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Section 1 of 5

Document Information			
Document #	HNF-1701	Revision	0
Title	TANK 241AZ101, CORES 266, 269 ANALYTICAL RESULTS FOR THE FINAL REPORT		
Date			
Originator	STEEN FH	Originator Co.	FH
Recipient		Recipient Co.	
References			
Keywords			
Projects			
Other Information			

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24

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ENGINEERING DATA TRANSMITTAL

Page 1 of 1
1. EDT 628071

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) 222-S Laboratory	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Tank 241-AZ-101, Core, Waste Management/PPC/FDH	6. Design Authority/ Design Agent/Cog. Engr.: F. H. Steen	7. Purchase Order No.: N/A
8. Originator Remarks: This document is being released into the supporting document system for retrievability purposes.		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: 241-AZ-101
11. Receiver Remarks: For release.		12. Major Assm. Dwg. No.: N/A
11A. Design Baseline Document? ☐ Yes ☒ No		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 07/28/00

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	HNF-1701	N/A	0	Tank 241-AZ-101, Cores 266 and 269 Analytical Results for the Final Report	Q	2	1	1

16. KEY		
Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledge

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)									
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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

**United States
Department of Energy**
P.O. Box 550
Richland, Washington 99352

Tank 241-AZ-101 Cores, 266 and 269 Analytical Results for the Final Report

Franciska H. Steen
Fluor Hanford

Date Published
July 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

**United States
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Total pages: 2085

Printed in the United States of America

HNF-1701 REV. 0

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**TANK 241-AZ-101, CORES 266, 269
ANALYTICAL RESULTS FOR THE FINAL REPORT**

Project Coordinator: Franciska H. Steen

**Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management**

by

**222-S Laboratory
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Richland, Washington**

HNF-1701 REV. 0

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222-S LABORATORY TANK 241-AZ-101, CORES 266 AND 269, ANALYTICAL RESULTS FOR THE FINAL REPORT

This document is the analytical laboratory report for tank 241-AZ-101 push mode core segments collected between October 29, 1999 and November 17, 1999. The segments were subsampled and analyzed in accordance with the *Tank 241-AZ-101 Privatization Push Mode Core Sampling and Analysis Plan* (TSAP) (Templeton, 2000), *Low-Activity Waste and High Level Waste Feed Data Quality Objectives* (DQO) (Patello, et al., 1999), the ORP letter "Additional Analysis of Double Shell Tank 241-AZ-101 and 241-AZ-102 for Americium-241" (Popitti, 1999). The analytical results are included in the data summary table (Table 1).

The results for twelve solid subsamples exceeded the Total Alpha notification limits of $41\mu\text{Ci/g}$ as stated in the TSAP (Templeton, 2000), appropriate notifications were made. The statistical results of the 95% confidence interval on the mean calculations are provided by the Tank Waste Remediation Systems Technical Basis Group in accordance with the Memorandum of Understanding (Schreiber, 1997) and not considered in this report.

The TSAP (Templeton, 2000) required shear strength, weight percent oxides and particle size distribution analyses to be performed on selected segments. The results for shear strength are included in Attachment 6; the results for weight percent oxides are included in Attachment 7; the results for the particle size analysis are included in Attachment 9. The customer requested a heating study and microscopy analysis to be performed on selected segments. The results for these analyses are included in Attachments 10 and 11 respectively. Although not specifically requested in the TSAP (Templeton, 2000), viscosity analysis was performed on the liquid core composite subsamples. The results for viscosity are included in Attachment 8.

Total alpha, americium-241, percent solids by gravimetry, bulk density, centrifuge solids density and weight fraction of centrifuge solids analyses were requested to be performed on the solid material from core 266, segments 16 and 16R and core 269, segments 16, 16R, 16R1 and 16R2 (Popitti, 1999). The results and discussion for these analyses were issued in a final letter report on February 24, 2000. The final letter report, corresponding documents and raw data have been included in this report as Attachment 5.

Appearance and Sample Handling

Attachment 1 is a cross reference to relate the tank farm identification numbers to the 222-S Laboratory LabCore/LIMS sample numbers. The subsamples generated in the laboratory for analyses are identified in these diagrams with their sources shown.

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Core 266

Seventeen push mode core segments (1-16 and 16R) were removed from tank 241-AZ-101 riser 6G between October 29, 1999 and November 6, 1999. Segments were received by the 222-S Laboratory between November 2, 1999 and November 17, 1999.

The TSAP (Templeton, 2000) states that the core samples should be transported to the laboratory within three calendar days from the time each segment is removed from the tank, this requirement was not met for the segments from core 266. Attachment 2 provides the extrusion information.

Core 269

Nineteen push mode core segments (1-16, 16R, 16R1 and 16R2) were removed from tank 241-AZ-101 riser 15L between November 11, 1999 and November 17, 1999. Segments were received by the 222-S Laboratory between November 15, 1999 and December 9, 1999.

The TSAP (Templeton, 2000) states that the core samples should be transported to the laboratory within three calendar days from the time each segment is removed from the tank, this requirement was not met for the segments from core 269. Attachment 2 provides the extrusion information.

Field Blank

A field blank was provided to the 222-S laboratory with core 269. At the time of sample receipt, the TSAP (Templeton, 1999) did not address the analytical requirements of the field blank. The customer provided the required analyses by electronic mail (Attachment 4) and in a later revision of the TSAP (Templeton, 2000).

Core Composites

The laboratory was requested to combine the solid material from selected segments in order to provide enough sample material for the americium analyses (Poppiti, 1999) and to prepare whole core composites. For core 266, the solids from segments 16 and 16R were combined. For core 269, the solids from segments 16, 16R, 16R1 and 16R2 were combined. These composites were identified as "segment 16 solid composites".

The whole core composites were prepared per instruction from the customer (Templeton, 2000). The core composite laboratory worksheets are included in this document. In preparing the composites, the DQO (Patello, et al., 1999) required the liquid and solid material to be combined, shaken to form a slurry, then separated by centrifugation. Each phase was divided into three separate subsamples and submitted to the laboratory for analyses (see Attachment 1 for further information). These subsamples were analyzed as triplicate samples. The average results and Relative Standard Deviations (RSDs) for the three subsamples are presented in Attachment 3 and are to be used for informational purposes only.

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The core composite from core 266 was dropped during hot-cell processing. Most of the liquid phase was spilled so there was insufficient material remaining for analyses. A limited amount of solid material was recovered and submitted to the laboratory for analyses. Bulk density, the graphite furnace metals, mercury and total inorganic/organic carbon could not be performed (Attachment 4) on the solid material. In addition, there was insufficient sample material from the core 269 composite to perform the graphite furnace metals.

Analytical Results Summary

The data summary report (Table 1) compiles the analytical results that satisfy all applicable DQOs. Attachment 3 Table 1 provides the average results and the RSD calculations for the core composite subsamples.

The detection limits for some analytes did not meet the required minimum reportable quantities (MRQ) as listed in the TSAP (Templeton, 2000). The high concentration of one or more analytes in multi analyte methods such as IC and ICP required a greater dilution than expected for meeting the MRQs. In addition, the high radionuclide activity in the samples required reduced sample sizes or larger dilutions than originally expected, which may have contributed to the higher detection limits reported for other methods.

Attachment 3 Table 2 provides the MRQs converted to the appropriate units for direct comparison to the laboratory's reported detection limits. The solid MRQs were converted from a dry weight to a wet weight using the average percent solid result. The liquid and solid MRQs for ICP/MS radionuclides were converted from μCi to μg using the specific activity for each isotope. Only those analytes that failed to meet the required MRQs are listed in this table. The comparison to MRQs is not applicable for those analytes that had one or more results reported greater than their respective detection limits. For informational purposes, the entire converted MRQ tables are included as Appendix B.

It should be noted that all of the sample preparations and digestions for the solid subsamples were performed remotely (in the hot-cell). The remote handling of this material may have contributed to the high RSD results for many of the analyses.

Inorganic Analyses

Bulk Density

Bulk density was performed on the solid material from selected segments and core composites as required by the TSAP (Templeton, 2000). The results of the bulk density analysis ranged from 1.50 g/mL to 1.80 g/mL. There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for these samples.

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Specific Gravity (SpG)

Specific gravity (SpG) analysis was performed on the liquid core composite subsamples from core 269. There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for these samples, however, the standard recoveries were within the control limits of the laboratory.

Percent Solid (% Solid)

The percent solid analysis (%solid) was performed on the core 266 and 269 segment 16 solid composites and the core 269 composite. The %solid analysis could not be performed on the core 266 composite subsamples due to insufficient sample material.

The TSAP (Templeton, 2000) required the segment 16 composite subsamples to be analyzed in duplicate. The standard recoveries were within the required limits of 80% - 120%. There were no Relative Percent Difference (RPD) requirements stated in the TSAP (Templeton, 2000) for these samples.

For the core 269 subsamples, the RSDs were less than 21% and the standard recoveries were within the required limits of 80% - 120%.

pH

The pH analysis was performed on the liquid core composite subsamples from core 269. The analysis was performed on direct subsamples as indicated by a blank in the A# column in Table 1. There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for these samples. However, the standard recoveries were within the control limits of the laboratory.

In addition, an earlier revision of the TSAP (Templeton, 1999) requested that the pH analysis be performed on all segments from cores 266 and 269 containing drainable liquid. The raw data has been included in the data package for informational purposes only and stamped "data not used". The results from these analyses are considered "opportunistic" and have been included in Appendix A. Any anomalies in these results are not discussed in this report.

Hydroxide (OH)

The OH analysis was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

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A high RSD (>15%) was reported for the core 269 solid subsamples. The results were near (less than five times) or less than the detection limit which decreased the precision of the analysis. No reanalysis was requested. The standard recoveries were within the required limits of 80% - 120%.

Ammonia (NH₃)

The NH₃ analysis was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

A high RSD (>15%) was reported for the core 266 solid subsamples. The results were near (less than five times) or less than the detection limit which decreased the precision of the analysis. No reanalysis was requested.

The standard recoveries were within the required limits of 80% - 120% and the spike recoveries were within the required limits of 75% - 125%.

Cyanide (CN)

Cyanide analysis was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

A high RSD (>15%) was reported for the core 269 liquid subsamples. The results were less than ten times the detection limit which decreased the precision of the analysis. No reanalysis was requested. The standard recoveries were within the required limits of 80%-120% and the spike recoveries were within the required limits of 75%-125%.

Mercury (Hg)

Mercury analysis was performed on the core composite subsamples from core 269. The analysis was performed on direct subsamples as indicated by a blank in the A# column in Table 1.

The composite from core 266 did not yield enough sample material to perform the mercury analysis and "INS" was entered into the result column of Table 1.

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A high RSD (>15%) was reported for the solid. The results were less than ten times the detection limit which decreased the precision of the analysis. No reanalysis was requested. The standard recoveries were within the required limits of 80%-120% and the spike recoveries were within the required limits of 75%-125%.

Ion Chromatography (IC)

The IC analyses were performed on the field blank, core 266 segments 1-15, core 269 segments 1-15 and the core composite subsamples from cores 266 and 269. The analyses were performed on direct subsamples of liquids as indicated by a blank in the A# column in Table 1. Solid subsamples were prepared for analysis by performing a water digest. The water digest is indicated with a "W" in the A# column in Table 1.

The required analyte for cores 266 and 269 segments 1-15 was lithium (Li). Segments 2,7 and 14 also required fluoride (F⁻), nitrate (NO₃⁻), nitrite (NO₂⁻). These additional analytes were used to determine the homogeneity of the liquid in tank 241-AZ-101 (Templeton, 2000). The subsample from core 269 segment 7 was spilled and no analyses were performed on this sample. All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report. The standard recoveries were within the required limits of 80% - 120% and the spike recoveries were within the required limits of 75% - 125%. There were no Relative Percent Difference (RPD) requirements stated in the TSAP (Templeton, 2000) for these samples.

The required analytes for the core composite subsamples from cores 266 and 269 were F⁻, chloride (Cl⁻), NO₃⁻, NO₂⁻, phosphate (PO₄⁻³), sulfate (SO₄⁻²), oxalate, formate and acetate. An earlier revision of the TSAP (Templeton, 2000) also required citrate and NTA to be performed, however, the customer rescinded this requirement (Attachment 4). All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report.

High RSDs (>15%) were reported for the core 266 solid composite subsamples analyzed for F⁻, NO₃⁻, NO₂⁻ and oxalate. High RSDs were also reported for the core 269 liquid composite subsamples analyzed for Cl⁻, F⁻, NO₃⁻, oxalate, PO₄⁻³ and SO₄⁻². The high RSDs were attributed to sample inhomogeneity and no reanalysis was requested. It should be noted that all of the sample digestions for the solid subsamples were performed remotely (in the hot-cell). The remote handling of this material may have contributed to the high RSD results for many of the analyses. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit.

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The standard recoveries were within the required limits of 80%-120% and the spike recoveries were within the required range 75%-125%.

Inductively Coupled Plasma Spectrophotometry (ICP)

The ICP analyses were performed on the field blank, core 266 segments 1-15 and the segment 16 solid composite, core 269 segments 1-15 and the segment 16 solid composite and the core composite subsamples from cores 266 and 269. The liquid subsamples were prepared for analysis by an acid adjustment of the direct subsample. This is indicated by a "D" in the A# column in Table 1. Solid subsamples were prepared for analysis by performing an acid or fusion digest. The acid digest is indicated with an "A" in the A# column in Table 1 and the fusion digest is indicated with an "F" in the A# column in Table 1.

The required analyte for cores 266 and 269 segments 1-15 and the segment 16 solid composites was lithium (Li). Segments 2, 7 and 14 also required aluminum (Al) and sodium (Na). These additional analytes were used to determine the homogeneity of the liquid in tank 241-AZ-101 (Templeton, 2000). The subsample from core 269 segment 7 was spilled and no analyses were performed on this sample. All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report. There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for these subsamples, however, a high RPD (28%) for Li was reported for the subsample from core 266 segment 7. No reanalysis was requested. The standard recoveries and spike recoveries were within the control limits of the laboratory.

The required analytes for the core composite subsamples from cores 266 and 269 were silver (Ag), Al, arsenic (As), boron (B), barium (Ba), beryllium (Be), bismuth (Bi), calcium (Ca), cadmium (Cd), cerium (Ce), cobalt (Co), chromium (Cr), copper (Cu), europium (Eu), potassium (K), iron (Fe), lanthanum (La), Li, magnesium (Mg), manganese (Mn), molybdenum (Mo), Na, neodymium (Nd), nickel (Ni), phosphorous (P), lead (Pb), sulfur (S), antimony (Sb), selenium (Se), strontium (Sr), silicon (Si), thorium (Th), titanium (Ti), thallium (Tl), uranium (U), vanadium (V), uranium (U), zinc (Zn) and zirconium (Zr). In addition, palladium (Pd), praseodymium (Pr), rubidium (Rb), rhodium (Rh), ruthenium (Ru), samarium (Sm), tin (Sn) and tantalum (Ta) were analyzed to evaluate the need for Inductively Coupled Plasma Spectrophotometry/Mass Spectrophotometer (ICP/MS) analyses. All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report.

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High RSDs (>15%) were reported for Al, B and P on the core 266 solid subsamples; B, Bi, K and Ru on the core 269 solid composite subsamples and Cd, Fe, P and Si on the core 269 liquid composite subsamples. The high RSDs for B and Si may have been due to the non-uniform leaching from the digestion vessels or the glass vials used to store the samples. Since this leaching could not be avoided, no reanalyses were requested. For the solid subsamples, some metals may not have been completely or uniformly dissolved by the acid digestion process. However, the concentration of many of these analytes were less than the detection limit or less than five times the detection limit and the precision of the analysis was decreased. No reparation or reanalysis was requested.

In addition, high RSDs (>3.5%) were reported for Na on both the liquid and solid core composite subsamples. Na is a common contaminant in the environment and difficult to avoid. No reparation or reanalysis was requested.

Matrix spike recoveries outside of the 75% to 125% control limits as set by the TSAP (Templeton, 2000) were reported for Al, Ag, Cd, Ca, Fe, Na, K, Si, S and Zr. These spike failures were attributed to the high concentration of these analytes in the samples with respect to the amount of spike standard added. A post digestion spike analysis was performed as an additional instrument performance check. The post digestion spike recoveries were within the required limits. More information may be obtained by examining the raw data.

Typically, with high concentrations of analytes, it is difficult to add sufficient spike to perform a meaningful analysis. Therefore, the assessment of the accuracy of the measurement for these analytes were also made by comparison of the sample results to those of a serial dilution of the sample. The serial dilution was performed by preparing and analyzing an additional five-fold dilution of the sample. The result obtained from this analysis should be within $\pm 10\%$ of the undiluted sample result. The results of this comparison are presented in Table 2 and indicate the accuracy of this analysis was acceptable for all but K. The undiluted results were already near the detection limit and an additional five-fold dilution decreased the precision of the analysis even further.

The standard recoveries for B, Ca, Na and Si were outside of the required range of 80% - 120% for the acid digested portion of the subsamples. It should be noted that the acid digestions were performed in the hot-cells using remote equipment. The accuracy needed to weigh and measure could not be achieved. A standard recovery of 79.2% for Bi was reported for the core 269 liquid composite samples. The chemist accepted the results, no reanalysis was requested. The standard recoveries for the remaining analytes were within the required limits of 80%-120%.

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Table 2: ICP Serial Dilution Results for Tank 241-AZ-101

Sample ID	Analyte	Undiluted Sample Result (µg/mL)	Serial Dilution Result (µg/mL)	Percent Difference (%)
S00T000804	Al	6.90E+02	7.18E+02	4.0
S00T000804	Cd	4.13E+01	4.33E+01	4.9
S00T000804	Ca	1.72E+01	1.79E+01	4.5
S00T000804	Fe	5.23E+02	5.40E+02	3.3
S00T000804	Si	6.35E+00	6.60E+00	4.1
S00T000804	Na	1.15E+03	1.27E+03	9.8
S00T000804	S	3.61E+02	3.72E+02	3.2
S00T000804	Zr	1.94E+02	1.97E+02	1.2
S00T000809	Al	4.51E+02	4.64E+02	2.8
S00T000809	Fe	611.92	6.36E+02	4.0
S00T000809	Na	4.13E+02	4.49E+02	8.7
S00T000809	K	2.26E+01	3.40E+01	50.0
S00T000809	Ag	1.42E+00	1.44E+00	1.6

$$\% \text{ Difference} = (\text{ABS}(\text{Sample} - \text{Serial})) / \text{Sample} \times 100$$

Inductively Coupled Plasma Spectrophotometry/Mass Spectrophotometer (ICP/MS)

The ICP analyses were performed on the core composite subsamples from cores 266 and 269. The liquid subsamples were prepared for analysis by an acid adjustment of the direct subsample. This is indicated by a "D" in the A# column in Table 1. Solid subsamples were prepared for analysis by performing an acid digest. The acid digest is indicated with an "A" in the A# column in Table 1.

The required analytes for the core composite subsamples from cores 266 and 269 were neptunium (^{237}Np), uranium 233 (^{233}U), uranium 234 (^{234}U), uranium 235 (^{235}U), uranium 236 (^{236}U), uranium 238 (^{238}U), protactinium 231 (^{231}Pa), atomic mass unit 241 (^{241}Amu), atomic mass unit 242 (^{242}Amu), atomic mass unit 243 (^{243}Amu), tin 126 (^{126}Sn), technetium 99 (^{99}Tc), cesium (Cs), Eu, As, B, Ba, Be, Ce, Co, K, La, Li, Mo, Pd, Pr, Rb, Rh, Ru, Sb, Se, Ta, Te, Th, Tl, vanadium (V), tungsten (W) and atomic mass unit 90 (^{90}Amu).

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The chemist Daniel R. Hansen provided the following narrative:

ICP-MS Narrative for AZ-101

In general, results reported on an elemental basis were directly calibrated using an appropriate isotope without correction. When isobaric corrections are needed, they have been noted below. Parameters that have results on an elemental basis in LabCore have 'TOT' in the parameter name, such as "ASTOT". Results that reported isotopically have the mass being reported in the parameter name, such as TC99. Isotopic results are directly calibrated where possible. The following isotopes were indirectly calibrated, with the isotope used to calibrate in parentheses: Th229/Th230/Pa231 (Th232), U233/U234/U236 (U235), Pu240/AMU242/AMU244 (Pu239), AMU241/AMU243 (Am-241), Sn126 (Sn117), Cs135 (Ba135), and Cs137 (Ba137).

AZ-101 acid digest samples had significant chloride present due to the digestion process. Two elements, As and V, required isobaric correction for the presence of Chlorinated polyatomic interferences. An Inter-Element Check solution (IEC) was analyzed to verify that the isobaric correction was working properly. The isobaric corrections can be over-estimated, leading to a bias low. The results for As and V should be flagged as estimated values.

The 2 natural isotopes of Sb (A.M.U. 121 and 123) were monitored in the samples. Significant differences were noted between them, with A.M.U. 123 typically 5X higher than A.M.U. 121. This is likely due to a polyatomic interference on A.M.U. 123 rather radiogenic Sb-123. However, both results were very low, and the differences could be due to noise. The result for Sb-121 was reported. Europium-151 was measured and reported as A.M.U.-151, due to the possibility of polyatomic interferences from Cd and Cl. A Sm-151 fission product may also exist. Eu-153 was also measured, though, and had good agreement with Eu-151, indicating little bias at the AMU-151 result.

Pd is very susceptible to ZrO⁺ ion interferences and Cd isobars. The acid digest samples contained significant concentrations of both Zr and Cd. The Pd result reported (Pd-108) should be flagged as an estimated result due to this potential bias high. Ru is also very susceptible to polyatomic, isobaric and fission product biases. A 2X difference was noted between the 2 Ru isotopes monitored. The Ru result reported (Ru-101) should be flagged as an estimated result due to this potential bias high.

AMU-90 is directly interfered by Zr-90, which is present in large quantities in the solid acid digest samples, rendering the result of little value for Sr-90. AMU-93 is directly interfered with by Nb-93; which is monoisotopic (100%). Since other isotopes can't be measured to indicate the presence of Nb, the result must be flagged as an estimated result.

AZ-101 direct samples were also analyzed. Mass scans indicated that chloride polyatomic ions

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weren't present in sufficient quantities to interfere with the As and V results, so the isobaric correction was not used for the direct samples. The mass scans also indicated that natural Zr wasn't present, based on the expected isotopic distributions at masses 90, 91, 92, and 94. The lack of Zr and low levels of Cd leads to better agreement of the Pd 108 and 110 isotopes (<2X), however the results should still be considered semi-quantitative. Ru is also very susceptible to polyatomic, isobaric and fission product biases. A 2X difference was noted between the 2 Ru isotopes monitored. The Ru result reported (Ru-101) should be flagged as an estimated result due to this potential bias high. The average of Eu-151 and Eu-153 was reported for elemental Europium. (End of chemist's narrative)

High RSDs (>15%) were reported for Pd on the liquid subsamples. High RSDs (>15%) were reported for Se, Rb and Ru, ^{238}U and Zr on the solid subsamples. The sample results were less than the detection limit which decreased the precision of the analysis. No reanalysis was requested. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit.

Spike recoveries outside of the required range of 70% - 130% were reported for $^{93}\text{Nb}/\text{Zr}$, Pr, Ce, $^{241}\text{Pu}/\text{Am}$, $^{90}\text{Zr}/\text{Sr}$ (^{90}Amu) and ^{235}U . The spike failures were attributed to the high concentration of these analytes in the samples with respect to the amount of spike standard added. No reanalysis was requested.

Standard recoveries outside of the required range of 90% - 110% were reported for $^{93}\text{Nb}/\text{Zr}$, Pa, ^{239}Pu , Ru, and ^{235}U . The standard recoveries were within the control limits of the laboratory and no reanalysis was requested.

Total Inorganic/Organic Carbon (TIC/TOC)

TIC/TOC analysis by persulfate was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples from core 269 as indicated by a blank in the A# column in Table 1. In addition, the solid subsamples from cores 266 and 269 were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1. None of the results exceeded the TOC notification limit of 45,000 $\mu\text{gC/g}$ for solids and 45,000 $\mu\text{gC/mL}$ for liquids.

The solid composite from core 266 did not yield enough sample material to perform the direct analysis and "INS" was entered into the result column of Table 1.

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For all TIC and TOC analyses, an Analysis Report worksheet is included for each sample as raw data. Due to programming limitations with the instrument software, the sample size listed on the worksheet is incorrect. This value was not used in the final calculations and had no bearing on the results in Table 1. The blank is considered a reagent blank. The value was within the acceptance limits and all results were corrected for the concentration found in the blank.

High RSDs (>15%) were reported for the solid (water digested portion) core composite subsamples from core 266 and the liquid core composite subsamples from core 269. These high RSDs were attributed to sample inhomogeneity and no reanalysis was requested. Due to the high radioactivity of the samples, less than 5/100 of a gram of sample was placed directly into the analysis vessels. The small sample size may be an additional factor to the high RSDs. The standard recoveries were within the required limits of 80%-120% and the spike recoveries were within the required limits of 75% - 125%.

Total Organic Carbon (TOC)

TOC analysis by combustion was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct liquid subsamples from core 269 as indicated by a blank in the A# column in Table 1. The solid subsamples from cores 266 and 269 were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1. None of the results exceeded the TOC notification limit of 45,000 $\mu\text{gC/g}$ for solids and 45,000 $\mu\text{gC/mL}$ for liquids.

High RSDs (>15%) were reported for the solid core composite subsamples from core 266. The high RSD was attributed to sample inhomogeneity and no reanalysis was requested. The standard recoveries were within the required limits of 80% - 120% and the spike recoveries were within the required limits of 75% - 125%.

Radionuclide Analyses

Tritium (^3H)

Tritium analysis was requested on the field blank and the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. Solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for the field blank, however, the standard recovery was within the control limits of the laboratory.

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For the core composite subsamples from cores 266 and 269, the RSDs were less than 15%, the standard recoveries were within the required limits of 80% - 120% and the spike recoveries were within the required limits of 75% - 125% as per the TSAP (Templeton, 2000).

Total Alpha/Beta (AT/TB)

The total alpha/beta (AT/TB) analysis was performed on the field blank and the core composite subsamples from cores 266 and 269. Only total alpha was performed on cores 266 and 269 segment 16 solid composites. The analyses were performed on direct subsamples of liquids as indicated by a blank in the A# column in Table 1. Solid subsamples were prepared for analysis by performing a fusion digest. The fusion digest is indicated with an "F" in the A# column in Table 1.

All liquid AT results were below the total alpha activity action limit of $61.5 \mu\text{Ci/mL}$. The results for twelve solid subsamples exceeded the Total Alpha notification limits of $41 \mu\text{Ci/g}$ as stated in the TSAP (Templeton, 2000), appropriate notifications were made (Attachment 4).

The results and discussion for the subsamples from core 266 and core 269 segment 16 solid composites were issued in a final letter report on February 24, 2000. The final letter report, corresponding documents and raw data have been included in this report as Attachment 5.

There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for the field blank, however, the standard recovery was within the control limits of the laboratory.

For the core composite subsamples from cores 266 and 269 the RSDs were less than 15%. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit. The standard recoveries were within the required limit of 70% - 130, the spike recoveries for alpha were within the required limits of 75% - 125% and the spike recoveries for beta were within the required limits of 70% - 130%.

Gamma Energy Analysis (GEA)

Gamma energy analysis was performed on core 266 segments 2, 7 and 14, the field blank, core 269 segments 2, 7, 14 and the core 266 and 269 composite subsamples. The analysis was performed on direct subsamples of liquids as indicated by a blank in the A# column in Table 1. Solid subsamples were prepared for analysis by performing a fusion digest. The fusion digest is indicated with an "F" in the A# column in Table 1.

Actual detection limits for GEA analytes are not currently available. The latest GEA software does not report a minimum detectable activity (MDA). If an analyte is reported as "less than", the value reported is the detection limit.

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For the GEA analysis some radionuclides have peak energies that are very close together and cannot always be separated. When this occurs most software will report all isotopes with an energy near the found peak energy. The chemist eliminates the data from the radionuclides that are not present by crossing-out the unused peaks.

There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for the field blank, however, the standard recovery was within the control limits of the laboratory.

The required analyte for segments 2, 7 and 14 from cores 266 and 269 was ^{137}Cs . There was insufficient sample to perform the analysis on core 266 segment 14 and core 269 segment 7. A result of "INS" was entered into the result column of Table 1 for the subsample from core 266 segment 14. These other segments were analyzed to determine the homogeneity of the liquid in tank 241-AZ-101 (Templeton, 2000). All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report. There were no quality control (QC) parameters stated in the TSAP (Templeton, 2000) for this analyte, however, the standard recoveries were within the control limits of the laboratory.

The required analytes for the core composite subsamples from cores 266 and 269 were ^{60}Co , ^{137}Cs , ^{125}Sb and $^{152/154/155}\text{Eu}$. All other analyte results are presented in Appendix A. These results are considered "opportunistic" and do not have customer defined QC parameters. Therefore, any anomalies in those results are not discussed in this report. The RSDs were less than 15%. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit. The standard recoveries were within the required limit of 80% - 120% as per the TSAP (Templeton, 2000).

Iodine 129 (^{129}I)

^{129}I analysis was requested on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

The RSDs were "non-applicable" since all subsample results were less than the detection limit. There were no standard recovery requirements stated in the TSAP (Templeton, 2000), however, the standard recoveries were within the required limits of the laboratory.

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Carbon 14 (^{14}C)

^{14}C Carbon analysis was requested on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

A standard recovery outside of the required range (80% - 120%) was reported for the core 266 solid core composite subsamples. The standard recovery was within the laboratory control limits of 70.73% - 104.94% and no reanalysis was requested. A spike recovery outside of the required range of 75% - 125% was also reported for the core 266 solid composite subsamples. The sample results were less than the detection limit which decreased the precision of the analysis. No reanalysis was requested. The RSDs were less than 15%.

Strontium 90 (^{90}Sr)

^{90}Sr was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a fusion digest. This is indicated with an "F" in the A# column in Table 1.

The RSDs were less than 15% and the standard recoveries were within the required limits of 75% - 125%.

Technetium 99 (^{99}Tc)

^{99}Tc Technetium analysis was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a water digest. This is indicated with a "W" in the A# column in Table 1.

The TSAP (Templeton, 2000) requested that the liquid subsamples be analyzed with and without peroxide (please see Attachment 1 for further information).

A high RSD (>15%) was reported for the core 266 solid composite subsamples. The sample results were near the detection limit which decreased the precision of the analysis. No reanalysis was requested. The standard recoveries were within the required limits of 80% - 120%.

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Americium 241 (^{241}Am)

The 241 americium analysis was performed on the core 266 and 269 segment 16 solid composites. The results and discussion for these composites were issued in a final letter report on February 24, 2000. The final letter report, corresponding documents and raw data have been included in this report as Attachment 5.

Americium 241/Curium243/Curium244 (^{241}Am , $^{243/244}\text{Cm}$)

The 241 americium/ $^{243/244}$ curium analysis was performed on the composite subsamples from cores 266 and 269. The analyses were performed on direct subsamples of liquids as indicated by a blank in the A# column in Table 1. Solid subsamples were prepared for analysis by performing a fusion digest. The fusion digest is indicated with an "F" in the A# column in Table 1.

The Laboratory does not currently have a method for performing the 242 curium analysis, however the results may be calculated from the raw data.

A high RSD (>15%) was reported for the core 269 liquid composite subsamples. The sample results were near or less than the detection limit which decreased the precision of the analysis. No reanalysis was requested. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit. There were no standard recovery requirements stated in the TSAP (Templeton, 2000), however, the standard recoveries were within the required limits of the laboratory.

Plutonium 238/239 ($^{238/239}\text{Pu}$)

The $^{238/239}$ plutonium analysis was performed on the core composite subsamples from cores 266 and 269. The analysis was performed on direct subsamples of liquid as indicated by a blank in the A# column in Table 1. The solid subsamples were prepared for analysis by performing a fusion digest. This is indicated with an "F" in the A# column in Table 1.

High RSDs were reported for the core 266 solid subsamples. The sample results were near or less than the detection limit which decreased the precision of the analysis. No reanalysis was requested. The calculation for RSD is "non-applicable" when all three subsample results are less than the detection limit. There were no standard recovery requirements stated in the TSAP (Templeton, 2000), however, the standard recoveries were within the required limits of the laboratory.

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Procedures

Table 3 lists the analytical procedures used for performing the sample analyses. Abbreviations for analyses are defined in the table notes.

Table 3. Analytical Procedures			
Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
Sp.G.	Liquid	N/A	LA-510-112 Rev. E-2
Bulk Density	Solid	N/A	LO-160-103 Rev. B-0 LA-519-132 Rev. B-0
OH	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-211-102 Rev. D-3
PH	Liquid	N/A	LA-212-106 Rev. C-6
IC	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-533-105 Rev. F-2 LA-533-115 Rev. D-0
ICP	Solid Liquid	LA-505-112 Rev. A-0 LA-549-141 Rev. G-2 N/A	LA-505-161 Rev. C-5
ICP/MS	Solid Liquid	LA-505-112 Rev. A-0 LA-549-141 Rev. G-2 N/A	LA-506-101 Rev. A-3

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Table 3. Analytical Procedures			
Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
NH ₃	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-631-001 Rev. D-2
TICTOC	Solid/Liquid	N/A	LA-342-100 Rev. F-1 LA-342-100 Rev. F-4
TOC	Liquid	N/A	LA-344-105 Rev. F-3 LA-344-105 Rev. F-4
H ₃	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-218-114 Rev. B-5 LA-218-114 Rev. B-6
GEA	Solid Liquid	LA-549-141 Rev. G-2 N/A	LA-548-121 Rev. F-2
AT/TB	Solid Liquid	LA-549-141 Rev. G-2 N/A	LA-508-101 Rev. G-2
%Solid	Solid/Liquid	N/A	LA-564-101 Rev. G-3
CN	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-695-102 Rev. H-1
Hg	Solid/Liquid	N/A	LA-325-106 Rev. A-3
I129	Solid Liquid	LA-504-101 Rev. G-3 N/A	LA-378-103 Rev. E-1

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Table 3. Analytical Procedures			
Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
C14	Solid	LA-504-101 Rev. G-3	LA-348-104 Rev. C-6
	Liquid	N/A	
Tc99	Solid	LA-549-141 Rev. G-2	LA-438-101 Rev. E-5
	Liquid	N/A	
Am241/Cm244	Solid	LA-549-141 Rev. G-2	LA-953-104 Rev. B-3
	Liquid	N/A	
Pu238/239	Solid	LA-549-141 Rev. G-2	LA-953-104 Rev. B-3
	Liquid	N/A	
Sr90	Solid	LA-549-141 Rev. G-2	LA-220-101 Rev. E-5
	Liquid	N/A	
Se79	Solid	LA-549-141 Rev. G-2	LA-365-132 Rev. D-6
	Liquid	N/A	

HNF-1701, REV.0

Abbreviations:

N/A	= not applicable (these are direct samples)
SpG	= specific gravity
OH	= hydroxide
IC	= ion chromatography
ICP	= inductively coupled plasma
ICP/MS	= inductively coupled plasma/mass spectrophotometer
NH3	= ammonia
TIC/TOC	= total inorganic/organic carbon
TOC	= total organic carbon
H3	= tritium
GEA	= gamma energy analysis
AT/TB	= total alpha/beta
%WATER	= percent water by gravimetry
%SOLID	= percent solid by gravimetry
CN	= cyanide
HG	= mercury
I129	= iodine129
C14	= carbon14
Tc99	= technetium99
AM241	= americium241
PU239	= plutonium239
SR90	= strontium 90
SE79	= selenium79

HNF-1701, REV.0

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SAMPLE BREAKDOWN

ATTACHMENT 1

HNF-1701 REV. 0

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Attachment 1

AZ-101
Core 266
Segment 1
S99T001741

Attachment 1

AZ-101
Core 266
Segment 2
S99T001742

Drainable Liquid

VOLUME % SETTLED SOLIDS

The sample aliquots for Polarized Light Microscopy and Heating/Settling Study were removed first. The remaining sample was then centrifuged.

S99T001817

Attachment 1

AZ-101
Core 266
Segment 3
S99T001743

HNF-1701 REV. 0

Attachment 1

AZ-101
Core 266
Segment 4
S99T001744

HNF-1701 REV. 0

AZ-101
Core 266
Segment 5
S99T001745

AZ-101
Core 266
Segment 6
S99T001746

Attachment 1

AZ-101
Core 266
Segment 7
S99T001753

HNF-1701 REV. 0

Attachment 1

AZ-101
Core 266
Segment 8
S99T001754

Attachment 1

AZ-101
Core 266
Segment 9
S99T001755

Attachment 1

AZ-101
Core 266
Segment 10
S99T001756

Drainable Liquid

VOLUME % SETTLED SOLIDS

The sample aliquots for Polarized Light Microscopy and Heating/Settling Study were removed first. The remaining sample was then centrifuged.

S99T001825

Attachment 1

AZ-101
Core 266
Segment 11
S99T001757

Attachment 1

AZ-101
Core 266
Segment 12
S99T001758

S99T001827

Attachment 1

AZ-101
Core 266
Segment 13
S99T001759

Attachment 1

AZ-101
Core 266
Segment 14
S99T001760

HNF-1701 REV. 0

Attachment 1

HNF-1701 REV. 0

AZ-101
Core 266
Segment 15
S99T001806

Attachment 1

AZ-101
Core 266
Segment 16
S99T001807

HNF-1701 REV. 0

Attachment 1

AZ-101
Core 266
Segment 16R
S99T001808

Whole
Segment

S99T001945

S99T001947

AZ-101
Core 266
Segment 16 Solid
Composite

Attachment 1

Composited:		
Segment:	Grams:	
16 WS	30.2	
16R WS	116.1

AZ-101
Core 266
Segments 1-15
Centrifuged Solids
Composite

S00T000744

Attachment 1

AZ-101 Core 266 Core Composite

Attachment 1

This sample was spilled during processing in the hot-cell. There was insufficient drainable/interstitial liquid remaining to submit material to the laboratory for analyses. There was a limited amount of centrifuged solids remaining. These were submitted to the laboratory for analyses.

VOLUME % SETTLED SOLIDS

S00T000748

Please see the next page for further sample breakdown

AZ-101 Core 266 Core Composite Centrifuged Solids

Attachment 1

S00T000770

HNF-1701 REV. 0

S00T000772

INSUFFICIENT
SAMPLE TO
PERFORM
BULK DENSITY

S00T000815

S00T001160

INSUFFICIENT
SAMPLE TO
PERFORM
MERCURY

INSUFFICIENT
SAMPLE TO
PERFORM
TIC/TOC

FUSION
ICP
SR90
PU238/239
TC99
ALPHA/BETA
GEA
AM241/CM242/3/4

ACID
DIGEST
ICP
ICP/MS

H2O
DIGEST
NH3
OH
H3
C14
I129
IC-ANIONS
TIC/TOC
CN
TOC

S00T000797 S00T000803 S00T000806

S00T000773

INSUFFICIENT
SAMPLE TO
PERFORM
BULK DENSITY

S00T000816

S00T001161

INSUFFICIENT
SAMPLE TO
PERFORM
MERCURY

INSUFFICIENT
SAMPLE TO
PERFORM
TIC/TOC

FUSION
ICP
SR90
PU238/239
TC99
ALPHA/BETA
GEA
AM241/CM242/3/4

ACID
DIGEST
ICP
ICP/MS

H2O
DIGEST
NH3
OH
H3
C14
I129
IC-ANIONS
TIC/TOC
CN
TOC

S00T000798 S00T000804 S00T000807

S00T000774

INSUFFICIENT
SAMPLE TO
PERFORM
BULK DENSITY

S00T000817

S00T001162

INSUFFICIENT
SAMPLE TO
PERFORM
MERCURY

INSUFFICIENT
SAMPLE TO
PERFORM
TIC/TOC

FUSION
ICP
SR90
PU238/239
TC99
ALPHA/BETA
GEA
AM241/CM242/3/4

ACID
DIGEST
ICP
ICP/MS

H2O
DIGEST
NH3
OH
H3
C14
I129
IC-ANIONS
TIC/TOC
CN
TOC

S00T000799 S00T000805 S00T000808

Attachment 1

AZ-101
Core 269
Segment 1
S99T001902

Attachment 1

AZ-101
Core 269
Segment 2
S99T001896

Attachment 1

AZ-101
Core 269
Segment 3
S99T001897

Attachment 1

AZ-101
Core 269
Segment 4
S99T001903

Attachment 1

AZ-101
Core 269
Segment 5
S99T001904

Attachment 1

AZ-101
Core 269
Segment 6
S99T001905

HNF-1701 REV. 0

Attachment 1

AZ-101
Core 269
Segment 7
S99T001910

Attachment 1

AZ-101
Core 269
Segment 8
S99T001794

HNF-1701 REV. 0

Attachment 1

AZ-101
Core 269
Segment 9
S99T001795

Attachment 1

AZ-101
Core 269
Segment 10
S99T001815

Attachment 1

AZ-101
Core 269
Segment 11
S99T001796

Attachment 1

AZ-101
Core 269
Segment 12
S99T001803

Attachment 1

HNF-1701 REV. 0

AZ-101
Core 269
Segment 13
S99T001804

Attachment 1

AZ-101
Core 269
Segment 14
S99T001805

Attachment 1

AZ-101
Core 269
Segment 15
S99T001814

AZ-101
Core 269
Segment 16
S99T001898

Attachment 1

AZ-101
Core 269
Segment 16R
S99T001899

Whole
Segment

S99T001949

Drainable
Liquid

VOLUME % SETTLED SOLIDS

S99T001926

Attachment 1

Attachment 1

AZ-101
Core 269
Segment 16R1
S99T001900

S99T001925

Whole
Segment

S99T001950

AZ-101
Core 269
Segment 16R2
S99T001901

Whole
Segment

S99T001951

Drainable
Liquid

VOLUME % SETTLED SOLIDS

S99T001927

Attachment 1

Attachment 1

AZ-101
Core 269
Field Blank
S99T001892

Attachment 1

AZ-101
Core 269
Hydrostatic Head
Fluid
S99T001891

Attachment 1

AZ-101
Core 269
Segment 16 Solid
Composite

S99T001995

Composited:

Segment	Grams
16 WS	103.8
16R WS	101.4
16R1 WS	155.5
16R2 WS	72.0
16 DLSOL	28.9
16R1 DLSOL	3.4

AZ-101
Core 269
Segments 1-15
Centrifuged Solids
Composite

S00T000746

Attachment 1

AZ-101
Core 269
Core Composite

Attachment 1

Please see
next five pages
for further
sample breakdown

AZ-101
 Core 269
 Core Composite
 Triplicate #2
 Drainable/Interstitial Liquid

HNF-1701 REV. 0

AZ-101
 Core 269
 Core Composite
 Triplicate #1
 Drainable/Interstitial Liquid

Attachment 1

HNF-1701 REV. 0

AZ-101
 Core 269
 Core Composite
 Triplicate #3
 Drainable/Interstitial Liquid

HNF-1701 REV. 0

AZ-101

Core 269

Core Composite

Triplicate #3

Drainable/Interstitial Liquid

S00T000766

|

S00T000769

AZ-101 Core 269 Core Composite Centrifuged Solids

Attachment 1

HNF-1701 REV. 0

CENTRIFUGED
SOLIDS

S00T000765

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T000775

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T000776

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T000777

HG

S00T000818

TIC/TOC

S00T001163

HG

S00T000819

TIC/TOC

S00T001164

HG

S00T000820

TIC/TOC

S00T001165

FUSION
ICP

S00T000800

ACID
DIGEST
ICP

S00T000809

ACID
DIGEST
ICP

S00T000810

ACID
DIGEST
ICP

S00T000813

ACID
DIGEST
ICP

S00T000811

ACID
DIGEST
ICP

S00T000814

S00T000800

S00T000809

S00T000812

S00T000810

S00T000813

S00T000811

S00T000814

HNF-1701 REV. 0

EXTRUSION REPORTS

ATTACHMENT 2

HNF-1701 REV. 0

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AZ-101 Core 266 Segment 1 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-01
Cask SN: 6G
Logbook : WHC-N-1126
LABCORE ID: S99T001741

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	380.8 g	Jar:	16738 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	380.8 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 2 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-02
Cask SN: 20G
Logbook : WHC-N-1126
LABCORE ID: S99T001742

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 310 mLs of drainable liquid (L1). The liquid was yellow/amber in color and opaque.

Solid Sample: A small quantity of solids were present. They were flat, circular in shape about ½ inch in diameter. The color was white and integrity brittle, and the texture resembled a dry salt (M5). The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	377.8 g	Jar:	16739 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	377.8 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 3 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-03
Cask SN: 2G
Logbook : WHC-N-1126
LABCORE ID: S99T001743

EXTRUSION INFORMATION

Liner Liquid: < 5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A few white flakes of dry salt (M5) were dispersed throughout the segment. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	373.5 g	Jar:	16740 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	373.5 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 4 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-04
Cask SN: 1002-C
Logbook : WHC-N-1126
LABCORE ID: S99T001744

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	374.6 g	Jar:	16741 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	374.6 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 5 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-05
Cask SN: 69
Logbook : WHC-N-1126
LABCORE ID: S99T001745

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	376.3 g	Jar:	16744 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	376.3 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 6 Riser 15G

Date Extruded: 11/03/99
Sample Number: 266-06
Cask SN: C-1055
Logbook : WHC-N-1126
LABCORE ID: S99T001746

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	377.2 g	Jar:	16750 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	377.2 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 7 Riser 15G

Date Extruded: 11/08/99
Sample Number: 266-07
Cask SN: C1024
Logbook : WHC-N-1126
LABCORE ID: S99T001753

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: There were two pea-sized solids observed. They appeared to be white in color, and the texture resembled a dry salt (M5). The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	369.0 g	Jar:	16882 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	369.0 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 8 Riser 15G

Date Extruded: 11/08/99
Sample Number: 266-08
Cask SN: C2011
Logbook : WHC-N-1126
LABCORE ID: S99T001754

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow/amber in color and slightly opaque.

Solid Sample: Observed fine white solids in the extruded liquid. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	367.3 g	Jar:	16872 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	367.3 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 9 Riser 15G

Date Extruded: 11/08/99
Sample Number: 266-09
Cask SN: C-1040
Logbook : WHC-N-1126
LABCORE ID: S99T001755

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: Observed trace suspended solids. The solids were fine sized and white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	369.7 g	Jar:	16877 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	369.7 g		

Reviewed by Rob Schroeder 11/08/99

AZ-101 Core 266 Segment 10 Riser 15G

Date Extruded: 11/10/99
Sample Number: 266-10
Cask SN: C-1035
Logbook : WHC-N-1126
LABCORE ID: S99T001756

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: Observed trace suspended solids. The solids were fine sized and white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	365.9 g	Jar:	16873 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	365.9 g		

Reviewed by Rob Schroeder 11/10/99

AZ-101 Core 266 Segment 11 Riser 15G

Date Extruded: 11/10/99
Sample Number: 266-11
Cask SN: C-1041
Logbook : WHC-N-1126
LABCORE ID: S99T001757

EXTRUSION INFORMATION

Liner Liquid: None present.

Drainable Liquid: Collected approximately 310 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: Observed trace suspended solids. The solids were fine sized and white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	376.0 g	Jar:	16883 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	376.0 g		

Reviewed by Rob Schroeder 11/10/99

AZ-101 Core 266 Segment 12 Riser 15G

Date Extruded: 11/10/99
Sample Number: 266-12
Cask SN: SN-1001-C
Logbook : WHC-N-1126
LABCORE ID: S99T001758

EXTRUSION INFORMATION

Liner Liquid: < 5 mL/ did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: Observed trace suspended solids. The solids were fine sized and white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	377.2 g	Jar:	16868 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	377.2 g		

Reviewed by Rob Schroeder 11/10/99

AZ-101 Core 266 Segment 13 Riser 15G

Date Extruded: 11/10/99
Sample Number: 266-13
Cask SN: C-2008
Logbook : WHC-N-1126
LABCORE ID: S99T001759

EXTRUSION INFORMATION

Liner Liquid: None present.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: N/A.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	379.9 g	Jar:	16874 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	379.9 g		

Reviewed by Rob Schroeder 11/10/99

AZ-101 Core 266 Segment 14 Riser 15G

Date Extruded: 11/10/99
Sample Number: 266-14
Cask SN: 26-G
Logbook : WHC-N-1126
LABCORE ID: S99T001760

EXTRUSION INFORMATION

Liner Liquid: < 5 mL/ did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and opaque. The sample was spilled while being moved. Approximately 50 mLs remain in the jar.

Solid Sample: Observed trace suspended solids. The solids were fine sized and white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	61.6 g	Jar:	16870 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	61.6 g		

Reviewed by Rob Schroeder 11/10/99

AZ-101 Core 266 Segment 15 Riser 15G

Date Extruded: 11/19/99
Sample Number: 266-15
Cask SN: SN-76
Logbook : WHC-N-1126
LABCORE ID: S99T001806

EXTRUSION INFORMATION

Liner Liquid: < 5 mL/ did not retain.

Drainable Liquid: Collected approximately 305 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	371.6 g	Jar:	16885 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	371.6 g		

Reviewed by Rob Schroeder 11/19/99

AZ-101 Core 266 Segment 16 Riser 15G

Date Extruded: 11/19/99
Sample Number: 266-16
Cask SN: SN-77
Logbook : WHC-N-1126
LABCORE ID: S99T001807

EXTRUSION INFORMATION

Liner Liquid: Observed approximately 15 mLs of liquid, did not retain.

Drainable Liquid: Collected approximately 170 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solid Sample: Extruded approximately 2 inches of solids. The solids were brown in color and the texture resembled a sludge slurry (D2).

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	219.2 g	Jar:	16887 (500 mL)
Whole Segment Solids:	35.2	Jar:	15485 (125 mL)
Total Sample Mass:	254.4 g		

Reviewed by Rob Schroeder 11/19/99

AZ-101 Core 266 Segment 16R Riser 15G

Date Extruded: 11/19/99
Sample Number: 266-16R
Cask SN: 27G
Logbook : WHC-N-1126
LABCORE ID: S99T001808

EXTRUSION INFORMATION

Liner Liquid: Observed approximately 10 mLs of liquid, did not retain.

Drainable Liquid: Collected approximately 90 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solid Sample: Extruded approximately 6 inches of solids. The solids were brown in color and the texture resembled a sludge slurry (D2).

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	105.8 g	Jar:	15446 (250 mL)
Whole Segment Solids:	117.1 g	Jar:	15441 (250 mL)
Total Sample Mass:	222.9 g		

Reviewed by Rob Schroeder 11/19/99

AZ-101 Core 269 Segment 1 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-01
Cask SN: SN-64
Logbook : WHC-N-1126
LABCORE ID: S99T001902

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 280 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: No solids were present.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	363.1 g	Jar:	16875 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	363.1 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 2 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-02
Cask SN: 24-G
Logbook : WHC-N-1126
LABCORE ID: S99T001896

EXTRUSION INFORMATION

Liner Liquid: < 5 mLs /did not retain.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solids: Observed suspended trace solids, which were white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	370.6 g	Jar:	16884 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	370.6 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 3 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-03
Cask SN: SN-66
Logbook : WHC-N-1126
LABCORE ID: S99T001897

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solids: Observed suspended trace solids, which were white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	373.4 g	Jar:	16886 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	373.4 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 4 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-04
Cask SN: 22G
Logbook : WHC-N-1126
LABCORE ID: S99T001903

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solids: Observed suspended trace solids, which were white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	372.2 g	Jar:	16889 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	372.2 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 5 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-05
Cask SN: #57
Logbook : WHC-N-1126
LABCORE ID: S99T001904

EXTRUSION INFORMATION

Liner Liquid: There was no liner liquid.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solids: Observed suspended trace solids which were white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	375.0 g	Jar:	16895 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	375.0 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 6 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-06
Cask SN: #61
Logbook : WHC-N-1126
LABCORE ID: S99T001905

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 285 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solids: Observed suspended trace solids which were white in color. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	369.6 g	Jar:	17468 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	369.6 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 7 Riser 15L

Date Extruded: 12/14/99
Sample Number: 269-07
Cask SN: C2012
Logbook : WHC-N-1126
LABCORE ID: S99T001910

EXTRUSION INFORMATION

Liner Liquid: < 5 mL, did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow and opaque.

Solids: Observed fine white suspended solids which were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	376.0 g	Jar:	17466 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	376.0 g		

Reviewed by Rob Schroeder 12/14/99

AZ-101 Core 269 Segment 8 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-08
Cask SN: 30
Logbook : WHC-N-1126
LABCORE ID: S99T001794

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	369.7 g	Jar:	16890 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	369.7 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 9 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-09
Cask SN: 72
Logbook : WHC-N-1126
LABCORE ID: S99T001795

EXTRUSION INFORMATION

Liner Liquid: < 5 mLs /did not retain.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	374.4 g	Jar:	16894 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	374.4 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 10 Riser 15L

Date Extruded: 12/01/99
Sample Number: 269-10
Cask SN: C-2004
Logbook : WHC-N-1126
LABCORE ID: S99T001815

EXTRUSION INFORMATION

Liner Liquid: No liner liquid present.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	374.4 g	Jar:	16869 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	374.4 g		

Reviewed by Rob Schroeder 12/01/99

AZ-101 Core 269 Segment 11 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-11
Cask SN: C1018
Logbook : WHC-N-1126
LABCORE ID: S99T001796

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	374.9 g	Jar:	16891 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	374.9 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 12 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-12
Cask SN: 29G
Logbook : WHC-N-1126
LABCORE ID: S99T001803

EXTRUSION INFORMATION

Liner Liquid: < 5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	376.0 g	Jar:	16876 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	376.0 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 13 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-013
Cask SN: SN-62
Logbook : WHC-N-1126
LABCORE ID: S99T001804

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 300 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	375.9 g	Jar:	16892 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	375.9 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 14 Riser 15L

Date Extruded: 11/22/99
Sample Number: 269-14
Cask SN: C-2001
Logbook : WHC-N-1126
LABCORE ID: S99T001805

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 295 mLs of drainable liquid (L1). The liquid was yellow in color and clear.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	368.8 g	Jar:	16893 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	368.8 g		

Reviewed by Rob Schroeder 11/23/99

AZ-101 Core 269 Segment 15 Riser 15L

Date Extruded: 12/01/99
Sample Number: 269-15
Cask SN: 71
Logbook : WHC-N-1126
LABCORE ID: S99T001814

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 290 mLs of drainable liquid (L1). The liquid was yellow in color and opaque.

Solid Sample: A trace quantity of white suspended solids was observed. The solids were retained with the drainable liquid.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	377.4 g	Jar:	16888 (500 mL)
Whole Segment Solids:	n/a	Jar:	
Total Sample Mass:	377.4 g		

Reviewed by Rob Schroeder 12/01/99

AZ-101 Core 269 Segment 16 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-16
Cask SN: C-2000
Logbook : WHC-N-1126
LABCORE ID: S99T001898

EXTRUSION INFORMATION

Liner Liquid: <5 mLs, did not retain.

Drainable Liquid: Collected approximately 50 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solids: Extruded approximately 4 inches of solids. The solids were brown in color and the texture resembled a sludge slurry (D2). There were 3 small rocks found in the sample which y were cleaned and retained separately.

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	83.7 g	Jar:	16354 (125 mL)
Whole Segment Solids:	114.0	Jar:	16351 (125 mL)
Rocks:	14.1	Jar:	17505 (60 mL)
Total Sample Mass:	211.8 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 16R Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-16R
Cask SN: 2-G
Logbook : WHC-N-1126
LABCORE ID: S99T001899

EXTRUSION INFORMATION

Liner Liquid: <5 mLs /did not retain.

Drainable Liquid: Collected approximately 210 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solids: Extruded approximately 4 inches of solids. The solids were brown in color and the texture resembled a sludge slurry (D2).

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	244.1 g	Jar:	15053 (250 mL)
Whole Segment Solids:	115.8	Jar:	17512 (60mL)
Total Sample Mass:	359.9 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 16R1 Riser 15L

Date Extruded: 12/08/99
Sample Number: 269-16R1
Cask SN: C-1035
Logbook : WHC-N-1126
LABCORE ID: S99T001900

EXTRUSION INFORMATION

Liner Liquid: < 10 mLs /did not retain.

Drainable Liquid: Collected approximately 87 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solids: Extruded approximately 7 inches of solids. The solids were brown in color and the texture resembled a wet sludge (D3).

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	116.8 g	Jar:	16353 (125 mL)
Whole Segment Solids:	168.0 g	Jar:	15436 (250mL)
Total Sample Mass:	284.8 g		

Reviewed by Rob Schroeder 12/08/99

AZ-101 Core 269 Segment 16R2 Riser 15L

Date Extruded: 12/09/99
Sample Number: 269-16R2
Cask SN: 20G
Logbook : WHC-N-1126
LABCORE ID: S99T001901

EXTRUSION INFORMATION

Liner Liquid: Approximately 20 mLs did not retain.

Drainable Liquid: Collected approximately 135 mLs of drainable liquid (L1). The liquid was brown in color and opaque.

Solids: Extruded approximately 3.5 inches of solids. The solids were brown in color and the texture resembled a wet sludge (D3).

SUBSAMPLE INFORMATION

Liner Liquid:	n/a	Jar:	
Drainable Liquid:	157.3 g	Jar:	15061 (250 mL)
Whole Segment Solids:	77.9 g	Jar:	17508 (60mL)
Total Sample Mass:	235.2 g		

Reviewed by Rob Schroeder 12/08/99

HNF-1701 REV. 0

EXCELL SPREADSHEETS

ATTACHMENT 3

HNF-1701 REV. 0

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Table 1										
AZ101 Cores 266 and 269 Composite Results										
Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit	
S00T000806	W		Acetate by IC-Dionex 500 col	ug/g	< 9.71E+02	9.08E+02	77.267932	n/a	9.71E+02	
S00T000807	W		Acetate by IC-Dionex 500 col	ug/g	< 9.32E+02				9.32E+02	
S00T000808	W		Acetate by IC-Dionex 500 col	ug/g	< 8.22E+02				8.22E+02	
S00T000797	F		Alpha of Digested Solid	uCi/g	4.17E+01	4.77E+01	5.1964732	10.901692	3.83	
S00T000798	F		Alpha of Digested Solid	uCi/g	5.12E+01				3.62	
S00T000799	F		Alpha of Digested Solid	uCi/g	5.01E+01				3.87	
S00T000803	A		Aluminium -ICP-Acid Digest	ug/g	4.57E+04	5.65E+04	19053.609	33.723201	26.7	
S00T000804	A		Aluminium -ICP-Acid Digest	ug/g	7.85E+04				274	
S00T000805	A		Aluminium -ICP-Acid Digest	ug/g	4.53E+04				28.2	
S00T000803	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.40E+00	2.47E+00	0.0705006	n/a	2.404	
S00T000804	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.48E+00				2.475	
S00T000805	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.55E+00				2.545	
S00T000797	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	4.43E+01	4.91E+01	4.6543886	9.48584635	5.73	
S00T000798	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	5.36E+01				6.2	
S00T000799	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	4.93E+01				6.1	
S00T000806	W		Ammonia-by ISE-Std Additions	ug/g	7.32E+03	6.99E+03	1911.0556	27.3268192	5.15E+03	
S00T000807	W		Ammonia-by ISE-Std Additions	ug/g	< 4.94E+03				4.94E+03	
S00T000808	W		Ammonia-by ISE-Std Additions	ug/g	< 8.72E+03				8.72E+03	
S00T000803	A		Antimony (Total) ICP/MS ACD159	ug/g	< 7.07E+00	7.28E+00	0.207505	n/a	7.071	
S00T000804	A		Antimony (Total) ICP/MS ACD159	ug/g	< 7.28E+00				7.281	
S00T000805	A		Antimony (Total) ICP/MS ACD159	ug/g	< 7.49E+00				7.486	
S00T000803	A		Antimony -ICP-Acid Digest	ug/g	< 3.20E+01	3.29E+01	0.9504385	n/a	32	
S00T000804	A		Antimony -ICP-Acid Digest	ug/g	< 3.29E+01				32.9	
S00T000805	A		Antimony -ICP-Acid Digest	ug/g	< 3.39E+01				33.9	
S00T000797	F		Antimony-125 by GEA	uCi/g	1.71E+01	1.78E+01	0.7150524	4.01714857	n/a	
S00T000798	F		Antimony-125 by GEA	uCi/g	1.85E+01				n/a	
S00T000799	F		Antimony-125 by GEA	uCi/g	1.78E+01				n/a	
S00T000803	A		Arsenic -ICP-Acid Digest	ug/g	< 5.33E+01	5.49E+01	1.5502688	n/a	53.3	
S00T000804	A		Arsenic -ICP-Acid Digest	ug/g	< 5.49E+01				54.9	
S00T000805	A		Arsenic -ICP-Acid Digest	ug/g	< 5.64E+01				56.4	
S00T000803	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 7.07E+01	7.28E+01	2.0750502	n/a	70.71	
S00T000804	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 7.28E+01				72.81	

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000805	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 7.49E+01				74.86
S00T000803	A		Barium (Total) ICP/MS ACIDG159	ug/g	5.12E+02	5.14E+02	44.545857	8.66089239	7.07
S00T000804	A		Barium (Total) ICP/MS ACIDG159	ug/g	4.71E+02				7.28
S00T000805	A		Barium (Total) ICP/MS ACIDG159	ug/g	5.60E+02				7.49
S00T000803	A		Barium -ICP-Acid Digest	ug/g	4.44E+02	4.54E+02	18.770544	4.13144776	26.7
S00T000804	A		Barium -ICP-Acid Digest	ug/g	4.43E+02				27.4
S00T000805	A		Barium -ICP-Acid Digest	ug/g	4.76E+02				28.2
S00T000803	A		Beryllium -ICP-Acid Digest	ug/g	7.14E+00	7.32E+00	0.2107922	2.8809862	2.67
S00T000804	A		Beryllium -ICP-Acid Digest	ug/g	7.26E+00				2.74
S00T000805	A		Beryllium -ICP-Acid Digest	ug/g	7.55E+00				2.82
S00T000797	F		Beta of Solid Sample	uCi/g	3.68E+04	4.42E+04	6470.188	14.6274033	10.3
S00T000798	F		Beta of Solid Sample	uCi/g	4.86E+04				9.71
S00T000799	F		Beta of Solid Sample	uCi/g	4.73E+04				10.4
S00T000803	A		Bismuth -ICP-Acid Digest	ug/g	6.19E+01	6.07E+01	5.2595944	8.66966111	53.3
S00T000804	A		Bismuth -ICP-Acid Digest	ug/g	< 5.49E+01				54.9
S00T000805	A		Bismuth -ICP-Acid Digest	ug/g	6.52E+01				56.4
S00T000803	A		Boron -ICP-Acid Digest	ug/g	6.22E+01	5.70E+01	14.3262	25.1336838	26.7
S00T000804	A		Boron -ICP-Acid Digest	ug/g	6.80E+01				27.4
S00T000805	A		Boron -ICP-Acid Digest	ug/g	4.08E+01				28.2
S00T000806	W		C-14 Small Volume	uCi/g	< 2.30E-03	2.25E-03	0.0001136	5.04791853	2.30E-03
S00T000807	W		C-14 Small Volume	uCi/g	2.33E-03				2.21E-03
S00T000808	W		C-14 Small Volume	uCi/g	2.12E-03				1.94E-03
S00T000803	A		Cadmium -ICP-Acid Digest	ug/g	4.49E+03	4.73E+03	215.48395	4.55247785	2.67
S00T000804	A		Cadmium -ICP-Acid Digest	ug/g	4.81E+03				27.4
S00T000805	A		Cadmium -ICP-Acid Digest	ug/g	4.90E+03				2.82
S00T000803	A		Calcium -ICP-Acid Digest	ug/g	2.02E+03	2.07E+03	86.60254	4.1836976	53.3
S00T000804	A		Calcium -ICP-Acid Digest	ug/g	2.02E+03				54.9
S00T000805	A		Calcium -ICP-Acid Digest	ug/g	2.17E+03				56.4
S00T000803	A		Cerium -ICP-Acid Digest	ug/g	4.94E+02	5.05E+02	16.522712	3.27182409	53.3
S00T000804	A		Cerium -ICP-Acid Digest	ug/g	4.97E+02				54.9
S00T000805	A		Cerium -ICP-Acid Digest	ug/g	5.24E+02				56.4
S00T000797	F		Cesium-137 by GEA	uCi/g	7.76E+02	8.06E+02	32.787193	4.0678899	n/a
S00T000798	F		Cesium-137 by GEA	uCi/g	8.01E+02				n/a
S00T000799	F		Cesium-137 by GEA	uCi/g	8.41E+02				n/a
S00T000806	W		Chloride-IC-Dionex 500 col	ug/g	< 1.69E+02	1.58E+02	13.453624	n/a	1.69E+02
S00T000807	W		Chloride-IC-Dionex 500 col	ug/g	< 1.62E+02				1.62E+02
S00T000808	W		Chloride-IC-Dionex 500 col	ug/g	< 1.43E+02				1.43E+02
S00T000803	A		Chromium -ICP-Acid Digest	ug/g	4.64E+02	4.61E+02	55.075705	11.9556524	5.33
S00T000804	A		Chromium -ICP-Acid Digest	ug/g	4.04E+02				5.49
S00T000805	A		Chromium -ICP-Acid Digest	ug/g	5.14E+02				5.64

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000797	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 5.73E+00	6.01E+00	0.2475884	n/a	5.73
S00T000798	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 6.20E+00				6.2
S00T000799	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 6.10E+00				6.1
S00T000803	A		Cobalt -ICP-Acid Digest	ug/g	3.29E+01	3.33E+01	2.3713569	7.12832722	10.7
S00T000804	A		Cobalt -ICP-Acid Digest	ug/g	3.11E+01				11
S00T000805	A		Cobalt -ICP-Acid Digest	ug/g	3.58E+01				11.3
S00T000797	F		Cobalt-60 by GEA	uCi/g	2.69E+00	2.78E+00	0.1349679	4.85787273	n/a
S00T000798	F		Cobalt-60 by GEA	uCi/g	2.93E+00				n/a
S00T000799	F		Cobalt-60 by GEA	uCi/g	2.71E+00				n/a
S00T000803	A		Copper -ICP-Acid Digest	ug/g	1.60E+02	1.62E+02	6.6583281	4.11855348	5.33
S00T000804	A		Copper -ICP-Acid Digest	ug/g	1.56E+02				5.49
S00T000805	A		Copper -ICP-Acid Digest	ug/g	1.69E+02				5.64
S00T000803	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	1.52E+01	1.51E+01	0.9106225	6.0412815	9.61E-02
S00T000804	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	1.41E+01				9.92E-02
S00T000805	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	1.59E+01				1.02E-01
S00T000803	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	5.73E+00	5.91E+00	0.3752763	6.35451277	9.61E-02
S00T000804	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	5.65E+00				9.92E-02
S00T000805	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	6.34E+00				1.02E-01
S00T000803	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.12E+02	1.26E+02	16.370706	12.9926234	9.61E-02
S00T000804	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.44E+02				9.92E-02
S00T000805	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.22E+02				1.02E-01
S00T000806	W		Cyanide Water Distillation	ug/g	< 1.13E+01	1.06E+01	0.8944458	n/a	11.3
S00T000807	W		Cyanide Water Distillation	ug/g	< 1.09E+01				10.9
S00T000808	W		Cyanide Water Distillation	ug/g	< 9.59E+00				9.59
S00T000803	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	2.29E+01	2.33E+01	1.2844195	5.51805579	7.071
S00T000804	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	2.22E+01				7.281
S00T000805	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	2.47E+01				7.486
S00T000803	A		Europium ICP-Acid Digest	ug/g	< 2.67E+01	2.74E+01	0.7505553	n/a	26.7
S00T000804	A		Europium ICP-Acid Digest	ug/g	< 2.74E+01				27.4
S00T000805	A		Europium ICP-Acid Digest	ug/g	< 2.82E+01				28.2
S00T000797	F		Europium-152 by GEA	uCi/g	< 4.80E+00	4.89E+00	0.1091345	n/a	4.802
S00T000798	F		Europium-152 by GEA	uCi/g	< 4.85E+00				4.852
S00T000799	F		Europium-152 by GEA	uCi/g	< 5.01E+00				5.011
S00T000797	F		Europium-154 by GEA	uCi/g	3.06E+01	3.25E+01	1.6936056	5.21109422	n/a
S00T000798	F		Europium-154 by GEA	uCi/g	3.30E+01				n/a
S00T000799	F		Europium-154 by GEA	uCi/g	3.39E+01				n/a
S00T000797	F		Europium-155 by GEA	uCi/g	4.33E+01	4.64E+01	2.8862663	6.22263672	n/a
S00T000798	F		Europium-155 by GEA	uCi/g	4.69E+01				n/a
S00T000799	F		Europium-155 by GEA	uCi/g	4.90E+01				n/a
S00T000806	W		Fluoride-IC-Dionex 500	ug/g	3.74E+04	3.18E+04	5870.548	18.4415119	1.02E+02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000807		W	Fluoride-IC-Dionex 500	ug/g	3.24E+04				1.19E+03
S00T000808		W	Fluoride-IC-Dionex 500	ug/g	2.57E+04				1.08E+04
S00T000806		W	Formate by IC-DIONEX 500 col	ug/g	< 9.71E+02	9.08E+02	77.267932	n/a	1.05E+02
S00T000807		W	Formate by IC-DIONEX 500 col	ug/g	< 9.32E+02				9.32E+02
S00T000808		W	Formate by IC-DIONEX 500 col	ug/g	< 8.22E+02				8.22E+02
S00T000806		W	Iodine-129 Waste Tank Samples	uCi/g	< 3.04E-03	2.68E-03	0.0004124	n/a	3.04E-03
S00T000807		W	Iodine-129 Waste Tank Samples	uCi/g	< 2.77E-03				2.77E-03
S00T000808		W	Iodine-129 Waste Tank Samples	uCi/g	< 2.23E-03				2.23E-03
S00T000803		A	Iron -ICP-Acid Digest	ug/g	5.99E+04	6.17E+04	3380.8283	5.4794624	26.7
S00T000804		A	Iron -ICP-Acid Digest	ug/g	5.96E+04				274
S00T000805		A	Iron -ICP-Acid Digest	ug/g	6.56E+04				28.2
S00T000803		A	Lanthanum -ICP-Acid Digest	ug/g	1.40E+03	1.49E+03	95.39392	6.40227652	26.7
S00T000804		A	Lanthanum -ICP-Acid Digest	ug/g	1.59E+03				27.4
S00T000805		A	Lanthanum -ICP-Acid Digest	ug/g	1.48E+03				28.2
S00T000803		A	Lead -ICP-Acid Digest	ug/g	2.66E+02	2.67E+02	15.524175	5.81429764	53.3
S00T000804		A	Lead -ICP-Acid Digest	ug/g	2.52E+02				54.9
S00T000805		A	Lead -ICP-Acid Digest	ug/g	2.83E+02				56.4
S00T000803		A	Lithium -ICP-Acid Digest	ug/g	4.23E+02	3.94E+02	56.083271	14.2463856	5.33
S00T000804		A	Lithium -ICP-Acid Digest	ug/g	3.29E+02				5.49
S00T000805		A	Lithium -ICP-Acid Digest	ug/g	4.29E+02				5.64
S00T000803		A	Magnesium -ICP-Acid Digest	ug/g	4.37E+02	4.39E+02	14.640128	3.33235072	53.3
S00T000804		A	Magnesium -ICP-Acid Digest	ug/g	4.26E+02				54.9
S00T000805		A	Magnesium -ICP-Acid Digest	ug/g	4.55E+02				56.4
S00T000803		A	Manganese -ICP-Acid Digest	ug/g	7.20E+02	7.30E+02	55.139218	7.55676808	5.33
S00T000804		A	Manganese -ICP-Acid Digest	ug/g	6.80E+02				5.49
S00T000805		A	Manganese -ICP-Acid Digest	ug/g	7.89E+02				5.64
S00T000815			Mercury by CVAA (PE) with FIAS	ug/g	INS				1.25E-01
S00T000816			Mercury by CVAA (PE) with FIAS	ug/g	INS				1.25E-01
S00T000817			Mercury by CVAA (PE) with FIAS	ug/g	INS				1.25E-01
S00T000803		A	Molybdenum -ICP-Acid Digest	ug/g	4.58E+01	4.36E+01	5.7262553	13.1336131	26.7
S00T000804		A	Molybdenum -ICP-Acid Digest	ug/g	3.71E+01				27.4
S00T000805		A	Molybdenum -ICP-Acid Digest	ug/g	4.79E+01				28.2
S00T000803		A	Nb/Zr 93 by ICP/MS AcidD159	ug/g	3.02E+02	2.91E+02	28.536526	9.79514633	7.071
S00T000804		A	Nb/Zr 93 by ICP/MS AcidD159	ug/g	2.59E+02				7.281
S00T000805		A	Nb/Zr 93 by ICP/MS AcidD159	ug/g	3.13E+02				7.486
S00T000803		A	Neodymium -ICP-Acid Digest	ug/g	1.16E+03	1.20E+03	35.118846	2.93472249	53.3
S00T000804		A	Neodymium -ICP-Acid Digest	ug/g	1.20E+03				54.9
S00T000805		A	Neodymium -ICP-Acid Digest	ug/g	1.23E+03				56.4
S00T000803		A	Neptunium-237 by ICP/MS	ug/g	5.50E+01	5.63E+01	4.3215429	7.6804673	2.404
S00T000804		A	Neptunium-237 by ICP/MS	ug/g	5.27E+01				2.475

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000805	A		Neptunium-237 by ICP/MS	ug/g	6.11E+01				2.545
S00T000803	A		Nickel -ICP-Acid Digest	ug/g	2.96E+03	3.07E+03	143.64308	4.68401335	10.7
S00T000804	A		Nickel -ICP-Acid Digest	ug/g	3.01E+03				11
S00T000805	A		Nickel -ICP-Acid Digest	ug/g	3.23E+03				11.3
S00T000806	W		Nitrate-IC-Dionex 500 col	ug/g	3.54E+04	3.03E+04	5658.0326	18.6939404	1.27E+03
S00T000807	W		Nitrate-IC-Dionex 500 col	ug/g	3.12E+04				1.22E+03
S00T000808	W		Nitrate-IC-Dionex 500 col	ug/g	2.42E+04				1.07E+03
S00T000806	W		Nitrite-IC - Dionex 500 col	ug/g	3.81E+04	3.28E+04	5981.0813	18.2535543	1.14E+03
S00T000807	W		Nitrite-IC - Dionex 500 col	ug/g	3.39E+04				1.09E+03
S00T000808	W		Nitrite-IC - Dionex 500 col	ug/g	2.63E+04				9.65E+02
S00T000806	W		OH- by Pot. Titration	ug/g	< 1.29E+04	1.21E+04	1040.833	n/a	1.29E+04
S00T000807	W		OH- by Pot. Titration	ug/g	< 1.24E+04				1.24E+04
S00T000808	W		OH- by Pot. Titration	ug/g	< 1.09E+04				1.09E+04
S00T000806	W		Oxalate-IC-Dionex 500 col	ug/g	2.48E+04	2.05E+04	5445.4874	26.520231	1.14E+03
S00T000807	W		Oxalate-IC-Dionex 500 col	ug/g	2.24E+04				1.09E+03
S00T000808	W		Oxalate-IC-Dionex 500 col	ug/g	1.44E+04				9.65E+02
S00T000803	A		Palladium(Total) ICP/MS ACD159	ug/g	1.98E+03	1.96E+03	215.48395	10.9754135	9.428
S00T000804	A		Palladium(Total) ICP/MS ACD159	ug/g	1.74E+03				9.709
S00T000805	A		Palladium(Total) ICP/MS ACD159	ug/g	2.17E+03				9.983
S00T000806	W		Phosphate-IC-Dionex 500 col	ug/g	< 1.14E+03	1.07E+03	90.138782	n/a	1.14E+03
S00T000807	W		Phosphate-IC-Dionex 500 col	ug/g	< 1.09E+03				1.09E+03
S00T000808	W		Phosphate-IC-Dionex 500 col	ug/g	< 9.65E+02				9.65E+02
S00T000803	A		Phosphorus -ICP-Acid Digest	ug/g	9.61E+02	7.79E+02	206.23288	26.4740537	107
S00T000804	A		Phosphorus -ICP-Acid Digest	ug/g	5.55E+02				110
S00T000805	A		Phosphorus -ICP-Acid Digest	ug/g	8.21E+02				113
S00T000803	A		Plutonium-239 by ICP/MS	ug/g	4.21E+01	4.20E+01	2.896049	6.8920729	2.404
S00T000804	A		Plutonium-239 by ICP/MS	ug/g	3.91E+01				2.475
S00T000805	A		Plutonium-239 by ICP/MS	ug/g	4.49E+01				2.545
S00T000803	A		Plutonium-240 by ICP/MS	ug/g	3.26E+00	3.22E+00	0.1783956	5.54885312	2.404
S00T000804	A		Plutonium-240 by ICP/MS	ug/g	3.02E+00				2.475
S00T000805	A		Plutonium-240 by ICP/MS	ug/g	3.37E+00				2.545
S00T000803	A		Plutonium-242 by ICP/MS	ug/g	< 2.40E+00	2.47E+00	0.0705006	n/a	2.404
S00T000804	A		Plutonium-242 by ICP/MS	ug/g	< 2.48E+00				2.475
S00T000805	A		Plutonium-242 by ICP/MS	ug/g	< 2.55E+00				2.545
S00T000803	A		Potassium -ICP-Acid Digest	ug/g	2.19E+03	1.93E+03	241.72988	12.5032695	267
S00T000804	A		Potassium -ICP-Acid Digest	ug/g	1.71E+03				274
S00T000805	A		Potassium -ICP-Acid Digest	ug/g	1.90E+03				282
S00T000803	A		Praseodymium(Tot) ICP/MS AD159	ug/g	2.58E+02	2.76E+02	19.756855	7.16693664	7.071
S00T000804	A		Praseodymium(Tot) ICP/MS AD159	ug/g	2.72E+02				7.281
S00T000805	A		Praseodymium(Tot) ICP/MS AD159	ug/g	2.97E+02				7.486

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000803	A		Protactinium-231 by ICP/MS	ug/g	< 7.21E-01	7.42E-01	0.0210079	n/a	7.21E-01
S00T000804	A		Protactinium-231 by ICP/MS	ug/g	< 7.43E-01				7.43E-01
S00T000805	A		Protactinium-231 by ICP/MS	ug/g	< 7.63E-01				7.63E-01
S00T000803	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.40E+00	2.47E+00	0.0705006	n/a	2.404
S00T000804	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.48E+00				2.475
S00T000805	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.55E+00				2.545
S00T000803	A		Pu/Am-241 by ICP/MS	ug/g	1.62E+01	1.69E+01	0.7686352	4.56163296	2.404
S00T000804	A		Pu/Am-241 by ICP/MS	ug/g	1.66E+01				2.475
S00T000805	A		Pu/Am-241 by ICP/MS	ug/g	1.77E+01				2.545
S00T000797	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	< 1.51E+00	1.26E+00	0.5079137	40.3853994	1.51
S00T000798	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	< 6.73E-01				6.73E-01
S00T000799	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	1.59E+00				8.02E-01
S00T000797	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	4.32E+00	3.61E+00	0.6557693	18.1821424	1.51
S00T000798	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	3.03E+00				6.73E-01
S00T000799	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	3.47E+00				8.02E-01
S00T000803	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.23E+02	1.24E+02	9.0737717	7.29793973	7.071
S00T000804	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.16E+02				7.281
S00T000805	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.34E+02				7.486
S00T000803	A		Rhodium -ICP-Acid Digest	ug/g	< 5.33E+02	5.49E+02	15.502688	n/a	533
S00T000804	A		Rhodium -ICP-Acid Digest	ug/g	< 5.49E+02				549
S00T000805	A		Rhodium -ICP-Acid Digest	ug/g	< 5.64E+02				564
S00T000803	A		Rubidium (Total) ICP/MS ACD159	ug/g	1.70E+01	1.45E+01	6.3573349	43.8225332	7.071
S00T000804	A		Rubidium (Total) ICP/MS ACD159	ug/g	< 7.28E+00				7.281
S00T000805	A		Rubidium (Total) ICP/MS ACD159	ug/g	1.92E+01				7.486
S00T000803	A		Rubidium-ICP-Acid Digest	ug/g	< 1.07E+03	1.10E+03	30	n/a	1.07E+03
S00T000804	A		Rubidium-ICP-Acid Digest	ug/g	< 1.10E+03				1.10E+03
S00T000805	A		Rubidium-ICP-Acid Digest	ug/g	< 1.13E+03				1.13E+03
S00T000803	A		Ruthenium ICP-Acid Digest	ug/g	< 1.07E+03	1.10E+03	30	n/a	1.07E+03
S00T000804	A		Ruthenium ICP-Acid Digest	ug/g	< 1.10E+03				1.10E+03
S00T000805	A		Ruthenium ICP-Acid Digest	ug/g	< 1.13E+03				1.13E+03
S00T000803	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.15E+03	1.08E+03	60.827625	5.63218753	7.071
S00T000804	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.04E+03				7.281
S00T000805	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.05E+03				7.486
S00T000803	A		Selenium -ICP-Acid Digest	ug/g	< 5.33E+01	5.49E+01	1.5502688	n/a	53.3
S00T000804	A		Selenium -ICP-Acid Digest	ug/g	< 5.49E+01				54.9
S00T000805	A		Selenium -ICP-Acid Digest	ug/g	< 5.64E+01				56.4
S00T000803	A		Selenium(Total) ICP/MS ACDG159	ug/g	6.23E+01	4.68E+01	17.458563	37.2993092	23.57
S00T000804	A		Selenium(Total) ICP/MS ACDG159	ug/g	2.79E+01				24.27
S00T000805	A		Selenium(Total) ICP/MS ACDG159	ug/g	5.02E+01				24.96
S00T000803	A		Silicon -ICP-Acid Digest	ug/g	9.10E+02	8.37E+02	104.73299	12.5129025	26.7

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000804	A		Silicon -ICP-Acid Digest	ug/g	7.17E+02				274
S00T000805	A		Silicon -ICP-Acid Digest	ug/g	8.84E+02				28.2
S00T000803	A		Silver -ICP-Acid Digest	ug/g	1.42E+02	1.38E+02	10.016653	7.24095383	5.33
S00T000804	A		Silver -ICP-Acid Digest	ug/g	1.27E+02				5.49
S00T000805	A		Silver -ICP-Acid Digest	ug/g	1.46E+02				5.64
S00T000803	A		Sn126 ICP/MS AcidDig LA-505159	ug/g	< 7.21E+00	7.42E+00	0.2115049	n/a	7.212
S00T000804	A		Sn126 ICP/MS AcidDig LA-505159	ug/g	< 7.43E+00				7.426
S00T000805	A		Sn126 ICP/MS AcidDig LA-505159	ug/g	< 7.64E+00				7.635
S00T000803	A		Sodium -ICP-Acid Digest	ug/g	1.61E+05	1.50E+05	14364.308	9.55497181	53.3
S00T000804	A		Sodium -ICP-Acid Digest	ug/g	1.34E+05				549
S00T000805	A		Sodium -ICP-Acid Digest	ug/g	1.56E+05				56.4
S00T000803	A		Strontium -ICP-Acid Digest	ug/g	3.77E+02	3.71E+02	32.868425	8.85146083	5.33
S00T000804	A		Strontium -ICP-Acid Digest	ug/g	3.36E+02				5.49
S00T000805	A		Strontium -ICP-Acid Digest	ug/g	4.01E+02				5.64
S00T000797	F		Strontium-89/90 High Level	uCi/g	2.00E+04	2.15E+04	1452.5839	6.75620421	8.15
S00T000798	F		Strontium-89/90 High Level	uCi/g	2.29E+04				7.65
S00T000799	F		Strontium-89/90 High Level	uCi/g	2.16E+04				8.14
S00T000806	W		Sulfate-IC-Dionex 500 col	ug/g	1.74E+05	1.71E+05	7571.8778	4.43664715	1.37E+05
S00T000807	W		Sulfate-IC-Dionex 500 col	ug/g	1.62E+05				1.27E+04
S00T000808	W		Sulfate-IC-Dionex 500 col	ug/g	1.76E+05				1.16E+05
S00T000803	A		Sulfur -ICP-Acid Digest	ug/g	5.11E+04	4.75E+04	5697.6603	12.0034979	53.3
S00T000804	A		Sulfur -ICP-Acid Digest	ug/g	4.09E+04				549
S00T000805	A		Sulfur -ICP-Acid Digest	ug/g	5.04E+04				56.4
S00T000803	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 7.07E+00	7.28E+00	0.207505	n/a	7.071
S00T000804	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 7.28E+00				7.281
S00T000805	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 7.49E+00				7.486
S00T000803	A		Tantalum -ICP-Acid Digest	ug/g	< 2.67E+02	2.74E+02	7.5055535	n/a	267
S00T000804	A		Tantalum -ICP-Acid Digest	ug/g	< 2.74E+02				274
S00T000805	A		Tantalum -ICP-Acid Digest	ug/g	< 2.82E+02				282
S00T000803	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	1.01E+01	9.76E+00	0.7648728	7.83654339	9.61E-02
S00T000804	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	8.89E+00				9.92E-02
S00T000805	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	1.03E+01				1.02E-01
S00T000797	F		Technetium-99 Liq. Scint.	uCi/g	1.69E-01	1.44E-01	0.0235867	16.3418379	1.25E-01
S00T000798	F		Technetium-99 Liq. Scint.	uCi/g	1.22E-01				1.19E-01
S00T000799	F		Technetium-99 Liq. Scint.	uCi/g	1.42E-01				1.29E-01
S00T000803	A		Tellurium (Tot) ICP/MS ACD159	ug/g	5.86E+01	5.73E+01	3.9338827	6.86741239	7.071
S00T000804	A		Tellurium (Tot) ICP/MS ACD159	ug/g	5.29E+01				7.281
S00T000805	A		Tellurium (Tot) ICP/MS ACD159	ug/g	6.04E+01				7.486
S00T000803	A		Tellurium-ICP-Acid Digest	ug/g	< 2.67E+02	2.74E+02	7.5055535	n/a	267
S00T000804	A		Tellurium-ICP-Acid Digest	ug/g	< 2.74E+02				274

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000805	A		Tellurium-ICP-Acid Digest	ug/g	< 2.82E+02				282
S00T000803	A		Thallium (Total) ICP/MS ACD159	ug/g	< 7.07E+00	7.28E+00	0.207505	n/a	7.071
S00T000804	A		Thallium (Total) ICP/MS ACD159	ug/g	< 7.28E+00				7.281
S00T000805	A		Thallium (Total) ICP/MS ACD159	ug/g	< 7.49E+00				7.486
S00T000803	A		Thallium -ICP-Acid Digest	ug/g	< 1.07E+02	1.10E+02		3 n/a	107
S00T000804	A		Thallium -ICP-Acid Digest	ug/g	< 1.10E+02				110
S00T000805	A		Thallium -ICP-Acid Digest	ug/g	< 1.13E+02				113
S00T000803	A		Thorium -ICP-Acid Digest	ug/g	1.12E+02	1.13E+02	1.7320508	1.53278833	26.7
S00T000804	A		Thorium -ICP-Acid Digest	ug/g	1.15E+02				27.4
S00T000805	A		Thorium -ICP-Acid Digest	ug/g	1.12E+02				28.2
S00T000806	W		TIC by Acid/Coulometry	ug/g	5.72E+03	5.20E+03	530.28294	10.1977489	52
S00T000807	W		TIC by Acid/Coulometry	ug/g	5.22E+03				52
S00T000808	W		TIC by Acid/Coulometry	ug/g	4.66E+03				52
S00T001160			TIC by Acid/Coulometry	ug/g	INS				5
S00T001161			TIC by Acid/Coulometry	ug/g	INS				5
S00T001162			TIC by Acid/Coulometry	ug/g	INS				5
S00T000803	A		Titanium-ICP-Acid Digest	ug/g	2.83E+01	2.81E+01	1.5631165	5.56929885	5.33
S00T000804	A		Titanium-ICP-Acid Digest	ug/g	2.64E+01				5.49
S00T000805	A		Titanium-ICP-Acid Digest	ug/g	2.95E+01				5.64
S00T000806	W		TOC by Persulfate/Coulometry	ug/g	9.85E+03	5.57E+03	4602.8071	82.6851577	416
S00T000807	W		TOC by Persulfate/Coulometry	ug/g	7.00E+02				416
S00T000808	W		TOC by Persulfate/Coulometry	ug/g	6.15E+03				416
S00T001160			TOC by Persulfate/Coulometry	ug/g	INS				80
S00T001161			TOC by Persulfate/Coulometry	ug/g	INS				80
S00T001162			TOC by Persulfate/Coulometry	ug/g	INS				80
S00T000806	W		Tot. Organic Carbon by Coul.	ug/g	7.53E+03	6.57E+03	1457.4064	22.1940057	566
S00T000807	W		Tot. Organic Carbon by Coul.	ug/g	7.28E+03				543
S00T000808	W		Tot. Organic Carbon by Coul.	ug/g	4.89E+03				480
S00T000806	W		Tritium By Lachat	uCi/g	1.47E-02	1.45E-02	0.0014572	10.0263729	3.59E-03
S00T000807	W		Tritium By Lachat	uCi/g	1.59E-02				3.54E-03
S00T000808	W		Tritium By Lachat	uCi/g	1.30E-02				3.11E-03
S00T000803	A		Tungsten (Total) ICP/MS ACD159	ug/g	3.63E+01	3.24E+01	4.1036853	12.6722141	7.071
S00T000804	A		Tungsten (Total) ICP/MS ACD159	ug/g	2.81E+01				7.281
S00T000805	A		Tungsten (Total) ICP/MS ACD159	ug/g	3.28E+01				7.486
S00T000803	A		Tungsten -ICP-Acid Digest	ug/g	< 2.67E+02	2.74E+02	7.5055535	n/a	267
S00T000804	A		Tungsten -ICP-Acid Digest	ug/g	< 2.74E+02				274
S00T000805	A		Tungsten -ICP-Acid Digest	ug/g	< 2.82E+02				282
S00T000803	A		Uranium -ICP-Acid Digest	ug/g	3.87E+03	3.91E+03	188.76794	4.82371214	267
S00T000804	A		Uranium -ICP-Acid Digest	ug/g	3.75E+03				274
S00T000805	A		Uranium -ICP-Acid Digest	ug/g	4.12E+03				282

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000803	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 5.77E-01	5.94E-01	0.017	n/a	5.77E-01
S00T000804	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 5.94E-01				5.94E-01
S00T000805	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 6.11E-01				6.11E-01
S00T000803	A		Uranium-234 by ICP/MS AcidD159	ug/g	< 5.77E-01	5.94E-01	0.017	n/a	5.77E-01
S00T000804	A		Uranium-234 by ICP/MS AcidD159	ug/g	< 5.94E-01				5.94E-01
S00T000805	A		Uranium-234 by ICP/MS AcidD159	ug/g	< 6.11E-01				6.11E-01
S00T000803	A		Uranium-235 by ICP/MS AcidD159	ug/g	3.54E+01	3.61E+01	1.947109	5.39614495	5.77E-01
S00T000804	A		Uranium-235 by ICP/MS AcidD159	ug/g	3.46E+01				5.94E-01
S00T000805	A		Uranium-235 by ICP/MS AcidD159	ug/g	3.83E+01				6.11E-01
S00T000803	A		Uranium-236 by ICP/MS AcidD159	ug/g	3.42E+00	3.53E+00	0.1960162	5.5518171	7.69E-01
S00T000804	A		Uranium-236 by ICP/MS AcidD159	ug/g	3.42E+00				7.92E-01
S00T000805	A		Uranium-236 by ICP/MS AcidD159	ug/g	3.76E+00				8.15E-01
S00T000803	A		Uranium-238 by ICP/MS AcidD159	ug/g	4.09E+03	4.17E+03	225.01852	5.40044443	5.77E-01
S00T000804	A		Uranium-238 by ICP/MS AcidD159	ug/g	3.99E+03				5.94E-01
S00T000805	A		Uranium-238 by ICP/MS AcidD159	ug/g	4.42E+03				6.11E-01
S00T000803	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 3.54E+02	3.64E+02	10	n/a	353.6
S00T000804	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 3.64E+02				364
S00T000805	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 3.74E+02				374.3
S00T000803	A		Vanadium -ICP-Acid Digest	ug/g	< 2.67E+01	2.74E+01	0.7505553	n/a	26.7
S00T000804	A		Vanadium -ICP-Acid Digest	ug/g	< 2.74E+01				27.4
S00T000805	A		Vanadium -ICP-Acid Digest	ug/g	< 2.82E+01				28.2
S00T000803	A		Yttrium (Total) ICP/MS ACDG159	ug/g	1.79E+02	1.77E+02	14.571662	8.21710263	2.357
S00T000804	A		Yttrium (Total) ICP/MS ACDG159	ug/g	1.62E+02				2.428
S00T000805	A		Yttrium (Total) ICP/MS ACDG159	ug/g	1.91E+02				2.496
S00T000803	A		Yttrium -ICP-Acid Digest	ug/g	1.40E+02	1.42E+02	7.2111026	5.07824123	26.7
S00T000804	A		Yttrium -ICP-Acid Digest	ug/g	1.36E+02				27.4
S00T000805	A		Yttrium -ICP-Acid Digest	ug/g	1.50E+02				28.2
S00T000803	A		Zinc -ICP-Acid Digest	ug/g	6.02E+01	6.14E+01	4.0360872	6.57343194	5.33
S00T000804	A		Zinc -ICP-Acid Digest	ug/g	5.81E+01				5.49
S00T000805	A		Zinc -ICP-Acid Digest	ug/g	6.59E+01				5.64
S00T000803	A		Zirconium -ICP-Acid Digest	ug/g	2.24E+04	2.25E+04	1106.044	4.9084793	5.33
S00T000804	A		Zirconium -ICP-Acid Digest	ug/g	2.15E+04				54.9
S00T000805	A		Zirconium -ICP-Acid Digest	ug/g	2.37E+04				5.64
S00T000803	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	2.56E+04	2.49E+04	2137.7558	8.58536479	7.071
S00T000804	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	2.25E+04				7.281
S00T000805	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	2.66E+04				7.486

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
Sample#	R	A#	Analyte	Unit	Result				Det Limit
S00T000782			Acetate by IC-Dionex 500 col	ug/mL	< 2.56E+02	2.56E+02		0 n/a	255.5
S00T000785			Acetate by IC-Dionex 500 col	ug/mL	< 2.56E+02				255.5
S00T000827			Acetate by IC-Dionex 500 col	ug/mL	< 2.56E+02				255.5
S00T000812	W		Acetate by IC-Dionex 500 col	ug/g	< 8.96E+02	8.30E+02	108.5833	n/a	8.96E+02
S00T000813	W		Acetate by IC-Dionex 500 col	ug/g	< 8.90E+02				8.90E+02
S00T000814	W		Acetate by IC-Dionex 500 col	ug/g	< 7.05E+02				7.05E+02
S00T000780			Alpha in Liquid Samples	uCi/mL	< 4.65E-02	5.18E-02	0.0092376	n/a	8.04E-02
S00T000783			Alpha in Liquid Samples	uCi/mL	< 4.65E-02				8.04E-02
S00T000786			Alpha in Liquid Samples	uCi/mL	< 6.25E-02				8.04E-02
S00T000800	F		Alpha of Digested Solid	uCi/g	8.33E+01	8.37E+01	4.7127487	5.63052409	3.63
S00T000801	F		Alpha of Digested Solid	uCi/g	7.92E+01				3.59
S00T000802	F		Alpha of Digested Solid	uCi/g	8.86E+01				3.72
S00T000809	A		Aluminium -ICP-Acid Digest	ug/g	5.98E+04	5.40E+04	7958.8525	14.7477193	318
S00T000810	A		Aluminium -ICP-Acid Digest	ug/g	4.49E+04				28.3
S00T000811	A		Aluminium -ICP-Acid Digest	ug/g	5.72E+04				27.1
S00T000778	D		Aluminium-ICP-Acid Dil.	ug/mL	8.26E+03	8.07E+03	185.56221	2.30035796	20.1
S00T000781	D		Aluminium-ICP-Acid Dil.	ug/mL	7.89E+03				20.1
S00T000784	D		Aluminium-ICP-Acid Dil.	ug/mL	8.05E+03				20.1
S00T000778	D		Am 243/Cm 243 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02		0 n/a	6.03E-02
S00T000781	D		Am 243/Cm 243 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Am 243/Cm 243 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000809	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.55E+00	2.33E+00	0.1973837	n/a	2.551
S00T000810	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.27E+00				2.271
S00T000811	A		Am 243/Cm 243 by ICP/MS	ug/g	< 2.17E+00				2.17
S00T000780			Am-241 by TRU-SPEC Resin IonEx	uCi/mL	1.14E-03	7.00E-04	0.0004076	58.203059	3.22E-04
S00T000783			Am-241 by TRU-SPEC Resin IonEx	uCi/mL	6.26E-04				3.26E-04
S00T000786			Am-241 by TRU-SPEC Resin IonEx	uCi/mL	< 3.35E-04				3.35E-04
S00T000800	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	8.71E+01	8.79E+01	7.5844138	8.62518633	12
S00T000801	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	8.08E+01				10.6
S00T000802	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	9.59E+01				11.8
S00T000779			Ammonia by ISE-Std Additions	ug/mL	< 1.00E+02	8.33E+01	28.867513	n/a	100
S00T000782			Ammonia by ISE-Std Additions	ug/mL	< 1.00E+02				100
S00T000785			Ammonia by ISE-Std Additions	ug/mL	< 5.00E+01				50
S00T000812	W		Ammonia-by ISE-Std Additions	ug/g	< 2.38E+03	2.20E+03	288.84829	n/a	2.38E+03
S00T000813	W		Ammonia-by ISE-Std Additions	ug/g	< 2.36E+03				2.36E+03
S00T000814	W		Ammonia-by ISE-Std Additions	ug/g	< 1.87E+03				1.87E+03
S00T000850	D		Antimony (Total) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02		0 n/a	6.36E-02
S00T000852	D		Antimony (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000854	D		Antimony (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Antimony (Total) ICP/MS ACD159	ug/g	< 8.10E+00	7.40E+00	0.6264187	n/a	8.096
S00T000810	A		Antimony (Total) ICP/MS ACD159	ug/g	< 7.21E+00				7.207
S00T000811	A		Antimony (Total) ICP/MS ACD159	ug/g	< 6.89E+00				6.887
S00T000809	A		Antimony -ICP-Acid Digest	ug/g	< 3.82E+01	3.49E+01	2.9546573	n/a	38.2
S00T000810	A		Antimony -ICP-Acid Digest	ug/g	< 3.40E+01				34
S00T000811	A		Antimony -ICP-Acid Digest	ug/g	< 3.25E+01				32.5
S00T000780			Antimony-125 by GEA	uCi/mL	< 1.58E+00	1.56E+00	0.0292973	n/a	1.584
S00T000783			Antimony-125 by GEA	uCi/mL	< 1.57E+00				1.574
S00T000786			Antimony-125 by GEA	uCi/mL	< 1.53E+00				1.529
S00T000800	F		Antimony-125 by GEA	uCi/g	2.40E+01	2.54E+01	1.4060702	5.54589866	n/a
S00T000801	F		Antimony-125 by GEA	uCi/g	2.53E+01				n/a
S00T000802	F		Antimony-125 by GEA	uCi/g	2.68E+01				n/a
S00T000778	D		Antimony-ICP-Acid Dil.	ug/mL	< 2.41E+01	2.41E+01	0	n/a	24.1
S00T000781	D		Antimony-ICP-Acid Dil.	ug/mL	< 2.41E+01				24.1
S00T000784	D		Antimony-ICP-Acid Dil.	ug/mL	< 2.41E+01				24.1
S00T000809	A		Arsenic -ICP-Acid Digest	ug/g	< 6.36E+01	5.81E+01	4.9244289	n/a	63.6
S00T000810	A		Arsenic -ICP-Acid Digest	ug/g	< 5.66E+01				56.6
S00T000811	A		Arsenic -ICP-Acid Digest	ug/g	< 5.41E+01				54.1
S00T000809	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 8.10E+01	7.40E+01	6.2641866	n/a	80.95
S00T000810	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 7.21E+01				72.06
S00T000811	A		Arsenic(Total) ICP/MS ACIDG159	ug/g	< 6.89E+01				68.86
S00T000850	D		Arsenic(Total) ICP/MS ACIDL158	ug/mL	8.47E+00	8.35E+00	0.126891	1.51934978	8.48E-02
S00T000852	D		Arsenic(Total) ICP/MS ACIDL158	ug/mL	8.37E+00				8.48E-02
S00T000854	D		Arsenic(Total) ICP/MS ACIDL158	ug/mL	8.22E+00				8.48E-02
S00T000778	D		Arsenic-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01	0	n/a	40.1
S00T000781	D		Arsenic-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Arsenic-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000850	D		Barium (Total) ICP/MS ACID Add	ug/mL	8.38E-02	8.39E-02	0.0087008	10.3662823	6.36E-02
S00T000852	D		Barium (Total) ICP/MS ACID Add	ug/mL	9.27E-02				6.36E-02
S00T000854	D		Barium (Total) ICP/MS ACID Add	ug/mL	7.53E-02				6.36E-02
S00T000809	A		Barium (Total) ICP/MS ACIDG159	ug/g	7.19E+02	6.67E+02	48.045118	7.19956808	8.1
S00T000810	A		Barium (Total) ICP/MS ACIDG159	ug/g	6.24E+02				7.21
S00T000811	A		Barium (Total) ICP/MS ACIDG159	ug/g	6.59E+02				6.89
S00T000809	A		Barium -ICP-Acid Digest	ug/g	6.18E+02	5.85E+02	34.559128	5.9109113	31.8
S00T000810	A		Barium -ICP-Acid Digest	ug/g	5.49E+02				28.3
S00T000811	A		Barium -ICP-Acid Digest	ug/g	5.87E+02				27.1
S00T000778	D		Barium-ICP-Acid Dil.	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Barium-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000784	D		Barium-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000809	A		Beryllium -ICP-Acid Digest	ug/g	1.02E+01	9.16E+00	0.9086253	9.91949056	3.18
S00T000810	A		Beryllium -ICP-Acid Digest	ug/g	8.52E+00				2.83
S00T000811	A		Beryllium -ICP-Acid Digest	ug/g	8.76E+00				2.71
S00T000850	D		Beryllium(Total) ICP/MS ACD158	ug/mL	3.02E-01	3.17E-01	0.0172434	5.43383074	6.36E-02
S00T000852	D		Beryllium(Total) ICP/MS ACD158	ug/mL	3.36E-01				6.36E-02
S00T000854	D		Beryllium(Total) ICP/MS ACD158	ug/mL	3.14E-01				6.36E-02
S00T000778	D		Beryllium-ICP-Acid Dil.	ug/mL	< 2.01E+00	2.01E+00	0	n/a	2.01
S00T000781	D		Beryllium-ICP-Acid Dil.	ug/mL	< 2.01E+00				2.01
S00T000784	D		Beryllium-ICP-Acid Dil.	ug/mL	< 2.01E+00				2.01
S00T000780			Beta in Liquid Samples	uCi/mL	2.05E+03	2.02E+03	30	1.48514851	3.51E-01
S00T000783			Beta in Liquid Samples	uCi/mL	2.02E+03				3.51E-01
S00T000786			Beta in Liquid Samples	uCi/mL	1.99E+03				3.51E-01
S00T000800	F		Beta of Solid Sample	uCi/g	3.69E+04	3.70E+04	1404.7538	3.79321467	9.73
S00T000801	F		Beta of Solid Sample	uCi/g	3.57E+04				9.63
S00T000802	F		Beta of Solid Sample	uCi/g	3.85E+04				9.98
S00T000809	A		Bismuth -ICP-Acid Digest	ug/g	8.51E+01	6.79E+01	15.118973	22.2556025	63.6
S00T000810	A		Bismuth -ICP-Acid Digest	ug/g	< 5.66E+01				56.6
S00T000811	A		Bismuth -ICP-Acid Digest	ug/g	6.21E+01				54.1
S00T000778	D		Bismuth-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01	0	n/a	40.1
S00T000781	D		Bismuth-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Bismuth-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000850	D		Boron (Total) ICP/MS ACD158	ug/mL	2.13E+01	2.02E+01	1.6941369	8.38266674	8.48E-01
S00T000852	D		Boron (Total) ICP/MS ACD158	ug/mL	2.11E+01				8.48E-01
S00T000854	D		Boron (Total) ICP/MS ACD158	ug/mL	1.83E+01				8.48E-01
S00T000809	A		Boron -ICP-Acid Digest	ug/g	2.19E+02	2.83E+02	69.615611	24.6281644	31.8
S00T000810	A		Boron -ICP-Acid Digest	ug/g	2.72E+02				28.3
S00T000811	A		Boron -ICP-Acid Digest	ug/g	3.57E+02				27.1
S00T000778	D		Boron-ICP-Acid Dil.	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Boron-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000784	D		Boron-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000775			Bulk Density of Sample	g/mL	1.66E+00	1.68E+00	0.02	1.19047619	5.00E-01
S00T000776			Bulk Density of Sample	g/mL	1.70E+00				5.00E-01
S00T000777			Bulk Density of Sample	g/mL	1.68E+00				5.00E-01
S00T000780			C-14 Small Volume	uCi/mL	2.10E-03	2.05E-03	0.0001997	9.74389481	2.15E-05
S00T000783			C-14 Small Volume	uCi/mL	1.83E-03				2.15E-05
S00T000786			C-14 Small Volume	uCi/mL	2.22E-03				2.14E-05
S00T000812	W		C-14 Small Volume	uCi/g	2.14E-03	1.62E-03	0.0004674	28.7906686	7.98E-04
S00T000813	W		C-14 Small Volume	uCi/g	1.50E-03				7.92E-04
S00T000814	W		C-14 Small Volume	uCi/g	1.23E-03				6.28E-04
S00T000809	A		Cadmium -ICP-Acid Digest	ug/g	6.80E+03	6.35E+03	460.1449	7.25018232	3.18

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000810	A		Cadmium -ICP-Acid Digest	ug/g	5.88E+03				2.83
S00T000811	A		Cadmium -ICP-Acid Digest	ug/g	6.36E+03				2.71
S00T000778	D		Cadmium-ICP-Acid Dil.	ug/mL	4.88E+00	4.00E+00	1.7240166	43.1363627	2.01
S00T000781	D		Cadmium-ICP-Acid Dil.	ug/mL	5.10E+00				2.01
S00T000784	D		Cadmium-ICP-Acid Dil.	ug/mL	< 2.01E+00				2.01
S00T000809	A		Calcium -ICP-Acid Digest	ug/g	2.05E+03	1.89E+03	177.85762	9.39388843	63.6
S00T000810	A		Calcium -ICP-Acid Digest	ug/g	1.70E+03				56.6
S00T000811	A		Calcium -ICP-Acid Digest	ug/g	1.93E+03				54.1
S00T000778	D		Calcium-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01	0	n/a	40.1
S00T000781	D		Calcium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Calcium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000850	D		Cerium (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Cerium (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Cerium (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Cerium -ICP-Acid Digest	ug/g	8.23E+02	7.74E+02	47.606022	6.15329884	63.6
S00T000810	A		Cerium -ICP-Acid Digest	ug/g	7.28E+02				56.6
S00T000811	A		Cerium -ICP-Acid Digest	ug/g	7.70E+02				54.1
S00T000778	D		Cerium-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01	0	n/a	40.1
S00T000781	D		Cerium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Cerium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000780			Cesium-137 by GEA	uCi/mL	1.96E+03	1.90E+03	73.711148	3.87273982	n/a
S00T000783			Cesium-137 by GEA	uCi/mL	1.93E+03				n/a
S00T000786			Cesium-137 by GEA	uCi/mL	1.82E+03				n/a
S00T000800	F		Cesium-137 by GEA	uCi/g	1.00E+03	1.04E+03	45.825757	4.40632278	n/a
S00T000801	F		Cesium-137 by GEA	uCi/g	1.09E+03				n/a
S00T000802	F		Cesium-137 by GEA	uCi/g	1.03E+03				n/a
S00T000782			Chloride-IC-Dionex 500 col	ug/mL	2.03E+02	1.72E+02	31	18.0232558	44.44
S00T000785			Chloride-IC-Dionex 500 col	ug/mL	1.41E+02				44.44
S00T000827			Chloride-IC-Dionex 500 col	ug/mL	1.72E+02				44.44
S00T000812	W		Chloride-IC-Dionex 500 col	ug/g	< 1.56E+02	1.45E+02	18.770544	12.9750306	1.56E+02
S00T000813	W		Chloride-IC-Dionex 500 col	ug/g	< 1.55E+02				1.55E+02
S00T000814	W		Chloride-IC-Dionex 500 col	ug/g	< 1.23E+02				1.23E+02
S00T000809	A		Chromium -ICP-Acid Digest	ug/g	6.06E+02	5.48E+02	52.290853	9.53632582	6.36
S00T000810	A		Chromium -ICP-Acid Digest	ug/g	5.35E+02				5.66
S00T000811	A		Chromium -ICP-Acid Digest	ug/g	5.04E+02				5.41
S00T000778	D		Chromium-ICP-Acid Dil.	ug/mL	7.53E+02	7.39E+02	13.503086	1.82638675	4.01
S00T000781	D		Chromium-ICP-Acid Dil.	ug/mL	7.26E+02				4.01
S00T000784	D		Chromium-ICP-Acid Dil.	ug/mL	7.39E+02				4.01
S00T000780			Cm-243/244 by TRU_SPEC Resin	uCi/mL	< 3.22E-04	3.28E-04	6.658E-06	n/a	3.22E-04
S00T000783			Cm-243/244 by TRU_SPEC Resin	uCi/mL	< 3.26E-04				3.26E-04

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000786			Cm-243/244 by TRU SPEC Resin	uCi/mL	< 3.35E-04				3.35E-04
S00T000800	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 1.20E+01	1.15E+01	0.7571878	n/a	12
S00T000801	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 1.06E+01				10.6
S00T000802	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	< 1.18E+01				11.8
S00T000850	D		Cobalt (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Cobalt (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Cobalt (Total) ICP/MS ACIDL158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Cobalt -ICP-Acid Digest	ug/g	4.61E+01	4.14E+01	4.3844422	10.58192	12.7
S00T000810	A		Cobalt -ICP-Acid Digest	ug/g	3.74E+01				11.3
S00T000811	A		Cobalt -ICP-Acid Digest	ug/g	4.08E+01				10.8
S00T000800	F		Cobalt-60 by GEA	uCi/g	4.16E+00	4.12E+00	0.2693127	6.53936153	n/a
S00T000801	F		Cobalt-60 by GEA	uCi/g	3.83E+00				n/a
S00T000802	F		Cobalt-60 by GEA	uCi/g	4.37E+00				n/a
S00T000778	D		Cobalt-ICP-Acid Dil.	ug/mL	< 8.02E+00	8.02E+00	0	n/a	8.02
S00T000781	D		Cobalt-ICP-Acid Dil.	ug/mL	< 8.02E+00				8.02
S00T000784	D		Cobalt-ICP-Acid Dil.	ug/mL	< 8.02E+00				8.02
S00T000809	A		Copper -ICP-Acid Digest	ug/g	2.28E+02	2.15E+02	13.576941	6.30508107	6.36
S00T000810	A		Copper -ICP-Acid Digest	ug/g	2.01E+02				5.66
S00T000811	A		Copper -ICP-Acid Digest	ug/g	2.17E+02				5.41
S00T000778	D		Copper-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00	0	n/a	4.01
S00T000781	D		Copper-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Copper-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000778	D		Cs 133 by ICP/MS Acid Addition	ug/mL	4.01E+01	4.04E+01	0.5960145	1.47443195	2.41E-03
S00T000781	D		Cs 133 by ICP/MS Acid Addition	ug/mL	4.11E+01				2.41E-03
S00T000784	D		Cs 133 by ICP/MS Acid Addition	ug/mL	4.00E+01				2.41E-03
S00T000778	D		Cs 135 by ICP/MS Acid Addition	ug/mL	1.42E+01	1.43E+01	0.140119	0.98031015	2.41E-03
S00T000781	D		Cs 135 by ICP/MS Acid Addition	ug/mL	1.45E+01				2.41E-03
S00T000784	D		Cs 135 by ICP/MS Acid Addition	ug/mL	1.43E+01				2.41E-03
S00T000778	D		Cs 137 by ICP/MS Acid Addition	ug/mL	2.70E+01	2.71E+01	0.1379613	0.50996062	2.41E-03
S00T000781	D		Cs 137 by ICP/MS Acid Addition	ug/mL	2.72E+01				2.41E-03
S00T000784	D		Cs 137 by ICP/MS Acid Addition	ug/mL	2.70E+01				2.41E-03
S00T000809	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	2.47E+01	2.24E+01	2.3201149	10.3591975	1.02E-01
S00T000810	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	2.24E+01				9.10E-02
S00T000811	A		Cs133 ICP/MS AcidDig LA-505159	ug/g	2.01E+01				8.66E-02
S00T000809	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	9.04E+00	8.33E+00	0.6349953	7.6229925	1.02E-01
S00T000810	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	8.15E+00				9.10E-02
S00T000811	A		Cs135 ICP/MS AcidDig LA-505159	ug/g	7.80E+00				8.66E-02
S00T000809	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.91E+02	1.78E+02	13.576941	7.61323808	1.02E-01
S00T000810	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.64E+02				9.10E-02
S00T000811	A		Cs137 ICP/MS AcidDig LA-505159	ug/g	1.80E+02				8.66E-02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000779			Cyanide Water Distillation	ug/mL	4.77E-01	3.08E-01	0.1769774	57.4601947	1.10E-01
S00T000782			Cyanide Water Distillation	ug/mL	1.24E-01				5.50E-02
S00T000785			Cyanide Water Distillation	ug/mL	3.23E-01				5.50E-02
S00T000812	W		Cyanide Water Distillation	ug/g	< 5.23E+00	4.84E+00	0.6354001	n/a	5.23
S00T000813	W		Cyanide Water Distillation	ug/g	< 5.19E+00				5.19
S00T000814	W		Cyanide Water Distillation	ug/g	< 4.11E+00				4.11
S00T000809	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	3.84E+01	3.53E+01	2.8898501	8.18268066	8.096
S00T000810	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	3.27E+01				7.207
S00T000811	A		Eu/Sm 151 by ICP/MS AcidD159	ug/g	3.48E+01				6.887
S00T000809	A		Europium ICP-Acid Digest	ug/g	< 3.18E+01	2.91E+01	2.4419937	n/a	31.8
S00T000810	A		Europium ICP-Acid Digest	ug/g	< 2.83E+01				28.3
S00T000811	A		Europium ICP-Acid Digest	ug/g	< 2.71E+01				27.1
S00T000778	D		Europium ICP-Acid Dil.	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Europium ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000784	D		Europium ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000850	D		Europium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Europium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Europium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000780			Europium-152 by GEA	uCi/mL	< 7.62E-01	7.51E-01	0.0136137	n/a	7.62E-01
S00T000783			Europium-152 by GEA	uCi/mL	< 7.56E-01				7.56E-01
S00T000786			Europium-152 by GEA	uCi/mL	< 7.36E-01				7.36E-01
S00T000800	F		Europium-152 by GEA	uCi/g	< 5.04E+00	5.09E+00	0.1164131	n/a	5.042
S00T000801	F		Europium-152 by GEA	uCi/g	< 5.00E+00				4.998
S00T000802	F		Europium-152 by GEA	uCi/g	< 5.22E+00				5.218
S00T000780			Europium-154 by GEA	uCi/mL	< 7.40E-02	6.89E-02	0.004417	n/a	7.40E-02
S00T000783			Europium-154 by GEA	uCi/mL	< 6.63E-02				6.63E-02
S00T000786			Europium-154 by GEA	uCi/mL	< 6.64E-02				6.64E-02
S00T000800	F		Europium-154 by GEA	uCi/g	4.87E+01	4.90E+01	3.4047075	6.94318712	n/a
S00T000801	F		Europium-154 by GEA	uCi/g	4.58E+01				n/a
S00T000802	F		Europium-154 by GEA	uCi/g	5.26E+01				n/a
S00T000780			Europium-155 by GEA	uCi/mL	< 8.85E-01	8.73E-01	0.0172143	n/a	8.85E-01
S00T000783			Europium-155 by GEA	uCi/mL	< 8.80E-01				8.80E-01
S00T000786			Europium-155 by GEA	uCi/mL	< 8.53E-01				8.53E-01
S00T000800	F		Europium-155 by GEA	uCi/g	6.27E+01	6.62E+01	4.9110114	7.41545919	n/a
S00T000801	F		Europium-155 by GEA	uCi/g	6.42E+01				n/a
S00T000802	F		Europium-155 by GEA	uCi/g	7.18E+01				n/a
S00T000812	W		Fluoride-IC-Dionex 500	ug/g	4.74E+03	4.84E+03	110.6044	2.28364212	1.17E+02
S00T000813	W		Fluoride-IC-Dionex 500	ug/g	4.83E+03				1.16E+02
S00T000814	W		Fluoride-IC-Dionex 500	ug/g	4.96E+03				9.20E+01
S00T000782			Fluoride-IC-Dionex 500 col	ug/mL	2.52E+03	2.29E+03	372.6929	16.2747993	33.33

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000785			Fluoride-IC-Dionex 500 col	ug/mL	1.86E+03				33.33
S00T000827			Fluoride-IC-Dionex 500 col	ug/mL	2.49E+03				33.33
S00T000782			Formate by IC-DIONEX 500 col	ug/mL	< 2.56E+02	2.56E+02	0	n/a	255.5
S00T000785			Formate by IC-DIONEX 500 col	ug/mL	< 2.56E+02				255.5
S00T000827			Formate by IC-DIONEX 500 col	ug/mL	< 2.56E+02				255.5
S00T000812	W		Formate by IC-DIONEX 500 col	ug/g	< 8.96E+02	8.30E+02	108.5833	n/a	8.96E+02
S00T000813	W		Formate by IC-DIONEX 500 col	ug/g	< 8.90E+02				8.90E+02
S00T000814	W		Formate by IC-DIONEX 500 col	ug/g	< 7.05E+02				7.05E+02
S00T000780			Iodine-129 Waste Tank Samples	uCi/mL	< 9.57E-05	8.90E-05	8.882E-06	n/a	9.57E-05
S00T000783			Iodine-129 Waste Tank Samples	uCi/mL	< 7.89E-05				7.89E-05
S00T000786			Iodine-129 Waste Tank Samples	uCi/mL	< 9.23E-05				9.23E-05
S00T000812	W		Iodine-129 Waste Tank Samples	uCi/g	< 4.47E-03	4.63E-03	0.0007332	n/a	4.47E-03
S00T000813	W		Iodine-129 Waste Tank Samples	uCi/g	< 5.43E-03				5.43E-03
S00T000814	W		Iodine-129 Waste Tank Samples	uCi/g	< 3.99E-03				3.99E-03
S00T000809	A		Iron -ICP-Acid Digest	ug/g	8.13E+04	7.44E+04	6536.8188	8.78604677	318
S00T000810	A		Iron -ICP-Acid Digest	ug/g	6.83E+04				28.3
S00T000811	A		Iron -ICP-Acid Digest	ug/g	7.36E+04				27.1
S00T000778	D		Iron-ICP-Acid Dil.	ug/mL	2.76E+01	2.47E+01	4.0079088	16.2482791	20.1
S00T000781	D		Iron-ICP-Acid Dil.	ug/mL	2.63E+01				20.1
S00T000784	D		Iron-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000809	A		Lanthanum -ICP-Acid Digest	ug/g	3.54E+03	3.32E+03	225.01852	6.78447792	31.8
S00T000810	A		Lanthanum -ICP-Acid Digest	ug/g	3.09E+03				28.3
S00T000811	A		Lanthanum -ICP-Acid Digest	ug/g	3.32E+03				27.1
S00T000850	D		Lanthanum(Total) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Lanthanum(Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Lanthanum(Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000778	D		Lanthanum-ICP-Acid Dil.	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Lanthanum-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000784	D		Lanthanum-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000809	A		Lead -ICP-Acid Digest	ug/g	3.05E+02	2.94E+02	42.579338	14.4827679	63.6
S00T000810	A		Lead -ICP-Acid Digest	ug/g	2.47E+02				56.6
S00T000811	A		Lead -ICP-Acid Digest	ug/g	3.30E+02				54.1
S00T000778	D		Lead-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01	0	n/a	40.1
S00T000781	D		Lead-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Lead-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000850	D		Lithium (Total) ICP/MS ACD158	ug/mL	5.95E-01	5.55E-01	0.0362261	6.52331481	4.24E-01
S00T000852	D		Lithium (Total) ICP/MS ACD158	ug/mL	5.47E-01				4.24E-01
S00T000854	D		Lithium (Total) ICP/MS ACD158	ug/mL	5.24E-01				4.24E-01
S00T000809	A		Lithium -ICP-Acid Digest	ug/g	5.95E+02	5.88E+02	20.984121	3.57075229	6.36
S00T000810	A		Lithium -ICP-Acid Digest	ug/g	6.04E+02				5.66

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000811	A		Lithium -ICP-Acid Digest	ug/g	5.64E+02				5.41
S00T000778	D		Lithium-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00		0 n/a	4.01
S00T000781	D		Lithium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Lithium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000809	A		Magnesium -ICP-Acid Digest	ug/g	6.38E+02	6.01E+02	38.587563	6.42055953	63.6
S00T000810	A		Magnesium -ICP-Acid Digest	ug/g	5.61E+02				56.6
S00T000811	A		Magnesium -ICP-Acid Digest	ug/g	6.04E+02				54.1
S00T000778	D		Magnesium-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01		0 n/a	40.1
S00T000781	D		Magnesium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Magnesium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000809	A		Manganese -ICP-Acid Digest	ug/g	1.02E+03	9.57E+02	61.554854	6.43206412	6.36
S00T000810	A		Manganese -ICP-Acid Digest	ug/g	8.97E+02				5.66
S00T000811	A		Manganese -ICP-Acid Digest	ug/g	9.54E+02				5.41
S00T000778	D		Manganese-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00		0 n/a	4.01
S00T000781	D		Manganese-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Manganese-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000818			Mercury by CVAA (PE) with FIAS	ug/g	2.04E+00	1.92E+00	0.1083067	5.63901406	2.40E-02
S00T000819			Mercury by CVAA (PE) with FIAS	ug/g	1.84E+00				2.40E-02
S00T000820			Mercury by CVAA (PE) with FIAS	ug/g	1.88E+00				2.40E-02
S00T000826			Mercury by CVAA (PE) with FIAS	ug/mL	1.12E-02	1.52E-02	0.0034655	22.7996361	2.40E-03
S00T000828			Mercury by CVAA (PE) with FIAS	ug/mL	1.71E-02				2.40E-03
S00T000830			Mercury by CVAA (PE) with FIAS	ug/mL	1.73E-02				2.40E-03
S00T000809	A		Molybdenum -ICP-Acid Digest	ug/g	4.73E+01	4.11E+01	6.0135957	14.643496	31.8
S00T000810	A		Molybdenum -ICP-Acid Digest	ug/g	4.06E+01				28.3
S00T000811	A		Molybdenum -ICP-Acid Digest	ug/g	3.53E+01				27.1
S00T000778	D		Molybdenum-ICP-Acid Dil.	ug/mL	9.75E+01	9.62E+01	1.1930353	1.24059135	20.1
S00T000781	D		Molybdenum-ICP-Acid Dil.	ug/mL	9.52E+01				20.1
S00T000784	D		Molybdenum-ICP-Acid Dil.	ug/mL	9.58E+01				20.1
S00T000809	A		Nb/Zr 93 by ICP/MS AcidD159	ug/g	3.56E+02	3.30E+02	23.30236	7.06132133	8.096
S00T000810	A		Nb/Zr 93 by ICP/MS AcidD159	ug/g	3.11E+02				7.207
S00T000811	A		Nb/Zr 93 by ICP/MS AcidD159	ug/g	3.23E+02				6.887
S00T000809	A		Neodymium -ICP-Acid Digest	ug/g	2.15E+03	2.02E+03	125.03333	6.17957144	63.6
S00T000810	A		Neodymium -ICP-Acid Digest	ug/g	1.90E+03				56.6
S00T000811	A		Neodymium -ICP-Acid Digest	ug/g	2.02E+03				54.1
S00T000778	D		Neodymium-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.01E+01		0 n/a	40.1
S00T000781	D		Neodymium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000784	D		Neodymium-ICP-Acid Dil.	ug/mL	< 4.01E+01				40.1
S00T000778	D		Neptunium-237 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02		0 n/a	6.03E-02
S00T000781	D		Neptunium-237 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Neptunium-237 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000809	A		Neptunium-237 by ICP/MS	ug/g	6.91E+01	6.53E+01	3.6713667	5.62632818	2.551
S00T000810	A		Neptunium-237 by ICP/MS	ug/g	6.18E+01				2.271
S00T000811	A		Neptunium-237 by ICP/MS	ug/g	6.49E+01				2.17
S00T000809	A		Nickel -ICP-Acid Digest	ug/g	4.94E+03	4.60E+03	326.03681	7.08775669	12.7
S00T000810	A		Nickel -ICP-Acid Digest	ug/g	4.29E+03				11.3
S00T000811	A		Nickel -ICP-Acid Digest	ug/g	4.57E+03				10.8
S00T000778	D		Nickel-ICP-Acid Dil.	ug/mL	< 8.02E+00	8.02E+00	0	n/a	8.02
S00T000781	D		Nickel-ICP-Acid Dil.	ug/mL	< 8.02E+00				8.02
S00T000784	D		Nickel-ICP-Acid Dil.	ug/mL	< 8.02E+00				8.02
S00T000782			Nitrate-IC-Dionex 500 col	ug/mL	3.42E+04	5.90E+04	21450.019	36.3765168	1.24E+03
S00T000785			Nitrate-IC-Dionex 500 col	ug/mL	7.11E+04				1.24E+03
S00T000827			Nitrate-IC-Dionex 500 col	ug/mL	7.16E+04				1.24E+03
S00T000812	W		Nitrate-IC-Dionex 500 col	ug/g	3.48E+04	3.56E+04	680.68593	1.9138311	1.17E+03
S00T000813	W		Nitrate-IC-Dionex 500 col	ug/g	3.58E+04				1.16E+03
S00T000814	W		Nitrate-IC-Dionex 500 col	ug/g	3.61E+04				9.20E+02
S00T000782			Nitrite-IC - Dionex 500 col	ug/mL	7.32E+04	7.34E+04	2605.7628	3.55008562	1.12E+03
S00T000785			Nitrite-IC - Dionex 500 col	ug/mL	7.61E+04				1.12E+03
S00T000827			Nitrite-IC - Dionex 500 col	ug/mL	7.09E+04				1.12E+03
S00T000812	W		Nitrite-IC - Dionex 500 col	ug/g	3.72E+04	3.78E+04	550.75705	1.45574552	1.05E+03
S00T000813	W		Nitrite-IC - Dionex 500 col	ug/g	3.82E+04				1.04E+03
S00T000814	W		Nitrite-IC - Dionex 500 col	ug/g	3.81E+04				8.28E+02
S00T000779			OH- by Pot. Titration	ug/mL	1.15E+04	1.15E+04	57.735027	0.50059272	2.50E+03
S00T000782			OH- by Pot. Titration	ug/mL	1.15E+04				2.50E+03
S00T000785			OH- by Pot. Titration	ug/mL	1.16E+04				2.50E+03
S00T000812	W		OH- by Pot. Titration	ug/g	5.77E+03	4.80E+03	1460.719	30.4316459	3.96E+03
S00T000813	W		OH- by Pot. Titration	ug/g	5.51E+03				3.93E+03
S00T000814	W		OH- by Pot. Titration	ug/g	< 3.12E+03				3.12E+03
S00T000782			Oxalate-IC-Dionex 500 col	ug/mL	1.68E+03	1.43E+03	326.95565	22.8640318	300
S00T000785			Oxalate-IC-Dionex 500 col	ug/mL	1.06E+03				300
S00T000827			Oxalate-IC-Dionex 500 col	ug/mL	1.55E+03				300
S00T000812	W		Oxalate-IC-Dionex 500 col	ug/g	4.71E+03	5.08E+03	365.01142	7.18998192	1.05E+03
S00T000813	W		Oxalate-IC-Dionex 500 col	ug/g	5.08E+03				1.04E+03
S00T000814	W		Oxalate-IC-Dionex 500 col	ug/g	5.44E+03				8.28E+02
S00T000850	D		Palladium(Total) ICP/MS ACD158	ug/mL	5.07E+00	2.10E+00	2.5718776	122.606591	8.48E-02
S00T000852	D		Palladium(Total) ICP/MS ACD158	ug/mL	5.70E-01				8.48E-02
S00T000854	D		Palladium(Total) ICP/MS ACD158	ug/mL	6.56E-01				8.48E-02
S00T000809	A		Palladium(Total) ICP/MS ACD159	ug/g	2.51E+03	2.38E+03	122.20202	5.14173991	10.79
S00T000810	A		Palladium(Total) ICP/MS ACD159	ug/g	2.27E+03				9.608
S00T000811	A		Palladium(Total) ICP/MS ACD159	ug/g	2.35E+03				9.182
S00T000779			pH Direct	pH	>1.35E+01	1.35E+01	0	n/a	1.00E-02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000782			pH Direct	pH	>1.35E+01				1.00E-02
S00T000785			pH Direct	pH	>1.35E+01				1.00E-02
S00T000782			Phosphate-IC-Dionex 500 col	ug/mL	2.63E+03	2.30E+03	621.15484	27.0459291	300
S00T000785			Phosphate-IC-Dionex 500 col	ug/mL	1.58E+03				300
S00T000827			Phosphate-IC-Dionex 500 col	ug/mL	2.68E+03				300
S00T000812	W		Phosphate-IC-Dionex 500 col	ug/g	< 1.05E+03	9.73E+02	125.38474	n/a	1.05E+03
S00T000813	W		Phosphate-IC-Dionex 500 col	ug/g	< 1.04E+03				1.04E+03
S00T000814	W		Phosphate-IC-Dionex 500 col	ug/g	< 8.28E+02				8.28E+02
S00T000809	A		Phosphorus -ICP-Acid Digest	ug/g	< 1.27E+02	1.16E+02	9.8488578	n/a	127
S00T000810	A		Phosphorus -ICP-Acid Digest	ug/g	< 1.13E+02				113
S00T000811	A		Phosphorus -ICP-Acid Digest	ug/g	< 1.08E+02				108
S00T000778	D		Phosphorus-ICP-Acid Dil.	ug/mL	4.67E+02	4.64E+02	3.0550505	0.65888939	80.2
S00T000781	D		Phosphorus-ICP-Acid Dil.	ug/mL	4.61E+02				80.2
S00T000784	D		Phosphorus-ICP-Acid Dil.	ug/mL	4.63E+02				80.2
S00T000778	D		Plutonium-239 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02	0	n/a	6.03E-02
S00T000781	D		Plutonium-239 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Plutonium-239 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000809	A		Plutonium-239 by ICP/MS	ug/g	5.73E+01	5.43E+01	3.0577606	5.63019816	2.551
S00T000810	A		Plutonium-239 by ICP/MS	ug/g	5.12E+01				2.271
S00T000811	A		Plutonium-239 by ICP/MS	ug/g	5.45E+01				2.17
S00T000778	D		Plutonium-240 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02	0	n/a	6.03E-02
S00T000781	D		Plutonium-240 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Plutonium-240 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000809	A		Plutonium-240 by ICP/MS	ug/g	4.61E+00	4.44E+00	0.1740038	3.92018244	2.551
S00T000810	A		Plutonium-240 by ICP/MS	ug/g	4.26E+00				2.271
S00T000811	A		Plutonium-240 by ICP/MS	ug/g	4.44E+00				2.17
S00T000809	A		Plutonium-242 by ICP/MS	ug/g	< 2.55E+00	2.33E+00	0.1973837	n/a	2.551
S00T000810	A		Plutonium-242 by ICP/MS	ug/g	< 2.27E+00				2.271
S00T000811	A		Plutonium-242 by ICP/MS	ug/g	< 2.17E+00				2.17
S00T000809	A		Potassium -ICP-Acid Digest	ug/g	4.83E+03	3.25E+03	1386.4463	42.7036847	3.18E+03
S00T000810	A		Potassium -ICP-Acid Digest	ug/g	2.66E+03				283
S00T000811	A		Potassium -ICP-Acid Digest	ug/g	2.25E+03				271
S00T000778	D		Potassium-ICP-Acid Dil.	ug/mL	5.34E+03	4.49E+03	744.46849	16.5929084	2.01E+03
S00T000781	D		Potassium-ICP-Acid Dil.	ug/mL	3.97E+03				201
S00T000784	D		Potassium-ICP-Acid Dil.	ug/mL	4.15E+03				201
S00T000850	D		Praseodymium(Tot) ICP/MS AD158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Praseodymium(Tot) ICP/MS AD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Praseodymium(Tot) ICP/MS AD158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Praseodymium(Tot) ICP/MS AD159	ug/g	4.73E+02	4.40E+02	29.816103	6.77638705	8.096
S00T000810	A		Praseodymium(Tot) ICP/MS AD159	ug/g	4.15E+02				7.207

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000811	A		Praseodymium(Tot) ICP/MS AD159	ug/g	4.32E+02				6.887
S00T000778	D		Protactinium-231 by ICP/MS	ug/mL	< 1.81E-02	1.81E-02		0 n/a	1.81E-02
S00T000781	D		Protactinium-231 by ICP/MS	ug/mL	< 1.81E-02				1.81E-02
S00T000784	D		Protactinium-231 by ICP/MS	ug/mL	< 1.81E-02				1.81E-02
S00T000809	A		Protactinium-231 by ICP/MS	ug/g	< 7.65E-01	6.99E-01	0.0590931	n/a	7.65E-01
S00T000810	A		Protactinium-231 by ICP/MS	ug/g	< 6.81E-01				6.81E-01
S00T000811	A		Protactinium-231 by ICP/MS	ug/g	< 6.51E-01				6.51E-01
S00T000778	D		Pu 244/Cm 244 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02		0 n/a	6.03E-02
S00T000781	D		Pu 244/Cm 244 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Pu 244/Cm 244 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000809	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.55E+00	2.33E+00	0.1973837	n/a	2.551
S00T000810	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.27E+00				2.271
S00T000811	A		Pu 244/Cm 244 by ICP/MS	ug/g	< 2.17E+00				2.17
S00T000778	D		Pu/Am-241 by ICP/MS	ug/mL	< 6.03E-02	6.03E-02		0 n/a	6.03E-02
S00T000781	D		Pu/Am-241 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000784	D		Pu/Am-241 by ICP/MS	ug/mL	< 6.03E-02				6.03E-02
S00T000809	A		Pu/Am-241 by ICP/MS	ug/g	3.04E+01	2.89E+01	1.5050249	5.21130511	2.551
S00T000810	A		Pu/Am-241 by ICP/MS	ug/g	2.74E+01				2.271
S00T000811	A		Pu/Am-241 by ICP/MS	ug/g	2.89E+01				2.17
S00T000780			Pu-238 by TRU-SPEC Resin	uCi/mL	< 1.32E-04	1.32E-04	7.506E-06	n/a	1.32E-04
S00T000783			Pu-238 by TRU-SPEC Resin	uCi/mL	< 1.40E-04				1.40E-04
S00T000786			Pu-238 by TRU-SPEC Resin	uCi/mL	< 1.25E-04				1.25E-04
S00T000800	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	< 1.46E+00	1.48E+00	0.0776745	n/a	1.46
S00T000801	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	< 1.42E+00				1.42
S00T000802	F		Pu-238 by TRU-SPEC Resin IonEx	uCi/g	< 1.57E+00				1.57
S00T000780			Pu-239/240 by TRU-SPEC Resin	uCi/mL	6.84E-04	6.39E-04	8.675E-05	13.5753925	1.32E-04
S00T000783			Pu-239/240 by TRU-SPEC Resin	uCi/mL	6.94E-04				1.40E-04
S00T000786			Pu-239/240 by TRU-SPEC Resin	uCi/mL	5.39E-04				1.25E-04
S00T000800	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	4.85E+00	5.14E+00	0.6091798	11.8517466	1.46
S00T000801	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	4.73E+00				1.42
S00T000802	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	5.84E+00				1.57
S00T000850	D		Rhodium (Total) ICP/MS ACDG158	ug/mL	2.35E+00	2.26E+00	0.0738986	3.26840244	6.36E-02
S00T000852	D		Rhodium (Total) ICP/MS ACDG158	ug/mL	2.23E+00				6.36E-02
S00T000854	D		Rhodium (Total) ICP/MS ACDG158	ug/mL	2.21E+00				6.36E-02
S00T000809	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.72E+02	1.62E+02	9.6090235	5.9437259	8.096
S00T000810	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.53E+02				7.207
S00T000811	A		Rhodium (Total) ICP/MS ACDG159	ug/g	1.60E+02				6.887
S00T000809	A		Rhodium -ICP-Acid Digest	ug/g	< 6.36E+02	5.81E+02	49.244289	n/a	636
S00T000810	A		Rhodium -ICP-Acid Digest	ug/g	< 5.66E+02				566
S00T000811	A		Rhodium -ICP-Acid Digest	ug/g	< 5.41E+02				541

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000778	D		Rhodium -ICP-Acid Dilution	ug/mL	< 4.01E+02	4.01E+02	0	n/a	401
S00T000781	D		Rhodium -ICP-Acid Dilution	ug/mL	< 4.01E+02				401
S00T000784	D		Rhodium -ICP-Acid Dilution	ug/mL	< 4.01E+02				401
S00T000850	D		Rubidium (Total) ICP/MS ACD158	ug/mL	4.95E+00	5.02E+00	0.1345028	2.67827137	6.36E-02
S00T000852	D		Rubidium (Total) ICP/MS ACD158	ug/mL	5.18E+00				6.36E-02
S00T000854	D		Rubidium (Total) ICP/MS ACD158	ug/mL	4.94E+00				6.36E-02
S00T000809	A		Rubidium (Total) ICP/MS ACD159	ug/g	< 8.10E+00	1.29E+01	4.4077044	34.2700876	8.096
S00T000810	A		Rubidium (Total) ICP/MS ACD159	ug/g	1.68E+01				7.207
S00T000811	A		Rubidium (Total) ICP/MS ACD159	ug/g	1.37E+01				6.887
S00T000809	A		Rubidium-ICP-Acid Digest	ug/g	< 1.27E+04	4.97E+03	6694.4231	n/a	1.27E+04
S00T000810	A		Rubidium-ICP-Acid Digest	ug/g	< 1.13E+03				1.13E+03
S00T000811	A		Rubidium-ICP-Acid Digest	ug/g	< 1.08E+03				1.08E+03
S00T000778	D		Rubidium-ICP-Acid Dilution	ug/mL	< 8.02E+02	8.02E+02	0	n/a	802
S00T000781	D		Rubidium-ICP-Acid Dilution	ug/mL	< 8.02E+02				802
S00T000784	D		Rubidium-ICP-Acid Dilution	ug/mL	< 8.02E+02				802
S00T000809	A		Ruthenium ICP-Acid Digest	ug/g	< 1.27E+04	5.00E+03	6665.5557	133.2223	1.27E+04
S00T000810	A		Ruthenium ICP-Acid Digest	ug/g	< 1.13E+03				1.13E+03
S00T000811	A		Ruthenium ICP-Acid Digest	ug/g	1.18E+03				1.08E+03
S00T000778	D		Ruthenium ICP-Acid Dilution	ug/mL	< 8.02E+02	8.02E+02	0	n/a	802
S00T000781	D		Ruthenium ICP-Acid Dilution	ug/mL	< 8.02E+02				802
S00T000784	D		Ruthenium ICP-Acid Dilution	ug/mL	< 8.02E+02				802
S00T000850	D		Ruthenium(Total) ICP/MS ACD158	ug/mL	4.77E-01	5.05E-01	0.0253837	5.02316395	6.36E-02
S00T000852	D		Ruthenium(Total) ICP/MS ACD158	ug/mL	5.13E-01				6.36E-02
S00T000854	D		Ruthenium(Total) ICP/MS ACD158	ug/mL	5.26E-01				6.36E-02
S00T000809	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.54E+03	1.31E+03	230.07245	17.6075856	8.096
S00T000810	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.08E+03				7.207
S00T000811	A		Ruthenium(Total) ICP/MS ACD159	ug/g	1.30E+03				6.887
S00T000809	A		Selenium -ICP-Acid Digest	ug/g	< 6.36E+01	5.81E+01	4.9244289	n/a	63.6
S00T000810	A		Selenium -ICP-Acid Digest	ug/g	< 5.66E+01				56.6
S00T000811	A		Selenium -ICP-Acid Digest	ug/g	< 5.41E+01				54.1
S00T000850	D		Selenium(Total) ICP/MS ACDG158	ug/mL	2.47E+01	2.47E+01	0.590113	2.38686659	2.12E-01
S00T000852	D		Selenium(Total) ICP/MS ACDG158	ug/mL	2.53E+01				2.12E-01
S00T000854	D		Selenium(Total) ICP/MS ACDG158	ug/mL	2.41E+01				2.12E-01
S00T000809	A		Selenium(Total) ICP/MS ACDG159	ug/g	< 2.70E+01	2.47E+01	2.0875584	n/a	26.99
S00T000810	A		Selenium(Total) ICP/MS ACDG159	ug/g	< 2.40E+01				24.02
S00T000811	A		Selenium(Total) ICP/MS ACDG159	ug/g	< 2.30E+01				22.96
S00T000780			Selenium-79 by Liquid Scint.	uCi/mL	1.54E-03	1.47E-03	7.024E-05	4.78893352	4.19E-05
S00T000783			Selenium-79 by Liquid Scint.	uCi/mL	1.40E-03				4.18E-05
S00T000786			Selenium-79 by Liquid Scint.	uCi/mL	1.46E-03				4.34E-05
S00T000778	D		Selenium-ICP-Acid Dil.	ug/mL	< 4.01E+01	4.19E+01	1.6258331	3.8771855	40.1

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000781		D	Selenium-ICP-Acid Dil.	ug/mL	4.25E+01				40.1
S00T000784		D	Selenium-ICP-Acid Dil.	ug/mL	4.32E+01				40.1
S00T000809		A	Silicon -ICP-Acid Digest	ug/g	1.64E+03	1.50E+03	208.80613	13.9204087	31.8
S00T000810		A	Silicon -ICP-Acid Digest	ug/g	1.26E+03				28.3
S00T000811		A	Silicon -ICP-Acid Digest	ug/g	1.60E+03				27.1
S00T000778		D	Silicon-ICP-Acid Dil.	ug/mL	< 2.01E+02	1.23E+02	67.719298	55.1160863	201
S00T000781		D	Silicon-ICP-Acid Dil.	ug/mL	8.65E+01				20.1
S00T000784		D	Silicon-ICP-Acid Dil.	ug/mL	8.11E+01				20.1
S00T000809		A	Silver -ICP-Acid Digest	ug/g	1.71E+02	1.66E+02	7	4.21686747	63.6
S00T000810		A	Silver -ICP-Acid Digest	ug/g	1.58E+02				5.66
S00T000811		A	Silver -ICP-Acid Digest	ug/g	1.69E+02				5.41
S00T000778		D	Silver-ICP-Acid Dil.	ug/mL	9.87E+00	8.62E+00	1.1121601	12.9020889	4.01
S00T000781		D	Silver-ICP-Acid Dil.	ug/mL	7.74E+00				4.01
S00T000784		D	Silver-ICP-Acid Dil.	ug/mL	8.25E+00				4.01
S00T000778		D	Sn 126 by ICP/MS Acid Addition	ug/mL	2.29E+01	2.30E+01	0.0040415	1.75970329	1.81E-01
S00T000781		D	Sn 126 by ICP/MS Acid Addition	ug/mL	2.34E+01				1.81E-01
S00T000784		D	Sn 126 by ICP/MS Acid Addition	ug/mL	2.26E+01				1.81E-01
S00T000809		A	Sn126 ICP/MS AcidDig LA-505159	ug/g	< 7.65E+00	6.99E+00	0.5923026	n/a	7.653
S00T000810		A	Sn126 ICP/MS AcidDig LA-505159	ug/g	< 6.81E+00				6.812
S00T000811		A	Sn126 ICP/MS AcidDig LA-505159	ug/g	< 6.51E+00				6.51
S00T000809		A	Sodium -ICP-Acid Digest	ug/g	9.82E+04	8.74E+04	9383.1409	10.7399553	636
S00T000810		A	Sodium -ICP-Acid Digest	ug/g	8.21E+04				56.6
S00T000811		A	Sodium -ICP-Acid Digest	ug/g	8.18E+04				54.1
S00T000778		D	Sodium-ICP-Acid Dil.	ug/mL	1.15E+05	1.07E+05	6806.8593	6.34179437	401
S00T000781		D	Sodium-ICP-Acid Dil.	ug/mL	1.02E+05				40.1
S00T000784		D	Sodium-ICP-Acid Dil.	ug/mL	1.05E+05				40.1
S00T000775			Solids % - Grav. in Hot Cell	%	5.96E+01	5.99E+01	0.3	0.50083472	1.00E-02
S00T000776			Solids % - Grav. in Hot Cell	%	5.99E+01				1.00E-02
S00T000777			Solids % - Grav. in Hot Cell	%	6.02E+01				1.00E-02
S00T000778			Solids % - Gravimetric	%	2.90E+01	2.87E+01	0.305505	1.06571528	1.00E-02
S00T000781			Solids % - Gravimetric	%	2.86E+01				1.00E-02
S00T000784			Solids % - Gravimetric	%	2.84E+01				1.00E-02
S00T000779			Specific Gravity	Sp.G.	1.23E+00	1.24E+00	0.0052915	0.4281151	1.00E-03
S00T000782			Specific Gravity	Sp.G.	1.23E+00				1.00E-03
S00T000785			Specific Gravity	Sp.G.	1.24E+00				1.00E-03
S00T000809		A	Strontium -ICP-Acid Digest	ug/g	3.30E+02	3.09E+02	24.556058	7.94694444	6.36
S00T000810		A	Strontium -ICP-Acid Digest	ug/g	2.82E+02				5.66
S00T000811		A	Strontium -ICP-Acid Digest	ug/g	3.15E+02				5.41
S00T000780			Strontium-89/90 High Level	uCi/mL	1.11E+00	1.02E+00	0.1017251	10.0123149	5.97E-02
S00T000783			Strontium-89/90 High Level	uCi/mL	1.03E+00				5.91E-02

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000786			Strontium-89/90 High Level	uCi/mL	9.08E-01				6.02E-02
S00T000800	F		Strontium-89/90 High Level	uCi/g	1.69E+04	1.73E+04	964.36508	5.5743646	7.59
S00T000801	F		Strontium-89/90 High Level	uCi/g	1.66E+04				7.52
S00T000802	F		Strontium-89/90 High Level	uCi/g	1.84E+04				7.83
S00T000778	D		Strontium-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00	0	n/a	4.01
S00T000781	D		Strontium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Strontium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000782			Sulfate-IC-Dionex 500 col	ug/mL	2.49E+04	2.22E+04	4361.5746	19.6172772	355.5
S00T000785			Sulfate-IC-Dionex 500 col	ug/mL	1.72E+04				355.5
S00T000827			Sulfate-IC-Dionex 500 col	ug/mL	2.46E+04				355.5
S00T000812	W		Sulfate-IC-Dionex 500 col	ug/g	2.73E+04	2.80E+04	665.83281	2.37514677	1.25E+03
S00T000813	W		Sulfate-IC-Dionex 500 col	ug/g	2.82E+04				1.24E+03
S00T000814	W		Sulfate-IC-Dionex 500 col	ug/g	2.86E+04				9.81E+02
S00T000809	A		Sulfur-ICP-Acid Digest	ug/g	9.48E+03	8.40E+03	1569.2036	18.6809955	63.6
S00T000810	A		Sulfur-ICP-Acid Digest	ug/g	6.60E+03				56.6
S00T000811	A		Sulfur-ICP-Acid Digest	ug/g	9.12E+03				54.1
S00T000778	D		Sulfur-ICP-Acid Dil.	ug/mL	5.23E+03	5.13E+03	105.03968	2.04888833	40.1
S00T000781	D		Sulfur-ICP-Acid Dil.	ug/mL	5.02E+03				40.1
S00T000784	D		Sulfur-ICP-Acid Dil.	ug/mL	5.13E+03				40.1
S00T000850	D		Tantalum (Total) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02	0	n/a	6.36E-02
S00T000852	D		Tantalum (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Tantalum (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 8.10E+00	7.40E+00	0.6264187	n/a	8.096
S00T000810	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 7.21E+00				7.207
S00T000811	A		Tantalum (Total) ICP/MS ACD159	ug/g	< 6.89E+00				6.887
S00T000809	A		Tantalum -ICP-Acid Digest	ug/g	< 3.18E+02	2.91E+02	24.419937	n/a	318
S00T000810	A		Tantalum -ICP-Acid Digest	ug/g	< 2.83E+02				283
S00T000811	A		Tantalum -ICP-Acid Digest	ug/g	< 2.71E+02				271
S00T000778	D		Tantalum -ICP-Acid Dil.	ug/mL	< 2.01E+02	2.01E+02	0	n/a	201
S00T000781	D		Tantalum -ICP-Acid Dil.	ug/mL	< 2.01E+02				201
S00T000784	D		Tantalum -ICP-Acid Dil.	ug/mL	< 2.01E+02				201
S00T000778	D		Tc 99 by ICP/MS Acid Addition	ug/mL	2.57E+01	2.58E+01	0.130767	0.50626004	2.41E-03
S00T000781	D		Tc 99 by ICP/MS Acid Addition	ug/mL	2.59E+01				2.41E-03
S00T000784	D		Tc 99 by ICP/MS Acid Addition	ug/mL	2.59E+01				2.41E-03
S00T000809	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	1.46E+01	1.30E+01	1.5700106	12.092508	1.02E-01
S00T000810	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	1.30E+01				9.10E-02
S00T000811	A		Tc99 by ICP/MS AcidDigLA505159	ug/g	1.14E+01				8.66E-02
S00T000778			Technetium-99 Liq. Scint.	uCi/mL	4.25E-01	4.09E-01	0.0294618	7.2033838	5.64E-04
S00T000780			Technetium-99 Liq. Scint.	uCi/mL	3.75E-01				5.06E-04
S00T000781			Technetium-99 Liq. Scint.	uCi/mL	4.27E-01				4.93E-04

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000783			Technetium-99 Liq. Scint.	uCi/mL	3.67E-01	3.70E-01	0.0810329	21.9205361	4.90E-04
S00T000784			Technetium-99 Liq. Scint.	uCi/mL	2.90E-01				3.78E-04
S00T000786			Technetium-99 Liq. Scint.	uCi/mL	4.52E-01				5.76E-04
S00T000800	F		Technetium-99 Liq. Scint.	uCi/g	1.88E-01	2.10E-01	0.0312143	14.8404024	1.21E-01
S00T000801	F		Technetium-99 Liq. Scint.	uCi/g	1.97E-01				1.15E-01
S00T000802	F		Technetium-99 Liq. Scint.	uCi/g	2.46E-01				1.20E-01
S00T000850	D		Tellurium (Tot) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02		0 n/a	6.36E-02
S00T000852	D		Tellurium (Tot) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Tellurium (Tot) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Tellurium (Tot) ICP/MS ACD159	ug/g	8.85E+01	8.14E+01	6.1939029	7.61327027	8.096
S00T000810	A		Tellurium (Tot) ICP/MS ACD159	ug/g	7.84E+01				7.207
S00T000811	A		Tellurium (Tot) ICP/MS ACD159	ug/g	7.72E+01				6.887
S00T000809	A		Tellurium-ICP-Acid Digest	ug/g	< 3.18E+02	2.91E+02	24.419937	n/a	318
S00T000810	A		Tellurium-ICP-Acid Digest	ug/g	< 2.83E+02				283
S00T000811	A		Tellurium-ICP-Acid Digest	ug/g	< 2.71E+02				271
S00T000778	D		Tellurium-ICP-Acid Dilution	ug/mL	< 2.01E+02	2.01E+02		0 n/a	201
S00T000781	D		Tellurium-ICP-Acid Dilution	ug/mL	< 2.01E+02				201
S00T000784	D		Tellurium-ICP-Acid Dilution	ug/mL	< 2.01E+02				201
S00T000850	D		Thallium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02	6.36E-02		0 n/a	6.36E-02
S00T000852	D		Thallium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000854	D		Thallium (Total) ICP/MS ACD158	ug/mL	< 6.36E-02				6.36E-02
S00T000809	A		Thallium (Total) ICP/MS ACD159	ug/g	< 8.10E+00	7.40E+00	0.6264187	n/a	8.096
S00T000810	A		Thallium (Total) ICP/MS ACD159	ug/g	< 7.21E+00				7.207
S00T000811	A		Thallium (Total) ICP/MS ACD159	ug/g	< 6.89E+00				6.887
S00T000809	A		Thallium-ICP-Acid Digest	ug/g	< 1.27E+02	1.16E+02	9.8488578	n/a	127
S00T000810	A		Thallium-ICP-Acid Digest	ug/g	< 1.13E+02				113
S00T000811	A		Thallium-ICP-Acid Digest	ug/g	< 1.08E+02				108
S00T000778	D		Thallium-ICP-Acid Dil.	ug/mL	< 8.02E+01	8.02E+01		0 n/a	80.2
S00T000781	D		Thallium-ICP-Acid Dil.	ug/mL	< 8.02E+01				80.2
S00T000784	D		Thallium-ICP-Acid Dil.	ug/mL	< 8.02E+01				80.2
S00T000809	A		Thorium-ICP-Acid Digest	ug/g	2.79E+02	2.64E+02	13.316656	5.03782708	31.8
S00T000810	A		Thorium-ICP-Acid Digest	ug/g	2.53E+02				28.3
S00T000811	A		Thorium-ICP-Acid Digest	ug/g	2.61E+02				27.1
S00T000778	D		Thorium-ICP-Acid Dilution	ug/mL	< 2.01E+01	2.01E+01		0 n/a	20.1
S00T000781	D		Thorium-ICP-Acid Dilution	ug/mL	< 2.01E+01				20.1
S00T000784	D		Thorium-ICP-Acid Dilution	ug/mL	< 2.01E+01				20.1
S00T000779			TIC by Acid/Coulometry	ug/mL	6.75E+03	6.84E+03	90	1.31578947	5
S00T000782			TIC by Acid/Coulometry	ug/mL	6.84E+03				5
S00T000785			TIC by Acid/Coulometry	ug/mL	6.93E+03				5
S00T000812	W		TIC by Acid/Coulometry	ug/g	4.65E+03	5.08E+03	530.03145	10.4405406	475

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000813	W		TIC by Acid/Coulometry	ug/g	4.91E+03				472
S00T000814	W		TIC by Acid/Coulometry	ug/g	5.67E+03				374
S00T001163			TIC by Acid/Coulometry	ug/g	5.41E+03	5.24E+03	574.19509	10.9579215	5
S00T001164			TIC by Acid/Coulometry	ug/g	5.71E+03				5
S00T001165			TIC by Acid/Coulometry	ug/g	4.60E+03				5
S00T000809	A		Titanium-ICP-Acid Digest	ug/g	3.54E+01	3.25E+01	2.640707	8.11692718	6.36
S00T000810	A		Titanium-ICP-Acid Digest	ug/g	3.02E+01				5.66
S00T000811	A		Titanium-ICP-Acid Digest	ug/g	3.20E+01				5.41
S00T000778	D		Titanium-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00	0 n/a		4.01
S00T000781	D		Titanium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Titanium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000779			TOC by Persulfate/Coulometry	ug/mL	3.81E+02	3.62E+02	41.868843	11.5659787	40
S00T000782			TOC by Persulfate/Coulometry	ug/mL	3.14E+02				40
S00T000785			TOC by Persulfate/Coulometry	ug/mL	3.91E+02				40
S00T000812	W		TOC by Persulfate/Coulometry	ug/g	< 3.80E+03	3.52E+03	459.2385	n/a	3.80E+03
S00T000813	W		TOC by Persulfate/Coulometry	ug/g	< 3.77E+03				3.77E+03
S00T000814	W		TOC by Persulfate/Coulometry	ug/g	< 2.99E+03				2.99E+03
S00T001163			TOC by Persulfate/Coulometry	ug/g	7.56E+02	1.24E+03	425.84661	34.4722025	40
S00T001164			TOC by Persulfate/Coulometry	ug/g	1.57E+03				40
S00T001165			TOC by Persulfate/Coulometry	ug/g	1.38E+03				40
S00T000779			Tot. Organic Carbon by Coul.	ug/mL	3.30E+02	3.38E+02	28.290163	8.37813323	55
S00T000782			Tot. Organic Carbon by Coul.	ug/mL	3.14E+02				55
S00T000785			Tot. Organic Carbon by Coul.	ug/mL	3.69E+02				55
S00T000812	W		Tot. Organic Carbon by Coul.	ug/g	3.03E+03	3.09E+03	52.915026	1.7124604	523
S00T000813	W		Tot. Organic Carbon by Coul.	ug/g	3.11E+03				519
S00T000814	W		Tot. Organic Carbon by Coul.	ug/g	3.13E+03				411
S00T000780			Tritium By Lachat	uCi/mL	1.90E+02	1.88E+02	0.0001528	0.81107534	4.58E-05
S00T000783			Tritium By Lachat	uCi/mL	1.88E+02				4.54E-05
S00T000786			Tritium By Lachat	uCi/mL	1.87E+02				4.52E-05
S00T000812	W		Tritium By Lachat	uCi/g	1.68E+02	1.45E+02	0.0021656	14.9354537	3.55E+03
S00T000813	W		Tritium By Lachat	uCi/g	1.42E+02				3.50E+03
S00T000814	W		Tritium By Lachat	uCi/g	1.25E+02				2.77E+03
S00T000850	D		Tungsten (Total) ICP/MS ACD158	ug/mL	1.95E+01	1.92E+01	0.2768273	1.44130821	6.36E-02
S00T000852	D		Tungsten (Total) ICP/MS ACD158	ug/mL	1.92E+01				6.36E-02
S00T000854	D		Tungsten (Total) ICP/MS ACD158	ug/mL	1.90E+01				6.36E-02
S00T000809	A		Tungsten (Total) ICP/MS ACD159	ug/g	8.88E+00	7.68E+00	1.0552826	13.739466	8.096
S00T000810	A		Tungsten (Total) ICP/MS ACD159	ug/g	7.28E+00				7.207
S00T000811	A		Tungsten (Total) ICP/MS ACD159	ug/g	< 6.89E+00				6.887
S00T000809	A		Tungsten -ICP-Acid Digest	ug/g	< 3.18E+03	1.24E+03	1676.0586	n/a	3.18E+03
S00T000810	A		Tungsten -ICP-Acid Digest	ug/g	< 2.83E+02				283

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000811	A		Tungsten -ICP-Acid Digest	ug/g	< 2.71E+02				271
S00T000778	D		Tungsten -ICP-Acid Dil.	ug/mL	< 2.01E+02	2.01E+02	0	n/a	201
S00T000781	D		Tungsten -ICP-Acid Dil.	ug/mL	< 2.01E+02				201
S00T000784	D		Tungsten -ICP-Acid Dil.	ug/mL	< 2.01E+02				201
S00T000809	A		Uranium -ICP-Acid Digest	ug/g	5.85E+03	5.51E+03	340.04902	6.16775724	318
S00T000810	A		Uranium -ICP-Acid Digest	ug/g	5.17E+03				283
S00T000811	A		Uranium -ICP-Acid Digest	ug/g	5.52E+03				271
S00T000778	D		Uranium-233 by ICP/MS Acid Add	ug/mL	< 1.45E-02	1.45E-02	0	n/a	1.45E-02
S00T000781	D		Uranium-233 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000784	D		Uranium-233 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000809	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 6.12E-01	5.59E-01	0.0471628	n/a	6.12E-01
S00T000810	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 5.45E-01				5.45E-01
S00T000811	A		Uranium-233 by ICP/MS AcidD159	ug/g	< 5.21E-01				5.21E-01
S00T000778	D		Uranium-234 by ICP/MS Acid Add	ug/mL	< 1.45E-02	1.45E-02	0	n/a	1.45E-02
S00T000781	D		Uranium-234 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000784	D		Uranium-234 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000809	A		Uranium-234 by ICP/MS AcidD159	ug/g	< 6.12E-01	5.69E-01	0.037072	6.51147576	6.12E-01
S00T000810	A		Uranium-234 by ICP/MS AcidD159	ug/g	< 5.45E-01				5.45E-01
S00T000811	A		Uranium-234 by ICP/MS AcidD159	ug/g	5.51E-01				5.21E-01
S00T000778	D		Uranium-235 by ICP/MS Acid Add	ug/mL	< 1.45E-02	1.45E-02	0	n/a	1.45E-02
S00T000781	D		Uranium-235 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000784	D		Uranium-235 by ICP/MS Acid Add	ug/mL	< 1.45E-02				1.45E-02
S00T000809	A		Uranium-235 by ICP/MS AcidD159	ug/g	5.26E+01	4.97E+01	2.4743551	4.97524491	6.12E-01
S00T000810	A		Uranium-235 by ICP/MS AcidD159	ug/g	4.79E+01				5.45E-01
S00T000811	A		Uranium-235 by ICP/MS AcidD159	ug/g	4.87E+01				5.21E-01
S00T000778	D		Uranium-236 by ICP/MS Acid Add	ug/mL	< 1.93E-02	1.93E-02	0	n/a	1.93E-02
S00T000781	D		Uranium-236 by ICP/MS Acid Add	ug/mL	< 1.93E-02				1.93E-02
S00T000784	D		Uranium-236 by ICP/MS Acid Add	ug/mL	< 1.93E-02				1.93E-02
S00T000809	A		Uranium-236 by ICP/MS AcidD159	ug/g	5.26E+00	4.92E+00	0.3003204	6.10614133	8.16E-01
S00T000810	A		Uranium-236 by ICP/MS AcidD159	ug/g	4.68E+00				7.27E-01
S00T000811	A		Uranium-236 by ICP/MS AcidD159	ug/g	4.82E+00				6.95E-01
S00T000778	D		Uranium-238 by ICP/MS Acid Add	ug/mL	9.55E-01	1.22E+00	0.4601525	37.6351563	1.45E-02
S00T000781	D		Uranium-238 by ICP/MS Acid Add	ug/mL	1.75E+00				1.45E-02
S00T000784	D		Uranium-238 by ICP/MS Acid Add	ug/mL	9.59E-01				1.45E-02
S00T000809	A		Uranium-238 by ICP/MS AcidD159	ug/g	5.98E+03	5.62E+03	325.93455	5.80298909	6.12E-01
S00T000810	A		Uranium-238 by ICP/MS AcidD159	ug/g	5.35E+03				5.45E-01
S00T000811	A		Uranium-238 by ICP/MS AcidD159	ug/g	5.52E+03				5.21E-01
S00T000778	D		Uranium-ICP-Acid Dil.	ug/mL	< 2.01E+02	2.01E+02	0	n/a	201
S00T000781	D		Uranium-ICP-Acid Dil.	ug/mL	< 2.01E+02				201
S00T000784	D		Uranium-ICP-Acid Dil.	ug/mL	< 2.01E+02				201

Sample#	R	A#	Analyte	Unit	Result	Average	StdDev	RSD	Det Limit
S00T000850	D		Vanadium (Total) ICP/MS ACD158	ug/mL	< 3.18E+00	3.18E+00	4.215E-08	n/a	3.182
S00T000852	D		Vanadium (Total) ICP/MS ACD158	ug/mL	< 3.18E+00				3.182
S00T000854	D		Vanadium (Total) ICP/MS ACD158	ug/mL	< 3.18E+00				3.182
S00T000809	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 4.05E+02	3.70E+02	31.628047	n/a	404.8
S00T000810	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 3.60E+02				360.3
S00T000811	A		Vanadium (Total) ICP/MS ACD159	ug/g	< 3.44E+02				344.3
S00T000809	A		Vanadium -ICP-Acid Digest	ug/g	< 3.18E+01	2.91E+01	2.4419937	n/a	31.8
S00T000810	A		Vanadium -ICP-Acid Digest	ug/g	< 2.83E+01				28.3
S00T000811	A		Vanadium -ICP-Acid Digest	ug/g	< 2.71E+01				27.1
S00T000778	D		Vanadium-ICP-Acid Dil.	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Vanadium-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000784	D		Vanadium-ICP-Acid Dil.	ug/mL	< 2.01E+01				20.1
S00T000809	A		Yttrium (Total) ICP/MS ACDG159	ug/g	2.35E+02	2.14E+02	18.147543	8.46697206	2.698
S00T000810	A		Yttrium (Total) ICP/MS ACDG159	ug/g	2.01E+02				2.403
S00T000811	A		Yttrium (Total) ICP/MS ACDG159	ug/g	2.07E+02				2.295
S00T000809	A		Yttrium -ICP-Acid Digest	ug/g	1.88E+02	1.76E+02	11.06044	6.27246126	31.8
S00T000810	A		Yttrium -ICP-Acid Digest	ug/g	1.66E+02				28.3
S00T000811	A		Yttrium -ICP-Acid Digest	ug/g	1.75E+02				27.1
S00T000778	D		Yttrium -ICP-Acid Dilution	ug/mL	< 2.01E+01	2.01E+01	0	n/a	20.1
S00T000781	D		Yttrium -ICP-Acid Dilution	ug/mL	< 2.01E+01				20.1
S00T000784	D		Yttrium -ICP-Acid Dilution	ug/mL	< 2.01E+01				20.1
S00T000809	A		Zinc -ICP-Acid Digest	ug/g	9.24E+01	8.62E+01	5.6956123	6.60743892	6.36
S00T000810	A		Zinc -ICP-Acid Digest	ug/g	8.12E+01				5.66
S00T000811	A		Zinc -ICP-Acid Digest	ug/g	8.50E+01				5.41
S00T000778	D		Zinc-ICP-Acid Dil.	ug/mL	< 4.01E+00	4.01E+00	0	n/a	4.01
S00T000781	D		Zinc-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000784	D		Zinc-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000809	A		Zirconium -ICP-Acid Digest	ug/g	2.84E+04	2.66E+04	1670.3293	6.27943349	63.6
S00T000810	A		Zirconium -ICP-Acid Digest	ug/g	2.51E+04				5.66
S00T000811	A		Zirconium -ICP-Acid Digest	ug/g	2.63E+04				5.41
S00T000778	D		Zirconium-ICP-Acid Dil.	ug/mL	1.58E+01	1.13E+01	6.3953134	56.4126438	4.01
S00T000781	D		Zirconium-ICP-Acid Dil.	ug/mL	1.42E+01				4.01
S00T000784	D		Zirconium-ICP-Acid Dil.	ug/mL	< 4.01E+00				4.01
S00T000850	D		Zr/Sr 90 by ICP/MS Acid Add	ug/mL	< 6.36E-02	7.24E-02	0.0110654	15.2907576	6.36E-02
S00T000852	D		Zr/Sr 90 by ICP/MS Acid Add	ug/mL	6.87E-02				6.36E-02
S00T000854	D		Zr/Sr 90 by ICP/MS Acid Add	ug/mL	8.48E-02				6.36E-02
S00T000809	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	3.00E+04	2.74E+04	2324.5071	8.49393587	8.096
S00T000810	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	2.56E+04				7.207
S00T000811	A		Zr/Sr 90 by ICP/MS AcidD159	ug/g	2.65E+04				6.887

Table 2
AZ101 LIQUID

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Analyte	Method	Corrected H&L MRQ	Corrected LAW MRQ	Units
234U	ICP/MS	1.92E-02	1.92E-05	µg/mL
Pb	ICP/AES	3.00E+02	3.00E+02	µg/mL
Rb	ICP/MS	2.30E+00	2.30E+00	µg/mL
Rh	ICP/AES	1.80E+01	1.80E+01	µg/mL
Ru	ICP/AES	3.60E+01	3.60E+01	µg/mL
154Eu	GEA	2.00E-02	2.00E-03	µCi/mL
155Eu	GEA	9.00E-02	9.00E-02	µCi/mL
243Am	ICP/MS	4.81E-02	4.81E-02	µg/mL

† - based on Am-241 specific activity

Table 2
AZ-101 SOLID

Analyte	Method	Corrected H&L MRQ	Corrected HLW MRQ	Units
As	ICP/MS	3.59E+01	1.80E+01	µg/g
Rh	ICP/MS	3.59E+00	3.59E+00	µg/g
Sb	ICP/MS	7.19E+00	7.19E+00	µg/g
Ta	ICP/MS	3.59E+00	3.59E+00	µg/g
Tl	ICP/MS	3.59E+00	3.59E+02	µg/g
V	ICP/MS	3.59E+00	3.59E-02	µg/g
Cl	IC	1.35E+02	1.35E+02	µg/g
CN-	CN-analysis	1.80E+00	1.80E+00	µg/g
126Sn7	ICP/MS	3.80E-01	1.27E+00	µg/g
152Eu	GEA	3.59E+00	1.20E+00	µCi/g
241AMU	ICP/MS	1.05E+00 †	1.05E+00 †	µg/g
243+244Cm	Sep./AEA	7.19E-03	3.59E-05	µCi/g

* - no specific activity available

‡ - GEA listed in Analysis table, ICP/MS listed in MRQ table in

† -based on Am-241 specific activity

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CORRESPONDENCE

ATTACHMENT 4

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Steen, Franciska H

From: Templeton, Andrew M.
Sent: Friday, July 14, 2000 4:26 PM
To: Steen, Franciska H
Subject: AZ-101 IC analyses

Fran sorry for not getting this out yesterday. For the AZ-101 liquid composite analysis the TSAP requires IC analyses of low molecular weight acids such as formate, oxalate, acetate and citrate and chelators such as NTA. These are actually required only as a secondary analysis if: for low molecular weight acids if TOC exceeds 5,000 mg/L (ug/ml) and for chelators if TOC exceeds 40,000 mg/L (ug/ml). **My check of the preliminary liquid data indicates these limits were not exceeded therefore those analyses are not required.** Given I am looking at preliminary data please double check. One of us need to fill out a Characterization Change Notice form. I am still double checking the solids requirements.

Andrew

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, June 14, 2000 10:30 AM
To: Steen, Franciska H
Cc: Burgeson, Ingrid E
Subject: RE: AZ-101 Core 269 Wt% Oxide Prep Could Use Liquid Composite Already Prepared

I have discussed this with Ingrid Burgeson yesterday. Since three core 269 solid composite subsamples were analyzed for wt%oxides, only the liquid wt% oxides is required. No slurry wt% oxides is required on AY-101 per Ingrid Burgeson. I will fill out a Characterization Change Form documenting this for insertion in final report.

-----Original Message-----

From: Steen, Franciska H
Sent: Wednesday, June 14, 2000 8:47 AM
To: Person, James C; Templeton, Andrew M; Chenault, Jeffrey W
Subject: RE: AZ-101 Core 269 Wt% Oxide Prep Could Use Liquid Composite Already Prepared

Jim, Andrew and Jeff,

We have completed the wt%oxides analysis on core 269 centrifuged solids. I have three liquid subsamples from core 269 composite that have been slated for viscosity and wt%oxides analyses. One of the e:mails from Andrew requested the wt%oxides analysis to be performed on three slurry and three liquid samples, is this still the requirement? I'm confused (a constant state these days). The solid core composite used for the "TSAP" analyses was depleted so I cannot prepare slurry samples from this material. If we are required to perform wt%oxides on slurries, I will have to prepare them using the solid core material slated for the WIT and WFD composites. Andrew, Please let me know what to do!

Fran

-----Original Message-----

From: Person, James C
Sent: Tuesday, June 13, 2000 5:00 PM
To: Templeton, Andrew M
Cc: Steen, Franciska H
Subject: AZ-101 Core 269 Wt% Oxide Prep Could Use Liquid Composite Already Prepared

Andrew,

Regarding whether the AZ-101 Core 269 liquid composite was prepared, Fran's email of 5/15 states that it was prepared. Thus, we can use the liquid composite for the three wt% oxide samples (if you do not want to prepare the four WIT composites yet).

Steen, Franciska H

From: Templeton, Andrew M
 Sent: Wednesday, May 10, 2000 3:00 PM
 To: Steen, Franciska H; Person, James C; Chenault, Jeffrey W
 Cc: Burgeson, Ingrid E
 Subject: RE: AZ-101

Fran,

After discussing with Ingrid Burgeson, please perform the Wt% oxides on the slurry (core 269). Do not analyze the drainable liquid for Wt% oxides. Thanks

Andrew

-----Original Message-----

From: Steen, Franciska H
 Sent: Wednesday, May 10, 2000 2:38 PM
 To: Person, James C; Templeton, Andrew M; Chenault, Jeffrey W
 Subject: FW: AZ-101

Jim,

We have enough centrifuged solid material from core 269 to perform the weight percent oxides (I needed clarification from Andrew on the message below before proceeding with instructions).

The hot-cell techs are holding-over tonight to subsample core 269 for TICTOC and Mercury. The samples will be available tomorrow for the next set of wt% oxides (no rush on these, the data is due by June 2).

In addition we may also be required to analyze the slurry and drainable liquid for wt% oxides. Andrew is questioning the WIT DQO folks today. I'll let you know.

Fran

-----Original Message-----

From: Templeton, Andrew M
 Sent: Tuesday, May 02, 2000 4:24 PM
 To: Steen, Franciska H
 Cc: Person, James C; Burgeson, Ingrid E; Sasaki, Leela M; Rasmussen, Juergen H; McKinney, Steve G
 Subject: AZ-101

Fran, in discussion with Ingrid Burgeson it has become apparent that in addition to the Wt % oxides on the slurry the requirement was always to also perform Wt% oxides on the solids. The measurement on the solids is more important than the measurement on the slurry. Table 2 requests Wt% oxides on the solids. If you have any questions please call. Thanks!

WT % OXIDES

Core 266

Analyze centrifuged solids for Wt % oxides

Core 266 [Steen, Franciska H] This should be core 269.

Analyze at a minimum the centrifuged solids for Wt% oxides.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, May 03, 2000 10:10 AM
To: Steen, Franciska H
Cc: Burgeson, Ingrid E
Subject: RE: AZ-101

Sounds good Fran. Please keep Ingrid and I posted on material availability. What is the likelihood of not having the 3 grams to give to Jim? Thanks

Andrew

-----Original Message-----

From: Steen, Franciska H
Sent: Wednesday, May 03, 2000 6:46 AM
To: Templeton, Andrew M
Subject: RE: AZ-101

Andrew,

What timing! I spoke with Jim Person yesterday regarding the wt%oxides analysis. If we have enough core 269 centrifuged solids remaining after subsampling, he has requested 3 grams (one from each daughter sample) to perform the wt%oxides. Originally we were requested to perform this analysis on the slurry but he wanted to compare results from both the slurry and centrifuged solids.

As for core 266, the wt%oxides analysis will begin on the centrifuged solids Monday. I will then be able to subsample for the direct analyses (Hg, TICTOC, Sb and Se).

Fran

-----Original Message-----

From: Templeton, Andrew M
Sent: Tuesday, May 02, 2000 4:24 PM
To: Steen, Franciska H
Cc: Person, James C; Burgeson, Ingrid E; Sasaki, Leela M; Rasmussen, Juergen H; McKinney, Steve G
Subject: AZ-101

Fran, in discussion with Ingrid Burgeson it has become apparent that in addition to the Wt % oxides on the slurry the requirement was always to also perform Wt% oxides on the solids. The measurement on the solids is more important than the measurement on the slurry. Table 2 requests Wt% oxides on the solids. If you have any questions please call. Thanks!

WT % OXIDES

Core 266

Analyze centrifuged solids for Wt % oxides

Core 266

Analyze at a minimum the centrifuged solids for Wt% oxides.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, May 02, 2000 4:24 PM
To: Steen, Franciska H
Cc: Person, James C; Burgeson, Ingrid E; Sasaki, Leela M; Rasmussen, Juergen H; McKinney, Steve G
Subject: AZ-101

Fran, in discussion with Ingrid Burgeson it has become apparent that in addition to the Wt % oxides on the slurry the requirement was always to also perform Wt% oxides on the solids. The measurement on the solids is more important than the measurement on the slurry. Table 2 requests Wt% oxides on the solids. If you have any questions please call. Thanks!

WT % OXIDES

Core 266

Analyze centrifuged solids for Wt % oxides

Core 266

Analyze at a minimum the centrifuged solids for Wt% oxides.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, April 26, 2000 4:50 PM
To: McKinney, Steve G
Cc: Steen, Franciska H
Subject: FW: AZ101 Homogeniety Write-up

FYI

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:Ingrid.burgeson@pnl.gov]
Sent: Wednesday, April 26, 2000 3:28 PM
To: Templeton, Andrew M
Subject: AZ101 Homogeniety Write-up

Homogeniety Check of
AZ101 Wri...

Andrew,

I promised you this write-up last Thursday. I hope I haven't held you up.

Ingrid

Homogeneity Check of AZ101 Segment Drainable Liquid

During preparation and handling of the whole tanks composite from tank AZ101 core 266, the composite was spilled resulting in a loss of 90% of the material composited. An evaluation was performed on the available segment ICP-AES data from core 266 and core 269 to determine if the supernate from the two cores were homogeneous. The ICP-AES analyses were performed on each segment prior to forming composites; hence, this data would provide an accurate evaluation on a segment by segment basis.

The preliminary analytical data was downloaded from the TCD by Steve McKinney and delivered to WIT (Ingrid Burgeson) in electronic format on 3-24-00. The data was consolidated by analyte type and ordered by segment for each core. Each segment data point was plotted for the following analytes: Al, Cr, PO₄, Si, Cl, F, NO₃, Na, and K. The F and PO₄ data visually appeared significantly difference. Therefore, a further evaluation of selected analytes was performed for only those segments which appeared inhomogeneous (11, 12, 13 and 14). The percent difference of selected analytes (Al, Cr, Na, PO₄, S, Si, F, Cl, NO₂, NO₃) was calculated. The evaluation considered the two segments to be the same if the difference between both cores was $\leq 20\%$. The average percent difference was less than 20%. The supernate from segments 1-16 of Core 266 was determined to be homogeneous with the segments 1-16 of Core 269.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, April 05, 2000 10:18 AM
To: Wiemers, Karyn D
Cc: Burgeson, Ingrid E; Steen, Franciska H
Subject: AZ-101 analysis

Karen, yes the % solids will be done by gravimetry. Also if the priority is to perform all three preps and % solids the Mercury may still be performed if there is enough material.

Andrew

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, April 04, 2000 3:02 PM
To: Burgeson, Ingrid E
Cc: Wiemers, Karyn D; McKinney, Steve G; Steen, Franciska H; Field, Jim G
Subject: Core 266 Composite

I just got an update from Fran Steen at the laboratory on the core 266 composite. The liquids and solids have been separated. No additional liquid was used to transfer the solids. There was 27.23 grams of solids and 83.9 grams of liquid. The solids were homogenized and separated into 3 aliquots. The three aliquots contain 5 , 8 and 11 grams of solids. Fran is confident that all the analysis can be performed except Mercury (and bulk density, Wt% oxides previously indicated). The lab can perform % water, acid digest, water digest and fusion. To perform the Mercury analysis we would have to give up the wt% water or one of the digests. I would like direction from you on how to proceed. Please let me know.

Andrew Templeton

Steen, Franciska H

From: Templeton, Andrew M
Sent: Thursday, March 30, 2000 2:52 PM
To: Steen, Franciska H
Cc: Brown, Thomas A; Prilucik, John R; McKinney, Steve G; Field, Jim G; Clark, Glen A; Burgeson, Ingrid E; Baldwin, John H; Welliver, Nancy C
Subject: AZ-101 compositing

Fran, per our 9am meeting this morning please proceed as directed below:

Core 266

Please proceed with centrifugation of the remaining material.

The supernate between cores 266 and 269 was determined to be homogenous.

If necessary use liquid from segment 7 core 266 to transfer the remaining solids to centrifuge cones.

Proceed with the triplicate subsampling, following the same handling directions as core 269.

I understand we will not be able to perform bulk density measurements in triplicate and we missed the opportunity to perform Wt % oxides measurements on the slurry. I understand all other analyses can be performed in triplicate. If this is not the case please inform me and wait for prioritization direction.

Core 269

In addition to prior direction, during triplicate subsampling, homogenize solids between aliquots 1 through 3 with a tissue homogenizer.

If you have any questions please do not hesitate to call me. My home phone number is 943-0205. Thanks for all your help!!

Andrew Templeton

Steen, Franciska H

From: Templeton, Andrew M
Sent: Thursday, March 30, 2000 7:57 AM
To: Steen, Franciska H
Cc: McKinney, Daniel L
Subject: FW: AZ101 Core 266 Solid Transfer

FYI for now.

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:ingrid.burgeson@pnl.gov]
Sent: Wednesday, March 29, 2000 4:47 PM
To: Templeton, Andrew M
Subject: AZ101 Core 266 Solid Transfer

Andrew,

My recommendation for performing the transfer of the remaining core 266 AZ101 solids from the large composite jar are as follows:

1. Collect as much of the material as possible without addition of liquid and centrifuge (perhaps syringe with tubing attached?)
2. Set aside the recovered liquid for potential Table 1 analyses, estimate volume (+/- 10 mLs)
3. Use liquid from segment 7 core 266 to transfer the remaining solids to centrifuge cones and centrifuge
4. Decant off the liquid and discard (do not add this liquid to the salvaged composite liquid)
5. Collect all centrifuged solids. This material can be analyzed by starting with step 7 of the details for core 269 and following the remaining directions of that document.

Note: Be certain to record initial and final mass of centrifuge cones so that the total amount of solids can be determined and communicated to tank coordinator for prioritization of analyses.

Also Andrew,

I've been discussing prioritization of analyses with Mike Truex. He indicated that a "bulleted list of priority analyses" was created for either AZ101 or AZ102. I do not have a copy of this list (Mike said it was created last fall- before my time on TSAP's). Do you know what Mike is referring to? Do you or Jurgen have this list handy? It would help me immensely.

Ingrid

HNF-1701 REV. 0

CHARACTERIZATION CHANGE NOTICE

Document: HNF-4738, Rev. 1, Tank 241-AZ-101 Privatization Plan Push Mode Core Sampling and Analysis Plan

Change Number: 4738-01

ECN to TSAP Required? No

Requestor: Andrew M. Templeton Date: 7-12-00

Samples Impacted: Solid and liquid laboratory composites

Proposed Change: For the AZ-101 liquid and solid composites, HNF-4738, Tables 1 and 2, requires IC analysis of low molecular weight acids such as citrate, and chelators such as NTA. For the solids, these analytes are not required. For the liquid, these are required only as a secondary analysis if: for low molecular weight acids TOC exceeds 5,000 mg/L ($\mu\text{g/mL}$) and for chelators if TOC exceeds 40,000 mg/L ($\mu\text{g/mL}$). My check of the preliminary liquid data indicates these limits were not exceeded, therefore, those analyses are not required.

Reason for Change: Analytes not required.

Date Change Effective: 7-12-00

Schedule Impact: None

Authorization:

Tank Coordinator:	<u>Andrew M. Templeton</u>	Date: <u>7-18-00</u>
Project Coordinator:	<u>Franciska H. Steen</u>	Date: <u>7/19/00</u>
222-S Client Services:	<u>Katherine L. Powell</u>	Date: <u>7/19/00</u>
Other:	<u>WI WINTERS</u>	Date: <u>7/19/00</u>

Steen, Franciska H

From: Fuller, Richard K (Keith)
Sent: Friday, April 21, 2000 3:56 PM
To: ^Tank Farms-Shift Office-200E; Field, Jim G; Templeton, Andrew M; Hedengren, David C (Dave)
Cc: Steen, Franciska H; McKinney, Steve G; Winters, William I (Bill)
Subject: IMMEDIATE NOTIFICATION ON AZ-101 SAMPLES
Importance: High

The Total Alpha exceeded the notification limit of 41 uCi/g for the samples listed below:

S00T000797, 798, 799 - AZ-101 Core Comp 266 centrifuged solids A, B, C....results are 41.7, 51.2, 50.1 uCi/g respectively.

S00T000800, 801, 802 - AZ-101 Core Comp 269 centrifuged solids A, B, C....results are 83.3, 79.2, 88.6 uCi/g respectively.

Contact Fran Steen if you have any questions.

Thanks, Keith Fuller

373-1883

Steen, Franciska H

From: Steen, Franciska H
Sent: Thursday, January 13, 2000 10:14 AM
To: Templeton, Andrew M; Fowler, Kenneth D (Kenny); Winters, William I (Bill); Catlow, Stanley A; Bachand, Donald D; Blevins, David G
Cc: Steen, Franciska H
Subject: AZ-101 Alpha Notification

Six solid samples from tank 241-AZ-101 have exceeded the total alpha notification limit of 41 uCi/g. The office of the East Tank Farms Shift Operations Manager was notified of the results by telephone at 1000 hours on January 13, 2000. The results are provided below:

Tank 241-AZ-101, Core 266, Segment 16 Composite: sample 56.20 uCi/g, duplicate 64.30 uCi/g.
Tank 241-AZ-101, Core 266, Segment 16 Composite: sample 64.50 uCi/g, duplicate 57.00 uCi/g.
Tank 241-AZ-101, Core 266, Segment 16 Composite: sample 72.50 uCi/g, duplicate 63.00 uCi/g.
Tank 241-AZ-101, Core 269, Segment 16 Composite: sample 109.00 uCi/g, duplicate 110.0 uCi/g.
Tank 241-AZ-101, Core 269, Segment 16 Composite: sample 99.00 uCi/g, duplicate 110.0 uCi/g.
Tank 241-AZ-101, Core 269, Segment 16 Composite: sample 88.40 uCi/g, duplicate 85.60 uCi/g.

If you have any questions regarding this data, please call me at 372-2495.

Franciska Steen
Project Coordinator
222-S Laboratory

HNF-1701 REV. 0

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Steen, Franciska H

From: Templeton, Andrew M
Sent: Friday, March 24, 2000 4:08 PM
To: Stanton, George A Jr; Wiemers, Karyn D; Welliver, Nancy C; Carreon, Rodolfo (Rudy); Burgeson, Ingrid E; McKinney, Steve G; Liou, Wen-Shou; Seidel, Cary M
Cc: Steen, Franciska H; Field, Jim G; DeFigh-Price, Cherri; Kirch, Nicholas W (Nick)
Subject: AZ-101 Core 266

I have good news, I observed what was left of the Core 266 tank composite today at noon. There appears to be as much as 50 grams (maybe more or less) of solids remaining of the AZ-101 Core 266 tank composite. Fran Steen the Project Coordinator for the 222-S laboratories feels that the lab can perform almost all the solids analysis in triplicate on this material. The lab may not be able to perform: Wt % oxides/Wt% solids on the slurry, bulk densities, and possibly TGA (% water). Fran will send me by tuesday a detail of the quantity of material it takes for each analysis, we can then assess the need for any prioritization. If you have any questions, please do not hesitate to call.

Thank You!

Andrew M. Templeton

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, March 21, 2000 12:40 PM
To: Steen, Franciska H
Cc: McKinney, Steve G
Subject: Composites Core 266, segment 2

Fran per our telephone conversation this morning, due to sample jar breakage, please supplement Segment 2 liquids with liquid from Segment 3. If you have any questions please call and/or e-mail. Thanks

Andrew

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, March 07, 2000 11:45 AM
To: Steen, Franciska H
Subject: FW: AZ-101 compositing

Fran I can't remember if I sent you this. This stuff will be put in the ECN to the TSAP. Andrew

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:ingrid.burgeson@pnl.gov]
Sent: Monday, February 07, 2000 3:33 PM
To: Templeton, Andrew M
Subject: RE: AZ-101 compositing

Andrew,

I believe we agree on the series for handling core 266 and 269. Bear with me as I reiterate my understanding from the meeting:

Core 266

centrifuge and collect the white solids from each liquid segment, record weight white solids from each segment.
 Combine all white solids together into one jar and mix
 calculate the amount of liquids needed to form a composite
 calculate the amount of white solids needed in the composite (based upon relative masses of this solid the original total solids and the remaining solids)
 combine the solids, white solids and liquid and "shake"
 provide the whole composite to WFD for settling and viscosity measurements
 once composite is returned from those measurements, homogenize the composite using a tissue homogenizer
 allow the material to settle, decant liquid, centrifuge solids and recombine liquid with the decanted supernate
 homogenize the centrifuged solids with tissue homogenizer and subsample for Tables 1 and 2
 mix the combined supernate and subsample for Tables 1 and 2

Core 269 This core was handling a bit differently due to the "excess" of solids and the need of WFD for remaining sample, hence, note the differences in handling from core 266 as shown in red

centrifuge and collect the white solids from each liquid segment, record weight white solids from each segment.
 Combine all white solids together into one jar and mix
 add the white solids to the combined solids and homogenize using a tissue homogenizer
 provide sample solids (homogenized) and supernate to Jim Person- Jim will form his own composite based upon the needed total mass/volume for solubility studies
 calculate the amount of liquids needed to form a composite
 subsample the homogenized solids to form the WIT composite; form the composite by combining the solids(which contain the white solids) and liquid then homogenize with tissue homogenizer

submit the remaining solids to WFD for testing to their test plan

allow the homogenized composite material to settle, decant liquid, centrifuge solids and recombine liquid with the decanted supernate
 homogenize the centrifuged solids with tissue homogenizer and subsample for Tables 1 and 2
 mix the combined supernate and subsample for Tables 1 and 2

Your solid preparation scheme for core 269 would only add the white solids to the WIT composite. My faulty recollection is that the solids would be comprised of all of the collected solids. The only reason for not adding all of the solids to core 266 was the fact that the solids has already been subsampled for Poppiti analyses, etc. But I don't recall from our meeting if this core has already been subsampled for analyses. If so, then the amount of white solids to be added must be calculated based upon the remaining solids versus the total original solids, as with core 266.

Whew, I think I got that out somewhat intelligibly. Please contact me if you have any comments or questions.

Ingrid

-----Original Message-----

From: Templeton, Andrew M
Sent: Wednesday, February 02, 2000 5:00 PM
To: Steen, Franciska H; Truex, Michael J; Burgeson, Ingrid E; Baldwin, John H; Person, James C
Subject: AZ-101 compositing

MEETING MINUTES

Subject: AZ-101 1999 Core Sample Compositing

To: Distribution

From: Andrew Templeton

Date of Meeting: January 28, 2000

Attendees:

Mike Truex Fran Steen
 Ingrid Burgeson Andrew Templeton
 John Baldwin Jim Person

Initially the meeting was held in the hot cells. All the drainable liquids from core 269 and the drainable liquid from core 266, Segment 2, 3 and 10 was observed. Of interest were the white solids present in the bottom of the samples. These white settled solids appeared to have agglomerated since settling. Results from the recently completed heating tests and the PLM, SEM/XRD tests indicate that the solids may exist in the tank.

After leaving the hot cells the meeting was reconvened in a MO-039 Conference room. The following handling and analysis schemes were discussed and agreed to.

CORE 266

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment. Add appropriate supernate and white solids to remaining sludge (104.4 grams) to form a tank composite. Supernate and white solids weights/volumes to be determined.

Shake

Allow Process Chemistry to perform viscosity measurements and settling test.

Homogenize with tissue homogenizer.

Subsample 5-10 grams of slurry for Wt% oxides analysis.

Allow to settle.

Centrifuge.

Homogenize centrifuged solids with tissue homogenizer.

Analyze solids and liquids per Table 1 and 2 of TSAP (Templeton 1999).

CORE 269

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment.

Homogenize the remaining 427.5 grams of sludge with a tissue homogenizer.

Subsample 125 grams for the WIT test plan (J. Person)

Subsample 125 grams to make composite for Fran Steen to perform analysis per Tables 1 and 2.

The remaining approximately 177.5 grams would be provided to Process Chemistry to analyze per the WFD test plan (not issued).

The composite that will be analyzed for Tables 1 and 2 will be handled in the following manner:

Appropriate amounts of supernate and white solids will be added to make a tank representative composite.

The sample will then be shaken and allowed to settle.

The sample will then be centrifuged.

The solids will then be homogenized with a tissue homogenizer.

The liquids and solids will be analyzed per Tables 1 and 2.

If you have any questions or comments please call me at 373-5589.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, March 07, 2000 11:43 AM
To: Steen, Franciska H
Subject: AZ-101

Fran I recieved the white solids segment quantities on Friday. Thanks! I am working on an ECN/compositing scheme. Are you waiting on me to proceed? In other words if you had the compositing scheme today would you start tomorrow? Have we scheduled the compositing yet? Please let me know. Thanks!

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, March 01, 2000 11:36 AM
To: Steen, Franciska H
Subject: FW: AZ-101 compositing

Can you answer Ingrid's question on the fusion spike? Thanks

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:ingrid.burgeson@pnl.gov]
Sent: Wednesday, March 01, 2000 11:02 AM
To: Templeton, Andrew M
Subject: RE: AZ-101 compositing

Andrew,

It would be nice to delay a bit, but since everyone has already accepted the 7:30 meeting, I'm not sure how easy it would be to change times. It will probably be more trouble than it's worth.

Is there anything I should know about this morning's meeting?

Do you happen to know- I've been asked by some folk if 222S performs a spike on samples before they prepare it by fusion. I've not known this to be done successfully- hence I was curious myself.

Ingrid

-----Original Message-----

From: Templeton, Andrew M
Sent: Tuesday, February 29, 2000 11:44 PM
To: Burgeson, Ingrid E
Subject: RE: AZ-101 compositing

Ingrid,

Thanks for the quick reply. Would you like to delay the meeting on Thursday till say 8, I have young kids at home and fully understand. Let me know it's just John Baldwin, Glen Clark and myself. I was hoping to have the white solid weights by now, thus I'm not sure what tomorrow's meeting will accomplish except as an update since it has been a month since we last met. By the way I have a print out of 40 some pages of "labcore" AZ-101 data. Fran has ran the IC and ICP analysis on all the supernate segments and I think the drainable liquid. I am checking for Lithium Bromide contamination (hydrostatic head fluid) prior to compositing. Given the bottom segment of AZ-101 was a 19" stroke and assuming 17.5 inches of sludge, I will need to include a portion of the drainable liquid from the sludge segment to represent that 1.5 inches. This will all be in my compositing scheme. Anyways I am putting a time line together for AZ-101 for the meeting and will try to fax you one in advance. Thanks Andrew

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:ingrid.burgeson@pnl.gov]
Sent: Tuesday, February 29, 2000 3:14 PM
To: Templeton, Andrew M
Subject: RE: AZ-101 compositing

Andrew,

I spoke with Mike Truex and understand now the progression of the logic, etc. By all means use 17.5 inches as your value. I saw that John B indicated agreement as well. Seems we're all on the same page.

As requested, I set up a conference room for AY101 at 7:30 am Thursday. I sent out the meeting request as well. I am home alone with my kids this week, hence, I may be a bit late to the meeting. Don't hold things up for me and don't worry that I forgot- I will be there. I will do all I can to ensure I'm on time (the kids usually have their own agenda and at 3, 2 and 1 they usually win as well).

See you Wednesday afternoon,

Oh-yeah- Mike indicated he can not make it to the Wednesday am meeting on AZ101. I can give you a call after

that meeting to discuss any issues you'd like to summarize, if that would be useful.
If I don't reach you, I guess I'll find out everything in the afternoon meeting.

Ingrid

-----Original Message-----

From: Templeton, Andrew M
Sent: Monday, February 28, 2000 1:13 PM
To: Burgeson, Ingrid E; Truex, Michael J; Baldwin, John H
Cc: Steen, Franciska H
Subject: RE: AZ-101 compositing

Ingrid your reiteration of the handling of core 266 and 269 is great. It is more concise than mine. This direction will be submitted to the lab as an ECN or letter along with the compositing scheme (actually it is all part of the scheme). In regards to the compositing scheme as everyone is aware we are waiting on the centrifugation of the liquids before proceeding with final direction. Meanwhile I am working on it. I have a question in regards to the amount of sludge that we should be using. I have forwarded an e-mail to you all with some more recent sludge level measurements. The average sludge levels is 17.5 inches. I am planning on using 17.5 inches to calculate the tank composite. What do you think, keeping in mind that we never sampled the bottom 5 inches of the tank, and the recovery above that was less than optimal. I think our maximum solids recovery was 7.5 inches. Please let me know your thoughts (well not all of them). Thanks
Andrew

-----Original Message-----

From: Burgeson, Ingrid E [SMTP:ingrid.burgeson@pnl.gov]
Sent: Monday, February 07, 2000 3:33 PM
To: Templeton, Andrew M
Subject: RE: AZ-101 compositing

Andrew,

I believe we agree on the series for handling core 266 and 269. Bear with me as I reiterate my understanding from the meeting:

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centrifuge and collect the white solids from each liquid segment, record weight white solids from each segment.

Combine all white solids together into one jar and mix

calculate the amount of liquids needed to form a composite

calculate the amount of white solids needed in the composite (based upon relative masses of this solid the original total solids and the remaining solids)

combine the solids, white solids and liquid and "shake"

provide the whole composite to WFD for settling and viscosity measurements

once composite is returned from those measurements, homogenize the composite using a tissue homogenizer

allow the material to settle, decant liquid, centrifuge solids and recombine liquid with the decanted supernate

homogenize the centrifuged solids with tissue homogenizer and subsample for Tables 1 and 2

mix the combined supernate and subsample for Tables 1 and 2

Core 269 This core was handling a bit differently due to the "excess" of solids and the need of WFD for remaining sample, hence, note the differences in handling from core 266 as shown in red

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Combine all white solids together into one jar and mix

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provide sample solids (homogenized) and supernate to Jim Person- Jim will form his own composite based upon the needed total mass/volume for solubility studies

calculate the amount of liquids needed to form a composite

subsample the homogenized solids to form the WIT composite; form the composite by combining the solids(which contain the white solids) and liquid then homogenize with tissue homogenizer

submit the remaining solids to WFD for testing to their test plan

allow the homogenized composite material to settle, decant liquid, centrifuge solids and recombine liquid with the decanted supernate
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Whew, I think I got that out somewhat intelligibly. Please contact me if you have any comments or questions.

Ingrid

-----Original Message-----

From: Templeton, Andrew M
Sent: Wednesday, February 02, 2000 5:00 PM
To: Steen, Franciska H; Truex, Michael J; Burgeson, Ingrid E; Baldwin, John H; Person, James C
Subject: AZ-101 compositing

MEETING MINUTES

Subject: AZ-101 1999 Core Sample Compositing

To: Distribution

From: Andrew Templeton

Date of Meeting: January 28, 2000

Attendees:

Mike Truex Fran Steen
 Ingrid Burgeson Andrew Templeton
 John Baldwin Jim Person

Initially the meeting was held in the hot cells. All the drainable liquids from core 269 and the drainable liquid from core 266, Segment 2, 3 and 10 was observed. Of interest were the white solids present in the bottom of the samples. These white settled solids appeared to have agglomerated since settling. Results from the recently completed heating tests and the PLM, SEM/XRD tests indicate that the solids may exist in the tank.

After leaving the hot cells the meeting was reconvened in a MO-039 Conference room. The following handling and analysis schemes were discussed and agreed to.

CORE 266

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment. Add appropriate supernate and white solids to remaining sludge (104.4 grams) to form a tank composite. Supernate and white solids weights/volumes to be determined.

Shake

Allow Process Chemistry to perform viscosity measurements and settling test.

Homogenize with tissue homogenizer.

Subsample 5-10 grams of slurry for Wt% oxides analysis.

Allow to settle.

Centrifuge.

Homogenize centrifuged solids with tissue homogenizer.

Analyze solids and liquids per Table 1 and 2 of TSAP (Templeton 1999).

CORE 269

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment.

Homogenize the remaining 427.5 grams of sludge with a tissue homogenizer.

Subsample 125 grams for the WIT test plan (J. Person)

Subsample 125 grams to make composite for Fran Steen to perform analysis per Tables 1 and 2.

The remaining approximately 177.5 grams would be provided to Process Chemistry to analyze per the WFD test plan (not issued).

The composite that will be analyzed for Tables 1 and 2 will be handled in the following manner:

Appropriate amounts of supernate and white solids will be added to make a tank representative composite.

The sample will then be shaken and allowed to settle.

The sample will then be centrifuged.

The solids will then be homogenized with a tissue homogenizer.

The liquids and solids will be analyzed per Tables 1 and 2.

If you have any questions or comments please call me at 373-5589.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Thursday, February 10, 2000 11:27 PM
To: Person, James C
Cc: Herting, Daniel L; Winters, William I (Bill); O'Rourke, John F; Steen, Franciska H
Subject: RE: AZ-101 compositing

Ok Jim, Fran has indicated that it will be two weeks before all the centrifugation of the liquids will be completed. It is my intent to have guidance in place prior to that time. The only missing piece will be the amount of white solids to add to the composites. My guidance for a composite is to Fran Steen for the one composite she is using. I would like you to calculate what liquid you will need to perform your tests. Since this is the first time I have done this I am a little confused. How would I know how much liquid you need. Dan Herting I need the same info from you. Of course Dan you do not know yet, how much solids you will receive. I can make an estimate of what that will be. Then you tell me how much liquid you need.

-----Original Message-----

From: Person, James C
Sent: Wednesday, February 09, 2000 11:04 AM
To: Templeton, Andrew M; Steen, Franciska H
Cc: Winters, William I (Bill)
Subject: FW: AZ-101 compositing

I think that we are ready to go forward with the WIT Solubility Screening tests, once you calculate the liquid/solids weight ratio for Core 269. When you are ready, please send an email to direct Process Chemistry to use 125 g of the final solids composite and xxx g of liquid composite from Core 269 for the Four Solubility Screening Tests and for preparing three slurry samples for wt% oxides analyses, according to the Test Plan in HNF-4752.

Thanks,

Jim Person, 373-2377

-----Original Message-----

From: Templeton, Andrew M
Sent: Thursday, February 03, 2000 11:59 AM
To: Person, James C; Truex, Michael J; Burgeson, Ingrid E; Steen, Franciska H; Baldwin, John H
Subject: FW: AZ-101 compositing

Jim, you are right for 269 I need to add the step of adding the white solids. I think I have core 266 correct. I have not calculated the amount of supernate added to the composite, but will do so next week.

-----Original Message-----

From: Person, James C
Sent: Thursday, February 03, 2000 11:43 AM
To: Templeton, Andrew M
Subject: RE: AZ-101 compositing

I had thought that the settled solids were to be added before subsampling the solids. This way, they will have to be added separately for the WIT subsample (and why not also for the Process Chemistry subsample?). The current way:

I believe that the 125 g subsample of Core 269 for the WIT test plan should be handled in the following manner:

Appropriate amounts of supernate and white solids will be added to make a tank representative composite. (in any case, using the test plan: The sample will then be shaken and allowed to settle. The sample will then be centrifuged.)

Also, do you have a rough idea how much supernate will have to be added (i.e., what is ratio of (wt of

supernate/wt of c-sol)?

HNF-1701 REV. 0

-----Original Message-----

From: Templeton, Andrew M

Sent: Wednesday, February 02, 2000 5:00 PM

To: Steen, Franciska H; Truex, Michael J; Burgeson, Ingrid E; Baldwin, John H; Person, James C

Subject: AZ-101 compositing

MEETING MINUTES

Subject: AZ-101 1999 Core Sample Compositing

To: Distribution

From: Andrew Templeton

Date of Meeting: January 28, 2000

Attendees:

Mike Truex Fran Steen

Ingrid Burgeson Andrew Templeton

John Baldwin Jim Person

Initially the meeting was held in the hot cells. All the drainable liquids from core 269 and the drainable liquid from core 266, Segment 2, 3 and 10 was observed. Of interest were the white solids present in the bottom of the samples. These white settled solids appeared to have agglomerated since settling. Results from the recently completed heating tests and the PLM, SEM/XRD tests indicate that the solids may exist in the tank.

After leaving the hot cells the meeting was reconvened in a MO-039 Conference room. The following handling and analysis schemes were discussed and agreed to.

CORE 266

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment.

Add appropriate supernate and white solids to remaining sludge (104.4 grams) to form a tank composite. Supernate and white solids weights/volumes to be determined.

Shake

Allow Process Chemistry to perform viscosity measurements and settling test.

Homogenize with tissue homogenizer.

Subsample 5-10 grams of slurry for Wt% oxides analysis.

Allow to settle.

Centrifuge.

Homogenize centrifuged solids with tissue homogenizer.

Analyze solids and liquids per Table 1 and 2 of TSAP (Templeton 1999).

CORE 269

Centrifuge segments 1 through 15. Measure the weight of the centrifuged solids in each segment.

Homogenize the remaining 427.5 grams of sludge with a tissue homogenizer.

Subsample 125 grams for the WIT test plan (J. Person)

Subsample 125 grams to make composite for Fran Steen to perform analysis per Tables 1 and 2.

The remaining approximately 177.5 grams would be provided to Process Chemistry to analyze per the WFD test plan (not issued).

The composite that will be analyzed for Tables 1 and 2 will be handled in the following manner:

Appropriate amounts of supernate and white solids will be added to make a tank representative composite.

The sample will then be shaken and allowed to settle.

The sample will then be centrifuged.

The solids will then be homogenized with a tissue homogenizer.

The liquids and solids will be analyzed per Tables 1 and 2.

If you have any questions or comments please call me at 373-5589.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, January 12, 2000 7:45 PM
To: Herting, Daniel L; Person, James C
Cc: Steen, Franciska H; McKinney, Steve G; Seidel, Cary M
Subject: RE: Include Solids in Composite of 101-AZ If Formed When Cooled

Dan you were in the same meeting I was. Didn't we discuss this?

-----Original Message-----

From: Herting, Daniel L
Sent: Wednesday, January 12, 2000 9:39 AM
To: Person, James C; Templeton, Andrew M
Cc: Steen, Franciska H
Subject: RE: Include Solids in Composite of 101-AZ If Formed When Cooled

I concur with Jim, that if the solids formed as a result of cooling, you definitely WOULD want them included in the composite samples. If you exclude them, you run the risk of missing a large share of some component, like phosphate or fluoride, that is likely to be important for processing information downstream.

Dan

-----Original Message-----

From: Person, James C
Sent: Wednesday, January 12, 2000 9:24 AM
To: Templeton, Andrew M
Cc: Herting, Daniel L; Steen, Franciska H
Subject: Include Solids in Composite of 101-AZ If Formed When Cooled

I am concerned about the statement in your memo 74B20-99-052 (Interim Guidance for Tank 241-AZ-101 Analysis) that "If the solids are likely to have formed as a result of cooling from tank temperature to lab temperature, then the solids probably would not be included in the core composite." I believe that this would be a mistake. It would leave out part of the material that is in the tank. That is, consider an example where the solids were Na_3PO_4 . If these solids were dissolved at tank temperature, the Na and PO_4 concentrations are increased over what they are in the supernatant liquid at the cooler temperature. Thus, the solids must be included with the liquid to represent the tank contents at tank temperature.

When I asked Herting why he was doing the PLM study he explained that the concern was that there may a small amount of insoluble solids from the bottom of the tank suspended in the liquid. These solids (the ones that did not form upon cooling) were not wanted (since they represented a disturbed liquid with suspended solids). This is the opposite of what was expressed in the memo.

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, January 05, 2000 2:39 PM
To: Winters, William I (Bill); McKinney, Steve G
Cc: Seidel, Cary M; Lockrem, Larry L; Steen, Franciska H; Fuller, Richard K (Keith); Truex, Michael J; Baldwin, John H
Subject: RE: Revision to Interim Guidance on AZ-101 Am-241 Analyses

I agree the samples can be processed in this manner. Fran Steen should be commended for her ingenuity. Thank You!

Sincerely,

Andrew M. Templeton
 CH2MHill Hanford Group

-----Original Message-----

From: Winters, William I (Bill)
Sent: Wednesday, January 05, 2000 1:44 PM
To: Templeton, Andrew M; McKinney, Steve G
Cc: Seidel, Cary M; Lockrem, Larry L; Steen, Franciska H; Fuller, Richard K (Keith); Winters, William I (Bill)
Subject: Revision to Interim Guidance on AZ-101 Am-241 Analyses

Andrew/Steve:

The purpose of this e:mail is to request an e:mail directive from you to follow the approach describe below which summarizes the recent conversations on the AZ-101 Am-241 analyses. Please call or page me if there are any questions.

In a review of the status of the AZ-101 (AM-241) analyses and our commitment dates, a concern was identified with the path being taken as described in the "interim Guidance for Tank 241-AZ-101" letter (74B20-99-052), December 14, 1999. Based on our understanding of the letter for Core 262 analyses there was a decision point on two of the three subsamples for Am-241 analyses. This decision point required the Am-241 to be completed on the first subsample before the other two subsamples were analyzed. This path would require more loadouts and delay the preparation of the samples for analyses of these two subsamples. Based on where we are today, this delay would jeopardize providing all the required analyses for the Am project by the January 23 date. Further discussions by phone with Steve McKinney indicated the primary concern with the decision point was to ensure that sufficient material would be available after these test to combine with the original material for additional testing.

Fran Steen, the Project Coordinator for AZ-101, working with Andrew Templeton, the Tank Coordinator, had devised an approach in which 10-15 g of the homogenized segments from 16 and 16R would be transferred directly into centrifuge tubes for the bulk density measurement. This reduces the number of sample transfers and losses of material. After obtaining the bulk density efforts would be made to vortex the material and transfer back into a jar for sampling of % water, fusion and water digest analyses. If vortexing was not successful in resuspending the sample then samples for these analyses would be taken directly from the centrifuge cones. In this approach 1) essentially all of the 10-15g will be used in the analyses and no transfer of material will be made back to the original sample and 2) Since only 10-15g of material was removed instead of the 24g originally planned an additional ~27g remains in the original sample and the 95g minum requirement for additional testing is available without the transfer back of any vortex solids.

Based on this approach there is no reason to have a decision point that requires an analysis of Am on just 1 subsample before proceeding and all three subsamples can be processed at one time.

Please send a e:mail directive to Fran Steen with copies to Keith Fuller, Cary Seidel and myself if you agree that the samples can be processed in this manner. Please notify us if you have any questions or concerns in this approach. If necessary we can have a short meeting tomorrow to iron out these concerns. We must make these decisions as soon as possible to be successful.

Thanks,

Bill Winters

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, December 28, 1999 4:47 PM
To: Steen, Franciska H
Cc: McKinney, Steve G; Powell, Katherine L
Subject: AZ-101 analysis

Finally I can send e-mail.

Per our telephone conversation this morning, I agree that we should add the settled solids from the drainable liquids in segments 16 and 16R1. This further clarifies page 3 of the attachment to letter 7B20-99-052 which indicates that settled solids from the drainable liquid could be added to the composite prior to the Poppiti analysis. If you have any further questions please do not hesitate to call. Thank You!

Andrew Templeton

Steen, Franciska H

From: Templeton, Andrew M
Sent: Tuesday, December 14, 1999 12:34 PM
To: Steen, Franciska H
Cc: Truex, Michael J; Baldwin, John H; Field, Jim G; McKinney, Steve G
Subject: AZ-101 Analysis

Per our meeting yesterday, December 13, 1999, please proceed with the tank 241-AZ-101 analysis for Core 266 solids as discussed in our meeting and outlined on pages 1 and 2 of the handouts. In summary, Core 266, segments 16 and 16R, perform shear strength and particle size measurements on segment 16R, then homogenize segments 16 and 16R, then take one subsample and perform bulk density measurement, fusion digest and % water for the Am-241 analysis per Poppiti 1999. Based upon the outcome of this subsample, a decision will be made on the path forward.

In regards to Core 269, Segments 16, 16R, 16R1 and 16R2 it was decided to perform shear strength and particle size tests on Segment 16, homogenize segments 16, 16R, 16R1 and 16R2, and take three subsamples and analyze per Poppiti 1999.

The above direction was agreed upon by the Mike Truex of the Waste Integration Team (WIT), John Baldwin of Retrieval Engineering, Fran Steen, 222-S Laboratory and Andrew Templeton, Process Engineering. If anybody is in disagreement please contact me within 24 hours. A letter will be transmitted reiterating this information. If you have any questions please call. Thank you

Andrew Templeton

Steen, Franciska H

From: Templeton, Andrew M
Sent: Wednesday, October 13, 1999 8:12 AM
To: Steen, Franciska H
Cc: Rasmussen, Juergen H; Fort, Leslie A (Les)
Subject: Field Blank analysis for tanks 241-AZ-101, 241-AZ-102, and 241-AW-103

Fran, we would like the following methods performed on the field blanks for the above mentioned tanks:

ICP/AES (for the analytes listed in the TSAP's)
IC (for the analytes listed in the TSAP)
Separation/liquid scintillation for Tritium
Alpha counting for total alpha
Beta counting for total beta
GEA for Eu-152, 154, 155, Cs-137, Co-60, Sb-125

If you have any questions please call. Any future TSAP's will include this information. I understand the TSAP for AW-103 will be modified(ECN) to incorporate this direction (Les please correct me if I'm wrong). I also anticipate an ECN to tank 241-AZ-101's TSAP. If this e-mail is not acceptable at this time please let me know.

Thanks

Andrew

HNF-1701 REV. 0

AMERICIUM RESULTS FOR POPPITI

ATTACHMENT 5

HNF-1701 REV. 0

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CORRESPONDENCE DISTRIBUTION COVERSHEET

Author
F. H. Steen, FH
372-2495

Addressee
J. G. Field, CHG

Correspondence No.
FH-0001013
February 24, 2000

Subject: FINAL ANALYSES RESULTS FOR TANK 241-AZ-101 SOLID SAMPLES

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FLUOR DANIEL

Fluor Daniel Hanford, Inc.
P.O. Box 1000
Richland, WA 99352

February 24, 2000

FH-0001013

Mr. J. G. Field, Manager
Data Assessment and Interpretation
CH2M Hill Hanford Group R2-11
Post Office Box 1500
Richland, Washington 99352-1505

Dear Mr. Field:

FINAL ANALYSES RESULTS FOR TANK 241-AZ-101 SOLID SAMPLES

- References:
- (1) Letter, F. H. Steen, FH, to J. G. Field, CHG, "Interim Analyses Results for Tank 241-AZ-101 Solid Samples," FH-0000289, dated January 20, 2000.
 - (2) HNF-4738, "Tank 241-AZ-101 Privatization Push Mode Core Sampling and Analysis Plan," Revision 0-A, dated October 28, 1999.
 - (3) Letter, J. A. Poppitti, ORP, to R. D. Hansen, FDH, "Additional Analysis of Double Shell Tank 241-AZ-101 and 241-AZ-102 for Americium-241," 99-PDD-047, PDD:JFT, dated June 10, 1999.

The purpose of this letter is to provide final results for Tank 241-AZ-101 analyses. Total alpha, americium-241, percent solids by gravimetry, bulk density, centrifuge solids density and weight fraction of centrifuge solids analyses were performed on the solid material of selected segments. Samples were received from Tank 241-AZ-101 (risers 15G and 15L) between November 2, 1999 and December 9, 1999. Analyses were performed in accordance with Tank 241-AZ-101 Privatization Push Mode Core Sampling and Analysis Plan (TSAP) (Reference 2) and ORP letter "Additional Analysis of Double Shell Tank 241-AZ-101 and 241-AZ-102 for Americium-241" (Reference 3).

FLUOR DANIEL

Mr. J. G. Field
Page 2
February 24, 2000

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An interim report was issued on January 20, 2000 (Reference 1). If you have any questions regarding this data please feel free to call me at (509)-372-2495.

Very truly yours,

Franciska H. Steen, Project Coordinator
222-S Laboratory - Analytical Production
Analytical Services Project

fjh

Attachments (5)

FH-0001013

Attachment 1

Case Narrative

(Consisting of 6 pages including cover page)

Appearance and Sample Handling

Total alpha, americium-241, percent solids by gravimetry, bulk density, centrifuge solids density and weight fraction of centrifuge solids analyses were performed on the solid material from cores 266 and 269. The solid material was homogenized prior to analysis.

The subsample diagrams (Attachment 2) are a cross-reference to relate the tank farm identification numbers to the 222-S Laboratory LabCore/LIMS sample numbers. The subsamples generated in the laboratory for analyses are identified in these diagrams with their sources shown.

The ORP letter "Additional Analysis of Double Shell Tank 241-AZ-101 and 241-AZ-102 for Americium-241 (Reference 2) required three subsamples from each segment to be analyzed in duplicate. Tank 241-AZ-101 contains approximately eighteen inches of solids. Due to poor recovery during sampling, additional solid segments were taken. These segments were combined to provide homogenous material for analyses. The composite for core 266 was prepared by combining segments 16 and 16R. The composite for core 269 was prepared by combining the solid material from segments 16, 16R, 16R1 and 16R2. The composite worksheets are included in Attachment 3.

The solids density, centrifuged solid density and weight fraction of centrifuged solids measurements were obtained by centrifugation. The Americium-241 (Am-241) was determined by separation/alpha energy analysis of a fusion digest. The total alpha (AT) was measured by alpha counting of a fusion digest. The weight percent solids were determined by gravimetry.

Core 266

Seventeen push mode core segments were removed from tank 241-AZ-101, riser 15G, between October 29, 1999 and November 06, 1999. The segments were received by the 222-S Laboratory between November 02, 1999 and November 17, 1999.

Segments 1 through 15 contained drainable liquid. Segments 16 and 16R contained solid material, this solid material was combined and submitted to the laboratory for analyses. Segments numbered with the suffix "R" were obtained from the same locations as the initial segments after retracting the drill string from the sludge for at least eight hours.

Core 269

Nineteen push mode core segments were removed from tank 241-AZ-101, riser 15L, between November 11, 1999 and November 17, 1999. The segments were received by the 222-S Laboratory between November 15, 1999 and December 09, 1999.

Segments 1 through 15 contained drainable liquid. Segments 16, 16R, 16R1 and 16R2 contained solid material, this solid material was combined and submitted to the laboratory for analysis. Segments numbered with the suffix "R" were obtained from the same locations as the initial segments after retracting the drill string from the sludge for at least eight hours.

Analytical Results Summary

The analytical results are provided in the data summary table (Table 1)(Attachment 4).

Bulk Density/Centrifuged Solids Density/Weight Fraction of Centrifuged Solids

The solids density, centrifuged solids density and weight fraction of centrifuged solids measurements were obtained by centrifugation. The solids density (bulk density) results are presented in Table 1. The centrifuged solids density and weight fraction of centrifuged solids analytical results are provided in Table 2. These results were calculated from the bulk density subsample worksheets (Attachment 5).

Table 2. Centrifuged Solids Density and %Weight Fraction of Centrifuged Solids

Core	Segment	Labcore Sample Number	Weight Centrifuged Solids, g (A)	Weight Centrifuged Liquids, g (B)	Volume Solids mL (C)	Centrifuged Solids Density g/mL (A/C)	%Weight Fraction Centrifuged Solids [(A/(A+B))]
266	16 Composite	S00T000012	13.23	1.55	7.0	1.89	89.5%
266	16 Composite	S00T000013	8.34	0.52	4.5	1.85	94.1%
266	16 Composite	S00T000014	7.65	0.56	4.25	1.80	93.2%
269	16 Composite	S00T000018	10.35	1.45	5.9	1.75	87.7%
269	16 Composite	S00T000019	7.56	1.87	5.4	1.40	80.2%
269	16 Composite	S00T000020	8.3	0.33	5.75	1.44	96.2%

Weight Percent Solids by Gravimetry (% solids)

Weight percent solids by gravimetry (%solids) analysis was performed in duplicate on direct solid subsamples. The %solids analysis was performed at 120°C, however, the TSAP requested this analysis to be performed at 105°C. The difference between these two temperatures does not affect the usability of the data.

The subsamples were weighed and dried in a 120°C oven to a constant weight (the weight loss is assumed to be water) for a minimum drying time of 18 hours. The results ranged from 54.2% to 67.2% solids. There were no quality control (QC) parameters stated in the TSAP (Templeton, 1999) for these samples. However, the standard recoveries were within the laboratory's required range of 80% - 120% and the Relative Percent Differences (RPDs) were less than 20%.

Radionuclide Analyses

Total Alpha (AT)

Solid subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion digest is indicated with an "F" in the A# column in Table 1.

The total alpha results ranged from 56.2 $\mu\text{Ci/g}$ to 110.0 $\mu\text{Ci/g}$. The standard recoveries were within the required limits of 70%-130%, the spike recoveries were within the required limits of 75% to 125% and the RPDs were less than 20%.

²⁴¹Am - Americium 241

Solid subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion digest is indicated with an "F" in the A# column in Table 1.

A high RPD was reported for one sample, S99T000021 (core 269, segment 16 composite). The RPD for this sample was slightly above the required limit of <20% (23.7%). The high RPD may have been caused by sample inhomogeneity due to the inability to perform aggressive homogenization. With limited amounts of solids available, every effort was made to conserve sample during the remote hot cell operations. Therefore, the samples were homogenized by stirring with a spatula rather than using a tissue homogenizer (a tissue homogenizer, could have resulted in a loss of up to 30 grams of material).

The standard recovery was 92.43%. The tracer recoveries were between 78.6% and 104.8% indicating that the Am-241 method was in control.

Procedures

Table 3 lists the analytical procedures used for performing the sample analyses. Abbreviations for analyses are defined in the table notes.

Table 5. Analytical Procedures

Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
Extrusion	Solid	N/A	LA-160-103 Rev. D-0
Bulk Density	Solid	N/A	LA-519-132 Rev. E-2
%Solid	Solid	N/A	LA-564-101 Rev. G-3
Alpha	Solid	LA-549-141 Rev. G-0	LA-508-101 Rev. G-2
²⁴¹ Am	Solid	LA-549-101 Rev. G-0	LA-953-104 Rev. B-3

References

Templeton, A. M., 1999, *Tank 241-AZ-101 Privatization Push Mode Core Sampling and Analysis Plan*, HNF-4738, Rev. 0-A, Lockheed Martin Hanford Corporation, Richland, WA 99352.

Schreiber, R. D., 1997, *Fiscal Year 1997 Memorandum of Understanding for the TWRS Characterization Project*, HNF-SD-WM-SD-023, Rev. 0, Lockheed Martin Hanford Corporation, Richland, WA 99352

Markel, L. P., 1999, *Quality Assurance Plan for the 222-S Laboratories*, HNF-SD-CP-QAPP-016, Rev. 3C, Waste Management Hanford, Richland, WA 99352.

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Attachment 2

Subsample Diagrams

(Consisting of 3 pages including cover page)

AZ-101

Core:266
Segment 16 Solid
Composite

Composited:	
Segment	Grams
16 WS	30.2
16R WS	115.1

S99T001997

AZ-101
Core:269
Segment 16 Solid
Composite

S99T001995

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T0000020

FUSION
ALPHA
AM241

S00T0000023

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T0000019

FUSION
ALPHA
AM241

S00T0000022

BULK
DENSITY
% SOLIDS BY
GRAVIMETRY

S00T0000018

FUSION
ALPHA
AM241
ICP

S00T0000021

H2O
DIEST
IC-ANIONS

S00T0000042

Composited:

Segment	Grams
16 WS	103.8
16R WS	101.4
16R1 WS	155.5
16R2 WS	72.0
16 DLSOL	28.9
16R1 DLSOL	3.4

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Attachment 3

Composite Worksheets

(Consisting of 6 pages including cover page)

Date: 12/28/99

Tank: A2101

P.C.: Steen

Phone #: 372-2495

Samp. ID: 991001908
Aug/Core: 266
Segment: 16R

Samp. ID: 991001908
Aug/Core: 266
Segment: 16R

Samp. ID: 991001908
Aug/Core: 266
Segment: 16R

Samp. ID: 991001908
Aug/Core: 266
Segment: 16R

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

Jar #: 15485
Jar Size: 125 mL
Initial Wgt.: 159.3 g
Final Wgt.: 129.1 g
Net Wgt.: 30.2 g

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

199

99000 433

Samp. ID: 991001997

Tests:
Coulposol
Homogenizer

Jar #: 15441
Jar Size: 250 mL
Final Wgt.: 356.2 g
Initial Wgt.: 240.7 g
Net wgt: 145.5

12/25/99

HNF-1701 REV C

Special Instructions: Prepare composite using entire sample. OK to deplete jars.

Final Composite Calculation SheetDate: 12/28/99 Technician: Ron Hale + Alan CampbellTotal number of jars used to build the composite: 2Composite Jar number: 15441 Jar size: 250

1) Sample from segment jar 15441 to composite jar = 116.1 grams

2) Sample from segment jar 15485 to composite jar = 29.4 grams

3) Sample from segment jar _____ to composite jar = _____ grams

4) Sample from segment jar _____ to composite jar = _____ grams

5) Sample from segment jar _____ to composite jar = _____ grams

6) Sample from segment jar _____ to composite jar = _____ grams

7) Sample from segment jar _____ to composite jar = _____ grams

8) Sample from segment jar _____ to composite jar = _____ grams

9) Sample from segment jar _____ to composite jar = _____ grams

10) Sample from segment jar _____ to composite jar = _____ grams

11) Sample from segment jar _____ to composite jar = _____ grams

12) Sample from segment jar _____ to composite jar = _____ grams

13) Sample from segment jar _____ to composite jar = _____ grams

14) Sample from segment jar _____ to composite jar = _____ grams

15) Sample from segment jar _____ to composite jar = _____ grams

16) Sample from segment jar _____ to composite jar = _____ grams

17) Sample from segment jar _____ to composite jar = _____ grams

18) Sample from segment jar _____ to composite jar = _____ grams

19) Sample from segment jar _____ to composite jar = _____ grams

20) Sample from segment jar _____ to composite jar = _____ grams

Total grams collected in composite jar # 15441 = 145.5 grams

Composite Worksheet

P.C.: Steer
Phone #: 372-2495

Date: 12/28/99
Tank: 47101

Jar #: 16351 Jar Size: 125 mL
Initial Wgt.: 234.1 g
Final Wgt.: 128.1 g
Net Wgt.: 106.0 g
Net to Comp.: 103.8 g
Jar depleted

Jar #: 17572 Jar Size: 60 mL
Initial Wgt.: 200.3 g
Final Wgt.: 87.7 g
Net Wgt.: 112.6 g
Net to Comp.: 101.4 g
Jar depleted

Jar #: 15436 Jar Size: 250 mL
Initial Wgt.: 384.3 g
Final Wgt.: 224.0 g
Net Wgt.: 160.3 g
Net to Comp.: 155.5 g
Jar depleted

Jar #: 17508 Jar Size: 60 mL
Initial Wgt.: 164.3 g
Final Wgt.: 90.7 g
Net Wgt.: 73.6 g
Net to Comp.: 72.0 g
Jar depleted

Samp. ID: 5991001995

Jar #: 17480 Jar Size: 500 mL
Initial Wgt.: 761.3 g
Final Wgt.: 296.8 g
Net Wgt.: 464.5 g

Tests:
COULSON
40MGN201

HNF-1701 REV. 0

201

Special Instructions: Make composite using all available solid material.

Compos

R.C.: Gar

Phone #: 372-2495

Date: 12/28/99

Tank: A2101

Jar #: 16354 Jar Size: 125 mL
Initial Wgt.: 203.7 g
Final Wgt.: 172.11 g
Net Wgt.: 31.59 g
Net to Comp: 28.98

Jar #: 16353 Jar Size: 125 mL
Initial Wgt.: 236.7 g
Final Wgt.: 232.0 g
Net Wgt.: 4.7 g
Net to Comp: 3.4 g

Samp. ID: 99162925
Aug/Core: 269
Segment: 16.0 L DL
(Settled Solids)

Jar #: 16336 Jar Size: 125 mL
Initial Wgt.: 125 g
Final Wgt.: 125 g
Net Wgt.: 0 g

Samp. ID: 2100
Aug/Core: 100
Segment: 100

Jar #: 16336 Jar Size: 125 mL
Initial Wgt.: 125 g
Final Wgt.: 125 g
Net Wgt.: 0 g

Samp. ID: 11/11/99
Aug/Core: 11/11/99
Segment: 11/11/99

HNF-1701 REV. 0

See Parent Jar # on Page #1

Samp. ID: _____

202

Special Instructions: _____

Final Composite Calculation SheetDate: 12/28/99 Technician: Ron Hale, A. Campbell, R. HunterTotal number of jars used to build the composite: 6Composite Jar number: 17480 Jar size: 500

1)	Sample from segment jar	<u>16354</u>	to composite jar =	<u>28.98</u>	grams
2)	Sample from segment jar	<u>17512</u>	to composite jar =	<u>101.4</u>	grams
3)	Sample from segment jar	<u>16351</u>	to composite jar =	<u>103.8</u>	grams
4)	Sample from segment jar	<u>15436</u>	to composite jar =	<u>155.5</u>	grams
5)	Sample from segment jar	<u>17508</u>	to composite jar =	<u>72.0</u>	grams
6)	Sample from segment jar	<u>16353</u>	to composite jar =	<u>3.4</u>	grams
7)	Sample from segment jar	_____	to composite jar =	_____	grams
8)	Sample from segment jar	_____	to composite jar =	_____	grams
9)	Sample from segment jar	_____	to composite jar =	_____	grams
10)	Sample from segment jar	_____	to composite jar =	_____	grams
11)	Sample from segment jar	_____	to composite jar =	_____	grams
12)	Sample from segment jar	_____	to composite jar =	_____	grams
13)	Sample from segment jar	_____	to composite jar =	_____	grams
14)	Sample from segment jar	_____	to composite jar =	_____	grams
15)	Sample from segment jar	_____	to composite jar =	_____	grams
16)	Sample from segment jar	_____	to composite jar =	_____	grams
17)	Sample from segment jar	_____	to composite jar =	_____	grams
18)	Sample from segment jar	_____	to composite jar =	_____	grams
19)	Sample from segment jar	_____	to composite jar =	_____	grams
20)	Sample from segment jar	_____	to composite jar =	_____	grams
Total grams collected in composite jar #			<u>17480</u>	=	<u>465.1</u> grams

FH-0001013

Attachment 4

Table 1 - Data Summary Report

(Consisting of 7 pages including cover page)

Table 1. Data Summary Report.
AZ-101 (2)RE NUMBER: 266
CLIENT #: 16 COMPOSITE

CLIENT PORTION: Core Composite

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
S00T000012		Bulk Density of Sample	g/mL	n/a	n/a	1.740	n/a	n/a	n/a	5.00e-01	n/a
S00T000012		Solids % - Grav. in Hot Cell	%	102.2	n/a	57.60	58.50	58.05	1.55	1.00e-02	n/a
S00T000013		Bulk Density of Sample	g/mL	n/a	n/a	1.700	n/a	n/a	n/a	5.00e-01	n/a
S00T000013		Solids % - Grav. in Hot Cell	%	102.2	n/a	61.50	66.50	64.00	7.81	1.00e-02	n/a
S00T000014		Bulk Density of Sample	g/mL	n/a	n/a	1.800	n/a	n/a	n/a	5.00e-01	n/a
S00T000014		Solids % - Grav. in Hot Cell	%	102.2	n/a	67.20	63.60	65.40	5.50	1.00e-02	n/a
S00T000015	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	92.43	<8.560	58.30	60.50	59.40	3.70	n/a	3.14E+00
S00T000015	F	Alpha of Digested Solid	uCi/g	103.1	<3.900	56.20	64.30	60.25	13.4	88.51	1.45E+01
S00T000016	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	92.43	<8.560	51.90	59.30	55.60	13.3	n/a	3.11E+00
S00T000016	F	Alpha of Digested Solid	uCi/g	103.1	<3.900	64.50	57.00	60.75	12.3	n/a	1.85E+01
S00T000017	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	92.43	<8.560	73.60	64.50	69.05	15.2	n/a	3.00E+00
S00T000017	F	Alpha of Digested Solid	uCi/g	101.8	<3.620	72.50	63.00	67.75	14.0	n/a	1.69E+01

Table 1. Data Summary Report.
AZ-101 (2)

ELEMENT PORTION: Core Composite

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
S00T000018		Bulk Density of Sample	g/mL	N/A	N/A	1.630	N/A	N/A	N/A	5.00e-01	N/A
S00T000018		Solids % - Grav. In Hot Cell	%	102.2	N/A	61.40	64.90	63.15	5.54	1.00e-02	N/A
S00T000019		Bulk Density of Sample	g/mL	N/A	N/A	1.740	N/A	N/A	N/A	5.00e-01	N/A
S00T000019		Solids % - Grav. In Hot Cell	%	102.2	N/A	57.50	62.30	59.90	8.01	1.00e-02	N/A
S00T000020		Bulk Density of Sample	g/mL	N/A	N/A	1.500	N/A	N/A	N/A	5.00e-01	N/A
S00T000020		Solids % - Grav. In Hot Cell	%	102.2	N/A	57.80	54.20	56.00	6.43	1.00e-02	N/A
S00T000021	F	Am-241 by TRU-SPEC Resin IonEx	UCI/g	92.43	<8.560	1.16e+02	91.40	103.7	23.7	13.00	2.53E+00
S00T000021	F	Alpha of Digested Solid	UCI/g	101.8	<3.620	1.09e+02	110.0	109.5	0.91	91.60	1.32E+01
S00T000022	F	Am-241 by TRU-SPEC Resin IonEx	UCI/g	92.43	<8.560	97.20	109.0	103.1	11.4	14.80	2.78E+00
S00T000022	F	Alpha of Digested Solid	UCI/g	104.8	<4.950	99.00	110.0	104.5	10.5	N/A	1.40E+01
S00T000023	F	Am-241 by TRU-SPEC Resin IonEx	UCI/g	92.43	<8.560	93.10	84.40	88.75	9.80	N/A	2.54E+00
S00T000023	F	Alpha of Digested Solid	UCI/g	104.8	<4.950	88.40	85.60	87.00	3.22	2.250	9.60E+00

FH-0001013

Attachment 5

Bulk Density

(Consisting of 3 pages including cover page

Tank: A2101 Core: 216 Seg: 16 Composite

Date: 01/07/00 LabCore #: 599T 001997 Tests: _____
P.C.: STEEN Jar #: 15441 Jar/Vial Size: 250 mL
Phone: 372-2495 Initial Wgt: 355.2 g
Group #: 99000433 Final Wgt: 321.1 g
Matrix: _____ Wgt of Sample Removed: 34.1 g
Jar Depleted: _____ Wgt of Sample Remaining: 104.4 g
YES / NO

Bin#

LabCore Entry Initials: _____ LabCore Entry Initials: _____

CONE#: 12 Wt Cone + Samp: 22.27 g
Wt Cone + Solids: 15.14 g
Tare Wt Cone: 7.49 g
Net Wt Solids: 7.65 g
Net Wt Liquids: 1.55 g
Total Volume: 8.5 mL
Vol Solids: 7.0 mL
Bulk Density: 1.74 g/mL

CONE#: 13 Wt Cone + Samp: 16.53 g
Wt Cone + Solids: 16.01 g
Tare Wt Cone: 7.67 g
Net Wt Solids: 8.34 g
Net Wt Liquids: 0.52 g
Total Volume: 5.2 mL
Vol Solids: 4.5 mL
Bulk Density: 1.70 g/mL

CONE#: 14 Wt Cone + Samp: 15.70 g
Wt Cone + Solids: 15.14 g
Tare Wt Cone: 7.43 g
Net Wt Solids: 7.65 g
Net Wt Liquids: 0.56 g
Total Volume: 4.9 mL
Vol Solids: 4.25 mL
Bulk Density: 1.80 g/mL

LABCORE#: 5000001400 Jar# 5000001400
Jar/Vial Size: 250 mL
Initial Weight: 17.14 g
Final Weight: _____ g
Net Weight: _____ g

LABCORE#: 5000001400 Jar# 5000001400
Jar/Vial Size: 250 mL
Initial Weight: 16.92 g
Final Weight: _____ g
Net Weight: _____ g

LABCORE#: 5000001400 Jar# 5000001400
Jar/Vial Size: 250 mL
Initial Weight: 16.92 g
Final Weight: _____ g
Net Weight: _____ g

Subsample Worksheet

Tank: A2101 Core: 269 Date Subsampled: 16 Composite Seg: 16 Composite Tests:

Date: 01/07/00 LabCore #: 17480 Jar #: 17480 Jar/Vial Size: 500 mL
P.C.: STEEN Initial Wgt: 761.3 g Final Wgt: 724.3 g
Phone: 372-2495 Wgt of Sample Removed: 37.0 g
Group #: 99000438 Wgt of Sample Remaining: 427.5 g
Matrix:

Jar Depleted:
YES / NO

Bin#

LabCore Entry Initials:

LabCore Entry Initials: CONE#: 18 LabCore Entry Initials: 20

Wt Cone + Samp: 19.26 g Wt Cone + Samp: 16.06 g
Wt Cone + Solids: 17.81 g Wt Cone + Solids: 15.73 g
Tare Wt Cone: 7.46 g Tare Wt Cone: 7.43 g
Net Wt Solids: 10.35 g Net Wt Solids: 8.3 g
Net Wt Liquids: 1.45 g Net Wt Liquids: 0.33 g
Total Volume: 7.25 mL Total Volume: 5.75 mL
Vol Solids: 1.76 mL Vol Solids: 4.80 mL
Bulk Density: 1.663 g/mL Bulk Density: 1.50 g/mL

LABCORE#: 5001000018 Jar# 5001000018 Jar/Vial Size: 20 mL
Initial Weight: 17.31 g
Final Weight: g
Net Weight: g

LABCORE#: 5001000019 Jar# 5001000019 Jar/Vial Size: mL
Initial Weight: 17.03 g
Final Weight: g
Net Weight: g

LABCORE#: 5001000020 Jar# 5001000020 Jar/Vial Size: 1700 mL
Initial Weight: 16.92 g
Final Weight: g
Net Weight: g

HNF-1701 REV. 0

SHEAR STRENGTH RESULTS

ATTACHMENT 6

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical
content

QA *Joe L. Jung* Date 7/27/00

HNF-1701 REV. 0

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FLUOR DANIEL HANFORD, INC.

INTEROFFICE CORRESPONDENCE

To: F. H. Steen T6-12 Date: 8D500-JFO-00-011
March 2, 2000

From: J. F. O'Rourke, Engineer JFO T6-07 Telephone: 373-4995

cc: D. L. Herting DLH T6-07
L. L. Lockrem T6-07
JFO File/LB T6-07

Subject: PHYSICAL PROPERTY MEASUREMENTS FOR TANKS 241-AW-103, 241-AZ-101,
AND 241-AZ-102

This letter reports the results of physical property measurements on samples collected from tanks 241-AW-103, 241-AZ-101, and 241-AZ-102. Shear strength, viscosity and particle size distribution analyses were performed on the 241-AW-103 samples. Shear strength measurements also were performed on the samples collected from tanks 241-AZ-101 and 241-AZ-102. The particle size distribution results for tanks 241-AZ-101 and 241-AZ-102 will be reported in a separate letter.

Viscosity Measurements

Laboratory Analytical Procedure LA-519-105 (Revision A-2) was followed for the viscosity measurements. The viscosity of each sample was measured at ambient laboratory temperature ($\sim 25^\circ\text{C}$). All information associated with the viscosity measurements was recorded in controlled laboratory notebook HNF-N-153-1.

The viscosity measurements were performed with shear rates increasing from 0 s^{-1} to 300 s^{-1} and decreasing from 300 s^{-1} to 0 s^{-1} . The measurements were completed using a MV-1 sensor system installed on a Haake M-5 viscometer. The lower operating range for this viscometer was assumed to be 100 s^{-1} for this material. Measurements with shear rates below the lower operating range should be considered highly questionable.

Table 1 provides a summary of the mean viscosities observed during each of the sample runs. The mean viscosities were calculated after excluding measurements made outside of the operating range of the instrument. Attachments I and II contain plots of shear stress (τ) vs. shear rate ($\dot{\gamma}$) and viscosity (η) vs. shear rate ($\dot{\gamma}$) for each of the measurements. Attachments I and II also contain raw data from each of the sample runs.

Table 1 - Summary of Viscosity Data

Sample Number	Jar Number	Mean Viscosity
S00T000120	16342	2.0 cP
S00T000126	16340	2.3 cP

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F. H. Steen
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Particle Size Distribution Analyses

Table 2 contains a summary of the means and ranges for each of the particle size distribution measurements for the samples collected from cores 265 and 267 from tank 241-AW-103. Attachment III contains the particle size distribution data in graphical and tabular form.

The particle size distribution measurements were performed on a Horiba LA-910 Particle Size Analyzer. The Horiba LA-910 uses laser diffraction to determine the volume distribution of particles with sizes ranging from 0.02 μm to 1020 μm . The particles were diluted with enough supernatant liquid to make a well-separated suspension. All measurements were performed at ambient laboratory temperature (typically around 25 °C). Laboratory technology procedure LT-519-105 was followed for the particle size distribution analyses.

The particles may have undergone size changes during sampling, storage, or processing before the measurements were performed. The particle size distribution of the sample that was analyzed does not necessarily represent *in-situ* conditions.

Table 2 Summary of Particle Size Distribution Measurements

Sample Number	Vial Number	Mean	Range
S99T001587	16802	50.4 μm	15 - 170 μm
S99T001588	17692	106 μm	15 - 200 μm
S99T001589	17687	55.8 μm	15 - 150 μm
S99T001590	17690	106 μm	17 - 200 μm
S99T001592	17691	127 μm	15 - 200 μm
S99T001593	16800	61.0 μm	15 - 150 μm
S99T001594	16801	54.9 μm	15 - 100 μm
S00T000386	17718	73.8 μm	15 - 130 μm
S00T000387	17712	84.7 μm	6 - 150 μm
S00T000388	17709	86.2 μm	9 - 150 μm
S00T000389	17704	68.0 μm	15 - 130 μm
S00T000390	17706	84.1 μm	6 - 150 μm
S00T000391	17708	99.0 μm	6 - 170 μm
S00T000392	17717	58.6 μm	10 - 130 μm
S00T000508	17848	83.0 μm	13 - 170 μm

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Shear Strength Measurements

Table 3 contains the shear strengths measurements on the samples collected from tanks 241-AW-103, 241-AZ-101, and 241-AZ-102. Prior to the shear strength measurements, the samples had been removed from their core samplers and left undisturbed in storage jars for less than a month.

Table 3 - Summary of Shear Strength Measurements

Tank	Sample Number	Jar Number	Core/Segment	Shear Strength
241-AW-103	S99T001491	14922	265 / 5	49 Pa
	S99T001492	15487	265 / 6	98 Pa
	S99T001493	15497	265 / 7	100 Pa
	S99T001494	15490	265 / 8	56 Pa
	S99T001495	15496	265 / 9	190 Pa
	S99T001496	17060	265 / 10	380 Pa
	S99T001581	15495	267 / 4	None Measured
	S99T001582	15509	267 / 5	30 Pa
	S99T001583	15508	267 / 6	56 Pa
	S99T001584	15503	267 / 7	170 Pa
	S99T001585	15501	267 / 8	35 Pa
	S99T001586	15507	267 / 9	63 Pa
241-AZ-101	S99T001945	15441	266 / 16R	450 Pa
	S99T001946	16351	269 / 16	190 Pa
241-AZ-102	S99T001653	15442	268 / 16	79 Pa
	S99T001654	16742	268 / 17	880 Pa
	S99T001655	16743	268 / 17R	1300 Pa
	S99T001656	16745	268 / 18	120 Pa
	S99T001657	14947	268 / 18	59 Pa
	S99T001658	15450	262 / 17	68 Pa
	S99T001659	14924	262 / 17R	23 Pa
	S99T001660	15437	262 / 18	93 Pa
	S99T001661	15435	262 / 18R	37 Pa

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The shear strength measurements were performed on a Haake M5 Viscometer equipped with a FL-1000 shear vane. Shear strength is defined as the largest torque measured as the shear vane is rotated at a slow constant shear rate. Sample S99T001581 from tank 241-AW-103 did not have a measurable shear strength.

Laboratory analytical procedure LA-519-105 was followed for the shear strength analyses. All information associated with the shear strength measurements was recorded in controlled laboratory notebook HNF-N-153-1.

If you have any questions on this letter, feel free to call me at 373-4995.

Attachments (3)

jfo

8D500-JFO-00-011

Attachment I

VISCOSITY ANALYSIS OF SAMPLE S00T000120
FROM TANK 241-AW-103

Consisting of 5 Pages including the cover page

H A K E

Operator:

jwc

Substance:

au103/c265/1/j1
6342/S00T000120

Test No.:

01

Test of:

01-20-2000

System:

M5/MV1

Temperature:

23.0°C

--- 16342.RGT

H A K E

Operator:

jwc

Substance:

au103/c265/1/j1
6342/S00T000120

Test No.:

01

Test of:

01-20-2000

System:

M5/MV1

Temperature:

23.0°C

--- 16342.RGT

Tau[Pa]	γ [s ⁻¹]	Eta[mPas]	t[min]	Temp[°C]
0.000	0.053	0.000	0.00	24.7
1.449	0.146	100.500	0.02	24.7
4.804	0.222	46.110	0.04	24.7
6.786	0.256	37.720	0.06	24.7
10.520	0.189	18.000	0.08	24.7
13.500	0.140	10.340	0.10	24.7
16.740	0.236	14.110	0.12	24.7
19.690	0.213	10.790	0.14	24.7
22.660	0.218	9.606	0.16	24.7
25.490	0.214	8.413	0.18	24.7
28.970	0.250	8.623	0.20	24.7
31.810	0.230	7.214	0.22	24.7
34.840	0.183	5.244	0.24	24.7
38.310	0.204	5.324	0.26	24.7
40.910	0.271	6.627	0.28	24.7
43.880	0.296	6.738	0.30	24.7
47.350	0.192	4.049	0.32	24.7
49.730	0.280	5.622	0.34	24.7
53.140	0.332	6.248	0.36	24.7
56.000	0.251	4.478	0.38	24.7
59.410	0.302	5.080	0.40	24.7
62.220	0.160	2.573	0.42	24.7
65.250	0.308	4.712	0.44	24.7
68.110	0.246	3.613	0.46	24.7
71.560	0.258	3.604	0.48	24.7
74.450	0.304	4.055	0.50	24.7
77.010	0.276	3.588	0.52	24.7
80.150	0.274	3.412	0.54	24.7
83.680	0.289	3.454	0.56	24.8
86.560	0.302	3.487	0.58	24.8
89.840	0.222	2.476	0.60	24.7
92.930	0.309	3.329	0.63	24.7
95.780	0.326	3.407	0.64	24.8
99.230	0.233	2.346	0.67	24.7
102.200	0.333	3.254	0.68	24.7
105.100	0.351	3.334	0.71	24.8
107.900	0.316	2.933	0.73	24.8
111.300	0.174	1.565	0.75	24.8
113.600	0.308	2.715	0.77	24.8
116.700	0.274	2.352	0.78	24.8
119.500	0.286	2.391	0.81	24.7
122.900	0.318	2.585	0.83	24.8
125.600	0.230	1.831	0.85	24.7
129.200	0.337	2.606	0.87	24.8
131.500	0.335	2.546	0.89	24.8
135.000	0.340	2.520	0.91	24.8
137.800	0.403	2.924	0.93	24.8
141.200	0.396	2.802	0.95	24.8
144.100	0.360	2.498	0.97	24.8
147.000	0.389	2.648	0.99	24.8
149.800	0.267	1.784	1.01	24.8
153.300	0.380	2.478	1.03	24.8
156.100	0.685	4.391	1.05	24.8
159.500	0.186	1.166	1.07	24.8
161.800	0.259	1.602	1.09	24.8
165.300	0.440	2.661	1.11	24.8
168.100	0.406	2.413	1.13	24.8
171.600	0.443	2.580	1.15	24.8
173.800	0.525	3.019	1.17	24.8
177.800	0.233	1.312	1.19	24.8
180.500	0.297	1.646	1.21	24.8
183.600	0.527	2.872	1.23	24.8
186.400	0.565	3.033	1.25	24.8
189.300	0.463	2.448	1.27	24.8
192.700	0.383	1.988	1.29	24.8
195.600	0.409	2.089	1.31	24.7
199.600	0.084	0.419	1.33	24.8
201.500	0.444	2.201	1.35	24.8
204.700	0.416	2.030	1.37	24.8
207.600	0.371	1.786	1.39	24.8
211.000	0.335	1.589	1.41	24.8
213.900	0.610	2.851	1.43	24.8
216.700	0.496	2.288	1.45	24.8
219.600	0.520	2.368	1.47	24.8

223.000	0.269	1.205	1.49	24.8
225.900	0.482	2.135	1.51	24.8
228.700	0.582	2.546	1.53	24.8
231.600	0.480	2.074	1.55	24.8
235.000	0.579	2.464	1.58	24.8
237.900	0.453	1.902	1.59	24.8
241.300	0.505	2.091	1.62	24.8
243.600	0.493	2.022	1.63	24.8
247.000	0.600	2.427	1.66	24.8
250.500	0.430	1.718	1.67	24.8
253.300	0.806	3.183	1.70	24.8
256.200	0.783	3.078	1.71	24.8
258.700	0.605	2.339	1.74	24.8
261.900	0.562	2.146	1.75	24.8
265.300	0.338	1.275	1.78	24.8
268.800	0.475	1.768	1.80	24.8
271.100	0.761	2.808	1.82	24.8
274.500	0.745	2.716	1.84	24.8
277.300	0.491	1.770	1.86	24.8
280.800	0.673	2.396	1.88	24.8
283.600	0.661	2.330	1.90	24.8
286.500	0.550	1.919	1.92	24.8
289.400	0.605	2.091	1.94	24.8
292.800	0.549	1.875	1.96	24.8
295.600	0.640	2.165	1.98	24.8
298.900	0.645	2.159	2.00	24.8
300.200	0.485	1.616	2.00	24.8
298.500	0.230	0.769	2.02	24.8
295.800	0.430	1.455	2.04	24.8
292.400	0.575	1.966	2.06	24.8
289.500	0.429	1.483	2.08	24.8
286.300	0.295	1.031	2.10	24.8
283.800	0.365	1.286	2.11	24.8
280.200	0.814	2.905	2.14	24.8
277.500	0.492	1.772	2.16	24.8
274.100	0.570	2.078	2.18	24.8
271.600	0.236	0.869	2.20	24.8
268.200	0.074	0.277	2.22	24.8
265.900	0.289	1.085	2.24	24.8
262.100	0.223	0.851	2.26	24.8
259.200	0.338	1.305	2.28	24.8
256.200	0.371	1.447	2.30	24.8
252.900	0.440	1.740	2.32	24.8
250.100	0.350	1.398	2.34	24.8
246.700	0.416	1.687	2.36	24.8
243.800	0.457	1.874	2.38	24.8
240.700	0.231	0.957	2.40	24.8
238.100	0.205	0.863	2.42	24.8
234.600	0.338	1.441	2.44	24.8
231.800	0.271	1.170	2.46	24.8
228.700	0.418	1.828	2.48	24.8
226.100	0.386	1.707	2.50	24.9
222.600	0.242	1.088	2.53	24.8
219.800	0.405	1.842	2.54	24.8
216.200	0.368	1.704	2.57	24.8
213.900	0.345	1.614	2.58	24.8
210.600	0.366	1.736	2.61	24.9
207.800	0.279	1.341	2.62	24.8
204.300	0.223	1.091	2.65	24.8
201.500	0.441	2.190	2.66	24.8
198.600	0.351	1.767	2.69	24.8
195.600	0.646	3.304	2.70	24.8
192.100	0.221	1.150	2.73	24.8
189.300	0.383	2.021	2.74	24.8
186.400	0.308	1.652	2.77	24.8
183.800	0.198	1.079	2.79	24.9
180.300	0.236	1.309	2.81	24.8
177.800	0.268	1.508	2.83	24.8
174.000	0.319	1.835	2.85	24.9
171.600	0.275	1.605	2.87	24.9
168.100	0.215	1.278	2.89	24.8
164.900	0.285	1.727	2.91	24.9
161.800	0.268	1.658	2.93	24.8
159.000	0.263	1.652	2.95	24.8
156.300	0.291	1.858	2.97	24.8
152.700	0.303	1.983	2.99	24.8
149.800	0.227	1.513	3.01	24.8
146.400	0.257	1.755	3.03	24.8

144.100	0.279	1.934	3.05	24.8
140.900	0.359	2.552	3.07	24.8
137.800	0.313	2.272	3.09	24.9
134.400	0.248	1.845	3.11	24.8
131.900	0.232	1.758	3.13	24.8
128.700	0.258	2.008	3.15	24.8
125.800	0.273	2.166	3.17	24.9
122.400	0.170	1.385	3.19	24.9
119.500	0.215	1.802	3.21	24.9
116.700	0.316	2.709	3.23	24.8
113.800	0.265	2.332	3.25	24.8
111.500	0.239	2.140	3.26	24.8
108.100	0.241	2.228	3.29	24.8
104.900	0.178	1.693	3.31	24.9
101.600	0.199	1.957	3.33	24.8
99.010	0.226	2.280	3.35	24.8
95.250	0.178	1.869	3.37	24.8
93.100	0.173	1.856	3.39	24.8
90.310	0.203	2.243	3.41	24.8
86.770	0.216	2.493	3.43	24.8
84.140	0.137	1.622	3.45	24.8
80.230	0.000	0.000	3.47	24.8
76.990	0.000	0.000	3.50	24.8
74.720	0.317	4.241	3.51	24.8
71.460	0.472	6.603	3.53	24.8
68.390	0.256	3.750	3.55	24.9
64.960	0.069	1.062	3.58	24.8
61.890	0.000	0.000	3.59	24.8
59.070	0.015	0.249	3.62	24.8
56.060	0.148	2.648	3.63	24.8
52.800	0.081	1.539	3.66	24.8
49.120	0.139	2.825	3.67	24.9
46.970	0.151	3.217	3.70	24.8
44.090	0.099	2.250	3.72	24.8
40.830	0.139	3.406	3.73	24.9
37.840	0.057	1.512	3.76	24.9
34.440	0.127	3.679	3.78	24.8
32.140	0.165	5.128	3.79	24.8
28.650	0.073	2.553	3.82	24.8
25.730	0.060	2.346	3.84	24.9
22.260	0.110	4.917	3.86	24.8
19.790	0.105	5.291	3.88	24.9
16.490	0.070	4.272	3.90	24.8
13.630	0.082	6.031	3.92	24.8
10.200	0.058	5.651	3.94	24.8
7.301	0.060	8.276	3.96	24.8
4.403	0.032	7.241	3.98	24.8
1.601	0.061	38.210	4.00	24.8

8D500-JFO-00-011

Attachment II

VISCOSITY ANALYSIS OF SAMPLE S00T000126
FROM TANK 241-AW-103

Consisting of 5 Pages including the cover page

H A F K E

Operator:

Juc

Substance:

aw103/c267/1/J1

6340/S00T000126

Test No.:

01

Test of:

01-20-2000

System:

M5/MVI

Temperature:

23.0°C

--- 16340.R0T

H A F K E

Operator:

Juc

Substance:

aw103/c267/1/J1

6340/S00T000126

Test No.:

01

Test of:

01-20-2000

System:

M5/MVI

Temperature:

23.0°C

--- 16340.R0T

Tau[Pa]	γ [s ⁻¹]	Eta[mPas]	t[min]	Temp[°C]
0.000	0.000	0.000	0.00	24.0
1.411	0.143	101.400	0.02	24.0
4.804	0.158	32.830	0.04	24.0
7.358	0.155	21.050	0.05	24.0
10.140	0.262	25.830	0.08	24.0
13.340	0.286	21.440	0.10	24.1
16.870	0.253	15.020	0.12	24.0
19.900	0.194	9.730	0.14	24.0
22.590	0.198	8.767	0.16	24.1
25.220	0.275	10.910	0.18	24.1
28.920	0.289	10.010	0.20	24.1
31.810	0.266	8.352	0.22	24.1
34.710	0.362	10.430	0.24	24.1
37.300	0.348	9.314	0.26	24.1
41.330	0.353	8.534	0.28	24.1
43.670	0.186	4.247	0.30	24.1
47.290	0.352	7.447	0.32	24.1
49.710	0.310	6.239	0.34	24.1
53.110	0.315	5.938	0.36	24.1
55.980	0.330	5.894	0.38	24.1
59.410	0.253	4.258	0.40	24.1
62.050	0.299	4.823	0.42	24.1
65.990	0.216	3.268	0.44	24.1
67.920	0.222	3.273	0.46	24.1
71.560	0.350	4.889	0.48	24.1
74.630	0.274	3.675	0.50	24.1
77.350	0.278	3.594	0.52	24.1
80.170	0.304	3.792	0.54	24.1
83.640	0.259	3.092	0.56	24.1
86.560	0.410	4.735	0.58	24.1
89.910	0.302	3.355	0.60	24.1
92.930	0.316	3.404	0.63	24.1
95.780	0.353	3.687	0.64	24.1
99.270	0.360	3.629	0.67	24.1
102.200	0.319	3.124	0.68	24.1
105.200	0.356	3.380	0.71	24.1
107.900	0.368	3.408	0.73	24.1
111.300	0.365	3.274	0.75	24.1
113.800	0.379	3.331	0.77	24.1
117.200	0.420	3.581	0.79	24.1
119.500	0.395	3.303	0.81	24.1
122.900	0.458	3.725	0.83	24.1
125.800	0.387	3.074	0.85	24.1
129.200	0.398	3.076	0.87	24.1
131.500	0.366	2.782	0.89	24.1
135.000	0.329	2.435	0.91	24.1
137.800	0.442	3.207	0.93	24.1
141.200	0.279	1.972	0.95	24.1
144.100	0.578	4.008	0.97	24.1
147.000	0.411	2.795	0.99	24.1
149.800	0.352	2.351	1.01	24.1
153.300	0.579	3.775	1.03	24.1
156.100	0.609	3.899	1.05	24.1
159.400	0.452	2.836	1.07	24.1
161.800	0.486	3.005	1.09	24.1
165.300	0.428	2.588	1.11	24.1
168.100	0.444	2.643	1.13	24.1
171.600	0.499	2.907	1.15	24.1
173.800	0.444	2.556	1.17	24.1
177.300	0.480	2.709	1.19	24.1
180.700	0.595	3.293	1.21	24.1
183.600	0.450	2.440	1.23	24.1
187.000	0.401	2.144	1.25	24.2
189.300	0.483	2.577	1.27	24.1
192.700	0.451	2.337	1.29	24.1
195.600	0.506	2.586	1.31	24.1
199.000	0.408	2.052	1.33	24.1
201.300	0.521	2.588	1.35	24.2
204.700	0.394	1.923	1.37	24.1
207.600	0.552	2.659	1.39	24.2
211.000	0.446	2.115	1.41	24.2
213.900	0.600	2.807	1.43	24.1
216.700	0.474	2.185	1.45	24.2
219.600	0.327	1.490	1.47	24.2

223.000	0.487	2.185	1.49	24.1
225.900	0.626	2.772	1.51	24.1
228.700	0.548	2.395	1.53	24.1
231.600	0.485	2.096	1.55	24.2
235.000	0.522	2.222	1.58	24.2
237.900	0.555	2.334	1.59	24.2
241.300	0.519	2.149	1.62	24.1
243.600	0.541	2.221	1.63	24.2
247.000	0.559	2.263	1.66	24.2
249.900	0.218	0.871	1.67	24.1
253.300	0.461	1.821	1.70	24.2
256.200	0.634	2.476	1.71	24.2
259.000	0.545	2.106	1.74	24.2
261.900	0.683	2.609	1.75	24.2
265.300	0.692	2.608	1.78	24.2
268.800	0.699	2.601	1.80	24.2
271.100	0.699	2.577	1.82	24.2
274.500	0.619	2.254	1.84	24.2
277.300	0.657	2.369	1.86	24.1
280.800	0.494	1.761	1.88	24.2
283.600	0.533	1.880	1.90	24.2
286.500	0.810	2.826	1.92	24.1
289.400	0.754	2.607	1.94	24.2
292.800	0.850	2.902	1.96	24.2
295.600	0.664	2.246	1.98	24.2
298.700	0.577	1.930	2.00	24.2
300.200	0.559	1.862	2.00	24.2
298.500	0.610	2.044	2.02	24.2
295.300	0.614	2.081	2.04	24.2
292.400	0.572	1.957	2.06	24.2
289.000	0.529	1.832	2.08	24.2
286.700	0.472	1.645	2.10	24.2
283.300	0.776	2.738	2.12	24.2
280.400	0.660	2.355	2.14	24.2
277.000	0.835	3.015	2.16	24.2
274.500	0.829	3.022	2.18	24.2
271.200	0.430	1.586	2.20	24.2
268.400	0.370	1.377	2.22	24.2
265.000	0.456	1.720	2.24	24.2
262.100	0.682	2.600	2.26	24.2
259.000	0.495	1.910	2.28	24.2
256.400	0.575	2.244	2.30	24.2
253.100	0.544	2.147	2.32	24.2
250.100	0.368	1.472	2.34	24.2
246.700	0.460	1.865	2.36	24.2
244.400	0.506	2.071	2.38	24.2
241.300	0.168	0.696	2.40	24.2
238.300	0.396	1.663	2.42	24.2
234.600	0.382	1.630	2.44	24.2
232.200	0.396	1.706	2.46	24.2
228.700	0.432	1.887	2.48	24.2
225.900	0.346	1.530	2.50	24.2
222.400	0.518	2.329	2.52	24.2
219.800	0.374	1.701	2.54	24.2
216.700	0.353	1.629	2.56	24.2
214.100	0.230	1.074	2.58	24.2
210.600	0.283	1.342	2.60	24.2
207.000	0.412	1.989	2.63	24.2
204.700	0.229	1.120	2.64	24.2
201.300	0.231	1.149	2.67	24.2
198.400	0.361	1.820	2.69	24.2
195.200	0.435	2.228	2.71	24.2
192.100	0.283	1.471	2.73	24.2
189.300	0.359	1.896	2.75	24.3
186.400	0.406	2.176	2.77	24.2
183.000	0.400	2.185	2.79	24.2
180.100	0.437	2.427	2.81	24.2
177.300	0.300	1.694	2.83	24.2
174.400	0.314	1.800	2.85	24.2
171.000	0.279	1.629	2.87	24.2
168.100	0.258	1.536	2.89	24.2
164.900	0.330	1.998	2.91	24.2
162.400	0.425	2.614	2.93	24.3
158.400	0.295	1.862	2.95	24.3
156.500	0.280	1.789	2.97	24.2
152.700	0.315	2.065	2.99	24.2
149.800	0.324	2.165	3.01	24.2
147.200	0.272	1.847	3.03	24.2

144.700	0.296	2.042	3.04	24.2
140.700	0.287	2.040	3.07	24.2
138.000	0.362	2.624	3.09	24.2
135.000	0.262	1.941	3.11	24.2
132.100	0.262	1.983	3.13	24.2
129.000	0.300	2.326	3.15	24.3
125.800	0.288	2.285	3.17	24.2
122.400	0.371	3.032	3.19	24.3
119.500	0.303	2.536	3.21	24.3
116.700	0.246	2.108	3.23	24.2
113.200	0.311	2.743	3.25	24.2
110.400	0.329	2.981	3.27	24.2
107.900	0.267	2.470	3.29	24.3
105.000	0.296	2.817	3.31	24.2
101.400	0.229	2.257	3.33	24.3
99.140	0.187	1.884	3.35	24.3
95.570	0.258	2.701	3.37	24.2
93.060	0.260	2.795	3.39	24.2
90.050	0.198	2.194	3.41	24.2
86.770	0.097	1.117	3.43	24.2
83.490	0.203	2.430	3.45	24.2
79.720	0.229	2.877	3.47	24.3
77.600	0.500	6.444	3.49	24.2
74.680	0.442	5.918	3.51	24.3
71.270	0.359	5.041	3.53	24.3
68.390	0.323	4.721	3.55	24.2
65.320	0.447	6.838	3.58	24.3
62.620	0.189	3.024	3.59	24.2
59.110	0.195	3.293	3.62	24.2
55.550	0.192	3.448	3.63	24.3
52.440	0.393	7.491	3.66	24.2
50.230	0.252	5.008	3.67	24.3
47.140	0.172	3.644	3.70	24.3
44.620	0.244	5.468	3.71	24.3
40.730	0.197	4.825	3.74	24.3
38.090	0.158	4.144	3.75	24.3
34.430	0.246	7.156	3.78	24.3
31.550	0.082	2.597	3.80	24.3
28.550	0.064	2.241	3.82	24.3
24.680	0.282	11.420	3.84	24.3
22.870	0.136	5.962	3.86	24.3
19.390	0.135	6.947	3.88	24.3
16.510	0.142	8.619	3.90	24.3
13.060	0.139	10.650	3.92	24.3
10.310	0.176	17.040	3.94	24.3
7.243	0.000	0.000	3.96	24.3
4.460	0.095	21.250	3.98	24.3
1.048	0.117	111.600	4.00	24.3

8D500-JFO-00-011

Attachment III

PARTICLE SIZE DISTRIBUTION ANALYSES
FOR TANK 241-AW-103

Consisting of 16 Pages including the cover page

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:15

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-182 09:09 Material : aw103
 Filename : ST001587 Source : tank farms
 Sample : aw103 s00t001587 vial 117 Lot Number :

Condition

T%(He-Ne): 14.8% Dist.Form: Sharp Sampling times : 100
 (LAMP): 46.5% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circuln : 0 U.sonic : OFF(3)

Format

Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 46.303 μ m SP.Area : 1497cm²/cm³ S.D. : 25.456 μ m
 Mode : 47.339 μ m Mean : 50.446 μ m
 C.V. : 50.46%

Span : (D 10.0-D 90.0) / D50 = 1.196

Dia. on %(10.0%) :	21.788 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	34.346 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	39.557 μ m	% on Dia.(10.000 μ m) :	0.0%
Dia. on %(80.0%) :	61.798 μ m	% on Dia.(30.000 μ m) :	14.6%
Dia. on %(90.0%) :	77.162 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.20	11.55	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.06	10.35	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.54	9.29	0.510	0.00	0.00
678.5	0.00	100.00	17.38	5.37	6.75	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.38	1.38	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.99	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	1.41	99.01	3.905	0.00	0.00	0.100	0.00	0.00
133.1	1.00	97.60	3.409	0.00	0.00	0.087	0.00	0.00
116.2	1.54	96.60	2.976	0.00	0.00	0.076	0.00	0.00
101.5	1.98	95.06	2.599	0.00	0.00	0.067	0.00	0.00
88.58	3.00	93.08	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.71	90.08	1.981	0.00	0.00	0.051	0.00	0.00
67.52	8.22	85.37	1.729	0.00	0.00	0.044	0.00	0.00
58.95	12.50	77.15	1.510	0.00	0.00	0.039	0.00	0.00
51.47	18.79	64.65	1.318	0.00	0.00	0.034	0.00	0.00
44.94	16.88	45.86	1.151	0.00	0.00	0.029	0.00	0.00
39.23	9.16	28.98	1.005	0.00	0.00	0.026	0.00	0.00
34.25	5.33	19.82	0.877	0.00	0.00	0.022	0.00	0.00
29.91	2.94	14.49	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:16

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-185 09:35 Material : aw103
 Filename : ST001588 Source : tank farms
 Sample : aw103 s00t001588 vial 176 Lot Number :

Condition
 T%(He-Ne): 67.7% Dist.Form: Sharp Sampling times : 100
 (LAMP): 32.6% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data
 Median : 114.705 μ m SP.Area : 840 cm^2/cm^3 S.D. : 47.462 μ m
 Mode : 154.977 μ m Mean : 106.243 μ m
 C.V. : 44.67%

Span : (D 10.0-D 90.0) / D50 = 1.153

Dia. on % (10.0%) :	33.012 μ m	% on Dia. (0.100 μ m) :	0.0%
Dia. on % (20.0%) :	58.180 μ m	% on Dia. (1.000 μ m) :	0.0%
Dia. on % (30.0%) :	77.061 μ m	% on Dia. (10.000 μ m) :	0.0%
Dia. on % (80.0%) :	151.418 μ m	% on Dia. (30.000 μ m) :	9.3%
Dia. on % (90.0%) :	165.286 μ m	% on Dia. (200.000 μ m) :	100.0%

Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.13	8.10	0.669	0.00	0.00
890.1	0.00	100.00	22.80	2.68	6.97	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.62	4.29	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.57	1.67	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.10	0.10	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	3.73	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	15.49	96.27	4.472	0.00	0.00	0.115	0.00	0.00
152.5	15.47	80.78	3.905	0.00	0.00	0.100	0.00	0.00
133.1	14.45	65.30	3.409	0.00	0.00	0.087	0.00	0.00
116.2	8.89	50.85	2.976	0.00	0.00	0.076	0.00	0.00
101.5	6.35	41.96	2.599	0.00	0.00	0.067	0.00	0.00
88.58	5.48	35.61	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.81	30.13	1.981	0.00	0.00	0.051	0.00	0.00
67.52	4.92	25.32	1.729	0.00	0.00	0.044	0.00	0.00
58.95	4.04	20.39	1.510	0.00	0.00	0.039	0.00	0.00
51.47	3.30	16.36	1.318	0.00	0.00	0.034	0.00	0.00
44.94	1.87	13.05	1.151	0.00	0.00	0.029	0.00	0.00
39.23	0.91	11.18	1.005	0.00	0.00	0.026	0.00	0.00
34.25	0.98	10.27	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.18	9.28	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:18

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-183 09:16 Material : aw103
 Filename : ST001589 Source : tank farms
 Sample : aw103 s00t001589 vial 176 Lot Numbe :

Condition

T%(He-Ne): 19.9% Dist.Form: Sharp Sampling times : 100
 (LAMP): 44.5% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format

Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 48.015µm SP.Area : 1446cm²/cm² S.D. : 28.135µm
 Mode : 41.963µm Mean : 55.806µm
 C.V. : 50.42%

Span : (D 10.0-D 90.0) / D50 = 1.599

Dia. on %(10.0%) :	20.388µm	% on Dia.(0.100µm) :	0.0%
Dia. on %(20.0%) :	32.068µm	% on Dia.(1.000µm) :	0.0%
Dia. on %(30.0%) :	37.512µm	% on Dia.(10.000µm) :	0.0%
Dia. on %(80.0%) :	83.676µm	% on Dia.(30.000µm) :	16.5%
Dia. on %(90.0%) :	97.154µm	% on Dia.(200.000µm) :	100.0%

Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.57	12.50	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.13	10.93	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.56	9.80	0.510	0.00	0.00
678.5	0.00	100.00	17.38	5.64	7.23	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.60	1.60	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	0.40	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	1.66	99.60	3.409	0.00	0.00	0.087	0.00	0.00
116.2	5.10	97.95	2.976	0.00	0.00	0.076	0.00	0.00
101.5	8.90	92.84	2.599	0.00	0.00	0.067	0.00	0.00
88.58	9.40	83.95	2.269	0.00	0.00	0.058	0.00	0.00
77.34	7.29	74.55	1.981	0.00	0.00	0.051	0.00	0.00
67.52	6.12	67.26	1.729	0.00	0.00	0.044	0.00	0.00
58.95	6.21	61.14	1.510	0.00	0.00	0.039	0.00	0.00
51.47	9.62	54.93	1.318	0.00	0.00	0.034	0.00	0.00
44.94	12.08	45.30	1.151	0.00	0.00	0.029	0.00	0.00
39.23	9.74	33.22	1.005	0.00	0.00	0.026	0.00	0.00
34.25	7.17	23.48	0.877	0.00	0.00	0.022	0.00	0.00
29.91	3.81	16.32	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:19

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-186 09:43 Material : aw103
 Filename : ST001590 Source : tank farms
 Sample : aw103 s00t001590 vial 176 Lot Numbe :

Condition
 T%(He-Ne): 72.2% Dist.Form: Sharp Sampling times : 100
 (LAMP): 16.1% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data
 Median : 117.535 μ m SP.Area : 3399cm²/cm³ S.D. : 46.830 μ m
 Mode : 144.227 μ m Mean : 105.959 μ m
 C.V. : 44.20%

Span : (D 10.0-D 90.0) / D50 = 1.120

Dia. on %(10.0%) :	30.488 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	57.339 μ m	% on Dia.(1.000 μ m) :	0.8%
Dia. on %(30.0%) :	77.119 μ m	% on Dia.(10.000 μ m) :	0.8%
Dia. on %(80.0%) :	150.286 μ m	% on Dia.(30.000 μ m) :	9.9%
Dia. on %(90.0%) :	162.079 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	0.85	9.05	0.669	0.00	0.79
890.1	0.00	100.00	22.80	3.21	8.20	0.584	0.00	0.79
777.1	0.00	100.00	19.90	2.94	4.99	0.510	0.00	0.79
678.5	0.00	100.00	17.38	1.26	2.05	0.445	0.00	0.79
592.4	0.00	100.00	15.17	0.00	0.79	0.389	0.00	0.79
517.2	0.00	100.00	13.25	0.00	0.79	0.339	0.00	0.79
451.6	0.00	100.00	11.56	0.00	0.79	0.296	0.00	0.79
394.2	0.00	100.00	10.10	0.00	0.79	0.259	0.00	0.79
344.2	0.00	100.00	8.816	0.00	0.79	0.226	0.00	0.79
300.5	0.00	100.00	7.697	0.00	0.79	0.197	0.79	0.79
262.4	0.00	100.00	6.720	0.00	0.79	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.79	0.150	0.00	0.00
200.0	0.26	100.00	5.122	0.00	0.79	0.131	0.00	0.00
174.6	17.75	99.74	4.472	0.00	0.79	0.115	0.00	0.00
152.5	18.89	81.99	3.905	0.00	0.79	0.100	0.00	0.00
133.1	14.30	63.11	3.409	0.00	0.79	0.087	0.00	0.00
116.2	9.11	48.81	2.976	0.00	0.79	0.076	0.00	0.00
101.5	5.19	39.69	2.599	0.00	0.79	0.067	0.00	0.00
88.58	4.41	34.50	2.269	0.00	0.79	0.058	0.00	0.00
77.34	4.06	30.09	1.981	0.00	0.79	0.051	0.00	0.00
67.52	5.15	26.02	1.729	0.00	0.79	0.044	0.00	0.00
58.95	4.28	20.88	1.510	0.00	0.79	0.039	0.00	0.00
51.47	3.60	16.59	1.318	0.00	0.79	0.034	0.00	0.00
44.94	1.80	12.99	1.151	0.00	0.79	0.029	0.00	0.00
39.23	0.66	11.19	1.005	0.00	0.79	0.026	0.00	0.00
34.25	0.62	10.53	0.877	0.00	0.79	0.022	0.00	0.00
29.91	0.86	9.91	0.766	0.00	0.79			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:19

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-184 09:25 Material : aw103
 Filename : ST001592 Source : tank farms
 Sample : aw103 s00t001592 vial 176 Lot Number :

Condition
 T%(He-Ne): 74.6% Dist.Form: Sharp Sampling times : 100
 (LAMP): 40.5% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data
 Median : 126.110µm SP.Area : 748cm²/cm³ S.D. : 60.535µm
 Mode : 188.551µm Mean : 126.852µm
 C.V. : 47.72%

Span : (D 10.0-D 90.0) / D50 = 1.310

Dia. on %(10.0%) :	41.808µm	% on Dia.(0.100µm) :	0.0%
Dia. on %(20.0%) :	65.787µm	% on Dia.(1.000µm) :	0.0%
Dia. on %(30.0%) :	89.617µm	% on Dia.(10.000µm) :	0.0%
Dia. on %(80.0%) :	188.742µm	% on Dia.(30.000µm) :	7.7%
Dia. on %(90.0%) :	207.024µm	% on Dia.(200.000µm) :	86.6%

Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	0.75	6.85	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.73	6.09	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.23	4.36	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.97	2.13	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.16	0.16	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	13.41	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	15.44	86.59	5.122	0.00	0.00	0.131	0.00	0.00
174.6	11.38	71.15	4.472	0.00	0.00	0.115	0.00	0.00
152.5	5.77	59.77	3.905	0.00	0.00	0.100	0.00	0.00
133.1	10.06	54.00	3.409	0.00	0.00	0.087	0.00	0.00
116.2	8.26	43.94	2.976	0.00	0.00	0.076	0.00	0.00
101.5	6.21	35.68	2.599	0.00	0.00	0.067	0.00	0.00
88.58	4.98	29.47	2.269	0.00	0.00	0.058	0.00	0.00
77.34	3.76	24.49	1.981	0.00	0.00	0.051	0.00	0.00
67.52	3.83	20.74	1.729	0.00	0.00	0.044	0.00	0.00
58.95	3.20	16.90	1.510	0.00	0.00	0.039	0.00	0.00
51.47	2.83	13.70	1.318	0.00	0.00	0.034	0.00	0.00
44.94	1.64	10.87	1.151	0.00	0.00	0.029	0.00	0.00
39.23	0.78	9.23	1.005	0.00	0.00	0.026	0.00	0.00
34.25	0.72	8.45	0.877	0.00	0.00	0.022	0.00	0.00
29.91	0.88	7.73	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/'00 14:20

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-187 09:54 Material : aw103
 Filename : ST001593 Source : tank farms
 Sample : aw103 s00t001593 vial 168 Lot Numbe :

Condition
 T%(He-Ne): 11.0% Dist.Form: Sharp Sampling times : 100
 (LAMP): 32.7% R.R.Index: 1.19-0.00i ()
 Agitation : 0 Circulth : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 50.765 μ m SP.Area : 1229cm²/cm³ S.D. : 28.389 μ m
 Mode : 47.233 μ m Mean : 60.832 μ m
 C.V. : 46.67%

Span : (D 10.0-D 90.0) / D50 = 1.417

Dia. on %(10.0%) :	35.308 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	40.534 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	43.932 μ m	% on Dia.(10.000 μ m) :	0.0%
Dia. on %(80.0%) :	86.074 μ m	% on Dia.(30.000 μ m) :	5.6%
Dia. on %(90.0%) :	107.234 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	0.21	4.71	0.669	0.00	0.00
890.1	0.00	100.00	22.80	0.11	4.49	0.584	0.00	0.00
777.1	0.00	100.00	19.90	0.58	4.39	0.510	0.00	0.00
678.5	0.00	100.00	17.38	2.42	3.81	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.38	1.38	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	1.42	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	5.04	98.58	3.409	0.00	0.00	0.087	0.00	0.00
116.2	5.98	93.54	2.976	0.00	0.00	0.076	0.00	0.00
101.5	6.44	87.56	2.599	0.00	0.00	0.067	0.00	0.00
88.58	5.30	81.12	2.269	0.00	0.00	0.058	0.00	0.00
77.34	5.04	75.83	1.981	0.00	0.00	0.051	0.00	0.00
67.52	7.07	70.79	1.729	0.00	0.00	0.044	0.00	0.00
58.95	11.77	63.72	1.510	0.00	0.00	0.039	0.00	0.00
51.47	19.14	51.95	1.318	0.00	0.00	0.034	0.00	0.00
44.94	16.86	32.81	1.151	0.00	0.00	0.029	0.00	0.00
39.23	7.66	15.95	1.005	0.00	0.00	0.026	0.00	0.00
34.25	2.70	8.29	0.877	0.00	0.00	0.022	0.00	0.00
29.91	0.88	5.59	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:27

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000229-188 10:00 Material : aw103
 Filename : ST001594 Source : tank farms
 Sample : aw103 s00t001594 vial 168 Lot Number :

Condition
 T%(He-Ne): 12.6% Dist.Form: Sharp Sampling times : 100
 (LAMP): 18.3% R.R.Index: 1.19-0.001 ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 58.132 μ m SP.Area : 1332cm²/cm³ S.D. : 19.938 μ m
 Mode : 71.014 μ m Mean : 54.929 μ m
 C.V. : 36.30%

Span : (D 10.0-D 90.0) / D50 = 0.909

Dia. on %(10.0%) :	26.621 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	34.561 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	42.673 μ m	% on Dia.(10.000 μ m) :	0.0%
Dia. on %(80.0%) :	73.460 μ m	% on Dia.(30.000 μ m) :	13.3%
Dia. on %(90.0%) :	79.479 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	2.05	9.47	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.25	7.42	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.14	6.17	0.510	0.00	0.00
678.5	0.00	100.00	17.38	3.27	4.03	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.77	0.77	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	0.00	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	0.00	100.00	3.409	0.00	0.00	0.087	0.00	0.00
116.2	0.00	100.00	2.976	0.00	0.00	0.076	0.00	0.00
101.5	1.31	100.00	2.599	0.00	0.00	0.067	0.00	0.00
88.58	10.88	98.69	2.269	0.00	0.00	0.058	0.00	0.00
77.34	20.60	87.81	1.981	0.00	0.00	0.051	0.00	0.00
67.52	16.18	67.21	1.729	0.00	0.00	0.044	0.00	0.00
58.95	9.97	51.03	1.510	0.00	0.00	0.039	0.00	0.00
51.47	8.37	41.06	1.318	0.00	0.00	0.034	0.00	0.00
44.94	7.06	32.69	1.151	0.00	0.00	0.029	0.00	0.00
39.23	6.02	25.63	1.005	0.00	0.00	0.026	0.00	0.00
34.25	6.43	19.61	0.877	0.00	0.00	0.022	0.00	0.00
29.91	3.70	13.17	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:09

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-175 09:57 Material : aw103
 Filename : ST000386 Source : tank farms
 Sample : aw103 s00t000386 vial 177 Lot Number :

Condition
 T%(He-Ne): 49.7% Dist.Form: Sharp Sampling times : 100
 (LAMP): 40.6% R.R.Index: 1.19-0.00i

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 83.423µm SP.Area : 1095cm²/cm³ S.D. : 28.605µm
 Mode : 92.528µm Mean : 73.804µm
 C.V. : 38.76%

Span : (D 10.0-D 90.0) / D50 = 0.912

Dia. on %(10.0%) :	25.810µm	% on Dia.(0.100µm) :	0.0%
Dia. on %(20.0%) :	39.720µm	% on Dia.(1.000µm) :	0.0%
Dia. on %(30.0%) :	64.370µm	% on Dia.(10.000µm) :	0.0%
Dia. on %(80.0%) :	97.214µm	% on Dia.(30.000µm) :	13.6%
Dia. on %(90.0%) :	101.929µm	% on Dia.(200.000µm) :	100.0%

Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)	Size(µm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	2.49	10.21	0.669	0.00	0.00
890.1	0.00	100.00	22.80	2.12	7.72	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.26	5.60	0.510	0.00	0.00
678.5	0.00	100.00	17.38	2.74	3.34	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.60	0.60	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	0.00	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	1.12	100.00	3.409	0.00	0.00	0.087	0.00	0.00
116.2	9.19	98.88	2.976	0.00	0.00	0.076	0.00	0.00
101.5	30.76	89.69	2.599	0.00	0.00	0.067	0.00	0.00
88.58	20.20	58.93	2.269	0.00	0.00	0.058	0.00	0.00
77.34	7.40	38.73	1.981	0.00	0.00	0.051	0.00	0.00
67.52	3.79	31.34	1.729	0.00	0.00	0.044	0.00	0.00
58.95	2.53	27.54	1.510	0.00	0.00	0.039	0.00	0.00
51.47	2.70	25.01	1.318	0.00	0.00	0.034	0.00	0.00
44.94	2.54	22.31	1.151	0.00	0.00	0.029	0.00	0.00
39.23	2.57	19.77	1.005	0.00	0.00	0.026	0.00	0.00
34.25	3.70	17.20	0.877	0.00	0.00	0.022	0.00	0.00
29.91	3.29	13.51	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:10

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-181 11:00 Material : aw103
 Filename : ST000387 Source : tank farms
 Sample : aw103 s00t000387 vial 177 Lot Number :

Condition
 T%(He-Ne): 63.8% Dist.Form: Sharp Sampling times : 100
 (LAMP): 29.0% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 95.396 μ m SP.Area : 1140cm²/cm³ S.D. : 36.344 μ m
 Mode : 111.048 μ m Mean : 84.656 μ m
 C.V. : 42.93%

Span : (D 10.0-D 90.0) / D50 = 1.047

Dia. on %(10.0%) :	25.727 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	46.322 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	64.673 μ m	% on Dia.(10.000 μ m) :	2.1%
Dia. on %(80.0%) :	117.759 μ m	% on Dia.(30.000 μ m) :	12.3%
Dia. on %(90.0%) :	125.652 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.61	10.18	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.79	8.57	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.29	6.78	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.25	5.49	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.86	4.24	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.77	3.38	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.50	2.61	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.39	2.11	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.43	1.72	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.62	1.29	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.50	0.66	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.17	0.17	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	1.12	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	20.92	98.88	3.409	0.00	0.00	0.087	0.00	0.00
116.2	21.72	77.96	2.976	0.00	0.00	0.076	0.00	0.00
101.5	13.74	56.24	2.599	0.00	0.00	0.067	0.00	0.00
88.58	7.22	42.50	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.07	35.28	1.981	0.00	0.00	0.051	0.00	0.00
67.52	4.11	31.21	1.729	0.00	0.00	0.044	0.00	0.00
58.95	3.98	27.10	1.510	0.00	0.00	0.039	0.00	0.00
51.47	4.03	23.13	1.318	0.00	0.00	0.034	0.00	0.00
44.94	2.83	19.10	1.151	0.00	0.00	0.029	0.00	0.00
39.23	2.09	16.27	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.90	14.17	0.877	0.00	0.00	0.022	0.00	0.00
29.91	2.09	12.27	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20 HNF-1701 BEV.0 14:11

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-180 10:51 Material : aw103
 Filename : ST000388 Source : tank farms
 Sample : aw103 s00t000388 vial 177 Lot Number :

Condition
 T%(He-Ne): 63.7% Dist.Form: Sharp Sampling times : 100
 (LAMP): 33.9% R.R.Index: 1.19-0.00i
 Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data
 Median : 97.177μm SP.Area : 1037cm²/cm³ S.D. : 36.272μm
 Mode : 117.494μm Mean : 86.242μm
 C.V. : 42.06%

Span : (D 10.0-D 90.0) / D50 = 1.042

Dia. on %(10.0%) : 25.576μm	% on Dia.(0.100μm) : 0.0%
Dia. on %(20.0%) : 48.437μm	% on Dia.(1.000μm) : 0.0%
Dia. on %(30.0%) : 65.576μm	% on Dia.(10.000μm) : 0.4%
Dia. on %(80.0%) : 119.695μm	% on Dia.(30.000μm) : 11.9%
Dia. on %(90.0%) : 126.812μm	% on Dia.(200.000μm) : 100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.36	10.21	0.669	0.00	0.00
890.1	0.00	100.00	22.80	2.40	8.85	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.79	6.45	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.87	4.66	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.90	2.79	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.95	1.89	0.339	0.00	0.00
451.6	0.00	100.00	11.66	0.52	0.94	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.28	0.41	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.13	0.13	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	1.74	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	23.17	98.26	3.409	0.00	0.00	0.087	0.00	0.00
116.2	21.15	75.10	2.976	0.00	0.00	0.076	0.00	0.00
101.5	12.42	53.95	2.599	0.00	0.00	0.067	0.00	0.00
88.58	6.61	41.52	2.269	0.00	0.00	0.058	0.00	0.00
77.34	3.94	34.91	1.981	0.00	0.00	0.051	0.00	0.00
67.52	4.48	30.97	1.729	0.00	0.00	0.044	0.00	0.00
58.95	4.48	26.48	1.510	0.00	0.00	0.039	0.00	0.00
51.47	4.47	22.00	1.318	0.00	0.00	0.034	0.00	0.00
44.94	2.76	17.53	1.151	0.00	0.00	0.029	0.00	0.00
39.23	1.57	14.78	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.32	13.21	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.69	11.89	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:12

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-179 10:41 Material : aw103
 Filename : ST000389 Source : tank farms
 Sample : aw103 s00t000389 vial 177 Lot Number :

Condition

T%(He-Ne): 41.6% Dist.Form: Sharp Sampling times : 100
 (LAMP): 45.1% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format

Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 77.378 μ m SP.Area : 1163cm²/cm³ S.D. : 26.673 μ m
 Mode : 84.584 μ m Mean : 67.964 μ m
 C.V. : 39.25%

Span : (D_{10.0}-D_{90.0}) / D₅₀ = 0.932

Dia. on %(10.0%) :	25.145 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	34.111 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	56.046 μ m	% on Dia.(10.000 μ m) :	0.0%
Dia. on %(80.0%) :	91.166 μ m	% on Dia.(30.000 μ m) :	15.3%
Dia. on %(90.0%) :	97.240 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	3.37	10.94	0.669	0.00	0.00
890.1	0.00	100.00	22.80	2.32	7.56	0.584	0.00	0.00
777.1	0.00	100.00	19.90	2.65	5.25	0.510	0.00	0.00
678.5	0.00	100.00	17.38	2.37	2.60	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.23	0.23	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.00	0.00	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	0.00	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	0.19	100.00	3.409	0.00	0.00	0.087	0.00	0.00
116.2	3.22	99.81	2.976	0.00	0.00	0.076	0.00	0.00
101.5	21.04	96.59	2.599	0.00	0.00	0.067	0.00	0.00
88.58	25.64	75.54	2.269	0.00	0.00	0.058	0.00	0.00
77.34	12.85	49.91	1.981	0.00	0.00	0.051	0.00	0.00
67.52	5.89	37.05	1.729	0.00	0.00	0.044	0.00	0.00
58.95	3.11	31.16	1.510	0.00	0.00	0.039	0.00	0.00
51.47	2.68	28.05	1.318	0.00	0.00	0.034	0.00	0.00
44.94	2.45	25.37	1.151	0.00	0.00	0.029	0.00	0.00
39.23	2.77	22.92	1.005	0.00	0.00	0.026	0.00	0.00
34.25	5.01	20.15	0.877	0.00	0.00	0.022	0.00	0.00
29.91	4.21	15.14	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:13

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-178 10:31 Material : aw103
 Filename : ST000390 Source : tank farms
 Sample : aw103 s00t000390 vial 176 Lot Number :

Condition
 T%(He-Ne): 61.7% Dist.Form: Sharp Sampling times : 100
 (LAMP): 30.7% R.R.Index: 1.19-0.00i ()
 Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 94.459 μ m SP.Area : 1141cm²/cm³ S.D. : 36.145 μ m
 Mode : 110.536 μ m Mean : 84.134 μ m
 C.V. : 42.96%

Span : (D 10.0-D 90.0) / D50 = 1.057

Dia. on %(10.0%) :	25.450 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	46.103 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	64.512 μ m	% on Dia.(10.000 μ m) :	1.8%
Dia. on %(80.0%) :	117.116 μ m	% on Dia.(30.000 μ m) :	12.3%
Dia. on %(90.0%) :	125.281 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.56	10.30	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.61	8.73	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.45	7.13	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.52	5.67	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.05	4.16	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.77	3.11	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.47	2.34	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.33	1.87	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.33	1.54	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.47	1.21	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.46	0.74	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.28	0.28	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	1.01	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	20.14	98.99	3.409	0.00	0.00	0.087	0.00	0.00
116.2	21.17	78.85	2.976	0.00	0.00	0.076	0.00	0.00
101.5	14.58	57.68	2.599	0.00	0.00	0.067	0.00	0.00
88.58	7.50	43.10	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.24	35.60	1.981	0.00	0.00	0.051	0.00	0.00
67.52	4.06	31.37	1.729	0.00	0.00	0.044	0.00	0.00
58.95	4.07	27.30	1.510	0.00	0.00	0.039	0.00	0.00
51.47	3.98	23.23	1.318	0.00	0.00	0.034	0.00	0.00
44.94	2.91	19.25	1.151	0.00	0.00	0.029	0.00	0.00
39.23	2.19	16.34	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.86	14.15	0.877	0.00	0.00	0.022	0.00	0.00
29.91	2.00	12.29	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Feb/29/00 14:14

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-177 10:24 Material : aw103
 Filename : ST000391 Source : tank farms
 Sample : aw103 s00t000391 vial 177 Lot Number :

Condition
 T%(He-Ne): 86.8% Dist.Form: Sharp Sampling times : 100
 (LAMP): 40.3% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 108.598 μ m SP.Area : 1007cm²/cm³ S.D. : 45.514 μ m
 Mode : 122.562 μ m Mean : 99.007 μ m
 C.V. : 45.97%

Span : (D 10.0-D 90.0) / D50 = 1.201

Dia. on %(10.0%) :	27.848 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	52.842 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	68.391 μ m	% on Dia.(10.000 μ m) :	1.5%
Dia. on %(80.0%) :	140.257 μ m	% on Dia.(30.000 μ m) :	11.0%
Dia. on %(90.0%) :	158.326 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.52	9.10	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.76	7.59	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.44	5.83	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.20	4.39	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.72	3.19	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.61	2.47	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.35	1.86	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.25	1.50	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.27	1.25	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.39	0.98	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.38	0.59	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.21	0.21	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	13.86	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	10.00	86.14	3.905	0.00	0.00	0.100	0.00	0.00
133.1	19.10	76.14	3.409	0.00	0.00	0.087	0.00	0.00
116.2	14.12	57.05	2.976	0.00	0.00	0.076	0.00	0.00
101.5	5.42	42.93	2.599	0.00	0.00	0.067	0.00	0.00
88.58	4.36	37.51	2.269	0.00	0.00	0.058	0.00	0.00
77.34	3.47	33.15	1.981	0.00	0.00	0.051	0.00	0.00
67.52	5.72	29.67	1.729	0.00	0.00	0.044	0.00	0.00
58.95	4.90	23.95	1.510	0.00	0.00	0.039	0.00	0.00
51.47	3.86	19.05	1.318	0.00	0.00	0.034	0.00	0.00
44.94	1.82	15.19	1.151	0.00	0.00	0.029	0.00	0.00
39.23	1.33	13.37	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.04	12.04	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.89	10.99	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j

Feb/29/00 14:15

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000228-176 10:04 Material : aw103
 Filename : ST000392 Source : tank farms
 Sample : aw103 s00t000392 vial 177 Lot Number :

Condition :
 T%(He-Ne): 26.0% Dist.Form: Sharp Sampling times : 100
 (LAMP): 29.4% R.R.Index: 1.19-0.00i ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(3)

Format :
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 61.357 μ m SP.Area : 1420cm²/cm³ S.D. : 26.744 μ m
 Mode : 82.329 μ m Mean : 58.611 μ m
 C.V. : 45.63%

Span : (D 10.0-D 90.0) / D50 = 1.154

Dia. on %(10.0%) :	22.020 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	31.285 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	38.286 μ m	% on Dia.(10.000 μ m) :	0.3%
Dia. on %(80.0%) :	84.606 μ m	% on Dia.(30.000 μ m) :	17.8%
Dia. on %(90.0%) :	92.838 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)	Size(μm)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	2.67	13.10	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.68	10.43	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.70	8.75	0.510	0.00	0.00
678.5	0.00	100.00	17.38	2.57	7.05	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.60	4.48	0.389	0.00	0.00
517.2	0.00	100.00	13.25	1.77	2.88	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.85	1.12	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.27	0.27	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.00	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	0.00	100.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	0.18	100.00	3.409	0.00	0.00	0.087	0.00	0.00
116.2	2.25	99.82	2.976	0.00	0.00	0.076	0.00	0.00
101.5	11.56	97.57	2.599	0.00	0.00	0.067	0.00	0.00
88.58	17.74	86.00	2.269	0.00	0.00	0.058	0.00	0.00
77.34	12.96	68.26	1.981	0.00	0.00	0.051	0.00	0.00
67.52	7.52	55.30	1.729	0.00	0.00	0.044	0.00	0.00
58.95	5.14	47.79	1.510	0.00	0.00	0.039	0.00	0.00
51.47	5.45	42.64	1.318	0.00	0.00	0.034	0.00	0.00
44.94	6.05	37.20	1.151	0.00	0.00	0.029	0.00	0.00
39.23	6.37	31.15	1.005	0.00	0.00	0.026	0.00	0.00
34.25	7.15	24.78	0.877	0.00	0.00	0.022	0.00	0.00
29.91	4.52	17.63	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Mar/02/'00 08:16

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000301-189 09:39 Material : aw103
 Filename : ST000508 Source : tank farms
 Sample : aw103 s00t000508 vial Lot Number :

Condition
 T%(He-Ne): 9.0% Dist.Form: Sharp Sampling times : 100
 (LAMP): 18.1% R.R.Index: 1.19-0.00i ()
 Agitation : 0 Circultn : 0 U.sonic : OFF(3)

Format
 Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 85.419 μ m SP.Area : 985cm²/cm³ S.D. : 35.280 μ m
 Mode : 95.988 μ m Mean : 83.007 μ m
 C.V. : 42.50%

Span : (D 10.0-D 90.0) / D50 = 1.113

Dia. on %(10.0%) :	34.213 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	47.382 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	62.251 μ m	% on Dia.(10.000 μ m) :	0.0%
Dia. on %(80.0%) :	114.958 μ m	% on Dia.(30.000 μ m) :	7.3%
Dia. on %(90.0%) :	129.260 μ m	% on Dia.(200.000 μ m) :	100.0%

Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	0.74	5.74	0.669	0.00	0.00
890.1	0.00	100.00	22.80	0.46	5.00	0.584	0.00	0.00
777.1	0.00	100.00	19.90	0.81	4.53	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.96	3.73	0.445	0.00	0.00
592.4	0.00	100.00	15.17	1.22	1.76	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.54	0.54	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.00	0.00	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.00	0.00	0.259	0.00	0.00
344.2	0.00	100.00	8.816	0.00	0.00	0.226	0.00	0.00
300.5	0.00	100.00	7.697	0.00	0.00	0.197	0.00	0.00
262.4	0.00	100.00	6.720	0.00	0.00	0.172	0.00	0.00
229.1	0.00	100.00	5.867	0.00	0.00	0.150	0.00	0.00
200.0	0.00	100.00	5.122	0.00	0.00	0.131	0.00	0.00
174.6	0.87	100.00	4.472	0.00	0.00	0.115	0.00	0.00
152.5	6.69	99.13	3.905	0.00	0.00	0.100	0.00	0.00
133.1	11.33	92.45	3.409	0.00	0.00	0.087	0.00	0.00
116.2	14.00	81.12	2.976	0.00	0.00	0.076	0.00	0.00
101.5	14.06	67.12	2.599	0.00	0.00	0.067	0.00	0.00
88.68	11.42	53.06	2.269	0.00	0.00	0.058	0.00	0.00
77.34	8.18	41.64	1.981	0.00	0.00	0.051	0.00	0.00
67.52	5.77	33.46	1.729	0.00	0.00	0.044	0.00	0.00
58.95	4.68	27.69	1.510	0.00	0.00	0.039	0.00	0.00
51.47	4.93	23.01	1.318	0.00	0.00	0.034	0.00	0.00
44.94	4.54	18.08	1.151	0.00	0.00	0.029	0.00	0.00
39.23	3.51	13.54	1.005	0.00	0.00	0.026	0.00	0.00
34.25	2.78	10.02	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.50	7.24	0.766	0.00	0.00			

WEIGHT PERCENT OXIDE RESULTS

ATTACHMENT 7

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical
content

QA *Joe L. Tong* Date 7/27/00

HNF-1701 REV. 0

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FLUOR GLOBAL SERVICES

Memorandum

To: ~~F. H. Steen~~ T6-12 Date: 8D500-JCP-JWC-00-030
June 16, 2000

From: J. C. Person JCP T6-07 Telephone: 373-2377
J. W. Chenault JWC T6-07 373-3612

cc: A. M. Templeton R2-12
I. E. Burgeson P7-25
D. L. Herting DLH T6-07
L. L. Lockrem T6-07
D. A. Reynolds R2-11
C. M. Seidel G1-32
JCP/LB File

Subject: WT% SOLIDS AND WT% OXIDES FOR TANK 241-AZ-101 COMPOSITE SAMPLES

References: (1) HNF-5479, "Test Plan for Weight Percent Oxides Measurements," Rev. 0,
March 7, 2000.

(2) Internal Memo 8D500-JCP-00-024, J. C. Person to F. H. Steen, "Wt% Solids
and Wt% Oxides for Tank 241-AZ-102 Composite Samples," May 22, 2000.

Introduction. The tests of tank 241-AZ-101 waste have been completed using the test plan for weight percent (wt%) oxides (Reference 1). This plan was used for tests of tank 241-AZ-102 reported earlier (Reference 2). Measurements of wt% solids were also made during the initial drying of the samples. The dried samples were placed in a furnace in the 11A hotcell of the 222-S Laboratory. The furnace was heated to 1050 °C for two hours. The samples were cooled in a desiccator and weighed before returning to the furnace for additional heating and weighing to verify that the weight loss was complete. Measurements were made on three samples of solids composite material from each of two cores (Cores 266 and 269). These measurements show a range of values for wt% solids and wt% oxides (dry). These result from the samples drying out before measurement. This is in contrast with the small scatter shown for the measurements of three samples of liquid composite material from Core 269.

The definitions of the measured properties are as follows. Wt% solids is 100 times the ratio of the weight after oven drying (at 105 °C) to the sample weight. This value also measures the moisture content, as wt% H₂O is equal to 100 minus wt% solids. Wt% oxides (wet) is 100 times

the ratio of the weight after furnace heating (at 1050 °C) to the sample weight, and wt% oxides (dry) is 100 times the ratio of the weight after furnace heating to the weight after oven drying. Note that the use of the total weight in the wt% solids and in the wt% oxides (wet) means that these do not represent properties of virgin material when there was significant drying before measurement.

Summary of Results for Solids Composites. Table 1 summarizes the average values for wt% solids and the wt% oxides. The range of the observed values is shown for each core in the first data column. The next two columns show the selected average and its estimated standard deviation. There was only a very small amount of material present in each sample jar, and most samples had dried significantly before measurement. The wt% solids and the wt% oxides (wet) values depend on the initial sample dryness as well as on the intrinsic nature of the material. For these two analytes, the selected average for Core 266 was arbitrarily chosen to be the average of the two samples with the most moisture; for Core 269 the chosen value was for the sample with the most material (#3 with 3.2 g). Earlier measurements of wt% solids show reasonable agreement with Core 269 Sample #3 (it apparently dried by 1.2%), while the other five samples had dried significantly. The wt% oxides (dry) values are seen to be approximately independent of sample dryness, with average values of 80.4 ± 1.8 (Core 266) and 75.2 ± 1.9 (Core 269). The wt% oxides (wet) values can be predicted from the average wt% oxides (dry) value and the observed wt% solids values.

Table 1. Values for Solids Composites of Wt% Solids and Wt% Oxides (Wet and Dry), With Range of Observed Values, Selected Average and Standard Deviation.

Core	Analyte	Observed Range	Sel Avg	Std Dev
266	Wt%Solids	86.2 to 98.1	87.9 ^a	2.3
269	Wt%Solids	61.4 to 76.1	61.4	Sample#3 ^b
266	Wt%Oxide,wet	70.9 to 77.0	71.4 ^a	0.8
269	Wt%Oxide,wet	47.5 to 56.9	47.5	Sample#3 ^b
266	Wt%Oxide,dry	78.5 to 82.2	80.4	1.8
269	Wt%Oxide,dry	73.6 to 77.4	75.2	1.9
^a Material Dried Significantly Before Measurement.				
^b Sample #3 Selected, Based on Sample Size and Moisture.				

Summary of Results for Core 269 Liquid Composite. Table 2 summarizes the average values for wt% solids and the wt% oxides. The range of the observed values shows much smaller effects of sample drying. The next two columns show the average and its estimated standard deviation. Earlier measurements of wt% solids are in good agreement, although the present values are consistently slightly drier (increased wt% solids by $0.43 \pm 0.12\%$). The average wt% oxides

(dry) value is lower (55.6%) than for the solids (75.2%), presumably because the composition of the liquid is different from the solids.

Table 2. Values for Liquid Composite of Wt% Solids and Wt% Oxides (Wet and Dry), With Range of Observed Values, Selected Average and Standard Deviation.

Core	Analyte	Observed Range	Sel Avg	Std Dev
269	Wt%Solids	28.9 to 29.4	29.1	0.2
269	Wt%Oxide,wet	16.1 to 16.3	16.2	0.1
269	Wt%Oxide,dry	55.4 to 55.7	55.6	0.1

Sample Preparation. The composites for each core were prepared by 222-S personnel; most of the solids composite material was then used for other analyses. The solids material for Core 266 Samples #1 through #3 were from Jars 17665 (Labcore S00T000772), 17662 (Labcore S00T000773), and 17517 (Labcore S00T000774), respectively. Sample #1 was scraped from material that had dried rock-hard to the wall; only 0.36 g could be collected. The other two samples were from a dried crust of material that scraped easier (1.20 and 0.95 g were collected). The solids material for Core 269 Samples #1 through #3 were from Jars 17178 (Labcore S00T000775), 17179 (Labcore S00T000776), and 17339 (Labcore S00T000777), respectively. Sample #1 was fairly dry (only 0.69 g collected), while the other two samples were like creamy peanut butter that was sticky (#2, only 0.56 g collected), or gooey (#3, 3.20 g collected).

The samples from Core 266 were dried overnight at temperatures of 106 to 110 °C (together with a standard containing 4.46 g of TerLiq and 0.34 g of glass wool). The solids samples from Core 269 were dried overnight at temperatures of 105 to 110 °C (together with a SiO₂ blank). The liquid material for Core 269 Samples #1 through #3 were from Jars 17324 (Labcore S00T000778), 17328 (Labcore S00T000781), and 17335 (Labcore S00T000784), respectively. Samples of 4.78 to 5.67 g of liquid from Core 269 were dried overnight at 110 °C (together with another standard containing 7.60 g of TerLiq and 0.62 g of glass wool). The samples were placed in tared ceramic crucibles before the oven drying. Each crucible contained 0.23 to 0.45 g of glass wool for the solids, and 0.37 to 0.67 g of glass wool for the liquids. The glass wool provides increased surface area to mitigate liquid losses during drying, as well as reacting with the Na₂O (at 1050 °C) to form a glassy product.

Results and Discussion for Solids. Data are reported for six measurements of wt% solids (three for each core) in Table 3, together with six measurements of wt% oxides. The wt% oxide results are calculated for the weights of both the original, wet sample and the oven-dried sample. The values of wt% solids and wt% oxides (wet) show that the original material has dried to different degrees before the measurement. However, the differences in dryness have only a small effect on the wt% oxides calculated for the dry weight (where no effect is expected due to the definition involving dry weights only).

Table 3. Values of Wt% Solids and Wt% Oxides (Wet and Dry) As Measured for Three Samples of Solids Composite from Cores 266 and 269.

Core	Analyte	Sample#1	Sample#2	Sample#3	Average	¹ RSD %	Standard%	Blank%
266	Wt%Solids	98.13	86.24	89.49	91.29	6.73	100.24	
266	Wt%Oxide,wet	77.03	70.87	72.01	73.31	4.47	92.84	
266	Wt%Oxide,dry	78.50	82.18	80.46	80.38	2.29	92.62	
269	Wt%Solids	76.10	72.28	61.38	69.92	10.92		0.004
269	Wt%Oxide,wet	56.88	53.19	47.50	52.52	8.99		0.047
269	Wt%Oxide,dry	74.74	73.58	77.39	75.24	2.59		0.043

¹RSD = Relative Standard Deviation.

Note: Tables 3 and 4 show four digits to minimize the effects of rounding in later use of the data, but not all digits are significant.

The wt% solids measured for the TerLiq (Lot 133N8) standard was 40.28%. This value was 100.2% of the standard value, as this lot of TerLiq was prepared to contain 40.18 wt% solids. The wt% oxides values measured for the TerLiq standard were also compared with values estimated from the TerLiq composition (22.68, wet and 56.44%, dry). These estimates were calculated by using the molecular weight for an assumed oxide form for each analyte (or zero, for analytes not present in an oxide form). The measured wt% oxides were 92.8 and 92.6% of the wet and dry forms, respectively, of the values estimated from the oxide composition. The blank run showed that a 4.86-g sample of silica (with 0.35 g of glass wool) maintained a constant weight (within 0.05%), both when dried in the oven and when fired in the furnace.

The finding of 92.6% of the expected value for the wt% oxides (dry) from TerLiq suggests that either there was some loss of material (e.g., spattering, or partial vaporization of some sodium species), or that some sodium is not in the form of Na₂O. This is because most of the expected weight for oxides from TerLiq is from Na₂O. The glassy appearance of the samples after firing suggests that the Na₂O fused into a glass as the result of reaction with the melted glass wool.

The same composite samples of Core 269 solids were previously analyzed in the 222-S Laboratory for wt% solids. The Labcore interim data are 59.6, 59.9, and 60.2% for Samples #1 through #3, respectively. The wt% solids values in Table 3 are increased by 1.2% (Sample #3), 12.4% (#2), or 16.5% (#1). Three samples of solid material from Core 266 Segment 16 measured earlier have Labcore interim wt% solids values of 58.05, 64.0, and 65.4%. These values are much lower than the Core 266 solids composite values in Table 3. This shows that all the Core 266 samples dried significantly before our measurements, as Segment 16 represents the bulk of the solids. In addition, similar measurements for Core 269 have Labcore interim wt% solids values of 63.15, 59.9, and 56.0% (values 3.9% wetter to 3.3% drier than for the average of the composite samples).

Because of the variations in the dryness of the samples, the observed values of wt% solids and of wt% oxides (wet) are not true measures of these properties for the original material (except for Core 269 #3). The two lowest values are averaged for the selected averages reported in Table 1 for Core 266, but these are biased high (e.g., compare the earlier wt% solids values). In addition, the data show a strong correlation of the wt% oxides (wet) with wt% solids.

Figure 1 shows the correlation, as well as showing that the wt% oxide (dry) values are less influenced by the moisture content. The dashed lines show the average values of the wt% oxides (dry) for the two cores. The solid lines show the wt% oxides (wet) values predicted from these average wt% oxides (dry) values and the observed wt% solids. The derivation of the prediction is given next.

The prediction is based on the assumption that all three samples have the same wt% oxides (dry) value, which is assigned to the average of the measured values. Let X_0 represent the value of wt% oxides (dry) for material that has dried completely before measurement, S_0 represent the wt% solids for material that has dried completely before measurement, and w_i represent the wt%

Figure 1. Wt% Oxides (Wet, Dry) Versus Wt% Solids for Cores 266 and 269. Broken Lines Show Average Dry Values; Solid Lines Show Predicted Wet Values.

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H₂O present in the *i*th sample. [Only the ratio of X_0 / S_0 is used, but note that S_0 is 100% when drying by evaporation removes the same amount of water as heating at 105 °C.] Now, imagine adding water to material that has completely dried. Then the observed wt% solids for the *i*th sample (S_i) would be

$$S_i = S_0 [100 / (100 + w_i)],$$

the observed wt% oxides, wet (X_{wi}) would be

$$X_{wi} = X_0 [100 / (100 + w_i)] = (X_0 / S_0) S_i,$$

and the observed wt% oxides, dry (X_{di}) would be

$$X_{di} = 100 X_{wi} / S_i = 100 X_0 / S_0.$$

These equations predict the X_{di} values to be independent of S_i (which is approximately shown by the dashed lines in Figure 1) and the X_{wi} values to be equal to S_i times $1/100^{\text{th}}$ of the X_{di} value (which is approximately shown by the solid lines).

The figure shows that the data follow the lines fairly well. However, there is some tendency for the X_{di} values to be negatively correlated with S_i . The observation that both wet and dry values of the wt% oxides deviate from the lines in the same direction suggests the deviations may result from a common cause. One reason for the negative correlation could be that the act of scraping may preferentially remove material with more interstitial liquid (the liquid has lower wt% oxides values) from the walls -- the drier samples have relatively more material scraped off the walls. However, the relative scatter of the wt% oxides (dry) values (including any correlation) is only 2.3 or 2.6%, values not much larger than the measurement uncertainties.

Results and Discussion for Liquids. Data are reported for three measurements of wt% solids (all for Core 269) in Table 4, together with three measurements of wt% oxides. The small range of the observed values shows much smaller effects of sample drying than for the solids. The same composite samples of Core 269 liquid were previously analyzed in the 222-S Laboratory for wt% solids. The Labcore interim data (29.0, 28.6, and 28.4%) show the present values to be in good agreement, but they are consistently slightly drier (increased wt% solids by $0.43 \pm 0.12\%$). The average wt% oxides (dry) value is lower (55.6%) than for the solids (75.2%), presumably because the composition of the liquid is different from the solids.

The wt% solids measured for a TerLiq (Lot 133N8) standard was 39.18% (97.5% of the standard value). The true value of this number is actually a little lower, as the weight change on the oven reheat was 0.0069 g (0.09 wt%). The additional oven heating that the test plan (Reference 1) normally requires for a weight change this large was not done because of schedule constraints, and because experience has shown that the heating would not lower the wt% solids enough to make the standard unacceptable. The wt% oxides values measured for the TerLiq standard were

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Table 4. Values of Wt% Solids and Wt% Oxides (Wet and Dry) As Measured for Three Samples of Liquid Composite from Core 269.

Core	Analyte	Sample#1	Sample#2	Sample#3	Average	¹ RSD %	Standard%
269	Wt%Solids	29.38	28.94	28.97	29.09	0.84	97.50
269	Wt%Oxide,wet	16.28	16.10	16.13	16.17	0.60	91.34
269	Wt%Oxide,dry	55.44	55.66	55.69	55.60	0.25	93.68
¹ RSD = Relative Standard Deviation.							

compared with values estimated from the TerLiq composition to give measured wt% oxides that were 91.3 and 93.7% of the wet and dry forms, respectively, of the values estimated from the oxide composition. The finding of 93.7% of the expected value for the wt% oxides (dry) from TerLiq again suggests that either there was some loss of material, or that some sodium is not in the form of Na₂O. No blank was run for this batch, as four crucibles are the maximum that can be run together, and previous runs have not found any significant effect in the blanks.

Please call us on 373-2377, or 373-3612 if you have any questions or comments about these results.

fjh

HNF-1701 REV. 0

VISCOSITY RESULTS

ATTACHMENT 8

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical content

QA Ty L. Tung Date 7/27/00

HNF-1701 REV. 0

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FLUOR GLOBAL SERVICES

Memorandum

To: F. H. Steen T6-12 Date: 8D500-JFO-00-035
June 21, 2000

From: J. F. O'Rourke, Engineer JFO T6-07 Telephone: 373-4995

cc: D. L. Herting DLH T6-07
L. L. Lockrem T6-07
JFO File/LB

Subject: Viscosity Measurements for Tank 241-AZ-101

This letter reports the results of the viscosity measurements on liquid samples from Core 269 of Tank 241-AZ-101. Average viscosities for each sample are presented in Table 1. The average viscosities were calculated from the values taken at shear rates above 100 s^{-1} . All of the samples exhibited the Newtonian behavior of viscosity remaining constant with shear rate. Attachments I-III contain plots of shear stress (τ) vs. shear rate ($\dot{\gamma}$) and viscosity (η) vs. shear rate ($\dot{\gamma}$) for each of the measurements. The attachments also contain raw data from each measurement.

Laboratory Analytical Procedure LT-519-115 (Revision B-0) was followed for the viscosity measurements. All viscosities were measured at ambient temperature. The viscosity measurements were performed with shear rates increasing from 0 s^{-1} to 300 s^{-1} and decreasing from 300 s^{-1} to 0 s^{-1} . The measurements were completed using a MV-1 coaxial cylinder sensor system installed on a Haake M5 viscometer. All information associated with these analyses was recorded in controlled laboratory notebook HNF-N-153-1.

Table 1 - Summary of Viscosity Data

Jar Number	Mean Viscosity
17324	2.3 cP
17328	3.5 cP
17335	3.5 cP

jfo

Attachments (3)

8D500-JFO-00-035

Attachment I

VISCOSITY ANALYSIS FOR JAR 17324

Consisting of 5 Pages including the cover page

H A A K E

Operator:

Jwo

Substance:

az101 Jar #

17324 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

---- 17324.ROT

H A A K E

Operator:

Jwo

Substance:

az101 Jar #

17324 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

---- 17324.ROT

Tau[Pa]	γ [s ⁻¹]	Eta[mPas]	t[min]	Temp[°C]
0.000	0.071	0.000	0.00	25.1
1.334	0.151	113.200	0.02	25.1
4.384	0.146	33.300	0.03	25.1
7.091	0.170	23.950	0.06	25.1
10.500	0.181	17.200	0.08	25.1
13.340	0.181	13.580	0.10	25.1
16.960	0.182	10.730	0.12	25.1
19.460	0.174	8.919	0.14	25.1
22.300	0.191	8.567	0.16	25.1
25.410	0.241	9.472	0.18	25.1
28.880	0.209	7.221	0.20	25.1
31.780	0.257	8.079	0.22	25.1
34.790	0.226	6.497	0.24	25.1
37.490	0.235	6.255	0.26	25.1
40.940	0.269	6.570	0.28	25.1
43.820	0.256	5.848	0.30	25.1
47.310	0.342	7.234	0.32	25.1
49.670	0.293	5.891	0.34	25.1
53.070	0.311	5.862	0.36	25.0
55.910	0.279	4.981	0.38	25.1
59.380	0.281	4.737	0.40	25.1
61.990	0.363	5.849	0.42	25.1
65.190	0.369	5.656	0.44	25.1
68.070	0.308	4.528	0.46	25.0
71.480	0.240	3.360	0.48	25.1
74.380	0.253	3.407	0.50	25.1
77.390	0.382	4.935	0.52	25.1
80.170	0.362	4.516	0.54	25.1
83.620	0.309	3.697	0.56	25.0
86.460	0.351	4.057	0.58	25.1
89.860	0.296	3.288	0.60	25.1
92.890	0.433	4.666	0.63	25.0
95.730	0.324	3.388	0.64	25.0
99.200	0.463	4.669	0.67	25.0
102.100	0.381	3.727	0.68	25.0
105.100	0.292	2.781	0.71	25.0
107.900	0.290	2.686	0.73	25.1
112.000	0.399	3.556	0.75	25.0
113.200	0.452	3.991	0.77	25.0
116.800	0.386	3.301	0.79	25.0
119.500	0.365	3.053	0.81	25.0
122.800	0.398	3.238	0.83	25.0
125.600	0.465	3.702	0.85	25.0
129.000	0.381	2.949	0.87	25.0
131.500	0.407	3.094	0.89	25.0
134.600	0.422	3.136	0.91	25.0
137.400	0.412	2.996	0.93	25.0
141.200	0.417	2.955	0.95	25.0
143.900	0.342	2.378	0.97	25.0
147.000	0.393	2.676	0.99	25.0
149.600	0.381	2.543	1.01	25.0
153.100	0.441	2.878	1.03	25.0
155.900	0.506	3.246	1.05	25.0
159.400	0.408	2.560	1.07	25.0
161.600	0.353	2.185	1.09	25.0
165.300	0.640	3.875	1.11	25.0
167.900	0.434	2.584	1.13	25.0
171.600	0.417	2.430	1.15	25.0
173.800	0.514	2.958	1.17	25.0
177.300	0.463	2.613	1.19	25.0
180.700	0.626	3.463	1.21	25.0
183.400	0.439	2.395	1.23	25.0
186.800	0.551	2.950	1.25	25.0
189.300	0.545	2.876	1.27	25.0
192.700	0.551	2.857	1.29	25.0
195.400	0.564	2.888	1.31	25.0

199.000	0.461	2.318	1.33	25.0
201.300	0.451	2.242	1.35	25.0
204.700	0.288	1.409	1.37	24.9
207.600	0.549	2.646	1.39	24.9
211.000	0.480	2.273	1.41	24.9
213.900	0.409	1.914	1.43	24.9
216.700	0.457	2.109	1.45	25.0
219.600	0.504	2.297	1.47	25.0
222.800	0.669	3.003	1.49	25.0
225.900	0.566	2.507	1.51	25.0
228.700	0.408	1.783	1.53	24.9
231.600	0.483	2.086	1.55	24.9
234.800	0.499	2.123	1.58	24.9
237.900	0.360	1.514	1.59	24.9
241.300	0.533	2.209	1.62	25.0
243.600	0.488	2.004	1.63	25.0
247.000	0.561	2.269	1.66	25.0
249.900	0.619	2.476	1.67	24.9
253.300	0.507	2.002	1.70	24.9
256.200	0.505	1.972	1.71	24.9
259.000	0.539	2.080	1.74	24.9
261.900	0.692	2.643	1.75	24.9
265.300	0.677	2.552	1.78	24.9
268.800	0.784	2.917	1.80	24.9
271.100	0.745	2.749	1.82	25.0
274.500	0.567	2.064	1.84	24.9
277.300	0.663	2.391	1.86	24.9
280.800	0.675	2.405	1.88	24.9
283.600	0.717	2.528	1.90	24.9
286.500	0.597	2.085	1.92	24.9
289.400	0.670	2.314	1.94	24.9
292.800	0.595	2.032	1.96	24.9
295.600	0.650	2.198	1.98	24.9
298.700	0.569	1.905	2.00	24.9
300.200	0.691	2.303	2.00	24.9
298.500	0.490	1.640	2.02	24.9
295.100	0.470	1.594	2.04	24.9
292.400	0.388	1.327	2.06	24.9
288.800	0.558	1.933	2.08	24.9
286.500	0.554	1.933	2.10	24.9
283.300	0.586	2.067	2.12	24.9
280.200	0.533	1.901	2.14	24.9
277.000	0.532	1.921	2.16	24.9
274.500	0.484	1.763	2.18	24.9
271.100	0.568	2.094	2.20	24.9
268.400	0.422	1.571	2.22	24.9
264.800	0.435	1.642	2.24	24.9
261.900	0.522	1.992	2.26	24.9
259.000	0.454	1.753	2.28	24.9
256.200	0.511	1.994	2.30	24.9
252.800	0.431	1.705	2.32	24.9
249.900	0.483	1.931	2.34	24.9
246.700	0.488	1.978	2.36	24.9
244.200	0.537	2.201	2.38	24.9
240.700	0.437	1.814	2.40	24.9
237.900	0.463	1.947	2.42	24.9
234.500	0.361	1.540	2.44	24.9
232.200	0.443	1.910	2.46	24.9
228.900	0.374	1.635	2.48	24.9
225.900	0.355	1.570	2.50	24.9
222.400	0.399	1.796	2.52	24.9
219.600	0.508	2.314	2.54	24.9
216.700	0.417	1.926	2.56	24.9
214.100	0.375	1.751	2.58	24.9
210.400	0.424	2.015	2.60	24.9
207.000	0.345	1.667	2.63	24.9
204.500	0.418	2.043	2.64	24.9
201.300	0.439	2.181	2.67	24.9
198.400	0.446	2.249	2.69	24.9
195.000	0.409	2.099	2.71	24.9

192.100	0.319	1.658	2.73	24.9
189.300	0.421	2.222	2.75	24.9
186.400	0.410	2.198	2.77	24.9
183.000	0.401	2.190	2.79	24.9
180.100	0.389	2.157	2.81	24.9
177.300	0.407	2.296	2.83	24.9
174.400	0.400	2.295	2.85	24.9
171.000	0.370	2.165	2.87	24.9
168.100	0.407	2.423	2.89	24.9
164.700	0.355	2.156	2.91	24.9
162.400	0.374	2.305	2.93	24.9
159.000	0.275	1.731	2.95	24.9
156.100	0.212	1.357	2.97	24.9
152.700	0.346	2.266	2.99	24.9
149.800	0.252	1.679	3.01	24.9
147.000	0.344	2.338	3.03	24.8
144.100	0.323	2.241	3.05	24.9
140.700	0.257	1.825	3.07	24.9
137.800	0.303	2.199	3.09	24.8
135.000	0.320	2.371	3.11	24.9
132.100	0.236	1.790	3.13	24.8
128.700	0.254	1.977	3.15	24.8
125.800	0.299	2.379	3.17	24.8
122.400	0.272	2.225	3.19	24.8
119.500	0.278	2.322	3.21	24.8
116.700	0.272	2.330	3.23	24.8
113.200	0.277	2.447	3.25	24.8
111.100	0.308	2.773	3.27	24.9
107.800	0.237	2.202	3.29	24.8
105.200	0.273	2.593	3.31	24.8
101.800	0.318	3.127	3.33	24.8
98.850	0.213	2.153	3.35	24.8
95.420	0.219	2.294	3.37	24.8
92.960	0.227	2.436	3.39	24.8
89.650	0.245	2.737	3.41	24.8
86.710	0.192	2.214	3.43	24.8
83.280	0.200	2.402	3.45	24.8
80.360	0.194	2.419	3.47	24.8
77.450	0.213	2.748	3.49	24.8
74.630	0.213	2.858	3.51	24.8
71.180	0.223	3.129	3.53	24.8
68.410	0.158	2.315	3.55	24.8
65.270	0.228	3.499	3.58	24.8
62.480	0.231	3.700	3.59	24.8
59.010	0.182	3.077	3.62	24.8
56.210	0.192	3.416	3.63	24.8
53.070	0.126	2.378	3.66	24.8
50.860	0.260	5.113	3.67	24.8
46.930	0.205	4.373	3.69	24.8
44.220	0.188	4.246	3.71	24.8
41.190	0.234	5.682	3.73	24.8
37.510	0.160	4.271	3.75	24.8
34.830	0.093	2.657	3.78	24.8
31.470	0.120	3.816	3.80	24.8
28.520	0.109	3.809	3.82	24.7
25.090	0.162	6.473	3.84	24.7
22.650	0.049	2.172	3.86	24.7
19.310	0.080	4.135	3.88	24.8
16.450	0.066	4.029	3.90	24.7
13.020	0.093	7.170	3.92	24.7
10.240	0.098	9.549	3.94	24.8
7.262	0.080	11.060	3.96	24.7
4.441	0.095	21.320	3.98	24.7
0.953	0.062	64.680	4.00	24.7

8D500-JFO-00-035

Attachment II

VISCOSITY ANALYSIS OF JAR 17328

Consisting of 5 Pages including the cover page

HAAKE Rev 3.0.3

H A A K E

Operator:

jwo

Substance:

az101 jar #

17328 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

--- 17328.ROT

HAAKE Rev 3.0.3

H A A K E

Operator:

jwo

Substance:

az101 jar #

17328 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

--- 17328.ROT

Tau[Pa]	γ [s ⁻¹]	Eta[mPas]	t[min]	Temp[°C]
0.000	0.000	0.000	0.00	23.5
1.258	0.167	133.000	0.01	23.5
4.765	0.237	49.800	0.04	23.5
7.167	0.215	29.940	0.06	23.5
10.500	0.241	22.910	0.08	23.5
13.420	0.231	17.190	0.10	23.5
16.830	0.230	13.650	0.12	23.5
19.710	0.250	12.660	0.14	23.5
22.590	0.260	11.510	0.16	23.5
25.410	0.297	11.700	0.18	23.5
28.900	0.341	11.810	0.20	23.5
31.780	0.283	8.910	0.22	23.5
34.810	0.340	9.777	0.24	23.5
37.550	0.404	10.760	0.26	23.5
40.960	0.366	8.930	0.28	23.5
43.880	0.355	8.100	0.30	23.5
47.330	0.417	8.807	0.32	23.5
49.670	0.357	7.193	0.34	23.5
53.090	0.354	6.668	0.36	23.6
55.930	0.387	6.921	0.38	23.5
59.360	0.384	6.473	0.40	23.6
62.180	0.351	5.640	0.42	23.5
65.210	0.398	6.095	0.44	23.5
68.070	0.355	5.221	0.46	23.6
71.480	0.429	6.003	0.48	23.6
74.340	0.585	7.863	0.50	23.5
77.350	0.385	4.973	0.52	23.5
80.130	0.346	4.317	0.54	23.5
83.620	0.567	6.781	0.56	23.5
86.480	0.454	5.251	0.58	23.5
89.860	0.375	4.171	0.60	23.5
92.910	0.444	4.782	0.63	23.5
95.730	0.473	4.942	0.64	23.5
99.200	0.439	4.426	0.67	23.5
102.100	0.537	5.262	0.68	23.5
105.100	0.480	4.568	0.71	23.5
107.900	0.463	4.293	0.73	23.5
112.100	0.557	4.965	0.75	23.5
113.400	0.580	5.112	0.77	23.5
117.000	0.581	4.962	0.79	23.5
119.500	0.573	4.792	0.81	23.5
122.800	0.565	4.604	0.83	23.5
125.600	0.559	4.450	0.85	23.5
129.200	0.528	4.088	0.87	23.5
131.500	0.553	4.204	0.89	23.5
134.800	0.622	4.618	0.91	23.5
137.600	0.635	4.615	0.93	23.5
141.100	0.639	4.529	0.95	23.5
144.100	0.640	4.443	0.97	23.5
147.000	0.656	4.463	0.99	23.6
149.800	0.645	4.305	1.01	23.5
153.100	0.619	4.041	1.03	23.5
155.900	0.658	4.219	1.05	23.5
159.400	0.660	4.140	1.07	23.5
161.800	0.618	3.816	1.09	23.5
165.300	0.561	3.394	1.11	23.5
168.100	0.646	3.842	1.13	23.5
171.400	0.709	4.139	1.15	23.5
173.800	0.623	3.585	1.17	23.5
177.300	0.687	3.876	1.19	23.5
180.500	0.781	4.325	1.21	23.5
183.400	0.689	3.755	1.23	23.5
186.600	0.661	3.543	1.25	23.5
189.300	0.752	3.974	1.27	23.5
192.500	0.741	3.849	1.29	23.5
195.600	0.747	3.820	1.31	23.6

199.000	0.741	3.721	1.33	23.5
201.300	0.755	3.749	1.35	23.5
204.700	0.689	3.363	1.37	23.5
207.600	0.738	3.556	1.39	23.5
211.000	0.714	3.382	1.41	23.5
213.900	0.831	3.884	1.43	23.5
216.700	0.843	3.890	1.45	23.5
219.600	0.897	4.086	1.47	23.5
222.800	0.857	3.845	1.49	23.5
225.900	0.868	3.841	1.51	23.5
228.700	0.741	3.241	1.53	23.5
231.600	0.844	3.646	1.55	23.5
235.000	0.862	3.669	1.58	23.5
237.900	0.860	3.613	1.59	23.5
241.300	0.882	3.654	1.62	23.5
243.600	0.820	3.367	1.63	23.5
247.000	1.055	4.269	1.66	23.5
249.900	1.029	4.118	1.67	23.5
253.300	0.997	3.936	1.70	23.5
256.200	0.926	3.613	1.71	23.5
259.000	0.918	3.542	1.74	23.5
261.900	0.896	3.421	1.75	23.5
265.300	0.854	3.220	1.78	23.5
268.800	0.848	3.154	1.80	23.5
271.100	1.147	4.231	1.82	23.5
274.500	0.922	3.360	1.84	23.5
277.300	0.975	3.515	1.86	23.5
280.800	1.001	3.566	1.88	23.5
283.600	0.879	3.100	1.90	23.5
286.500	0.751	2.623	1.92	23.5
289.400	0.990	3.421	1.94	23.5
292.800	1.046	3.573	1.96	23.5
295.600	0.890	3.011	1.98	23.5
298.500	0.960	3.217	2.00	23.5
300.200	0.911	3.035	2.00	23.5
298.500	0.769	2.576	2.02	23.5
295.100	0.935	3.169	2.04	23.5
292.400	0.923	3.158	2.06	23.5
288.800	0.966	3.346	2.08	23.5
286.500	0.777	2.712	2.10	23.5
283.300	0.802	2.833	2.12	23.5
280.200	0.745	2.658	2.14	23.5
276.800	0.597	2.158	2.16	23.5
274.500	0.868	3.161	2.18	23.5
271.100	0.836	3.084	2.20	23.5
268.400	0.758	2.822	2.22	23.5
264.800	0.750	2.831	2.24	23.5
261.900	0.830	3.168	2.26	23.5
259.000	0.652	2.517	2.28	23.5
256.200	0.850	3.316	2.30	23.5
252.800	0.748	2.959	2.32	23.5
250.100	0.703	2.810	2.34	23.5
246.700	0.697	2.826	2.36	23.5
244.200	0.715	2.930	2.38	23.5
240.700	0.653	2.711	2.40	23.5
237.900	0.712	2.992	2.42	23.5
234.500	0.684	2.918	2.44	23.5
232.200	0.724	3.120	2.46	23.5
228.700	0.817	3.572	2.48	23.5
225.900	0.740	3.274	2.50	23.5
222.400	0.669	3.006	2.52	23.5
219.600	0.604	2.752	2.54	23.5
216.700	0.621	2.863	2.56	23.5
213.900	0.563	2.632	2.58	23.5
210.400	0.619	2.942	2.60	23.5
207.000	0.727	3.513	2.63	23.5
204.700	0.585	2.855	2.64	23.5
201.300	0.574	2.852	2.67	23.5
198.400	0.600	3.024	2.69	23.5
195.000	0.687	3.521	2.71	23.5

192.100	0.658	3.423	2.73	23.5
189.300	0.623	3.290	2.75	23.5
186.400	0.723	3.878	2.77	23.5
183.000	0.539	2.947	2.79	23.5
180.300	0.471	2.610	2.81	23.5
177.300	0.687	3.873	2.83	23.5
174.400	0.559	3.205	2.85	23.5
171.000	0.526	3.073	2.87	23.5
168.100	0.520	3.095	2.89	23.5
164.700	0.529	3.214	2.91	23.5
162.400	0.609	3.748	2.93	23.5
159.000	0.483	3.035	2.95	23.5
156.100	0.455	2.915	2.97	23.5
152.700	0.453	2.968	2.99	23.5
149.800	0.490	3.268	3.01	23.5
147.000	0.461	3.138	3.03	23.5
144.100	0.562	3.902	3.05	23.5
140.700	0.513	3.648	3.07	23.5
137.800	0.491	3.559	3.09	23.5
135.000	0.474	3.509	3.11	23.5
132.100	0.427	3.234	3.13	23.5
128.700	0.396	3.078	3.15	23.5
125.800	0.383	3.047	3.17	23.5
122.400	0.412	3.368	3.19	23.5
119.500	0.447	3.737	3.21	23.5
116.700	0.443	3.796	3.23	23.5
113.200	0.327	2.889	3.25	23.5
111.100	0.449	4.039	3.27	23.5
107.800	0.403	3.735	3.29	23.5
105.300	0.366	3.480	3.31	23.5
101.700	0.359	3.526	3.33	23.5
98.890	0.361	3.647	3.35	23.5
95.400	0.339	3.552	3.37	23.5
92.960	0.353	3.793	3.39	23.5
89.650	0.395	4.407	3.41	23.5
86.750	0.346	3.983	3.43	23.5
83.300	0.290	3.484	3.45	23.5
80.540	0.346	4.302	3.47	23.5
77.500	0.376	4.854	3.49	23.5
74.660	0.287	3.843	3.51	23.4
71.210	0.272	3.823	3.53	23.5
68.320	0.278	4.068	3.55	23.5
65.210	0.268	4.110	3.58	23.5
62.540	0.298	4.769	3.59	23.4
59.070	0.240	4.057	3.62	23.5
56.210	0.241	4.289	3.63	23.4
52.740	0.224	4.248	3.66	23.4
50.340	0.252	5.014	3.67	23.4
46.970	0.248	5.284	3.70	23.4
44.130	0.202	4.574	3.71	23.4
40.620	0.218	5.353	3.74	23.4
38.010	0.200	5.261	3.75	23.4
34.860	0.179	5.126	3.78	23.4
31.410	0.175	5.554	3.80	23.4
28.550	0.149	5.200	3.82	23.4
25.100	0.133	5.312	3.84	23.4
22.760	0.137	6.025	3.86	23.4
18.930	0.145	7.669	3.88	23.5
16.340	0.109	6.694	3.90	23.5
13.110	0.086	6.526	3.92	23.4
10.290	0.117	11.360	3.94	23.4
7.262	0.079	10.930	3.96	23.4
4.422	0.080	18.110	3.98	23.4
0.991	0.054	54.360	4.00	23.4

8D500-JFO-00-035

Attachment III

VISCOSITY ANALYSIS OF JAR 17335

Consisting of 5 Pages including the cover page

H A A K E

Operator:

Jwo

Substance:

azl01 Jar #

17335 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

— 17335.R0T

H A A K E

Operator:

Jwo

Substance:

azl01 Jar #

17335 liquids

Test No.:

01

Test of:

06-19-2000

System:

M5/MV1

Temperature:

23.0°C

— 17335.R0T

Tau[Pa]	γ [s ⁻¹]	Eta[mPas]	t[min]	Temp[°C]
0.000	0.079	0.000	0.00	22.5
1.315	0.155	117.600	0.02	22.5
4.708	0.157	33.360	0.04	22.5
7.110	0.157	22.140	0.06	22.5
10.460	0.189	18.080	0.08	22.5
13.340	0.196	14.720	0.10	22.5
16.790	0.210	12.500	0.12	22.5
19.960	0.256	12.820	0.14	22.5
22.090	0.194	8.770	0.15	22.5
25.260	0.252	9.964	0.18	22.5
28.820	0.263	9.109	0.20	22.5
31.740	0.334	10.530	0.22	22.5
34.830	0.294	8.447	0.24	22.5
37.280	0.265	7.117	0.26	22.5
40.940	0.323	7.889	0.28	22.5
43.800	0.289	6.597	0.30	22.5
47.330	0.350	7.404	0.32	22.5
49.670	0.322	6.474	0.34	22.5
53.030	0.311	5.859	0.36	22.5
55.950	0.363	6.483	0.38	22.5
59.400	0.397	6.679	0.40	22.5
62.100	0.296	4.760	0.42	22.5
65.230	0.343	5.263	0.44	22.5
68.050	0.397	5.830	0.46	22.5
71.500	0.368	5.145	0.48	22.5
74.400	0.321	4.310	0.50	22.5
77.370	0.443	5.726	0.52	22.5
80.150	0.449	5.604	0.54	22.5
83.620	0.426	5.089	0.56	22.5
86.460	0.492	5.687	0.58	22.5
89.840	0.392	4.358	0.60	22.5
92.890	0.480	5.171	0.63	22.5
95.730	0.410	4.282	0.64	22.5
99.200	0.480	4.842	0.67	22.5
102.100	0.423	4.141	0.68	22.5
105.200	0.495	4.701	0.71	22.5
107.900	0.552	5.113	0.73	22.5
112.100	0.500	4.458	0.75	22.5
113.200	0.538	4.751	0.77	22.5
117.000	0.508	4.342	0.79	22.5
119.300	0.567	4.754	0.81	22.5
122.800	0.561	4.571	0.83	22.5
125.600	0.588	4.681	0.85	22.5
129.000	0.522	4.048	0.87	22.5
131.500	0.477	3.627	0.89	22.5
134.800	0.504	3.736	0.91	22.5
137.600	0.692	5.025	0.93	22.5
141.200	0.561	3.973	0.95	22.5
143.900	0.522	3.630	0.97	22.5
147.000	0.577	3.927	0.99	22.5
149.800	0.671	4.480	1.01	22.5
153.300	0.698	4.555	1.03	22.5
156.100	0.578	3.703	1.05	22.5
159.200	0.603	3.790	1.07	22.5
161.800	0.728	4.501	1.09	22.5
165.300	0.618	3.741	1.11	22.5
167.900	0.665	3.960	1.13	22.5
171.400	0.652	3.804	1.15	22.5
173.800	0.697	4.008	1.17	22.5
177.300	0.720	4.064	1.19	22.5
180.700	0.739	4.091	1.21	22.5
183.600	0.667	3.631	1.23	22.5
186.800	0.709	3.795	1.25	22.5
189.300	0.747	3.948	1.27	22.5
192.500	0.672	3.489	1.29	22.5
195.400	0.711	3.641	1.31	22.5
198.800	0.634	3.188	1.33	22.5

201.300	0.625	3.105	1.35	22.5
204.700	0.703	3.436	1.37	22.5
207.400	0.709	3.416	1.39	22.5
210.800	0.868	4.116	1.41	22.5
213.900	0.826	3.863	1.43	22.5
216.700	0.810	3.736	1.45	22.5
219.600	0.842	3.833	1.47	22.5
223.000	0.847	3.798	1.49	22.5
225.900	0.778	3.442	1.51	22.5
228.700	0.860	3.759	1.53	22.5
231.600	0.890	3.841	1.55	22.5
235.000	0.869	3.696	1.58	22.5
237.900	0.755	3.173	1.59	22.5
241.300	1.005	4.164	1.62	22.5
243.600	0.680	2.792	1.63	22.5
247.000	0.807	3.268	1.66	22.5
249.900	0.950	3.800	1.67	22.5
253.300	0.873	3.446	1.70	22.5
256.200	0.941	3.673	1.71	22.5
259.000	0.971	3.747	1.74	22.5
261.900	0.906	3.459	1.75	22.5
265.300	0.788	2.971	1.78	22.5
268.800	0.931	3.462	1.80	22.5
271.100	0.945	3.486	1.82	22.5
274.500	0.835	3.041	1.84	22.5
277.300	0.908	3.275	1.86	22.5
280.800	1.023	3.642	1.88	22.5
283.600	0.997	3.516	1.90	22.5
286.500	0.903	3.151	1.92	22.5
289.400	0.979	3.383	1.94	22.5
292.800	0.975	3.328	1.96	22.5
295.600	0.963	3.258	1.98	22.5
298.500	1.046	3.504	2.00	22.5
300.200	1.027	3.419	2.00	22.5
298.500	0.982	3.288	2.02	22.5
295.100	0.889	3.013	2.04	22.5
292.200	0.910	3.114	2.06	22.5
289.000	1.013	3.506	2.08	22.5
286.500	0.856	2.989	2.10	22.5
283.100	0.803	2.837	2.12	22.5
280.200	0.799	2.851	2.14	22.5
277.000	0.820	2.959	2.16	22.5
274.500	0.911	3.320	2.18	22.5
271.100	0.756	2.788	2.20	22.5
268.200	0.729	2.718	2.22	22.5
264.800	0.830	3.136	2.24	22.5
261.900	0.772	2.947	2.26	22.5
259.000	0.822	3.175	2.28	22.5
256.400	0.947	3.694	2.30	22.5
252.800	0.831	3.289	2.32	22.5
249.900	0.751	3.005	2.34	22.5
246.700	0.856	3.472	2.36	22.5
244.200	0.692	2.832	2.38	22.5
240.700	0.754	3.133	2.40	22.5
237.900	0.898	3.773	2.42	22.5
234.500	0.782	3.336	2.44	22.5
232.200	0.640	2.757	2.46	22.5
228.700	0.713	3.118	2.48	22.5
225.900	0.668	2.959	2.50	22.5
222.400	0.635	2.856	2.52	22.5
219.600	0.652	2.971	2.54	22.6
216.700	0.842	3.884	2.56	22.5
213.900	0.550	2.573	2.58	22.6
210.400	0.660	3.136	2.60	22.6
207.000	0.737	3.560	2.63	22.5
204.700	0.621	3.032	2.64	22.6
201.300	0.621	3.086	2.67	22.6
198.400	0.580	2.921	2.69	22.5
195.000	0.569	2.916	2.71	22.6
192.100	0.679	3.535	2.73	22.5

189.300	0.589	3.112	2.75	22.6
186.400	0.561	3.007	2.77	22.6
183.000	0.545	2.979	2.79	22.6
180.100	0.571	3.170	2.81	22.6
177.300	0.547	3.083	2.83	22.5
174.400	0.434	2.489	2.85	22.6
171.000	0.603	3.528	2.87	22.6
168.100	0.531	3.161	2.89	22.5
164.700	0.588	3.571	2.91	22.6
162.400	0.553	3.403	2.93	22.5
159.000	0.507	3.191	2.95	22.5
156.100	0.484	3.098	2.97	22.6
152.700	0.474	3.103	2.99	22.6
149.800	0.521	3.477	3.01	22.6
147.000	0.481	3.272	3.03	22.5
144.100	0.460	3.192	3.05	22.5
140.700	0.413	2.938	3.07	22.5
137.800	0.406	2.944	3.09	22.5
135.000	0.407	3.013	3.11	22.6
132.100	0.442	3.343	3.13	22.6
128.700	0.360	2.797	3.15	22.5
125.800	0.473	3.758	3.17	22.6
122.400	0.510	4.168	3.19	22.5
119.500	0.479	4.011	3.21	22.5
116.700	0.422	3.619	3.23	22.5
113.200	0.395	3.491	3.25	22.5
110.400	0.440	3.984	3.27	22.6
107.900	0.404	3.741	3.29	22.5
105.200	0.355	3.371	3.31	22.5
101.800	0.394	3.875	3.33	22.5
98.830	0.359	3.636	3.35	22.5
95.440	0.339	3.553	3.37	22.5
92.980	0.387	4.160	3.39	22.5
89.650	0.309	3.445	3.41	22.5
86.710	0.273	3.153	3.43	22.5
83.300	0.293	3.515	3.45	22.5
80.400	0.252	3.136	3.47	22.6
77.490	0.328	4.230	3.49	22.6
74.590	0.313	4.198	3.51	22.6
71.160	0.289	4.055	3.53	22.5
68.300	0.265	3.885	3.55	22.6
65.400	0.269	4.115	3.57	22.6
62.520	0.274	4.380	3.59	22.5
59.430	0.235	3.955	3.61	22.5
55.870	0.196	3.513	3.63	22.5
52.990	0.232	4.381	3.65	22.5
50.360	0.231	4.578	3.67	22.5
46.970	0.202	4.304	3.70	22.5
44.070	0.210	4.753	3.71	22.5
40.540	0.203	4.998	3.74	22.5
38.010	0.199	5.241	3.75	22.6
34.790	0.171	4.916	3.78	22.5
31.390	0.163	5.190	3.80	22.5
28.520	0.153	5.374	3.82	22.5
25.050	0.133	5.292	3.84	22.5
22.630	0.127	5.612	3.86	22.5
19.290	0.116	5.997	3.88	22.5
16.470	0.093	5.659	3.90	22.5
13.020	0.051	3.932	3.92	22.5
10.240	0.109	10.690	3.94	22.5
7.224	0.054	7.473	3.96	22.5
4.384	0.061	13.990	3.98	22.5
0.934	0.067	72.010	4.00	22.5

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PARTICLE SIZE RESULTS

ATTACHMENT 9

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical
content

QA *Ty L. Tang* Date 7/27/00

HNF-1701 REV. 0

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FLUOR GLOBAL SERVICES

Memorandum

To: F. H. Steen T6-12 Date: 8D500-JFO-00-017
April 13, 2000

From: J. F. O'Rourke, Engineer JFO T6-07 Telephone: 373-4995

cc: J. H Baldwin R3-73
D. L. Herting D.L.H. T6-07
J. R. Jewett R3-73
L. L. Lockrem T6-07
A. M. Templeton R2-12
JFO File/LB

Subject: PARTICLE SIZE DISTRIBUTION ANALYSES FOR TANK 241-AZ-101

This letter reports the results of particle size distribution analyses performed on samples collected from tank 241-AZ-101. Table 1 contains a summary of the means and ranges for each of the particle size distribution analyses. The particle size distribution data is also presented in graphical and tabular form in Attachment I.

Table 1 Summary of Particle Size Distribution Measurements

Sample Number	Mean	Range
S99T001947	135 μm	10-590 μm
S99T001948	116 μm	9-340 μm

The particle size distribution analyses were performed on a Horiba LA-910 Particle Size Analyzer. The Horiba LA-910 uses laser diffraction to determine the volume distribution of particles with sizes ranging from 0.02 μm to 1020 μm . The particles were diluted with enough supernatant liquid to make a well-separated suspension. All measurements were performed at ambient laboratory temperature (typically around 25 $^{\circ}\text{C}$). These samples were not sonicated prior to the analysis. Future particle size distribution analyses for tank 241-AZ-101 will be performed before and after sonication to evaluate the degree of particle agglomeration. Laboratory technology procedure LT-519-105 was followed for the particle size distribution analyses.

F. H. Steen
Page 2
April 13, 2000

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8D500-JFO-00-017

FLUOR GLOBAL SERVICES

The particles may have undergone size changes during sampling, storage, or processing before the measurements were performed. The particle size distribution of the sample that was analyzed does not necessarily represent *in-situ* conditions.

If you have any questions on this letter, feel free to call me at 373-4995.

Attachment

jfo

8D500-JFO-00-017

Attachment I

PARTICLE SIZE DISTRIBUTION ANALYSES
FOR TANK 241-AZ-101

Consisting of 3 Pages including the cover page

HORIBA LA-910

for Windows(TM) Ver.1.20J Apr/11/00 13:23

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000329-211 14:48
 Filename : S99T1947
 Sample : S99T001947

Material : 101AZ
 Source : C269/S16 TANK FARMS
 Lot Number :

Condition

T%(He-Ne): 49.6%
 (LAMP): 49.9%

Dist.Form: Std.
 R.R.Index: 1.19-0.001

Sampling times : 100
 ()

Agitation : 0 Circultrn : 0 U.sonic : OFF(60)

Format

Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 122.026 μ m SP.Area : 778cm²/cm³ S.D. : 83.966 μ m
 Mode : 141.530 μ m Mean : 134.941 μ m
 C.V. : 62.22%

Span : (D 10.0-D 90.0) / D50 = 1.727

Dia. on %(10.0%) :	35.497 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	63.318 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	84.864 μ m	% on Dia.(10.000 μ m) :	0.1%
Dia. on %(80.0%) :	197.156 μ m	% on Dia.(30.000 μ m) :	8.1%
Dia. on %(90.0%) :	246.295 μ m	% on Dia.(200.000 μ m) :	80.8%

Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.37	6.55	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.37	5.18	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.23	3.81	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.06	2.58	0.445	0.00	0.00
592.4	0.17	100.00	15.17	0.77	1.52	0.389	0.00	0.00
517.2	0.31	99.83	13.25	0.41	0.75	0.339	0.00	0.00
451.6	0.56	99.52	11.56	0.23	0.34	0.296	0.00	0.00
394.2	1.08	98.96	10.10	0.11	0.11	0.259	0.00	0.00
344.2	2.06	97.88	8.816	0.00	0.00	0.226	0.00	0.00
300.5	3.46	95.83	7.697	0.00	0.00	0.197	0.00	0.00
262.4	5.08	92.37	6.720	0.00	0.00	0.172	0.00	0.00
229.1	6.49	87.29	5.867	0.00	0.00	0.150	0.00	0.00
200.0	7.58	80.80	5.122	0.00	0.00	0.131	0.00	0.00
174.6	8.22	73.22	4.472	0.00	0.00	0.115	0.00	0.00
152.5	9.17	65.00	3.905	0.00	0.00	0.100	0.00	0.00
133.1	9.10	55.83	3.409	0.00	0.00	0.087	0.00	0.00
116.2	8.05	46.73	2.976	0.00	0.00	0.076	0.00	0.00
101.5	6.90	38.68	2.599	0.00	0.00	0.067	0.00	0.00
88.58	5.63	31.78	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.49	26.15	1.981	0.00	0.00	0.051	0.00	0.00
67.52	3.50	21.66	1.729	0.00	0.00	0.044	0.00	0.00
58.95	2.78	18.16	1.510	0.00	0.00	0.039	0.00	0.00
51.47	2.26	15.37	1.318	0.00	0.00	0.034	0.00	0.00
44.94	1.91	13.11	1.151	0.00	0.00	0.029	0.00	0.00
39.23	1.62	11.20	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.54	9.57	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.48	8.03	0.766	0.00	0.00			

HORIBA LA-910

for Windows(TM) Ver.1.20j Apr/11/00 13:24

Laser scattering particle size distribution analyzer

PARTICLE SIZE MEASUREMENT DATA

ID# : 000329-209 14:22
 Filename : S99T1948
 Sample : S99T001948

Material : 101AZ
 Source : C266/S16R TANK FARMS
 Lot Number :

Condition

T%(He-Ne): 81.2%
 (LAMP): 92.0%

Dist.Form: Std.
 R.R.Index: 1.19-0.001

Sampling times : 100
 ()

Agitation : 0 Circulth : 0 U.sonic : OFF(3)

Format

Dist.base : Volume Scaling : Auto Axis : LogX - LinearY

Data

Median : 117.798 μ m SP.Area : 854cm²/cm³ S.D. : 57.332 μ m
 Mode : 161.007 μ m Mean : 116.082 μ m
 C.V. : 49.39%

Span : (D 10.0-D 90.0) / D50 = 1.331

Dia. on %(10.0%) :	33.975 μ m	% on Dia.(0.100 μ m) :	0.0%
Dia. on %(20.0%) :	61.235 μ m	% on Dia.(1.000 μ m) :	0.0%
Dia. on %(30.0%) :	82.857 μ m	% on Dia.(10.000 μ m) :	0.5%
Dia. on %(80.0%) :	167.341 μ m	% on Dia.(30.000 μ m) :	8.6%
Dia. on %(90.0%) :	190.788 μ m	% on Dia.(200.000 μ m) :	93.3%

Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)	Size(μ m)	Freq(%)	Und(%)
1019.5	0.00	100.00	26.11	1.18	7.24	0.669	0.00	0.00
890.1	0.00	100.00	22.80	1.08	6.06	0.584	0.00	0.00
777.1	0.00	100.00	19.90	1.12	4.98	0.510	0.00	0.00
678.5	0.00	100.00	17.38	1.13	3.87	0.445	0.00	0.00
592.4	0.00	100.00	15.17	0.98	2.74	0.389	0.00	0.00
517.2	0.00	100.00	13.25	0.73	1.76	0.339	0.00	0.00
451.6	0.00	100.00	11.56	0.52	1.03	0.296	0.00	0.00
394.2	0.00	100.00	10.10	0.33	0.51	0.259	0.00	0.00
344.2	0.11	100.00	8.816	0.18	0.18	0.226	0.00	0.00
300.5	0.19	99.89	7.697	0.00	0.00	0.197	0.00	0.00
262.4	1.37	99.70	6.720	0.00	0.00	0.172	0.00	0.00
229.1	5.08	98.33	5.867	0.00	0.00	0.150	0.00	0.00
200.0	9.36	93.25	5.122	0.00	0.00	0.131	0.00	0.00
174.6	12.42	83.89	4.472	0.00	0.00	0.115	0.00	0.00
152.5	11.79	71.48	3.905	0.00	0.00	0.100	0.00	0.00
133.1	10.77	59.69	3.409	0.00	0.00	0.087	0.00	0.00
116.2	8.98	48.92	2.976	0.00	0.00	0.076	0.00	0.00
101.5	7.14	39.94	2.599	0.00	0.00	0.067	0.00	0.00
88.58	5.69	32.80	2.269	0.00	0.00	0.058	0.00	0.00
77.34	4.51	27.11	1.981	0.00	0.00	0.051	0.00	0.00
67.52	3.61	22.60	1.729	0.00	0.00	0.044	0.00	0.00
58.95	2.90	18.99	1.510	0.00	0.00	0.039	0.00	0.00
51.47	2.37	16.08	1.318	0.00	0.00	0.034	0.00	0.00
44.94	1.96	13.71	1.151	0.00	0.00	0.029	0.00	0.00
39.23	1.66	11.75	1.005	0.00	0.00	0.026	0.00	0.00
34.25	1.48	10.09	0.877	0.00	0.00	0.022	0.00	0.00
29.91	1.36	8.61	0.766	0.00	0.00			

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HEATING / SETTLING STUDY RESULTS

ATTACHMENT 10

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical content

QA *Tracy* Date 7/27/00

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FLUOR DANIEL HANFORD, INC.
INTEROFFICE CORRESPONDENCE

To: A. M. Templeton R2-12 **Date:** 8D500-JFO-00-007
 January 25, 2000
From: J. F. O'Rourke, Engineer JFO T6-07 **Telephone:** 373-4995
cc: J. H. Baldwin R3-73
 J. G. Field R2-11
 D. L. Herting T6-07
 L. L. Lockrem *2/2/96* T6-07
 S. G. McKinney *SH* R2-12
 K. L. Powell T6-04
 C. M. Seidel G1-32
 F. H. Steen T6-12
 M. J. Truex K2-10
 W. I. Winters T6-07
 JFO File/LB
Subject: RESULTS OF HEATING STUDY WITH SUPERNATANT LIQUID FROM TANK
 241-AZ-101

Two core samples (Cores 266 and 269) were collected from Tank 241-AZ-101 and delivered to the 222-S Laboratory. The supernatant liquid segments contain particles, which may have been the result of precipitation after cooling or may have been present under tank conditions. A heating test was performed to determine whether these particles would be present at tank temperature and to evaluate whether these solids should be included in the solids portion of the composite sample. This letter reports the results of the heating test.

After vigorously shaking the samples, approximately 50 ml was transferred from Jars 16346 (Core 266 - Segment 10) and 16357 (Core 266 - Segment 2) into two centrifuge cones. The cones were placed in a water bath set at 55 - 60 °C. After thirty-six hours in the water bath, there was no apparent reduction in the volume of solids.

The cones were then removed from the water bath and centrifuged for ten minutes. The supernatant liquid was decanted into two 60 mL jars and allowed to remain at ambient laboratory temperature. After three days at ambient temperature, the supernatant contained a small amount (less than 1 mg) of white particles. This testing indicates most of the particles in the drainable liquid were not the result of precipitation, but were present when the samples were collected.

If you have any questions on this letter, feel free to call me at 373-4995.

jfo

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MICROSCOPY RESULTS

ATTACHMENT 11

In this section:

QA signed for completion of the work.

Scientist signed for quality & technical
content

QA Tr L. King Date 7/27/00

HNF-1701 REV. 0

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FLUOR DANIEL HANFORD, INC.**I N T E R O F F I C E C O R R E S P O N D E N C E**

		8D500-DLH-JRS-00-006	
To:	F. H. Steen	T6-12	Date: January 20, 2000
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	DLH/JRS File/LB	T6-07	

Subject: **MICROSCOPY OF LIQUID LAYER SOLIDS FROM TANK 241-AZ-101**

- References: (1) Interoffice Memo, 74B20-99-052, A. M. Templeton, CHG, to R. J. Giroir, WMH, "Interim Guidance for Tank 241-AZ-101 Analysis," dated December 14, 1999.
- (2) "The Particle Atlas," Ed. 2, Vol. III, McCrone & Delly, Ann Arbor Science, 1973, page 644.

Microscopic analysis of the solids from Tank 241-AZ-101 Core 266 Segments 2 and 10, as requested in the Reference 1, has been completed. The solids appear to be composed of aluminum-rich minerals, which are unlikely to dissolve on heating. Details of the analysis follow.

Three samples were analyzed: Segment 2 sample S99T001955, Segment 2 sample S99T001956, and Segment 10 sample S99T001999. The samples were observed first with the polarized light microscope (PLM), then with the scanning electron microscope and its energy dispersive x-ray spectrometer (SEM/EDS). The similarities among the samples outnumbered the differences, which were slight.

Figures 1 and 2 show PLM views of the Segment 10 sample. (Photographs were not taken of the Segment 2 samples due to computer problems with the digital camera controller, but the main features of the samples were essentially the same.) The major phase is the isotropic material (same color as the background) that has little apparent crystalline structure at the PLM limit of resolution.

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Figure 1. Segment 10 Solids, Polarized Light, 40x.

Figure 2. Segment 10 Solids, Polarized Light, 250x.

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A minor phase, but obvious under polarized light, is the highly crystalline rod-shaped material with very high birefringence. These rods appear as bright yellow crystals in the PLM photographs, easily seen in Figure 2. A small cotton fiber is evident in Figure 1, and similar fibers were observed in the Segment 2 samples. One more minor phase not seen in Segment 10 was an iron-rich (amber-colored) phase, which was present in both of the Segment 2 samples.

Crystal identification by PLM in radioactive samples is based on recognition of the "fingerprint" characteristics of the crystals. The "fingerprint" is based on the physical appearance (crystal habit) and optical properties (mainly birefringence) of the crystals. None of the solids in these samples could be identified by recognition.

Figure 3 shows an SEM photograph of the Segment 10 sample. The fine structure of the major phase crystals is apparent at the higher magnification possible with the SEM. One small rod-shaped crystal is visible in the center of the photograph.

Figure 3. Segment 10 Solids, SEM Photograph

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Semi-quantitative elemental analysis of the particles in each of the three samples was performed by EDS. The EDS spectra are shown in Figures 4-9, and the results are summarized in Table 1. Results listed under the table heading "Scan" are obtained from x-rays generated by an electron beam rastering across a broad region of the sample. Results for "Rod" and "Rosette" are obtained from x-rays generated by an electron beam held in a stationary position either on a rod-shaped crystal (the minor phase) or on one of the rosette-shaped particles (the major phase). None of the iron-rich particles were found for individual analysis.

The EDS spectra all show a peak for gold (Au) because the samples were gold-coated to make them electrically conductive. The gold was not considered in the elemental analysis.

The major difference between the major phase and the rod-shaped phase is obviously in the amount of silicon present. The major phase contains little or no Si, but the rod-shaped crystals contain about as much Si as they do Na and Al, on a mole-for-mole basis. The effect is more dramatic for the Segment 2 rod than for the Segment 10 rod because the crystal that was analyzed was smaller in Segment 10. The "interaction volume" is the region of the sample that is excited by the electron beam and from which the x-rays are generated. As a rule-of-thumb, that area is typically about 5 μm in diameter, depending on the electron beam accelerating voltage and the atomic number of the sample. The rod-shaped crystal in Figure 3 is only about 1 μm or so in diameter, so it is likely that some of the x-rays were generated from the surrounding matrix (the major phase). Thus, the analysis of the rod from Segment 2 is believed to be more representative of the actual composition of the rod-shaped crystals.

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Figure 4. EDS Spectrum of Segment 2 Sample #1955, Scan Mode

Figure 5. EDS Spectrum of Segment 2 Sample #1956, Scan Mode

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Figure 6. EDS Spectrum of Segment 2 #1956, Rod-shaped Crystal

Figure 7. EDS Spectrum of Segment 10 Sample #1999, Scan Mode

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Figure 8. EDS Spectrum of Segment 10 Sample #1999, Rosette

Figure 9. EDS Spectrum of Segment 10 Sample #1999, Rod-shaped Crystal

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Table 1. Semi-Quantitative Elemental Analysis by EDS (in weight percent).

Element	Segment 2 #1955 Scan	Segment 2 #1956 Scan	Segment 2 #1956 Rod	Segment 10 #1999 Scan	Segment 10 #1999 Rosette	Segment 10 #1999 Rod
O	55.0	53.4	46.2	59.2	59.8	56.6
Na	21.8	18.8	10.4	19.5	15.0	15.8
Al	17.9	20.0	14.4	18.5	23.6	19.3
Si	0.6	1.1	19.9	0.6	0.7	6.7
S	1.7	1.9	1.6	n.d.	n.d.	n.d.
K	0.9	1.6	2.9	1.4	0.9	1.4
Ca	n.d. ¹	n.d.	1.1	n.d.	n.d.	n.d.
Ti	n.d.	n.d.	0.5	n.d.	n.d.	n.d.
Cr	0.3	0.7	0.5	0.8	n.d.	0.3
Fe	1.8	2.4	2.1	n.d.	n.d.	n.d.

¹ n.d. = not detected

The Na:Al:O mole ratios for the samples marked "Scan" or "Rosette" in Table 1 average about 1:1:4.5. If the fraction of oxygen is assigned to the traces of Fe, Cr, and K, then the Na:Al:O mole ratio becomes 1:1:4, corresponding nicely to the formula $\text{NaAl}(\text{OH})_4$, or sodium aluminate. This is not a conclusive identification, however, for two reasons. First, the crystal habit of the rosette-shaped crystals does not match either the soda-cracker habit or the dumbbell-shaped needle bunch habit that have been previously documented for sodium aluminate crystals in tank waste. Second, the hydroxide concentration is lower in tank 241-AZ-101 than we normally think of as producing conditions favoring sodium aluminate formation. Nevertheless, the species certainly is some type of sodium aluminate compound, if not specifically $\text{NaAl}(\text{OH})_4$.

The surface structure of these rosette-shaped crystals suggests that they did not form as a result of cooling from tank temperature to ambient temperature, either in the field or in the laboratory. Typically, crystals formed by such cooling have very regular shapes and flat faces.

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The rod-shaped minor phase crystals, which do have regular shapes and flat faces, contain Na:Al:Si:O mole ratios that suggest some form of sodium aluminosilicate, or zeolite. For the Segment 2 rod-shaped crystal, the mole ratios were 1:1:1.5:6, corresponding to an empirical formula of $\text{NaAlSi}_{1.5}\text{O}_6$. This is a very good match for natrolite, $\text{H}_4\text{Na}_2\text{Al}_2\text{Si}_3\text{O}_{12}$, described in "The Particle Atlas" (Reference 2) as "the commonest of the fibrous zeolites". The segment 2 rod-shaped crystal also contained traces of calcium and titanium, typical of natural mineral zeolites. None of these zeolites, natural or synthetic, have any appreciable solubility in water, and are very unlikely to have formed as a result of cooling of the tank waste.

Please call us on 373-2532 or 373-5612 if you have any questions or comments about these results.

fjh

[Original signed by D. L. Herting and J. R. Smith]

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SAMPLE DATA SUMMARY

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Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266

SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001832	D	Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832		Bromide by Ion Chromatograph	ug/mL	97.28	<1.25e-1	<2.65e+02	<2.65e2	n/a	n/a	n/a	265.1	n/a	n/a

CORE NUMBER: 266
SEGMENT #: 2

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001833	D	Aluminum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	8.61e+03	8.43e+03	8.52e+03	2.11	98.00	201.0	n/a
S99T001833	D	Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	96.70	4.010	n/a
S99T001833	D	Sodium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-1	1.15e+05	1.10e+05	1.13e+05	4.44	92.00	401.0	n/a
S99T001833		Fluoride-IC-Dionex 4000/4500	ug/mL	100.8	<1.20e-2	1.81e+03	1.84e+03	1.82e+03	1.64	96.72	25.45	n/a
S99T001833		Nitrite-IC - Dionex 4000/4500	ug/mL	93.01	<1.08e-1	7.42e+04	7.38e+04	7.40e+04	0.54	88.85	229.1	n/a
S99T001833		Bromide by Ion Chromatograph	ug/mL	97.28	<1.25e-1	9.84e+02	913.0	948.5	7.49	94.08	265.1	n/a
S99T001833		Nitrate by IC-Dionex 4000/4500	ug/mL	104.3	<1.39e-1	7.37e+04	7.39e+04	7.38e+04	0.27	105.7	294.8	n/a
S99T001833		Cesium-137 by GEA	uci/mL	106.6	<7.53e-3	2.73e+03	2.73e+03	2.73e+03	0.00	n/a	n/a	0.120

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CORE NUMBER: 266
SEGMENT #: 3

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001834	D	Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	17.90	18.20	18.05	1.66	n/a	4.010	n/a
S99T001834		Bromide by Ion Chromatograph	ug/mL	97.28	<1.25e-1	9.28e+02	1.00e+03	963.9	7.47	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001835	D	Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	4.360	4.070	4.215	6.88	n/a	4.010	n/a
S99T001835		Bromide by Ion Chromatograph	ug/mL	96.96	<1.25e-1	<2.65e+02	269.0	n/a	n/a	n/a	265.1	n/a

CORE NUMBER: 266
SEGMENT #: 5

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001836	D	Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	18.80	18.60	18.70	1.07	n/a	4.010	n/a
S99T001836		Bromide by Ion Chromatograph	ug/mL	96.96	<1.25e-1	6.16e+02	655.0	635.4	6.14	n/a	265.1	n/a

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CORE NUMBER: 266
SEGMENT #: 6

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001837	D	Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	16.60	16.60	16.60	0.00	96.00	4.010	n/a
S99T001837		Bromide by Ion Chromatograph	ug/mL	96.96	<1.25e-1	1.11e+03	1.14e+03	1.12e+03	2.67	93.28	265.1	n/a

CORE NUMBER: 266
SEGMENT #: 7

SEGMENT PORTION: Drainable Liquid

Table 1. Data Summary Report.
AZ-101 (2)

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001838	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.27e+03	8.49e+03	8.38e+03	2.63	n/a	20.10	n/a
S99T001838	D	Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	24.90	33.00	28.95	28.0	n/a	4.010	n/a
S99T001838	D	Sodium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	1.05e+05	1.08e+05	1.07e+05	2.82	n/a	40.10	n/a
S99T001838		Fluoride-IC-Dionex 4000/4500	ug/mL	105.2	<1.20e-2	1.74e+03	1.70e+03	1.72e+03	2.33	n/a	25.45	n/a
S99T001838		Nitrite-IC - Dionex 4000/4500	ug/mL	96.03	<1.08e-1	7.11e+04	7.29e+04	7.20e+04	2.50	n/a	229.1	n/a
S99T001838		Bromide by Ion Chromatograph	ug/mL	97.12	<1.25e-1	1.14e+03	1.27e+03	1.20e+03	10.8	n/a	265.1	n/a
S99T001838		Nitrate by IC-Dionex 4000/4500	ug/mL	102.2	<1.39e-1	7.06e+04	7.22e+04	7.14e+04	2.24	n/a	294.8	n/a
S99T001838		Cesium-137 by GEA	uCi/mL	106.6	<7.53e-3	2.04e+03	2.02e+03	2.03e+03	0.99	n/a	n/a	0.140

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266

SEGMENT #: 8

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001839	D		Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	18.90	24.90	21.90	27.4	n/a	4.010	n/a
S99T001839			Bromide by Ion Chromatograph	ug/mL	97.12	<1.25e-1	1.24e+03	1.22e+03	1.23e+03	1.63	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001840	D	Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	22.00	21.70	21.85	1.37	n/a	4.010	n/a
S99T001840		Bromide by Ion Chromatograph	ug/mL	97.12	<1.25e-1	1.18e+03	1.16e+03	1.17e+03	1.71	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001841	D	Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	23.50	22.20	22.85	5.69	n/a	4.010	n/a
S99T001841		Bromide by Ion Chromatograph	ug/mL	98.08	<1.25e-1	1.13e+03	1.20e+03	1.17e+03	6.01	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R I#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001842	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	18.90	17.80	18.35	5.99	n/a	4.010	n/a
S99T001842		Bromide by Ion Chromatograph	ug/mL	98.08	<1.25e-1	8.90e+02	886.0	888.0	0.45	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266

SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001843	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	21.30	21.00	21.15	1.42	n/a	4.010	n/a
S99T001843		Bromide by Ion Chromatograph	ug/mL	98.08	<1.25e-1	8.90e+02	918.0	904.0	3.10	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001844	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	12.80	12.80	12.80	0.00	n/a	4.010	n/a
S99T001844		Bromide by Ion Chromatograph	ug/mL	97.76	<1.25e-1	3.52e+02	355.0	353.7	0.85	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 14

SEGMENT PORTION: Drainable Liquid

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001845	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.11e+03	8.16e+03	8.14e+03	0.61	77.00	20.10	n/a
S99T001845	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	9.480	9.590	9.535	1.15	94.90	4.010	n/a
S99T001845	D	Sodium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-1	1.12e+05	1.07e+05	1.10e+05	4.57	102.0	401.0	n/a
S99T001845		Fluoride-IC-Dionex 4000/4500	ug/mL	98.44	<1.20e-2	1.62e+03	1.66e+03	1.64e+03	2.44	96.72	25.45	n/a
S99T001845		Nitrite-IC - Dionex 4000/4500	ug/mL	95.46	<1.08e-1	6.79e+04	6.79e+04	6.79e+04	0.00	95.27	229.1	n/a
S99T001845		Bromide by Ion Chromatograph	ug/mL	97.76	<1.25e-1	1.25e+03	1.25e+03	1.25e+03	0.00	94.88	265.1	n/a
S99T001845		Nitrate by IC-Dionex 4000/4500	ug/mL	100.6	<1.39e-1	6.87e+04	6.88e+04	6.87e+04	0.15	98.99	294.8	n/a
S99T001845		Cesium-137 by GEA	uCi/mL	n/a	N/A	INS	N/A	n/a	n/a	n/a	n/a	n/a

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CORE NUMBER: 266
SEGMENT #: 15

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001846	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	33.50	34.80	34.15	3.81	n/a	4.010	n/a
S99T001846		Bromide by Ion Chromatograph	ug/mL	97.76	<1.25e-1	8.80e+02	988.0	933.8	11.6	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 16

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001847	D		Lithium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010		n/a
S99T001847			Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	3.84e+02	416.0	400.2	8.00	n/a	265.1		n/a

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CORE NUMBER: 266
SEGMENT #: 16 COMPOSITE

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Core Composite

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000012		Bulk Density of Sample	g/mL	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000012		Solids % - Grav. in Hot Cell	%	102.2	n/a	57.60	58.50	58.05	1.55	n/a	1.00e-02	n/a
S00T000013		Bulk Density of Sample	g/mL	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000013		Solids % - Grav. in Hot Cell	%	102.2	n/a	61.50	66.50	64.00	7.81	n/a	1.00e-02	n/a
S00T000014		Bulk Density of Sample	g/mL	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000014		Solids % - Grav. in Hot Cell	%	102.2	n/a	67.20	63.60	65.40	5.50	n/a	1.00e-02	n/a
S00T000015	F	Lithium - ICP-Fusion	ug/g	99.20	<1.00e-2	<1.93e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S00T000015	F	Am-241 by TRU-SPEC Resin IonEx	uci/g	92.43	<8.56E+0	58.30	60.50	59.40	3.70	n/a	9.890	3.14E+00
S00T000015	F	Alpha of Digested Solid	uci/g	103.1	<3.90E+0	56.20	64.30	60.25	13.4	88.51	6.730	1.86E+01
S00T000016	F	Am-241 by TRU-SPEC Resin IonEx	uci/g	92.43	<8.56E+0	51.90	59.30	55.60	13.3	n/a	8.300	3.11E+00
S00T000016	F	Alpha of Digested Solid	uci/g	103.1	<3.90E+0	64.50	57.00	60.75	12.3	n/a	7.120	1.83E+01
S00T000017	F	Am-241 by TRU-SPEC Resin IonEx	uci/g	92.43	<8.56E+0	73.60	64.50	69.05	13.2	n/a	12.30	3.00E+00
S00T000017	F	Alpha of Digested Solid	uci/g	101.8	<3.62E+0	72.50	63.00	67.75	14.0	n/a	8.460	1.69E+01

Table 1. Data Summary Report.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: Core Comp Trip1

SEGMENT PORTION: Centrifuged Solids

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000797	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	1.69E-01	n/a	n/a	n/a	n/a	1.25E-01	8.74E+00
S00T000797	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	2.00E+04	n/a	n/a	n/a	n/a	8.150	6.83E-01
S00T000797	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	4.320	n/a	n/a	n/a	n/a	1.510	4.85E+00
S00T000797	F	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<1.46E+0	< 1.510	n/a	n/a	n/a	n/a	1.510	1.00E+02
S00T000797	F	Cobalt-60 by GEA	uCi/g	98.19	<3.70E-1	2.694	n/a	n/a	n/a	n/a	n/a	16.3
S00T000797	F	Antimony-125 by GEA	uCi/g	n/a	<9.91E-1	17.08	n/a	n/a	n/a	n/a	n/a	15.4
S00T000797	F	Cesium-137 by GEA	uCi/g	104.5	<8.61E-1	7.76E+02	n/a	n/a	n/a	n/a	n/a	0.740
S00T000797	F	Europium-152 by GEA	uCi/g	n/a	<6.93E-1	< 4.802	n/a	n/a	n/a	n/a	4.802	n/a
S00T000797	F	Europium-154 by GEA	uCi/g	n/a	<1.21E0	30.61	n/a	n/a	n/a	n/a	n/a	5.03
S00T000797	F	Europium-155 by GEA	uCi/g	n/a	<8.64E-1	43.27	n/a	n/a	n/a	n/a	n/a	9.50
S00T000797	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	89.53	<3.25E+0	44.30	n/a	n/a	n/a	n/a	5.730	2.72E+00
S00T000797	F	Cm-243/244 by TRU-SPEC Resin	uCi/g	n/a	<3.25E+0	< 5.730	n/a	n/a	n/a	n/a	5.730	1.00E+02
S00T000797	F	Alpha of Digested Solid	uCi/g	91.44	<1.59E+0	41.70	n/a	n/a	n/a	88.12	3.830	1.58E+01
S00T000797	F	Beta of Solid Sample	uCi/g	102.8	1.35E+1	3.68E+04	n/a	n/a	n/a	108.1	10.30	4.03E-01
S00T000803	A	Arsenic (Total) ICP/MS ACD159	ug/g	90.60	<6.63E-1	< 70.71	n/a	n/a	n/a	n/a	70.71	n/a
S00T000803	A	Barium (Total) ICP/MS ACD159	ug/g	96.00	<6.63E-2	5.12E+02	n/a	n/a	n/a	n/a	7.070	n/a
S00T000803	A	Palladium (Total) ICP/MS ACD159	ug/g	104.0	<8.84E-2	1.98E+03	n/a	n/a	n/a	n/a	9.428	n/a
S00T000803	A	Praseodymium (Total) ICP/MS AD159	ug/g	94.67	<6.63E-2	2.58E+02	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Rubidium (Total) ICP/MS ACD159	ug/g	98.67	<6.63E-2	17.00	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Ruthenium (Total) ICP/MS ACD159	ug/g	100.0	<6.63E-2	1.23E+02	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Selenium (Total) ICP/MS ACD159	ug/g	112.7	<6.63E-2	1.15E+03	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Tantalum (Total) ICP/MS ACD159	ug/g	101.4	<6.63E-2	< 7.071	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Tellurium (Total) ICP/MS ACD159	ug/g	102.2	<6.63E-2	62.30	n/a	n/a	n/a	n/a	23.57	n/a
S00T000803	A	Thallium (Total) ICP/MS ACD159	ug/g	96.67	<6.63E-2	58.60	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Vanadium (Total) ICP/MS ACD159	ug/g	96.60	<6.63E-2	< 7.071	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Yttrium (Total) ICP/MS ACD159	ug/g	97.00	<3.32E0	<3.54E+02	n/a	n/a	n/a	n/a	353.6	n/a
S00T000803	A	Zirconium (Total) ICP/MS ACD159	ug/g	n/a	<6.63E-2	36.28	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Barium (Total) ICP/MS ACD159	ug/g	94.80	<2.21E-2	1.79E+02	n/a	n/a	n/a	n/a	2.357	n/a
S00T000803	A	Strontium (Total) ICP/MS ACD159	ug/g	107.6	<6.63E-2	2.56E+04	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Nb/Zr 93 by ICP/MS ACD159	ug/g	153.3	<6.63E-2	3.02E+02	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Eu/Sm 151 by ICP/MS ACD159	ug/g	95.60	<6.63E-2	22.89	n/a	n/a	n/a	n/a	7.071	n/a
S00T000803	A	Tc99 by ICP/MS ACD159	ug/g	98.50	2.03E-03	10.06	n/a	n/a	n/a	n/a	9.61E-02	n/a
S00T000803	A	Sn126 ICP/MS ACD159	ug/g	n/a	<6.76E-2	< 7.212	n/a	n/a	n/a	n/a	7.212	n/a
S00T000803	A	Cs133 ICP/MS ACD159	ug/g	92.00	<9.02E-4	15.19	n/a	n/a	n/a	n/a	9.61E-02	n/a
S00T000803	A	Cs135 ICP/MS ACD159	ug/g	n/a	<9.02E-4	5.726	n/a	n/a	n/a	n/a	9.61E-02	n/a
S00T000803	A	Cs137 ICP/MS ACD159	ug/g	n/a	<9.02E-4	1.12E+02	n/a	n/a	n/a	n/a	9.61E-02	n/a
S00T000803	A	Protactinium-231 by ICP/MS	ug/g	n/a	<6.77E-3	<7.21E-01	n/a	n/a	n/a	n/a	7.21E-01	n/a
S00T000803	A	Uranium-233 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<5.77E-01	n/a	n/a	n/a	n/a	5.77E-01	n/a
S00T000803	A	Uranium-234 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<5.77E-01	n/a	n/a	n/a	n/a	5.77E-01	n/a
S00T000803	A	Uranium-235 by ICP/MS ACD159	ug/g	103.6	<5.41E-3	35.40	n/a	n/a	n/a	n/a	5.77E-01	n/a
S00T000803	A	Uranium-236 by ICP/MS ACD159	ug/g	n/a	<7.22E-3	3.419	n/a	n/a	n/a	n/a	7.69E-01	n/a
S00T000803	A	Uranium-238 by ICP/MS ACD159	ug/g	98.30	<5.41E-3	4.09E+03	n/a	n/a	n/a	n/a	5.77E-01	n/a
S00T000803	A	Neptunium-237 by ICP/MS	ug/g	n/a	<2.26E-2	55.00	n/a	n/a	n/a	n/a	2.404	n/a

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000803	A	Plutonium-239 by ICP/MS	ug/g	n/a	<2.26e-2	42.11	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Plutonium-240 by ICP/MS	ug/g	n/a	<2.26e-2	3.255	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Plutonium-242 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.404	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Pu/Am-241 by ICP/MS	ug/g	n/a	<2.26e-2	16.23	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Am 243/Cm 243 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.404	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.404	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Silver - ICP-Acid Digest	ug/g	88.00	<1.00e-2	1.42e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Aluminum - ICP-Acid Digest	ug/g	92.80	1.21e-01	4.57e+04	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Arsenic - ICP-Acid Digest	ug/g	82.60	<1.00e-1	< 53.30	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Boron - ICP-Acid Digest	ug/g	99.20	5.01e-01	62.20	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Barium - ICP-Acid Digest	ug/g	86.00	<5.00e-2	4.44e+02	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Beryllium - ICP-Acid Digest	ug/g	87.40	<5.00e-3	7.140	n/a	n/a	n/a	n/a	2.670	n/a
S00T000803	A	Bismuth - ICP-Acid Digest	ug/g	79.20	<1.00e-1	61.90	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Calcium - ICP-Acid Digest	ug/g	156.0	<1.00e-1	2.02e+03	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Cadmium - ICP-Acid Digest	ug/g	83.40	<5.00e-3	4.49e+03	n/a	n/a	n/a	n/a	2.670	n/a
S00T000803	A	Cerium - ICP-Acid Digest	ug/g	88.40	<1.00e-1	4.94e+02	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Cobalt - ICP-Acid Digest	ug/g	84.60	<2.00e-2	32.90	n/a	n/a	n/a	n/a	10.70	n/a
S00T000803	A	Chromium - ICP-Acid Digest	ug/g	86.20	<1.00e-2	4.64e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Copper - ICP-Acid Digest	ug/g	87.20	<1.00e-2	1.60e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Europium - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 26.70	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Iron - ICP-Acid Digest	ug/g	88.20	6.27e-02	5.99e+04	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Potassium - ICP-Acid Digest	ug/g	82.80	<5.00e-1	2.19e+03	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Lanthanum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	1.40e+03	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Lithium - ICP-Acid Digest	ug/g	85.40	<1.00e-2	4.23e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Magnesium - ICP-Acid Digest	ug/g	86.20	<1.00e-1	4.37e+02	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Manganese - ICP-Acid Digest	ug/g	82.00	<1.00e-2	7.20e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Molybdenum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	45.80	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Sodium - ICP-Acid Digest	ug/g	108.0	9.25e-01	1.61e+05	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Neodymium - ICP-Acid Digest	ug/g	89.80	<1.00e-1	1.16e+03	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Nickel - ICP-Acid Digest	ug/g	84.20	<2.00e-2	2.96e+03	n/a	n/a	n/a	n/a	10.70	n/a
S00T000803	A	Phosphorus - ICP-Acid Digest	ug/g	89.80	<2.00e-1	9.61e+02	n/a	n/a	n/a	n/a	107.0	n/a
S00T000803	A	Lead - ICP-Acid Digest	ug/g	82.60	<1.00e-1	2.66e+02	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Palladium - ICP-Acid Digest	ug/g	99.80	<1.00e0	<5.33e+02	n/a	n/a	n/a	n/a	533.0	n/a
S00T000803	A	Praseodymium - ICP Acid Digest	ug/g	102.6	<5.00e-1	3.13e+02	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Rubidium - ICP-Acid Digest	ug/g	95.20	<2.00e0	<1.07e+03	n/a	n/a	n/a	n/a	1.07e+03	n/a
S00T000803	A	Rhodium - ICP-Acid Digest	ug/g	102.2	<1.00e0	<5.33e+02	n/a	n/a	n/a	n/a	533.0	n/a
S00T000803	A	Ruthenium - ICP-Acid Digest	ug/g	102.6	<2.00e0	<1.07e+03	n/a	n/a	n/a	n/a	1.07e+03	n/a
S00T000803	A	Sulfur - ICP-Acid Digest	ug/g	86.40	1.11e-01	5.11e+04	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Antimony - ICP-Acid Digest	ug/g	87.40	<6.00e-2	< 32.00	n/a	n/a	n/a	n/a	32.00	n/a
S00T000803	A	Selenium - ICP-Acid Digest	ug/g	85.20	<1.00e-1	< 53.30	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Silicon - ICP-Acid Digest	ug/g	107.4	2.95e-01	9.10e+02	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Samarium - ICP-Acid Digest	ug/g	88.60	<1.00e-1	1.98e+02	n/a	n/a	n/a	n/a	53.30	n/a
S00T000803	A	Tin - ICP-Acid Digest	ug/g	101.2	<5.00e-1	<2.67e+02	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Strontium - ICP-Acid Digest	ug/g	87.20	<1.00e-2	3.77e+02	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Tantalum - ICP-Acid Digest	ug/g	109.0	<5.00e-1	<2.67e+02	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Tellurium - ICP-Acid Digest	ug/g	100.6	<5.00e-1	<2.67e+02	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Thorium - ICP-Acid Digest	ug/g	84.60	<5.00e-2	1.12e+02	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Titanium - ICP-Acid Digest	ug/g	92.40	<1.00e-2	28.30	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Thallium - ICP-Acid Digest	ug/g	82.60	<2.00e-1	<1.07e+02	n/a	n/a	n/a	n/a	107.0	n/a
S00T000803	A	Uranium - ICP-Acid Digest	ug/g	90.50	<5.00e-1	3.87e+03	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Vanadium - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 26.70	n/a	n/a	n/a	n/a	26.70	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000803	A	Tungsten -ICP-Acid Digest	ug/g	102.2	<5.00e-1	<2.67e+02	n/a	n/a	n/a	n/a	267.0	n/a
S00T000803	A	Yttrium -ICP-Acid Digest	ug/g	88.00	<5.00e-2	1.40e+02	n/a	n/a	n/a	n/a	26.70	n/a
S00T000803	A	Zinc -ICP-Acid Digest	ug/g	84.60	<1.00e-2	60.20	n/a	n/a	n/a	n/a	5.330	n/a
S00T000803	A	Zirconium -ICP-Acid Digest	ug/g	92.60	<1.00e-2	2.24e+04	n/a	n/a	n/a	n/a	5.330	n/a
S00T000806	W	Cyanide Water Distillation	ug/g	89.71	<1.10e-2	< 11.30	n/a	n/a	n/a	81.30	11.30	n/a
S00T000806	W	Ammonia by ISE-Std Additions	ug/g	97.90	<5.15e+3	7.32e+03	n/a	n/a	n/a	78.99	5.15e+03	n/a
S00T000806	W	OH- by Pot. Titration	ug/g	101.2	< 1.29e4	<1.29e+04	n/a	n/a	n/a	n/a	1.29e+04	n/a
S00T000806	W	Tot. Organic Carbon by Coul.	ug/g	103.3	9.00E-1	7.53e+03	n/a	n/a	n/a	96.40	566.0	n/a
S00T000806	W	TIC by Acid/Coulometry	ug/g	99.17	<5.20e1	5.72e+03	n/a	n/a	n/a	100.2	52.00	n/a
S00T000806	W	TOC by Persulfate/Coulometry	ug/g	93.67	<4.16e2	9.85e+03	n/a	n/a	n/a	85.20	416.0	n/a
S00T000806	W	Fluoride-IC-Dionex 500	ug/g	100.3	<3.00e-2	3.74e+04	n/a	n/a	n/a	102.3	1.28e+04	n/a
S00T000806	W	Acetate by IC-Dionex 500 col	ug/g	103.2	<2.30e-1	<9.71e+02	n/a	n/a	n/a	107.1	971.2	n/a
S00T000806	W	Formate by IC-DIONEX 500 col	ug/g	102.4	<2.30e-1	<9.71e+02	n/a	n/a	n/a	104.7	971.2	n/a
S00T000806	W	Chloride-IC-Dionex 500 col	ug/g	100.9	1.30e-01	<1.69e+02	n/a	n/a	n/a	104.0	168.9	n/a
S00T000806	W	Nitrite-IC - Dionex 500 col	ug/g	97.03	2.80e-01	3.81e+04	n/a	n/a	n/a	98.33	1.14e+03	n/a
S00T000806	W	Sulfate-IC-Dionex 500 col	ug/g	99.22	<3.20e-1	1.74e+05	n/a	n/a	n/a	100.9	1.37e+05	n/a
S00T000806	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	2.48e+04	n/a	n/a	n/a	102.4	1.14e+03	n/a
S00T000806	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<2.70e-1	3.54e+04	n/a	n/a	n/a	110.7	1.27e+03	n/a
S00T000806	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<1.14e+03	n/a	n/a	n/a	103.8	1.14e+03	n/a
S00T000806	W	Iodine-129 Waste Tank Samples	uCi/g	95.07	<3.37E-3	<3.04e-03	n/a	n/a	n/a	n/a	3.04e-03	0.00E+00
S00T000806	W	Tritium By Lachat	uCi/g	94.19	6.72E-3	1.47e-02	n/a	n/a	n/a	93.78	3.59e-03	5.21E+00
S00T000806	W	C-14 Small Volume	ug/g	72.85	<2.30E-3	<2.30e-03	n/a	n/a	n/a	74.17	2.30e-03	4.09E+00
S00T000815		Mercury by CVAA (PE) with FIAS	ug/g	n/a	n/a	INS	INS	n/a	n/a	n/a	1.25e-01	n/a
S00T001160		TIC by Acid/Coulometry	ug/g	n/a	n/a	INS	n/a	n/a	n/a	n/a	5.000	n/a
S00T001160		TOC by Persulfate/Coulometry	ug/g	n/a	n/a	INS	n/a	n/a	n/a	n/a	80.00	n/a

Table 1. Data Summary Report.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: Core Comp Trip2

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T0000798	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	1.22E-01	n/a	n/a	n/a	n/a	1.19E-01	8.99E+00
S00T0000798	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	2.29E+04	n/a	n/a	n/a	n/a	7.650	6.18E-01
S00T0000798	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	3.030	n/a	n/a	n/a	n/a	6.73E-01	3.47E+00
S00T0000798	F	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<1.44E+0	<6.73E-01	n/a	n/a	n/a	n/a	6.73E-01	1.00E+02
S00T0000798	F	Cobalt-60 by GEA	uCi/g	98.19	<3.70E-1	2.934	n/a	n/a	n/a	n/a	n/a	14.6
S00T0000798	F	Antimony-125 by GEA	uCi/g	n/a	<9.91E-1	18.51	n/a	n/a	n/a	n/a	n/a	16.4
S00T0000798	F	Cesium-137 by GEA	uCi/g	104.5	<8.61E-1	8.01E+02	n/a	n/a	n/a	n/a	n/a	0.710
S00T0000798	F	Europium-152 by GEA	uCi/g	n/a	<6.93E-1	< 4.852	n/a	n/a	n/a	n/a	4.852	n/a
S00T0000798	F	Europium-154 by GEA	uCi/g	n/a	<1.21E0	33.01	n/a	n/a	n/a	n/a	n/a	4.55
S00T0000798	F	Europium-155 by GEA	uCi/g	n/a	<8.64E-1	46.91	n/a	n/a	n/a	n/a	n/a	8.92
S00T0000798	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	89.53	<3.25E+0	53.60	n/a	n/a	n/a	n/a	6.200	2.59E+00
S00T0000798	F	Am-243/244 by TRU-SPEC Resin	uCi/g	n/a	<3.25E+0	< 6.200	n/a	n/a	n/a	n/a	6.200	1.00E+02
S00T0000798	F	Alpha of Digested Solid	uCi/g	91.44	<1.59E+0	51.20	n/a	n/a	n/a	n/a	3.620	1.40E+01
S00T0000798	F	Beta of Solid Sample	uCi/g	102.8	1.35E+1	4.86E+04	n/a	n/a	n/a	n/a	9.710	3.23E-01
S00T0000804	A	Arsenic(Total) ICP/MS ACD159	ug/g	90.60	<6.63E-1	< 72.81	n/a	n/a	n/a	88.10	72.81	n/a
S00T0000804	A	Barium (Total) ICP/MS ACD159	ug/g	96.00	<6.63E-2	4.71E+02	n/a	n/a	n/a	93.68	7.280	n/a
S00T0000804	A	Palladium(Total) ICP/MS ACD159	ug/g	104.0	<8.84E-2	1.74E+03	n/a	n/a	n/a	122.8	9.709	n/a
S00T0000804	A	Praseodymium(Tot) ICP/MS ACD159	ug/g	94.67	<6.63E-2	2.72E+02	n/a	n/a	n/a	77.20	7.281	n/a
S00T0000804	A	Rubidium (Total) ICP/MS ACD159	ug/g	98.67	<6.63E-2	< 7.281	n/a	n/a	n/a	101.6	7.281	n/a
S00T0000804	A	Rhodium (Total) ICP/MS ACD159	ug/g	100.0	<6.63E-2	1.16E+02	n/a	n/a	n/a	102.0	7.281	n/a
S00T0000804	A	Ruthenium(Total) ICP/MS ACD159	ug/g	112.7	<6.63E-2	1.04E+03	n/a	n/a	n/a	111.2	7.281	n/a
S00T0000804	A	Antimony (Total) ICP/MS ACD159	ug/g	101.4	<6.63E-2	< 7.281	n/a	n/a	n/a	99.61	7.281	n/a
S00T0000804	A	Selenium(Total) ICP/MS ACD159	ug/g	102.0	4.19E-01	27.89	n/a	n/a	n/a	97.99	24.27	n/a
S00T0000804	A	Tantalum (Total) ICP/MS ACD159	ug/g	102.0	<6.63E-2	< 7.281	n/a	n/a	n/a	98.80	7.281	n/a
S00T0000804	A	Tellurium (Total) ICP/MS ACD159	ug/g	96.67	<6.63E-2	52.86	n/a	n/a	n/a	94.00	7.281	n/a
S00T0000804	A	Thallium (Total) ICP/MS ACD159	ug/g	96.60	<6.63E-2	< 7.281	n/a	n/a	n/a	94.75	7.281	n/a
S00T0000804	A	Vanadium (Total) ICP/MS ACD159	ug/g	97.00	<3.32E0	<3.64E+02	n/a	n/a	n/a	91.88	364.0	n/a
S00T0000804	A	Tungsten (Total) ICP/MS ACD159	ug/g	n/a	<6.63E-2	28.10	n/a	n/a	n/a	97.60	7.281	n/a
S00T0000804	A	Yttrium (Total) ICP/MS ACD159	ug/g	94.80	<2.21E-2	1.62E+02	n/a	n/a	n/a	97.09	2.428	n/a
S00T0000804	A	Zr/Sr 90 by ICP/MS ACD159	ug/g	107.6	<6.63E-2	2.25E+04	n/a	n/a	n/a	100.4	7.281	n/a
S00T0000804	A	Nb/Zr 93 by ICP/MS ACD159	ug/g	153.3	<6.63E-2	2.59E+02	n/a	n/a	n/a	153.2	7.281	n/a
S00T0000804	A	Eu/Sm 151 by ICP/MS ACD159	ug/g	95.60	<6.63E-2	22.23	n/a	n/a	n/a	96.91	7.281	n/a
S00T0000804	A	Tc99 by ICP/MS ACD159	ug/g	98.50	2.03E-03	8.891	n/a	n/a	n/a	110.0	9.92E-02	n/a
S00T0000804	A	Sn126 ICP/MS ACD159	ug/g	n/a	<6.76E-2	< 7.426	n/a	n/a	n/a	n/a	7.426	n/a
S00T0000804	A	Cs133 ICP/MS ACD159	ug/g	92.00	<9.02E-4	14.11	n/a	n/a	n/a	103.5	9.92E-02	n/a
S00T0000804	A	Cs135 ICP/MS ACD159	ug/g	n/a	<9.02E-4	5.654	n/a	n/a	n/a	n/a	9.92E-02	n/a
S00T0000804	A	Cs137 ICP/MS ACD159	ug/g	n/a	<9.02E-4	1.44E+02	n/a	n/a	n/a	n/a	9.92E-02	n/a
S00T0000804	A	Protactinium-231 by ICP/MS	ug/g	n/a	<6.77E-3	<7.43E-01	n/a	n/a	n/a	n/a	7.43E-01	n/a
S00T0000804	A	Uranium-233 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<5.94E-01	n/a	n/a	n/a	n/a	5.94E-01	n/a
S00T0000804	A	Uranium-234 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<5.94E-01	n/a	n/a	n/a	n/a	5.94E-01	n/a
S00T0000804	A	Uranium-235 by ICP/MS ACD159	ug/g	103.6	<5.41E-3	34.57	n/a	n/a	n/a	52.81	5.94E-01	n/a
S00T0000804	A	Uranium-236 by ICP/MS ACD159	ug/g	n/a	<7.22E-3	3.416	n/a	n/a	n/a	n/a	7.92E-01	n/a
S00T0000804	A	Uranium-238 by ICP/MS ACD159	ug/g	98.30	<5.41E-3	3.99E+03	n/a	n/a	n/a	100.7	5.94E-01	n/a
S00T0000804	A	Neptunium-237 by ICP/MS	ug/g	n/a	<2.26E-2	52.72	n/a	n/a	n/a	n/a	2.475	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000804	A	Plutonium-239 by ICP/MS	ug/g	n/a	<2.26e-2	39.08	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Plutonium-240 by ICP/MS	ug/g	n/a	<2.26e-2	3.020	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Plutonium-242 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.475	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Pu/Am-241 by ICP/MS	ug/g	n/a	<2.26e-2	16.61	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Am 243/Cm 243 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.475	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.475	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Silver - ICP-Acid Digest	ug/g	n/a	<2.26e-2	< 2.475	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Aluminum - ICP-Acid Digest	ug/g	88.00	<1.00e-2	1.27e+02	128.0	127.5	0.78	101.6	5.490	n/a
S00T000804	A	Arsenic - ICP-Acid Digest	ug/g	92.80	1.21e-01	7.85e+04	7.92e+04	7.88e+04	0.89	-3.06e+03	274.0	n/a
S00T000804	A	Boron - ICP-Acid Digest	ug/g	82.60	<1.00e-1	< 54.90	<5.49e1	n/a	n/a	87.20	54.90	n/a
S00T000804	A	Barium - ICP-Acid Digest	ug/g	99.20	<5.00e-2	68.00	62.90	65.45	7.79	92.78	27.40	n/a
S00T000804	A	Beryllium - ICP-Acid Digest	ug/g	86.00	<5.00e-2	4.43e+02	440.0	441.5	0.68	85.40	27.40	n/a
S00T000804	A	Bismuth - ICP-Acid Digest	ug/g	87.40	<5.00e-2	7.260	7.240	7.250	0.28	88.28	2.740	n/a
S00T000804	A	Calcium - ICP-Acid Digest	ug/g	79.20	<1.00e-1	< 54.90	<5.49e1	n/a	n/a	95.47	54.90	n/a
S00T000804	A	Cadmium - ICP-Acid Digest	ug/g	156.0	<1.00e-1	2.02e+03	2.03e+03	2.02e+03	0.49	179.8	549.0	n/a
S00T000804	A	Cerium - ICP-Acid Digest	ug/g	83.40	<5.00e-2	4.81e+03	4.78e+03	4.80e+03	0.63	69.76	27.40	n/a
S00T000804	A	Cobalt - ICP-Acid Digest	ug/g	88.40	<1.00e-1	4.97e+02	495.0	496.0	0.40	93.68	54.90	n/a
S00T000804	A	Chromium - ICP-Acid Digest	ug/g	84.60	<2.00e-2	31.10	33.20	32.15	6.53	89.90	11.00	n/a
S00T000804	A	Copper - ICP-Acid Digest	ug/g	86.20	<1.00e-2	4.04e+02	404.0	404.0	0.00	94.04	5.490	n/a
S00T000804	A	Europium - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 27.40	<2.74e1	n/a	n/a	91.52	27.40	n/a
S00T000804	A	Iron - ICP-Acid Digest	ug/g	88.20	6.27e-02	5.96e+04	5.95e+04	5.96e+04	0.17	-7.73e+02	274.0	n/a
S00T000804	A	Potassium - ICP-Acid Digest	ug/g	82.80	<5.00e-1	1.71e+03	1.69e+03	1.70e+03	1.18	117.4	274.0	n/a
S00T000804	A	Lanthanum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	1.59e+03	1.58e+03	1.58e+03	0.63	82.35	27.40	n/a
S00T000804	A	Lithium - ICP-Acid Digest	ug/g	85.40	<1.00e-2	3.29e+02	318.0	323.5	3.40	102.1	5.490	n/a
S00T000804	A	Magnesium - ICP-Acid Digest	ug/g	86.20	<1.00e-1	4.26e+02	424.0	425.0	0.47	92.60	54.90	n/a
S00T000804	A	Manganese - ICP-Acid Digest	ug/g	82.00	<1.00e-2	6.80e+02	679.0	679.5	0.15	83.79	5.490	n/a
S00T000804	A	Molybdenum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	37.10	38.20	37.65	2.92	94.93	27.40	n/a
S00T000804	A	Sodium - ICP-Acid Digest	ug/g	108.0	9.25e-01	1.34e+05	1.42e+05	1.38e+05	5.80	3.99e+03	549.0	n/a
S00T000804	A	Neodymium - ICP-Acid Digest	ug/g	89.80	<1.00e-1	1.20e+03	1.19e+03	1.20e+03	0.84	94.39	54.90	n/a
S00T000804	A	Nickel - ICP-Acid Digest	ug/g	84.20	<2.00e-2	3.01e+03	3.00e+03	3.00e+03	0.33	75.52	11.00	n/a
S00T000804	A	Phosphorus - ICP-Acid Digest	ug/g	89.80	<2.00e-1	5.55e+02	552.0	553.5	0.54	86.66	54.90	n/a
S00T000804	A	Lead - ICP-Acid Digest	ug/g	82.60	<1.00e-1	2.52e+02	255.0	253.5	1.18	86.66	54.90	n/a
S00T000804	A	Palladium - ICP-Acid Digest	ug/g	99.80	<1.00e0	<5.49e+02	<5.49e2	n/a	n/a	99.20	549.0	n/a
S00T000804	A	Praseodymium- ICP Acid Digest	ug/g	102.6	<5.00e-1	3.16e+02	315.0	315.5	0.32	100.0	274.0	n/a
S00T000804	A	Rubidium- ICP-Acid Digest	ug/g	95.20	<2.00e0	<1.10e+03	<1.10e3	n/a	n/a	88.70	1.10e+03	n/a
S00T000804	A	Rhodium - ICP-Acid Digest	ug/g	102.2	<1.00e0	<5.49e+02	<5.49e2	n/a	n/a	99.60	549.0	n/a
S00T000804	A	Ruthenium - ICP-Acid Digest	ug/g	102.6	<2.00e0	<1.10e+03	<1.10e3	n/a	n/a	101.0	1.10e+03	n/a
S00T000804	A	Sulfur - ICP-Acid Digest	ug/g	86.40	1.11e-01	4.09e+04	4.09e+04	4.09e+04	0.00	1.50e+03	549.0	n/a
S00T000804	A	Antimony - ICP-Acid Digest	ug/g	87.40	<6.00e-2	< 32.90	<3.29e1	n/a	n/a	93.50	32.90	n/a
S00T000804	A	Selenium - ICP-Acid Digest	ug/g	85.20	<1.00e-1	< 54.90	<5.49e1	n/a	n/a	90.62	54.90	n/a
S00T000804	A	Silicon - ICP-Acid Digest	ug/g	107.4	2.95e-01	7.17e+02	686.0	701.5	4.42	130.2	274.0	n/a
S00T000804	A	Samarium - ICP-Acid Digest	ug/g	88.60	<1.00e-1	2.05e+02	208.0	206.5	1.45	93.14	54.90	n/a
S00T000804	A	Tin - ICP-Acid Digest	ug/g	101.2	<5.00e-1	<2.74e+02	<2.74e2	n/a	n/a	99.20	274.0	n/a
S00T000804	A	Strontium - ICP-Acid Digest	ug/g	87.20	<1.00e-2	3.36e+02	334.0	335.0	0.60	94.93	5.490	n/a
S00T000804	A	Tantalum - ICP-Acid Digest	ug/g	109.0	<5.00e-1	<2.74e+02	<2.74e2	n/a	n/a	106.0	274.0	n/a
S00T000804	A	Tellurium - ICP-Acid Digest	ug/g	100.6	<5.00e-1	<2.74e+02	<2.74e2	n/a	n/a	97.20	274.0	n/a
S00T000804	A	Thorium - ICP-Acid Digest	ug/g	84.60	<5.00e-2	1.15e+02	112.0	113.5	2.64	89.90	27.40	n/a
S00T000804	A	Titanium - ICP-Acid Digest	ug/g	92.40	<1.00e-2	26.40	26.50	26.45	0.38	96.01	5.490	n/a
S00T000804	A	Thallium - ICP-Acid Digest	ug/g	82.60	<2.00e-1	<1.10e2	<1.10e2	n/a	n/a	85.94	110.0	n/a
S00T000804	A	Uranium - ICP-Acid Digest	ug/g	90.50	<5.00e-1	3.75e+03	3.72e+03	3.74e+03	0.80	108.8	274.0	n/a
S00T000804	A	Vanadium - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 27.40	<2.74e1	n/a	n/a	93.50	27.40	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000804	A	Tungsten -ICP-Acid Digest	ug/g	102.2	<5.00e-1	<2.74e+02	<2.74e2	n/a	n/a	98.20	274.0	n/a
S00T000804	A	Yttrium -ICP-Acid Digest	ug/g	88.00	<5.00e-2	1.36e+02	136.0	136.0	0.00	93.68	27.40	n/a
S00T000804	A	Zinc -ICP-Acid Digest	ug/g	84.60	<1.00e-2	58.10	58.20	58.15	0.17	93.86	5.490	n/a
S00T000804	A	Zirconium -ICP-Acid Digest	ug/g	92.60	<1.00e-2	2.15e+04	2.15e+04	2.15e+04	0.00	289.5	54.90	n/a
S00T000807	W	Cyanide Water Distillation	ug/g	89.71	<1.10e-2	<10.90	n/a	n/a	n/a	n/a	10.90	n/a
S00T000807	W	Ammonia-by ISE-Std Additions	ug/g	97.90	<5.15E+3	<4.94e+03	n/a	n/a	n/a	n/a	4.94e+03	n/a
S00T000807	W	OH- by Pot. Titration	ug/g	101.2	<1.29e4	<1.24e+04	n/a	n/a	n/a	n/a	1.24e+04	n/a
S00T000807	W	Tot. Organic Carbon by Coul.	ug/g	103.3	9.00E-1	7.28e+03	n/a	n/a	n/a	n/a	543.0	n/a
S00T000807	W	TIC by Acid/Coulometry	ug/g	99.17	<5.20e1	5.22e+03	n/a	n/a	n/a	n/a	52.00	n/a
S00T000807	W	TOC by Persulfate/Coulometry	ug/g	93.67	<4.16e2	7.00e+02	n/a	n/a	n/a	n/a	416.0	n/a
S00T000807	W	Fluoride-IC-Dionex 500	ug/g	102.6	<3.00e-2	3.24e+04	n/a	n/a	n/a	n/a	1.19e+03	n/a
S00T000807	W	Acetate by IC-Dionex 500 col	ug/g	103.2	<2.30e-1	<9.32e+02	n/a	n/a	n/a	n/a	931.8	n/a
S00T000807	W	Formate by IC-DIONEX 500 col	ug/g	102.4	<2.30e-1	<9.32e+02	n/a	n/a	n/a	n/a	931.8	n/a
S00T000807	W	Chloride-IC-Dionex 500 col	ug/g	100.9	1.30e-01	<1.62e+02	n/a	n/a	n/a	n/a	162.1	n/a
S00T000807	W	Nitrite-IC - Dionex 500 col	ug/g	97.03	2.80e-01	3.39e+04	n/a	n/a	n/a	n/a	1.09e+03	n/a
S00T000807	W	Sulfate-IC-Dionex 500 col	ug/g	101.9	<3.20e-1	1.62e+05	n/a	n/a	n/a	n/a	1.27e+04	n/a
S00T000807	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	2.24e+04	n/a	n/a	n/a	n/a	1.09e+03	n/a
S00T000807	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<3.00e-1	3.12e+04	n/a	n/a	n/a	n/a	1.22e+03	n/a
S00T000807	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<1.09e+03	n/a	n/a	n/a	n/a	1.09e+03	n/a
S00T000807	W	Iodine-129 Waste Tank Samples	uCi/g	95.07	<3.37E-3	<2.77e-03	n/a	n/a	n/a	n/a	2.77e-03	0.00E+00
S00T000807	W	Tritium By Lachat	uCi/g	94.19	6.72E-3	1.59e-02	n/a	n/a	n/a	n/a	3.54e-03	5.14E+00
S00T000807	W	C-14 Small Volume	uCi/g	72.85	<2.30E-3	2.33e-03	n/a	n/a	n/a	n/a	2.21e-03	4.04E+00
S00T000816		Mercury by CVAA (PE) with FIAS	ug/g	n/a	n/a	INS	INS	n/a	n/a	n/a	1.25e-01	n/a
S00T001161		TIC by Acid/Coulometry	ug/g	n/a	n/a	INS	INS	n/a	n/a	n/a	5.000	n/a
S00T001161		TOC by Persulfate/Coulometry	ug/g	n/a	n/a	INS	INS	n/a	n/a	n/a	80.00	n/a

Table 1. Data Summary Report.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: Core Comp Trip3

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000799	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	1.42E-01	n/a	n/a	n/a	n/a	1.29E-01	8.94E+00
S00T000799	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	2.16E+04	n/a	n/a	n/a	n/a	8.140	6.56E-01
S00T000799	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	3.470	n/a	n/a	n/a	n/a	8.02E-01	3.55E+00
S00T000799	F	Pu-238 by TRU-SPEC Resin IonEX	uCi/g	n/a	<1.46E+0	1.590	n/a	n/a	n/a	n/a	8.02E-01	5.04E+00
S00T000799	F	Cobalt-60 by GEA	uCi/g	98.19	<3.70E-1	2.707	n/a	n/a	n/a	n/a	n/a	14.5
S00T000799	F	Antimony-125 by GEA	uCi/g	n/a	<9.91E-1	17.81	n/a	n/a	n/a	n/a	n/a	17.9
S00T000799	F	Cesium-137 by GEA	uCi/g	104.5	<8.61E-1	8.41E+02	n/a	n/a	n/a	n/a	n/a	0.720
S00T000799	F	Europium-152 by GEA	uCi/g	n/a	<6.93E-1	< 5.011	n/a	n/a	n/a	n/a	5.011	n/a
S00T000799	F	Europium-154 by GEA	uCi/g	n/a	<1.21E0	33.88	n/a	n/a	n/a	n/a	n/a	4.62
S00T000799	F	Europium-155 by GEA	uCi/g	n/a	<8.64E-1	48.97	n/a	n/a	n/a	n/a	n/a	9.15
S00T000799	F	Am-241 by TRU-SPEC Resin IonEX	uCi/g	89.53	<3.25E+0	49.30	n/a	n/a	n/a	n/a	6.100	2.68E+00
S00T000799	F	Cm-243/244 by TRU-SPEC Resin	uCi/g	n/a	<3.25E+0	< 6.100	n/a	n/a	n/a	n/a	6.100	1.00E+02
S00T000799	F	Alpha of Digested Solid	uCi/g	91.44	<1.59E+0	50.10	n/a	n/a	n/a	n/a	3.870	1.42E+01
S00T000799	F	Beta of Solid Sample	uCi/g	102.8	1.35E+1	4.73E+04	n/a	n/a	n/a	n/a	10.40	3.39E-01
S00T000805	A	Arsenic (Total) ICP/MS ACD159	ug/g	90.60	<6.63E-1	< 74.86	n/a	n/a	n/a	n/a	74.86	n/a
S00T000805	A	Barium (Total) ICP/MS ACD159	ug/g	96.00	<6.63E-2	5.60E+02	n/a	n/a	n/a	n/a	7.490	n/a
S00T000805	A	Palladium (Total) ICP/MS ACD159	ug/g	104.0	<8.84E-2	2.17E+03	n/a	n/a	n/a	n/a	9.983	n/a
S00T000805	A	Praseodymium (Total) ICP/MS AD159	ug/g	94.67	<6.63E-2	2.97E+02	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Rubidium (Total) ICP/MS ACD159	ug/g	98.67	<6.63E-2	19.24	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Rhodium (Total) ICP/MS ACD159	ug/g	100.0	<6.63E-2	1.34E+02	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Ruthenium (Total) ICP/MS ACD159	ug/g	112.7	<6.63E-2	1.05E+03	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Antimony (Total) ICP/MS ACD159	ug/g	101.4	<6.63E-2	< 7.486	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Selenium (Total) ICP/MS ACD159	ug/g	102.0	<6.63E-2	50.23	n/a	n/a	n/a	n/a	24.96	n/a
S00T000805	A	Tantalum (Total) ICP/MS ACD159	ug/g	102.0	<6.63E-2	< 7.486	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Tellurium (Total) ICP/MS ACD159	ug/g	96.67	<6.63E-2	60.39	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Thallium (Total) ICP/MS ACD159	ug/g	96.60	<6.63E-2	< 7.486	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Vanadium (Total) ICP/MS ACD159	ug/g	97.00	<3.32E0	<3.74E+02	n/a	n/a	n/a	n/a	374.3	n/a
S00T000805	A	Tungsten (Total) ICP/MS ACD159	ug/g	n/a	<6.63E-2	32.77	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Yttrium (Total) ICP/MS ACD159	ug/g	94.80	<2.21E-2	1.91E+02	n/a	n/a	n/a	n/a	2.496	n/a
S00T000805	A	Zr/Sr 90 by ICP/MS ACD159	ug/g	107.6	<6.63E-2	2.66E+04	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Hf/Zr 93 by ICP/MS ACD159	ug/g	153.3	<6.63E-2	3.13E+02	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Eu/Sm 151 by ICP/MS ACD159	ug/g	95.60	<6.63E-2	24.71	n/a	n/a	n/a	n/a	7.486	n/a
S00T000805	A	Tc99 by ICP/MS ACD159	ug/g	98.50	2.03E-03	10.33	n/a	n/a	n/a	n/a	1.02E-01	n/a
S00T000805	A	Sn126 ICP/MS ACD159	ug/g	n/a	<6.76E-2	< 7.635	n/a	n/a	n/a	n/a	7.635	n/a
S00T000805	A	Cs133 ICP/MS ACD159	ug/g	92.00	2.44E-03	15.92	n/a	n/a	n/a	n/a	1.02E-01	n/a
S00T000805	A	Cs137 ICP/MS ACD159	ug/g	n/a	<9.02E-4	6.337	n/a	n/a	n/a	n/a	1.02E-01	n/a
S00T000805	A	Protactinium-231 by ICP/MS	ug/g	n/a	<6.77E-3	<7.63E-01	n/a	n/a	n/a	n/a	7.63E-01	n/a
S00T000805	A	Uranium-233 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<6.11E-01	n/a	n/a	n/a	n/a	6.11E-01	n/a
S00T000805	A	Uranium-234 by ICP/MS ACD159	ug/g	n/a	<5.41E-3	<6.11E-01	n/a	n/a	n/a	n/a	6.11E-01	n/a
S00T000805	A	Uranium-235 by ICP/MS ACD159	ug/g	103.6	<5.41E-3	38.28	n/a	n/a	n/a	n/a	6.11E-01	n/a
S00T000805	A	Uranium-236 by ICP/MS ACD159	ug/g	n/a	<7.22E-3	3.757	n/a	n/a	n/a	n/a	8.15E-01	n/a
S00T000805	A	Uranium-238 by ICP/MS ACD159	ug/g	98.30	<5.41E-3	4.42E+03	n/a	n/a	n/a	n/a	6.11E-01	n/a
S00T000805	A	Neptunium-237 by ICP/MS	ug/g	n/a	<2.26E-2	61.08	n/a	n/a	n/a	n/a	2.545	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000805	A	Plutonium-239 by ICP/MS	ug/g	n/a	<2.26e-2	44.87	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Plutonium-240 by ICP/MS	ug/g	n/a	<2.26e-2	3.370	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Plutonium-242 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.545	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Pu/Am-241 by ICP/MS	ug/g	n/a	<2.26e-2	17.71	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Am 243/Cm 243 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.545	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.545	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Silver - ICP-Acid Digest	ug/g	88.00	<1.00e-2	1.46e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Aluminum - ICP-Acid Digest	ug/g	92.80	1.21e-01	4.53e+04	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Arsenic - ICP-Acid Digest	ug/g	82.60	<1.00e-1	< 56.40	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Boron - ICP-Acid Digest	ug/g	99.20	<1.00e-1	40.80	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Barium - ICP-Acid Digest	ug/g	86.00	<5.00e-2	4.76e+02	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Beryllium - ICP-Acid Digest	ug/g	87.40	<5.00e-3	7.550	n/a	n/a	n/a	n/a	2.820	n/a
S00T000805	A	Bismuth - ICP-Acid Digest	ug/g	79.20	<1.00e-1	65.20	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Calcium - ICP-Acid Digest	ug/g	156.0	<1.00e-1	2.17e+03	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Cadmium - ICP-Acid Digest	ug/g	83.40	<5.00e-3	4.90e+03	n/a	n/a	n/a	n/a	2.820	n/a
S00T000805	A	Cerium - ICP-Acid Digest	ug/g	88.40	<1.00e-1	5.24e+02	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Cobalt - ICP-Acid Digest	ug/g	84.60	<2.00e-2	35.80	n/a	n/a	n/a	n/a	11.30	n/a
S00T000805	A	Chromium - ICP-Acid Digest	ug/g	86.20	<1.00e-2	5.14e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Copper - ICP-Acid Digest	ug/g	87.20	<1.00e-2	1.69e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Europium ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 28.20	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Iron - ICP-Acid Digest	ug/g	88.20	6.27e-02	6.56e+04	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Potassium - ICP-Acid Digest	ug/g	82.80	<5.00e-1	1.90e+03	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Lanthanum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	1.48e+03	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Lithium - ICP-Acid Digest	ug/g	85.40	<1.00e-2	4.29e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Magnesium - ICP-Acid Digest	ug/g	86.20	<1.00e-1	4.53e+02	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Manganese - ICP-Acid Digest	ug/g	82.00	<1.00e-2	7.89e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Molybdenum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	47.90	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Sodium - ICP-Acid Digest	ug/g	108.0	9.25e-01	1.56e+05	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Neodymium - ICP-Acid Digest	ug/g	89.80	<1.00e-1	1.23e+03	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Nickel - ICP-Acid Digest	ug/g	84.20	<2.00e-2	3.23e+03	n/a	n/a	n/a	n/a	11.30	n/a
S00T000805	A	Phosphorus - ICP-Acid Digest	ug/g	89.80	<2.00e-1	8.21e+02	n/a	n/a	n/a	n/a	113.0	n/a
S00T000805	A	Lead - ICP-Acid Digest	ug/g	82.60	<1.00e-1	2.83e+02	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Palladium - ICP-Acid Digest	ug/g	99.80	<1.00e0	<5.64e+02	n/a	n/a	n/a	n/a	564.0	n/a
S00T000805	A	Praseodymium-ICP Acid Digest	ug/g	102.6	<5.00e-1	3.31e+03	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Rubidium-ICP-Acid Digest	ug/g	95.20	<2.00e0	<1.13e+03	n/a	n/a	n/a	n/a	1.13e+03	n/a
S00T000805	A	Rhodium - ICP-Acid Digest	ug/g	102.2	<1.00e0	<5.64e+02	n/a	n/a	n/a	n/a	564.0	n/a
S00T000805	A	Ruthenium ICP-Acid Digest	ug/g	102.6	<2.00e0	<1.13e+03	n/a	n/a	n/a	n/a	1.13e+03	n/a
S00T000805	A	Sulfur - ICP-Acid Digest	ug/g	86.40	1.11e-01	5.04e+04	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Antimony - ICP-Acid Digest	ug/g	87.40	<6.00e-2	< 33.90	n/a	n/a	n/a	n/a	33.90	n/a
S00T000805	A	Selenium - ICP-Acid Digest	ug/g	85.20	<1.00e-1	< 56.40	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Silicon - ICP-Acid Digest	ug/g	107.4	2.95e-01	8.84e+02	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Samarium - ICP-Acid Digest	ug/g	88.60	<1.00e-1	2.17e+02	n/a	n/a	n/a	n/a	56.40	n/a
S00T000805	A	Tin - ICP-Acid Digest	ug/g	101.2	<5.00e-1	<2.82e+02	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Strontium - ICP-Acid Digest	ug/g	87.20	<1.00e-2	4.01e+02	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Tantalum - ICP-Acid Digest	ug/g	109.0	<5.00e-1	<2.82e+02	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Tellurium - ICP-Acid Digest	ug/g	100.6	<5.00e-1	<2.82e+02	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Thorium - ICP-Acid Digest	ug/g	84.60	<5.00e-2	1.12e+02	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Titanium-ICP-Acid Digest	ug/g	92.40	<1.00e-2	29.50	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Thallium - ICP-Acid Digest	ug/g	82.60	<2.00e-1	<1.13e+02	n/a	n/a	n/a	n/a	113.0	n/a
S00T000805	A	Uranium - ICP-Acid Digest	ug/g	90.50	<5.00e-1	4.12e+03	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Vanadium - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 28.20	n/a	n/a	n/a	n/a	28.20	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000805	A	Tungsten - ICP-Acid Digest	ug/g	102.2	<5.00e-1	<2.82e+02	n/a	n/a	n/a	n/a	282.0	n/a
S00T000805	A	Yttrium - ICP-Acid Digest	ug/g	88.00	<5.00e-2	1.50e+02	n/a	n/a	n/a	n/a	28.20	n/a
S00T000805	A	Zinc - ICP-Acid Digest	ug/g	84.60	<1.00e-2	65.90	n/a	n/a	n/a	n/a	5.640	n/a
S00T000805	A	Zirconium - ICP-Acid Digest	ug/g	92.60	<1.00e-2	2.37e+04	n/a	n/a	n/a	n/a	5.640	n/a
S00T000808	W	Cyanide Water Distillation	ug/g	89.71	<1.10e-2	< 9.590	n/a	n/a	n/a	n/a	9.590	n/a
S00T000808	W	Ammonia-by ISE-Std Additions	ug/g	97.90	<5.15e+3	<8.72e+03	n/a	n/a	n/a	n/a	8.72e+03	n/a
S00T000808	W	OH- by Pot. Titration	ug/g	101.2	< 1.29e4	<1.09e+04	n/a	n/a	n/a	n/a	1.09e+04	n/a
S00T000808	W	Tot. Organic Carbon by Coul.	ug/g	103.3	9.00E-1	4.89e+03	n/a	n/a	n/a	n/a	480.0	n/a
S00T000808	W	TIC by Acid/Coulometry	ug/g	99.17	<5.20e1	4.66e+03	n/a	n/a	n/a	n/a	52.00	n/a
S00T000808	W	TOC by Persulfate/Coulometry	ug/g	93.67	<4.16e2	6.15e+03	n/a	n/a	n/a	n/a	416.0	n/a
S00T000808	W	Fluoride-IC-Dionex 500	ug/g	100.3	<3.00e-2	2.57e+04	n/a	n/a	n/a	n/a	1.08e+04	n/a
S00T000808	W	Acetate by IC-Dionex 500 col	ug/g	103.2	<2.30e-1	<8.22e+02	n/a	n/a	n/a	n/a	822.1	n/a
S00T000808	W	Formate by IC-DIONEX 500 col	ug/g	102.4	<2.30e-1	<8.22e+02	n/a	n/a	n/a	n/a	822.1	n/a
S00T000808	W	Chloride-IC-Dionex 500 col	ug/g	100.9	1.30e-01	<1.43e+02	n/a	n/a	n/a	n/a	143.0	n/a
S00T000808	W	Nitrite-IC - Dionex 500 col	ug/g	97.03	2.80e-01	2.63e+04	n/a	n/a	n/a	n/a	965.1	n/a
S00T000808	W	Sulfate-IC-Dionex 500 col	ug/g	99.22	<3.20e-1	1.76e+05	n/a	n/a	n/a	n/a	1.16e+05	n/a
S00T000808	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	1.44e+04	n/a	n/a	n/a	n/a	965.1	n/a
S00T000808	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<3.00e-1	2.42e+04	n/a	n/a	n/a	n/a	1.07e+03	n/a
S00T000808	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<9.65e+02	n/a	n/a	n/a	n/a	965.1	n/a
S00T000808	W	Iodine-129 Waste Tank Samples	uCi/g	95.07	<3.37E-3	<2.23e-03	n/a	n/a	n/a	n/a	2.23e-03	0.00E+00
S00T000808	W	Tritium By Lachat	uCi/g	94.19	6.72E-3	1.30e-02	n/a	n/a	n/a	n/a	3.11e-03	5.22E+00
S00T000808	W	C-14 Small Volume	uCi/g	72.85	<2.30E-3	2.12e-03	n/a	n/a	n/a	n/a	1.94e-03	4.01E+00
S00T000817	W	Mercury by CVAA (PE) with FIAS	ug/g	n/a	n/a	INS	n/a	n/a	n/a	n/a	1.25e-01	n/a
S00T001162		TIC by Acid/Coulometry	ug/g	n/a	n/a	INS	n/a	n/a	n/a	n/a	5.000	n/a
S00T001162		TOC by Persulfate/Coulometry	ug/g	n/a	n/a	INS	n/a	n/a	n/a	n/a	80.00	n/a

CORE NUMBER: 269
SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Table 1. Data Summary Report.
AZ-101 (2)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001918	D		Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001918			Bromide by Ion Chromatograph	ug/mL	98.24	<1.25e-1	<5.18e+02	<5.18e2	n/a	n/a	n/a	517.6	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001919	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.53e+03	8.56e+03	8.54e+03	0.35	n/a	30.10	n/a
S99T001919	D	Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	< 6.010	9.080	n/a	n/a	n/a	6.010	n/a
S99T001919	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.11e+05	1.10e+05	1.11e+05	0.90	n/a	60.10	n/a
S99T001919		Fluoride-IC-Dionex 4000/4500	ug/mL	98.74	<1.20e-2	1.65e+03	1.67e+03	1.66e+03	1.20	n/a	49.69	n/a
S99T001919		Nitrite-IC - Dionex 4000/4500	ug/mL	83.18	<1.08e-1	6.80e+04	6.87e+04	6.83e+04	1.02	n/a	447.2	n/a
S99T001919		Bromide by Ion Chromatograph	ug/mL	98.24	<1.25e-1	1.03e+03	1.09e+03	1.06e+03	5.66	n/a	517.6	n/a
S99T001919		Nitrate by IC-Dionex 4000/4500	ug/mL	109.7	<1.39e-1	6.83e+04	6.77e+04	6.80e+04	0.88	n/a	575.6	n/a
S99T001919		Cesium-137 by GEA	uCi/mL	106.6	<7.53e-3	2.34e+03	2.35e+03	2.34e+03	0.43	n/a	n/a	0.130

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Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001920	D		Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	7.850	7.270	7.560	7.67	n/a	6.010	n/a
S99T001920			Bromide by Ion Chromatograph	ug/mL	98.24	<1.25e-1	1.36e+03	1.35e+03	1.36e+03	0.74	n/a	517.6	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001921	D		Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	11.50	11.00	11.25	4.44	98.00	6.010		n/a
S99T001921			Bromide by Ion Chromatograph	ug/mL	96.64	<1.25e-1	1.26e+03	1.29e+03	1.28e+03	2.35	96.96	517.6		n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 5

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001922	D		Lithium-ICP-Acid Dil.	ug/ml	103.6	<1.00e-2	7.560	7.270	7.415	3.91	n/a	6.010	n/a
S99T001922			Bromide by Ion Chromatograph	ug/ml	96.64	<1.25e-1	1.33e+03	1.42e+03	1.38e+03	6.55	n/a	517.6	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269

SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001923	D		Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	10.70	7.500	9.100	35.2	n/a	6.010		n/a
S99T001923			Bromide by Ion Chromatograph	ug/mL	100.5	<1.25e-1	1.11e+03	1.19e+03	1.15e+03	6.96	n/a	517.6		n/a

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CORE NUMBER: 269
SEGMENT #: 8

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001858	D	Lithium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-2	48.90	49.00	48.95	0.20	n/a	4.010	n/a
S99T001858		Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	1.30e+03	1.26e+03	1.28e+03	3.12	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001859	D		Lithium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-2	40.60	41.50	41.05	2.19	n/a	4.010	n/a
S99T001859			Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	1.14e+03	1.16e+03	1.15e+03	1.74	n/a	265.1	n/a

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

CORE NUMBER: 269
SEGMENT #: 10

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001867	D		Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	31.90	31.70	31.80	0.63	n/a	4.010	n/a
S99T001867			Bromide by Ion Chromatograph	ug/mL	97.44	<1.25e-1	1.29e+03	1.34e+03	1.31e+03	3.80	n/a	265.1	n/a

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Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001860	D		Lithium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-2	40.80	40.90	40.85	0.24	95.30	4.010	n/a
S99T001860			Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	1.20e+03	1.19e+03	1.19e+03	0.84	98.08	265.1	n/a

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CORE NUMBER: 269
SEGMENT #: 12

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001861	D		Lithium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-2	53.20	52.60	52.90	1.13	n/a	4.010	n/a
S99T001861			Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	1.58e+03	1.54e+03	1.56e+03	2.56	n/a	265.1	n/a

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CORE NUMBER: 269
SEGMENT #: 13

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001862	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	32.30	32.30	32.30	0.00	n/a	4.010	n/a
S99T001862		Bromide by Ion Chromatograph	ug/mL	97.92	<1.25e-1	1.12e+03	1.16e+03	1.14e+03	3.51	n/a	265.1	n/a

CORE NUMBER: 269
SEGMENT #: 14

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001863	D		Aluminum-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	9.28e+03	9.26e+03	9.27e+03	0.22	n/a	20.10	n/a
S99T001863	D		Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	30.90	29.50	30.20	4.64	n/a	4.010	n/a
S99T001863	D		Sodium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	1.15e+05	1.14e+05	1.15e+05	0.87	n/a	40.10	n/a
S99T001863			Fluoride-IC-Dionex 4000/4500	ug/mL	101.9	<1.20e-2	2.03e+03	2.10e+03	2.07e+03	3.39	n/a	25.45	n/a
S99T001863			Nitrite-IC - Dionex 4000/4500	ug/mL	94.90	<1.08e-1	8.28e+04	8.23e+04	8.25e+04	0.61	n/a	229.1	n/a
S99T001863			Bromide by Ion Chromatograph	ug/mL	97.44	<1.25e-1	8.90e+02	935.0	912.8	4.93	n/a	265.1	n/a
S99T001863			Nitrate by IC-Dionex 4000/4500	ug/mL	103.3	<1.39e-1	8.24e+04	8.33e+04	8.29e+04	1.09	n/a	294.8	n/a
S99T001863			Cesium-137 by GEA	uCi/mL	106.6	<7.53e-3	2.36e+03	2.35e+03	2.36e+03	0.42	n/a	n/a	0.130

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CORE NUMBER: 269
SEGMENT #: 15

Table 1. Data Summary Report.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001868	D	Lithium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	17.90	18.10	18.00	1.11	96.50	4.010	n/a
S99T001868		Bromide by Ion Chromatograph	ug/mL	97.44	<1.25e-1	5.39e+02	535.0	536.9	0.74	96.00	265.1	n/a

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Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 16

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001924	D	Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924		Bromide by Ion Chromatograph	ug/mL	100.5	<1.25e-1	1.20e+03	1.20e+03	1.20e+03	0.00	n/a	517.6	n/a

CORE NUMBER: 269
SEGMENT #: 16 Composite Solids

SEGMENT PORTION: Core Composite

Table 1. Data Summary Report.
AZ-101 (2)

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000018		Bulk Density of Sample	g/mL	n/a	n/a	1.630	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000018		Solids % - Grav. in Hot Cell	%	102.2	n/a	61.40	64.90	63.15	5.54	n/a	1.00e-02	n/a
S00T000019		Bulk Density of Sample	g/mL	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000019		Solids % - Grav. in Hot Cell	%	102.2	n/a	57.50	62.30	59.90	8.01	n/a	1.00e-02	n/a
S00T000020		Bulk Density of Sample	g/mL	n/a	n/a	1.500	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000020		Solids % - Grav. in Hot Cell	%	102.2	n/a	57.80	54.20	56.00	6.43	n/a	1.00e-02	n/a
S00T000021	F	Lithium - ICP-Fusion	ug/g	99.20	<1.00e-2	<1.97e+02	<1.86e2	n/a	n/a	93.40	197.0	n/a
S00T000021	F	Am-241 by IRU-SPEC Resin IonEx	uCi/g	92.43	<8.56E+0	1.16e+02	91.40	103.7	23.7	n/a	13.00	2.53E+00
S00T000021	F	Alpha of Digested Solid	uCi/g	101.8	<3.62E+0	1.09e+02	110.0	109.5	0.91	91.60	8.410	1.32E+01
S00T000022	F	Am-241 by IRU-SPEC Resin IonEx	uCi/g	92.43	<8.56E+0	97.20	109.0	103.1	11.4	n/a	14.80	2.78E+00
S00T000022	F	Alpha of Digested Solid	uCi/g	104.8	<4.95E+0	99.00	110.0	104.5	10.5	n/a	4.860	1.40E+01
S00T000023	F	Am-241 by IRU-SPEC Resin IonEx	uCi/g	92.43	<8.56E+0	93.10	84.40	88.75	9.80	n/a	10.80	2.56E+00
S00T000023	F	Alpha of Digested Solid	uCi/g	104.8	<4.95E+0	88.40	85.60	87.00	3.22	n/a	2.250	9.60E+00

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269

SEGMENT #: Core Comp Trip1

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000775		Bulk Density of Sample	g/mL	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000775		Solids % - Grav. in Hot Cell	%	99.50	n/a	59.60	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000800	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	1.88e-01	n/a	n/a	n/a	n/a	1.21e-01	8.57E+00
S00T000800	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	1.69e+04	n/a	n/a	n/a	n/a	7.590	7.16E-01
S00T000800	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	4.850	n/a	n/a	n/a	n/a	1.460	4.01E+00
S00T000800	F	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<1.46E+0	< 1.460	n/a	n/a	n/a	n/a	1.460	1.00E+02
S00T000800	F	Cobalt-60 by GEA	uCi/g	98.19	<3.70E-1	4.159	n/a	n/a	n/a	n/a	n/a	11.4
S00T000800	F	Antimony-125 by GEA	uCi/g	n/a	<9.91E-1	23.98	n/a	n/a	n/a	n/a	n/a	13.1
S00T000800	F	Cesium-137 by GEA	uCi/g	104.5	<8.61E-1	1.00e+03	n/a	n/a	n/a	n/a	n/a	0.630
S00T000800	F	Europium-152 by GEA	uCi/g	n/a	<6.93E-1	< 5.042	n/a	n/a	n/a	n/a	5.042	n/a
S00T000800	F	Europium-154 by GEA	uCi/g	n/a	<1.21E0	48.74	n/a	n/a	n/a	n/a	n/a	3.54
S00T000800	F	Europium-155 by GEA	uCi/g	n/a	<8.64E-1	62.67	n/a	n/a	n/a	n/a	n/a	5.91
S00T000800	F	Am-241 by TRU-SPEC Resin IonEx	uCi/g	89.53	<3.25E+0	87.10	n/a	n/a	n/a	n/a	12.00	2.75E+00
S00T000800	F	Cm-243/244 by TRU-SPEC Resin	uCi/g	n/a	<3.25E+0	< 12.00	n/a	n/a	n/a	n/a	12.00	1.00E+02
S00T000800	F	Alpha of Digested Solid	uCi/g	91.44	<1.59E+0	83.30	n/a	n/a	n/a	n/a	91.29	3.630
S00T000800	F	Beta of Solid Sample	uCi/g	102.8	1.35E+1	3.69e+04	n/a	n/a	n/a	n/a	104.4	9.730
S00T000809	A	Arsenic(Total) ICP/MS ACD159	ug/g	86.60	<6.36E-2	< 80.95	n/a	n/a	n/a	n/a	86.00	80.95
S00T000809	A	Barium (Total) ICP/MS ACD159	ug/g	94.80	<6.36E-2	7.19e+02	n/a	n/a	n/a	n/a	100.0	8.100
S00T000809	A	Praseodymium(Tot) ICP/MS AD159	ug/g	110.0	<8.48E-2	2.51e+03	n/a	n/a	n/a	n/a	113.6	10.79
S00T000809	A	Rubidium (Total) ICP/MS ACD159	ug/g	97.33	<6.36E-2	< 8.095	n/a	n/a	n/a	n/a	93.20	8.096
S00T000809	A	Rhodium (Total) ICP/MS ACD159	ug/g	100.0	<6.36E-2	1.72e+02	n/a	n/a	n/a	n/a	91.60	8.096
S00T000809	A	Ruthenium(Total) ICP/MS ACD159	ug/g	114.0	<6.36E-2	1.54e+03	n/a	n/a	n/a	n/a	94.40	8.096
S00T000809	A	Antimony (Total) ICP/MS ACD159	ug/g	97.80	<6.36E-2	< 8.095	n/a	n/a	n/a	n/a	106.4	8.096
S00T000809	A	Selenium(Total) ICP/MS ACD159	ug/g	95.80	<2.12E-1	< 26.98	n/a	n/a	n/a	n/a	98.00	8.096
S00T000809	A	Tantalum (Total) ICP/MS ACD159	ug/g	94.67	<6.36E-2	< 8.095	n/a	n/a	n/a	n/a	97.20	26.99
S00T000809	A	Tellurium (Total) ICP/MS ACD159	ug/g	95.33	<6.36E-2	88.48	n/a	n/a	n/a	n/a	94.40	8.096
S00T000809	A	Thallium (Total) ICP/MS ACD159	ug/g	92.60	<6.36E-2	< 8.095	n/a	n/a	n/a	n/a	96.00	8.096
S00T000809	A	Vanadium (Total) ICP/MS ACD159	ug/g	90.60	<3.18E0	<4.05e+02	n/a	n/a	n/a	n/a	98.40	8.096
S00T000809	A	Tungsten (Total) ICP/MS ACD159	ug/g	92.40	<2.12E-2	2.35e+02	n/a	n/a	n/a	n/a	95.20	404.8
S00T000809	A	Yttrium (Total) ICP/MS ACD159	ug/g	99.80	6.55E-02	3.00e+04	n/a	n/a	n/a	n/a	92.40	2.698
S00T000809	A	Zr/Sr 90 by ICP/MS ACD159	ug/g	144.0	<6.36E-2	3.56e+02	n/a	n/a	n/a	n/a	76.00	8.096
S00T000809	A	Nb/Zr 93 by ICP/MS ACD159	ug/g	96.80	<6.36E-2	38.43	n/a	n/a	n/a	n/a	142.0	8.096
S00T000809	A	Eu/Sm 151 by ICP/MS ACD159	ug/g	101.5	<8.02E-4	14.55	n/a	n/a	n/a	n/a	98.40	8.096
S00T000809	A	Sn126 ICP/MS ACD159	ug/g	n/a	<6.02E-2	< 7.653	n/a	n/a	n/a	n/a	109.5	1.02e-01
S00T000809	A	Cs133 ICP/MS ACD159	ug/g	94.00	1.76E-03	24.73	n/a	n/a	n/a	n/a	n/a	n/a
S00T000809	A	Cs135 ICP/MS ACD159	ug/g	n/a	<8.02E-4	9.035	n/a	n/a	n/a	n/a	107.0	1.02e-01
S00T000809	A	Cs137 ICP/MS ACD159	ug/g	n/a	<8.02E-4	1.91e+02	n/a	n/a	n/a	n/a	n/a	n/a
S00T000809	A	Protactinium-231 by ICP/MS	ug/g	n/a	<3.02E-3	<7.65e-01	n/a	n/a	n/a	n/a	n/a	n/a
S00T000809	A	Uranium-233 by ICP/MS ACD159	ug/g	n/a	<2.41E-3	<6.12e-01	n/a	n/a	n/a	n/a	n/a	n/a
S00T000809	A	Uranium-235 by ICP/MS ACD159	ug/g	n/a	<2.41E-3	<6.12e-01	n/a	n/a	n/a	n/a	n/a	n/a
S00T000809	A	Uranium-236 by ICP/MS ACD159	ug/g	100.8	<2.41E-3	52.55	n/a	n/a	n/a	n/a	118.8	6.12e-01
S00T000809	A	Uranium-236 by ICP/MS ACD159	ug/g	n/a	<3.22E-3	5.255	n/a	n/a	n/a	n/a	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000809	A	Uranium-238 by ICP/MS Acid159	ug/g	95.90	1.39e-02	5.98e+03	n/a	n/a	n/a	112.8	6.12e-01	n/a
S00T000809	A	Neptunium-237 by ICP/MS	ug/g	n/a	<1.01e-2	69.08	n/a	n/a	n/a	89.43	2.551	n/a
S00T000809	A	Plutonium-239 by ICP/MS	ug/g	n/a	<1.01e-2	57.29	n/a	n/a	n/a	87.15	2.551	n/a
S00T000809	A	Plutonium-240 by ICP/MS	ug/g	n/a	<1.01e-2	4.612	n/a	n/a	n/a	n/a	2.551	n/a
S00T000809	A	Plutonium-242 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.551	n/a	n/a	n/a	n/a	2.551	n/a
S00T000809	A	Pu/Am-241 by ICP/MS	ug/g	n/a	<1.01e-2	30.39	n/a	n/a	n/a	88.21	2.551	n/a
S00T000809	A	Am 243/Cm 243 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.551	n/a	n/a	n/a	n/a	2.551	n/a
S00T000809	A	Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.551	n/a	n/a	n/a	n/a	2.551	n/a
S00T000809	A	Silver - ICP-Acid Digest	ug/g	89.40	<1.00e-2	1.71e+02	174.0	172.5	1.74	455.1	63.60	n/a
S00T000809	A	Aluminum - ICP-Acid Digest	ug/g	99.80	3.69e-01	5.98e+04	5.99e+04	5.98e+04	0.17	2.34e+02	318.0	n/a
S00T000809	A	Arsenic - ICP-Acid Digest	ug/g	85.60	<1.00e-1	< 63.60	<6.36e1	n/a	n/a	103.0	63.60	n/a
S00T000809	A	Boron - ICP-Acid Digest	ug/g	140.0	2.68e+00	2.19e+02	229.0	224.0	4.46	95.73	31.80	n/a
S00T000809	A	Barium - ICP-Acid Digest	ug/g	85.60	<5.00e-2	6.18e+02	629.0	623.5	1.76	91.80	31.80	n/a
S00T000809	A	Beryllium - ICP-Acid Digest	ug/g	88.60	<5.00e-3	10.20	10.30	10.25	0.98	92.12	3.180	n/a
S00T000809	A	Bismuth - ICP-Acid Digest	ug/g	83.40	<1.00e-1	85.10	68.00	76.55	22.3	87.56	63.60	n/a
S00T000809	A	Calcium - ICP-Acid Digest	ug/g	168.8	1.02e-01	2.05e+03	2.07e+03	2.06e+03	0.97	113.7	63.60	n/a
S00T000809	A	Cadmium - ICP-Acid Digest	ug/g	85.80	1.09e-02	6.80e+03	6.90e+03	6.85e+03	1.46	114.1	3.180	n/a
S00T000809	A	Cerium - ICP-Acid Digest	ug/g	87.80	<1.00e-1	8.23e+02	843.0	833.0	2.40	95.73	63.60	n/a
S00T000809	A	Cobalt - ICP-Acid Digest	ug/g	85.60	<2.00e-2	46.10	44.70	45.40	3.08	95.89	12.70	n/a
S00T000809	A	Chromium - ICP-Acid Digest	ug/g	87.80	2.14e-02	6.06e+02	614.0	610.0	1.31	97.46	6.360	n/a
S00T000809	A	Copper - ICP-Acid Digest	ug/g	86.40	<1.00e-2	2.28e+02	230.0	229.0	0.87	92.59	6.360	n/a
S00T000809	A	Europium - ICP-Acid Digest	ug/g	87.00	<5.00e-2	< 31.80	<3.18e1	n/a	n/a	91.33	31.80	n/a
S00T000809	A	Iron - ICP-Acid Digest	ug/g	91.80	2.50e-01	8.13e+04	8.11e+04	8.12e+04	0.25	-2.75e+02	318.0	n/a
S00T000809	A	Potassium - ICP-Acid Digest	ug/g	85.20	<5.00e-1	4.83e+03	3.42e+03	4.12e+03	34.2	-2.33e+02	3.18e+03	n/a
S00T000809	A	Lanthanum - ICP-Acid Digest	ug/g	88.00	<5.00e-2	3.54e+03	3.60e+03	3.57e+03	1.68	98.41	31.80	n/a
S00T000809	A	Lithium - ICP-Acid Digest	ug/g	85.00	<1.00e-2	5.95e+02	577.0	586.0	3.07	85.67	6.360	n/a
S00T000809	A	Magnesium - ICP-Acid Digest	ug/g	88.20	<1.00e-1	6.38e+02	652.0	645.0	2.17	95.42	63.60	n/a
S00T000809	A	Manganese - ICP-Acid Digest	ug/g	83.80	<1.00e-2	1.02e+03	1.04e+03	1.03e+03	1.94	94.01	6.360	n/a
S00T000809	A	Molybdenum - ICP-Acid Digest	ug/g	89.00	<5.00e-2	47.30	45.40	46.35	4.10	95.42	31.80	n/a
S00T000809	A	Sodium - ICP-Acid Digest	ug/g	190.0	4.21e+00	9.82e+04	9.98e+04	9.90e+04	1.62	-1.41e+03	636.0	n/a
S00T000809	A	Neodymium - ICP-Acid Digest	ug/g	88.80	<1.00e-1	2.15e+03	2.18e+03	2.16e+03	1.39	94.79	63.60	n/a
S00T000809	A	Nickel - ICP-Acid Digest	ug/g	85.20	<2.00e-2	4.94e+03	5.01e+03	4.98e+03	1.41	104.4	12.70	n/a
S00T000809	A	Phosphorus - ICP-Acid Digest	ug/g	89.60	<2.00e-1	<1.27e+02	<1.27e2	n/a	n/a	116.3	127.0	n/a
S00T000809	A	Lead - ICP-Acid Digest	ug/g	85.80	<1.00e-1	3.05e+02	298.0	301.5	2.32	96.68	63.60	n/a
S00T000809	A	Palladium - ICP-Acid Digest	ug/g	98.40	<1.00e0	<6.36e+03	<6.36e3	n/a	n/a	98.80	6.36e+03	n/a
S00T000809	A	Praseodymium - ICP Acid Digest	ug/g	96.40	<5.00e-1	4.95e+02	496.0	495.5	0.20	88.80	318.0	n/a
S00T000809	A	Rubidium - ICP-Acid Digest	ug/g	107.4	<2.00e0	<1.27e+04	<1.27e4	n/a	n/a	117.0	1.27e+04	n/a
S00T000809	A	Rhodium - ICP-Acid Digest	ug/g	97.00	<1.00e0	<6.36e+02	<6.36e2	n/a	n/a	118.0	636.0	n/a
S00T000809	A	Ruthenium - ICP-Acid Digest	ug/g	98.60	<2.00e0	<1.27e+04	<1.27e4	n/a	n/a	95.00	1.27e+04	n/a
S00T000809	A	Sulfur - ICP-Acid Digest	ug/g	82.20	<1.00e-1	9.48e+03	9.64e+03	9.56e+03	1.67	108.6	63.60	n/a
S00T000809	A	Antimony - ICP-Acid Digest	ug/g	86.60	<6.00e-2	< 38.20	<3.82e1	n/a	n/a	95.42	38.20	n/a
S00T000809	A	Selenium - ICP-Acid Digest	ug/g	86.40	<1.00e-1	< 63.60	<6.36e1	n/a	n/a	93.22	63.60	n/a
S00T000809	A	Silicon - ICP-Acid Digest	ug/g	202.0	5.06e+00	1.64e+03	1.65e+03	1.64e+03	0.61	101.7	31.80	n/a
S00T000809	A	Samarium - ICP-Acid Digest	ug/g	87.60	<1.00e-1	3.24e+02	327.0	325.5	0.92	94.63	63.60	n/a
S00T000809	A	Tin - ICP-Acid Digest	ug/g	99.40	<5.00e-1	3.51e+02	351.0	351.0	0.00	91.50	318.0	n/a
S00T000809	A	Strontium - ICP-Acid Digest	ug/g	87.20	<1.00e-2	3.30e+02	335.0	332.5	1.50	92.75	6.360	n/a
S00T000809	A	Tantalum - ICP-Acid Digest	ug/g	98.20	<5.00e-1	<3.18e+02	<3.18e2	n/a	n/a	91.60	318.0	n/a
S00T000809	A	Tellurium - ICP-Acid Digest	ug/g	97.40	<5.00e-1	<3.18e+02	<3.18e2	n/a	n/a	114.0	318.0	n/a
S00T000809	A	Thorium - ICP-Acid Digest	ug/g	86.60	<5.00e-2	2.79e+02	278.0	278.5	0.36	91.96	31.80	n/a
S00T000809	A	Titanium - ICP-Acid Digest	ug/g	92.80	<1.00e-2	35.40	34.80	35.10	1.71	94.79	6.360	n/a
S00T000809	A	Thallium - ICP-Acid Digest	ug/g	84.40	<2.00e-1	<1.27e+02	<1.27e2	n/a	n/a	94.63	127.0	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000809	A	Uranium - ICP-Acid Digest	ug/g	88.90	<5.00e-1	5.85e+03	5.94e+03	5.90e+03	1.53	95.11	318.0	n/a
S00T000809	A	Tungsten - ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 31.80	<3.18e1	n/a	n/a	97.78	31.80	n/a
S00T000809	A	Vanadium - ICP-Acid Digest	ug/g	98.60	<5.00e-1	3.18e+03	<3.18e3	n/a	n/a	93.90	3.18e+03	n/a
S00T000809	A	Yttrium - ICP-Acid Digest	ug/g	86.60	<5.00e-2	1.88e+02	191.0	189.5	1.58	91.18	31.80	n/a
S00T000809	A	Zinc - ICP-Acid Digest	ug/g	87.60	1.20e-02	92.40	93.90	93.15	1.61	95.58	6.360	n/a
S00T000809	A	Zirconium - ICP-Acid Digest	ug/g	92.60	4.51e-02	2.84e+04	2.83e+04	2.84e+04	0.35	83.63	63.60	n/a
S00T000812	W	Cyanide Water Distillation	ug/g	95.70	<1.0e-2	< 5.230	n/a	n/a	n/a	87.60	5.230	n/a
S00T000812	W	Ammonia by ISE-Std Additions	ug/g	90.13	<2.38e+3	<2.38e+03	n/a	n/a	n/a	98.32	2.38e+03	n/a
S00T000812	W	OH- by Pot. Titration	ug/g	101.8	<3.961e3	5.77e+03	n/a	n/a	n/a	n/a	3.96e+03	n/a
S00T000812	W	Tot. Organic Carbon by Coul.	ug/g	103.3	9.00E-1	3.03e+03	n/a	n/a	n/a	n/a	523.0	n/a
S00T000812	W	TIC by Acid/Coulometry	ug/g	100.5	<4.75e2	4.65e+03	n/a	n/a	n/a	100.3	475.0	n/a
S00T000812	W	TIC by Persulfate/Coulometry	ug/g	94.67	<3.80e3	<3.80e+03	n/a	n/a	n/a	96.60	3.80e+03	n/a
S00T000812	W	Fluoride-IC-Dionex 500	ug/g	102.6	<3.00e-2	4.74e+03	n/a	n/a	n/a	n/a	116.9	n/a
S00T000812	W	Acetate by IC-Dionex 500 col	ug/g	103.2	<2.30e-1	<8.96e+02	n/a	n/a	n/a	n/a	896.4	n/a
S00T000812	W	Formate by IC-DIONEX 500 col	ug/g	102.4	<2.30e-1	<8.96e+02	n/a	n/a	n/a	n/a	896.4	n/a
S00T000812	W	Chloride-IC-Dionex 500 col	ug/g	100.9	1.30e-01	<1.56e+02	n/a	n/a	n/a	n/a	155.9	n/a
S00T000812	W	Nitrite-IC - Dionex 500 col	ug/g	97.03	2.80e-01	3.72e+04	n/a	n/a	n/a	n/a	1.05e+03	n/a
S00T000812	W	Sulfate-IC-Dionex 500 col	ug/g	101.9	<3.20e-1	2.73e+04	n/a	n/a	n/a	n/a	1.25e+03	n/a
S00T000812	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	4.71e+03	n/a	n/a	n/a	n/a	1.17e+03	n/a
S00T000812	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<3.00e-1	3.48e+04	n/a	n/a	n/a	n/a	1.05e+03	n/a
S00T000812	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<1.05e+03	n/a	n/a	n/a	n/a	1.05e+03	n/a
S00T000812	W	Iodine-129 Waste Tank Samples	uCi/g	121.4	<4.90E-3	<4.47e-03	n/a	n/a	n/a	n/a	4.47e-03	0.00E+00
S00T000812	W	Trinitium By Lachat	uCi/g	95.02	7.30E-3	1.68e-02	n/a	n/a	n/a	94.61	3.55e-03	4.92E+00
S00T000812	W	C-14 Small Volume	uCi/g	92.72	<7.97E-4	2.14e-03	n/a	n/a	n/a	87.42	7.98e-04	3.94E+00
S00T000818		Mercury by CVAA (PE) with FIAS	ug/g	108.8	<6.0e-05	2.043	n/a	n/a	n/a	92.32	2.40e-02	n/a
S00T001163		TIC by Acid/Coulometry	ug/g	94.19	4.00E+0	5.41e+03	n/a	n/a	n/a	95.80	5.000	n/a
S00T001163		TIC by Persulfate/Coulometry	ug/g	90.67	3.80E+0	7.56e+02	n/a	n/a	n/a	99.30	40.00	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000767		Viscosity	cP	n/a	n/a	COMPLETE	n/a	n/a	n/a	n/a	3.000	n/a
S00T000778		Solids % - Gravimetric	%	100.7	n/a	29.00	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000778	D	Technetium-99 Liq. Scint.	uCi/mL	98.07	<5.55E-4	4.25e-01	n/a	n/a	n/a	n/a	5.64e-04	8.20E-01
S00T000778	D	Tc 99 by ICP/MS Acid Addition	ug/mL	103.0	<2.00e-6	25.68	n/a	n/a	n/a	103.0	2.41e-03	n/a
S00T000778	D	Sn 126 by ICP/MS Acid Addition	ug/mL	n/a	<1.50e-4	2.29e-01	n/a	n/a	n/a	99.00	1.81e-01	n/a
S00T000778	D	Cs 133 by ICP/MS Acid Addition	ug/mL	94.50	<2.00e-6	40.12	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000778	D	Cs 137 by ICP/MS Acid Addition	ug/mL	n/a	<2.00e-6	14.18	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000778	D	Protactinium-231 by ICP/MS	ug/mL	n/a	<2.00e-6	27.00	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000778	D	Uranium-233 by ICP/MS Acid Add	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000778	D	Uranium-234 by ICP/MS Acid Add	ug/mL	n/a	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000778	D	Uranium-235 by ICP/MS Acid Add	ug/mL	117.2	<1.20e-5	<1.45e-02	n/a	n/a	n/a	97.86	1.45e-02	n/a
S00T000778	D	Uranium-236 by ICP/MS Acid Add	ug/mL	n/a	<1.60e-5	<1.93e-02	n/a	n/a	n/a	n/a	1.93e-02	n/a
S00T000778	D	Uranium-238 by ICP/MS Acid Add	ug/mL	106.0	<1.20e-5	9.55e-01	n/a	n/a	n/a	84.50	1.45e-02	n/a
S00T000778	D	Neptunium-237 by ICP/MS	ug/mL	109.3	<5.00e-5	<6.03e-02	n/a	n/a	n/a	89.94	6.03e-02	n/a
S00T000778	D	Plutonium-239 by ICP/MS	ug/mL	111.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	87.65	6.03e-02	n/a
S00T000778	D	Plutonium-240 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000778	D	Plutonium-242 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000778	D	Pu/Am-241 by ICP/MS	ug/mL	108.7	<5.00e-5	<6.03e-02	n/a	n/a	n/a	77.00	6.03e-02	n/a
S00T000778	D	Am 243/Cm 243 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000778	D	Pu 244/Cm 244 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a	n/a
S00T000778	D	Silver-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	9.870	9.090	9.480	8.23	89.80	4.010	n/a	n/a
S00T000778	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.26e+03	8.23e+03	8.24e+03	0.36	83.50	20.10	n/a	n/a
S00T000778	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	<40.10	<4.01e1	n/a	n/a	101.0	40.10	n/a	n/a
S00T000778	D	Boron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	<20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a	n/a
S00T000778	D	Barium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	<20.10	<2.01e1	n/a	n/a	95.00	20.10	n/a	n/a
S00T000778	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	<2.010	<2.01e0	n/a	n/a	96.50	2.010	n/a	n/a
S00T000778	D	Bismuth-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	<40.10	<4.01e1	n/a	n/a	93.30	40.10	n/a	n/a
S00T000778	D	Calcium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	<40.10	<4.01e1	n/a	n/a	108.0	40.10	n/a	n/a
S00T000778	D	Cadmium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-3	4.880	4.560	4.720	6.78	99.70	2.010	n/a	n/a
S00T000778	D	Cerium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	<40.10	<4.01e1	n/a	n/a	100.0	40.10	n/a	n/a
S00T000778	D	Cobalt-ICP-Acid Dil.	ug/mL	102.6	<2.00e-2	<8.020	<8.02e0	n/a	n/a	102.0	8.020	n/a	n/a
S00T000778	D	Chromium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	7.53e+02	748.0	750.5	0.67	99.00	4.010	n/a	n/a
S00T000778	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	<40.10	<4.01e0	n/a	n/a	98.10	4.010	n/a	n/a
S00T000778	D	Europium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-2	<20.10	<2.01e1	n/a	n/a	94.50	20.10	n/a	n/a
S00T000778	D	Iron-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	27.60	25.80	26.70	6.74	93.10	20.10	n/a	n/a
S00T000778	D	Potassium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-1	5.34e+03	5.97e+03	5.66e+03	11.1	93.30	2.01e+03	n/a	n/a
S00T000778	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	<20.10	<2.01e1	n/a	n/a	98.50	20.10	n/a	n/a
S00T000778	D	Lithium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	<40.10	<4.01e0	n/a	n/a	91.90	4.010	n/a	n/a
S00T000778	D	Magnesium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	<40.10	<4.01e1	n/a	n/a	97.50	40.10	n/a	n/a
S00T000778	D	Manganese-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	<40.10	<4.01e0	n/a	n/a	93.40	4.010	n/a	n/a
S00T000778	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-2	97.50	97.70	97.60	0.20	102.0	20.10	n/a	n/a
S00T000778	D	Sodium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-1	1.15e+05	1.17e+05	1.16e+05	1.72	101.0	401.0	n/a	n/a
S00T000778	D	Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	<40.10	<4.01e1	n/a	n/a	96.90	40.10	n/a	n/a
S00T000778	D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<2.00e-2	<8.020	<8.02e0	n/a	n/a	101.0	8.020	n/a	n/a
S00T000778	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.67e+02	4.62.0	4.64.5	1.08	98.70	80.20	n/a	n/a
S00T000778	D	Lead-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<40.10	<4.01e1	n/a	n/a	100.0	40.10	n/a	n/a
S00T000778	D	Palladium-ICP-Acid Dil.	ug/mL	99.40	<1.00e0	<4.01e+02	<4.01e2	n/a	n/a	93.20	401.0	n/a	n/a
S00T000778	D	Praseodymium-ICP Acid Dilution	ug/mL	101.4	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	91.10	201.0	n/a	n/a
S00T000778	D	Rhodium-ICP-Acid Dilution	ug/mL	96.40	<2.00e0	<8.02e+02	<8.02e2	n/a	n/a	76.50	802.0	n/a	n/a
S00T000778	D	Rubidium-ICP-Acid Dilution	ug/mL	101.4	<1.00e0	<4.01e+02	<4.01e2	n/a	n/a	90.00	401.0	n/a	n/a
S00T000778	D	Ruthenium-ICP-Acid Dilution	ug/mL	101.6	<2.00e0	<8.02e+02	<8.02e2	n/a	n/a	94.10	802.0	n/a	n/a
S00T000778	D	Sulfur-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	5.23e+03	5.21e+03	5.22e+03	0.38	93.10	40.10	n/a	n/a
S00T000778	D	Antimony-ICP-Acid Dil.	ug/mL	101.0	<6.00e-2	<24.10	<2.41e1	n/a	n/a	104.0	24.10	n/a	n/a
S00T000778	D	Selenium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<40.10	<4.01e1	n/a	n/a	112.0	40.10	n/a	n/a
S00T000778	D	Silicon-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	<2.01e+02	<2.01e2	n/a	n/a	105.0	201.0	n/a	n/a
S00T000778	D	Samarium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	<40.10	<4.01e1	n/a	n/a	97.80	40.10	n/a	n/a
S00T000778	D	Tin-ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	114.0	201.0	n/a	n/a
S00T000778	D	Strontium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	<4.010	<4.01e0	n/a	n/a	97.10	4.010	n/a	n/a
S00T000778	D	Tantalum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	102.0	201.0	n/a	n/a
S00T000778	D	Tellurium-ICP-Acid Dilution	ug/mL	99.60	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	101.0	201.0	n/a	n/a
S00T000778	D	Thorium-ICP-Acid Dilution	ug/mL	101.0	<5.00e-2	<20.10	<2.01e1	n/a	n/a	99.60	20.10	n/a	n/a
S00T000778	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	<40.10	<4.01e0	n/a	n/a	99.80	4.010	n/a	n/a
S00T000778	D	Thallium-ICP-Acid Dil.	ug/mL	100.2	<2.00e-1	<80.20	<8.02e1	n/a	n/a	101.0	80.20	n/a	n/a
S00T000778	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	103.5	201.0	n/a	n/a
S00T000778	D	Vanadium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	<20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a	n/a
S00T000778	D	Tungsten-ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a	n/a
S00T000778	D	Yttrium-ICP-Acid Dilution	ug/mL	100.0	<5.00e-2	<20.10	<2.01e1	n/a	n/a	98.40	20.10	n/a	n/a
S00T000778	D	Zinc-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	<40.10	<4.01e0	n/a	n/a	102.0	4.010	n/a	n/a
S00T000778	D	Zirconium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	15.80	15.80	15.80	0.00	97.40	4.010	n/a	n/a
S00T000779		Cyanide Water Distillation	ug/mL	98.62	<1.10e-2	4.77e-01	n/a	n/a	n/a	111.2	1.10e-01	n/a	n/a

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000779		Ammonia by ISE-Std Additions	ug/mL	82.77	<1.00E+2	<1.00E+02	n/a	n/a	n/a	101.7	100.0	n/a
S00T000779		OH- by Pot. Titration	ug/mL	99.32	<2.5e3	1.15e+04	n/a	n/a	n/a	n/a	2.50e+03	n/a
S00T000779		pH Direct	pH	n/a	n/a	> 13.50	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000779		Specific Gravity	Sp.G.	99.04	n/a	1.234	n/a	n/a	n/a	n/a	1.00e-03	n/a
S00T000779		Tot. Organic Carbon by Coul.	ug/mL	98.33	6.00E-1	3.30e+02	n/a	n/a	n/a	83.50	55.00	n/a
S00T000779		TIC by Acid/coulometry	ug/mL	96.69	2.10E+0	6.75e+03	n/a	n/a	n/a	103.0	5.000	n/a
S00T000779		TOC by Persulfate/Coulometry	ug/mL	95.00	2.90E+0	3.81e+02	n/a	n/a	n/a	93.70	40.00	n/a
S00T000780		Technetium-99 Liq. Scint.	uCi/mL	97.58	<5.57E-4	3.75e-01	n/a	n/a	n/a	n/a	5.06e-04	8.30E-01
S00T000780		Strontium-89/90 High Level	uCi/mL	101.0	<4.37E-2	1.110	n/a	n/a	n/a	n/a	5.97e-02	9.01E+00
S00T000780		Selenium-79 by Liquid Scint.	uCi/mL	n/a	5.08E-5	1.54e-03	n/a	n/a	n/a	n/a	4.19e-05	1.37E+00
S00T000780		Pu-239/240 by TRU-SPEC Resin	uCi/mL	85.33	<1.26E-4	6.84e-04	n/a	n/a	n/a	n/a	1.32e-04	3.12E+00
S00T000780		Iodine-129 Waste Tank Samples	uCi/mL	116.8	<9.12E-5	<9.57e-05	n/a	n/a	n/a	n/a	9.57e-05	0.00E+00
S00T000780		Tritium By Lachat	uCi/mL	95.44	3.70E-4	1.90e-02	n/a	n/a	n/a	93.78	4.58e-05	8.90E-01
S00T000780		Cobalt-60 by GEA	uCi/mL	110.8	<1.70e-2	<2.29e-02	n/a	n/a	n/a	n/a	2.29e-02	n/a
S00T000780		Antimony-125 by GEA	uCi/mL	n/a	<4.30e-2	< 1.584	n/a	n/a	n/a	n/a	1.584	n/a
S00T000780		Cesium-137 by GEA	uCi/mL	106.2	<4.19e-2	1.96e+03	n/a	n/a	n/a	n/a	n/a	0.100
S00T000780		Europium-152 by GEA	uCi/mL	n/a	<3.25e-2	<7.62e-01	n/a	n/a	n/a	n/a	7.62e-01	n/a
S00T000780		Europium-154 by GEA	uCi/mL	n/a	<5.43e-2	<7.40e-02	n/a	n/a	n/a	n/a	7.40e-02	n/a
S00T000780		Europium-155 by GEA	uCi/mL	n/a	<4.38e-2	<8.85e-01	n/a	n/a	n/a	n/a	8.85e-01	n/a
S00T000780		C-14 Small Volume	uCi/mL	89.40	<2.15E-5	2.10e-03	n/a	n/a	n/a	n/a	2.15e-05	1.31E+00
S00T000780		Am-241 by TRU-SPEC Resin IonEx	uCi/mL	88.78	<3.10E-4	1.14e-03	n/a	n/a	n/a	n/a	3.22e-04	3.68E+00
S00T000780		Cm-243/244 by TRU SPEC Resin	uCi/mL	n/a	<3.25E-2	<4.65e-02	n/a	n/a	n/a	n/a	8.04e-02	5.00E+02
S00T000780		Alpha in Liquid Samples	uCi/mL	104.4	<3.25E-2	<4.65e-02	n/a	n/a	n/a	92.67	8.04e-02	1.00E+02
S00T000780		Beta in Liquid Samples	uCi/mL	108.1	7.45E-1	2.05e+03	n/a	n/a	n/a	107.4	3.51e-01	2.59E-01
S00T000826		Mercury by CVAA (PE) with FIAS	ug/mL	101.0	<6.0e-5	1.12e-02	n/a	n/a	n/a	92.00	2.40e-03	n/a
S00T000827		Fluoride-IC-Dionex 500 col	ug/mL	99.48	n/a	2.49e+03	n/a	n/a	n/a	83.68	33.33	n/a
S00T000827		Acetate by IC-Dionex 500 col	ug/mL	98.49	n/a	<2.56e+02	n/a	n/a	n/a	101.7	255.5	n/a
S00T000827		Formate by IC-DIONEX 500 col	ug/mL	98.70	n/a	<2.56e+02	n/a	n/a	n/a	98.92	255.5	n/a
S00T000827		Chloride-IC-Dionex 500 col	ug/mL	104.4	n/a	1.72e+02	n/a	n/a	n/a	103.5	44.44	n/a
S00T000827		Nitrate-IC - Dionex 500 col	ug/mL	98.17	n/a	7.09e+04	n/a	n/a	n/a	99.45	1.12e+03	n/a
S00T000827		Sulfate-IC-Dionex 500 col	ug/mL	102.7	n/a	2.46e+04	n/a	n/a	n/a	86.90	355.5	n/a
S00T000827		Oxalate-IC-Dionex 500 col	ug/mL	101.8	n/a	1.55e+03	n/a	n/a	n/a	121.6	300.0	n/a
S00T000827		Nitrate-IC-Dionex 500 col	ug/mL	112.3	n/a	7.16e+04	n/a	n/a	n/a	104.0	1.24e+03	n/a
S00T000827		Phosphate-IC-Dionex 500 col	ug/mL	111.4	n/a	2.68e+03	n/a	n/a	n/a	111.6	300.0	n/a
S00T000850		Arsenic(Total) ICP/MS ACID158	ug/mL	104.0	<3.00e-4	8.469	n/a	n/a	n/a	107.6	8.48e-02	n/a
S00T000850		Boron (Total) ICP/MS ACID158	ug/mL	n/a	n/a	21.32	n/a	n/a	n/a	102.8	8.48e-01	n/a
S00T000850		Barium (Total) ICP/MS ACID Add	ug/mL	102.7	<3.00e-6	8.38e-02	n/a	n/a	n/a	100.8	6.36e-02	n/a
S00T000850		Beryllium(Total) ICP/MS ACID158	ug/mL	100.0	<3.00e-5	3.02e-01	n/a	n/a	n/a	98.80	6.36e-02	n/a
S00T000850		Cerium (Total) ICP/MS ACID158	ug/mL	98.67	<3.00e-5	<6.36e-02	n/a	n/a	n/a	213.2	6.36e-02	n/a
S00T000850		Cobalt (Total) ICP/MS ACID158	ug/mL	102.0	<3.00e-5	<6.36e-02	n/a	n/a	n/a	99.20	6.36e-02	n/a
S00T000850		Europium (Total) ICP/MS ACID158	ug/mL	99.33	<3.00e-5	<6.36e-02	n/a	n/a	n/a	91.60	6.36e-02	n/a
S00T000850		Lanthanum(Total) ICP/MS ACID158	ug/mL	101.3	<2.00e-4	<6.36e-02	n/a	n/a	n/a	105.6	6.36e-02	n/a
S00T000850		Lithium (Total) ICP/MS ACID158	ug/mL	99.33	<2.00e-4	5.95e-01	n/a	n/a	n/a	103.2	4.24e-01	n/a
S00T000850		Palladium(Total) ICP/MS ACID158	ug/mL	109.3	<4.00e-5	5.067	n/a	n/a	n/a	105.6	8.48e-02	n/a
S00T000850		Praseodymium(Tot) ICP/MS AD158	ug/mL	100.7	<3.00e-5	<6.36e-02	n/a	n/a	n/a	98.80	6.36e-02	n/a
S00T000850		Rubidium (Total) ICP/MS ACID158	ug/mL	96.00	<3.00e-5	4.953	n/a	n/a	n/a	98.00	6.36e-02	n/a
S00T000850		Rhodium (Total) ICP/MS ACID158	ug/mL	99.33	<3.00e-5	2.346	n/a	n/a	n/a	91.60	6.36e-02	n/a
S00T000850		Ruthenium(Total) ICP/MS ACID158	ug/mL	110.0	<3.00e-5	4.77e-01	n/a	n/a	n/a	105.6	6.36e-02	n/a
S00T000850		Antimony (Total) ICP/MS ACID158	ug/mL	102.0	<3.00e-5	<6.36e-02	n/a	n/a	n/a	98.40	6.36e-02	n/a
S00T000850		Selenium(Total) ICP/MS ACID158	ug/mL	101.3	<1.00e-4	24.71	n/a	n/a	n/a	100.4	2.12e-01	n/a
S00T000850		Tantalum (Total) ICP/MS ACID158	ug/mL	105.3	<3.00e-5	<6.36e-02	n/a	n/a	n/a	92.40	6.36e-02	n/a

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000850	D	Tellurium (Tot) ICP/MS	ACD158 ug/mL	95.33	<3.00e-5	<6.36e-02	n/a	n/a	n/a	90.00	6.36e-02	n/a
S00T000850	D	Thallium (Total) ICP/MS	ACD158 ug/mL	100.7	<3.00e-5	<6.36e-02	n/a	n/a	n/a	90.40	6.36e-02	n/a
S00T000850	D	Vanadium (Total) ICP/MS	ACD158 ug/mL	n/a	n/a	< 3.182	n/a	n/a	n/a	108.0	3.182	n/a
S00T000850	D	Tungsten (Total) ICP/MS	ACD158 ug/mL	n/a	n/a	19.50	n/a	n/a	n/a	92.40	6.36e-02	n/a
S00T000850	D	Zr/Sr 90 by ICP/MS	Acid Add	100.7	<3.00e-5	<6.36e-02	n/a	n/a	n/a	91.60	6.36e-02	n/a

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: Core Comp Trip2

SEGMENT PORTION: Centrifuged Solids

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000776		Bulk Density of Sample	g/ml	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000776		Solids % - Grav. in Hot Cell	%	99.50	n/a	59.90	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000801	F	Technetium-99 Liq. Scint.	µCi/g	96.21	<1.26E-1	1.97e-01	n/a	n/a	n/a	n/a	1.15e-01	8.47e+00
S00T000801	F	Strontium-89/90 High Level	µCi/g	93.86	4.92E+0	1.66e+04	n/a	n/a	n/a	n/a	7.520	7.19E-01
S00T000801	F	Pu-239/240 by TRU-SPEC Resin	µCi/g	94.44	2.33E+0	4.730	n/a	n/a	n/a	n/a	1.420	3.99E+00
S00T000801	F	Pu-238 by TRU-SPEC Resin IonEX	µCi/g	n/a	<1.46E+0	< 1.420	n/a	n/a	n/a	n/a	1.420	1.00E+02
S00T000801	F	Cobalt-60 by GEA	µCi/g	98.19	<3.70e-1	3.831	n/a	n/a	n/a	n/a	n/a	11.4
S00T000801	F	Antimony-125 by GEA	µCi/g	n/a	<9.91e-1	25.29	n/a	n/a	n/a	n/a	n/a	14.8
S00T000801	F	Cesium-137 by GEA	µCi/g	104.5	<8.61e-1	1.09e+03	n/a	n/a	n/a	n/a	n/a	0.610
S00T000801	F	Europium-152 by GEA	µCi/g	n/a	<6.93e-1	< 4.998	n/a	n/a	n/a	n/a	4.998	n/a
S00T000801	F	Europium-154 by GEA	µCi/g	n/a	<1.21e0	45.79	n/a	n/a	n/a	n/a	n/a	3.52
S00T000801	F	Europium-155 by GEA	µCi/g	n/a	<8.64e-1	64.18	n/a	n/a	n/a	n/a	n/a	6.52
S00T000801	F	Am-241 by TRU-SPEC Resin IonEX	µCi/g	89.53	<3.25E+0	80.80	n/a	n/a	n/a	n/a	10.60	2.82E+00
S00T000801	F	Am-243/244 by TRU-SPEC Resin	µCi/g	n/a	<3.25E+0	< 10.60	n/a	n/a	n/a	n/a	10.60	1.00E+02
S00T000801	F	Alpha of Digested Solid	µCi/g	91.44	<1.59E+0	79.20	n/a	n/a	n/a	n/a	3.590	1.10E+01
S00T000801	F	Beta of Solid Sample	µCi/g	102.8	1.35E+1	3.57e+04	n/a	n/a	n/a	n/a	9.630	3.76E-01
S00T000810	A	Arsenic(Total) ICP/MS ACD159	µg/g	86.60	<6.36e-1	< 72.06	n/a	n/a	n/a	n/a	72.06	n/a
S00T000810	A	Barium (Total) ICP/MS ACD159	µg/g	94.80	<6.36e-2	6.24e+02	n/a	n/a	n/a	n/a	7.210	n/a
S00T000810	A	Palladium(Total) ICP/MS ACD159	µg/g	110.0	<8.48e-2	2.27e+03	n/a	n/a	n/a	n/a	9.608	n/a
S00T000810	A	Praseodymium(Tot) ICP/MS AD159	µg/g	94.67	<6.36e-2	4.15e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Rubidium (Total) ICP/MS ACD159	µg/g	97.33	<6.36e-2	16.79	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Rhodium (Total) ICP/MS ACD159	µg/g	100.0	<6.36e-2	1.53e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Ruthenium(Total) ICP/MS ACD159	µg/g	114.0	<6.36e-2	1.08e+03	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Antimony (Total) ICP/MS ACD159	µg/g	97.80	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Selenium(Total) ICP/MS ACD159	µg/g	95.80	<2.12e-1	< 24.02	n/a	n/a	n/a	n/a	24.02	n/a
S00T000810	A	Tantalum (Total) ICP/MS ACD159	µg/g	94.67	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Tellurium (Total) ICP/MS ACD159	µg/g	95.33	<6.36e-2	78.35	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Thallium (Total) ICP/MS ACD159	µg/g	92.60	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Vanadium (Total) ICP/MS ACD159	µg/g	90.60	<3.18e0	<3.60e+02	n/a	n/a	n/a	n/a	360.3	n/a
S00T000810	A	Tungsten (Total) ICP/MS ACD159	µg/g	n/a	<6.36e-2	7.278	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Yttrium (Total) ICP/MS ACD159	µg/g	92.40	<2.12e-2	2.01e+02	n/a	n/a	n/a	n/a	2.403	n/a
S00T000810	A	Zr/Sr 90 by ICP/MS ACD159	µg/g	99.80	6.55e-02	2.56e+04	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Nb/Zr 93 by ICP/MS ACD159	µg/g	144.0	<6.36e-2	3.11e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Eu/Sm 151 by ICP/MS ACD159	µg/g	96.80	<6.36e-2	32.72	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Tc99 by ICP/MS ACD159	µg/g	101.5	<8.02e-4	12.99	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Sn126 ICP/MS ACD159	µg/g	n/a	<6.02e-2	< 6.812	n/a	n/a	n/a	n/a	6.812	n/a
S00T000810	A	Cs133 ICP/MS ACD159	µg/g	94.00	1.76e-03	22.37	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Cs135 ICP/MS ACD159	µg/g	n/a	<8.02e-4	8.152	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Cs137 ICP/MS ACD159	µg/g	n/a	<8.02e-4	1.64e+02	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Protactinium-231 by ICP/MS	µg/g	n/a	<3.02e-3	<6.81e-01	n/a	n/a	n/a	n/a	6.81e-01	n/a
S00T000810	A	Uranium-233 by ICP/MS ACD159	µg/g	n/a	<2.41e-3	<5.45e-01	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-234 by ICP/MS ACD159	µg/g	n/a	<2.41e-3	<5.45e-01	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-235 by ICP/MS ACD159	µg/g	100.8	<2.41e-3	47.91	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-236 by ICP/MS ACD159	µg/g	n/a	<3.22e-3	4.678	n/a	n/a	n/a	n/a	7.27e-01	n/a

CORE NUMBER: 269
SEGMENT #: Core Comp Trip2

Table 1. Data Summary Table.
AZ-101 (2)

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000776		Bulk Density of Sample	g/mL	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000776		Solids % - Grav. in Hot Cell	%	99.50	n/a	59.90	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000801	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	1.97e-01	n/a	n/a	n/a	n/a	1.15e-01	8.47E+00
S00T000801	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	1.66e+04	n/a	n/a	n/a	n/a	7.520	7.19E-01
S00T000801	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	4.730	n/a	n/a	n/a	n/a	1.420	3.99E+00
S00T000801	F	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<1.46E+0	< 1.420	n/a	n/a	n/a	n/a	1.420	1.00E+02
S00T000801	F	Silver - ICP-Fusion	ug/g	96.60	<4.10E-1	1.50e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05E0	4.90e+04	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	4.84e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Barium - ICP-Fusion	ug/g	97.20	<2.05E0	4.81e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05E-1	< 39.30	n/a	n/a	n/a	n/a	39.30	n/a
S00T000801	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10E0	1.78e+03	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05E-1	5.54e+03	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20E-1	<1.57e+02	n/a	n/a	n/a	n/a	157.0	n/a
S00T000801	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10E-1	5.40e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Copper - ICP-Fusion	ug/g	98.80	<4.10E-1	2.02e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Europium ICP-Fusion	ug/g	97.20	<2.05E0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Iron - ICP-Fusion	ug/g	102.2	<2.05E0	5.38e+04	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05E0	2.93e+03	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10E-1	4.94e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Manganese - ICP-Fusion	ug/g	95.20	<4.10E-1	8.92e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05E0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	7.72e+04	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Neodymium - ICP-Fusion	ug/g	100.6	<4.10E0	1.70e+03	n/a	n/a	n/a	n/a	157.0	n/a
S00T000801	F	Nickel - ICP-Fusion	ug/g	102.0	1.59e+02	9.42e+04	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Phosphorus - ICP-Fusion	ug/g	99.80	<4.10E0	<1.57e+03	n/a	n/a	n/a	n/a	1.57e+03	n/a
S00T000801	F	Lead - ICP-Fusion	ug/g	99.80	<1.00E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00E0	<1.93e+04	n/a	n/a	n/a	n/a	1.93e+04	n/a
S00T000801	F	Praseodymium-ICP Fusion	ug/g	97.60	<5.00E-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a
S00T000801	F	Rubidium-ICP Fusion	ug/g	92.20	<2.00E0	<3.87e+04	n/a	n/a	n/a	n/a	3.87e+04	n/a
S00T000801	F	Rhodium - ICP-Fusion	ug/g	98.20	<2.00E0	<1.93e+04	n/a	n/a	n/a	n/a	1.93e+04	n/a
S00T000801	F	Ruthenium - ICP-Fusion	ug/g	99.20	<2.00E0	<3.87e+04	n/a	n/a	n/a	n/a	3.87e+04	n/a
S00T000801	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10E0	7.38e+03	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46E0	<4.71e+02	n/a	n/a	n/a	n/a	471.0	n/a
S00T000801	F	Selenium - ICP-Fusion	ug/g	98.60	8.07e+00	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Silicon - ICP-Fusion	ug/g	102.4	<4.10E0	3.75e+03	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10E0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a
S00T000801	F	Tin - ICP-Fusion	ug/g	97.60	<5.00E-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a
S00T000801	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10E-1	2.66e+02	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00E-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000801	F	Tellurium-ICP-Fusion	ug/g	97.40	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a
S00T000801	F	Thorium-ICP-Fusion	ug/g	99.60	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Titanium-ICP-Fusion	ug/g	100.8	<4.10e-1	< 78.50	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Thallium-ICP-Fusion	ug/g	98.40	<8.20e0	<1.57e+03	n/a	n/a	n/a	n/a	1.57e+03	n/a
S00T000801	F	Uranium-ICP-Fusion	ug/g	97.90	<2.05e1	<3.93e+03	n/a	n/a	n/a	n/a	3.93e+03	n/a
S00T000801	F	Vanadium-ICP-Fusion	ug/g	101.2	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Tungsten-ICP-Fusion	ug/g	96.80	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a
S00T000801	F	Yttrium-ICP-Fusion	ug/g	98.40	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a
S00T000801	F	Zinc-ICP-Fusion	ug/g	100.8	<4.10e-1	< 78.50	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Zirconium-ICP-Fusion	ug/g	101.0	<4.10e-1	1.96e+04	n/a	n/a	n/a	n/a	78.50	n/a
S00T000801	F	Cobalt-60 by GEA	uci/g	98.19	<3.70e-1	3.831	n/a	n/a	n/a	n/a	n/a	11.4
S00T000801	F	Antimony-125 by GEA	uci/g	n/a	<9.91e-1	25.29	n/a	n/a	n/a	n/a	n/a	14.8
S00T000801	F	Cesium-137 by GEA	uci/g	104.5	<8.61e-1	1.09e+03	n/a	n/a	n/a	n/a	n/a	0.610
S00T000801	F	Europium-152 by GEA	uci/g	n/a	<6.93e-1	< 4.998	n/a	n/a	n/a	n/a	4.998	n/a
S00T000801	F	Europium-154 by GEA	uci/g	n/a	<1.21e0	45.79	n/a	n/a	n/a	n/a	n/a	3.52
S00T000801	F	Europium-155 by GEA	uci/g	n/a	<8.64e-1	64.18	n/a	n/a	n/a	n/a	n/a	6.52
S00T000801	F	Am-241 by TRU-SPEC Resin IonEx	uci/g	89.53	<3.25E+0	80.80	n/a	n/a	n/a	n/a	10.60	2.82E+00
S00T000801	F	Qm-243/244 by TRU-SPEC Resin	uci/g	n/a	<3.25E+0	< 10.60	n/a	n/a	n/a	n/a	10.60	1.00E+02
S00T000801	F	Alpha of Digested Solid	uci/g	91.44	<1.59E+0	79.20	n/a	n/a	n/a	n/a	3.590	1.10E+01
S00T000801	F	Beta of Solid Sample	uci/g	102.8	1.35E+1	3.57e+04	n/a	n/a	n/a	n/a	9.630	3.76E-01
S00T000810	A	Arsenic(Total) ICP/MS ACD159	ug/g	86.60	<6.36e-1	< 72.06	n/a	n/a	n/a	n/a	72.06	n/a
S00T000810	A	Barium (Total) ICP/MS ACD159	ug/g	94.80	<6.36e-2	6.24e+02	n/a	n/a	n/a	n/a	7.210	n/a
S00T000810	A	Palladium(Total) ICP/MS ACD159	ug/g	110.0	<8.48e-2	2.27e+03	n/a	n/a	n/a	n/a	9.608	n/a
S00T000810	A	Praseodymium(Tot) ICP/MS AD159	ug/g	94.67	<6.36e-2	4.15e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Rubidium (Total) ICP/MS ACD159	ug/g	97.33	<6.36e-2	16.79	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Rhodium (Total) ICP/MS ACD159	ug/g	100.0	<6.36e-2	1.53e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Ruthenium(Total) ICP/MS ACD159	ug/g	114.0	<6.36e-2	1.08e+03	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Antimony (Total) ICP/MS ACD159	ug/g	97.80	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Selenium(Total) ICP/MS ACD159	ug/g	95.80	<2.12e-1	< 24.02	n/a	n/a	n/a	n/a	24.02	n/a
S00T000810	A	Tantalum (Total) ICP/MS ACD159	ug/g	94.67	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Tellurium (Tot) ICP/MS ACD159	ug/g	95.33	<6.36e-2	78.35	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Thallium (Total) ICP/MS ACD159	ug/g	92.60	<6.36e-2	< 7.206	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Vanadium (Total) ICP/MS ACD159	ug/g	90.60	<3.18e0	<3.60e+02	n/a	n/a	n/a	n/a	360.3	n/a
S00T000810	A	Tungsten (Total) ICP/MS ACD159	ug/g	n/a	<6.36e-2	7.278	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Yttrium (Total) ICP/MS ACD159	ug/g	92.40	<2.12e-2	2.01e+02	n/a	n/a	n/a	n/a	2.403	n/a
S00T000810	A	Zr/Sr 90 by ICP/MS ACD159	ug/g	99.80	6.55e-02	2.56e+04	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Mb/Zr 93 by ICP/MS ACD159	ug/g	144.0	<6.36e-2	3.11e+02	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Eu/Sm 151 by ICP/MS ACD159	ug/g	96.80	<6.36e-2	32.72	n/a	n/a	n/a	n/a	7.207	n/a
S00T000810	A	Tc99 by ICP/MS ACD159	ug/g	101.5	<8.02e-4	12.99	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Sn126 ICP/MS ACD159	ug/g	n/a	<6.02e-2	< 6.812	n/a	n/a	n/a	n/a	6.812	n/a
S00T000810	A	Cs133 ICP/MS ACD159	ug/g	94.00	1.76e-03	22.37	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Cs135 ICP/MS ACD159	ug/g	n/a	<8.02e-4	8.152	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Cs137 ICP/MS ACD159	ug/g	n/a	<8.02e-4	1.64e+02	n/a	n/a	n/a	n/a	9.10e-02	n/a
S00T000810	A	Protactinium-231 by ICP/MS	ug/g	n/a	<3.02e-3	<6.81e-01	n/a	n/a	n/a	n/a	6.81e-01	n/a
S00T000810	A	Uranium-233 by ICP/MS ACD159	ug/g	n/a	<2.41e-3	<5.45e-01	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-234 by ICP/MS ACD159	ug/g	n/a	<2.41e-3	<5.45e-01	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-235 by ICP/MS ACD159	ug/g	100.8	<2.41e-3	47.91	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Uranium-236 by ICP/MS ACD159	ug/g	n/a	<3.22e-3	4.678	n/a	n/a	n/a	n/a	7.27e-01	n/a
S00T000810	A	Uranium-238 by ICP/MS ACD159	ug/g	95.90	1.39e-02	5.35e+03	n/a	n/a	n/a	n/a	5.45e-01	n/a
S00T000810	A	Neptunium-237 by ICP/MS	ug/g	n/a	<1.01e-2	61.76	n/a	n/a	n/a	n/a	2.271	n/a
S00T000810	A	Plutonium-239 by ICP/MS	ug/g	n/a	<1.01e-2	51.18	n/a	n/a	n/a	n/a	2.271	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000810	A		Plutonium-240 by ICP/MS	ug/g	n/a	<1.01e-2	4.264	n/a	n/a	n/a	n/a	2.271	n/a	n/a
S00T000810	A		Plutonium-242 by ICP/MS	ug/g	n/a	<1.01e-2	2.271	n/a	n/a	n/a	n/a	2.271	n/a	n/a
S00T000810	A		Pu/Am-241 by ICP/MS	ug/g	n/a	<1.01e-2	27.38	n/a	n/a	n/a	n/a	2.271	n/a	n/a
S00T000810	A		Am 243/Cm 243 by ICP/MS	ug/g	n/a	<1.01e-2	2.271	n/a	n/a	n/a	n/a	2.271	n/a	n/a
S00T000810	A		Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<1.01e-2	2.271	n/a	n/a	n/a	n/a	2.271	n/a	n/a
S00T000810	A		Silver -ICP-Acid Digest	ug/g	89.40	<1.00e-2	1.58e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Aluminum -ICP-Acid Digest	ug/g	99.80	3.69e-01	4.49e+04	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Arsenic -ICP-Acid Digest	ug/g	85.60	<1.00e-1	56.60	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Boron -ICP-Acid Digest	ug/g	140.0	2.68e+00	2.72e+02	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Barium -ICP-Acid Digest	ug/g	85.60	<5.00e-2	5.49e+02	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Beryllium -ICP-Acid Digest	ug/g	88.60	<5.00e-3	8.520	n/a	n/a	n/a	n/a	2.830	n/a	n/a
S00T000810	A		Bismuth -ICP-Acid Digest	ug/g	83.40	<1.00e-1	56.60	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Calcium -ICP-Acid Digest	ug/g	168.8	1.02e-01	1.70e+03	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Cadmium -ICP-Acid Digest	ug/g	85.80	1.09e-02	5.88e+03	n/a	n/a	n/a	n/a	2.830	n/a	n/a
S00T000810	A		Cerium -ICP-Acid Digest	ug/g	87.80	<1.00e-1	7.28e+02	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Cobalt -ICP-Acid Digest	ug/g	85.60	<2.00e-2	37.40	n/a	n/a	n/a	n/a	11.30	n/a	n/a
S00T000810	A		Chromium -ICP-Acid Digest	ug/g	87.80	2.14e-02	5.35e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Copper -ICP-Acid Digest	ug/g	86.40	<1.00e-2	2.01e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Europium ICP-Acid Digest	ug/g	87.00	<5.00e-2	28.30	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Iron -ICP-Acid Digest	ug/g	91.80	2.50e-01	6.83e+04	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Potassium -ICP-Acid Digest	ug/g	85.20	<5.00e-1	2.66e+03	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Lead -ICP-Acid Digest	ug/g	88.00	<5.00e-2	3.09e+03	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Lithium -ICP-Acid Digest	ug/g	85.00	<1.00e-2	6.04e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Magnesium -ICP-Acid Digest	ug/g	88.20	<1.00e-1	5.61e+02	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Manganese -ICP-Acid Digest	ug/g	83.80	<1.00e-2	8.97e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Molybdenum -ICP-Acid Digest	ug/g	89.00	<5.00e-2	40.60	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Sodium -ICP-Acid Digest	ug/g	190.0	4.21e+00	8.21e+04	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Neodymium -ICP-Acid Digest	ug/g	88.80	<1.00e-1	1.90e+03	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Nickel -ICP-Acid Digest	ug/g	85.20	<2.00e-2	4.29e+03	n/a	n/a	n/a	n/a	11.30	n/a	n/a
S00T000810	A		Phosphorus -ICP-Acid Digest	ug/g	89.60	<2.00e-1	4.13e+02	n/a	n/a	n/a	n/a	113.0	n/a	n/a
S00T000810	A		Lead -ICP-Acid Digest	ug/g	85.80	<1.00e-1	2.47e+02	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Palladium -ICP-Acid Digest	ug/g	98.40	<1.00e0	5.66e+02	n/a	n/a	n/a	n/a	566.0	n/a	n/a
S00T000810	A		Praseodymium-ICP Acid Digest	ug/g	96.40	<5.00e-1	4.70e+02	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Rhodium -ICP-Acid Digest	ug/g	107.4	<2.00e0	4.13e+03	n/a	n/a	n/a	n/a	1.13e+03	n/a	n/a
S00T000810	A		Ruthenium ICP-Acid Digest	ug/g	97.00	<1.00e0	5.66e+02	n/a	n/a	n/a	n/a	566.0	n/a	n/a
S00T000810	A		Sulfur -ICP-Acid Digest	ug/g	98.60	<2.00e0	4.13e+03	n/a	n/a	n/a	n/a	1.13e+03	n/a	n/a
S00T000810	A		Antimony -ICP-Acid Digest	ug/g	86.60	<6.00e-2	34.00	n/a	n/a	n/a	n/a	34.00	n/a	n/a
S00T000810	A		Selenium -ICP-Acid Digest	ug/g	86.40	<1.00e-1	56.60	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Silicon -ICP-Acid Digest	ug/g	202.0	5.06e+00	1.26e+03	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Samarium -ICP-Acid Digest	ug/g	87.60	<1.00e-1	2.83e+02	n/a	n/a	n/a	n/a	56.60	n/a	n/a
S00T000810	A		Tin -ICP-Acid Digest	ug/g	99.40	<5.00e-1	2.83e+02	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Tantalum -ICP-Acid Digest	ug/g	87.20	<1.00e-2	2.83e+02	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Tellurium-ICP-Acid Digest	ug/g	98.20	<5.00e-1	2.83e+02	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Thorium -ICP-Acid Digest	ug/g	97.40	<5.00e-1	2.83e+02	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Titanium -ICP-Acid Digest	ug/g	86.60	<5.00e-2	2.53e+02	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A		Thallium -ICP-Acid Digest	ug/g	92.80	<1.00e-2	30.20	n/a	n/a	n/a	n/a	5.660	n/a	n/a
S00T000810	A		Uranium -ICP-Acid Digest	ug/g	84.40	<2.00e-1	4.13e+02	n/a	n/a	n/a	n/a	113.0	n/a	n/a
S00T000810	A		Vanadium -ICP-Acid Digest	ug/g	88.90	<5.00e-1	5.17e+03	n/a	n/a	n/a	n/a	283.0	n/a	n/a
S00T000810	A		Tungsten -ICP-Acid Digest	ug/g	87.40	<5.00e-2	28.30	n/a	n/a	n/a	n/a	28.30	n/a	n/a
S00T000810	A			ug/g	98.60	<5.00e-1	2.83e+02	n/a	n/a	n/a	n/a	283.0	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000810	A	Yttrium - ICP-Acid Digest	ug/g	86.60	<5.00e-2	1.66e+02	n/a	n/a	n/a	n/a	28.30	n/a
S00T000810	A	Zinc - ICP-Acid Digest	ug/g	87.60	1.20e-02	81.20	n/a	n/a	n/a	n/a	5.660	n/a
S00T000810	A	Zirconium - ICP-Acid Digest	ug/g	92.60	4.51e-02	2.51e+04	n/a	n/a	n/a	n/a	5.660	n/a
S00T000813	W	Cyanide Water Distillation	ug/g	95.70	<5.23	< 5.190	n/a	n/a	n/a	n/a	5.190	n/a
S00T000813	W	Ammonia-by ISE-Std Additions	ug/g	90.13	<2.38e+3	<2.36e+03	n/a	n/a	n/a	n/a	2.36e+03	n/a
S00T000813	W	OH- by Pot. Titration	ug/g	101.8	<3.961e3	5.51e+03	n/a	n/a	n/a	n/a	3.93e+03	n/a
S00T000813	W	Tot. Organic Carbon by Coul.	ug/g	103.3	9.00E-1	3.11e+03	n/a	n/a	n/a	n/a	519.0	n/a
S00T000813	W	TIC by Acid/Coulometry	ug/g	100.5	<4.75e2	4.91e+03	n/a	n/a	n/a	n/a	472.0	n/a
S00T000813	W	TIC by Persulfate/Coulometry	ug/g	94.67	<3.80e3	<3.77e+03	n/a	n/a	n/a	n/a	3.77e+03	n/a
S00T000813	W	Fluoride-IC-Dionex 500	ug/g	102.6	<3.00e-2	4.83e+03	n/a	n/a	n/a	n/a	116.0	n/a
S00T000813	W	Acetate by IC-Dionex 500 col	ug/g	103.2	<2.30e-1	<8.90e+02	n/a	n/a	n/a	n/a	889.6	n/a
S00T000813	W	Formate by IC-DIONEX 500 col	ug/g	102.4	<2.30e-1	<8.90e+02	n/a	n/a	n/a	n/a	889.6	n/a
S00T000813	W	Chloride-IC-Dionex 500 col	ug/g	100.9	1.30e-01	<1.55e+02	n/a	n/a	n/a	n/a	154.7	n/a
S00T000813	W	Nitrite-IC - Dionex 500 col	ug/g	97.03	2.80e-01	3.82e+04	n/a	n/a	n/a	n/a	1.04e+03	n/a
S00T000813	W	Sulfate-IC-Dionex 500 col	ug/g	101.9	<3.20e-1	2.82e+04	n/a	n/a	n/a	n/a	1.24e+03	n/a
S00T000813	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	5.08e+03	n/a	n/a	n/a	n/a	1.04e+03	n/a
S00T000813	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<3.00e-1	3.58e+04	n/a	n/a	n/a	n/a	1.16e+03	n/a
S00T000813	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<1.04e+03	n/a	n/a	n/a	n/a	1.04e+03	n/a
S00T000813	W	Iodine-129 Waste Tank Samples	uci/g	121.4	<4.90E-3	<5.43e-03	n/a	n/a	n/a	n/a	5.43e-03	0.00E+00
S00T000813	W	Tritium By Lachat	uci/g	95.02	7.30E-3	1.42e-02	n/a	n/a	n/a	n/a	3.50e-03	5.07E+00
S00T000813	W	C-14 Small Volume	uci/g	92.72	<7.97E-4	1.50e-03	n/a	n/a	n/a	n/a	7.92e-04	4.07E+00
S00T000819		Mercury by CVAA (PE) with FIAS	ug/g	108.8	<6.0e-05	1.837	n/a	n/a	n/a	n/a	2.40e-02	n/a
S00T001164		TIC by Acid/Coulometry	ug/g	94.19	4.00E+0	5.71e+03	n/a	n/a	n/a	n/a	5.000	n/a
S00T001164		TOC by Persulfate/Coulometry	ug/g	90.67	3.80E+0	1.57e+03	n/a	n/a	n/a	n/a	40.00	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000781		Solids % - Gravimetric	%	100.7	n/a	28.60	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000781		Technetium-99 Liq. Scint.	uci/mL	98.07	<5.55E-4	4.27e-01	n/a	n/a	n/a	n/a	4.93e-04	7.60E-01
S00T000781	D	Tc 99 by ICP/MS Acid Addition	ug/mL	103.0	<2.00e-6	25.89	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000781	D	Sn 126 by ICP/MS Acid Addition	ug/mL	n/a	<1.50e-4	2.34e-01	n/a	n/a	n/a	n/a	1.81e-01	n/a
S00T000781	D	Cs 133 by ICP/MS Acid Addition	ug/mL	94.50	<2.00e-6	41.11	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000781	D	Cs 135 by ICP/MS Acid Addition	ug/mL	n/a	<2.00e-6	14.45	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000781	D	Cs 137 by ICP/MS Acid Addition	ug/mL	n/a	<2.00e-6	27.21	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000781	D	Protactinium-231 by ICP/MS	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000781	D	Uranium-233 by ICP/MS Acid Add	ug/mL	n/a	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000781	D	Uranium-234 by ICP/MS Acid Add	ug/mL	n/a	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000781	D	Uranium-235 by ICP/MS Acid Add	ug/mL	117.2	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000781	D	Uranium-236 by ICP/MS Acid Add	ug/mL	n/a	<1.60e-5	<1.93e-02	n/a	n/a	n/a	n/a	1.93e-02	n/a
S00T000781	D	Uranium-238 by ICP/MS Acid Add	ug/mL	106.0	<1.20e-5	1.754	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000781	D	Neptunium-237 by ICP/MS	ug/mL	109.3	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Plutonium-239 by ICP/MS	ug/mL	111.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Plutonium-240 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Plutonium-242 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Pu/Am-241 by ICP/MS	ug/mL	108.7	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Am 243/Cm 243 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Pu 244/Cm 244 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Silver-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	7.740	n/a	n/a	n/a	n/a	4.010	n/a
S00T000781	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	7.89e+03	n/a	n/a	n/a	n/a	20.10	n/a
S00T000781	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000781	D	Boron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Barium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-3	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	< 2.010	n/a	n/a	n/a	n/a	2.010	n/a	n/a
S00T000781	D	Bismuth-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Calcium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Cadmium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-3	< 5.100	n/a	n/a	n/a	n/a	2.010	n/a	n/a
S00T000781	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<2.00e-2	< 8.020	n/a	n/a	n/a	n/a	8.020	n/a	n/a
S00T000781	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	7.26e+02	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Europium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Iron-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	26.30	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Potassium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-1	3.97e+03	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Lithium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Magnesium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Manganese-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-2	95.20	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Sodium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-1	1.02e+05	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<2.00e-2	< 8.020	n/a	n/a	n/a	n/a	8.020	n/a	n/a
S00T000781	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.61e+02	n/a	n/a	n/a	n/a	80.20	n/a	n/a
S00T000781	D	Lead-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Palladium-ICP-Acid Dil.	ug/mL	99.40	<1.00e0	<4.01e+02	n/a	n/a	n/a	n/a	401.0	n/a	n/a
S00T000781	D	Praseodymium-ICP Acid Dilution	ug/mL	101.4	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a	n/a
S00T000781	D	Rubidium-ICP-Acid Dilution	ug/mL	96.40	<2.00e0	<8.02e+02	n/a	n/a	n/a	n/a	802.0	n/a	n/a
S00T000781	D	Rhodium-ICP-Acid Dilution	ug/mL	101.4	<1.00e0	<4.01e+02	n/a	n/a	n/a	n/a	401.0	n/a	n/a
S00T000781	D	Ruthenium-ICP-Acid Dilution	ug/mL	101.6	<2.00e0	<8.02e+02	n/a	n/a	n/a	n/a	802.0	n/a	n/a
S00T000781	D	Sulfur-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	5.02e+03	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Antimony-ICP-Acid Dil.	ug/mL	101.0	<6.00e-2	< 24.10	n/a	n/a	n/a	n/a	24.10	n/a	n/a
S00T000781	D	Selenium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	42.50	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Silicon-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	86.50	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Samarium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a	n/a
S00T000781	D	Tin-ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a	n/a
S00T000781	D	Strontium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Tantalum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a	n/a
S00T000781	D	Tellurium-ICP-Acid Dilution	ug/mL	99.60	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a	n/a
S00T000781	D	Thorium-ICP-Acid Dilution	ug/mL	101.0	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Thallium-ICP-Acid Dil.	ug/mL	100.2	<2.00e-1	< 80.20	n/a	n/a	n/a	n/a	80.20	n/a	n/a
S00T000781	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a	n/a
S00T000781	D	Vanadium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Tungsten-ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Yttrium-ICP-Acid Dilution	ug/mL	100.0	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a	n/a
S00T000781	D	Zinc-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000781	D	Zirconium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	14.20	n/a	n/a	n/a	n/a	4.010	n/a	n/a
S00T000782		Cyanide Water Distillation	ug/mL	98.62	<1.10e-2	1.24e-01	n/a	n/a	n/a	n/a	5.50e-02	n/a	n/a
S00T000782		Ammonia by ISE-Std Additions	ug/mL	82.77	<1.00e+2	<1.00e+02	n/a	n/a	n/a	n/a	100.0	n/a	n/a
S00T000782		OH- by Pot. Titration	ug/mL	99.32	<2.5e3	1.15e+04	n/a	n/a	n/a	n/a	2.50e+03	n/a	n/a
S00T000782		pH Direct	pH	n/a	n/a	> 13.50	n/a	n/a	n/a	n/a	1.00e-02	n/a	n/a
S00T000782		Specific Gravity	Sp.G.	99.04	n/a	1.232	n/a	n/a	n/a	n/a	1.00e-03	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000782		Tot. Organic Carbon by Coul.	ug/mL	98.33	6.00E-1	3.14e+02	n/a	n/a	n/a	n/a	55.00	n/a	n/a
S00T000782		TIC by Acid/Coulometry	ug/mL	96.69	2.10E+0	6.84e+03	n/a	n/a	n/a	n/a	5.000	n/a	n/a
S00T000782		TOC by Persulfate/Coulometry	ug/mL	95.00	2.90E+0	3.14e+02	n/a	n/a	n/a	n/a	40.00	n/a	n/a
S00T000782		Fluoride-IC-Dionex 500 col	ug/mL	99.48	n/a	2.52e+03	n/a	n/a	n/a	n/a	33.33	n/a	n/a
S00T000782		Acetate by IC-Dionex 500 col	ug/mL	98.49	n/a	<2.56e+02	n/a	n/a	n/a	n/a	255.5	n/a	n/a
S00T000782		Formate by IC-DIONEX 500 col	ug/mL	98.70	n/a	<2.56e+02	n/a	n/a	n/a	n/a	255.5	n/a	n/a
S00T000782		Chloride-IC-Dionex 500 col	ug/mL	104.4	n/a	2.03e+02	n/a	n/a	n/a	n/a	44.44	n/a	n/a
S00T000782		Nitrite-IC - Dionex 500 col	ug/mL	98.17	n/a	7.32e+04	n/a	n/a	n/a	n/a	1.12e+03	n/a	n/a
S00T000782		Sulfate-IC-Dionex 500 col	ug/mL	102.7	n/a	2.49e+04	n/a	n/a	n/a	n/a	355.5	n/a	n/a
S00T000782		Oxalate-IC-Dionex 500 col	ug/mL	101.8	n/a	1.68e+03	n/a	n/a	n/a	n/a	300.0	n/a	n/a
S00T000782		Nitrate-IC-Dionex 500 col	ug/mL	112.3	n/a	3.42e+04	n/a	n/a	n/a	n/a	1.24e+03	n/a	n/a
S00T000782		Phosphate-IC-Dionex 500 col	ug/mL	111.4	n/a	2.63e+03	n/a	n/a	n/a	n/a	300.0	n/a	n/a
S00T000783		Technetium-99 Liq. Scint.	uCi/mL	97.58	<5.57E-4	3.67e-01	n/a	n/a	n/a	n/a	4.90e-04	8.20E-01	n/a
S00T000783		Strontium-89/90 High Level	uCi/mL	101.0	<4.37E-2	1.030	n/a	n/a	n/a	n/a	5.91e-02	9.38E+00	n/a
S00T000783		Selenium-79 by Liquid Scint.	uCi/mL	n/a	5.08E-5	1.40e-03	n/a	n/a	n/a	n/a	4.18e-05	1.41E+00	n/a
S00T000783		Pu-239/240 by TRU-SPEC Resin	uCi/mL	85.33	<1.26E-4	6.94e-04	n/a	n/a	n/a	n/a	1.40e-04	3.20E+00	n/a
S00T000783		Iodine-129 Waste Tank Samples	uCi/mL	116.8	<9.12E-5	<7.89e-05	n/a	n/a	n/a	n/a	7.89e-05	0.00E+00	n/a
S00T000783		Tritium By Lachart	uCi/mL	95.44	3.70E-4	1.88e-02	n/a	n/a	n/a	n/a	4.54e-05	8.90E-01	n/a
S00T000783		Cobalt-60 by GEA	uCi/mL	110.8	<1.70e-2	<2.01e-02	n/a	n/a	n/a	n/a	2.01e-02	n/a	n/a
S00T000783		Antimony-125 by GEA	uCi/mL	n/a	<4.30e-2	< 1.574	n/a	n/a	n/a	n/a	1.574	n/a	n/a
S00T000783		Cesium-137 by GEA	uCi/mL	106.2	<4.19e-2	1.93e+03	n/a	n/a	n/a	n/a	7.56e-01	n/a	n/a
S00T000783		Europium-152 by GEA	uCi/mL	n/a	<3.25e-2	<7.56e-01	n/a	n/a	n/a	n/a	6.63e-02	n/a	n/a
S00T000783		Europium-154 by GEA	uCi/mL	n/a	<5.43e-2	<6.63e-02	n/a	n/a	n/a	n/a	8.80e-01	n/a	n/a
S00T000783		Europium-155 by GEA	uCi/mL	n/a	<4.38e-2	<8.80e-01	n/a	n/a	n/a	n/a	2.15e-05	1.40E+00	n/a
S00T000783		C-14 Small Volume	uCi/mL	89.40	<2.15E-5	1.83e-03	n/a	n/a	n/a	n/a	100.0	n/a	n/a
S00T000783		Am-241 by TRU-SPEC Resin IonEx	uCi/mL	88.78	<3.10E-4	6.26e-04	n/a	n/a	n/a	n/a	3.26e-04	4.55E+00	n/a
S00T000783		Am-243/244 by TRU SPEC Resin	uCi/mL	n/a	<3.10E-4	<3.26e-04	n/a	n/a	n/a	n/a	3.26e-04	1.00E+02	n/a
S00T000783		Alpha in Liquid Samples	uCi/mL	104.4	<3.25E-2	<4.65e-02	n/a	n/a	n/a	n/a	8.04e-02	3.67E+02	n/a
S00T000783		Beta in Liquid Samples	uCi/mL	108.1	7.45E-1	2.02e+03	n/a	n/a	n/a	n/a	3.51e-01	2.62E-01	n/a
S00T000828		Mercury by CVAA (PE) with FIAS	ug/mL	101.0	<6.0e-5	1.71e-02	n/a	n/a	n/a	n/a	2.40e-03	n/a	n/a
S00T000852		D Arsenic(Total) ICP/MS ACIDL158	ug/mL	104.0	<3.00e-4	8.369	n/a	n/a	n/a	n/a	8.48e-02	n/a	n/a
S00T000852		D Boron (Total) ICP/MS ACIDL158	ug/mL	n/a	n/a	21.05	n/a	n/a	n/a	n/a	8.48e-01	n/a	n/a
S00T000852		D Barium (Total) ICP/MS ACIDL158	ug/mL	102.7	<3.00e-6	9.27e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Beryllium(Total) ICP/MS ACIDL158	ug/mL	100.0	<3.00e-5	3.36e-01	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Cerium (Total) ICP/MS ACIDL158	ug/mL	98.67	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Cobalt (Total) ICP/MS ACIDL158	ug/mL	102.0	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Europium (Total) ICP/MS ACIDL158	ug/mL	99.33	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Lanthanum(Total) ICP/MS ACIDL158	ug/mL	101.3	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Lithium (Total) ICP/MS ACIDL158	ug/mL	99.33	<2.00e-4	5.47e-01	n/a	n/a	n/a	n/a	4.24e-01	n/a	n/a
S00T000852		D Palladium(Total) ICP/MS ACIDL158	ug/mL	109.3	<4.00e-5	5.70e-01	n/a	n/a	n/a	n/a	8.48e-02	n/a	n/a
S00T000852		D Praseodymium(Tot) ICP/MS AD158	ug/mL	100.7	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Rhodium (Total) ICP/MS ACIDL158	ug/mL	96.00	<3.00e-5	5.177	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Ruthenium(Total) ICP/MS ACIDL158	ug/mL	99.33	<3.00e-5	2.225	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Selenium(Total) ICP/MS ACIDL158	ug/mL	110.0	<3.00e-5	5.13e-01	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Antimony (Total) ICP/MS ACIDL158	ug/mL	102.0	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Tantalum(Total) ICP/MS ACIDL158	ug/mL	101.3	<1.00e-4	25.32	n/a	n/a	n/a	n/a	2.12e-01	n/a	n/a
S00T000852		D Tellurium (Tot) ICP/MS ACIDL158	ug/mL	105.3	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Thallium (Total) ICP/MS ACIDL158	ug/mL	95.33	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Vanadium (Total) ICP/MS ACIDL158	ug/mL	100.7	<3.00e-5	<6.36e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a
S00T000852		D Tungsten (Total) ICP/MS ACIDL158	ug/mL	n/a	n/a	< 3.182	n/a	n/a	n/a	n/a	3.182	n/a	n/a
S00T000852			ug/mL	n/a	n/a	19.17	n/a	n/a	n/a	n/a	6.36e-02	n/a	n/a

Sample#	RI A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000852	D	Zr/Sr 90 by ICP/MS Acid Add	ug/mL	100.7	<3.00e-5	6.87e-02	n/a	n/a	n/a	n/a	6.36e-02		n/a

Table 1. Data Summary Table.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: Core Comp Trip3

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000777		Bulk Density of Sample	g/mL	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.00e-01	n/a
S00T000777		Solids % - Grav. in Hot Cell	%	99.50	n/a	60.20	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000802	F	Technetium-99 Liq. Scint.	uCi/g	96.21	<1.26E-1	2.46e-01	n/a	n/a	n/a	n/a	1.20e-01	8.23E+00
S00T000802	F	Strontium-89/90 High Level	uCi/g	93.86	4.92E+0	1.84e+04	n/a	n/a	n/a	n/a	7.830	6.98E-01
S00T000802	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	94.44	2.33E+0	5.840	n/a	n/a	n/a	n/a	1.570	3.75E+00
S00T000802	F	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<1.46E+0	< 1.570	n/a	n/a	n/a	n/a	1.570	1.00E+02
S00T000802	F	Silver - ICP-Fusion	ug/g	96.60	<4.10E-1	2.08e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05E0	5.93e+04	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10E0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Boron - ICP-Fusion	ug/g	101.4	2.89e+00	6.75e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Barium - ICP-Fusion	ug/g	97.20	<2.05E-1	5.92e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05E-1	< 40.70	n/a	n/a	n/a	n/a	40.70	n/a
S00T000802	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10E0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10E0	2.22e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05E-1	6.40e+03	n/a	n/a	n/a	n/a	40.70	n/a
S00T000802	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10E0	8.50e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20E-1	<1.63e+02	n/a	n/a	n/a	n/a	163.0	n/a
S00T000802	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10E-1	5.44e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Copper - ICP-Fusion	ug/g	98.80	<4.10E-1	2.38e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Europium ICP-Fusion	ug/g	97.20	<2.05E0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Iron - ICP-Fusion	ug/g	102.2	<2.05E0	7.20e+04	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05E0	3.33e+03	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10E-1	4.83e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10E0	8.44e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Manganese - ICP-Fusion	ug/g	95.20	<4.10E-1	9.48e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05E0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	8.14e+04	n/a	n/a	n/a	n/a	1.63e+03	n/a
S00T000802	F	Nickel - ICP-Fusion	ug/g	99.20	<4.10E0	2.03e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Phosphorus - ICP-Fusion	ug/g	102.0	1.59e+02	1.71e+04	n/a	n/a	n/a	n/a	163.0	n/a
S00T000802	F	Lead - ICP-Fusion	ug/g	99.80	<1.00E0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00E0	<2.00e+04	n/a	n/a	n/a	n/a	2.00e+04	n/a
S00T000802	F	Praseodymium-ICP Fusion	ug/g	97.60	<5.00E-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Rubidium-ICP Fusion	ug/g	92.20	<2.00E0	<4.01e+04	n/a	n/a	n/a	n/a	4.01e+04	n/a
S00T000802	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00E0	<2.00e+04	n/a	n/a	n/a	n/a	2.00e+04	n/a
S00T000802	F	Ruthenium ICP-Fusion	ug/g	99.20	<2.00E0	<4.01e+04	n/a	n/a	n/a	n/a	4.01e+04	n/a
S00T000802	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10E0	8.69e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46E0	<4.88e+02	n/a	n/a	n/a	n/a	488.0	n/a
S00T000802	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10E0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	4.19e+03	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10E0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Tin - ICP-Fusion	ug/g	97.60	<5.00E-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10E-1	3.05e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00E-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000802	F		Tellurium-ICP-Fusion	ug/g	97.40	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a	n/a
S00T000802	F		Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a	n/a
S00T000802	F		Titanium-ICP-Fusion	ug/g	100.8	<4.10e-1	<81.30	n/a	n/a	n/a	n/a	81.30	n/a	n/a
S00T000802	F		Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.63e+03	n/a	n/a	n/a	n/a	1.63e+03	n/a	n/a
S00T000802	F		Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	<4.07e+03	n/a	n/a	n/a	n/a	4.07e+03	n/a	n/a
S00T000802	F		Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a	n/a
S00T000802	F		Tungsten - ICP-Fusion	ug/g	96.80	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a	n/a
S00T000802	F		Yttrium - ICP-Fusion	ug/g	98.40	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a	n/a
S00T000802	F		Zinc - ICP-Fusion	ug/g	100.8	<4.10e-1	82.90	n/a	n/a	n/a	n/a	81.30	n/a	n/a
S00T000802	F		Zirconium - ICP-Fusion	ug/g	101.0	<4.10e-1	2.72e+04	n/a	n/a	n/a	n/a	81.30	n/a	n/a
S00T000802	F		Cobalt-60 by GEA	uCi/g	98.19	<3.70e-1	4.365	n/a	n/a	n/a	n/a	n/a	11.4	n/a
S00T000802	F		Antimony-125 by GEA	uCi/g	n/a	<9.91e-1	26.79	n/a	n/a	n/a	n/a	n/a	12.3	n/a
S00T000802	F		Cesium-137 by GEA	uCi/g	104.5	<8.61e-1	1.03e+03	n/a	n/a	n/a	n/a	n/a	0.640	n/a
S00T000802	F		Europium-152 by GEA	uCi/g	n/a	<6.93e-1	<5.218	n/a	n/a	n/a	n/a	5.218	n/a	n/a
S00T000802	F		Europium-154 by GEA	uCi/g	n/a	<1.21e0	52.58	n/a	n/a	n/a	n/a	n/a	3.42	n/a
S00T000802	F		Europium-155 by GEA	uCi/g	n/a	<8.64e-1	71.83	n/a	n/a	n/a	n/a	n/a	5.91	n/a
S00T000802	F		Am-241 by TRU-SPEC Resin IonEx	uCi/g	89.53	<3.25e+0	95.90	n/a	n/a	n/a	n/a	11.80	2.61E+00	n/a
S00T000802	F		Cm-243/244 by TRU-SPEC Resin	uCi/g	n/a	<3.25e+0	<11.80	n/a	n/a	n/a	n/a	11.80	1.00E+02	n/a
S00T000802	F		Alpha of Digested Solid	uCi/g	91.44	<1.59E+0	88.60	n/a	n/a	n/a	n/a	3.720	1.06E+01	n/a
S00T000802	F		Beta of Solid Sample	uCi/g	102.8	1.35E+1	3.85e+04	n/a	n/a	n/a	n/a	9.980	3.70E-01	n/a
S00T000811	A		Arsenic(Total) ICP/MS ACDIG159	ug/g	86.60	<6.36e-1	<68.86	n/a	n/a	n/a	n/a	68.86	n/a	n/a
S00T000811	A		Barium (Total) ICP/MS ACDIG159	ug/g	94.80	<6.36e-2	6.59e+02	n/a	n/a	n/a	n/a	6.890	n/a	n/a
S00T000811	A		Palladium(Total) ICP/MS ACD159	ug/g	110.0	<8.48e-2	2.35e+03	n/a	n/a	n/a	n/a	9.182	n/a	n/a
S00T000811	A		Praseodymium(Tot) ICP/MS AD159	ug/g	94.67	<6.36e-2	4.32e+02	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Rubidium (Total) ICP/MS ACD159	ug/g	97.33	<6.36e-2	13.70	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Rhodium (Total) ICP/MS ACDG159	ug/g	100.0	<6.36e-2	1.60e+02	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Ruthenium(Total) ICP/MS ACD159	ug/g	114.0	<6.36e-2	1.30e+03	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Antimony (Total) ICP/MS ACD159	ug/g	97.80	<6.36e-2	<6.886	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Selenium(Total) ICP/MS ACDG159	ug/g	95.80	<2.12e-1	<22.95	n/a	n/a	n/a	n/a	22.96	n/a	n/a
S00T000811	A		Tantalum (Total) ICP/MS ACD159	ug/g	94.67	<6.36e-2	<6.886	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Tellurium (Tot) ICP/MS ACD159	ug/g	95.33	<6.36e-2	77.24	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Thallium (Total) ICP/MS ACD159	ug/g	92.60	<6.36e-2	<6.886	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Vanadium (Total) ICP/MS ACD159	ug/g	90.60	<3.18e0	<3.44e+02	n/a	n/a	n/a	n/a	344.3	n/a	n/a
S00T000811	A		Tungsten (Total) ICP/MS ACD159	ug/g	n/a	<6.36e-2	<6.886	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Yttrium (Total) ICP/MS ACDG159	ug/g	92.40	<2.12e-2	2.07e+02	n/a	n/a	n/a	n/a	2.295	n/a	n/a
S00T000811	A		Zr/Sr 90 by ICP/MS ACD159	ug/g	99.80	6.55e-02	2.65e+04	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Nb/Zr 93 by ICP/MS ACD159	ug/g	144.0	<6.36e-2	3.23e+02	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Eu/Sm 151 by ICP/MS ACD159	ug/g	96.80	<6.36e-2	34.80	n/a	n/a	n/a	n/a	6.887	n/a	n/a
S00T000811	A		Tc99 by ICP/MS ACD159	ug/g	101.5	<8.02e-4	11.41	n/a	n/a	n/a	n/a	8.66e-02	n/a	n/a
S00T000811	A		Sn126 ICP/MS ACD159	ug/g	n/a	<6.02e-2	<6.510	n/a	n/a	n/a	n/a	6.510	n/a	n/a
S00T000811	A		Cs133 ICP/MS ACD159	ug/g	94.00	1.76e-03	20.09	n/a	n/a	n/a	n/a	8.66e-02	n/a	n/a
S00T000811	A		Cs135 ICP/MS ACD159	ug/g	n/a	<8.02e-4	7.803	n/a	n/a	n/a	n/a	8.66e-02	n/a	n/a
S00T000811	A		Protactinium-231 by ICP/MS	ug/g	n/a	<8.02e-4	1.80e+02	n/a	n/a	n/a	n/a	8.66e-02	n/a	n/a
S00T000811	A		Uranium-233 by ICP/MS ACD159	ug/g	n/a	<3.02e-3	<6.51e-01	n/a	n/a	n/a	n/a	6.51e-01	n/a	n/a
S00T000811	A		Uranium-234 by ICP/MS ACD159	ug/g	n/a	<2.41e-3	<5.21e-01	n/a	n/a	n/a	n/a	5.21e-01	n/a	n/a
S00T000811	A		Uranium-235 by ICP/MS ACD159	ug/g	n/a	<2.41e-3	5.51e-01	n/a	n/a	n/a	n/a	5.21e-01	n/a	n/a
S00T000811	A		Uranium-236 by ICP/MS ACD159	ug/g	100.8	<2.41e-3	48.74	n/a	n/a	n/a	n/a	5.21e-01	n/a	n/a
S00T000811	A		Uranium-238 by ICP/MS ACD159	ug/g	95.90	<3.22e-3	4.822	n/a	n/a	n/a	n/a	6.95e-01	n/a	n/a
S00T000811	A		Neptunium-237 by ICP/MS	ug/g	n/a	1.39e-02	5.52e+03	n/a	n/a	n/a	n/a	5.21e-01	n/a	n/a
S00T000811	A		Plutonium-239 by ICP/MS	ug/g	n/a	<1.01e-2	64.92	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A			ug/g	n/a	<1.01e-2	54.46	n/a	n/a	n/a	n/a	2.170	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000811	A	Plutonium-240 by ICP/MS	ug/g	n/a	<1.01e-2	4.440	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A	Plutonium-242 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.170	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A	Pu/Am-241 by ICP/MS	ug/g	n/a	<1.01e-2	28.87	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A	Am 243/Cm 243 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.170	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A	Pu 244/Cm 244 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.170	n/a	n/a	n/a	n/a	2.170	n/a	n/a
S00T000811	A	Silver -ICP-Acid Digest	ug/g	89.40	<1.00e-2	1.69e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Aluminum -ICP-Acid Digest	ug/g	99.80	3.69e-01	5.72e+04	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Arsenic -ICP-Acid Digest	ug/g	85.60	<1.00e-1	< 54.10	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Boron -ICP-Acid Digest	ug/g	140.0	2.68e+00	3.57e+02	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Barium -ICP-Acid Digest	ug/g	85.60	<5.00e-2	5.87e+02	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Beryllium -ICP-Acid Digest	ug/g	88.60	<5.00e-3	8.760	n/a	n/a	n/a	n/a	2.710	n/a	n/a
S00T000811	A	Bismuth -ICP-Acid Digest	ug/g	83.40	<1.00e-1	62.10	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Calcium -ICP-Acid Digest	ug/g	168.8	1.02e-01	1.93e+03	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Cadmium -ICP-Acid Digest	ug/g	85.80	<1.00e-02	6.36e+03	n/a	n/a	n/a	n/a	2.710	n/a	n/a
S00T000811	A	Cerium -ICP-Acid Digest	ug/g	87.80	<1.00e-1	7.70e+02	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Cobalt -ICP-Acid Digest	ug/g	85.60	<2.00e-2	40.80	n/a	n/a	n/a	n/a	10.80	n/a	n/a
S00T000811	A	Chromium -ICP-Acid Digest	ug/g	87.80	2.14e-02	5.04e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Copper -ICP-Acid Digest	ug/g	86.40	<1.00e-2	2.17e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Europium -ICP-Acid Digest	ug/g	87.00	<5.00e-2	< 27.10	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Iron -ICP-Acid Digest	ug/g	91.80	2.50e-01	7.36e+04	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Potassium -ICP-Acid Digest	ug/g	85.20	<5.00e-1	2.25e+03	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Lanthanum -ICP-Acid Digest	ug/g	88.00	<5.00e-2	3.32e+03	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Lithium -ICP-Acid Digest	ug/g	85.00	<1.00e-2	5.64e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Magnesium -ICP-Acid Digest	ug/g	88.20	<1.00e-1	6.04e+02	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Manganese -ICP-Acid Digest	ug/g	83.80	<1.00e-2	9.54e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Molybdenum -ICP-Acid Digest	ug/g	89.00	<5.00e-2	35.30	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Sodium -ICP-Acid Digest	ug/g	190.0	4.21e+00	8.18e+04	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Neodymium -ICP-Acid Digest	ug/g	88.80	<1.00e-1	2.02e+03	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Nickel -ICP-Acid Digest	ug/g	85.20	<2.00e-2	4.57e+03	n/a	n/a	n/a	n/a	10.80	n/a	n/a
S00T000811	A	Phosphorus -ICP-Acid Digest	ug/g	89.60	<2.00e-1	<1.08e+02	n/a	n/a	n/a	n/a	108.0	n/a	n/a
S00T000811	A	Lead -ICP-Acid Digest	ug/g	85.80	<1.00e-1	3.30e+02	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Palladium -ICP-Acid Digest	ug/g	98.40	<1.00e0	<5.41e+02	n/a	n/a	n/a	n/a	541.0	n/a	n/a
S00T000811	A	Praseodymium-ICP Acid Digest	ug/g	96.40	<5.00e-1	4.92e+02	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Rubidium -ICP-Acid Digest	ug/g	107.4	<2.00e0	<1.08e+03	n/a	n/a	n/a	n/a	1.08e+03	n/a	n/a
S00T000811	A	Rhodium -ICP-Acid Digest	ug/g	97.00	<1.00e0	<5.41e+02	n/a	n/a	n/a	n/a	541.0	n/a	n/a
S00T000811	A	Ruthenium -ICP-Acid Digest	ug/g	98.60	<2.00e0	1.18e+03	n/a	n/a	n/a	n/a	1.08e+03	n/a	n/a
S00T000811	A	Sulfur -ICP-Acid Digest	ug/g	82.20	<1.00e-1	9.12e+03	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Antimony -ICP-Acid Digest	ug/g	86.60	<6.00e-2	< 32.50	n/a	n/a	n/a	n/a	32.50	n/a	n/a
S00T000811	A	Selenium -ICP-Acid Digest	ug/g	86.40	<1.00e-1	< 54.10	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Silicon -ICP-Acid Digest	ug/g	202.0	5.06e+00	1.60e+03	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Samarium -ICP-Acid Digest	ug/g	87.60	<1.00e-1	3.01e+02	n/a	n/a	n/a	n/a	54.10	n/a	n/a
S00T000811	A	Tin -ICP-Acid Digest	ug/g	99.40	<5.00e-1	3.44e+02	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Strontium -ICP-Acid Digest	ug/g	87.20	<1.00e-2	3.15e+02	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Tantalum -ICP-Acid Digest	ug/g	98.20	<5.00e-1	<2.71e+02	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Tellurium -ICP-Acid Digest	ug/g	97.40	<5.00e-1	<2.71e+02	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Thorium -ICP-Acid Digest	ug/g	86.60	<5.00e-2	2.61e+02	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Titanium -ICP-Acid Digest	ug/g	92.80	<1.00e-2	32.00	n/a	n/a	n/a	n/a	5.410	n/a	n/a
S00T000811	A	Thallium -ICP-Acid Digest	ug/g	84.40	<2.00e-1	<1.08e+02	n/a	n/a	n/a	n/a	108.0	n/a	n/a
S00T000811	A	Uranium -ICP-Acid Digest	ug/g	88.90	<5.00e-1	5.52e+03	n/a	n/a	n/a	n/a	271.0	n/a	n/a
S00T000811	A	Vanadium -ICP-Acid Digest	ug/g	87.40	<5.00e-2	< 27.10	n/a	n/a	n/a	n/a	27.10	n/a	n/a
S00T000811	A	Tungsten -ICP-Acid Digest	ug/g	98.60	<5.00e-1	<2.71e+02	n/a	n/a	n/a	n/a	271.0	n/a	n/a

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000811	A	Yttrium - ICP-Acid Digest	ug/g	86.60	<5.00e-2	1.75e+02	n/a	n/a	n/a	n/a	27.10	n/a
S00T000811	A	Zinc - ICP-Acid Digest	ug/g	87.60	1.20e-02	85.00	n/a	n/a	n/a	n/a	5.410	n/a
S00T000814	W	Cyanide Water Distillation	ug/g	92.60	4.51e-02	2.63e+04	n/a	n/a	n/a	n/a	5.410	n/a
S00T000814	W	Ammonia by ISE-Std Additions	ug/g	99.70	<5.23	< 4.110	n/a	n/a	n/a	n/a	4.110	n/a
S00T000814	W	OH- by Pot. Titration	ug/g	90.13	<2.38e+3	<1.87e+03	n/a	n/a	n/a	n/a	1.87e+03	n/a
S00T000814	W	Tot. Organic Carbon by Coul.	ug/g	101.8	<3.961e3	<3.12e+03	n/a	n/a	n/a	n/a	3.12e+03	n/a
S00T000814	W	TIC by Acid/Coulometry	ug/g	103.3	9.00E-1	3.13e+03	n/a	n/a	n/a	n/a	411.0	n/a
S00T000814	W	TOC by Persulfate/Coulometry	ug/g	100.5	<4.75e2	5.67e+03	n/a	n/a	n/a	n/a	374.0	n/a
S00T000814	W	Fluoride-IC-Dionex 500	ug/g	94.67	<3.80e3	<2.99e+03	n/a	n/a	n/a	n/a	2.99e+03	n/a
S00T000814	W	Acetate by IC-Dionex 500 col	ug/g	102.6	<3.00e-2	4.96e+03	n/a	n/a	n/a	n/a	92.00	n/a
S00T000814	W	Formate by IC-DIONEX 500 col	ug/g	103.2	<2.30e-1	<7.05e+02	n/a	n/a	n/a	n/a	705.3	n/a
S00T000814	W	Chloride-IC-Dionex 500 col	ug/g	102.4	<2.30e-1	<7.05e+02	n/a	n/a	n/a	n/a	705.3	n/a
S00T000814	W	Nitrite-IC - Dionex 500 col	ug/g	100.9	1.30e-01	<1.23e+02	n/a	n/a	n/a	n/a	122.7	n/a
S00T000814	W	Sulfate-IC-Dionex 500 col	ug/g	97.03	<3.80e-01	3.81e+04	n/a	n/a	n/a	n/a	828.0	n/a
S00T000814	W	Oxalate-IC-Dionex 500 col	ug/g	104.7	<2.70e-1	5.44e+03	n/a	n/a	n/a	n/a	828.0	n/a
S00T000814	W	Nitrate-IC-Dionex 500 col	ug/g	109.2	<3.00e-1	3.61e+04	n/a	n/a	n/a	n/a	920.0	n/a
S00T000814	W	Phosphate-IC-Dionex 500 col	ug/g	102.6	<2.70e-1	<8.28e+02	n/a	n/a	n/a	n/a	828.0	n/a
S00T000814	W	Iodine-129 Waste Tank Samples	ug/g	121.4	<4.90E-3	<3.99e-03	n/a	n/a	n/a	n/a	3.99e-03	0.00E+00
S00T000814	W	Itrium By Lachat	ug/g	95.02	7.30E-3	1.25e-02	n/a	n/a	n/a	n/a	2.77e-03	4.96E+00
S00T000820	W	C-14 Small Volume	ug/g	92.72	<7.97E-4	1.23e-03	n/a	n/a	n/a	n/a	6.28e-04	4.05E+00
S00T001165	W	Mercury by CVA4 (PE) with FIAS	ug/g	108.8	<6.00e-05	1.882	n/a	n/a	n/a	n/a	2.40e-02	n/a
S00T001165	W	TIC by Acid/Coulometry	ug/g	94.19	4.00E+0	4.60e+03	n/a	n/a	n/a	n/a	5.000	n/a
S00T001165	W	TOC by Persulfate/Coulometry	ug/g	90.67	3.80E+0	1.38e+03	n/a	n/a	n/a	n/a	40.00	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000784		Solids % - Gravimetric	%	100.7	n/a	28.40	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000784	D	Technetium-99 Liq. Scint.	ug/mL	98.07	<5.55E-4	2.90e-01	n/a	n/a	n/a	n/a	3.78e-04	8.10E-01
S00T000784	D	Tc 99 by ICP/MS Acid Addition	ug/mL	103.0	<2.00e-6	25.92	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000784	D	Sn 126 by ICP/MS Acid Addition	ug/mL	n/a	<1.50e-4	2.26e-01	n/a	n/a	n/a	n/a	1.81e-01	n/a
S00T000784	D	Cs 133 by ICP/MS Acid Addition	ug/mL	94.50	<2.00e-6	40.04	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000784	D	Cs 137 by ICP/MS Acid Addition	ug/mL	n/a	<2.00e-6	14.25	n/a	n/a	n/a	n/a	2.41e-03	n/a
S00T000784	D	Protactinium-231 by ICP/MS	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000784	D	Uranium-233 by ICP/MS Acid Add	ug/mL	n/a	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000784	D	Uranium-234 by ICP/MS Acid Add	ug/mL	n/a	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000784	D	Uranium-235 by ICP/MS Acid Add	ug/mL	117.2	<1.20e-5	<1.45e-02	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000784	D	Uranium-236 by ICP/MS Acid Add	ug/mL	n/a	<1.60e-5	<1.93e-02	n/a	n/a	n/a	n/a	1.93e-02	n/a
S00T000784	D	Uranium-238 by ICP/MS Acid Add	ug/mL	106.0	<1.20e-5	9.59e-01	n/a	n/a	n/a	n/a	1.45e-02	n/a
S00T000784	D	Neptunium-237 by ICP/MS	ug/mL	109.3	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Plutonium-239 by ICP/MS	ug/mL	111.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Plutonium-240 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Plutonium-242 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Pu/Am-241 by ICP/MS	ug/mL	108.7	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Am 243/Cm 243 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Pu 244/Cm 244 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Silver-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	8.250	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.05e+03	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000784	D	Boron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Barium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	< 2.010	n/a	n/a	n/a	n/a	2.010	n/a
S00T000784	D	Bismuth-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Calcium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Cadmium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 2.010	n/a	n/a	n/a	n/a	2.010	n/a
S00T000784	D	Cerium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Cobalt-ICP-Acid Dil.	ug/mL	102.6	<2.00e-2	< 8.020	n/a	n/a	n/a	n/a	8.020	n/a
S00T000784	D	Chromium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	7.39e+02	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Europium ICP-Acid Dil.	ug/mL	99.60	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Iron-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Potassium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-1	4.15e+03	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.4	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Lithium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Magnesium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Manganese-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-2	95.80	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Sodium-ICP-Acid Dil.	ug/mL	105.0	<1.00e-1	1.05e+05	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<2.00e-2	< 8.020	n/a	n/a	n/a	n/a	8.020	n/a
S00T000784	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.63e+02	n/a	n/a	n/a	n/a	80.20	n/a
S00T000784	D	Lead-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Palladium -ICP-Acid Dil	ug/mL	99.40	<1.00e0	<4.01e+02	n/a	n/a	n/a	n/a	401.0	n/a
S00T000784	D	Praseodymium-ICP Acid Dilution	ug/mL	101.4	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Rhodium -ICP-Acid Dilution	ug/mL	96.40	<2.00e0	<4.01e+02	n/a	n/a	n/a	n/a	802.0	n/a
S00T000784	D	Ruthenium ICP-Acid Dilution	ug/mL	101.4	<1.00e0	<4.01e+02	n/a	n/a	n/a	n/a	401.0	n/a
S00T000784	D	Ruthenium ICP-Acid Dilution	ug/mL	101.6	<2.00e0	<8.02e+02	n/a	n/a	n/a	n/a	802.0	n/a
S00T000784	D	Sulfur-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	5.13e+03	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Antimony-ICP-Acid Dil.	ug/mL	101.0	<6.00e-2	< 24.10	n/a	n/a	n/a	n/a	24.10	n/a
S00T000784	D	Selenium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	43.20	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Silicon-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	81.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Samarium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	n/a	n/a	n/a	n/a	40.10	n/a
S00T000784	D	Tin -ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Strontium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Tantalum -ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Tellurium-ICP-Acid Dilution	ug/mL	99.60	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Thorium -ICP-Acid Dilution	ug/mL	101.0	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Thallium-ICP-Acid Dil.	ug/mL	100.2	<2.00e-1	< 80.20	n/a	n/a	n/a	n/a	80.20	n/a
S00T000784	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Vanadium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Tungsten -ICP-Acid Dil.	ug/mL	100.6	<5.00e-1	<2.01e+02	n/a	n/a	n/a	n/a	201.0	n/a
S00T000784	D	Yttrium -ICP-Acid Dilution	ug/mL	100.0	<5.00e-2	< 20.10	n/a	n/a	n/a	n/a	20.10	n/a
S00T000784	D	Zinc-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000784	D	Zirconium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	< 4.010	n/a	n/a	n/a	n/a	4.010	n/a
S00T000785		Cyanide Water Distillation	ug/mL	98.62	<1.0e-2	3.23e-01	n/a	n/a	n/a	n/a	5.50e-02	n/a
S00T000785		Ammonia by ISE-Std Additions	ug/mL	82.77	<1.00e+2	< 50.00	n/a	n/a	n/a	n/a	50.00	n/a
S00T000785		OH- by Pot. Titration	ug/mL	99.32	<2.5e3	1.16e+04	n/a	n/a	n/a	n/a	2.50e+03	n/a
S00T000785		pH Direct	pH	n/a	n/a	> 13.50	n/a	n/a	n/a	n/a	1.00e-02	n/a
S00T000785		Specific Gravity	Sp.G.	99.04	n/a	1.242	n/a	n/a	n/a	n/a	1.00e-03	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000785		Tot. Organic Carbon by Coul.	ug/mL	98.33	6.00E-1	3.69E+02	n/a	n/a	n/a	n/a	55.00	n/a	n/a
S00T000785		TIC by Acid/Coulometry	ug/mL	66.69	2.10E+0	6.93E+03	n/a	n/a	n/a	n/a	5.000	n/a	n/a
S00T000785		TOC by Persulfate/Coulometry	ug/mL	95.00	2.90E+0	3.91E+02	n/a	n/a	n/a	n/a	40.00	n/a	n/a
S00T000785		Fluoride-IC-Dionex 500 col	ug/mL	99.48	n/a	1.86E+03	n/a	n/a	n/a	n/a	33.33	n/a	n/a
S00T000785		Acetate by IC-Dionex 500 col	ug/mL	98.49	n/a	<2.56E+02	n/a	n/a	n/a	n/a	255.5	n/a	n/a
S00T000785		Formate by IC-DIONEX 500 col	ug/mL	98.70	n/a	<2.56E+02	n/a	n/a	n/a	n/a	255.5	n/a	n/a
S00T000785		Chloride-IC-Dionex 500 col	ug/mL	104.4	n/a	1.41E+02	n/a	n/a	n/a	n/a	44.44	n/a	n/a
S00T000785		Nitrite-IC - Dionex 500 col	ug/mL	98.17	n/a	7.61E+04	n/a	n/a	n/a	n/a	1.12E+03	n/a	n/a
S00T000785		Sulfate-IC-Dionex 500 col	ug/mL	102.7	n/a	1.72E+04	n/a	n/a	n/a	n/a	355.5	n/a	n/a
S00T000785		Oxalate-IC-Dionex 500 col	ug/mL	101.8	n/a	1.06E+03	n/a	n/a	n/a	n/a	300.0	n/a	n/a
S00T000785		Nitrate-IC-Dionex 500 col	ug/mL	112.3	n/a	7.11E+04	n/a	n/a	n/a	n/a	1.24E+03	n/a	n/a
S00T000785		Phosphate-IC-Dionex 500 col	ug/mL	111.4	n/a	1.58E+03	n/a	n/a	n/a	n/a	300.0	n/a	n/a
S00T000786		Technetium-99 Liq. Scint.	uci/mL	97.58	<5.57E-4	4.52E-01	n/a	n/a	n/a	n/a	5.76E-04	8.10E-01	n/a
S00T000786		Strontium-89/90 High Level	uci/mL	101.0	<4.37E-2	9.08E-01	n/a	n/a	n/a	n/a	6.02E-02	1.02E+01	n/a
S00T000786		Selenium-79 by Liquid Scint.	uci/mL	n/a	5.08E-5	1.46E-03	n/a	n/a	n/a	n/a	4.34E-05	1.41E+00	n/a
S00T000786		Pu-239/240 by TRU-SPEC Resin	uci/mL	85.33	<1.26E-4	5.39E-04	n/a	n/a	n/a	n/a	1.25E-04	3.55E+00	n/a
S00T000786		Iodine-129 Waste Tank Samples	uci/mL	116.8	<9.12E-5	<9.23E-05	n/a	n/a	n/a	n/a	9.23E-05	0.00E+00	n/a
S00T000786		Tritium by Lachart	uci/mL	95.44	3.70E-4	1.87E-02	n/a	n/a	n/a	n/a	4.52E-05	8.90E-01	n/a
S00T000786		Cobalt-60 by GEA	uci/mL	110.8	<1.70E-2	<2.10E-02	n/a	n/a	n/a	n/a	2.10E-02	n/a	n/a
S00T000786		Antimony-125 by GEA	uci/mL	n/a	<4.30E-2	< 1.529	n/a	n/a	n/a	n/a	1.529	n/a	n/a
S00T000786		Cesium-137 by GEA	uci/mL	106.2	<4.19E-2	1.82E+03	n/a	n/a	n/a	n/a	n/a	0.110	n/a
S00T000786		Europium-152 by GEA	uci/mL	n/a	<3.25E-2	<7.36E-01	n/a	n/a	n/a	n/a	7.36E-01	n/a	n/a
S00T000786		Europium-154 by GEA	uci/mL	n/a	<5.43E-2	<6.64E-02	n/a	n/a	n/a	n/a	6.64E-02	n/a	n/a
S00T000786		Europium-155 by GEA	uci/mL	n/a	<4.38E-2	<8.53E-01	n/a	n/a	n/a	n/a	8.53E-01	n/a	n/a
S00T000786		C-14 Small Volume	uci/mL	89.40	<2.15E-5	2.22E-03	n/a	n/a	n/a	n/a	2.14E-05	1.28E+00	n/a
S00T000786		Am-241 by TRU-SPEC Resin IonEx	uci/mL	88.78	<3.10E-4	<3.35E-04	n/a	n/a	n/a	n/a	3.35E-04	7.10E+00	n/a
S00T000786		Cm-243/244 by TRU SPEC Resin	uci/mL	104.4	<3.25E-2	<6.25E-02	n/a	n/a	n/a	n/a	8.04E-02	1.00E+02	n/a
S00T000786		Alpha in Liquid Samples	uci/mL	108.1	7.45E-1	1.99E+03	n/a	n/a	n/a	n/a	3.51E-01	2.63E-01	n/a
S00T000830		Beta in Liquid Samples	uci/mL	101.0	<6.0E-5	1.73E-02	n/a	n/a	n/a	n/a	2.40E-03	n/a	n/a
S00T000830		Mercury by CVAA (PE) with FIAS	ug/mL	104.0	<3.00E-4	8.217	n/a	n/a	n/a	n/a	8.48E-02	n/a	n/a
S00T000854		D Arsenic(Total) ICP/MS ACIDL158	ug/mL	n/a	n/a	18.26	n/a	n/a	n/a	n/a	8.48E-01	n/a	n/a
S00T000854		D Boron (Total) ICP/MS ACIDL158	ug/mL	102.7	<3.00E-6	7.53E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Barium (Total) ICP/MS ACID Add	ug/mL	100.0	<3.00E-5	3.14E-01	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Beryllium(Total) ICP/MS ACIDL158	ug/mL	98.67	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Cerium (Total) ICP/MS ACIDL158	ug/mL	102.0	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Cobalt (Total) ICP/MS ACIDL158	ug/mL	99.33	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Europium (Total) ICP/MS ACIDL158	ug/mL	101.3	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Lanthanum(Total) ICP/MS ACIDL158	ug/mL	99.33	<3.00E-5	5.24E-01	n/a	n/a	n/a	n/a	4.24E-01	n/a	n/a
S00T000854		D Lithium (Total) ICP/MS ACIDL158	ug/mL	99.33	<2.00E-4	6.56E-01	n/a	n/a	n/a	n/a	8.48E-02	n/a	n/a
S00T000854		D Palladium(Total) ICP/MS AD158	ug/mL	109.3	<4.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Praseodymium(Tot) ICP/MS AD158	ug/mL	100.7	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Rbodium (Total) ICP/MS ADG158	ug/mL	96.00	<3.00E-5	4.936	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Ruthenium(Total) ICP/MS ACIDL158	ug/mL	99.33	<3.00E-5	2.212	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Selenium(Total) ICP/MS ACIDL158	ug/mL	110.0	<3.00E-5	5.26E-01	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Antimony (Total) ICP/MS ACIDL158	ug/mL	102.0	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Tellurium (Total) ICP/MS ACIDL158	ug/mL	101.3	<1.00E-4	24.14	n/a	n/a	n/a	n/a	2.12E-01	n/a	n/a
S00T000854		D Tantalum (Total) ICP/MS ACIDL158	ug/mL	105.3	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Thallium (Tot) ICP/MS ACIDL158	ug/mL	95.33	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Thallium (Total) ICP/MS ACIDL158	ug/mL	100.7	<3.00E-5	<6.36E-02	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a
S00T000854		D Vanadium (Total) ICP/MS ACIDL158	ug/mL	n/a	n/a	< 3.182	n/a	n/a	n/a	n/a	3.182	n/a	n/a
S00T000854		D Tungsten (Total) ICP/MS ACIDL158	ug/mL	n/a	n/a	18.95	n/a	n/a	n/a	n/a	6.36E-02	n/a	n/a

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Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000854	D	Zr/Sr 90 by ICP/MS Acid Add	ug/mL	100.7	<3.00e-5	8.48e-02	n/a	n/a	n/a	n/a	6.36e-02	n/a

348.6

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269

SEGMENT #: FIELD BLANK

SEGMENT PORTION: Field Blank

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001892	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Arsenic-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Boron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	8.62e-02	9.03e-02	8.82e-02	4.65	n/a	5.00e-02	n/a
S99T001892	D	Barium-ICP-Acid Dil.	ug/mL	97.60	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Beryllium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-3	<5.00e-3	<5.00e-3	n/a	n/a	n/a	5.00e-03	n/a
S99T001892	D	Bismuth-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Calcium-ICP-Acid Dil.	ug/mL	104.4	<1.00e-1	3.44e-01	3.25e-01	3.35e-01	5.68	n/a	1.00e-01	n/a
S99T001892	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	<5.00e-3	<5.00e-3	n/a	n/a	n/a	5.00e-03	n/a
S99T001892	D	Cerium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Cobalt-ICP-Acid Dil.	ug/mL	101.4	<2.00e-2	<2.00e-2	<2.00e-2	n/a	n/a	n/a	2.00e-02	n/a
S99T001892	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Copper-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Potassium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-1	<5.00e-1	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001892	D	Lanthanum-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Lithium-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Magnesium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Manganese-ICP-Acid Dil.	ug/mL	95.00	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Sodium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	1.020	9.64e-01	9.92e-01	5.65	n/a	1.00e-01	n/a
S99T001892	D	Neodymium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Nickel-ICP-Acid Dil.	ug/mL	100.6	<2.00e-2	<2.00e-2	<2.00e-2	n/a	n/a	n/a	2.00e-02	n/a
S99T001892	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.8	<2.00e-1	<2.00e-1	<2.00e-1	n/a	n/a	n/a	2.00e-01	n/a
S99T001892	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	1.01e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Antimony-ICP-Acid Dil.	ug/mL	100.2	<6.00e-2	<6.00e-2	<6.00e-2	n/a	n/a	n/a	6.00e-02	n/a
S99T001892	D	Selenium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Silicon-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	4.54e-01	4.45e-01	4.50e-01	2.00	n/a	5.00e-02	n/a
S99T001892	D	Samarium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	<1.00e-1	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001892	D	Strontium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Titanium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Thallium-ICP-Acid Dil.	ug/mL	98.80	<2.00e-1	<2.00e-1	<2.00e-1	n/a	n/a	n/a	2.00e-01	n/a
S99T001892	D	Uranium-ICP-Acid Dil.	ug/mL	97.90	<5.00e-1	<5.00e-1	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001892	D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	<5.00e-2	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001892	D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	2.45e-02	2.32e-02	2.38e-02	5.45	n/a	1.00e-02	n/a
S99T001892	D	Zirconium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-2	<1.00e-2	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S99T001892	D	Fluoride-IC-Dionex 4000/4500	ug/mL	111.6	<1.20e-2	<1.20e-2	<1.20e-2	n/a	n/a	n/a	1.20e-02	n/a
S99T001892	D	Chloride-IC-Dionex 4000/4500	ug/mL	97.67	<1.70e-2	6.90e-02	6.10e-02	6.50e-02	12.3	n/a	1.70e-02	n/a
S99T001892	D	Nitrite-IC - Dionex 4000/4500	ug/mL	97.73	<1.08e-1	<1.08e-1	<1.08e-1	n/a	n/a	n/a	1.08e-01	n/a
S99T001892	D	Nitrate by IC-Dionex 4000/4500	ug/mL	105.9	<1.39e-1	<1.39e-1	<1.39e-1	n/a	n/a	n/a	1.39e-01	n/a
S99T001892	D	Phosphate by IC-Dionex 4000/4500	ug/mL	98.58	<1.20e-1	<1.20e-1	<1.20e-1	n/a	n/a	n/a	1.20e-01	n/a
S99T001892	D	Sulfate by IC-Dionex 4000/4500	ug/mL	100.3	<1.38e-1	2.19e-01	1.93e-01	2.06e-01	12.6	n/a	1.38e-01	n/a
S99T001892	D	Oxalate-IC-Dionex 4000/4500	ug/mL	104.5	<1.05e-1	1.67e-01	<1.05e-1	n/a	n/a	n/a	1.05e-01	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001892		Tritium By Lachat	uCi/mL	99.61	<3.32E-6	<3.30E-06	<3.29E-6	n/a	n/a	n/a	3.30e-06	6.48E+00
S99T001892		Cobalt-60 by GEA	uCi/mL	110.5	<2.79E-6	<2.67E-06	<2.96E-6	n/a	n/a	n/a	2.67e-06	n/a
S99T001892		Antimony-125 by GEA	uCi/mL	n/a	<7.32E-6	<7.28E-06	<7.20E-6	n/a	n/a	n/a	7.28e-06	n/a
S99T001892		Cesium-137 by GEA	uCi/mL	100.3	<3.31E-6	<3.24E-06	<3.41E-6	n/a	n/a	n/a	3.24e-06	n/a
S99T001892		Europium-152 by GEA	uCi/mL	n/a	<5.79E-6	<5.75E-06	<5.74E-6	n/a	n/a	n/a	5.75e-06	n/a
S99T001892		Europium-154 by GEA	uCi/mL	n/a	<8.12E-6	<8.98E-06	<9.19E-6	n/a	n/a	n/a	8.98e-06	n/a
S99T001892		Europium-155 by GEA	uCi/mL	n/a	<4.28E-6	<4.32E-6	<4.32E-6	n/a	n/a	n/a	4.32e-06	n/a
S99T001892		Alpha in Liquid Samples	uCi/mL	103.9	<8.16E-8	<1.10E-07	8.51E-08	n/a	n/a	n/a	1.34e-07	1.65E+02
S99T001892		Beta in Liquid Samples	uCi/mL	107.1	<9.52E-7	<7.36E-07	<5.52E-7	n/a	n/a	n/a	7.72e-07	5.00E+02

Table 1. Data Summary Report.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: L1BR

SEGMENT PORTION: Hydrostatic Head Fluid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk. Rec %	Det Limit	Count	Err%
S99T001891	D	Lithium-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	2.04e+03	2.01e+03	2.02e+03	1.48	n/a	1.00e-01		n/a
S99T001891		Bromide by Ion Chromatograph	ug/mL	100.2	<1.25e-1	2.37e+04	2.40e+04	2.38e+04	1.26	n/a	1.28e+03		n/a

348.9

HNF-1701 REV. 0

CHAIN OF CUSTODY

HNF-1701 REV. 0

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CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>266-01</u>		(2) Supervisor/Sampler <u>R. Frank Frost</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No	
(3) Tank <u>AZ-101</u>		(4) Riser <u>15G</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(5) Cask/Pig Serial No. <u>6G</u>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6a) ☒ Yes ☐ No	
(6) Shipment Description: A. Work Package Number <u>ES-99-00155</u> B. Cask/Pig Seal Number <u>11335</u> C. Date Sample Collected <u>10-29-99</u> D. Time Sample Collected <u>1146 hrs</u>				(12) Laboratory Comments:	
(7) Sampling Data - Lithium Bromide Amount <u>1500 ml</u> Concentration <u>0.3 molar</u> - X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stroke Length <u>NA</u>				(13) Field Comments: <u>push sampler, 19" push, sampler clean, 9.2 R dose rate</u>	
(14) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(15) Date/Time <u>11-2-99</u> <u>1450</u>	
(16) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(17) Receiver Comments	
(18) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(19) Date/Time <u>11-2-99</u> <u>1530</u>	
(20) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(21) Receiver Comments	
(22) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(23) Date/Time <u>11-2-99</u>	
(24) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(25) Receiver Comments	
(26) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(27) Date/Time	
(28) Relinquished By (Sign and PRINT) <u>W. T. Ruznik</u>				(29) Receiver Comments	

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>266-02</u>		(2) Supervisor/Sampler <u>R. L. FRANK FROST R. L. Frank Frost / 98-603</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15G</u>	(5) Cask/Pig Serial No. <u>20G</u>	(6) Shipment Description:	(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
A. Work Package Number <u>ES-99-00155</u>		(7) Sampling Data		(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
B. Cask/Pig Seal Number <u>11022</u>		- Lithium Bromide ☒ Y ☐ N		(12) Laboratory Comments:
C. Date Sample Collected <u>10-30-99</u>		Amount <u>1500ml</u>		
D. Time Sample Collected <u>1045 hrs.</u>		Concentration <u>0.3 molar</u>		
		- X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stroke Length <u>NA</u>		
(8) Field Comments: <u>push sampler, 19" push, 11.8 R lower rate, sampler clean</u>				
(13) Relinquished By (Sign and PRINT) <u>Robert Ruzick</u>		(14) Received By (Sign and PRINT) <u>Robert Ruzick</u>		(15) Date/Time <u>11-2-99</u>
(17) Relinquished By (Sign and PRINT) <u>Robert Ruzick</u>		(18) Received By (Sign and PRINT) <u>Robert Ruzick</u>		(19) Date/Time <u>11-2-99</u>
(21) Relinquished By (Sign and PRINT) <u>Robert Ruzick</u>		(22) Received By (Sign and PRINT) <u>Robert Ruzick</u>		(23) Date/Time <u>11-2-99</u>
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(20) Receiver Comments
				(24) Receiver Comments
				(28) Receiver Comments

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CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number 266-03		(2) Supervisor/Sampler R. FRANK FROST R. Frank Frost / # 98-003		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15G	(5) Cast/Pkg Serial No. 11-2-99		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: ES-99-00155				(11) Seal Number AND Cast/Pkg SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
(7) Sampling Data				(12) Laboratory Comments:
Y N - Lithium Bromide ☒ ☐ Amount 1500ml Concentration 0.3molar - X-Ray ☒ ☐ - Partial Sample ☒ ☐ - Retrieved Partial Sample Stroke Length NA				HNF-1701 REV. 0
(8) Field Comments: push sample (orig) 12.2 R dose rate, 19" push, sampler clean				
353				
(13) Relinquished By (Sign and PRINT) V. Matthews		(14) Received By (Sign and PRINT) V. Matthews		(15) Date/Time 11-2-99
(17) Relinquished By (Sign and PRINT) V. Matthews		(18) Received By (Sign and PRINT) R. Frost		(19) Date/Time 11-2-99
(21) Relinquished By (Sign and PRINT) V. Matthews		(22) Received By (Sign and PRINT) R. Frost		(23) Date/Time 11-2-99
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(24) Receiver Comments
				(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>266-04</u>		(2) Supervisor/Sampler <u>R. Frank Faust</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No	
(3) Tank <u>AZ-101</u>	(4) Riser <u>15G</u>	(5) Cask/Pig Serial No. <u>1002-C</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(6) Shipment Description: A. Work Package Number <u>E5-99-00155</u> B. Cask/Pig Seal Number <u>10139</u> C. Date Sample Collected <u>10-30-99</u> D. Time Sample Collected <u>1526 hrs</u>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No	
(7) Sampling Data Y N - Lithium Bromide ☒ ☐ Amount <u>1500 mL</u> Concentration <u>0.3 molar</u> - X-Ray ☐ ☒ - Partial Sample ☐ ☒ - Retrieved Partial Sample Stroke Length <u>NA</u>				(12) Laboratory Comments:	
(8) Field Comments: <u>push sampler (o-ring), 19" push, 12.4 close rate, sampler clean.</u>				HNF-1701 REV. 0	
(13) Relinquished By (Sign and PRINT) <u>Walter Smith</u>		(14) Received By (Sign and PRINT) <u>Walter Smith</u>		(15) Date/Time <u>11-2-99</u>	(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) <u>Walter Smith</u>		(18) Received By (Sign and PRINT) <u>R.T. Steele</u>		(19) Date/Time <u>11-2-99</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time	(28) Receiver Comments

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

Sample Number <u>266-05</u>		(12) Supervisor/Sampler <u>R. Frank Frost</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
Tank <u>12-101</u>	(4) Riser <u>15G</u>	(5) Cask/Pig Serial No. <u>69</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
Shipment Description: A. Work Package Number <u>ES-99-00155</u>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
B. Cask/Pig Seal Number <u>1195</u>				(12) Laboratory Comments:
C. Date Sample Collected <u>10-30-99</u>				
D. Time Sample Collected <u>11-02-99</u>				
<u>1018 hrs</u>				
(7) Sampling Data Y N - Lithium Bromide ☒ ☐ Amount <u>1500ml</u> Concentration <u>0.3mM/LR</u> - X-Ray ☒ ☐ - Partial Sample ☒ ☐ - Retrieved Partial Sample Stroke Length <u>HR</u>				
(13) Relinquished By (Sign and PRINT) <u>[Signature]</u>				
(14) Received By (Sign and PRINT) <u>V. Matthews</u>				
(15) Date/Time <u>11-2-99</u>				
(16) Receiver Comments				
(17) Relinquished By (Sign and PRINT) <u>V. Matthews</u>				
(18) Received By (Sign and PRINT) <u>R.T. Steele</u>				
(19) Date/Time <u>11-2-99</u>				
(20) Receiver Comments				
(21) Relinquished By (Sign and PRINT) <u>V. Matthews</u>				
(22) Received By (Sign and PRINT) <u>[Signature]</u>				
(23) Date/Time <u>11-2-99</u>				
(24) Receiver Comments				
(25) Relinquished By (Sign and PRINT) <u>[Signature]</u>				
(26) Received By (Sign and PRINT) <u>[Signature]</u>				
(27) Date/Time <u>11-2-99</u>				
(28) Receiver Comments				

Field Comments:
push sampler (o-ring), 19" push

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>266-06</u>		(2) Supervisor/Sampler <u>M.C. Jones</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15G</u>	(5) Cask/Pig Serial No. <u>C-1055</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
A. Work Package Number <u>ES-99-00155</u> B. Cask/Pig Seal Number <u>3825</u> C. Date Sample Collected <u>11-1-99</u> D. Time Sample Collected <u>1345</u>				(12) Laboratory Comments:
(7) Sampling Data - Lithium Bromide Y ☒ N ☐ Amount <u>1500 ml.</u> Concentration <u>0.3</u> - X-Ray ☐ ☒ - Partial Sample ☐ ☒ - Retrieved Partial Sample Stroke Length <u>N/A</u>				
(8) Field Comments:				
(13) Relinquished By (Sign and PRINT) <u>Blue Robert Praznik</u> (17) Relinquished By (Sign and PRINT) <u>V. Matthews</u> (21) Relinquished By (Sign and PRINT) <u>V. Matthews</u> (25) Relinquished By (Sign and PRINT) <u>V. Matthews</u>				
(14) Received By (Sign and PRINT) <u>V. Matthews</u> (18) Received By (Sign and PRINT) <u>R. B. B.</u> (22) Received By (Sign and PRINT) <u>R. B. B.</u> (26) Received By (Sign and PRINT) <u>R. B. B.</u>				(15) Date/Time <u>11-2-99</u> (19) Date/Time <u>11-2-99</u> (23) Date/Time <u>11-2-99</u> (27) Date/Time <u>11-2-99</u>
				(16) Receiver Comments
				(20) Receiver Comments
				(24) Receiver Comments
				(28) Receiver Comments

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CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number 266-07		(2) Supervisor/Sampler M.C. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 156	(5) Cask/Pig Serial No. C1024		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: <div> <div>A. Work Package Number ES-99-00155</div> <div>B. Cask/Pig Seal Number 11024</div> <div>C. Date Sample Collected 11-2-99</div> <div>D. Time Sample Collected 1900 hrs</div> </div>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(8) Field Comments: push sampled O-rings, 19" push, 12.5R dose rate, samples clean off				(12) Laboratory Comments: 150 mm / hr @ C 35 mm / hr @ 1A
(13) Relinquished By (Sign and PRINT) [Signature]				(15) Date/Time 11-5-99
(14) Received By (Sign and PRINT) [Signature]				(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) [Signature]				(19) Date/Time 11-5-99/1055
(21) Relinquished By (Sign and PRINT)				(23) Date/Time
(25) Relinquished By (Sign and PRINT)				(27) Date/Time

HN-1701 REV. 0

5997001753

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number 266-08		(2) Supervisor/Sampler R. FRANK FROST R. Frank Frost		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15G	(5) Cask/Pig Serial No. C-10241559 C2011		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
A. Work Package Number ES-99-00155		(7) Sampling Date Y ☒ N ☐ - Lithium Bromide		(12) Laboratory Comments: 170 mm/hr @ C 35 mm/hr @ 1st
B. Cask/Pig Seal Number 11332		Amount 1500 mL		
C. Date Sample Collected 11-2-99		Concentration 0.3 MOLAR		
D. Time Sample Collected 2025		- X-Ray ☒ - Partial Sample ☒		
		- Retrieved Partial Sample Stroke Length NA		
(8) Field Comments: push sampler (O-ring) 19" push, 12.2R close rate, sampler close. off				
358				
(13) Relinquished By (Sign and PRINT) R. Frank Frost		(14) Received By (Sign and PRINT) BC C-Shell		(15) Date/Time 11-5-99 930
(17) Relinquished By (Sign and PRINT) BC C-Shell		(18) Received By (Sign and PRINT) Frank Frost / LINDA MACK		(19) Date/Time 11-5-99/050
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number 266-09		(2) Supervisor/Sampler M.C. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15G	(5) Cask/Pig Serial No. C-1040		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
A. Work Package Number ES-99-00155		(7) Sampling Data		(12) Laboratory Comments: 200 mm / 1/2 @ C 40 mm / 1/2 @ 1 ft
B. Cask/Pig Seal Number 3826		Y N ☒ ☐		
C. Date Sample Collected 11-3-99		Amount 1500 ml		
D. Time Sample Collected 0915		Concentration 0.3		
		☒ X-Ray ☐		
		☐ Partial Sample ☒		
		Retrieved Partial Sample Stroke Length N/A		
(8) Field Comments:				
359				
(13) Relinquished By (Sign and PRINT) Robert J. Razowski		(14) Received By (Sign and PRINT) RCC-phell		(15) Date/Time 11-5-99
(17) Relinquished By (Sign and PRINT) RCC-phell		(18) Received By (Sign and PRINT) Fontonack/LUNDA MACK		(19) Date/Time 11-5-99/1052
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

5997001730

(1) Sample Number 266-10		(2) Supervisor/Sampler M.C. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank A2-101	(4) Riser 156	(5) Cask/Pig Serial No. C-1035		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: <div> <div> A. Work Package Number ES-99-00155 </div> <div> B. Cask/Pig Seal Number 3827 </div> <div> C. Date Sample Collected 11-3-99 </div> <div> D. Time Sample Collected 1024 </div> </div>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(7) Sampling Data <div> <div> Y ☒ N ☐ </div> <div> Lithium Bromide 1500ml </div> <div> Amount 0.3m </div> <div> Concentration ☒ X-Ray ☐ Partial Sample </div> <div> Retrieved Partial Sample Stroke Length N/A </div> </div>				(12) Laboratory Comments: 170 mmm / 12 @ C 35 mmm / 12 @ 1 R
(8) Field Comments:				

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(13) Relinquished By (Sign and PRINT) Robert Skizw...	(14) Received By (Sign and PRINT) V. Matthews V. Matthews	(15) Date/Time 9:50 am	(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) V. Matthews V. Matthews	(18) Received By (Sign and PRINT) Spencer/LINDA Mack	(19) Date/Time 11-5-99	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time 11-5-99/1043	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

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(1) Sample Number <u>266-11</u>		(2) Supervisor/Sampler <u>M.C. Jones</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>156</u>	(5) Cask/Pig Serial No. <u>C-1041</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
A. Work Package Number <u>ES-99-00155</u>	(7) Sampling Data		(12) Laboratory Comments: <u>180 new/hr @ C</u> <u>35 new/hr @ 1 hr</u>	
B. Cask/Pig Seal Number <u>3828</u>	- Lithium Bromide ☒ Y ☐ N			
C. Date Sample Collected <u>11-3-99</u>	Amount <u>1500ml</u>			
D. Time Sample Collected <u>1405</u>	Concentration <u>0.3M</u>			
	- X-Ray ☐			
	- Partial Sample ☐			
	- Retrieved Partial Sample Stroke Length <u>N/A</u>			
(8) Field Comments:				
<u>5991001757</u>				
(13) Relinquished By (Sign and PRINT) <u>Robert J Raznik</u>	(14) Received By (Sign and PRINT) <u>V. Matthews</u>	(15) Date/Time <u>9:50am</u>	(16) Receiver Comments	
(17) Relinquished By (Sign and PRINT) <u>V. Matthews</u>	(18) Received By (Sign and PRINT) <u>Linda Mack</u>	(19) Date/Time <u>11-5-99</u>	(20) Receiver Comments	
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time <u>11-5-99/1039</u>	(24) Receiver Comments	
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>266-12</u>		(2) Supervisor/Sampler <u>M.C. Jones</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>156</u>	(5) Cask/Pig Serial No. <u>266-SN-1001-C</u>	(6) Shipment Description: A. Work Package Number <u>ES-99-00155</u> B. Cask/Pig Seal Number <u>3834</u> C. Date Sample Collected <u>11-4-99</u> D. Time Sample Collected <u>1009</u>	(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(7) Sampling Data				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
Y N - Lithium Bromide ☒ ☐ Amount <u>1500ml</u> Concentration <u>0.3 m</u> - X-Ray ☐ ☒ - Partial Sample ☐ ☒ - Retrieved Partial Sample Stroke Length <u>N/A</u>				(12) Laboratory Comments:
(8) Field Comments:				(16) Receiver Comments
(13) Relinquished By (Sign and PRINT) <u>Robert J. Praznik</u>				(15) Date/Time <u>11-5-99 1200</u>
(17) Relinquished By (Sign and PRINT) <u>BC-pbell</u>				(19) Date/Time <u>1230</u>
(21) Relinquished By (Sign and PRINT)				(23) Date/Time <u>11-5-99</u>
(25) Relinquished By (Sign and PRINT)				(27) Date/Time
(26) Received By (Sign and PRINT) <u>BC-pbell</u>				(20) Receiver Comments
(22) Received By (Sign and PRINT) <u>R.T. Steele</u>				(24) Receiver Comments
(28) Received By (Sign and PRINT)				(28) Receiver Comments

HNF-1701 REV. 0

5991001758

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number (1-5-99) AZ-101-266-13		(2) Supervisor/Sampler M.C. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15G	(5) Cask/Pig Serial No. C-2008		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: A. Work Package Number ES-99-0055 B. Cask/Pig Seal Number 3835 C. Date Sample Collected 11-4-99 D. Time Sample Collected 1141				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(7) Sampling Data Y N - Lithium Bromide ☒ ☐ Amount 1500 ML Concentration 0.3 M - X-Ray ☒ ☐ - Partial Sample ☒ ☐ - Retrieved Partial Sample Stroke Length N/A				(12) Laboratory Comments:
(8) Field Comments:				
363				
(13) Relinquished By (Sign and PRINT) B Campbell				(16) Receiver Comments Sept 100 1759
(17) Relinquished By (Sign and PRINT) B Campbell				(19) Date/Time 11-5-99 (20) Receiver Comments
(21) Relinquished By (Sign and PRINT) B Campbell				(23) Date/Time 11-5-99 (24) Receiver Comments
(25) Relinquished By (Sign and PRINT)				(27) Date/Time (28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>266-15</u>		(2) Supervisor/Sampler <u>R. FRANK FROST</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15G</u>	(5) Cask/Pig Serial No. <u>SN-76</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
A. Work Package Number <u>ES-99-00155</u>		(12) Laboratory Comments:		
B. Cask/Pig Seal Number <u>11044</u>				
C. Date Sample Collected <u>11-4-99</u>				
D. Time Sample Collected <u>2:22 hrs</u>				
(7) Sampling Data				
- Lithium Bromide ☒ Y ☐ N				
Amount <u>1500 mL</u>				
Concentration <u>0.3 molar</u>				
- X-Ray ☒				
- Partial Sample ☒				
- Retrieved Partial Sample Stroke Length <u>NA</u>				
(8) Field Comments: <u>Push sampler (oring) 19" push, 12.2R data rate</u>				
(13) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(14) Received By (Sign and PRINT) <u>[Signature]</u>		(15) Date/Time <u>11/17/99 8:25</u>
(17) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(18) Received By (Sign and PRINT) <u>[Signature]</u>		(19) Date/Time <u>1400</u>
(21) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(22) Received By (Sign and PRINT) <u>[Signature]</u>		(23) Date/Time <u>11-17-99</u>
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(28) Receiver Comments

365

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

366

(1) Sample Number <u>266-16</u>	(2) Supervisor/Sampler <u>R. FRANK FROST</u>	(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15G</u>	(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(5) Cast/Pig Serial No. <u>SN-77</u>		(11) Seal Number AND Cast/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(6) Shipment Description: A. Work Package Number <u>ES-99-00155</u> B. Cast/Pig Seal Number <u>11034</u> C. Date Sample Collected <u>11-5-99</u> D. Time Sample Collected <u>0945</u>		

(7) Sampling Data	Y	N
- Lithium Bromide	☒	☐
Amount	<u>1500 mL</u>	
Concentration	<u>0.3 mL/LR</u>	
- X-Ray	☒	☐
- Partial Sample	☒	☐
- Retrieved Partial Sample Stroke Length	<u>13"</u>	

(18) Field Comments:
push sample, 13" push (Hydraulic down force clamp)
X-RAY showed 14.4" OF Liquid DOSE was 12.8 R/LR

(12) Laboratory Comments:

(13) Relinquished By (Sign and PRINT) <u>Blue Robert Frazell</u>	(14) Received By (Sign and PRINT) <u>Dr. Robert D. Roberts</u>	(15) Date/Time <u>11/17/99 1325</u>	(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) <u>Dr. Robert D. Roberts</u>	(18) Received By (Sign and PRINT) <u>Dr. Owens-Richardson</u>	(19) Date/Time <u>11-17-99 1400</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

BC-6001-326 (07/97)

(1) Sample Number 266-16R		(2) Supervisor/Sampler R. FRANK FROST		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15G	(5) Cask/Pkg Serial No. 27C		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: ES-99-00155				(11) Seal Number AND Cask/Pkg SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(7) Sampling Data				(12) Laboratory Comments:
Y N ☒ ☐ Lithium Bromide Amount 1500 mL Concentration 0.3 MOLAR X-Ray ☒ Partial Sample ☒ Retrieved Partial Sample Stroke Length 14"				
(8) Field Comments: push sampler o-ring 14" push hydraulic bottom detector, 13.1 R dose rate, X-rayed 5" of sludge + 7" of liquid. All samples #98-002				
367				
(13) Relinquished By (Sign and PRINT) [Signature]		(14) Received By (Sign and PRINT) [Signature]		(15) Date/Time 11/17/99 1325
(17) Relinquished By (Sign and PRINT) [Signature]		(18) Received By (Sign and PRINT) [Signature]		(19) Date/Time 1900
(21) Relinquished By (Sign and PRINT) [Signature]		(22) Received By (Sign and PRINT) [Signature]		(23) Date/Time 11-17-99
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number 269-01		(2) Supervisor/Sampler M.C. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Filter 15L	(5) Cask/Pig Seal No. SN-69		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: A. Work Package Number ES-99-00156 B. Cask/Pig Seal Number 3824 C. Date Sample Collected 11-11-99 D. Time Sample Collected 1858				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(7) Sampling Data - Lithium Bromide Amount 1500 ml. Concentration 0.3 M - X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stroke Length N/A				(12) Laboratory Comments:
(8) Field Comments:				
368				
(13) Relinquished By (Sign and PRINT) V. Matthews		(14) Received By (Sign and PRINT) V. Matthews		(15) Date/Time 1344
(17) Relinquished By (Sign and PRINT) V. Matthews		(18) Received By (Sign and PRINT) R.T. Steele		(19) Date/Time 1405
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time 12-7-99
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
(28) Receiver Comments				

HNF-1701 REV. 0

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number 269-02		(2) Supervisor/Sampler M. C. Jones		(3) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank A2-101	(4) Riser 15L	(5) Cask/Pig Serial No. 24-G		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
A. Work Package Number ES-99-00156 B. Cask/Pig Seal Number 3833 C. Date Sample Collected 11-11-99 D. Time Sample Collected 1952				(12) Laboratory Comments:
(17) Sampling Data - Lithium Bromide ☒ Y ☐ N Amount 1500 MI Concentration 0.3 M - X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stroke Length 3/4				
(8) Field Comments:				
(13) Relinquished By (Sign and PRINT) Robert Plaznik		(14) Received By (Sign and PRINT) V. Matthews		(15) Date/Time 12-5-99
(17) Relinquished By (Sign and PRINT) V. Matthews		(18) Received By (Sign and PRINT) R. F. Steele		(19) Date/Time 11-21
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time 12-2-99
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time
				(28) Receiver Comments

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HNF-1701 REV. 0

CHAIN-OF-CUSTODY RECORD FOR CPO																							
(1) Sample Number 269-03	(2) Supervisor/Sampler M.C. Jones	(3) Tank 42-101	(4) Riser 15L	(5) Cask/Pig Serial No. SN-66	(9) Seal Intact Upon Release? ☒ Yes ☐ No																		
(6) Shipment Description: A. Work Package Number ES-99-00156 B. Cask/Pig Seal Number 3831 C. Date Sample Collected 11-11-99 D. Time Sample Collected 2051					(10) Seal Intact Upon Receipt? ☐ Yes ☐ No																		
					(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☐ Yes ☐ No																		
(12) Laboratory Comments: (17) Sampling Data <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Y</td> <td style="width: 50%; text-align: center;">N</td> </tr> <tr> <td colspan="2"> - Lithium Bromide ☒ Y ☐ N </td> </tr> <tr> <td colspan="2"> Amount 1500 mL </td> </tr> <tr> <td colspan="2"> Concentration 0.3 M </td> </tr> <tr> <td colspan="2"> - X-Ray ☐ Y ☒ N </td> </tr> <tr> <td colspan="2"> - Partial Sample ☐ Y ☒ N </td> </tr> <tr> <td colspan="2"> - Retrieved Partial Sample Stroke Length N/A </td> </tr> </table>					Y	N	- Lithium Bromide ☒ Y ☐ N		Amount 1500 mL		Concentration 0.3 M		- X-Ray ☐ Y ☒ N		- Partial Sample ☐ Y ☒ N		- Retrieved Partial Sample Stroke Length N/A		(12) Laboratory Comments: 				
					Y	N																	
- Lithium Bromide ☒ Y ☐ N																							
Amount 1500 mL																							
Concentration 0.3 M																							
- X-Ray ☐ Y ☒ N																							
- Partial Sample ☐ Y ☒ N																							
- Retrieved Partial Sample Stroke Length N/A																							
(8) Field Comments: <div style="text-align: center; font-size: 2em; font-weight: bold;">370</div>					HNF-1701 REV. 0																		
(13) Relinquished By (Sign and PRINT) Robert J. Reznick					(14) Received By (Sign and PRINT) V. Mathews V. Mathews					(15) Date/Time 11-05-99	(16) Receiver Comments												
										(17) Relinquished By (Sign and PRINT) V. Mathews V. Mathews					(18) Received By (Sign and PRINT) R. J. Reznick					(19) Date/Time 11-12-99	(20) Receiver Comments		
																				(21) Relinquished By (Sign and PRINT) V. Mathews V. Mathews			
										(25) Relinquished By (Sign and PRINT)					(26) Received By (Sign and PRINT)								
																				(27) Date/Time	(28) Receiver Comments		

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>269-04</u>	(2) Supervisor/Sampler <u>D.C. HARTNEY</u>
(3) Tank <u>241-AZ-101</u>	(4) Riser <u>15 L</u>
(5) Cask/Pig Serial No. <u>22 G</u>	
(6) Shipment Description:	
A. Work Package Number <u>ES-99-00156</u>	(7) Sampling Data Y ☒ N ☐ - Lithium Bromide
B. Cask/Pig Seal Number <u>11625</u>	Amount <u>1500ML</u>
C. Date Sample Collected <u>11-13-99</u>	Concentration <u>1.3M</u>
D. Time Sample Collected <u>0932</u>	- X-Ray ☐ - Partial Sample ☐ - Retrieved Partial Sample Stroke Length <u>N/A</u>

(8) Field Comments:

Sampler reads 12.9 R/hr thru drill
string.

371

(13) Relinquished By (Sign and PRINT) <u>Robert Ruznik</u>	(14) Received By (Sign and PRINT) <u>BC Clinton Beckstrom</u>	(15) Date/Time <u>12/09/1412</u>	(16) Receiver Comments <u>N/A</u>
(17) Relinquished By (Sign and PRINT) <u>BC Clinton Beckstrom</u>	(18) Received By (Sign and PRINT) <u>R.T. Steele</u>	(19) Date/Time <u>1432</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number 269-05		(2) Supervisor/Sampler DC Hartley, J. M. Hartley		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank 24-AZ-101	(4) Riser 15L	(6) Cask/Pig Serial No. #57		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(5) Shipment Description: A. Work Package Number ES-99-00156 B. Cask/Pig Seal Number 11620 C. Date Sample Collected 11-13-99 D. Time Sample Collected 1030				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(8) Field Comments: Sample reads 12-R/4R thru drill string				(12) Laboratory Comments:
(13) Relinquished By (Sign and PRINT) Sam Robert Spazich				(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) V. Matthews V. Matthews				(20) Receiver Comments
(21) Relinquished By (Sign and PRINT) V. Matthews V. Matthews				(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)				(28) Receiver Comments
(14) Received By (Sign and PRINT) V. Matthews V. Matthews				(116) Date/Time 1344
(18) Received By (Sign and PRINT) R. T. Steele				(119) Date/Time 12-7-99
(22) Received By (Sign and PRINT)				(123) Date/Time 12-7-99
(26) Received By (Sign and PRINT)				(127) Date/Time

HNF-1701 REV. 0

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number 269-06		(2) Supervisor/Sampler OC Hartley, O. Hartley		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank 24-AZ-101	(4) Riser 15L	(16) Cask/Pig Serial No. #61		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(5) Shipment Description: A. Work Package Number 5399-00156 B. Cask/Pig Seal Number 11635 C. Data Sample Collected 11-13-99 D. Time Sample Collected 1130				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
(6) Field Comments: Sampler reads 12.1 R/hr thru drill string				(12) Laboratory Comments:
(7) Sampling Data				
Y N ☒ Lithium Bromide Amount 1500mL Concentration 13mM ☒ X-Ray ☒ Partial Sample Retrieved Partial Sample Stroke Length N/A				
(14) Received By (Sign and PRINT) Blanton BC Ekstrom				(16) Receiver Comments N/A
(18) Received By (Sign and PRINT) Blanton R.T. Steele				(20) Receiver Comments
(22) Received By (Sign and PRINT)				(24) Receiver Comments
(26) Received By (Sign and PRINT)				(28) Receiver Comments
(15) Relinquished By (Sign and PRINT) Blanton BC Ekstrom				(17) Date/Time 12/7/99 142
(17) Relinquished By (Sign and PRINT)				(19) Date/Time 1433
(21) Relinquished By (Sign and PRINT)				(23) Date/Time 12-7-99
(25) Relinquished By (Sign and PRINT)				(27) Date/Time

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

599T001910

374

(1) Sample Number

269-07

(2) Supervisor/Sampler

D. Clary, J. DeBartolo

(3) Tank

241-AZ-101

(4) Rise

15L

(5) Cask/Pig Serial No.

C2012

(6) Shipment Description:

(7) Sampling Data

Y N

A. Work Package Number

ES99-00156

Lithium Bromide

☒

B. Cask/Pig Seal Number

11622

Amount

150ML

C. Date Sample Collected

11-13-99

Concentration

3MCL

D. Time Sample Collected

1445

X-Ray

☒

Partial Sample

☒

Retrieved Partial Sample Stroke Length

N/A

(8) Field Comments:

Sampler reads 280 R/hr thru drill
 string, thru OTC connected @ 12-9-99

Correction factor of (2) Two
 per mgt direction. @ 12-9-99

(13) Relinquished By (Sign and PRINT)

J. M. Robert I. Fernald

(14) Received By (Sign and PRINT)

J. M. Robert I. Fernald

(17) Relinquished By (Sign and PRINT)

R. E. Shahan BC ELSFROM

(18) Received By (Sign and PRINT)

R. E. Shahan R. T. Steele

(21) Relinquished By (Sign and PRINT)

R. E. Shahan BC ELSFROM

(22) Received By (Sign and PRINT)

R. E. Shahan R. T. Steele

(25) Relinquished By (Sign and PRINT)

R. E. Shahan BC ELSFROM

(26) Received By (Sign and PRINT)

R. E. Shahan R. T. Steele

(9) Seal Intact Upon Release?

☒ Yes☐ No

(10) Seal Intact Upon Receipt?

☒ Yes☐ No

(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6a)

☒ Yes☐ No

(12) Laboratory Comments:

(15) Date/Time

12/9/99 1339

(16) Receiver Comments

N/A

(19) Date/Time

12/9/99 1359

(20) Receiver Comments

(23) Date/Time

12/9/99

(24) Receiver Comments

(27) Date/Time

12/9/99

(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO			
(1) Sample Number 208-08		(2) Supervisor/Sampler R. Frank Frost	
(3) Tank AZ-101	(4) Flow 15L	(5) Cask/Pig Serial No. 30	
(6) Shipment Description:			
A. Work Package Number ES-99-00156		(7) Sampling Data	
B. Cask/Pig Seal Number 11039		Lithium Bromide Y ☒ N ☐	
C. Date Sample Collected 11-14-99		Amount 1500 mL	
D. Time Sample Collected 1025		Concentration 0.3 molar	
		X-Ray ☐	
		Partial Sample ☐	
		Retrieved Partial Sample Stroke Length NA	
(8) Field Comments: push sampler (o-ring), 19" push, 9.3 down rate,			
HNF-1701 REV. 0			
(14) Received By (Sign and PRINT) BCC Call Robert Raznik		(15) Date/Time 11-15-99 1430	
(17) Relinquished By (Sign and PRINT) BCC Call BCC - phel		(18) Receiver Comments 1530	
(21) Relinquished By (Sign and PRINT)		(20) Receiver Comments 11/15/99	
(25) Relinquished By (Sign and PRINT)		(23) Date/Time 11/15/99	
		(24) Receiver Comments	
		(26) Receiver Comments	

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number: 11-15-49 208-09		(2) Supervisor/Sampler R. Frank Frost R. Frank Frost		(9) Seal Intact Upon Release?	☒ Yes ☐ No
(3) Tank AZ-101	(4) Blaser 15L	(5) Cask/Pkg Serial No. 72		(10) Seal Intact Upon Receipt?	☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pkg SERIAL Number consistent with this record? (Block 5 & 6b)	☒ Yes ☐ No
A. Work Package Number ES-99-00156 B. Cask/Pkg Seal Number 11336 C. Date Sample Collected 11-14-99 D. Time Sample Collected 1123				(12) Laboratory Comments:	
(7) Sampling Data • Lithium Bromide ☒ Y ☐ N Amount 1500ml Concentration 0.3 molar • X-Ray ☒ • Partial Sample ☒ • Retrieved Partial Sample Stroke Length NA				HNF-1701 REV. 0 5097001795	
(8) Field Comments: push sampled (ring), 19" push, 11.8R dose rate					
(13) Relinquished By (Sign and PRINT) [Signature]					
(17) Relinquished By (Sign and PRINT) [Signature]					
(14) Received By (Sign and PRINT) [Signature]				(15) Date/Time 11-15-99 1430	(16) Receiver Comments
(18) Received By (Sign and PRINT) [Signature]				(19) Date/Time 11/15/99	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT) [Signature]				(22) Date/Time 11/15/99	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT) [Signature]				(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>268-10</u>		(2) Supervisor/Sampler <u>R. Frank Frost</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No																					
(3) Tank <u>AZ-101</u>	(4) Riser <u>15L</u>	(5) Cask/Pig Serial No. <u>C-2004</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No																					
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No																					
<table border="1"> <tr> <td>(7) Sampling Data</td> <td>Y</td> <td>N</td> </tr> <tr> <td>- Lithium Bromide</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Amount</td> <td colspan="2"><u>1500ML</u></td> </tr> <tr> <td>Concentration</td> <td colspan="2"><u>0.39MOLAR</u></td> </tr> <tr> <td>- X-Ray</td> <td>☐</td> <td>☒</td> </tr> <tr> <td>- Partial Sample</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>- Retrieved Partial Sample Stroke Length</td> <td colspan="2"><u>NA</u></td> </tr> </table>				(7) Sampling Data	Y	N	- Lithium Bromide	☒	☐	Amount	<u>1500ML</u>		Concentration	<u>0.39MOLAR</u>		- X-Ray	☐	☒	- Partial Sample	☐	☐	- Retrieved Partial Sample Stroke Length	<u>NA</u>		(12) Laboratory Comments:
(7) Sampling Data	Y	N																							
- Lithium Bromide	☒	☐																							
Amount	<u>1500ML</u>																								
Concentration	<u>0.39MOLAR</u>																								
- X-Ray	☐	☒																							
- Partial Sample	☐	☐																							
- Retrieved Partial Sample Stroke Length	<u>NA</u>																								
(8) Field Comments: <u>Resh sample (Q-ring), 19" push, 12.5R data rate</u>																									
377																									
(13) Relinquished By (Sign and PRINT) <u>James Michael James Sicks</u>	(14) Received By (Sign and PRINT) <u>D Reddick</u>	(15) Date/Time <u>11/27/99 1110</u>	(16) Receiver Comments																						
(17) Relinquished By (Sign and PRINT) <u>D Reddick</u>	(18) Received By (Sign and PRINT) <u>Richard R. Chivers</u>	(19) Date/Time <u>1200</u>	(20) Receiver Comments																						
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments																						
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments																						

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>100-108-11</u>		(2) Supervisor/Sampler <u>R. Frank Faust</u>		(3) Tank <u>AZ-101</u>		(4) Riser <u>15L</u>		(5) Cask/Pig Serial No. <u>C1018</u>		(6) Seal Intact Upon Release? ☒ Yes ☐ No			
(8) Shipment Description:										(10) Seal Intact Upon Receipt? ☒ Yes ☐ No			
A. Work Package Number <u>ES-99-00156</u> B. Cask/Pig Seal Number <u>11031</u> C. Date Sample Collected <u>11-14-99</u> D. Time Sample Collected <u>1509</u>										(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record (Block 6 & 8) ☒ Yes ☐ No			
(7) Sampling Data										(12) Laboratory Comments:			
- Lithium Bromide ☒ Y ☐ N Amount <u>1500 mL</u> Concentration <u>0.3 molar</u> - X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stock Length <u>NA</u>													
(8) Field Comments: <u>push samples (o-ring), 19" push, 12.7 R dose rate</u>													
(16) Relinquished By (Sign and PRINT) <u>Robert J. Raznik</u>												(16) Receiver Comments	
(17) Relinquished By (Sign and PRINT) <u>BC call BC C-shell</u>												(17) Receiver Comments	
(21) Relinquished By (Sign and PRINT) <u>BC call BC C-shell</u>												(21) Receiver Comments	
(26) Relinquished By (Sign and PRINT)												(26) Receiver Comments	

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>269</u>	(2) Supervisor/Sampler <u>R. Frank Frost</u>	(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15L</u>	(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(5) Cask/Pig Serial No. <u>298</u>	(6) Shipment Description: <u>ES-99-00156</u>	(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record (Block 5 & 6b) ☒ Yes ☐ No
(7) Sampling Data	(12) Laboratory Comments:	
Lithium Bromide ☒ Y ☐ N Amount <u>1500 mL</u> Concentration <u>0.3 MOLAR</u> X-Ray ☒ Partial Sample ☒ Retrieved Partial Sample Stroke Length <u>NA</u>		

(8) Field Comments:

push sampler (O-ring), 19" push.

379

(13) Relinquished By (Sign and PRINT) <u>Blue Robert J. Raznik</u>	(14) Received By (Sign and PRINT) <u>V. Matthew V. Menden</u>	(15) Date/Time <u>1328</u>	(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) <u>V. Matthew V. Menden</u>	(18) Received By (Sign and PRINT) <u>Recharles P. Richards</u>	(19) Date/Time <u>11-17-99</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time <u>1400</u>	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNH-1701 REV. 0

(1) Sample Number 269-013		(2) Supervisor/Sampler M.C. Jones M. Jones		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank AZ-101	(4) Riser 15L	(5) Cask/Pig Serial No. SN-62		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
(7) Sampling Data				(12) Laboratory Comments:
Y N - Lithium Bromide ☒ ☐ Amount 1500 MI Concentration 0.3 M - X-Ray ☐ ☒ - Partial Sample ☐ ☒ - Retrieved Partial Sample Stroke Length N/A				
A. Work Package Number ES-99-00156 B. Cask/Pig Seal Number 3832 C. Date Sample Collected 11-15-99 D. Time Sample Collected 1015				
(8) Field Comments:				
380				
(13) Relinquished By (Sign and PRINT) John Robert Spruznik		(14) Received By (Sign and PRINT) V. Matthews V. Matthews		(15) Date/Time 1328
(17) Relinquished By (Sign and PRINT) V. Matthews V. Matthews		(18) Received By (Sign and PRINT) R. Swander R. Swander		(19) Date/Time 11-17-99
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time 1400
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time 11-17-99
				(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>269-14</u>		(2) Supervisor/Sampler <u>M.C. Jones DM-C</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15L</u>	(5) Cask/Pig Serial No. <u>C-2001</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description:				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No
(7) Sampling Data Y N Lithium Bromide ☒ ☐ Amount <u>1500 ml</u> Concentration <u>0.3 M</u> X-Ray ☐ ☒ Partial Sample ☐ ☒ Retrieved Partial Sample Stroke Length <u>N/A</u>				(12) Laboratory Comments:
A. Work Package Number <u>ES-99-00156</u> B. Cask/Pig Seal Number <u>3830</u> C. Date Sample Collected <u>11-15-99</u> D. Time Sample Collected <u>1109</u>				
(8) Field Comments:				
381				
(13) Relinquished By (Sign and PRINT) <u>Elu Robert Plaznik</u>		(14) Received By (Sign and PRINT) <u>V. Matthews V. Matthews</u>		(16) Date/Time <u>1328</u> (16) Receiver Comments
(17) Relinquished By (Sign and PRINT) <u>V. Matthews V. Matthews</u>		(18) Received By (Sign and PRINT) <u>Reynolds Reynolds</u>		(19) Date/Time <u>1400</u> (19) Receiver Comments
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time <u>11-17-99</u> (23) Receiver Comments
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time <u></u> (27) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>268-15</u>		(2) Supervisor/Sampler <u>R. FRANK FROST</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No
(3) Tank <u>AZ-101</u>	(4) Riser <u>15L</u>	(5) Cask/Pig Serial No. <u>71</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No
(6) Shipment Description: <div style="display: flex; justify-content: space-between;"> <div> A. Work Package Number <u>ES-99-00156</u> </div> <div> (7) Sampling Date Lithium Bromide ☒ Y ☐ N Amount <u>1500ml</u> Concentration <u>0.3 molar</u> X-Ray ☒ Partial Sample ☒ Retrieved Partial Sample Stroke Length <u>NA</u> </div> </div>				(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No
(8) Field Comments: <u>push sampler (O-ring), sampler #98-639, 17.8 R dose rate, sampler clean, 19" push</u> <u>X-rayed = 100% liquid in sampler (liquid jello)</u>				(12) Laboratory Comments:

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(13) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(14) Received By (Sign and PRINT) <u>Robb C. Pelly</u>	(15) Date/Time <u>11-23-99</u>	(16) Receiver Comments
(17) Relinquished By (Sign and PRINT) <u>Robb C. Pelly</u>	(18) Received By (Sign and PRINT) <u>KL Overman/RL Chambers</u>	(19) Date/Time <u>11-23-99</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number <u>268-16</u>		(2) Supervisor/Sampler <u>R. FRANK FROST</u>		(9) Seal Intact Upon Release? ☒ Yes ☐ No	
(3) Tank <u>AZ-101</u>		(4) Riser <u>154</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(5) Shipment Description: <u>ES-99-00156</u>		(5) Cask/Pig Serial No. <u>C-2000</u>		(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No	
(6) Field Comments: <u>push sample (o-ring), samples #98-630, 15.7 R data rate, X-rayed = 12" of product = 9" of sludge and 3" of liquid. PH</u>		(7) Sampling Data Y ☒ N ☐ Lithium Bromide Amount <u>1500 mL</u> Concentration <u>0.3 MOLAR</u> - X-Ray ☒ - Partial Sample ☒ - Retrieved Partial Sample Stroke Length <u>12"</u>		(12) Laboratory Comments:	
(13) Relinquished By (Sign and PRINT) <u>Edm Robert Kneil</u>		(14) Received By (Sign and PRINT) <u>RE Elstrom BC Elstrom</u>		(15) Date/Time <u>12/7/99 0934</u>	
(17) Relinquished By (Sign and PRINT) <u>BC Elstrom</u>		(18) Received By (Sign and PRINT) <u>RT Stach R.T. Steele</u>		(19) Date/Time <u>1030</u>	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time <u>12-7-99</u>	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time	
(28) Relinquished By (Sign and PRINT)		(29) Received By (Sign and PRINT)		(30) Date/Time	

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number 296-16A 11-16-99 (2) Supervisor/Sampler M.C. Jones

(3) Tank AZ-101 (4) Riser 15L (5) Cask/Pig Serial No. 2-G

(6) Shipment Description:

A. Work Package Number E5-99-00156

B. Cask/Pig Seal Number 3869

C. Date Sample Collected 11-16-99

D. Time Sample Collected 1155

(7) Sampling Data

- Lithium Bromide ☒ Y ☐ N

Amount 1500 mL

Concentration 0.3 M

- X-Ray ☒ ☐

- Partial Sample ☒ ☐

- Retrieved Partial Sample Stroke Length 15"

(8) Field Comments:

X-Ray showed 5" of sludge in the sampler and 14" of liquid.

11-16-99

(9) Seal Intact Upon Release? ☒ Yes ☐ No

(10) Seal Intact Upon Receipt? ☒ Yes ☐ No

(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No

(12) Laboratory Comments:

(13) Relinquished By (Sign and PRINT) Robert Skazinski

(14) Received By (Sign and PRINT) V. Matthews

(15) Date/Time 9:32 AM

(16) Receiver Comments

(17) Relinquished By (Sign and PRINT) V. Matthews

(18) Received By (Sign and PRINT) R.T. Steele

(19) Date/Time 1020

(20) Receiver Comments

(21) Relinquished By (Sign and PRINT) V. Matthews

(22) Received By (Sign and PRINT)

(23) Date/Time 12-7-99

(24) Receiver Comments

(25) Relinquished By (Sign and PRINT)

(26) Received By (Sign and PRINT)

(27) Date/Time

(28) Receiver Comments

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

(1) Sample Number <u>269-16R1</u>		(2) Supervisor/Sampler <u>R. FRANK FROST</u>		(3) Seal Intact Upon Release? ☒ Yes ☐ No	
(3) Tank <u>AZ-101</u>		(4) Riser <u>156</u>		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(5) Shipment Description: <u>C-1035</u>		(6) Sampling Data Y N Lithium Bromide ☒ ☐ Amount <u>1500 mL</u> Concentration <u>0.3 MOLAR</u> X-Ray ☒ ☐ Partial Sample ☒ ☐ Retrieved Partial Sample Stroke Length <u>15"</u>		(11) Seal Number AND Cast/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No	
A. Work Package Number <u>ES-99-00156</u>		(12) Laboratory Comments:			
B. Cast/Pig Seal Number <u>1194</u>					
C. Date Sample Collected <u>11-16-99</u>					
D. Time Sample Collected <u>1841 hrs</u>					
(8) Field Comments: <u>push sampler (o-ring), sampler 98-642, 15" push, sampler clean, X-rayed = 13 1/2" of product = 8" of sludge and 5 1/2" of liquid. off</u>					
(13) Relinquished By (Sign and PRINT) <u>Alvin Robert Sraznik</u>		(14) Received By (Sign and PRINT) <u>BC Ekstrom</u>		(15) Date/Time <u>12/6/99 0936</u>	(16) Receiver Comments <u>N/A</u>
(17) Relinquished By (Sign and PRINT) <u>BC Ekstrom</u>		(18) Received By (Sign and PRINT) <u>R.T. Steele</u>		(19) Date/Time <u>10 30</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time	(28) Receiver Comments

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CHAIN-OF-CUSTODY RECORD FOR CPO

HNF-1701 REV. 0

599T0018011

189 Field Comments:

Field Comments: Lithium Bromide Sample, 4/7

387

DISTRIBUTION: Original - Laboratory
Copy - Sampling Operations

Field Blank

CHAIN-OF-CUSTODY RECORD FOR CPO

(1) Sample Number Field Blank		(2) Supervisor/Sampler R. Frank East		(9) Seal Intact Upon Release? ☒ Yes ☐ No	
(3) Task AZ-101		(4) Riser 15L		(10) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(5) Task/Pig Serial No. NA		(6) Task/Pig Serial No. NA		(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6) ☒ Yes ☐ No	
(7) Shipment Description A. Work Package Number ES-99-08156 # 11359		(7) Sampling Data - Lithium Bromide ☐ Y ☒ N Amount NA Concentration NA - X-Ray ☐ ☒ - Partial Sample ☐ ☒ - Retrieved Partial Sample Stroke Length NA		(12) Laboratory Comments: 5098T 001202	
(8) Field Comments: Field Blank - AZ-101, riser 15L, deionized H₂O					
(13) Relinquished By (Sign and PRINT) V. Matthews		(14) Received By (Sign and PRINT) V. Matthews		(15) Date/Time 11-19-99	
(17) Relinquished By (Sign and PRINT) V. Matthews		(18) Received By (Sign and PRINT) R. Frank East		(19) Date/Time 11/30	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)		(23) Date/Time 11/19/99	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time	

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PHOTOGRAPHS

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A2101 C266 S1

11/3/85

5032

0266

102-101

11/3/93

305

C266

101-261

11/3/99

Seq 4

Care 266

#2 101

11/3/55

S&S

Core 266

A2101

11/3/99

Core 266

AZ 101

11/3/59

Seq 7

CX 266

A2101

56/80/11

Sq 8

Core 266

A2101

11/08/99

Sej 9

CXE 266

A261

A2-101 C 266 Segment 10

A2-101 C 266 Segment 11

A2-101 C 266 Segment 12

PM 2:40
NOV 10 1999

AZ-101 C266 Segment 13

A2-101 C 266 Segment 14

11/9/85

Sq/5

core 266

101-20

CODE 2166 S116

Cable 5168

12/8/54

Seq 1

C-265

A2-101

12/8/95

5072

C269

A2-101

12/18/95

CR09 5.3

12/1/89

h 505

6969

A2-101

12/8/99

505

6969

12-101

12/8/59

5036

C269

102-101

12/14/99

Seq 7

C 269

AZ-101

C2609 58

0269 59

56/1/01

501 10

0-269

AZ-101

11/22/99

5911

CASE 269

AZ-101

11/22/95

Seq. 12

Box 269

A2-101

1/22/95

C2609 5/13

11/22/93

C269 S14

12/19/99

501.15

C-2609

A2-101

12/8/99

Sq 16

C269

A2-101

12/8/95

12/8/99

Sig 16 RI

C 269

AZ-101

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12/19/99

C2109 51682

**This document was too large to scan
as a single document. It has
been divided into smaller sections.**

Section 2 of 5

Document Information			
Document #	HNF-1701	Revision	0
Title	TANK 241AZ101, CORES 266, 269 ANALYTICAL RESULTS FOR THE FINAL REPORT		
Date			
Originator	STEEN FH	Originator Co.	FH
Recipient		Recipient Co.	
References			
Keywords			
Projects			
Other Information			

HNF-1701 REV. 0

COMPOSITE WORKSHEETS

HNF-1701 REV. 0

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Composite Worksheet

Date: 12/28/99

Tank: A2101

P.C.: Steer

Phone #: 372-2495

Samp. ID: 991001908
Aug/Core: 266
Segment: 16R

Samp. ID: 991001906
Aug/Core: 166
Segment: 16

Samp. ID: 991001906
Aug/Core: 166
Segment: 16

Samp. ID: 991001906
Aug/Core: 166
Segment: 16

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

Jar #: 15485
Jar Size: 125 mL
Initial Wgt.: 159.3 g
Final Wgt.: 129.1 g
Net Wgt.: 30.2 g

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 326.8 g
Final Wgt.: 326.8 g
Net Wgt.: 116.1 g

429

99020 433

Samp. ID: 9991001997

Tests:
Composol
Homogenizer

Jar #: 15441
Jar Size: 250 mL
Final Wgt.: 356.2 g
Initial Wgt.: 210.7 g
Net wgt.: 145.5

HNF-1701 REV. 0

Special Instructions: Depne composite using entire sample. OK to
deplate jars.

Final Composite Calculation SheetDate: 12/28/99 Technician: Ron Hale + Alan CampbellTotal number of jars used to build the composite: 2Composite Jar number: 15441 Jar size: 250

- 1) Sample from segment jar 15441 to composite jar = 116.1 grams
 - 2) Sample from segment jar 15485 to composite jar = 29.4 grams
 - 3) Sample from segment jar _____ to composite jar = _____ grams
 - 4) Sample from segment jar _____ to composite jar = _____ grams
 - 5) Sample from segment jar _____ to composite jar = _____ grams
 - 6) Sample from segment jar _____ to composite jar = _____ grams
 - 7) Sample from segment jar _____ to composite jar = _____ grams
 - 8) Sample from segment jar _____ to composite jar = _____ grams
 - 9) Sample from segment jar _____ to composite jar = _____ grams
 - 10) Sample from segment jar _____ to composite jar = _____ grams
 - 11) Sample from segment jar _____ to composite jar = _____ grams
 - 12) Sample from segment jar _____ to composite jar = _____ grams
 - 13) Sample from segment jar _____ to composite jar = _____ grams
 - 14) Sample from segment jar _____ to composite jar = _____ grams
 - 15) Sample from segment jar _____ to composite jar = _____ grams
 - 16) Sample from segment jar _____ to composite jar = _____ grams
 - 17) Sample from segment jar _____ to composite jar = _____ grams
 - 18) Sample from segment jar _____ to composite jar = _____ grams
 - 19) Sample from segment jar _____ to composite jar = _____ grams
 - 20) Sample from segment jar _____ to composite jar = _____ grams
- Total grams collected in composite jar # 15441 = 145.5 grams

LAD 7/1/00
~~HNF-1701 REV. 0~~

430

Composite Worksheet

P.C.: Steen

Phone #: 9900433

Date: 03/15/00

Tank: AZ101

Composite #1

0.273 Samp. ID: 5001000460
 Core: 266
 Segment: 1
 Stratum: Cent Solid

Jar #: 16738 ✓
 Jar Size: mL
 Initial Wgt.: g
 Final Wgt.: g
 Net Wgt.: g
 Net to Comp.: g

Verify parent jar# and net weight added by initialing "Net to Comp."

4.514 Samp. ID: 5001000460
 Core: 266
 Segment: 2
 Stratum: Cent Solid

Jar #: 16739 ✓
 Jar Size: mL
 Initial Wgt.: g
 Final Wgt.: g
 Net Wgt.: g
 Net to Comp.: g

5.304 Samp. ID: 5001000460
 Core: 266
 Segment: 3
 Stratum: Cent Solid

Jar #: 16740 ✓
 Jar Size: mL
 Initial Wgt.: g
 Final Wgt.: g
 Net Wgt.: g
 Net to Comp.: g

0.341 Samp. ID: 5001000460
 Core: 266
 Segment: 4
 Stratum: Cent Solid

Jar #: 16741 ✓
 Jar Size: mL
 Initial Wgt.: g
 Final Wgt.: g
 Net Wgt.: g
 Net to Comp.: g

initials

initials

Verify homogenization. 3-16-006
 Composite Description:

Stirred w/ spatula for 10m
wet light yellow, smooth, satte

Initials: py

Jar #: 15881
 Jar Size: 125 mL
 Final Wgt.: 166.85 g
 Initial Wgt.: 123.25 g
 Net Wgt.: 43.60 g

Samp. ID: 5001000744
 Tests: COMPOS0107
SAMPAN0700

Special Instructions: Combine the centrifuged solids from
segments 1-15. Record final weight. Stir with a spatula.

Page 1 of 4

Composite Worksheet

Date: 7/20/11

Tank: 03/15/00

P.C.: Steer

Phone #: 2-2495

Samp. ID: 40000
Aug/Core: 2166
Segment: 5
Cent Solids

Jar #: 16744 ✓
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

Jar #: 16750x
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

498

Samp. ID: 40010
Aug/Core: 2466
Segment: 6
Cent Solids

Samp. ID: 50010
Aug/Core: 2466
Segment: 7
Cent Solids

Jar #: 16882 ✓
Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID: 60020
Aug/Core: 2466
Segment: 8

Jar #: 16872⁴
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____

07/13/00 14:12 FAX 509 373 1438

WMH 222S/11A/200W

003

Samp. ID:

See Parent

Jar # 15881
on Page #1

Special Instructions:

Composite Worksheet

P.C.: Steer

Phone #: 2-24495

Date: 03/15/00

Tank: A3701

Samp. ID: 5001000408
Aug/Core: 2466
Segment: 9
Cent Solids

Jar #: 16877 X
Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID: 5001000408
Aug/Core: 2466
Segment: 10
Cent Solids

Jar #: 16873 X
Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID: 5001000408
Aug/Core: 2466
Segment: 12
Cent Solids

Jar #: 16868 X
Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID: 5001000408
Aug/Core: 2466
Segment: 13
Cent Solids

Jar #: 16874 X
Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

See Parent
Jar # 15881
on Page #1

Samp. ID:

Special Instructions:

Composite Worksheet

Date: 03/15/00

Tank: A2101

P.C.: Sheer

Phone #: 2-244988

Samp. ID: 494
Aug/Core: 2466
Segment: 15

Samp. ID: 16885
Aug/Core: 1500
Segment: 15

Samp. ID: 15881
Aug/Core: 1500
Segment: 15

Samp. ID: 15881
Aug/Core: 1500
Segment: 15

Jar #: 16885 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: 15881 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: 15881 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: 15881 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID:

See Parent
Jar # 15881
on Page #1

Special Instructions:

Composite Worksheet

HNF-1701 REV. 0

Date: 03/15/00

Tank: A2101

P.C.: Sheep

Phone #: 2-2495

group # 99000433
Composite # 2

Samp. ID: 6001000433
Core: 2le6
Segment: 1le(DL)
Stratum: Cent Solids
(Core)

Samp. ID: 591000433
Core: 2le6
Segment: 1le Comp
Stratum:

Samp. ID: _____
Core: _____
Segment: _____
Stratum: _____

Samp. ID: _____
Core: _____
Segment: _____
Stratum: _____

Jar #: _____
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

Jar #: _____
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

Jar #: _____
Jar Size: _____ mL
Initial Wgt.: _____ g
Final Wgt.: _____ g
Net Wgt.: _____ g
Net to Comp.: _____ g

Verify parent jar# and net weight added by initialing "Net to Comp."

435

Samp. ID: 500100745

Tests: COMPOS01

Jar #: 15441
Jar Size: 250 mL
Final Wgt.: 323.71g
Initial Wgt.: 317.38g
Net Wgt.: 6.33g

Verify homogenization.
Composite Description:

Initials: LD

Jar # 16887 seg. 16

Special Instructions: Combine centrifuged solids from segment 16 DL + segment 16 composite solids. Use jar # 15441.

Composite Worksheet

Date: 03/15/00

Tank: A2101

9900433

Composite #3

P.C.: Steen

Phone #: 2-2495

Dep total

114.3
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite
Composite #1 (white)

9.26
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

71.88
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

71.88
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

71.88
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

71.88
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

71.88
Samp. ID: 500100
Core: 246.45
Segment: Core
Stratum: Composite

Jar #: 15441
Jar Size: 250 mL
Initial Wgt.: 323.71 g
Final Wgt.: 317.38 g
Net Wgt.: 104.78 g
Net to Comp.: 104.78 g

Jar #: 15881
Jar Size: 125 mL
Initial Wgt.: 166.45 g
Final Wgt.: 146.72 g
Net Wgt.: 19.32 g
Net to Comp.: 19.32 g

Jar #: 16738
Jar Size: 500 mL
Initial Wgt.: 667.79 g
Final Wgt.: 479.35 g
Net Wgt.: 188.44 g
Net to Comp.: 188.44 g

Jar #: 16357
Jar Size: 125 mL
Initial Wgt.: 186.56 g
Final Wgt.: 131.62 g
Net Wgt.: 54.94 g
Net to Comp.: 54.94 g

Verify parent jar#
and net weight added
by initialing "Net to Comp."

2 Liter Jar

Jar #: #1748
Jar Size: 2000 mL
Final Wgt.: 739.62 g
Initial Wgt.: 739.62 g
Net Wgt.: 0 g

Samp. ID: 500100748
Tests: COMPOS01
96
4-21-00

Verify homogenization.
Composite Description:

Initials: _____

Special Instructions: Separate composites using weights listed.

Please see accompanying instructions.

Page 1 of 8

Composite Worksheet

Date: 03/15/00

Tank: A2701

P.C.: Star

Phone #: 2-24495

Jar #: 16740
Jar Size: 500 mL
Initial Wgt.: 655.55 g
Final Wgt.: 584.23 g
Net Wgt.: 71.32 g
Net to Comp.: 71.28 g

Jar #: 16741
Jar Size: 500 mL
Initial Wgt.: 652.31 g
Final Wgt.: 582.10 g
Net Wgt.: 70.21 g
Net to Comp.: 70.12 g

Jar #: 16744
Jar Size: 500 mL
Initial Wgt.: 660.35 g
Final Wgt.: 589.33 g
Net Wgt.: 71.02 g
Net to Comp.: 70.94 g

Jar #: 16750
Jar Size: 500 mL
Initial Wgt.: 655.35 g
Final Wgt.: 581.77 g
Net Wgt.: 73.58 g
Net to Comp.: 73.54 g

HNF-1701 REV. 0

See Parent
Jar # on Page #1

Samp. ID: 50000748

Special Instructions:

Composite Worksheet

P.C.: Steer

Phone #: 2-2495

Date: 03/15/00

Tank: AZ101

Samp. ID: 16882
Aug/Core: 266
Segment: 7DL

Jar #: 16882 ✓
Jar Size: 500 mL
Initial Wgt.: 651.42 g
Final Wgt.: 582.87 g
Net Wgt.: 68.55 g
Net to Comp.: 68.48 g

Samp. ID: 16872
Aug/Core: 266
Segment: 8DL

Jar #: 16872 ✓
Jar Size: 500 mL
Initial Wgt.: 645.02 g
Final Wgt.: 575.03 g
Net Wgt.: 68.99 g
Net to Comp.: 68.90 g

Samp. ID: 16877
Aug/Core: 266
Segment: 9DL

Jar #: 16877 ✓
Jar Size: 500 mL
Initial Wgt.: 649.86 g
Final Wgt.: 580.33 g
Net Wgt.: 69.53 g
Net to Comp.: 69.43 g

Samp. ID: 16873
Aug/Core: 266
Segment: 10DL

Jar #: 16873 ✓
Jar Size: 500 mL
Initial Wgt.: 411.44 g
Final Wgt.: 344.04 g
Net Wgt.: 67.40 g
Net to Comp.: 67.04 g

Samp. ID: 16877

See Parent
Jar # 16877
on Page #1

HNF-1701 REV. 0

Special Instructions: _____

Composite Worksheet

Date: 03/15/00Tank: A2101P.C.: SteerPhone #: 2-2495
 Bin B5
 Samp. ID: 1991001827
 Aug/Core: 266
 Segment: 11DL

 Jar #: 15433
 Jar Size: 500 ml
 Initial Wgt.: 427.53g
 Final Wgt.: 355.55g
 Net Wgt.: 71.98g
 Net to Comp.: 71.87g
71.87

 Samp. ID: 1991001827
 Aug/Core: 266
 Segment: 12DL

 Jar #: 16868
 Jar Size: 500 ml
 Initial Wgt.: 630.82g
 Final Wgt.: 557.34g
 Net Wgt.: 73.48g
 Net to Comp.: 73.41g

 Samp. ID: 1991001827
 Aug/Core: 266
 Segment: 13DL

 Jar #: 16874
 Jar Size: 500 ml
 Initial Wgt.: 623.97g
 Final Wgt.: 550.44g
 Net Wgt.: 73.53g
 Net to Comp.: 73.49g

 Samp. ID: 1991001827
 Aug/Core: 266
 Segment: 15DL

 Jar #: 16885
 Jar Size: 500 ml
 Initial Wgt.: 624.74g
 Final Wgt.: 554.53g
 Net Wgt.: 70.21g
 Net to Comp.: 70.00g

HNF-1701 REV. 0

See Parent

Samp. ID: See 100074Jar # on Page #1

Special Instructions: _____

Composite Worksheet

Date: 03/15/00

Tank: A2701

P.C.: Steel

Phone #: 2-2495

5.40
Samp. ID: 5.40
Aug/Core: 2/6
Segment: 1/6 DL

Samp. ID: 5010001810
Aug/Core: 2466
Segment: 1DL

Samp. ID: 54991010195
Aug/Core: 2466
Segment: 2DL
Dup'd 6/3/19/00
98

Jar #: 16887 ^{ORC} (P)
 Jar Size: 500 mL
 Initial Wgt.: 443.94 g
 Final Wgt.: 438.07 g
 Net Wgt.: 5.87 g
 Net to Comp.: 5.80 g

Jar #: 16738 ✓
 Jar Size: 500 mL
 Initial Wgt.: 594.99g
 Final Wgt.: 522.47g
 Net Wgt.: 72.52g
 Net to Comp.: 72.22g

Jar #: 16357^{QBC}
Jar Size: 500 mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

ase
 Jar #: 16740 ✓
 Jar Size: 500 ml
 Initial Wgt.: 584.21
 Final Wgt.: 513.79
 Net Wgt.: 70.42
 Net to Comp.: 70.19

04/24/00 11:02 FAX 509 373 1438

HNMH 222S/11A/200W

900 7

HNF-1701 REV. 0

Samp. ID: 500700748

See Parent

Jar # _____ on Page #1

Special Instructions:

Composite Worksheet

Date: 03/15/00
 Tank: A2101

P.C.: Steer
 Phone #: 2-24495

Samp. ID: 70.86
 Aug/Core: 266
 Segment: 4DL

Jar #: 16741 ✓
 Jar Size: 500 mL
 Initial Wgt.: 581.97 g
 Final Wgt.: 511.49 g
 Net Wgt.: 70.48 g
 Net to Comp.: 70.37 g

Samp. ID: 70.73
 Aug/Core: 266
 Segment: 5DL

Jar #: 16744 ✓
 Jar Size: 500 mL
 Initial Wgt.: 589.30 g
 Final Wgt.: 513.57 g
 Net Wgt.: 75.73 g
 Net to Comp.: 75.69 g

Samp. ID: 71.42
 Aug/Core: 266
 Segment: 6DL

Jar #: 16750 ✓
 Jar Size: 500 mL
 Initial Wgt.: 581.74 g
 Final Wgt.: 510.77 g
 Net Wgt.: 70.97 g
 Net to Comp.: 70.91 g

Samp. ID: 68.92
 Aug/Core: 266
 Segment: 7DL

Jar #: 16882 ✓
 Jar Size: 500 mL
 Initial Wgt.: 582.85 g
 Final Wgt.: 513.80 g
 Net Wgt.: 69.05 g
 Net to Comp.: 68.82 g

See Parent
 Jar #
 on Page #1

Samp. ID: 70.700248

Special Instructions:

Composite Worksheet

Date: 03/15/00

Tank: A2101

P.C.: Steer

Phone #: 2-24495

Jar #: 16872 ✓
 Jar Size: 500 mL
 Initial Wgt.: 575.00 g
 Final Wgt.: 505.74 g
 Net Wgt.: 69.26 g
 Net to Comp.: 68.78 g

Jar #: 16877 ✓
 Jar Size: 500 mL
 Initial Wgt.: 580.33 g
 Final Wgt.: 510.40 g
 Net Wgt.: 69.93 g
 Net to Comp.: 69.15 g

Jar #: 16873 ✓
 Jar Size: 500 mL
 Initial Wgt.: 343.98 g
 Final Wgt.: 298.89 g
 Net Wgt.: 45.09 g
 Net to Comp.: 45.03 g

Jar #: 15433 ✓
 Jar Size: 250 mL
 Initial Wgt.: 355.50 g
 Final Wgt.: 284.47 g
 Net Wgt.: 71.03 g
 Net to Comp.: 70.72 g

Samp. ID: See Parent

Jar # on Page #1

Special Instructions:

Composite Worksheet

Date: 03/15/00

Tank: AZ101

P.C.: Steer

Phone #: 2-2495

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100 11 11

71.06
70.41
Samp. ID: 59100083
Aug/Core: 266
Segment: 12DL

Jar #: 16868
Jar Size: 500 mL
Initial Wgt.: 557.32g
Final Wgt.: 485.97g
Net Wgt.: 71.35g
Net to Comp.: 71.06g

71.63
71.63
Samp. ID: 59100083
Aug/Core: 266
Segment: 13DL

Jar #: 17325
Jar Size: 500 mL
Initial Wgt.: 426.82g
Final Wgt.: 171.51g
Net Wgt.: 71.62g
Net to Comp.: 71.62g

69.44
69.44
Samp. ID: 59100083
Aug/Core: 266
Segment: 15DL

Jar #: 16885
Jar Size: 500 mL
Initial Wgt.: 554.30g
Final Wgt.: 485.00g
Net Wgt.: 69.30g
Net to Comp.: 69.14g

5.53
5.53
Samp. ID: 59100083
Aug/Core: 266
Segment: 16DL

Jar #: 16887
Jar Size: 500 mL
Initial Wgt.: 438.08g
Final Wgt.: 5.00g
Net Wgt.: 5.00g
Net to Comp.: 5.00g

See Parent
Jar #
on Page #1

Samp. ID: 59100083

Special Instructions:

Composite Worksheet

Date: 3/21/00

Tank: AZ101

Group # 99000433

P.C.: Star

Phone #: 202495

8/18/18

Samp. ID: 1645
 Core: 266
 Segment: 3 D
 Stratum: _____

Samp. ID: _____
 Core: _____
 Segment: _____
 Stratum: _____

Samp. ID: _____
 Core: _____
 Segment: _____
 Stratum: _____

Samp. ID: _____
 Core: _____
 Segment: _____
 Stratum: _____

Jar #: 16740 Jar Size: 500 mL
 Initial Wgt.: 513.63 g
 Final Wgt.: 447.14 g
 Net Wgt.: 66.49 g
 Net to Comp.: 66.49 g

Jar #: _____ Jar Size: _____ mL
 Initial Wgt.: _____ g
 Final Wgt.: _____ g
 Net Wgt.: _____ g
 Net to Comp.: _____ g

Jar #: _____ Jar Size: _____ mL
 Initial Wgt.: _____ g
 Final Wgt.: _____ g
 Net Wgt.: _____ g
 Net to Comp.: _____ g

Jar #: _____ Jar Size: _____ mL
 Initial Wgt.: _____ g
 Final Wgt.: _____ g
 Net Wgt.: _____ g
 Net to Comp.: _____ g

Verify parent jar#
 and net weight added
 by initialing "Net to Comp."

Samp. ID: 5000748

Tests: COMPOS01

Jar #: 748 Jar Size: 2000 mL
 Initial Wgt.: _____ g
 Final Wgt.: 739.62 g
 Net Wgt.: _____ g

Verify homogenization.
 Composite Description:

Initials: _____

Special Instructions: Please add 16.45 grams of DL from Seg 3 to large composite jar.

HNF-1701 REV. 0

Composite Worksheet

Date: 12/28/99

Tank: A2101

P.C.: Steer

Phone #: 372-2495

Samp. ID: 5991001946
Aug/Core: 269
Segment: 16625

Samp. ID: 5991001949
Aug/Core: 269
Segment: 16625

Samp. ID: 5991001987
Aug/Core: 269
Segment: 16625

Samp. ID: 5991001951
Aug/Core: 269
Segment: 16625

Jar #: 16351

Jar Size: 125 mL

Initial Wgt.: 234.1 g

Final Wgt.: 128.1 g

Net Wgt.: 106.0 g

Net to Comp.: 103.8 g

for depleted

Jar #: 17572

Jar Size: 60 mL

Initial Wgt.: 200.3 g

Final Wgt.: 87.7 g

Net Wgt.: 112.6 g

Net to Comp.: 101.4 g

for depleted

Jar #: 15436

Jar Size: 250 mL

Initial Wgt.: 384.3 g

Final Wgt.: 224.0 g

Net Wgt.: 160.3 g

Net to Comp.: 155.5 g

for depleted

Jar #: 17508

Jar Size: 60 mL

Initial Wgt.: 164.3 g

Final Wgt.: 90.7 g

Net Wgt.: 73.6 g

Net to Comp.: 72.0 g

for depleted

Samp. ID: 5991001995

Jar #: 17480

Jar Size: 500 mL

Final Wgt.: 761.3 g

Initial Wgt.: 296.8 g

Net Wgt.: 464.5 g

Tests:

COMPOSO
HOMGNZO1

HNF-1701 REV. 0

Special Instructions: Make composite using all available solid material.

Composite Worksheet

P.C.: Star
Phone #: 372-2495

Date: 12/28/99
Tank: A2101

Samp. ID: 16336
Aug/Core: 125
Segment: 100

Jar #: 16336 Jar Size: 125 mL
Initial Wgt.: 236.7 g
Final Wgt.: 232.0 g
Net Wgt.: 4.7 g

Samp. ID: 16353
Aug/Core: 269
Segment: 1681 DL
(Settled Solids)

Jar #: 16353 Jar Size: 125 mL
Initial Wgt.: 236.7 g
Final Wgt.: 232.0 g
Net Wgt.: 4.7 g

Samp. ID: 16354
Aug/Core: 269
Segment: 1681 DL
(Settled Solids)

Jar #: 16354 Jar Size: 125 mL
Initial Wgt.: 203.7 g
Final Wgt.: 172.11 g
Net Wgt.: 31.59 g

Samp. ID: 16357
Aug/Core: 269
Segment: 1681 DL
(Settled Solids)

Jar #: 16357 Jar Size: 125 mL
Initial Wgt.: 203.7 g
Final Wgt.: 172.11 g
Net Wgt.: 31.59 g

Net to Comp: 28.98

See Parent
Jar # on Page #1

Samp. ID: _____

HNF-1701 REV. 0

Special Instructions: _____

Page ____ of ____

Final Composite Calculation SheetDate: 12/28/99 Technician: Ron Hale, A. Campbell, R. HunterTotal number of jars used to build the composite: 6Composite Jar number: 17480 Jar size: 500

- 1) Sample from segment jar 16354 to composite jar = 28.98 grams
 - 2) Sample from segment jar 17512 to composite jar = 101.4 grams
 - 3) Sample from segment jar 16351 to composite jar = 103.8 grams
 - 4) Sample from segment jar 15436 to composite jar = 155.5 grams
 - 5) Sample from segment jar 17508 to composite jar = 72.0 grams
 - 6) Sample from segment jar 16353 to composite jar = 3.4 grams
 - 7) Sample from segment jar _____ to composite jar = _____ grams
 - 8) Sample from segment jar _____ to composite jar = _____ grams
 - 9) Sample from segment jar _____ to composite jar = _____ grams
 - 10) Sample from segment jar _____ to composite jar = _____ grams
 - 11) Sample from segment jar _____ to composite jar = _____ grams
 - 12) Sample from segment jar _____ to composite jar = _____ grams
 - 13) Sample from segment jar _____ to composite jar = _____ grams
 - 14) Sample from segment jar _____ to composite jar = _____ grams
 - 15) Sample from segment jar _____ to composite jar = _____ grams
 - 16) Sample from segment jar _____ to composite jar = _____ grams
 - 17) Sample from segment jar _____ to composite jar = _____ grams
 - 18) Sample from segment jar _____ to composite jar = _____ grams
 - 19) Sample from segment jar _____ to composite jar = _____ grams
 - 20) Sample from segment jar _____ to composite jar = _____ grams
- Total grams collected in composite jar # 17480 = 465.1 grams

Composite Worksheet

Date: 03/15/00Tank: A2701P.C.: StarPhone #: 2-2495Group # 99000438
Composite # 1 Core # 16884

Jar #: 16884 Jar Size: 1000 mL
Initial Wgt.: 1000 g
Final Wgt.: 1000 g
Net Wgt.: 1000 g
Net to Comp.: 1000 g

Verify parent jar#
and net weight added
by initialing "Net to Comp."

RH initials

Core # 16886

Jar #: 16886 Jar Size: 1000 mL
Initial Wgt.: 1000 g
Final Wgt.: 1000 g
Net Wgt.: 1000 g
Net to Comp.: 1000 g

RH initials

Core # 16889

Jar #: 16889 Jar Size: 1000 mL
Initial Wgt.: 1000 g
Final Wgt.: 1000 g
Net Wgt.: 1000 g
Net to Comp.: 1000 g

RH initials

Core # 16895

Jar #: 16895 Jar Size: 1000 mL
Initial Wgt.: 1000 g
Final Wgt.: 1000 g
Net Wgt.: 1000 g
Net to Comp.: 1000 g

RH initials

Verify homogenization.

Composite Description:

AB 1/2 liquid 1/2

Solid inverted

Sample

Initials: ABC

Jar #: 17340 Jar Size: 125 mL
Final Wgt.: 191.33 g
Initial Wgt.: 121.08 g
Net Wgt.: 70.25 g

Samp. ID: 501000746

Tests: COMPOS01

Standard

AT 1424-03

SAMP 1103

Special Instructions: Combine centrifuged solids from segments 1-5.Record final weight. Star with a spatula

Composite Worksheet

P.C.: F. Steen

Phone #: 2-2495

Date: 3/20/2000

Tank: AZ-101

Samp. ID: 507
Core: 269
Segment: 6
Stratum: Cent Solids

Samp. ID: 4785
Core: 269
Segment: 7
Stratum: Cent Solids

Samp. ID: 5145
Core: 269
Segment: 8
Stratum: Cent Solids

Samp. ID: 4773
Core: 269
Segment: 9
Stratum: Cent Solids

Jar #: One # 17468

Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: One # 17466

Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: One # 16890

Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Jar #: One # 16894

Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

RA initials

RA initials

RA initials

RA in

Samp. ID: 507

See Parent

Jar # 17340
on Page #1

HNF-1701 REV. 0

Special Instructions:

Composite Worksheet

Date: 03/15/00

Tank: AZ-101

P.C.: Star

Phone #: 2-2495

Samp. ID: 7.273
Aug/Core: 269
Segment: 10
Cent Solids

Jar #: Calc # 16869
Jar Size: mL
Initial Wgt.: 100 g
Final Wgt.: 100 g
Net Wgt.: 0 g
Net to Comp.: RA g

Samp. ID: 6.373
Aug/Core: 269
Segment: 11
Cent Solids

Jar #: Calc # 16891
Jar Size: mL
Initial Wgt.: 100 g
Final Wgt.: 100 g
Net Wgt.: 0 g
Net to Comp.: RA g

Samp. ID: 6.22
Aug/Core: 269
Segment: 12
Cent Solids

Jar #: Calc # 16876
Jar Size: mL
Initial Wgt.: 100 g
Final Wgt.: 100 g
Net Wgt.: 0 g
Net to Comp.: RA g

Samp. ID: 6.50
Aug/Core: 269
Segment: 13
Cent Solids

Jar #: Calc # 16892
Jar Size: mL
Initial Wgt.: 100 g
Final Wgt.: 100 g
Net Wgt.: 0 g
Net to Comp.: RA g

Samp. ID: See 1000746

See Parent

Jar # 17340
on Page #1

HNF-1701 REV. 0

Special Instructions:

Composite Worksheet

Date: 03/15/00

Tank: A-2701

P.C.: Slater

Phone #: 2-2495

5.447 1.859 10010000489
Samp. ID: 50010000489
Aug/Core: 2169
Segment: 14
Cent Solids

Jar #: Core # 16893 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

1.859 10010000489
Samp. ID: 50010000489
Aug/Core: 2169
Segment: 15

Jar #: Core # 16888 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

1.859 10010000489
Samp. ID: 50010000489
Aug/Core: 2169
Segment: 16

Jar #: Core # 16887 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

1.859 10010000489
Samp. ID: 50010000489
Aug/Core: 2169
Segment: 17

Jar #: Core # 16886 Jar Size: mL
Initial Wgt.: g
Final Wgt.: g
Net Wgt.: g
Net to Comp.: g

Samp. ID: 5001000746

See Parent

Jar # 17340
on Page #1

HNH-1701 REV. 0

Special Instructions: _____

452

Composite Worksheet

P.C.: Steer

Phone #: 2-2495

Date: 3/15/00

Tank: A7701

1161001913

Samp. ID: 5990201913
 Aug/Core: 269
 Segment: 3DL
 Bin # 139

Jar #: 16886 ✓
 Jar Size: 500 mL
 Initial Wgt.: 634.45 g
 Final Wgt.: 585.03 g
 Net Wgt.: 49.42 g
 Net to Comp.: 49.20 g

1161001914

Samp. ID: 5990201914
 Aug/Core: 269
 Segment: 4DL
 Bin # 139

Jar #: 16889 ✓
 Jar Size: 500 mL
 Initial Wgt.: 652.57 g
 Final Wgt.: 593.27 g
 Net Wgt.: 59.30 g
 Net to Comp.: 48.49 g

1161001915

Samp. ID: 5990201915
 Aug/Core: 269
 Segment: 5DL
 Bin # 139

Jar #: 16895 ✓
 Jar Size: 500 mL
 Initial Wgt.: 655.28 g
 Final Wgt.: 598.84 g
 Net Wgt.: 56.44 g
 Net to Comp.: 42.6 g

48.5
 Samp. ID: 5990201916
 Aug/Core: 269
 Segment: 6DL
 Bin # 139

Jar #: 17468 ✓
 Jar Size: 500 mL
 Initial Wgt.: 639.01 g
 Final Wgt.: 589.94 g
 Net Wgt.: 49.07 g
 Net to Comp.: 50.29 g

Samp. ID: _____

See Parent

Jar # 747
 on Page #1

Special Instructions: _____

Composite Worksheet

P.C.: Star

Phone #: 2-24495

Date: 3/15/00

Tank: A2201

Samp. ID: 500
Aug/Core: 269
Segment: 7DL
Bin # 139

Jar #: 174166 ✓
Jar Size: 500 mL
Initial Wgt.: 663.28 g
Final Wgt.: 611.09 g
Net Wgt.: 52.19 g
Net to Comp.: 50.16 g

Samp. ID: 491001853
Aug/Core: 269
Segment: 8DL
Bin # 139

Jar #: 16890 ✓
Jar Size: 500 mL
Initial Wgt.: 589.73 g
Final Wgt.: 541.12 g
Net Wgt.: 48.61 g
Net to Comp.: 48.47 g

Samp. ID: 491001854
Aug/Core: 269
Segment: 9DL
Bin # 139

Jar #: 16894 ✓
Jar Size: 500 mL
Initial Wgt.: 606.33 g
Final Wgt.: 556.62 g
Net Wgt.: 49.71 g
Net to Comp.: 50.92 g

Samp. ID: 4910021854
Aug/Core: 269
Segment: 10DL
Bin # 149

Jar #: 16869 ✓
Jar Size: 500 mL
Initial Wgt.: 619.25 g
Final Wgt.: 570.73 g
Net Wgt.: 48.52 g
Net to Comp.: 48.88 g

Samp. ID: _____

See Parent
Jar # 747
on Page #1

Special Instructions: _____

Composite Worksheet

P.C.: Star
Phone #: 2-2495

Date: 3/15/00
Tank: A2101

49.0
Samp. ID: 50170185
Aug/Core: 269
Segment: 11DL
Bin # 149

49.2
Samp. ID: 50170185
Aug/Core: 269
Segment: 13DL
Bin # 149

49.3
Samp. ID: 50170185
Aug/Core: 269
Segment: 12DL
Bin # 149

49.4
Samp. ID: 50170185
Aug/Core: 269
Segment: 14DL
Bin # 149

Jar #: 16891
Jar Size: 500 mL
Initial Wgt.: 613.43 g
Final Wgt.: 563.91 g
Net Wgt.: 49.52 g
Net to Comp.: 49.43 g

Jar #: 16892
Jar Size: 500 mL
Initial Wgt.: 574.46 g
Final Wgt.: 510.75 g
Net Wgt.: 63.71 g
Net to Comp.: 49.34 g

Jar #: 16876
Jar Size: 500 mL
Initial Wgt.: 603.51 g
Final Wgt.: 553.58 g
Net Wgt.: 49.93 g
Net to Comp.: 49.73 g

Jar #: 16893
Jar Size: 500 mL
Initial Wgt.: 615.51 g
Final Wgt.: 567.19 g
Net Wgt.: 48.32 g
Net to Comp.: 48.25 g

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See Parent
Jar # 747
on Page #1

Samp. ID: _____

Special Instructions: _____

900

WMH 222S/11A/200W

04/06/00 14:52 FAX 509 373 1438

HNF-1701 REV. 0

Special Instructions:

48.69
Samp. ID: 2
Aug/Core: 26c
Segment: 2N
Bin# 139

Jar #: 16884 ✓
Jar Size: 500 ml
Initial Wgt.: 861.04
Final Wgt.: 551.75
Net Wgt.: 49.10
Net to Comp.: 49.17

See Parent
Jar # 747
on Page #1

Page 5 of 9

Composite Worksheet

P.C.: Steer

Date: 03/15/00

Phone #: 2-2495

Tank: A2201

Samp. ID: 48.81
Aug/Core: 26g
Segment: 3DL
Bin # 139

Jar #: 16886 ✓
Jar Size: 500 mL
Initial Wgt.: 584.91 g
Final Wgt.: 536.01 g
Net Wgt.: 48.90 g
Net to Comp.: 48.81 g

Samp. ID: 48.91
Aug/Core: 26g
Segment: 4DL
Bin # 139

Jar #: 16889 ✓
Jar Size: 500 mL
Initial Wgt.: 593.21 g
Final Wgt.: 543.39 g
Net Wgt.: 49.82 g
Net to Comp.: 49.76 g

Samp. ID: 48.99
Aug/Core: 26g
Segment: 5DL
Bin # 139

Jar #: 16895 ✓
Jar Size: 500 mL
Initial Wgt.: 599.80 g
Final Wgt.: 549.34 g
Net Wgt.: 49.46 g
Net to Comp.: 48.97 g

Samp. ID: 48.63
Aug/Core: 26g
Segment: 6DL
Bin # 139

Jar #: 17468 ✓
Jar Size: 500 mL
Initial Wgt.: 588.95
Final Wgt.: 540.14
Net Wgt.: 48.81
Net to Comp.: 48.62

Samp. ID: _____

See Parent
Jar # 747
on Page #1

Special Instructions: _____

Composite Worksheet

P.C.: Steer

Phone #: 2-2495

Date: 03/15/00

Tank: A2101

Samp. ID: 49.19
Aug/Core: 269
Segment: 11DL
B# 149

Jar #: 16891
Jar Size: 500 mL
Initial Wgt.: 563.89 g
Final Wgt.: 514.69 g
Net Wgt.: 49.20 g
Net to Comp.: 49.16 g

Samp. ID: 49.24
Aug/Core: 269
Segment: 12DL
B# 149

Jar #: 16876
Jar Size: 500 mL
Initial Wgt.: 553.54 g
Final Wgt.: 504.22 g
Net Wgt.: 49.32 g
Net to Comp.: 49.28 g

Samp. ID: 49.23
Aug/Core: 269
Segment: 13DL
B# 149

Jar #: 16892
Jar Size: 500 mL
Initial Wgt.: 510.73 g
Final Wgt.: 460.89 g
Net Wgt.: 49.84 g
Net to Comp.: 49.77 g

Samp. ID: 48.43
Aug/Core: 269
Segment: 14DL
B# 149

Jar #: 16893
Jar Size: 500 mL
Initial Wgt.: 517.17
Final Wgt.: 518.72
Net Wgt.: 48.42
Net to Comp.: 48.4

459

Samp. ID: _____

See Parent
Jar # 747
on Page #1

Special Instructions: _____

Composite Worksheet

P.C.: Star

Phone #: 2-2495

Date: 03/15/00

Tank: A2701

Samp. ID: 50.03
Aug/Core: 16888
Segment: 15DL
B# 149

Jar #: 16888 ✓
Jar Size: 500 mL
Initial Wgt.: 553.52 g
Final Wgt.: 503.45 g
Net Wgt.: 50.07 g
Net to Comp.: 50.00 g

Samp. ID: 3.93
Aug/Core: 16354
Segment: 149
B# 149

Jar #: 16354 ✓
Jar Size: 125 mL
Initial Wgt.: 145.34 g
Final Wgt.: 141.10 g
Net Wgt.: 4.24 g
Net to Comp.: 4.05 g

Samp. ID: 216
Aug/Core: 100
Segment: 1917
B# 149

Jar #: 216
Jar Size: 100 mL
Initial Wgt.: 145.34 g
Final Wgt.: 141.10 g
Net Wgt.: 4.24 g
Net to Comp.: 4.05 g

Samp. ID: 216
Aug/Core: 100
Segment: 1917
B# 149

Jar #: 216
Jar Size: 100 mL
Initial Wgt.: 145.34 g
Final Wgt.: 141.10 g
Net Wgt.: 4.24 g
Net to Comp.: 4.05 g

Samp. ID: _____

See Parent
Jar # 747
on Page # 1

Special Instructions: _____

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SAMPLE HANDLING

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31633

Analyst: cwh

Instrument: BA000

Book # NAMethod: LO-160-103 Rev/Mod D.O

Worklist Comment: AZ-101 C266 SEG # 1 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001741	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>300</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001741	0	DLIQT01	SOLID	<u>N/A</u>	<u>380.8</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001741	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001741	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001741	0	LLIQT01	SOLID	<u>N/A</u>	<u>LS ONR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001741	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001741	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001741	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001741	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001741	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31633

[Signature] 11/3/99
Analyst Signature Date

[Signature] 11/3/99
Analyst Signature Date

Approved Rw Schuch 11/5/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31634

Analyst: hgb

Instrument: BA000

Book # NAMethod: LO-160-103 Rev/Mod D0

Worklist Comment: AZ-101 C266 SEG # 2 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001742	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>310</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001742	0	DLIQWT01	SOLID	<u>N/A</u>	<u>377.8</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001742	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.22</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001742	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001742	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001742	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001742	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001742	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001742	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001742	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

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Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Approved RW Schoeder
11/5/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31635

Analyst: ewh Instrument: BA000 Book # _____Method: LO-160-103 Rev/Mod 0-0

Worklist Comment: AZ-101 C266 SEG # 3 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001743	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001743	0	DLIQWT01	SOLID	<u>N/A</u>	<u>373.5</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001743	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.29</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001743	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001743	0	LLIQWT01	SOLID	<u>N/A</u>	<u>< 50NR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001743	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001743	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001743	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001743	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001743	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31635

C. L. Schuch 11/03/99
Analyst Signature Date

C. L. Schuch 11/03/99
Analyst Signature Date
Robert W. Schuch 10/5/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31636

Analyst: wyb Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod 00

Worklist Comment: AZ-101 C266 SEG # 4 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001744	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>360</u>		mL
99000433	AZ-101 (2)	4 SAMPLE	S99T001744	0	DLIQWT01	SOLID	<u>N/A</u>	<u>374.6</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001744	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.25</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001744	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001744	0	LLIQWT01	SOLID	<u>N/A</u>	<u>< 5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001744	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>11/26</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001744	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001744	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001744	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL
99000433	AZ-101 (2)	12 SAMPLE	S99T001744	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

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Colt 11/3/99
Analyst Signature Date

Colt 11/5/99
Analyst Signature Date

Approved RW Schneider 11/5/99

Data Entry Comments:

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HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31637Analyst: cwh Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C266 SEG # 5 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001745	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>300</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001745	0	DLIQWT01	SOLID	<u>N/A</u>	<u>376.3</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001745	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.25</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001745	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001745	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001745	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001745	0	SLOWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001745	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001745	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001745	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31637Analyst Signature [Signature] Date 11/3/99Analyst Signature [Signature] Date 11/3/99Approved RW Schrock 11/5/99

Data Entry Comments:

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LABCORE Data Entry Template for Worklist# 31638

Analyst: wgb Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C266 SEG # 6 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001746	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>300</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001746	0	DLIQWT01	SOLID	<u>N/A</u>	<u>377.2</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001746	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.26</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001746	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001746	0	LLIQWT01	SOLID	<u>N/A</u>	<u><50NR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001746	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001746	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001746	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001746	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001746	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31638

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Analyst Signature Date

Call 11/3/99
Analyst Signature Date

Approved By R. Schroeder 11/5/99

Data Entry Comments:

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R = Replicate Number, A = Aliquot Code.

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11/08/99 09:40

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LABCORE Data Entry Template for Worklist# 31662

Analyst: cwh Instrument: BA000 Book # NIAMethod: LO-160-103 Rev/Mod 0-0

Worklist Comment: AZ-101 C-266 Seg. 7 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	20	19.99	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	500	500.03	N/A	
99000433	AZ-101 (2)	3 SAMPLE	S99T001753	0	DLIQVOL1	SOLID	N/A	290		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001753	0	DLIQWT01	SOLID	N/A	369.0		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001753	0	EST.G/ML	SOLID	N/A	1.27		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001753	0	EXTRUD01	SOLID	N/A	complete		
99000433	AZ-101 (2)	7 SAMPLE	S99T001753	0	LLIQWT01	SOLID	N/A	<5 dnr		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001753	0	NOTEBOOK	SOLID	N/A	N-1126		
99000433	AZ-101 (2)	9 SAMPLE	S99T001753	0	SLDWT-01	SOLID	N/A	Ø		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001753	0	APPEAR01	SOLID	N/A	complete yellow 11/10/99		
99000433	AZ-101 (2)	11 SAMPLE	S99T001753	0	ORGVOL01	SOLID	N/A	Ø		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001753	0	PHOTO-01	SOLID	N/A	complete		

Final page for worklist # 31662

Analyst Signature [Signature] Date 11-15-99Analyst Signature [Signature] Date 11-15-99Validated by
[Signature]
faxed

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 31663

Analyst: cu Instrument: BA000 Book # N/A

Method: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 Core 266 Seg.8 - Extrusion

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>19.99</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3	SAMPLE	S99T001754	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000433	AZ-101 (2)	4	SAMPLE	S99T001754	0		DLIQWT01	SOLID	<u>N/A</u>	<u>367.3</u>		g
99000433	AZ-101 (2)	5	SAMPLE	S99T001754	0		EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>		g/mL
99000433	AZ-101 (2)	6	SAMPLE	S99T001754	0		EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7	SAMPLE	S99T001754	0		LLIQWT01	SOLID	<u>N/A</u>	<u><5 dnr</u>		g
99000433	AZ-101 (2)	8	SAMPLE	S99T001754	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9	SAMPLE	S99T001754	0		SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10	SAMPLE	S99T001754	0		APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11	SAMPLE	S99T001754	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12	SAMPLE	S99T001754	0		PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31663

Analyst Signature [Signature] Date 11/10/99

Analyst Signature [Signature] Date 11/10/99
Validated 11-11-99
Did R. Johnson

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 31664

Analyst: cuw Instrument: BA000 Book # NIA

Method: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 Core 266 Seg.9 - Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>19.99</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001755	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001755	0	DLIQT01	SOLID	<u>N/A</u>	<u>369.7</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001755	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001755	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001755	0	LLIQT01	SOLID	<u>N/A</u>	<u>Ø</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001755	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001755	0	SLDWT-01	SOLID	<u>N/A</u>	<u>Ø</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001755	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001755	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Ø</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001755	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31664

Analyst Signature C. A. L. Date 11/10/99

Analyst Signature C. A. L. Date 11/10/99
Validated 11-11-99
D. R. Jackson

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

471

LABCORE Data Entry Template for Worklist# 31665

Analyst: rdh Instrument: BA000 Book # N/A

Method: LO-160-103 Rev/Mod D.O.

Worklist Comment: AZ-101 Core 266 Seg.10 - Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001756	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001756	0	DLIQT01	SOLID	<u>N/A</u>	<u>3659</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001756	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.26</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001756	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001756	0	LLIQT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001756	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001756	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001756	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001756	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001756	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31665

rdh 11/10/99
Analyst Signature Date

rdh 11/10/99
Analyst Signature Date
Validated 11-11-99
Dwight E. Johnson

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

472

LABCORE Data Entry Template for Worklist# 31666

Analyst: rdh Instrument: BA000 Book # N/A

Method: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 Core 266 Seg.11 - Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001757	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>310</u>		mL
99000433	AZ-101 (2)	4 SAMPLE	S99T001757	0	DLIQWT01	SOLID	<u>N/A</u>	<u>376.0</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001757	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.21</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001757	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001757	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001757	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001757	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001757	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001757	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL
99000433	AZ-101 (2)	12 SAMPLE	S99T001757	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31666

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Analyst Signature Date
Validated 11-11-99
Deirdre Jackson

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31689

Analyst: ralh Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod D-O

Worklist Comment: AZ-101 C-266 Seg. 12 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001758	0	DLQVOL1	SOLID	<u>N/A</u>	<u>300</u>		mL
99000433	AZ-101 (2)	4 SAMPLE	S99T001758	0	DLQWT01	SOLID	<u>N/A</u>	<u>377.2</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001758	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.26</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001758	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001758	0	LLQWT01	SOLID	<u>N/A</u>	<u><SDNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001758	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001758	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001758	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001758	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL
99000433	AZ-101 (2)	12 SAMPLE	S99T001758	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31689

Analyst Signature ralh Date 11/10/99

Analyst Signature ralh Date 11/10/99
Validated 11-11-99
D. E. Johnson

Data Entry Comments:

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11/10/99 09:50

LABCORE Data Entry Template for Worklist# 31690

Analyst: rdh Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C-266 Seg. 13 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001759	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001759	0	DLIQWT01	SOLID	<u>N/A</u>	<u>379.9</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001759	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.31</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001759	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001759	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001759	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001759	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001759	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001759	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001759	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31690

Analyst Signature rdh Date 11/10/99Analyst Signature rdh Date 11/10/99
Validated 11-11-99
David Jenh

Data Entry Comments:

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LABCORE Data Entry Template for Worklist# 31691

Analyst: cwh Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod 0-0

Worklist Comment: AZ-101 C-255 Seg. 14 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.83</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001760	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>240.58</u>	<u>11/10/99</u>	mL
99000433	AZ-101 (2)	4 SAMPLE	S99T001760	0	DLIQWT01	SOLID	<u>N/A</u>	<u>61.6</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001760	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.23</u>		g/mL
99000433	AZ-101 (2)	6 SAMPLE	S99T001760	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001760	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001760	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001760	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001760	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001760	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL
99000433	AZ-101 (2)	12 SAMPLE	S99T001760	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>		

Final page for worklist # 31691

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[Signature] 11/10/99
Analyst Signature Date

Validated 11-11-99

[Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31757

Analyst: ABC Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C269 SEG# 8 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.0</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001794	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001794	0	DLIQWT01	SOLID	<u>N/A</u>	<u>369.7</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001794	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001794	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001794	0	LLIQWT01	SOLID	<u>N/A</u>	<u>< 5 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001794	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001794	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001794	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001794	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001794	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31757

hby J Buzhick 11/22/99
Analyst Signature Datehby J Buzhick 11/22/99
Analyst Signature DateApproved Ru Schneider 11/23/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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11/18/99 12:42

LABCORE Data Entry Template for Worklist# 31758

Analyst: DRJ Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C269 SEG # 9 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001795	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>374.4</u>	<u>N/A</u>	ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001795	0	DLIQWT01	SOLID	<u>N/A</u>	<u>374.4</u>	<u>N/A</u>	g
99000438	AZ-101 (2)	5 SAMPLE	S99T001795	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>	<u>N/A</u>	g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001795	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>	<u>N/A</u>	
99000438	AZ-101 (2)	7 SAMPLE	S99T001795	0	LLIQWT01	SOLID	<u>N/A</u>	<u>45 DNR</u>	<u>N/A</u>	g
99000438	AZ-101 (2)	8 SAMPLE	S99T001795	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>	<u>N/A</u>	
99000438	AZ-101 (2)	9 SAMPLE	S99T001795	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>	<u>N/A</u>	g
99000438	AZ-101 (2)	10 SAMPLE	S99T001795	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>	<u>N/A</u>	
99000438	AZ-101 (2)	11 SAMPLE	S99T001795	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>	<u>N/A</u>	ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001795	0	PHOTO-01	SOLID	<u>N/A</u>	<u>complete</u>	<u>N/A</u>	

Final page for worklist # 31758

Walter A. Buchardt 11/22/99
Analyst Signature Date

Walter A. Buchardt 11/22/99
Analyst Signature Date

Approved RW Schwach 11/23/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31759

Analyst:

DRT

Instrument: BA000

Book #

NA

Method: LO-160-103 Rev/Mod

D-0

Worklist Comment: AZ-101 C269 SEG # 11 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>10.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001796	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>295</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001796	0	DLIQWT01	SOLID	<u>N/A</u>	<u>374.9</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001796	0	EST.G/ML	SOLID	<u>N/A</u>	<u>6.27</u>		g/mL
99000438	AZ-101 (2)	6 SAMPLE	S99T001796	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001796	0	LLIQWT01	SOLID	<u>N/A</u>	<u>LS INR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001796	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001796	0	SLOWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001796	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001796	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001796	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31759

[Signature] 11/23/99
Analyst Signature Date

[Signature] 11/23/99
Analyst Signature Date

Approved RW Schroeder 11/23/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31761

Analyst: ABC Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C269 SEG# 13 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001804	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>300</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001804	0	DLIGHT01	SOLID	<u>N/A</u>	<u>375.9</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001804	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.25</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001804	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001804	0	LLIGHT01	SOLID	<u>N/A</u>	<u>4.5-1126</u>	<u>DNR</u>	g
99000438	AZ-101 (2)	8 SAMPLE	S99T001804	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001804	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001804	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001804	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001804	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31761

Analyst Signature W. J. Buzhardt Date 11/22/99Analyst Signature W. J. Buzhardt Date 11/22/99Approved AW Schroeder 11/23/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31763

Analyst: APC Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D.O

Worklist Comment: AZ-101 C269 SEG# 12 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001803	0	DLIQVOL1	SOLID	N/A	<u>290</u>		mL
99000438	AZ-101 (2)	4 SAMPLE	S99T001803	0	DLIQWT01	SOLID	N/A	<u>376.0</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001803	0	EST.G/ML	SOLID	N/A	<u>1.30</u>		g/mL
99000438	AZ-101 (2)	6 SAMPLE	S99T001803	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001803	0	LLIQWT01	SOLID	N/A	<u>LS DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001803	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001803	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001803	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001803	0	ORGVOL01	SOLID	N/A	<u>0</u>		mL
99000438	AZ-101 (2)	12 SAMPLE	S99T001803	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31763

Analyst Signature APC Date 11/23/99Analyst Signature APC Date 11/23/99

Relut W Schneider 11/25/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31764

Analyst:

DRS

Instrument: BA000

Book #

N/A

Method: LO-160-103 Rev/Mod

D-0

Worklist Comment: AZ-101 C269 SEG# 14 RISER 15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.00</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.04</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001805	0	DLIQVOL1	SOLID	N/A	<u>295</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001805	0	DLIQWT01	SOLID	N/A	<u>368.8</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001805	0	EST.G/ML	SOLID	N/A	<u>1.25</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001805	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001805	0	LLIQWT01	SOLID	N/A	<u>45</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001805	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001805	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001805	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001805	0	ORGVOL01	SOLID	N/A	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001805	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31764

Analyst Signature John R. Buzhardt Date 11/22/99Analyst Signature John R. Buzhardt Date 11/22/99Approved Rahit W. Schneider
11/23/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31765

Analyst: ABC Instrument: BA000 Book # N/AMethod: LO-160-103 Rev/Mod D-O

Worklist Comment: AZ-101 C266 SEG# 15 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20g</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500g</u>	<u>500.00</u>	<u>N/A</u>	
99000433	AZ-101 (2)	3 SAMPLE	S99T001806	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>305</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001806	0	DLIQWT01	SOLID	<u>N/A</u>	<u>371.6</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001806	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.22</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001806	0	EXTRUD01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001806	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001806	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001806	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001806	0	APPEAR01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001806	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001806	0	PHOTO-01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		

Final page for worklist # 31765

Analyst Signature RD Hala Date 11/19/99Analyst Signature Cos Date 11/19/99Approval RW Schroeder 11/19/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31768

Analyst: WGB Instrument: BA000 Book # N/A

Method: LO-160-103 Rev/Mod D-O

Worklist Comment: AZ-101 C266 SEG# 16 RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01		EXTRUD01	SOLID	<u>20</u>	<u>19.99</u> ^{214 N/A}		
		2	INSTCHK02		EXTRUD01	SOLID	<u>500</u>	<u>500.02</u> ^{N/A}		
99000433	AZ-101 (2)	3	SAMPLE	S99T001807	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>170</u>	ml
99000433	AZ-101 (2)	4	SAMPLE	S99T001807	0	DLIQT01	SOLID	<u>N/A</u>	<u>219.2</u>	g
99000433	AZ-101 (2)	5	SAMPLE	S99T001807	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.29</u>	g/ml
99000433	AZ-101 (2)	6	SAMPLE	S99T001807	0	EXTRUD01	SOLID	<u>N/A</u>	<u>COMPLETE</u>	
99000433	AZ-101 (2)	7	SAMPLE	S99T001807	0	LLIQT01	SOLID	<u>N/A</u>	<u>15 DNR</u>	g
99000433	AZ-101 (2)	8	SAMPLE	S99T001807	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>	
99000433	AZ-101 (2)	9	SAMPLE	S99T001807	0	SLDWT-01	SOLID	<u>N/A</u>	<u>35.2</u> ^{214 N/A}	g
99000433	AZ-101 (2)	10	SAMPLE	S99T001807	0	APPEAR01	SOLID	<u>N/A</u>	<u>COMPLETE</u>	
99000433	AZ-101 (2)	11	SAMPLE	S99T001807	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>	ml
99000433	AZ-101 (2)	12	SAMPLE	S99T001807	0	PHOTO-01	SOLID	<u>N/A</u>	<u>COMPLETE</u>	

Final page for worklist # 31768

Analyst Signature RD 1/26 Date 11/19/99

Analyst Signature Call Date 11/19/99

Approved RW Schoen 11/19/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

484

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31769

Analyst: ABC Instrument: BA000 Book # N/AMethod: LO-160-103 Rev/Mod D-0

Worklist Comment: AZ-101 C266 SEG# 16R RISER 15G EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>19.99</u> <u>11/17/99</u> <u>20.00</u> <u>N/A</u>		
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.00</u> <u>N/A</u>		
99000433	AZ-101 (2)	3 SAMPLE	S99T001808	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>90</u>		ml
99000433	AZ-101 (2)	4 SAMPLE	S99T001808	0	DLIQWT01	SOLID	<u>N/A</u>	<u>105.8</u>		g
99000433	AZ-101 (2)	5 SAMPLE	S99T001808	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.18</u>		g/ml
99000433	AZ-101 (2)	6 SAMPLE	S99T001808	0	EXTRUD01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		
99000433	AZ-101 (2)	7 SAMPLE	S99T001808	0	LLIQWT01	SOLID	<u>N/A</u>	<u><10 DNR</u>		g
99000433	AZ-101 (2)	8 SAMPLE	S99T001808	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N/A</u>		
99000433	AZ-101 (2)	9 SAMPLE	S99T001808	0	SLDWT-01	SOLID	<u>N/A</u>	<u>117.1</u>		g
99000433	AZ-101 (2)	10 SAMPLE	S99T001808	0	APPEAR01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		
99000433	AZ-101 (2)	11 SAMPLE	S99T001808	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000433	AZ-101 (2)	12 SAMPLE	S99T001808	0	PHOTO-01	SOLID	<u>N/A</u>	<u>COMPLETE</u>		

Final page for worklist # 31769

RO/ha 11/19/99
Analyst Signature Date

C. Sed 11/17/99
Analyst Signature Date

Approved RW Schroeder 11/19/99

Data Entry Comments:

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R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31901

Analyst: RH Instrument: BA000 Book # _____Method: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 C269 SEG#1 RISER#15L EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.07</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.02</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001902	0	DLIQVOL1	SOLID	N/A	<u>280</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001902	0	DLIQWT01	SOLID	N/A	<u>363.1</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001902	0	EST.G/ML	SOLID	N/A	<u>1.30</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001902	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001902	0	LLIQWT01	SOLID	N/A	<u><5 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001902	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001902	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001902	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001902	0	ORGVOL01	SOLID	N/A	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001902	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31901

R. Hunter 12/8/99
Analyst Signature DateAlan B. Campbell 12/8/99
Analyst Signature DateValidated 12/9/99
CC

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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12/08/99 09:33

LABCORE Data Entry Template for Worklist# 31906

Analyst:

EC

Instrument: BA000

Book #

Method: LO-160-103 Rev/Mod

D-1

Worklist Comment: AZ-101 Core-269 Seg-2 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.07</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.40</u>	<u>500.02</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001896	0	DLIQVOL1	SOLID	N/A	<u>295</u>		mL
99000438	AZ-101 (2)	4 SAMPLE	S99T001896	0	DLIQWT01	SOLID	N/A	<u>370.6</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001896	0	EST.G/ML	SOLID	N/A	<u>1.26</u>		g/mL
99000438	AZ-101 (2)	6 SAMPLE	S99T001896	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001896	0	LLIQWT01	SOLID	N/A	<u><5 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001896	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001896	0	SLOWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001896	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001896	0	ORGVOL01	SOLID	N/A	<u>0</u>		mL
99000438	AZ-101 (2)	12 SAMPLE	S99T001896	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31906

R. Hunter
Analyst Signature

12/8/99
Date

Alan B Campbell
Analyst Signature

12/8/99
Date

Validated
12/9/99

EC

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31915

Analyst:

EL

Instrument: BA000

Book #

NA

Method: LO-160-103 Rev/Mod

D-1

Worklist Comment: AZ-101 Core 269 Seg-3 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.</u>	<u>500.02</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001897	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>295</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001897	0	DLQWT01	SOLID	<u>N/A</u>	<u>373.4</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001897	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.27</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001897	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001897	0	LLIQUOT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001897	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>WMC-A-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001897	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001897	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001897	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001897	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31915

R. Hunter
Analyst Signature

12/8/99
Date

Alan B Campbell
Analyst Signature

12/8/99
Date

Validated by
Calld 12/9/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95

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12/08/99 10:13

LABCORE Data Entry Template for Worklist# 31918

Analyst: RDH Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-16 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.70</u>	<u>20.07</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.03</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3 SAMPLE	S99T001898	0	DLIQLVOL1	SOLID	<u>N/A</u>	<u>50</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001898	0	DLIQLWT01	SOLID	<u>N/A</u>	<u>83.7</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001898	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.67</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001898	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001898	0	LLIQLWT01	SOLID	<u>N/A</u>	<u><5 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001898	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001898	0	SLDWT-01	SOLID	<u>N/A</u>	<u>128.1</u> <u>14.0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001898	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001898	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001898	0	PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31918

Alan B Campbell 12/8/99
Analyst Signature Date

Alan B Campbell 12/8/99
Analyst Signature Date

Validated 12/9/99

CD

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Allquot Code.

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LABCORE Data Entry Template for Worklist# 31919

Analyst: RDT Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-16R Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	20.00	20.07	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	500.00	500.03	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001899	0	DLIQVOL1	SOLID	N/A	210		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001899	0	DLIQWT01	SOLID	N/A	244.1		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001899	0	EST.G/ML	SOLID	N/A	1.16		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001899	0	EXTRUD01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	7 SAMPLE	S99T001899	0	LLIQWT01	SOLID	N/A	15DNB		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001899	0	NOTEBOOK	SOLID	N/A	N-1126		
99000438	AZ-101 (2)	9 SAMPLE	S99T001899	0	SLDWT-01	SOLID	N/A	115.8		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001899	0	APPEAR01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	11 SAMPLE	S99T001899	0	ORGVOL01	SOLID	N/A	0		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001899	0	PHOTO-01	SOLID	N/A	Complete		

Final page for worklist # 31919

Alan B Campbell 12/8/99
Analyst Signature Date

Alan B Campbell 12/8/99
Analyst Signature Date
Validated 12/9/99
C. L. L.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units: DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 31920

Analyst: ROH Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-16R1

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	20.00	20.07	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	500.00	500.03	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001900	0	DLIQVOL1	SOLID	N/A	87		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001900	0	DLIQWT01	SOLID	N/A	116.8		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001900	0	EST.G/ML	SOLID	N/A	1.34		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001900	0	EXTRUD01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	7 SAMPLE	S99T001900	0	LLIQWT01	SOLID	N/A	<10DNR		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001900	0	NOTEBOOK	SOLID	N/A	N-1126		
99000438	AZ-101 (2)	9 SAMPLE	S99T001900	0	SLDWT-01	SOLID	N/A	168.0		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001900	0	APPEAR01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	11 SAMPLE	S99T001900	0	ORGVOL01	SOLID	N/A	0		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001900	0	PHOTO-01	SOLID	N/A	Complete		

Final page for worklist # 31920

Alan B Campbell 12/8/99
Analyst Signature Date

Alan B Campbell 12/8/99
Analyst Signature Date
Validated 12/9/99
C. L. L.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31921

Analyst: RDH Instrument: BA000 Book # _____Method: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-16R2 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	20.00	19.99	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	500.00	500.01	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001901	0	DLIQVOL1	SOLID	N/A	13.5		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001901	0	DLIQWT01	SOLID	N/A	157.3		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001901	0	EST.G/ML	SOLID	N/A	1.17		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001901	0	EXTRUD01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	7 SAMPLE	S99T001901	0	LLIQWT01	SOLID	N/A	20 DNR		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001901	0	NOTEBOOK	SOLID	N/A	N-1126		
99000438	AZ-101 (2)	9 SAMPLE	S99T001901	0	SLDWT-01	SOLID	N/A	77.9		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001901	0	APPEAR01	SOLID	N/A	Complete		
99000438	AZ-101 (2)	11 SAMPLE	S99T001901	0	ORGVOL01	SOLID	N/A	0		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001901	0	PHOTO-01	SOLID	N/A	Complete		

Final page for worklist # 31921

Alan B Campbell 12/9/99
Analyst Signature DateAlan B Campbell 12/9/99
Analyst Signature DateValidated 12/9/99
C. [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31922

Analyst: EC Instrument: BA000 Book # _____Method: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-4 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.07</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.03</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001903	0	DLIQVOL1	SOLID	N/A	<u>290</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001903	0	DLIQT01	SOLID	N/A	<u>372.2</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001903	0	EST.G/ML	SOLID	N/A	<u>1.28</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001903	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001903	0	LLIQT01	SOLID	N/A	<u>LS-DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001903	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001903	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001903	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001903	0	ORGVOL01	SOLID	N/A	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001903	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31922

Analyst Signature: R. Hunter Date: 12/8/99Analyst Signature: Alan B. Campbell Date: 12/8/99Validated: 12/9/99
C. J. [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31923

Analyst: RH

Instrument: BA000

Book #

Method: LO-160-103 Rev/Mod D-1

Worklist Comment: AZ-101 Core 269 Seg-5 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.07</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001904	0	DLIQVOL1	SOLID	N/A	<u>290</u>		ml
99000438	AZ-101 (2)	4 SAMPLE	S99T001904	0	DLQWT01	SOLID	N/A	<u>375.0</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001904	0	EST.G/ML	SOLID	N/A	<u>1.29</u>		g/ml
99000438	AZ-101 (2)	6 SAMPLE	S99T001904	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001904	0	LLQWT01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001904	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001904	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001904	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001904	0	ORGVOL01	SOLID	N/A	<u>0</u>		ml
99000438	AZ-101 (2)	12 SAMPLE	S99T001904	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31923

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31924

Analyst: RH

Instrument: BA000

Book #

Method: LO-160-103 Rev/Mod De 1

Worklist Comment: AZ-101 Core 269 Seg-6 Riser 15L

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>2007</u>	N/A	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.03</u>	N/A	
99000438	AZ-101 (2)	3 SAMPLE	S99T001905	0	DLIQVOL1	SOLID	N/A	<u>285.</u>		mL
99000438	AZ-101 (2)	4 SAMPLE	S99T001905	0	DLIQWT01	SOLID	N/A	<u>369.6</u>		g
99000438	AZ-101 (2)	5 SAMPLE	S99T001905	0	EST.G/ML	SOLID	N/A	<u>1.30</u>		g/mL
99000438	AZ-101 (2)	6 SAMPLE	S99T001905	0	EXTRUD01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	7 SAMPLE	S99T001905	0	LLIQWT01	SOLID	N/A	<u>25.0 DNR</u>		g
99000438	AZ-101 (2)	8 SAMPLE	S99T001905	0	NOTEBOOK	SOLID	N/A	<u>N-1126</u>		
99000438	AZ-101 (2)	9 SAMPLE	S99T001905	0	SLDWT-01	SOLID	N/A	<u>0</u>		g
99000438	AZ-101 (2)	10 SAMPLE	S99T001905	0	APPEAR01	SOLID	N/A	<u>Complete</u>		
99000438	AZ-101 (2)	11 SAMPLE	S99T001905	0	ORGVOL01	SOLID	N/A	<u>0</u>		mL
99000438	AZ-101 (2)	12 SAMPLE	S99T001905	0	PHOTO-01	SOLID	N/A	<u>Complete</u>		

Final page for worklist # 31924

Analyst Signature R Hunter Date 12/8/99Analyst Signature Alan Campbell Date 12/8/99
Validated 12/9/99
C. L.

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

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12/13/99 13:07

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LABCORE Data Entry Template for Worklist# 31947

Analyst:

R.D. Hale

Instrument: BA000

Book #

N/A

Method: LO-160-103 Rev/Mod

D-1

Worklist Comment: AZ-101 C269 SEG # 7 RISER 15L EXTRUSION

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500.00</u>	<u>500.11</u>	<u>N/A</u>	
99000438	AZ-101 (2)	3	SAMPLE	S99T001910	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>290</u>		ml
99000438	AZ-101 (2)	4	SAMPLE	S99T001910	0		DLIQWT01	SOLID	<u>N/A</u>	<u>376.0</u>		g
99000438	AZ-101 (2)	5	SAMPLE	S99T001910	0		EST.G/ML	SOLID	<u>N/A</u>	<u>1.29</u>		g/ml
99000438	AZ-101 (2)	6	SAMPLE	S99T001910	0		EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	7	SAMPLE	S99T001910	0		LLIQWT01	SOLID	<u>N/A</u>	<u>65.0</u>		g
99000438	AZ-101 (2)	8	SAMPLE	S99T001910	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1126</u>		
99000438	AZ-101 (2)	9	SAMPLE	S99T001910	0		SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
99000438	AZ-101 (2)	10	SAMPLE	S99T001910	0		APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
99000438	AZ-101 (2)	11	SAMPLE	S99T001910	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
99000438	AZ-101 (2)	12	SAMPLE	S99T001910	0		PHOTO-01	SOLID	<u>N/A</u>	<u>Complete</u>		

Final page for worklist # 31947

R. Hunter 12/14/99
Analyst Signature Date

R.D. Hale 12/14/99
Analyst Signature Date

Approved R.W. Schroeder 12/14/99

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

SAMPLE PREPARATION

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 32075

Analyst: _____ Instrument: FUS01 _____ Book # _____

Method: LA-549-141 Rev/Mod G-2

Worklist Comment: AZ-101 (2), FUSIONHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSIONHC	SOLID	<u>1</u>	<u>5.22</u>	N/A	g/L
99000433	AZ-101 (2)	2 SAMPLE	S00T000015	0	FUSIONHC	SOLID	N/A	<u>5.22</u>		g/L
		<u>.5216</u> → <u>.100L</u>								
99000433	AZ-101 (2)	3 SAMPLE	S00T000015	0	DOSE-01	SOLID	N/A	<u>1080</u>		mrads/hour
99000433	AZ-101 (2)	4 DUP	S00T000015	0	FUSIONHC	SOLID	<u>5.22</u>	<u>5.20</u>	N/A	g/L
		<u>.5216</u> → <u>.100L</u>								
99000433	AZ-101 (2)	5 DUP	S00T000015	0	DOSE-01	SOLID	<u>1080</u>	<u>1051.5</u>	N/A	mrads/hour
99000433	AZ-101 (2)	6 SAMPLE	S00T000016	0	FUSIONHC	SOLID	N/A	<u>4.93</u>		g/L
		<u>.4929</u> → <u>.100L</u>								
99000433	AZ-101 (2)	7 SAMPLE	S00T000016	0	DOSE-01	SOLID	N/A	<u>874.5</u>		mrads/hour
99000433	AZ-101 (2)	8 DUP	S00T000016	0	FUSIONHC	SOLID	<u>4.93</u>	<u>5.25</u>	N/A	g/L
		<u>.5246</u> → <u>.100L</u>								
99000433	AZ-101 (2)	9 DUP	S00T000016	0	DOSE-01	SOLID	<u>874.5</u>	<u>876</u>	N/A	mrads/hour

Final page for worklist # 32075

[Signature] 1-10-00
Analyst Signature Date

Parent Daughter
S00T000012 → S00T000015
S00T000013 → S00T000016

[Signature] 1-10-00
Analyst Signature Date

VAUced
1-10-00
ABO

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit; S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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LABCORE Data Entry Template for Worklist# 32076

Analyst: _____ Instrument: FUS01 _____ Book # _____

Method: LA-549-141 Rev/Mod G-2

Worklist Comment: AZ-101 (2), FUSIONHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP		FUSIONHC	SOLID	<u>1</u>	<u>5.05</u>	N/A	g/L
99000438	AZ-101 (2)	2 SAMPLE <u>0.5052g</u>	S00T000022 <u>0 F 1.00L</u>	FUSIONHC	SOLID	N/A	<u>5.05</u>		g/L
99000438	AZ-101 (2)	3 SAMPLE	S00T000022 0	DOSE-01	SOLID	N/A	<u>1113</u>		mrad/hour
99000438	AZ-101 (2)	4 DUP <u>0.5528g</u>	S00T000022 <u>0 F 1.00L</u>	FUSIONHC	SOLID	<u>5.05</u>	<u>5.54</u>	N/A	g/L
99000438	AZ-101 (2)	5 DUP	S00T000022 0	DOSE-01	SOLID	<u>1113</u>	<u>1250</u>	N/A	mrad/hour
99000438	AZ-101 (2)	6 SAMPLE <u>0.5462g</u>	S00T000023 <u>0 F 1.00L</u>	FUSIONHC	SOLID	N/A	<u>5.46</u>		g/L
99000438	AZ-101 (2)	7 SAMPLE	S00T000023 0	DOSE-01	SOLID	N/A	<u>727.5</u>		mrad/hour
99000438	AZ-101 (2)	8 DUP <u>0.5540g</u>	S00T000023 <u>0 F 1.00L</u>	FUSIONHC	SOLID	<u>5.46</u>	<u>5.54</u>	N/A	g/L
99000438	AZ-101 (2)	9 DUP	S00T000023 0	DOSE-01	SOLID	<u>727.5</u>	<u>727.5</u>	N/A	mrad/hour

Final page for worklist # 32076

[Signature] 1-10-00
Analyst Signature Date

[Signature] 1-10-00
Analyst Signature Date

Parent Daughter
S00T000019 → S00T000022
S00T000020 → S00T000023

VAU dated
1-10-00
ABC

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

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01/06/00 13:33

LABCORE Data Entry Template for Worklist# 32078

Analyst: _____ Instrument: FUS01 _____ Book # _____

Method: LA-549-141 Rev/Mod G-2

Worklist Comment: AZ-101 (2), FUSIONHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
	11A1	1 BLNK-PREP			FUSIONHC	SOLID	<u>1</u>	<u>5.10</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	2 SAMPLE	S00T000017	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.10</u>		<u>g/L</u>
99000433	AZ-101 (2)	3 SAMPLE	S00T000017	0	DOSE-01	SOLID	<u>N/A</u>	<u>10.20</u>		<u>mrad/hour</u>
99000433	AZ-101 (2)	4 DUP	S00T000017	0 F	FUSIONHC	SOLID	<u>5.10</u>	<u>5.02</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	5 DUP	S00T000017	0	DOSE-01	SOLID	<u>10.20</u>	<u>96.3</u>	<u>N/A</u>	<u>mrad/hour</u>
99000438	AZ-101 (2)	6 SAMPLE	S00T000021	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.13</u>		<u>g/L</u>
99000438	AZ-101 (2)	7 SAMPLE	S00T000021	0	DOSE-01	SOLID	<u>N/A</u>	<u>9.33</u>		<u>mrad/hour</u>
99000438	AZ-101 (2)	8 DUP	S00T000021	0 F	FUSIONHC	SOLID	<u>5.13</u>	<u>5.43</u>	<u>N/A</u>	<u>g/L</u>
99000438	AZ-101 (2)	9 DUP	S00T000021	0	DOSE-01	SOLID	<u>9.33</u>	<u>9.34.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 32078

[Signature] 1-10-00
Analyst Signature Date

[Signature] 1-10-00
Analyst Signature Date

Parent Daughter
S00T000014 → S00T000017
S00T000018 → S00T000021

VAN Dabed
1-10-00
ABC

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklist rpt Version 2.1 05/15/95

Page: 1

04/10/00 15:16

LABCORE Data Entry Template for Worklist# 33174

Analyst: drj Instrument: FUS01 Book # N/AMethod: LA-549-141 Rev/Mod G-2

Worklist Comment: AZ101 (2), FUSIONHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSIONHC	SOLID	<u>1</u>	<u>4.90</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	2 SAMPLE	S00T000797	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>4.90</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.4903</u>	<u>→ 0.12</u>					<u>1116</u>		
99000433	AZ-101 (2)	3 SAMPLE	S00T000797	0	DOSE-01	SOLID	<u>N/A</u>	<u>789</u>	<u>N/A</u>	<u>mrads/hour</u>
99000433	AZ-101 (2)	4 SAMPLE	S00T000798	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.180</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5180</u>	<u>→ 0.12</u>							
99000433	AZ-101 (2)	5 SAMPLE	S00T000798	0	DOSE-01	SOLID	<u>N/A</u>	<u>1026</u>	<u>N/A</u>	<u>mrads/hour</u>
99000433	AZ-101 (2)	6 SAMPLE	S00T000799	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>4.833</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.4833</u>	<u>→ 0.12</u>							
99000433	AZ-101 (2)	7 SAMPLE	S00T000799	0	DOSE-01	SOLID	<u>N/A</u>	<u>1113</u>	<u>N/A</u>	<u>mrads/hour</u>
99000438	AZ-101 (2)	8 SAMPLE	S00T000800	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.165</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5166</u>	<u>→ 0.12</u>							
99000438	AZ-101 (2)	9 SAMPLE	S00T000800	0	DOSE-01	SOLID	<u>N/A</u>	<u>933</u>	<u>N/A</u>	<u>mrads/hour</u>
99000438	AZ-101 (2)	10 SAMPLE	S00T000801	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.222</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5222</u>	<u>→ 0.12</u>							
99000438	AZ-101 (2)	11 SAMPLE	S00T000801	0	DOSE-01	SOLID	<u>N/A</u>	<u>878</u>	<u>N/A</u>	<u>mrads/hour</u>
99000438	AZ-101 (2)	12 SAMPLE	S00T000802	0 F	FUSIONHC	SOLID	<u>N/A</u>	<u>5.044</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5044</u>	<u>→ 0.12</u>							
99000438	AZ-101 (2)	13 SAMPLE	S00T000802	0	DOSE-01	SOLID	<u>N/A</u>	<u>903</u>	<u>N/A</u>	<u>mrads/hour</u>

Final page for worklist # 33174

Analyst Signature drj Date 4-16-00Analyst Signature drj Date 4-16-00

17665 S00T000772 → S00T000797 17178 S00T000775 → S00T000800
 17662 S00T000773 → S00T000798 17179 S00T000776 → S00T000801
 17517 S00T000774 → S00T000799 17379 S00T000777 → S00T000802

Data Entry Comments:

Validated Rw Schlotch 4/17/00

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
 R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95

02/28/00 16:26

LABCORE Data Entry Template for Worklist# 32677

Analyst: RWS Dr. Instrument: H2001 Book # _____Method: LA-504-101 Rev/Mod G-3

Worklist Comment: AZ-101 (2), H2ODIGHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIGHC	SOLID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	2 SAMPLE	S00T000041	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>IS</u>		<u>g/L</u>
99000433	AZ-101 (2)	3 SAMPLE	S00T000041	0	DOSE-01	SOLID	<u>N/A</u>	<u>IS</u>		<u>mrad/h</u>
99000433	AZ-101 (2)	4 DUP	S00T000041	0 W	H2ODIGHC	SOLID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	5 DUP	S00T000041	0	DOSE-01	SOLID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	<u>mrad/h</u>
99000438	AZ-101 (2)	6 SAMPLE	S00T000042	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>IS</u>		<u>g/L</u>
99000438	AZ-101 (2)	7 SAMPLE	S00T000042	0	DOSE-01	SOLID	<u>N/A</u>	<u>IS</u>		<u>mrad/h</u>
99000438	AZ-101 (2)	8 DUP	S00T000042	0 W	H2ODIGHC	SOLID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	<u>g/L</u>
99000438	AZ-101 (2)	9 DUP	S00T000042	0	DOSE-01	SOLID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	<u>mrad/h</u>

Final page for worklist # 32677

Analyst Signature RWS Date _____Analyst Signature Rw Schaefer Date 4/1

AZ-101 G266 S-16 Comp
 57.6 S00T000012 → S00T000041 →
 S00T000018 → S00T000042
AZ-101 C-269 SKW 1/29/00
S-16 Comp

* IS = insufficient sample
 to perform analysis. R

Data Entry Comments:

~~15050~~ - ~~15055~~

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
 R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
04/13/00 10:46

Page: 1

LABCORE Data Entry Template for Worklist# 33226

Analyst: DRJ Instrument: H2O01 LE-BAL-061 Book # NA

Method: LA-504-101 Rev/Mod G-3

Worklist Comment: AZ101 (2), H2ODIGHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIGHC	SOLID	<u>1</u>	<u>9.71</u>	<u>N/A</u>	<u>g/L</u>
99000433	AZ-101 (2)	2 SAMPLE <u>0.4856 → 0.052</u>	S00T000806	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>9.71</u>		<u>g/L</u>
99000433	AZ-101 (2)	3 SAMPLE	S00T000806	0	DOSE-01	SOLID	<u>N/A</u>	<u>270</u>		<u>mrads/hour</u>
99000433	AZ-101 (2)	4 SAMPLE <u>0.5058 → 0.052</u>	S00T000807	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>10.12</u>		<u>g/L</u>
99000433	AZ-101 (2)	5 SAMPLE	S00T000807	0	DOSE-01	SOLID	<u>N/A</u>	<u>215</u>		<u>mrads/hour</u>
99000433	AZ-101 (2)	6 SAMPLE <u>0.5735 → 0.052</u>	S00T000808	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>16.47</u>		<u>g/L</u>
99000433	AZ-101 (2)	7 SAMPLE	S00T000808	0	DOSE-01	SOLID	<u>N/A</u>	<u>245</u>		<u>mrads/hour</u>

Final page for worklist # 33226

DRJ 4-16-00
Analyst Signature Date

DRJ 4-16-00
Analyst Signature Date

1765 S00T000772 → S00T000806
1762 S00T000773 → S00T000807
1757 S00T000774 → S00T000808

Approved RWSchneider
4/21/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95
04/13/00 10:50

Page: 1

LABCORE Data Entry Template for Worklist# 33227

Analyst: DRJ Instrument: H2001 LE-BAL-061 Book # NA

Method: LA-504-101 Rev/Mod G-3

Worklist Comment: AZ101 (2), H2ODIGHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIGHC	SOLID	<u>1</u>	<u>10.52</u>	<u>N/A</u>	g/L
99000438	AZ-101 (2)	2 SAMPLE <u>0.5260</u> → <u>0.052</u>	S00T000812	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>10.52</u>		g/L
99000438	AZ-101 (2)	3 SAMPLE	S00T000812	0	DOSE-01	SOLID	<u>N/A</u>	<u>270</u>		mrads/hour
99000438	AZ-101 (2)	4 SAMPLE <u>0.5300</u> → <u>0.052</u>	S00T000813	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>10.60</u>		g/L
99000438	AZ-101 (2)	5 SAMPLE	S00T000813	0	DOSE-01	SOLID	<u>N/A</u>	<u>270</u>		mrads/hour
99000438	AZ-101 (2)	6 SAMPLE <u>0.6684</u> → <u>0.052</u>	S00T000814	0 W	H2ODIGHC	SOLID	<u>N/A</u>	<u>13.37</u>		g/L
99000438	AZ-101 (2)	7 SAMPLE	S00T000814	0	DOSE-01	SOLID	<u>N/A</u>	<u>320</u>		mrads/hour

Final page for worklist # 33227

DRJ 4-16-00
Analyst Signature Date

DRJ 4-16-00
Analyst Signature Date

1718 S00T000775 → S00T000812
1719 S00T000776 → S00T000813
1719 S00T000777 → S00T000814
17339

Approved RW Schuch
4/17/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
04/13/00 18:39

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33224

Analyst: CWH

Instrument: ACD01

Book #

WNC-1A
WNC-2
B3B48Method: LA-505-112 Rev/Mod A-0

Worklist Comment: AZ101 (2), ACIDIGHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT	
		A 1 BLNK-PREP			ACIDIGHC	SOLID	<u>1</u>	<u>9.38 g/L</u>	N/A	g/L	
		B 2 STD-PREP			ACIDIGHC	SOLID	<u>44.6 g/L</u>	<u>44.6 g/L</u>	N/A	g/L	
99000433	AZ-101 (2)	C 3 SAMPLE	S00T000803	0	A	ACIDIGHC	SOLID	<u>N/A</u>	<u>9.38 g/L</u>	g/L	
99000433	AZ-101 (2)	4 SAMPLE	S00T000803	0	DOSE-01	SOLID	<u>N/A</u>	<u>59.525</u>		mrad/hour	
99000433	AZ-101 (2)	D 5 SAMPLE	S00T000804	0	A	ACIDIGHC	SOLID	<u>N/A</u>	<u>9.11 g/L</u>	g/L	
99000433	AZ-101 (2)	6 SAMPLE	S00T000804	0	DOSE-01	SOLID	<u>N/A</u>	<u>59.550</u>		mrad/hour	
99000433	AZ-101 (2)	E 7 SPK-PREDIG	S00T000804	0	A	ACIDIGHC	SOLID	<u>9.11 g/L</u>	<u>8.99 g/L</u>	N/A	g/L
99000433	AZ-101 (2)	8 SPK	S00T000804	0	DOSE-01	SOLID	<u>59.530</u>	<u>47.580</u>	N/A	mrad/hour	
99000433	AZ-101 (2)	F 9 SAMPLE	S00T000805	0	A	ACIDIGHC	SOLID	<u>N/A</u>	<u>8.86 g/L</u>	g/L	
99000433	AZ-101 (2)	10 SAMPLE	S00T000805	0	DOSE-01	SOLID	<u>N/A</u>	<u>71.500</u>		mrad/hour	

Final page for worklist # 33224

Analyst Signature

Date

4/16/00

Analyst Signature

Date

4-16-00Approved Ru Schaefer
4/17/00

S00T000772 → S00T000803

S00T000773 → S00T000804

S00T000774 → S00T000805

Data Entry Comments:

* B3B48, WNC-1A & WNC-2 used for STD & SPKUnits shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95
04/13/00 10:35

LABCORE Data Entry Template for Worklist# 33225

Analyst: cwh Instrument: ACD01 Book # WNC-7A
WNC-2
B3B48

Method: LA-505-112 Rev/Mod A-0

Worklist Comment: AZ101 (2), ACIDIGHC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL
		A 1 BLNK-PREP			ACIDIGHC	SOLID	1	7.86g/L	N/A
		B 2 STD-PREP			ACIDIGHC	SOLID	1	45.18g/L	N/A
		25 mL / 55.175g x 0.99707 g/mL x 1000 mL/L = 45.18g/L							
99000438	AZ-101 (2)	C 3 SAMPLE	S00T000809	0 A	ACIDIGHC	SOLID	N/A	7.86g/L	
		4 mg / 56.941g x 0.99707 g/mL x 1000 mL/L = 7.86g/L							
99000438	AZ-101 (2)	4 SAMPLE	S00T000809	0	DOSE-01	SOLID	N/A	3195	
99000438	AZ-101 (2)	D 5 SPK-PREDIG	S00T000809	0 A	ACIDIGHC	SOLID	7.86	7.86	N/A
		Lost Sample Due to cracked Cone							
99000438	AZ-101 (2)	6 SPK	S00T000809	0	DOSE-01	SOLID	3195	3195	N/A
99000438	AZ-101 (2)	E 7 SAMPLE	S00T000810	0 A	ACIDIGHC	SOLID	N/A	8.93g/L	
		510g / 57.555g x 0.99707 g/mL x 1000 mL/L = 8.93g/L							
99000438	AZ-101 (2)	8 SAMPLE	S00T000810	0	DOSE-01	SOLID	N/A	2925	
99000438	AZ-101 (2)	F 9 SAMPLE	S00T000811	0 A	ACIDIGHC	SOLID	N/A	9.24g/L	
		521g / 56.236g x 0.99707 g/mL x 1000 mL/L = 9.24g/L							
99000438	AZ-101 (2)	10 SAMPLE	S00T000811	0	DOSE-01	SOLID	N/A	2625	2895

Final page for worklist # 33225

[Signature] 4-24-00
Analyst Signature Date

[Signature] 4-
Analyst Signature Date
Approved RWJ

1711F S00T000775 → S00T000809
1711F S00T000776 → S00T000810
17359 S00T000777 → S00T000811

Data Entry Comments:

* B3B48, WNC-1A & WNC-2 used for
STD & SPK

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number.
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

AZ-101 BULK DENSITY WORKSHEETS

HNF-1701 REV. 0

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Subsample Worksheet

Tank: AZ101 Core: 2160 Seg: 16 Composite
 Date Subsampled: 01/07/00
 LabCore #: 599T 001997 Tests: 15441
 Jar #: 15441
 Jar/Vial Size: 250 mL
 Initial Wgt: 355.2 g
 Final Wgt: 324.1 g
 Wgt of Sample Removed: 34.1 g
 Wgt of Sample Remaining: 104.4 g

Bin#

Jar Depleted: YES / NO

LabCore Entry Initials: _____ LabCore Entry Initials: _____

CONE#: 12
 Wt Cone + Samp: 22.27 g
 Wt Cone + Solids: 15.14 g
 Tare Wt Cone: 7.49 g
 Net Wt Solids: 8.65 g
 Net Wt Liquids: 1.55 g
 Total Volume: 8.5 mL
 Vol Solids: 7.0 mL
 Bulk Density: 1.74 g/mL

CONE#: 13
 Wt Cone + Samp: 16.53 g
 Wt Cone + Solids: 16.01 g
 Tare Wt Cone: 7.67 g
 Net Wt Solids: 8.34 g
 Net Wt Liquids: 0.52 g
 Total Volume: 5.2 mL
 Vol Solids: 4.5 mL
 Bulk Density: 1.70 g/mL

CONE#: 14
 Wt Cone + Samp: 15.70 g
 Wt Cone + Solids: 15.14 g
 Tare Wt Cone: 7.43 g
 Net Wt Solids: 7.65 g
 Net Wt Liquids: 0.56 g
 Total Volume: 4.9 mL
 Vol Solids: 4.25 mL
 Bulk Density: 1.82 g/mL

LABCORE#: 50000014100
 Jar# 50000014100
 Jar/Vial Size: 250 mL
 Initial Weight: 17.14 g
 Final Weight: _____ g
 Net Weight: _____ g

LABCORE#: 50000014100
 Jar# 50000014100
 Jar/Vial Size: 250 mL
 Initial Weight: 16.92 g
 Final Weight: _____ g
 Net Weight: _____ g

LABCORE#: 50000014100
 Jar# 50000014100
 Jar/Vial Size: 250 mL
 Initial Weight: 16.92 g
 Final Weight: _____ g
 Net Weight: _____ g

510

Subsample Worksheet

Tank: A2101

Core: 269

Seg: 16 Composite
Date Subsampled: 16 Composite

Date: 01/07/00

P.C.: STEEN

Phone: 372-2495

Group #: 99000438

Matrix: _____

Jar Depleted: _____

YES / NO

Bin#

LabCore #: 17480

Jar #: 500 mL

Jar/Vial Size: 500 mL

Initial Wgt: 761.3 g

Final Wgt: 724.3 g

Wgt of Sample Removed: 37.0 g

Wgt of Sample Remaining: 427.5 g

Tests: _____

LabCore Entry Initials: _____

LabCore Entry Initials: _____

CONE#: 18

Wt Cone + Samp: 19.26 g

Wt Cone + Solids: 17.81 g

Tare Wt Cone: 7.46 g

Net Wt Solids: 10.35 g

Net Wt Liquids: 1.45 g

Total Volume: 7.25 mL

Vol Solids: 1.63 mL

Bulk Density: 1.63 g/mL

CONE#: 19

Wt Cone + Samp: 16.90 g

Wt Cone + Solids: 15.03 g

Tare Wt Cone: 7.47 g

Net Wt Solids: 7.56 g

Net Wt Liquids: 1.87 g

Total Volume: 5.4 mL

Vol Solids: 4.4 mL

Bulk Density: 1.74 g/mL

CONE#: 20

Wt Cone + Samp: 16.06 g

Wt Cone + Solids: 15.73 g

Tare Wt Cone: 7.43 g

Net Wt Solids: 8.3 g

Net Wt Liquids: 0.33 g

Total Volume: 5.75 mL

Vol Solids: 4.80 mL

Bulk Density: 1.50 g/L

LABCORE#: 5001000019

Jar# 5001000018

Jar/Vial Size: 20 mL

Initial Weight: 17.03 g

Final Weight: _____ g

Net Weight: _____ g

LABCORE#: 5001000018

Jar# 5001000018

Jar/Vial Size: 20 mL

Initial Weight: 17.31 g

Final Weight: _____ g

Net Weight: _____ g

LABCORE#: 5001000020

Jar# 5001000020

Jar/Vial Size: 1700 mL

Initial Weight: 16.92 g

Final Weight: _____ g

Net Weight: _____ g

BULK DENSITY WORKSHEET

HNF-1701 REV. 0

Procedure number: LA-519-132

Date: 4-3-00

P.C.: Skene

Phone: 2-2495

Group#: 99000438

Tank: A2-101

Core: 269

Seg: CW

Auger: /

Sample ID: /

LabCore# See 7000735

Jar #: 17178

Core Composite - Centrifuged Solids
\$ 71500

Analyst: gay / cwh

Cone# 75

Final Vol.: 7.5 mL

Final Wt.: 19.854 g

Initial Wt.: 7.428 g

Net Wt.: 12.426 g

Bulk Density 1.656 g/mL

Appearance/Narrative:

HNF-1701 REV. 0

BULK DENSITY WORKSHEET

Procedure number: LA-519-132

Date: 4-3-00
 P.C.: Sheen
 Phone: 2-2495
 Group#: 99000438

Tank: A2-101
 Core: 209
 Seg.: Core
 Auger: Core
 Sample ID: 2

LabCore# SocDoo 776
 Jar #: 17179
Core Composite - Centrifuged Solids
of 4/500

Analyst: galy/cwh
 Cone# 76
 Final Vol.: 7.5 mL
 Final Wt.: 20.183 g
 Initial Wt.: 7.465 g
 Net Wt.: 12.718 g

Bulk Density 1.695 g/mL

Appearance/Narrative:

BULK DENSITY WORKSHEET

Procedure number: LA-519-132

Date: 4-3-00
 P.C.: Steve
 Phone: 2-2495
 Group#: 99000438

Tank: A7-101
 Core: 264
 Seg: Core
 Auger: /
 Sample ID: /

LabCore# 500000777
 Jar #: 17339
Core Composite
Un-Hinged Solids 871500

Analyst: gay / cwh
 Cone# 77
 Final Vol.: 7.6 mL
 Final Wt.: 20.244 g
 Initial Wt.: 7.455 g
 Net Wt.: 12.789 g

Bulk Density 1.682 g/mL

Appearance/Narrative:

HNF-1701 REV. 0

INORGANIC ANALYSIS

HNF-1701 REV. 0

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LABCORE Completed Worklist Report for Worklist# 33290

Analyst: rwk

Instrument: BA001

Book#: 134N16E

Method: LA-510-112 Rev/Mod E-2

Worklist Comment: AZ-101 (2), SPG-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	SPG-01	LIQUID	1.37728	1.364	99.036 % Recovery	
2 SAMPLE	S00T000779	0	SPG-01	LIQUID	N/A	1.234	1.00e-003	Sp.G.
3 SAMPLE	S00T000782	0	SPG-01	LIQUID	N/A	1.232	1.00e-003	Sp.G.
4 SAMPLE	S00T000785	0	SPG-01	LIQUID	N/A	1.242	1.00e-003	Sp.G.

Final page for worklist# 33290

Analyst Signature _____ Date _____

Mary Jones 4/20/00
Analyst Signature Date

Brian Davis 04-21-00
Reviewer Signature Date

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95
04/18/00 14:35

Page: 1

LABCORE Data Entry Template for Worklist# 33290

Analyst: KK Instrument: BA001 Book # 134216-EMethod: LA-510-112 Rev/Mod E-2

Worklist Comment: AZ-101 (2), SPG-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID		<u>1.364</u>	<u>N/A</u>	Sp.G.
99000438	AZ-101 (2)	2 SAMPLE	S00T000779	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.234</u>		Sp.G.
99000438	AZ-101 (2)	3 SAMPLE	S00T000782	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.232</u>		Sp.G.
99000438	AZ-101 (2)	4 SAMPLE	S00T000785	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.242</u>		Sp.G.

Final page for worklist # 33290

Analyst Signature Not Kim Date 4/19/00Analyst Signature Mary From Date 4/20/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (E-2)

Type		STD	REPLICATE
STD	Gross Weight (W2)	1.4671	1.4417
Work List	Tare Weight (W1)	1.3316	1.3045
33290	Weight of Solution (W2-W1)	0.1355	0.1372
Test Code	Volume of Solution μ L	100.0000	100.0000
SPG-01	Specific Gravity	1.3550	1.3720
Matrix	Specific Gravity (Average)	1.3635	
LIQUID			
Sample #			
STD			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RWK	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
04/19/2000	v RESULT v		
Time	Specific Gravity Average =	1.364	
09:55 PM			

Data Entry by:	Date:	04/20/2000
Approved by:	Date:	4-21-00

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (E-2)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4382	1.4080
Work List	Tare Weight (W1)	1.3147	1.2846
33290	Weight of Solution (W2-W1)	0.1235	0.1234
Test Code	Volume of Solution μ L	100.0000	100.0000
SPG-01	Specific Gravity	1.2350	1.2340
Matrix	Specific Gravity (Average)	1.2345	
LIQUID			
Sample #			
S00T000779			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RWK	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
04/19/2000			
Time			
09:55 PM			
	v RESULT v		
	Specific Gravity Average =	1.234	

Data Entry by:	Date:	04/20/2000
Approved by:	<i>BVD</i> Date:	4-21-00

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (E-2)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4070	1.4814
Work List	Tare Weight (W1)	1.2842	1.3579
33290	Weight of Solution (W2-W1)	0.1228	0.1235
Test Code	Volume of Solution μ L	100.0000	100.0000
SPG-01	Specific Gravity	1.2280	1.2350
Matrix	Specific Gravity (Average)	1.2315	
LIQUID			
Sample #			
S00T000782			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RWK	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
04/19/2000	v RESULT v		
Time	Specific Gravity Average =	1.232	
09:55 PM			

Data Entry by:	Date: 04/20/2000
Approved by: <i>RWD</i>	Date: 4-21-00

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (E-2)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4551	1.4014
Work List	Tare Weight (W1)	1.3308	1.2774
33290	Weight of Solution (W2-W1)	0.1243	0.124
Test Code	Volume of Solution μ L	100.0000	100.0000
SPG-01	Specific Gravity	1.2430	1.2400
Matrix	Specific Gravity (Average)	1.2415	
LIQUID			
Sample #			
S00T000785			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RWK	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g}/\text{mL}]$		
Date			
04/19/2000	v RESULT v		
Time	Specific Gravity Average =	1.242	
09:55 PM			

Data Entry by:	Date:	04/20/2000
Approved by:	Date:	4-21-00

Form 510112L1 Rev. 1.1

LABCORE Completed Worklist Report for Worklist# 33331

Analyst: pjm

Instrument: BA001

Book#: 133N8

Method: LA-564-101 Rev/Mod G-3

Worklist Comment: AZ101 (2), SOLID-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		SOLID-01	LIQUID	40.2	40.5	100.746 %	Recovery
2	SAMPLE	S00T000778	0		SOLID-01	LIQUID	N/A	29	1.00e-002	%
3	SAMPLE	S00T000781	0		SOLID-01	LIQUID	N/A	28.6	1.00e-002	%
4	SAMPLE	S00T000784	0		SOLID-01	LIQUID	N/A	28.4	1.00e-002	%

Final page for worklist# 33331

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 33331

Analyst: RM Instrument: BA001 Book# 13318

Method: LA-564-101 Rev/Mod G3

Worklist Comment: AZ101 (2), SOLID-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				SOLID-01	LIQUID		
2	SAMPLE	S00T000778 0			SOLID-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: SOLID-01						
3	SAMPLE	S00T000781 0			SOLID-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: SOLID-01						
4	SAMPLE	S00T000784 0			SOLID-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: SOLID-01						

Final page for worklist # 33331

RJ McCown 04/20/00
Signature Date

Mary Frank 4/27/00
Signature Date

Data Entry Comments:

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% SOLIDS : LA-564-101 (G-3)

		STD	REPLICATE
Type	Tare Weight (W1)	17.8044	
STD	Gross Weight (W2)	19.1625	
W/C 4/24/00 Work List	First Residue Weight (W3)	18.3586	
33289- 33331	Second Residue Weight (W4)	18.3540	
Test Code	Percent Difference	0.0251	N/A
SOLID-01	QC Check	Pass	N/A
Matrix	Percent Weight Solids	40.47	N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
Sample #			
STD			
Instrument Code			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W4 - W1	= Residue Weight - Tare Weight	
PJM	Percent Difference	= [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/20/2000	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS	
Time	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2	
10:30 AM			

RESULT

% SOLIDS = 40.5

Data Entry by:

Date: 04/27/2000

Approved by:

Date:

Form 564101S2 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% SOLIDS : LA-564-101 (G-3)

		SAMPLE	REPLICATE
Type	Tare Weight (W1)	17.8766	
SAMPLE	Gross Weight (W2)	18.5035	
4/27/00 Work List	First Residue Weight (W3)	18.0585	
33289 33331	Second Residue Weight (W4)	18.0581	
Test Code	Percent Difference	0.0022	N/A
SOLID-01	QC Check	Pass	N/A
Matrix	Percent Weight Solids	28.95	N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
Sample #			
S00T000778			
Instrument Code			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W4 - W1	= Residue Weight - Tare Weight	
PJM	Percent Difference	= [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/20/2000	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS	
Time	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2	
10:30 AM			

RESULT

% SOLIDS = 29.0

Data Entry by:

Date: 04/27/2000

Approved by:

Date:

Form 564101S2 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% SOLIDS : LA-564-101 (G-3)

		DUP	REPLICATE
Type	Tare Weight (W1)	17.5234	
DUP	Gross Weight (W2)	18.1507	
4/27/00 Work List	First Residue Weight (W3)	17.7039	
33289-33331	Second Residue Weight (W4)	17.7038	
Test Code	Percent Difference	0.0006	N/A
SOLID-01	QC Check	Pass	N/A
Matrix	Percent Weight Solids	28.76	N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
Sample #			
S00T000778			
Instrument Code			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W4 - W1	= Residue Weight - Tare Weight	
PJM	Percent Difference	= [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/20/2000	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS	
Time	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2	
10:30 AM			

RESULT

% SOLIDS = 28.8

NR 13
4-27-00

Data Entry by:	Date:	04/27/2000
Approved by:	Date:	

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% SOLIDS : LA-564-101 (G-3)

% SOLIDS : LA-564-101 (G-3)		SAMPLE	REPLICATE
Type	Tare Weight (W1)	17.4470	
SAMPLE	Gross Weight (W2)	18.0728	
4/27/00 Work List	First Residue Weight (W3)	17.6262	
33289- 33331	Second Residue Weight (W4)	17.6259	
Test Code	Percent Difference	0.0017	N/A
SOLID-01	QC Check	Pass	N/A
Matrix	Percent Weight Solids	28.59	N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
Sample #			
S00T000781			
Instrument Code			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W4 - W1	= Residue Weight - Tare Weight	
PJM	Percent Difference	= [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/20/2000	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS	
Time	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2	
10:30 AM			

RESULT

% SOLIDS = 28.6

Data Entry by:

Date: 04/27/2000

Approved by:

Date:

Form 564101S2 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

% SOLIDS : LA-564-101 (G-3)

		SAMPLE	REPLICATE
Type	Tare Weight (W1)	17.7688	
SAMPLE	Gross Weight (W2)	18.3928	
Work List	First Residue Weight (W3)	17.9467	
33289 33331	Second Residue Weight (W4)	17.9463	
Test Code	Percent Difference	0.0022	N/A
SOLID-01	QC Check	Pass	N/A
Matrix	Percent Weight Solids	28.45	N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)		
Sample #			
S00T000784			
Instrument Code			
BA001	Sample = W2 - W1	= Gross Weight - Tare Weight	
Analyst	Weight = W4 - W1	= Residue Weight - Tare Weight	
PJM	Percent Difference	= [(W3-W4)/W4]*100.00	
Date	QC Check "Pass" if % Difference	= < +/- 0.1500%	
04/20/2000	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS	
Time	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2	
10:30 AM			

RESULT

% SOLIDS = 28.4

Data Entry by:	Date:	04/27/2000
Approved by:	Date:	

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HNF-1701 REV. 0

Page: 1

04/24/00 16:06

LABCORE Data Entry Template for Worklist# 33333Analyst: Drj 5-2-00
DRJ drj Instrument: BA001 Book # 13348Method: LA-564-101 Rev/Mod G-3

Worklist Comment: AZ101 (2). SOLID-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SOLID-HC	SOLID	<u>40.2</u>	<u>40.0</u>	<u>N/A</u>	%
99000438	AZ-101 (2)	2 SAMPLE	S00T000775	0	SOLID-HC	SOLID	<u>N/A</u>	<u>59.6</u>		%
99000438	AZ-101 (2)	3 SAMPLE	S00T000776	0	SOLID-HC	SOLID	<u>N/A</u>	<u>59.9</u>		%
99000438	AZ-101 (2)	4 SAMPLE	S00T000777	0	SOLID-HC	SOLID	<u>N/A</u>	<u>60.2</u>		%

Final page for worklist # 33333

Drj 5-2-00
Analyst Signature Date

Drj 5-4-00
Analyst Signature Date

S00T000775 17178 60ml Floor
776 17179 60ml Floor
777 17339 125ml Floor

Approved Rahat W. Schoed
5/4/00

Data Entry Comments:

Faxed Rws 5/4/00

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

NA

	Standard	REPLICATE
Type	Tare Weight (W1)	13.6080
Standard	Gross Weight (W2)	14.6586
Work List	First Residue Weight (W3)	14.0277
33333	Second Residue Weight (W4)	14.0278
Test Code	Percent Difference	0.0007
% Solid-HC	QC Check	Pass
Matrix	Percent Weight Solids	39.96
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)	
Sample #	Sample = W2 - W1	= Gross Weight - Tare Weight
133N8	Weight = W4 - W1	= Residue Weight - Tare Weight
Instrument Code	Percent Difference	= [(W3-W4)/W4]*100.00
LE-BAL-061	QC Check "Pass" If % Difference	= < +/- 0.1500%
Analyst	Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS
DRJ	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2
Date		
05/02/2000		
Time		

RESULT

% SOLIDS = 40.0

Data Entry by: <i>D. H. Jackson</i>	Date: 05/04/2000
Approved by: <i>Robert W. Schroeder</i>	Date: 5/4/00

HNF-1701 REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

NA

	Sample	REPLICATE
Type	Tare Weight (W1)	13.5388
Sample	Gross Weight (W2)	14.5785
Work List	First Residue Weight (W3)	14.1605
33333	Second Residue Weight (W4)	14.1584
Test Code	Percent Difference	0.0148
% Solid-HC	QC Check	Pass
Matrix	Percent Weight Solids	59.59
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)	
Sample #	Sample = W2 - W1	= Gross Weight - Tare Weight
S00T000775	Weight = W4 - W1	= Residue Weight - Tare Weight
Instrument Code	Percent Difference	= [(W3-W4)/W4]*100.00
LE-BAL-061	QC Check "Pass" if % Difference	= < +/- 0.1500%
Analyst	Percent Weight Solids	= [(W4-W1)/(W2-W1))*100 = % SOLIDS
DRJ	Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2
Date		
05/02/2000		
Time		

RESULT

% SOLIDS = 59.6

Data Entry by: <i>W. J. J. J.</i>	Date: 05/04/2000
Approved by: <i>Ralph W. Schneider</i>	Date: 5/4/00

HNF-1701 REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

<div style="border: 1px solid black; height: 300px; width: 100%;"></div>	
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NA

	Sample	REPLICATE
Type	Tare Weight (W1)	13.5730
Sample	Gross Weight (W2)	14.5960
Work List	First Residue Weight (W3)	14.1867
33333	Second Residue Weight (W4)	14.1860
Test Code	Percent Difference	0.0049 N/A
% Solid-HC	QC Check	Pass N/A
Matrix	Percent Weight Solids	59.92 N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)	
Sample #		
S00TQ00776		
Instrument Code		
LE-BAL-061		
Analyst		
DRJ		
Date		
05/02/2000		
Time		

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W4 - W1	= Residue Weight - Tare Weight
Percent Difference	= [(W3-W4)/W4]*100.00
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Weight Solids	= [(W4-W1)/(W2-W1)]*100 = % SOLIDS
Percent Solids (Average)	= [(% SOLIDS for A)+(% SOLIDS for B)]/2

RESULT

% SOLIDS =	59.9
------------	------

Data Entry by: <i>D. R. Jackson</i>	Date: 05/04/2000
Approved by: <i>Robert W. Schneider</i>	Date: 5/4/2000

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HNF-1701 REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

NA

	Sample	REPLICATE
Type	Tare Weight (W1)	13.6143
Sample	Gross Weight (W2)	14.6213
Work List	First Residue Weight (W3)	14.2208
33333	Second Residue Weight (W4)	14.2207
Test Code	Percent Difference	0.0007 N/A
% Solid-HC	QC Check	Pass N/A
Matrix	Percent Weight Solids	60.22 N/A
SOLID	(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)	
Sample #	Sample = W2 - W1 = Gross Weight - Tare Weight	
S00T000777	Weight = W4 - W1 = Residue Weight - Tare Weight	
Instrument Code	Percent Difference = $[(W3-W4)/W4]*100.00$	
LE-BAL-061	QC Check "Pass" If % Difference = $< +/- 0.1500\%$	
Analyst	Percent Weight Solids = $[(W4-W1)/(W2-W1)]*100 = \% \text{ SOLIDS}$	
DRJ	Percent Solids (Average) = $[(\% \text{ SOLIDS for A})+(\% \text{ SOLIDS for B})]/2$	
Date	05/02/2000	
Time		

RESULT

% SOLIDS = 60.2

Data Entry by: <i>Robert W. Schneider</i>	Date: 05/04/2000
Approved by: <i>Robert W. Schneider</i>	Date: 5/4/00

worklistrpt Version 2.1 05/15/95

12/07/99 15:55

HNF-1701 REV. 0

P

LABCORE Data Entry Template for Worklist# 31893

Analyst: drj Instrument: PH01 Book # 18 N19JMethod: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>7.92</u>	<u>N/A</u>	pH
99000433	AZ-101 (2)	2 SAMPLE	S99T001816	0	PH01-HC	LIQUID	<u>N/A</u>	<u>13.34</u>	pH
99000433	AZ-101 (2)	3 DUP	<u>for # 16738</u> S99T001816	0	PH01-HC	LIQUID	<u>13.34</u>	<u>13.40</u>	<u>N/A</u> pH
99000433	AZ-101 (2)	4 SAMPLE	S99T001817	0	PH01-HC	LIQUID	<u>N/A</u>	<u>I.S.</u>	pH
99000433	AZ-101 (2)	5 DUP	<u>for # 16739</u> S99T001817	0	PH01-HC	LIQUID	<u>I.S.</u>	<u>I.S.</u>	<u>N/A</u> pH
99000433	AZ-101 (2)	6 SAMPLE	S99T001818	0	PH01-HC	LIQUID	<u>N/A</u>	<u>13.39</u>	pH
99000433	AZ-101 (2)	7 DUP	<u>for # 16740</u> S99T001818	0	PH01-HC	LIQUID	<u>13.39</u>	<u>13.42</u>	<u>N/A</u> pH
99000433	AZ-101 (2)	8 SAMPLE	S99T001819	0	PH01-HC	LIQUID	<u>N/A</u>	<u>13.31</u>	pH
99000433	AZ-101 (2)	9 DUP	<u>for # 16741</u> S99T001819	0	PH01-HC	LIQUID	<u>13.31</u>	<u>13.40</u>	<u>N/A</u> pH
99000433	AZ-101 (2)	10 SAMPLE	S99T001820	0	PH01-HC	LIQUID	<u>N/A</u>	<u>I.S.</u>	pH
99000433	AZ-101 (2)	11 DUP	<u>for # 16744</u> S99T001820	0	PH01-HC	LIQUID	<u>I.S.</u>	<u>I.S.</u>	<u>N/A</u> pH

Final page for worklist # 31893

Analyst Signature drj Date 5-2-00Analyst Signature [Signature] Date 5/2/00DATA
NOT USEDApproved Rohit W. Sharma
5/2/00

Data Entry Comments:

I.S. = insufficient sample remaining for analysis.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95
12/07/99 15:56

LABCORE Data Entry Template for Worklist# 31894

Analyst: drj Instrument: PH01 Book # 18N19JMethod: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>8.0</u>	<u>7.92</u>	N/A	pH
99000433	AZ-101 (2)	2 SAMPLE	S99T001821	0	PH01-HC	LIQUID	N/A	<u>13.40</u>		pH
99000433	AZ-101 (2)	3 DUP <i>for #16750</i>	S99T001821	0	PH01-HC	LIQUID	<u>13.40</u>	<u>13.40</u>	N/A	pH
99000433	AZ-101 (2)	4 SAMPLE	S99T001822	0	PH01-HC	LIQUID	N/A	<u>13.34</u>		pH
99000433	AZ-101 (2)	5 DUP <i>for #16882</i>	S99T001822	0	PH01-HC	LIQUID	<u>13.34</u>	<u>13.43</u>	N/A	pH
99000433	AZ-101 (2)	6 SAMPLE	S99T001823	0	PH01-HC	LIQUID	N/A	<u>13.38</u>		pH
99000433	AZ-101 (2)	7 DUP <i>for #16872</i>	S99T001823	0	PH01-HC	LIQUID	<u>13.38</u>	<u>13.45</u>	N/A	pH
99000433	AZ-101 (2)	8 SAMPLE	S99T001824	0	PH01-HC	LIQUID	N/A	<u>13.5</u>	RWS 5/2/00	pH
99000433	AZ-101 (2)	9 DUP <i>for #16877</i>	S99T001824	0	PH01-HC	LIQUID	<u>13.57</u>	<u>13.42</u>	N/A	pH
99000433	AZ-101 (2)	10 SAMPLE	S99T001825	0	PH01-HC	LIQUID	N/A	<u>I.S.</u>		pH
99000433	AZ-101 (2)	11 DUP <i>for #16873</i>	S99T001825	0	PH01-HC	LIQUID	<u>I.S.</u>	<u>I.S.</u>	N/A	pH

Final page for worklist # 31894

D. D. R. Lick 5-1-00
Analyst Signature Date

Robert W. Schaefer 5/2/00
Analyst Signature Date

DATA
NOT USED

Approved Robert W. Schaefer
5/2/00

Data Entry Comments:

I.S. = insufficient sample remaining for analysis.

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
12/07/99 15:57

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 31895

Analyst: CWH Instrument: PH01 Book # 11A ^{1/26/00} 18N195Method: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	8.0	7.94	N/A	PH
99000433	AZ-101 (2)	2 SAMPLE	S99T001826 0		PH01-HC	LIQUID	N/A	13.24		PH
99000433	AZ-101 (2)	3 DUP	S99T001826 0		PH01-HC	LIQUID	13.24	13.24	N/A	PH
99000433	AZ-101 (2)	4 SAMPLE	S99T001827 0		PH01-HC	LIQUID	N/A	13.42		PH
99000433	AZ-101 (2)	5 DUP	S99T001827 0		PH01-HC	LIQUID	13.42	13.45	N/A	PH
99000433	AZ-101 (2)	6 SAMPLE	S99T001828 0		PH01-HC	LIQUID	N/A	13.27		PH
99000433	AZ-101 (2)	7 DUP	S99T001828 0		PH01-HC	LIQUID	13.27	13.33	N/A	PH
99000433	AZ-101 (2)	8 SAMPLE	S99T001829 0		PH01-HC	LIQUID	N/A	13.40		PH
99000433	AZ-101 (2)	9 DUP	S99T001829 0		PH01-HC	LIQUID	13.40	13.42	N/A	PH
99000433	AZ-101 (2)	10 SAMPLE	S99T001830 0		PH01-HC	LIQUID	N/A	13.61		PH
99000433	AZ-101 (2)	11 DUP	S99T001830 0		PH01-HC	LIQUID	13.61	13.68	N/A	PH

Final page for worklist # 31895

Analyst Signature

Date

Analyst Signature

Date

DATA
NOT USED

Data Entry Comments:

Faxed

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

Page: 1

worklistrpt Version 2.1 05/15/95
12/07/99 15:58

LABCORE Data Entry Template for Worklist# 31896

Analyst: EC

Instrument: PH01

Book # 18N19-JMethod: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STOPH			PH-01	LIQUID	<u>8.0</u>	<u>7.94</u>	N/A	PH
99000433	AZ-101 (2)	2 SAMPLE	S99T001831 0		PH01-HC	LIQUID	N/A	<u>13.46</u>		PH
99000433	AZ-101 (2)	3 DUP	<u>for #16887</u> S99T001831 0		PH01-HC	LIQUID	<u>13.46</u>	<u>13.47</u>	N/A	PH
99000438	AZ-101 (2)	4 SAMPLE	S99T001850 0		PH01-HC	LIQUID	N/A	<u>13.34</u>		PH
99000438	AZ-101 (2)	5 DUP	<u>for #16893</u> S99T001850 0		PH01-HC	LIQUID	<u>13.34</u>	<u>13.38</u>	N/A	PH
99000438	AZ-101 (2)	6 SAMPLE	S99T001851 0		PH01-HC	LIQUID	N/A	<u>13.40</u>		PH
99000438	AZ-101 (2)	7 DUP	<u>for #16892</u> S99T001851 0		PH01-HC	LIQUID	<u>13.40</u>	<u>13.42</u>	N/A	PH
99000438	AZ-101 (2)	8 SAMPLE	S99T001852 0		PH01-HC	LIQUID	N/A	<u>13.38</u>		PH
99000438	AZ-101 (2)	9 DUP	<u>for #16890</u> S99T001852 0		PH01-HC	LIQUID	<u>13.38</u>	<u>13.40</u>	N/A	PH
99000438	AZ-101 (2)	10 SAMPLE	S99T001853 0		PH01-HC	LIQUID	N/A	<u>13.39</u>		PH
99000438	AZ-101 (2)	11 DUP	<u>for #16891</u> S99T001853 0		PH01-HC	LIQUID	<u>13.39</u>	<u>13.42</u>	N/A	PH

Final page for worklist # 31896

Analyst Signature

Date

1/27/00

Analyst Signature

Date

2/3/00DATA
NOT USEDApproved Rob Schneider 2/3/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
12/07/99 15:59

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 31897

Analyst: CWH

Instrument: PH01

Book # 1126/100
18N195Method: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>8.0</u>	<u>7.94</u>	N/A	pH
99000438	AZ-101 (2)	2 SAMPLE	S99T001854	0	PH01-HC	LIQUID	N/A	<u>13.31</u>		pH
99000438	AZ-101 (2)	3 DUP	<u>fact# 16894</u> S99T001854	0	PH01-HC	LIQUID	<u>13.31</u>	<u>13.32</u>	N/A	pH
99000438	AZ-101 (2)	4 SAMPLE	S99T001855	0	PH01-HC	LIQUID	N/A	<u>13.34</u>		pH
99000438	AZ-101 (2)	5 DUP	<u>fact# 16890</u> S99T001855	0	PH01-HC	LIQUID	<u>13.34</u>	<u>13.35</u>	N/A	pH
99000438	AZ-101 (2)	6 SAMPLE	S99T001865	0	PH01-HC	LIQUID	N/A	<u>13.32</u>		pH
99000438	AZ-101 (2)	7 DUP	<u>fact# 16869</u> S99T001865	0	PH01-HC	LIQUID	<u>13.32</u>	<u>13.36</u>	N/A	pH
99000438	AZ-101 (2)	8 SAMPLE	S99T001866	0	PH01-HC	LIQUID	N/A	<u>13.28</u>		pH
99000438	AZ-101 (2)	9 DUP	<u>fact# 16888</u> S99T001866	0	PH01-HC	LIQUID	<u>13.28</u>	<u>13.29</u>	N/A	pH

Final page for worklist # 31897

Analyst Signature

Date

Analyst Signature

Date

DATA
NOT USED

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95

02/28/00 15:22

LABCORE Data Entry Template for Worklist# 32674

Analyst: ABC

Instrument: PH01

Book # 18N19JMethod: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ101 (2), PH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	8.0	7.91	N/A	PH
99000438	AZ-101 (2)	2 SAMPLE	✓ S99T001911 Jar# 16875 Box 139	0	PH01-HC	LIQUID	N/A	13.31		PH
99000438	AZ-101 (2)	3 DUP	S99T001911	0	PH01-HC	LIQUID	13.31	13.34	N/A	PH
99000438	AZ-101 (2)	4 SAMPLE	✓ S99T001912 Jar# 16884 Box 139	0	PH01-HC	LIQUID	N/A	13.33		PH
99000438	AZ-101 (2)	5 DUP	S99T001912	0	PH01-HC	LIQUID	13.33	13.34	N/A	PH
99000438	AZ-101 (2)	6 SAMPLE	S99T001913 Jar# 16886 Box 139	0	PH01-HC	LIQUID	N/A	13.33		PH
99000438	AZ-101 (2)	7 DUP	S99T001913	0	PH01-HC	LIQUID	13.33	13.33	N/A	PH
99000438	AZ-101 (2)	8 SAMPLE	✓ S99T001914 Jar# 16889 Box 139	0	PH01-HC	LIQUID	N/A	13.29		PH
99000438	AZ-101 (2)	9 DUP	S99T001914	0	PH01-HC	LIQUID	13.29	13.31	N/A	PH
99000438	AZ-101 (2)	10 SAMPLE	S99T001915 Jar# 16895 Box 139	0	PH01-HC	LIQUID	N/A	13.28		PH
99000438	AZ-101 (2)	11 DUP	S99T001915	0	PH01-HC	LIQUID	13.28	13.29	N/A	PH
99000438	AZ-101 (2)	12 SAMPLE	S99T001916 Jar# 17468 Box 151	0	PH01-HC	LIQUID	N/A	13.27		PH
99000438	AZ-101 (2)	13 DUP	S99T001916	0	PH01-HC	LIQUID	13.27	13.30	N/A	PH
99000438	AZ-101 (2)	14 SAMPLE	S99T001917 Jar# 16354 Floor (125mL)	0	PH01-HC	LIQUID	N/A	I.S.		PH
99000438	AZ-101 (2)	15 DUP	S99T001917	0	PH01-HC	LIQUID	I.S.	I.S.	N/A	PH

Final page for worklist # 32674

Alan B Campbell 5/2/00DATA
NOT USEDAlan B Campbell
Approved RW Schwede

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95
04/18/00 14:38

Page: 1

LABCORE Data Entry Template for Worklist# 33294

Analyst: PLW Instrument: PH01 >7 Book # 18N19JMethod: LA-212-106 Rev/Mod C-6

Worklist Comment: AZ-101 (2), pH-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>8.0</u>	<u>8.00</u>	<u>N/A</u>	pH
99000438	AZ-101 (2)	2 SAMPLE	S00T000779	0	PH-01	LIQUID	<u>N/A</u>	<u>13.55</u>		pH
99000438	AZ-101 (2)	3 SAMPLE	S00T000782	0	PH-01	LIQUID	<u>N/A</u>	<u>13.65</u>		pH
99000438	AZ-101 (2)	4 SAMPLE	S00T000785	0	PH-01	LIQUID	<u>N/A</u>	<u>13.68</u>		pH

Final page for worklist # 33294

Analyst Signature PLW Date 4/19/00Analyst Signature Mary Franz Date 4/20/00

Data Entry Comments:

Validated 4/20/00 James HulseUnits shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95

04/24/00 16:05

LABCORE Data Entry Template for Worklist# 33332

Analyst:

ABC

Instrument: PH01

Book #

18N19J

Method: LA-212-106 Rev/Mod

C-6

Worklist Comment: AZ101 (2), pH01-HC skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STOPH			PH-01	LIQUID	<u>8.9</u>	<u>7.91</u>	N/A	pH
99000438	AZ-101 (2)	2 SAMPLE	S00T000641 0 ✓ Jar # 17466		PH01-HC	LIQUID	N/A	<u>13.31</u>		pH
99000438	AZ-101 (2)	3 DUP	S00T000641 0 Box # 139?		PH01-HC	LIQUID	<u>13.31</u>	<u>13.37</u>	N/A	pH

Final page for worklist # 33332

Alan Campbell
Analyst Signature5/2/00
DateAlan Campbell
Analyst Signature

Date

Approved RW SchaeferDATA
NOT USED

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 33246

Analyst: adp

Instrument: PH01

Book#: 35N15A

Method: LA-211-102 Rev/Mod _____

Worklist Comment: AZ-101 (2), OH-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		OH-01	SOLID	1	< 1.29e4		ug/g
2 STD	0		OH-01	SOLID	1.621e4	1.64e4	101.172 % Recovery	
3 SAMPLE	S00T000806	0 W	OH-01	SOLID	N/A	< 1.29e4	12870.000	ug/g
4 SAMPLE	S00T000807	0 W	OH-01	SOLID	N/A	< 1.24e4	12350.000	ug/g
5 SAMPLE	S00T000808	0 W	OH-01	SOLID	N/A	< 1.09e4	10900.000	ug/g

Final page for worklist# 33246

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

04/17/00 11:10
ws2

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33246

Analyst:

ADP

Instrument: PH01

Book#

35N15-A

Method: LA-211-102

Rev/Mod

D-3

Worklist Comment: AZ-101 (2), OH-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK-PREP			OH-01	SOLID		
2 STD			OH-01	SOLID		
3 SAMPLE	S00T000806 0 W	OH-01	SOLID	99000433	AZ-101 (2)	
	Analytes Requested: OH-01					
4 SAMPLE	S00T000807 0 W	OH-01	SOLID	99000433	AZ-101 (2)	
	Analytes Requested: OH-01					
5 SAMPLE	S00T000808 0 W	OH-01	SOLID	99000433	AZ-101 (2)	
	Analytes Requested: OH-01					

Final page for worklist # 33246
Signature

Date

4/18/00
Signature

Date

4/18/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

806
(mL)

date 00-04-19 time 10:51
 GET pH 12 # 234
 Id.#1 1787
 Id.#2 .1982
 pH(init) 10.18
 V/mL pH
 EP1 .012 9.59
 EP2 .050 6.31
 manual stop
 =====

date 00-04-19 time 10:51
 GET pH 12 # 234
 .10ml/div Δ pH=1/div
 start V .000 ml

807 mL

date 00-04-19 time 10:58
 GET pH 12 # 236
 Id.#1 1787
 Id.#2 .1982
 pH(init) 10.24
 V/mL pH
 EP1 .011 9.75
 EP2 .044 6.06
 manual stop
 =====

date 00-04-19 time 10:59
 GET pH 12 # 236
 .10ml/div Δ pH=1/div
 start V .000 ml

808 mL

date 00-04-19 time 11:20
 GET pH 12 # 238
 Id.#1 1787
 Id.#2 .1982
 pH(init) 10.19
 V/mL pH
 EP1 .010 9.70
 EP2 .042 6.62
 manual stop
 =====

date 00-04-19 time 11:20
 GET pH 12 # 238
 .10ml/div Δ pH=1/div
 start V .000 ml

HNF-1701 REV. 0

SD 35N15-4

date 00-04-19 time 10:37
 GET pH 12 # 232
 Id.#1 1787
 Id.#2 .1982
 pH(init) 11.51
 V/ml pH
 EP1 .244 9.71
 EP2 .320 6.74
 manual stop
 =====

date 00-04-19 time 10:37
 GET pH 12 # 232
 .10ml/div Δ pH=1/div
 start V .000 ml

BIK

date 00-04-19 time 10:23
 GET pH 12 # 231
 Id.#1 1787
 Id.#2 .1982
 pH(init) 7.21
 V/ml pH
 EP1 .006 5.32
 manual stop
 =====

date 00-04-19 time 10:23
 GET pH 12 # 231
 .10ml/div Δ pH=1/div
 start V .000 ml

Prep BIK

date 00-04-19 time 10:55
 GET pH 12 # 235
 Id.#1 1787
 Id.#2 .1982
 pH(init) 5.74
 V/ml pH
 EP1 .006 4.59
 manual stop
 =====

OH (AUTO) : LA-211-102 (D-3)

		BLNK-PREP
Type	Sample Size (mL) SS	1.000
BLNK-PREP	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.006
33246	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L ***	9.71
OH-01	Concentration of Sample Prep (MOLARITY)	1.19E-03
Matrix	Concentration of Sample in PPM	2.08E+03
Solid		
Sample #		
BLNK-PREP	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	1.287E+04
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
10:10 AM		
		BLNK-PREP
Concentration of Sample in PPM		<12873
The Result is < Detection Limit		

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		STD
Type	Sample Size (mL) SS	0.050
STD	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.244
33246	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample Prep (MOLARITY)	9.67E-01
Matrix	Concentration of Sample in PPM	1.64E+04
Solid		
Sample #		
STD		
Instrument Code		
PH01	Detection Limit (PPM)	
Analyst		
ADP	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
10:10 AM		
		STD
	Concentration of Sample in PPM	1.64E+04

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.012
33246	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L***	9.71
OH-01	Concentration of Sample Prep (MOLARITY)	2.38E-03
Matrix	Concentration of Sample in PPM	4.16E+03
Solid		
Sample #		
S00T000806	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	1.287E+04
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
10:10 AM		
		SAMPLE
	Concentration of Sample in PPM	<12873
	The Result is < Detection Limit	

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.011
33246	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L***	10.12
OH-01	Concentration of Sample Prep (MOLARITY)	2.18E-03
Matrix	Concentration of Sample in PPM	3.66E+03
Solid		
Sample #		
S00T000807	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	1.235E+04
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
10:10 AM		
		SAMPLE
	Concentration of Sample in PPM	<12352
	The Result is < Detection Limit	

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.010
33246	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L***	11.47
OH-01	Concentration of Sample Prep (MOLARITY)	1.98E-03
Matrix	Concentration of Sample in PPM	2.94E+03
Solid		
Sample #		
S00T000808	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	1.090E+04
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
10:10 AM		
	Concentration of Sample in PPM	<10898
	The Result is < Detection Limit	

LABCORE Completed Worklist Report for Worklist# 33247

Analyst: adp

Instrument: PH01

Book#: 35N15A

Method: LA-211-102 Rev/Mod D-3

Worklist Comment: AZ-101 (2), OH-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		OH-01	SOLID	1	<3.961e3		ug/g
2 STD	0		OH-01	SOLID	1.621e4	1.65e4	101.789 % Recovery	
3 SAMPLE	S00T000812	0 W	OH-01	SOLID	N/A	5.77e3	3961.000	ug/g
4 SAMPLE	S00T000813	0 W	OH-01	SOLID	N/A	5.51e3	3931.000	ug/g
5 SAMPLE	S00T000814	0 W	OH-01	SOLID	N/A	3.116e3	3116.000	ug/g

Final page for worklist# 33247

Analyst Signature _____ Date _____

Mary Joann 4/24/00
Analyst Signature Date

James G. Goolsby 4/24/00
Reviewer Signature Date

HNF-1701 REV. 0

04/17/00 11:10

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 33247

Analyst:

Johs ASP

Instrument: PH01

Book#

35N15-A

Method: LA-211-102

Rev/Mod

D-3

Worklist Comment: AZ-101 (2), OH-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK-PREP			OH-01	SOLID		
2 STD			OH-01	SOLID		
3 SAMPLE	S00T000812 0 W	OH-01	SOLID	99000438	AZ-101 (2)	
Analytes Requested: OH-01						
4 SAMPLE	S00T000813 0 W	OH-01	SOLID	99000438	AZ-101 (2)	
Analytes Requested: OH-01						
5 SAMPLE	S00T000814 0 W	OH-01	SOLID	99000438	AZ-101 (2)	
Analytes Requested: OH-01						

Final page for worklist # 33247
Signature04-18-00
Date
Signature4/24/00
Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

812 3mL

date 00-04-19 time 13:42
 GET pH 12 # 245
 Id.#1 1787
 Id.#2 .1982
 pH(init) 11.85
 V/mL pH
 EP1 .054 9.73
 EP2 .105 7.72
 EP3 .229 4.48
 manual stop

813 3mL

date 00-04-19 time 13:48
 GET pH 12 # 246
 Id.#1 1787
 Id.#2 .1982
 pH(init) 10.97
 V/mL pH
 EP1 .052 9.68
 EP2 .110 7.40
 EP3 .198 5.52
 EP4 .262 4.34
 manual stop

814 3mL

date 00-04-19 time 13:56
 GET pH 12 # 247
 Id.#1 1787
 Id.#2 .1982
 pH(init) 10.84
 V/mL pH
 EP1 .037 9.71
 EP2 .101 7.62
 EP3 .312 4.57
 manual stop

date 00-04-19 time 13:43
 GET pH 12 # 245
 .10mL/div dPH=1/div
 start V .000 mL

date 00-04-19 time 13:49
 GET pH 12 # 246
 .10mL/div dPH=1/div
 start V .000 mL

date 00-04-19 time 13:56
 GET pH 12 # 247
 .10mL/div dPH=1/div
 start V .000 mL

date 00-04-19 time 14:03
 GET pH 12 # 248
 .10mL/div dPH=1/div
 start V .000 mL

Blank-Prep 3mL
 date 00-04-19 time 14:03
 GET pH 12 # 248
 Id.#1 1787
 Id.#2 .1982
 pH(init) 5.89
 V/mL pH
 EP1 .004 4.81
 manual stop

HNF-1701 REV. 0

BLK

.050

date 00-04-19 time 12:59
 GET pH 12 # 239
 Id.#1 1787
 Id.#2 .1982
 pH(init) 5.77

V ml pH
 EP1 .006 4.77
 manual stop

date 00-04-19 time 13:00
 GET pH 12 # 239
 .10ml/div Δ pH=1/div
 start V .000 ml

SHD

.050

date 00-04-19 time 13:07
 GET pH 12 # 240
 Id.#1 1787
 Id.#2 .1982
 pH(init) 11.63

V ml pH
 EP1 .245 9.62
 EP2 .316 6.64
 manual stop

date 00-04-19 time 13:07
 GET pH 12 # 240
 .10ml/div Δ pH=1/div
 start V .000 ml

Prop BLK

date 00-04-19 time 13:12
 GET pH 12 # 241
 Id.#1 1787
 Id.#2 .1982
 pH(init) 6.83

V ml pH
 EP1 .006 4.71
 manual stop

date 00-04-19 time 13:14
 GET pH 12 # 241
 .10ml/div Δ pH=1/div
 start V .000 ml

Not used. Redone w/ 3 mL

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		BLNK-PREP
Type	Sample Size (mL) SS	3.000
BLNK-PREP	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.004
33247	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L ***	10.52
OH-01	Concentration of Sample Prep (MOLARITY)	2.64E-04
Matrix	Concentration of Sample in PPM	4.27E+02
Solid		
Sample #		
BLNK-PREP	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	3.961E+03
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
01:00 PM		BLNK-PREP
	Concentration of Sample in PPM	<3961
The Result is < Detection Limit		

OH (AUTO) : LA-211-102 (D-3)

		STD
Type	Sample Size (mL) SS	0.050
STD	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.245
33247	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample Prep (MOLARITY)	9.71E-01
Matrix	Concentration of Sample in PPM	1.65E+04
Solid		
Sample #		
STD		
Instrument Code		
PH01	Detection Limit (PPM)	
Analyst		
ADP	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
01:00 PM		STD
	Concentration of Sample in PPM	1.65E+04

OH (AUTO) : LA-211-102 (D-3)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.054
33247	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L***	10.52
OH-01	Concentration of Sample Prep (MOLARITY)	3.57E-03
Matrix	Concentration of Sample in PPM	5.77E+03
Solid		
Sample #		
S00T000812	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	3.961E+03
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
01:00 PM		
		SAMPLE
Concentration of Sample in PPM		5.77E+03

OH (AUTO) : LA-211-102 (D-3)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.052
33247	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L***	10.6
OH-01	Concentration of Sample Prep (MOLARITY)	3.44E-03
Matrix	Concentration of Sample in PPM	5.51E+03
Solid		
Sample #		
S00T000813	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	3.931E+03
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
01:00 PM		
		SAMPLE
Concentration of Sample in PPM		5.51E+03

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.037
33247	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code	***Enter Digest Factor (DDF) in g/L ***	13.37
OH-01	Concentration of Sample Prep (MOLARITY)	2.44E-03
Matrix	Concentration of Sample in PPM	3.11E+03
Solid		
Sample #		
S00T000814	Detection Limit=((125µg /SS)*DF)*1000/DDF	
Instrument Code		
PH01	Detection Limit (PPM)	3.116E+03
Analyst		
ADP	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/18/2000	OH in µg/g =(OH MOLARITY)*(17g/mole) *(1000000 µg/g)/DDF	
Time		
01:00 PM		
		SAMPLE
Concentration of Sample in PPM		<3116
The Result is < Detection Limit		

LABCORE Completed Worklist Report for Worklist# 33293

Analyst: pjm

Instrument: PH01

Book#: 35N15A

Method: LA-211-102 Rev/Mod D.3

Worklist Comment: AZ-101 (2), OH-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		OH-01	LIQUID	1	<2.5e3		ug/mL
2 STD	0		OH-01	LIQUID	1.621e4	1.61e4	99.321 % Recovery	
3 SAMPLE	S00T000779	0	OH-01	LIQUID	N/A	1.15e4	2500.000	ug/mL
4 SAMPLE	S00T000782	0	OH-01	LIQUID	N/A	1.15e4	2500.000	ug/mL
5 SAMPLE	S00T000785	0	OH-01	LIQUID	N/A	1.16e4	2500.000	ug/mL

Final page for worklist# 33293

Analyst Signature _____ Date _____

Mary Tracy 4/20/00
Analyst Signature DateJames L. Lohs 4/21/00
Reviewer Signature Date

HNF-1701 REV. 0

Page: 1

worklistrpt Version 2.1 05/15/95

04/18/00 14:38

LABCORE Data Entry Template for Worklist# 33293Analyst: RM Instrument: PH01 Book # 35N15AMethod: LA-211-102 Rev/Mod D3

Worklist Comment: AZ-101 (2), OH-01 skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID			N/A	ug/mL
		2	STD				OH-01	LIQUID			N/A	ug/mL
99000438	AZ-101 (2)	3	SAMPLE	S00T000779	0		OH-01	LIQUID	N/A			ug/mL
99000438	AZ-101 (2)	4	SAMPLE	S00T000782	0		OH-01	LIQUID	N/A			ug/mL
99000438	AZ-101 (2)	5	SAMPLE	S00T000785	0		OH-01	LIQUID	N/A			ug/mL

Final page for worklist # 33293Analyst Signature RM Date 04/19/00Analyst Signature Wendy J. Jones Date 4/20/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Allquot Code.

HNF-1701 REV. 0

calibration data
 date 00-04-20
 pH(S) 1 7.00
 pH(S) 2 10.00
 t.cal. 23.5 °C
 slope(rl) .991
 U(as) -3.7 mV
 electr. input 1
 =====

date 00-04-20 time 10:38
 GET pH 12 # 251
 Id.#1 1787
 Id.#2 .1982
 pH(init) 6.01

V/ml	pH
EP1 .006	4.91

 stop volt.reached
 =====

BLNK

date 00-04-20 time 10:38
 GET pH 12 # 251
 .10ml/div Δ pH=1/div
 start V .000 ml

date 00-04-20 time 10:35
 GET pH 12 # 250
 Id.#1 1787
 Id.#2 .1982
 pH(init) 11.69

V/ml	pH
EP1 .239	9.80
EP2 .314	6.69

 stop volt.reached
 =====

5TD .050 mL

McCown

date 00-04-20 time 10:35
 GET pH 12 # 250
 .10ml/div Δ pH=1/div
 start V .000 ml

date 00-04-20 time 10:56
 GET pH 12 # 253
 Id.#1 779
 Id.#2 .1982
 pH(init) 11.62

V/ml	pH
EP1 .178	10.00
EP2 .278	8.38
EP3 .460	6.45

 stop volt.reached
 =====

500T000 779
.050 mL

date 00-04-20 time 11:01
 GET pH 12 # 253
 .10ml/div Δ pH=1/div
 start V .000 ml

date 00-04-20 time 11:15
 GET pH 12 # 254
 Id.#1 782
 Id.#2 .1982
 pH(init) 11.51

V/ml	pH
EP1 .171	9.97
EP2 .321	7.96
EP3 .342	6.41

 stop volt.reached
 =====

500T000 782
.050 mL

date 00-04-20 time 11:20
 GET pH 12 # 254
 .10ml/div Δ pH=1/div
 start V .000 ml

date 00-04-20 time 11:37
 GET pH 12 # 256
 Id.#1 785
 Id.#2 .1982
 pH(init) 11.56

V/ml	pH
EP1 .172	9.96
EP2 .283	8.25
EP3 .464	6.09

 stop volt.reached
 =====

500T000 785
.050 mL

date 00-04-20 time 11:38
 GET pH 12 # 256
 .10ml/div Δ pH=1/div
 start V .000 ml

OH (AUTO) : LA-211-102 (D-3)

		BLNK
Type	Sample Size (mL) SS	0.050
BLNK	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.006
33293	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample (MOLARITY)	2.38E-02
Matrix	Concentration of Sample in PPM	4.04E+02
LIQUID		
Sample #		
BLNK	Detection Limit =(125µg/SS)*DF	
Instrument Code		
PH01	Detection Limit (PPM)	2.500E+03
Analyst		
PJM	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/19/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
03:30 PM		
		BLNK
Concentration of Sample (MOLARITY)		2.38E-02
Concentration of Sample in PPM		<2500
The Result is < Detection Limit		

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		STD
Type	Sample Size (mL) SS	0.050
STD	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.239
33293	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample (MOLARITY)	9.47E-01
Matrix	Concentration of Sample in PPM	1.61E+04
LIQUID		
Sample #		
STD		
Instrument Code		
PH01	Detection Limit (PPM)	
Analyst		
PJM	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/19/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
03:30 PM		
		STD
	Concentration of Sample (MOLARITY)	9.47E-01
	Concentration of Sample in PPM	1.61E+04

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	0.050
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.170
33293	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample (MOLARITY)	6.74E-01
Matrix	Concentration of Sample in PPM	1.15E+04
LIQUID		
Sample #		
S00T000779	Detection Limit =(125µg/SS)*DF	
Instrument Code		
PH01	Detection Limit (PPM)	2.500E+03
Analyst		
PJM	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/19/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
03:30 PM		
		SAMPLE
	Concentration of Sample (MOLARITY)	6.74E-01
	Concentration of Sample in PPM	1.15E+04

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	0.050
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.171
33293	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample (MOLARITY)	6.78E-01
Matrix	Concentration of Sample in PPM	1.15E+04
LIQUID		
Sample #		
S00T000782	Detection Limit =(125µg/SS)*DF	
Instrument Code		
PH01	Detection Limit (PPM)	2.500E+03
Analyst		
PJM	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/19/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
03:30 PM		
		SAMPLE
	Concentration of Sample (MOLARITY)	6.78E-01
	Concentration of Sample in PPM	1.15E+04

OH (AUTO) : LA-211-102 (D-3)

OH (AUTO) : LA-211-102 (D-3)		SAMPLE
Type	Sample Size (mL) SS	0.050
SAMPLE	Concentration of Titrant (Molarity)	0.1982
Work List	Titrant volume at end-point in mL	0.172
33293	*** Enter Dilution Factor (DF) or 1 ***	1
Test Code		
OH-01	Concentration of Sample (MOLARITY)	6.82E-01
Matrix	Concentration of Sample in PPM	1.16E+04
LIQUID		
Sample #		
S00T000785	Detection Limit =(125µg/SS)*DF	
Instrument Code		
PH01	Detection Limit (PPM)	2.500E+03
Analyst		
PJM	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL)*Dilution Factor	
Date		
04/19/2000	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*(1000000µg/g)/(1000mL/L)	
Time		
03:30 PM		
		SAMPLE
	Concentration of Sample (MOLARITY)	6.82E-01
	Concentration of Sample in PPM	1.16E+04

LABCORE Completed Worklist Report for Worklist# 33244

Analyst: slh

Instrument: NH301

Book#: 7/19-C

Method: LA-631-001 Rev/Mod D-2

Worklist Comment: AZ-101 (2), NH3-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		NH3-01	SOLID	1	<5.15E+3		ug/g
2 STD	0		NH3-01	SOLID	4.76E+02	4.66E+2	97.899 % Recovery	
3 SAMPLE	S00T000806	0 W	NH3-01	SOLID	N/A	7.32E+03	5150.000	ug/g
4 SPK	S00T000806	0 W	NH3-01	SOLID	1.19E+02	9.40E+01	78.992 % Recovery	
5 SAMPLE	S00T000807	0 W	NH3-01	SOLID	N/A	< 4.94E+03	4940.000	ug/g
6 SAMPLE	S00T000808	0 W	NH3-01	SOLID	N/A	< 8.72E+03	8720.000	ug/g
7 STD	0		NH3-01	SOLID	4.76E+02	3.94E+2	82.773 % Recovery	

Final page for worklist# 33244

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 33244

Analyst: SLH Instrument: NH301 Book # 71N49-e

Method: LA-631-001 Rev/Mod D-2

Worklist Comment: AZ-101 (2), NH3-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			NH3-01	SOLID			N/A	ug/g
		2 STD			NH3-01	SOLID			N/A	ug/g
99000433	AZ-101 (2)	3 SAMPLE	S00T000806	0 W	NH3-01	SOLID	N/A			ug/g
99000433	AZ-101 (2)	4 SPK	S00T000806	0 W	NH3-01	SOLID			N/A	ug/g
99000433	AZ-101 (2)	5 SAMPLE	S00T000807	0 W	NH3-01	SOLID	N/A			ug/g
99000433	AZ-101 (2)	6 SAMPLE	S00T000808	0 W	NH3-01	SOLID	N/A			ug/g
		7 STD			NH3-01	SOLID			N/A	ug/g

Final page for worklist # 33244

Jandra L Hood
Analyst Signature
Date
4-18-2000

Mary Joann
Analyst Signature
Date
4/20/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

DOUBLE KNOWN ADDITION SELECTED
AT 01:57. 04-18-00

SAMPLE VOL= 25.000 AT 01:58. 04-18-00
ENTERED

EMF=-21.2 mV AT 01:58. 04-18-00

EMF=-21.4 mV AT 01:58. 04-18-00

EMF=-21.5 mV AT 01:59. 04-18-00

EMF=-21.6 mV AT 01:59. 04-18-00

EMF=-21.7 mV AT 01:59. 04-18-00
ENTERED

STD CONC= 1000 AT 02:00. 04-18-00
ENTERED

STD VOL= .25000 AT 02:03. 04-18-00
ENTERED

EMF=-39.2 mV AT 02:03. 04-18-00

EMF=-39.3 mV AT 02:03. 04-18-00

EMF=-39.4 mV AT 02:04. 04-18-00

EMF=-39.5 mV AT 02:04. 04-18-00

EMF=-39.5 mV AT 02:04. 04-18-00
ENTERED

STD VOL= 2.5000 AT 02:11. 04-18-00
ENTERED

EMF=-84.1 mV AT 02:11. 04-18-00

EMF=-84.2 mV AT 02:11. 04-18-00

EMF=-84.3 mV AT 02:12. 04-18-00

EMF=-84.4 mV AT 02:12. 04-18-00

EMF=-84.4 mV AT 02:12. 04-18-00
ENTERED

1:NH3 SLOPE=-61.4 mV/DEC
AT 02:12. 04-18-00

1:NH3 CONC= 10.3

WL33244

By STD

33 = .500 ml 7/11/9-C

571

DOUBLE KNOWN ADDITION SELECTED
AT 23:35. 04-17-00

SAMPLE VOL= 25.000 AT 23:35. 04-17-00
ENTERED

EMF= 51.2 mV AT 23:37. 04-17-00

EMF= 51.1 mV AT 23:38. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00
ENTERED

STD CONC= 1000 AT 23:39. 04-17-00
ENTERED

STD VOL= .25000 AT 23:41. 04-17-00
ENTERED

EMF=-11.9 mV AT 23:41. 04-17-00

EMF=-12.2 mV AT 23:41. 04-17-00

EMF=-12.5 mV AT 23:42. 04-17-00

EMF=-12.6 mV AT 23:42. 04-17-00
ENTERED

STD VOL= 2.5000 AT 23:47. 04-17-00
ENTERED

EMF=-71.0 mV AT 23:47. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.5 mV AT 23:49. 04-17-00

EMF=-71.6 mV AT 23:49. 04-17-00
ENTERED

1:NH3 SLOPE=-61.2 mV/DEC
AT 23:49. 04-17-00

1:NH3 CONC= .988

BK WL 33244

DOUBLE KNOWN ADDITION SELECTED
AT 02:25. 04-18-00

SAMPLE VOL= 25.000 AT 02:28. 04-18-00
ENTERED

EMF= 41.6 mV AT 02:34. 04-18-00

EMF= 42.3 mV AT 02:35. 04-18-00

EMF= 42.5 mV AT 02:35. 04-18-00

EMF= 42.7 mV AT 02:36. 04-18-00

EMF= 42.9 mV AT 02:36. 04-18-00

EMF= 43.0 mV AT 02:36. 04-18-00
ENTERED

STD CONC= 1000 AT 02:38. 04-18-00
ENTERED

STD VOL= .25000 AT 02:40. 04-18-00
ENTERED

EMF=-19.5 mV AT 02:40. 04-18-00

EMF=-19.6 mV AT 02:41. 04-18-00

EMF=-19.8 mV AT 02:41. 04-18-00

EMF=-19.8 mV AT 02:41. 04-18-00
ENTERED

STD VOL= 2.5000 AT 02:43. 04-18-00
ENTERED

EMF=-76.9 mV AT 02:44. 04-18-00

EMF=-77.6 mV AT 02:45. 04-18-00

EMF=-77.9 mV AT 02:45. 04-18-00

EMF=-78.0 mV AT 02:45. 04-18-00
ENTERED

1:NH3 SLOPE=-60.4 mV/DEC
AT 02:45. 04-18-00

1:NH3 CONC= .994

BIK Prep
573 SS = .500 ml

DOUBLE KNOWN ADDITION SELECTED
AT 02:54. 04-18-00

SAMPLE VOL= 25.000 AT 02:54. 04-18-00
ENTERED

EMF= 24.3 mV AT 02:54. 04-18-00

EMF= 24.6 mV AT 02:54. 04-18-00

EMF= 24.8 mV AT 02:55. 04-18-00

EMF= 24.9 mV AT 02:55. 04-18-00
ENTERED

STD CONC= 1000 AT 02:55. 04-18-00
ENTERED

STD VOL= .25000 AT 02:57. 04-18-00
ENTERED

EMF=-18.0 mV AT 02:57. 04-18-00

EMF=-18.3 mV AT 02:58. 04-18-00

EMF=-18.6 mV AT 02:58. 04-18-00

EMF=-18.8 mV AT 02:59. 04-18-00
ENTERED

STD VOL= 2.5000 AT 03:03. 04-18-00
ENTERED

EMF=-74.6 mV AT 03:03. 04-18-00

EMF=-74.8 mV AT 03:03. 04-18-00

EMF=-75.1 mV AT 03:04. 04-18-00

EMF=-75.3 mV AT 03:04. 04-18-00

EMF=-75.4 mV AT 03:04. 04-18-00
ENTERED

1:NH3 SLOPE=-61.8 mV/DEC
AT 03:05. 04-18-00

1:NH3 CONC= 2.41

500T000806
SS = .500ml

DOUBLE KNOWN ADDITION SELECTED
AT 03:44. 04-18-00

SAMPLE VOL= 25.000 AT 03:46. 04-18-00
ENTERED

EMF= 14.9 mV AT 03:46. 04-18-00

EMF= 15.0 mV AT 03:46. 04-18-00

EMF= 15.1 mV AT 03:47. 04-18-00

EMF= 15.3 mV AT 03:47. 04-18-00

EMF= 15.3 mV AT 03:47. 04-18-00
ENTERED

STD CONC= 1000 AT 03:48. 04-18-00
ENTERED

STD VOL= .25000 AT 03:49. 04-18-00
ENTERED

EMF=-10.0 mV AT 03:49. 04-18-00

EMF=-10.2 mV AT 03:49. 04-18-00

EMF=-10.4 mV AT 03:50. 04-18-00

EMF=-10.5 mV AT 03:50. 04-18-00
ENTERED

STD VOL= 2.5000 AT 03:53. 04-18-00
ENTERED

EMF=-60.7 mV AT 03:53. 04-18-00

EMF=-60.9 mV AT 03:53. 04-18-00

EMF=-61.1 mV AT 03:54. 04-18-00

EMF=-61.3 mV AT 03:54. 04-18-00

EMF=-61.3 mV AT 03:54. 04-18-00
ENTERED

1:NH3 SLOPE=-62.3 mV/DEC
AT 03:54. 04-18-00

1:NH3 CONC= 6.17

500 T000 8006 Jpk

SS = .500 ml + .250
7/11/9 C Jpk

575

DOUBLE KNOWN ADDITION SELECTED
AT 04:03. 04-18-00

SAMPLE VOL= 25.000 AT 04:03. 04-18-00
ENTERED

EMF= 48.9 mV AT 04:04. 04-18-00

EMF= 49.2 mV AT 04:04. 04-18-00

EMF= 49.7 mV AT 04:05. 04-18-00

EMF= 49.8 mV AT 04:05. 04-18-00
ENTERED

STD CONC= 1000 AT 04:06. 04-18-00
ENTERED

STD VOL= .25000 AT 04:07. 04-18-00
ENTERED

EMF=-4.0 mV AT 04:08. 04-18-00

EMF=-4.3 mV AT 04:08. 04-18-00

EMF=-4.6 mV AT 04:09. 04-18-00

EMF=-4.6 mV AT 04:09. 04-18-00
ENTERED

STD VOL= 2.5000 AT 04:17. 04-18-00
ENTERED

EMF=-62.4 mV AT 04:17. 04-18-00

EMF=-65.0 mV AT 04:17. 04-18-00

EMF=-63.1 mV AT 04:19. 04-18-00

EMF=-63.3 mV AT 04:20. 04-18-00

EMF=-63.3 mV AT 04:20. 04-18-00
ENTERED

1:NH3 SLOPE=-62.1 mV/DEC
AT 04:20. 04-18-00

1:NH3 CONC= 1.52

S60T000807 55=.500

DOUBLE KNOWN ADDITION SELECTED
AT 05:03. 04-18-00

SAMPLE VOL= 25.000 AT 05:03. 04-18-00
ENTERED

EMF= 60.4 mV AT 05:03. 04-18-00

EMF= 61.5 mV AT 05:04. 04-18-00

EMF= 62.4 mV AT 05:05. 04-18-00

EMF= 62.6 mV AT 05:05. 04-18-00
ENTERED

STD CONCN= 1000 AT 05:06. 04-18-00
ENTERED

STD VOL= .25000 AT 05:07. 04-18-00
ENTERED

EMF=-2.1 mV AT 05:08. 04-18-00

EMF=-2.3 mV AT 05:08. 04-18-00

EMF=-2.5 mV AT 05:08. 04-18-00

EMF=-2.6 mV AT 05:09. 04-18-00
ENTERED

STD VOL= 2.5000 AT 05:14. 04-18-00
ENTERED

EMF=-62.1 mV AT 05:14. 04-18-00

EMF=-62.2 mV AT 05:14. 04-18-00

EMF=-62.3 mV AT 05:15. 04-18-00

EMF=-62.3 mV AT 05:15. 04-18-00
ENTERED

1:NH3 SLOPE=-61.9 mV/DEC
AT 05:15. 04-18-00

1:NH3 CONCN= .960

SS = .250-2

500 TUDO 808

577

DOUBLE KNOWN ADDITION SELECTED
AT 05:21. 04-18-00

SAMPLE VOL= 25.000 AT 05:25. 04-18-00
ENTERED

EMF=-2.9 mV AT 05:25. 04-18-00

EMF=-3.0 mV AT 05:28. 04-18-00

EMF=-3.0 mV AT 05:30. 04-18-00

EMF=-3.0 mV AT 05:30. 04-18-00
ENTERED

STD CONC= 1000 AT 05:31. 04-18-00
ENTERED

STD VOL= .25000 AT 05:34. 04-18-00
ENTERED

EMF=-21.3 mV AT 05:34. 04-18-00

EMF=-21.4 mV AT 05:35. 04-18-00

EMF=-21.6 mV AT 05:35. 04-18-00

EMF=-22.0 mV AT 05:36. 04-18-00

EMF=-22.0 mV AT 05:36. 04-18-00
ENTERED

STD VOL= 2.5000 AT 05:39. 04-18-00
ENTERED

EMF=-65.7 mV AT 05:39. 04-18-00

EMF=-65.9 mV AT 05:40. 04-18-00

EMF=-66.3 mV AT 05:40. 04-18-00

EMF=-66.5 mV AT 05:40. 04-18-00
ENTERED

1:NH3 SLOPE=-58.7 mV/DEC
AT 05:41. 04-18-00

1:NH3 CONC= 8.86

71N19-C
SS = .500 ml

End STD

WORKBOOK PAGE: STD2

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		STD
Type	Instrument Data (µg/mL) ID	10.300
STD	Blank Result from the Instrument (µg/mL) BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL) VSAM	0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL) FVOL	25.0
Test Code	LCS Standard Book Number LCS	71N19C
NH3-01	LCS Standard Concentration (µg/mL) STD VAL	4.76E+02
Matrix		
Batch Number		
20001346		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL) NH3 CONC	4.66E+02
Sample #		
STD	Detection Limit (µg/mL) 5.00E+01	
Instrument Code		
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)	
Prepared By		
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)	
Chemist		
MJL	QC ACTUAL = STD VAL	
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)	
SLH		
Date Complete		
04/20/2000		
Analysis Date	QC ACTUAL (µg)	4.76E+02
04/18/2000	QC FOUND (µg)	4.66E+02
Analysis Time		
05:41 AM		
Sample Point		
AZ-101(2)		

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: BLANK1

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

BLNK-PREP

Type	Instrument Data (µg/mL)	ID	0.994
BLNK-PREP	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code			
NH3-01			
Matrix			
SOLID	Digest Dilution (g/L)	DD	9.710
Batch Number			
20001346			
Rerun			
0			
Sample Prep			
H2ODIG01	NH3 Concentration (µg/g)	NH3 CONC	< 5.15E+03
Sample #			
BLNK-PREP	Detection Limit (µg/g)		5.15E+03
Instrument Code			
NH301	Detection Limit = 1.000µg *1000* (FVOL/VSAM) / DD		
Prepared By			
MF	NH3 Concentration (µg/g) = (ID-BR) * 1000 * (FVOL / VSAM) /DD		
Chemist			
MJL			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/18/2000			
Analysis Time			
05:41 AM			
Sample Point	NH3 Concentration (µg/mL)		< 5.15E+03
AZ-101(2)			

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM3

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

			SAMPLE
Type	Instrument Data (µg/mL)	ID	2.410
SAMPLE	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code			
NH3-01			
Matrix			
SOLID	Digest Dilution (g/L)	DD	9.710
Batch Number			
20001346			
Rerun			
0			
Sample Prep			
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC	7.32E+03
Sample #			
S00T000806	Detection Limit (µg/g)	5.15E+03	
Instrument Code			
NH301	Detection Limit = 1.000µg *1000* (FVOL/VSAM) / DD		
Prepared By			
MF	NH3 Concentration (µg/g) = (ID-BR) * 1000 * (FVOL / VSAM) /DD		
Chemist			
MJL			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/18/2000			
Analysis Time			
05:41 AM			
Sample Point	NH3 Concentration (µg/g)		7.32E+03
AZ-101(2)			

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SPIKE4

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SPK
Type	Instrument Data (µg/mL)	ID 6.170
SPK	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code	Spike Book Number	SPK 71N19C
NH3-01	Spike Value (µg/mL)	SPK VAL 4.76E+02
Matrix	Vol of Spike Standard Used (mL)	VOL SPK 0.250
SOLID		
Batch Number		
20001346		
Rerun	Sample Instrument Data (µg/mL)	SAM ID 2.41
0	Sample Volume of Sample (mL)	SAM VSAM 0.500
Sample Prep	Sample Final Volume (mL)	SAM FVOL 25.0
H2ODIGHC		
Sample #		
S00T000806		
Instrument Code		
NH301		
Prepared By		
MF		
Chemist		
MJL	QC ACTUAL = SPK VAL * VOL SPK	
Analyst	QC FOUND = (((ID-BR) * FVOL) - (SAM ID - BR) * SAM FVOL * (VSAM / SAM VSAM))	
SLH		
Date Complete		
04/20/2000		
Analysis Date	QC ACTUAL (µg)	1.19E+02
04/18/2000	QC FOUND (µg)	9.40E+01
Analysis Time		
05:41 AM		
Sample Point		
AZ-101(2)		

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM5

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SAMPLE
Type	Instrument Data (µg/mL)	ID 1.520
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
SOLID	Digest Dilution (g/L)	DD 10.120
Batch Number		
20001346		
Rerun		
0		
Sample Prep		
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC < 4.94E+03
Sample #		
S00T000807	Detection Limit (µg/g)	4.94E+03
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Prepared By		
MF	NH3 Concentration (µg/g) = $(\text{ID} - \text{BR}) * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Chemist		
MJL		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/18/2000		
Analysis Time		
05:41 AM		
Sample Point	NH3 Concentration (µg/g)	< 4.94E+03
AZ-101(2)		

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM6

AMMONIA (NH3) : LA-631-001 (D-2)**LIQUIDS/SOLIDS**

		SAMPLE
Type	Instrument Data (µg/mL)	ID 0.960
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.250
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
SOLID	Digest Dilution (g/L)	DD 11.470
Batch Number		
20001346		
Rerun		
0		
Sample Prep		
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC < 8.72E+03
Sample #		
S00T000808	Detection Limit (µg/g)	8.72E+03
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Prepared By		
MF	NH3 Concentration (µg/g) = $(\text{ID} - \text{BR}) * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Chemist		
MJL		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/18/2000		
Analysis Time		
05:41 AM		
Sample Point	NH3 Concentration (µg/g)	< 8.72E+03
AZ-101(2)		

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: ST_END7

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		STD
Type	Instrument Data (µg/mL)	ID 8.860
STD	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.500
33244	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code	LCS Standard Book Number	LCS 71N19C
NH3-01	LCS Standard Concentration (µg/mL)	STD VAL 4.76E+02
Matrix		
Batch Number		
20001346		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL)	NH3 CONC 3.94E+02
Sample #		
STD	Detection Limit (µg/mL)	5.00E+01
Instrument Code		
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)	
Prepared By		
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)	
Chemist		
MJL	QC ACTUAL = STD VAL	
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)	
SLH		
Date Complete		
04/20/2000		
Analysis Date	QC ACTUAL (µg)	4.76E+02
04/18/2000	QC FOUND (µg)	3.94E+02
Analysis Time		
05:41 AM		
Sample Point		
AZ-101(2)		

Analyst:

SLH Date: 04/20/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

LABCORE Completed Worklist Report for Worklist# 33245

Analyst: rwk

Instrument: NH301

Book#: 71 N 19-C

Method: LA-631-001 Rev/Mod D-2

Worklist Comment: AZ-101 (2), NH3-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		NH3-01	SOLID	1	<2.38E+3		ug/g
2 STD	0		NH3-01	SOLID	4.76E+02	4.29E+2	90.126 % Recovery	
3 SAMPLE	S00T000812	0 W	NH3-01	SOLID	N/A	< 2.38E+03	2380.000	ug/g
4 SPK	S00T000812	0 W	NH3-01	SOLID	1.19E+02	1.17E+02	98.319 % Recovery	
5 SAMPLE	S00T000813	0 W	NH3-01	SOLID	N/A	< 2.36E+03	2360.000	ug/g
6 SAMPLE	S00T000814	0 W	NH3-01	SOLID	N/A	< 1.87E+03	1870.000	ug/g
7 STD	0		NH3-01	SOLID	4.76E+02	5.31E+2	111.555 % Recovery	

Final page for worklist# 33245

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

HNF-1701 REV. 0

worklistrpt Version 2.1 05/15/95

Page: 1

04/17/00 11:09

LABCORE Data Entry Template for Worklist# 33245

Analyst: KK Instrument: NH301 Book # 71719-CMethod: LA-631-001 Rev/Mod D2

Worklist Comment: AZ-101 (2), NH3-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			NH3-01	SOLID			N/A	ug/g
		2 STD			NH3-01	SOLID			N/A	ug/g
99000438	AZ-101 (2)	3 SAMPLE	S00T000812	0 W	NH3-01	SOLID	N/A			ug/g
99000438	AZ-101 (2)	4 SPK	S00T000812	0 W	NH3-01	SOLID			N/A	ug/g
99000438	AZ-101 (2)	5 SAMPLE	S00T000813	0 W	NH3-01	SOLID	N/A			ug/g
99000438	AZ-101 (2)	6 SAMPLE	S00T000814	0 W	NH3-01	SOLID	N/A			ug/g
		7 STD			NH3-01	SOLID			N/A	ug/g

Final page for worklist # 33245

Analyst Signature Not King Date 4/18/00Analyst Signature Mary Francis Date 4/19/00

Data Entry Comments:

Ran XRF Blk 2X, both above 1

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

DOUBLE KNOWN ADDITION SELECTED
AT 08:59. 04-18-00

SAMPLE VOL= 25.000 AT 09:05. 04-18-00
ENTERED

EMF= 5.6 mV AT 09:07. 04-18-00

EMF= 5.3 mV AT 09:08. 04-18-00
ENTERED

STD CONC= 1000 AT 09:08. 04-18-00
ENTERED

STD VOL= .25000 AT 09:08. 04-18-00
ENTERED

EMF=-12.5 mV AT 09:10. 04-18-00

EMF=-12.8 mV AT 09:10. 04-18-00

EMF=-12.8 mV AT 09:10. 04-18-00
ENTERED

STD VOL= 2.5000 AT 09:11. 04-18-00
ENTERED

EMF=-56.3 mV AT 09:13. 04-18-00

EMF=-56.6 mV AT 09:13. 04-18-00

EMF=-56.8 mV AT 09:13. 04-18-00
ENTERED

1:NH3 SLOPE=-59.0 mV/DEC
AT 09:13. 04-18-00

1:NH3 CONC= 9.56

Std

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 23:35. 04-17-00

SAMPLE VOL= 25.000 AT 23:35. 04-17-00
ENTERED

EMF= 51.2 mV AT 23:37. 04-17-00

EMF= 51.1 mV AT 23:38. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00
ENTERED

STD CONCN= 1000 AT 23:39. 04-17-00
ENTERED

STD VOL= .25000 AT 23:41. 04-17-00
ENTERED

EMF=-11.9 mV AT 23:41. 04-17-00

EMF=-12.2 mV AT 23:41. 04-17-00

EMF=-12.5 mV AT 23:42. 04-17-00

EMF=-12.6 mV AT 23:42. 04-17-00
ENTERED

STD VOL= 2.5000 AT 23:47. 04-17-00
ENTERED

EMF=-71.0 mV AT 23:47. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.5 mV AT 23:49. 04-17-00

EMF=-71.6 mV AT 23:49. 04-17-00
ENTERED

1:NH3 SLOPE=-61.2 mV/DEC
AT 23:49. 04-17-00

1:NH3 CONCN= .988

Bik

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 09:14. 04-18-00

SAMPLE VOL= 25.000 AT 09:21. 04-18-00
ENTERED

EMF= 60.5 mV AT 09:22. 04-18-00

EMF= 60.5 mV AT 09:22. 04-18-00
ENTERED

STD CONC= 1000 AT 09:23. 04-18-00
ENTERED

STD VOL= .25000 AT 09:23. 04-18-00
ENTERED

EMF= 5.8 mV AT 09:25. 04-18-00

EMF= 5.6 mV AT 09:25. 04-18-00
ENTERED

STD VOL= 2.5000 AT 09:26. 04-18-00
ENTERED

EMF=-51.6 mV AT 09:28. 04-18-00

EMF=-52.0 mV AT 09:28. 04-18-00

EMF=-52.1 mV AT 09:28. 04-18-00
ENTERED

1:NH3 SLOPE=-60.8 mV/DEC
AT 09:28. 04-18-00

1:NH3 CONC= 1.41

Ref Bld

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 09:34. 04-18-00

SAMPLE VOL= 25.000 AT 09:36. 04-18-00
ENTERED

EMF= 60.2 mV AT 09:37. 04-18-00

EMF= 60.1 mV AT 09:37. 04-18-00
ENTERED

STD CONC= 1000 AT 09:38. 04-18-00
ENTERED

STD VOL= .25000 AT 09:38. 04-18-00
ENTERED

EMF= 8.1 mV AT 09:40. 04-18-00

EMF= 7.7 mV AT 09:40. 04-18-00

EMF= 7.6 mV AT 09:40. 04-18-00
ENTERED

STD VOL= 2.5000 AT 09:41. 04-18-00
ENTERED

EMF=-50.1 mV AT 09:43. 04-18-00

EMF=-50.5 mV AT 09:43. 04-18-00

EMF=-50.6 mV AT 09:43. 04-18-00
ENTERED

1:NH3 SLOPE=-61.8 mV/DEC
AT 09:43. 04-18-00

1:NH3 CONC= 1.63

Jim BLA

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 09:44. 04-18-00

SAMPLE VOL= 25.000 AT 09:49. 04-18-00
ENTERED

EMF= 58.4 mV AT 09:50. 04-18-00

EMF= 58.5 mV AT 09:50. 04-18-00
ENTERED

STD CONCN= 1000 AT 09:51. 04-18-00
ENTERED

STD VOL= .25000 AT 09:51. 04-18-00
ENTERED

EMF= 8.1 mV AT 09:53. 04-18-00

EMF= 7.9 mV AT 09:53. 04-18-00
ENTERED

STD VOL= 2.5000 AT 09:54. 04-18-00
ENTERED

EMF=-49.7 mV AT 09:56. 04-18-00

EMF=-50.0 mV AT 09:56. 04-18-00

EMF=-50.0 mV AT 09:56. 04-18-00
ENTERED

1:NH3 SLOPE=-61.8 mV/DEC
AT 09:56. 04-18-00

1:NH3 CONCN= 1.77

8/2

1 ML

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 09:58. 04-18-00

SAMPLE VOL= 25.000 AT 10:03. 04-18-00
ENTERED

EMF= 23.9 mV AT 10:04. 04-18-00

EMF= 23.9 mV AT 10:04. 04-18-00
ENTERED

STD CONC= 1000 AT 10:05. 04-18-00
ENTERED

STD VOL= .25000 AT 10:05. 04-18-00
ENTERED

EMF=-0.5 mV AT 10:07. 04-18-00

EMF=-0.6 mV AT 10:07. 04-18-00
ENTERED

STD VOL= 2.5000 AT 10:07. 04-18-00
ENTERED

EMF=-49.7 mV AT 10:10. 04-18-00

EMF=-49.9 mV AT 10:10. 04-18-00

EMF=-49.9 mV AT 10:10. 04-18-00
ENTERED

1:NH3 SLOPE=-61.0 mV/DEC
AT 10:10. 04-18-00

1:NH3 CONC= 6.46

812 SPK
1ML 6.5
.250 SPK

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 10:19. 04-18-00

SAMPLE VOL= 25.000 AT 10:19. 04-18-00
ENTERED

EMF= 61.1 mV AT 10:21. 04-18-00

EMF= 61.0 mV AT 10:21. 04-18-00
ENTERED

STD CONCN= 1000 AT 10:21. 04-18-00
ENTERED

STD VOL= .25000 AT 10:21. 04-18-00
ENTERED

EMF= 11.9 mV AT 10:24. 04-18-00

EMF= 11.6 mV AT 10:24. 04-18-00

EMF= 11.6 mV AT 10:24. 04-18-00
ENTERED

STD VOL= 2.5000 AT 10:25. 04-18-00
ENTERED

EMF=-46.5 mV AT 10:27. 04-18-00

EMF=-46.7 mV AT 10:28. 04-18-00
ENTERED

1:NH3 SLOPE=-62.6 mV/DEC
AT 10:28. 04-18-00

1:NH3 CONCN= 1.92

813

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 10:29. 04-18-00

SAMPLE VOL= 25.000 AT 10:33. 04-18-00
ENTERED

EMF= 58.3 mV AT 10:35. 04-18-00

EMF= 58.2 mV AT 10:35. 04-18-00
ENTERED

STD CONCEN= 1000 AT 10:35. 04-18-00
ENTERED

STD VOL= .25000 AT 10:35. 04-18-00
ENTERED

EMF= 10.7 mV AT 10:37. 04-18-00

EMF= 10.4 mV AT 10:38. 04-18-00
ENTERED

STD VOL= 2.5000 AT 10:38. 04-18-00
ENTERED

EMF=-45.8 mV AT 10:41. 04-18-00

EMF=-46.1 mV AT 10:41. 04-18-00

EMF=-46.2 mV AT 10:41. 04-18-00
ENTERED

1:NH3 SLOPE=-60.8 mV/DEC
AT 10:41. 04-18-00

1:NH3 CONCEN= 1.93

814

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 11:08. 04-18-00

SAMPLE VOL= 25.000 AT 11:14. 04-18-00
ENTERED

EMF= 16.3 mV AT 11:15. 04-18-00

EMF= 16.2 mV AT 11:15. 04-18-00
ENTERED

STD CONC= 1000 AT 11:16. 04-18-00
ENTERED

STD VOL= .25000 AT 11:16. 04-18-00
ENTERED

EMF= 0.1 mV AT 11:17. 04-18-00

EMF=-0.1 mV AT 11:18. 04-18-00
ENTERED

STD VOL= 2.5000 AT 11:18. 04-18-00
ENTERED

EMF=-43.2 mV AT 11:20. 04-18-00

EMF=-43.5 mV AT 11:20. 04-18-00

EMF=-43.7 mV AT 11:21. 04-18-00
ENTERED

1:NH3 SLOPE=-61.5 mV/DEC
AT 11:21. 04-18-00

1:NH3 CONC= 11.6

End std

WORKBOOK PAGE: BLANK1

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

BLNK-PREP

Type	Instrument Data (µg/mL)	ID	1.410
BLNK-PREP	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	1.000
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code			
NH3-01			
Matrix			
SOLID	Digest Dilution (g/L)	DD	10.520
Batch Number			
20001347			
Rerun			
0			
Sample Prep			
H2ODIG01	NH3 Concentration (µg/g)	NH3 CONC	< 2.38E+03
Sample #			
BLNK-PREP	Detection Limit (µg/g)		2.38E+03
Instrument Code			
NH301	Detection Limit = 1.000µg *1000* (FVOL/VSAM) / DD		
Prepared By			
MF	NH3 Concentration (µg/g) = (ID-BR) * 1000 * (FVOL / VSAM) /DD		
Chemist			
MJL			
Analyst			
RWK			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time			
12:45 AM			
Sample Point	NH3 Concentration (µg/mL)		< 2.38E+03
AZ-101(2)			

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: STD2

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

			STD
Type	Instrument Data (µg/mL)	ID	9.560
STD	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.500
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code	LCS Standard Book Number	LCS	71N19C
NH3-01	LCS Standard Concentration (µg/mL)	STD VAL	4.76E+02
Matrix			
Batch Number			
20001347			
Rerun			
0			
Sample Prep			
N/A	NH3 Concentration (µg/mL)	NH3 CONC	4.29E+02
Sample #			
STD	Detection Limit (µg/mL)		5.00E+01
Instrument Code			
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)		
Prepared By			
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)		
Chemist			
MJL	QC ACTUAL = STD VAL		
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)		
RWK			
Date Complete			
04/19/2000			
Analysis Date	QC ACTUAL (µg)		4.76E+02
04/18/2000	QC FOUND (µg)		4.29E+02
Analysis Time			
12:45 AM			
Sample Point			
AZ-101(2)			

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM3

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SAMPLE
Type	Instrument Data (µg/mL)	ID 1.770
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 1.000
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
SOLID	Digest Dilution (g/L)	DD 10.520
Batch Number		
20001347		
Rerun		
0		
Sample Prep		
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC < 2.38E+03
Sample #		
S00T000812	Detection Limit (µg/g)	2.38E+03
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Prepared By		
MF	NH3 Concentration (µg/g) = $(\text{ID} - \text{BR}) * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
12:45 AM		
Sample Point	NH3 Concentration (µg/g)	< 2.38E+03
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SPIKE4

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SPK
Type	Instrument Data (µg/mL)	ID 6.460
SPK	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 1.000
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code	Spike Book Number	SPK 71N19C
NH3-01	Spike Value (µg/mL)	SPK VAL 4.76E+02
Matrix	Vol of Spike Standard Used (mL)	VOL SPK 0.250
SOLID		
Batch Number		
20001347		
Rerun	Sample Instrument Data (µg/mL)	SAM ID 1.77
0	Sample Volume of Sample (mL)	SAM VSAM 1.000
Sample Prep	Sample Final Volume (mL)	SAM FVOL 25.0
H2ODIGHC		
Sample #		
S00T000812		
Instrument Code		
NH301		
Prepared By		
MF		
Chemist		
MJL	QC ACTUAL = SPK VAL * VOL SPK	
Analyst	QC FOUND = (((ID-BR) * FVOL) - (SAM ID - BR) * SAM FVOL * (VSAM / SAM VSAM))	
RWK		
Date Complete		
04/19/2000		
Analysis Date	QC ACTUAL (µg)	1.19E+02
04/18/2000	QC FOUND (µg)	1.17E+02
Analysis Time		
12:45 AM		
Sample Point		
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM5

AMMONIA (NH3) : LA-631-001 (D-2)**LIQUIDS/SOLIDS**

		SAMPLE
Type	Instrument Data (µg/mL)	ID 1.920
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 1.000
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
SOLID	Digest Dilution (g/L)	DD 10.600
Batch Number		
20001347		
Rerun		
0		
Sample Prep		
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC < 2.36E+03
Sample #		
S00T000813	Detection Limit (µg/g)	2.36E+03
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Prepared By		
MF	NH3 Concentration (µg/g) = $(\text{ID} - \text{BR}) * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
12:45 AM		
Sample Point	NH3 Concentration (µg/g)	< 2.36E+03
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM6

AMMONIA (NH3) : LA-631-001 (D-2)**LIQUIDS/SOLIDS**

		SAMPLE
Type	Instrument Data (µg/mL)	ID 1.930
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 1.000
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
SOLID	Digest Dilution (g/L)	DD 13.370
Batch Number		
20001347		
Rerun		
0		
Sample Prep		
H2ODIGHC	NH3 Concentration (µg/g)	NH3 CONC < 1.87E+03
Sample #		
S00T000814	Detection Limit (µg/g)	1.87E+03
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Prepared By		
MF	NH3 Concentration (µg/g) = $(\text{ID}-\text{BR}) * 1000 * (\text{FVOL} / \text{VSAM}) / \text{DD}$	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
12:45 AM		
Sample Point	NH3 Concentration (µg/g)	< 1.87E+03
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: ST_END7

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		STD
Type	Instrument Data (µg/mL) ID	11.600
STD	Blank Result from the Instrument (µg/mL) BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL) VSAM	0.500
33245	Final Vol of Dilution (mL) or Vol of Sample Direct (mL) FVOL	25.0
Test Code	LCS Standard Book Number LCS	71N19C
NH3-01	LCS Standard Concentration (µg/mL) STD VAL	4.76E+02
Matrix		
Batch Number		
20001347		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL) NH3 CONC	5.31E+02
Sample #		
STD	Detection Limit (µg/mL) 5.00E+01	
Instrument Code		
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)	
Prepared By		
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)	
Chemist		
MJL	QC ACTUAL = STD VAL	
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)	
RWK		
Date Complete		
04/19/2000		
Analysis Date	QC ACTUAL (µg)	4.76E+02
04/18/2000	QC FOUND (µg)	5.31E+02
Analysis Time		
12:45 AM		
Sample Point		
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

LABCORE Completed Worklist Report for Worklist# 33292

Analyst: rwk

Instrument: NH301

Book#: 7/1/19-CMethod: LA-631-001 Rev/Mod D-2

Worklist Comment: AZ-101 (2), NH3-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		NH3-01	LIQUID	1	<1.00E+2		ug/mL
2 STD	0		NH3-01	LIQUID	4.76E+02	3.94E+2	82.773 % Recovery	
3 SAMPLE	S00T000779	0	NH3-01	LIQUID	N/A <	1.00E+02	100.000	ug/mL
4 SPK	S00T000779	0	NH3-01	LIQUID	1.19E+02	1.21E+02	101.681 % Recovery	
5 SAMPLE	S00T000782	0	NH3-01	LIQUID	N/A <	1.00E+02	100.000	ug/mL
6 SAMPLE	S00T000785	0	NH3-01	LIQUID	N/A <	5.00E+01	50.000	ug/mL
7 STD	0		NH3-01	LIQUID	4.76E+02	4.29E+2	90.126 % Recovery	

Final page for worklist# 33292

Analyst Signature _____ Date _____

Analyst Signature Mary Sham Date 4/19/00Reviewer Signature [Signature] Date 4/21/00

worklistrpt Version 2.1 05/15/95
04/18/00 14:37

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33292

Analyst: 72 K Instrument: NH301 Book # 71719-CMethod: LA-631-001 Rev/Mod D-2

Worklist Comment: AZ-101 (2), NH3-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			NH3-01	LIQUID			N/A	ug/mL
		2 STD			NH3-01	LIQUID			N/A	ug/mL
99000438	AZ-101 (2)	3 SAMPLE	S00T000779	0	NH3-01	LIQUID	N/A			ug/mL
99000438	AZ-101 (2)	4 SPK	S00T000779	0	NH3-01	LIQUID			N/A	ug/mL
99000438	AZ-101 (2)	5 SAMPLE	S00T000782	0	NH3-01	LIQUID	N/A			ug/mL
99000438	AZ-101 (2)	6 SAMPLE	S00T000785	0	NH3-01	LIQUID	N/A			ug/mL
		7 STD			NH3-01	LIQUID			N/A	ug/mL

Final page for worklist # 33292

Analyst Signature Rob King Date 4/18/00Analyst Signature Yvonne Jones Date 4/19/00

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 05:21. 04-18-00

SAMPLE VOL= 25.000 AT 05:25. 04-18-00
ENTERED

EMF=-2.9 mV AT 05:25. 04-18-00

EMF=-3.0 mV AT 05:28. 04-18-00

EMF=-3.0 mV AT 05:30. 04-18-00

EMF=-3.0 mV AT 05:30. 04-18-00
ENTERED

STD CONC= 1000 AT 05:31. 04-18-00
ENTERED

STD VOL= .25000 AT 05:34. 04-18-00
ENTERED

EMF=-21.3 mV AT 05:34. 04-18-00

EMF=-21.4 mV AT 05:35. 04-18-00

EMF=-21.8 mV AT 05:35. 04-18-00

EMF=-22.0 mV AT 05:36. 04-18-00

EMF=-22.0 mV AT 05:36. 04-18-00
ENTERED

STD VOL= 2.5000 AT 05:39. 04-18-00
ENTERED

EMF=-65.7 mV AT 05:39. 04-18-00

EMF=-65.9 mV AT 05:40. 04-18-00

EMF=-66.3 mV AT 05:40. 04-18-00

EMF=-66.5 mV AT 05:40. 04-18-00
ENTERED

1:NH3 SLOPE=-58.7 mV/DEC
AT 05:41. 04-18-00

1:NH3 CONC= 8.86

STD ES=.500ml
71NA-C

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 23:35. 04-17-00

SAMPLE VOL= 25.000 AT 23:35. 04-17-00
ENTERED

EMF= 51.2 mV AT 23:37. 04-17-00

EMF= 51.1 mV AT 23:38. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00

EMF= 51.2 mV AT 23:39. 04-17-00
ENTERED

STD CONC= 1000 AT 23:39. 04-17-00
ENTERED

STD VOL= .25000 AT 23:41. 04-17-00
ENTERED

EMF=-11.9 mV AT 23:41. 04-17-00

EMF=-12.2 mV AT 23:41. 04-17-00

EMF=-12.5 mV AT 23:42. 04-17-00

EMF=-12.6 mV AT 23:42. 04-17-00
ENTERED

STD VOL= 2.5000 AT 23:47. 04-17-00
ENTERED

EMF=-71.0 mV AT 23:47. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.2 mV AT 23:48. 04-17-00

EMF=-71.5 mV AT 23:49. 04-17-00

EMF=-71.6 mV AT 23:49. 04-17-00
ENTERED

1:NH3 SLOPE=-61.2 mV/DEC
AT 23:49. 04-17-00

1:NH3 CONC= .988

Bik

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 07:08. 04-18-00

SAMPLE VOL= 25.000 AT 07:53. 04-18-00
ENTERED

EMF= 77.2 mV AT 07:57. 04-18-00

EMF= 76.8 mV AT 07:57. 04-18-00

EMF= 76.6 mV AT 07:58. 04-18-00
ENTERED

STD CONCN= 1000 AT 07:58. 04-18-00
ENTERED

STD VOL= .25000 AT 07:58. 04-18-00
ENTERED

EMF=-18.7 mV AT 08:01. 04-18-00

EMF=-19.2 mV AT 08:02. 04-18-00
ENTERED

STD VOL= 2.5000 AT 08:02. 04-18-00
ENTERED

EMF=-77.5 mV AT 08:04. 04-18-00

EMF=-78.1 mV AT 08:05. 04-18-00

EMF=-78.3 mV AT 08:05. 04-18-00
ENTERED

1:NH3 SLOPE=-59.7 mV/DEC
AT 08:05. 04-18-00

1:NH3 CONCN= .252

779

.250

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 08:06. 04-18-00

SAMPLE VOL= 25.000 AT 08:15. 04-18-00
ENTERED

EMF= 9.9 mV AT 08:17. 04-18-00

EMF= 9.7 mV AT 08:17. 04-18-00
ENTERED

STD CONCN= 1000 AT 08:18. 04-18-00
ENTERED

STD VOL= .25000 AT 08:18. 04-18-00
ENTERED

EMF=-17.9 mV AT 08:20. 04-18-00

EMF=-18.2 mV AT 08:20. 04-18-00

EMF=-18.3 mV AT 08:21. 04-18-00
ENTERED

STD VOL= 2.5000 AT 08:21. 04-18-00
ENTERED

EMF=-68.5 mV AT 08:23. 04-18-00

EMF=-68.7 mV AT 08:24. 04-18-00
ENTERED

1:NH3 SLOPE=-59.9 mV/DEC
AT 08:24. 04-18-00

1:NH3 CONCN= 5.10

779 SPK
.250 S.S
.250 SPK

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 08:25. 04-18-00

SAMPLE VOL= 25.000 AT 08:33. 04-18-00
ENTERED

EMF= 56.9 mV AT 08:34. 04-18-00

EMF= 56.9 mV AT 08:35. 04-18-00
ENTERED

STD CONCN= 1000 AT 08:35. 04-18-00
ENTERED

STD VOL= .25000 AT 08:35. 04-18-00
ENTERED

EMF=-2.4 mV AT 08:37. 04-18-00

EMF=-2.8 mV AT 08:37. 04-18-00

EMF=-3.1 mV AT 08:37. 04-18-00

EMF=-3.1 mV AT 08:37. 04-18-00
ENTERED

STD VOL= 2.5000 AT 08:38. 04-18-00
ENTERED

EMF=-60.7 mV AT 08:40. 04-18-00

EMF=-61.0 mV AT 08:40. 04-18-00

EMF=-61.1 mV AT 08:40. 04-18-00
ENTERED

1:NH3 SLOPE=-60.5 mV/DEC
AT 08:40. 04-18-00

1:NH3 CONCN= 1.12

747
150

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 08:44. 04-18-00

SAMPLE VOL= 25.000 AT 08:48. 04-18-00
ENTERED

EMF= 58.9 mV AT 08:50. 04-18-00

EMF= 58.8 mV AT 08:50. 04-18-00
ENTERED

STD CONC= 1000 AT 08:51. 04-18-00
ENTERED

STD VOL= .25000 AT 08:51. 04-18-00
ENTERED

EMF=-0.3 mV AT 08:53. 04-18-00

EMF=-0.7 mV AT 08:53. 04-18-00

EMF=-0.7 mV AT 08:53. 04-18-00
ENTERED

STD VOL= 2.5000 AT 08:54. 04-18-00
ENTERED

EMF=-57.4 mV AT 08:56. 04-18-00

EMF=-57.8 mV AT 08:56. 04-18-00

EMF=-57.8 mV AT 08:56. 04-18-00
ENTERED

1:NH3 SLOPE=-59.5 mV/DEC
AT 08:56. 04-18-00

1:NH3 CONC= 1.10

725
1.5

HNF-1701 REV. 0

DOUBLE KNOWN ADDITION SELECTED
AT 09:59. 04-18-00

SAMPLE VOL= 25.000 AT 09:05. 04-18-00
ENTERED

EMF= 5.6 mV AT 09:07. 04-18-00

EMF= 5.3 mV AT 09:08. 04-18-00
ENTERED

STD CONC= 1000 AT 09:08. 04-18-00
ENTERED

STD VOL= .25000 AT 09:08. 04-18-00
ENTERED

EMF=-12.5 mV AT 09:10. 04-18-00

EMF=-12.8 mV AT 09:10. 04-18-00

EMF=-12.8 mV AT 09:10. 04-18-00
ENTERED

STD VOL= 2.5000 AT 09:11. 04-18-00
ENTERED

EMF=-56.3 mV AT 09:13. 04-18-00

EMF=-56.6 mV AT 09:13. 04-18-00

EMF=-56.8 mV AT 09:13. 04-18-00
ENTERED

1:NH3 SLOPE=-59.0 mV/DEC
AT 09:13. 04-18-00

1:NH3 CONC= 9.56

Std

WORKBOOK PAGE: STD2

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

			STD
Type	Instrument Data (µg/mL)	ID	8.860
STD	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.500
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code	LCS Standard Book Number	LCS	71N19C
NH3-01	LCS Standard Concentration (µg/mL)	STD VAL	4.76E+02
Matrix			
Batch Number			
20001393			
Rerun			
0			
Sample Prep			
N/A	NH3 Concentration (µg/mL)	NH3 CONC	3.94E+02
Sample #			
STD	Detection Limit (µg/mL)		5.00E+01
Instrument Code			
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)		
Prepared By			
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)		
Chemist			
MJL	QC ACTUAL = STD VAL		
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)		
RWK			
Date Complete			
04/19/2000			
Analysis Date	QC ACTUAL (µg)		4.76E+02
04/18/2000	QC FOUND (µg)		3.94E+02
Analysis Time			
04:48 AM			
Sample Point			
AZ-101(2)			

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: BLANK1

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		BLNK
Type	Instrument Data (µg/mL)	ID 0.000
BLNK	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.250
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
LIQUID	Dilution Factor	DF 1.000
Batch Number		
20001393		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL)	NH3 CONC < 1.00E+02
Sample #		
BLNK	Detection Limit (µg/mL)	1.00E+02
Instrument Code		
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)	
Prepared By		
MF	NH3 Concentration (µg/mL) = (BR) * (FVOL / VSAM) * DDF	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
04:48 AM		
Sample Point	NH3 Concentration (µg/mL)	< 1.00E+02
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM3

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SAMPLE
Type	Instrument Data (µg/mL)	ID 0.252
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.250
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
LIQUID	Dilution Factor	DF 1.000
Batch Number		
20001393		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL)	NH3 CONC < 1.00E+02
Sample #		
S00T000779	Detection Limit (µg/mL)	1.00E+02
Instrument Code		
NH301	Detection Limit = 1.000µg * (FVOL/VSAM) * DF	
Prepared By		
MF	NH3 Concentration (µg/mL) = (ID-BR) * (FVOL / VSAM)*DF	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
04:48 AM		
Sample Point	NH3 Concentration (µg/mL)	< 1.00E+02
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SPIKE4

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

		SPK
Type	Instrument Data (µg/mL)	ID 5.100
SPK	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.250
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code	Spike Book Number	SPK 71N19C
NH3-01	Spike Value (µg/mL)	SPK VAL 4.76E+02
Matrix	Vol of Spike Standard Used (mL)	VOL SPK 0.250
LIQUID		
Batch Number		
20001393		
Rerun	Sample Instrument Data (µg/mL)	SAM ID 0.252
0	Sample Volume of Sample (mL)	SAM VSAM 0.250
Sample Prep	Sample Final Volume (mL)	SAM FVOL 25.0
N/A		
Sample #		
S00T000779		
Instrument Code		
NH301		
Prepared By		
MF		
Chemist		
MJL	QC ACTUAL = SPK VAL * VOL SPK	
Analyst	QC FOUND = (((ID-BR) * FVOL) - (SAM ID - BR) * SAM FVOL * (VSAM / SAM VSAM))	
RWK		
Date Complete		
04/19/2000		
Analysis Date	QC ACTUAL (µg)	1.19E+02
04/18/2000	QC FOUND (µg)	1.21E+02
Analysis Time		
04:48 AM		
Sample Point		
AZ-101(2)		

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM5

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

			SAMPLE
Type	Instrument Data (µg/mL)	ID	1.120
SAMPLE	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.250
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code			
NH3-01			
Matrix			
LIQUID	Dilution Factor	DF	1.000
Batch Number			
20001393			
Rerun			
0			
Sample Prep			
N/A	NH3 Concentration (µg/mL)	NH3 CONC	< 1.00E+02
Sample #			
S00T000782	Detection Limit (µg/mL)		1.00E+02
Instrument Code			
NH301	Detection Limit = 1.000µg * (FVOL/VSAM) * DF		
Prepared By			
MF	NH3 Concentration (µg/mL) = (ID-BR) * (FVOL / VSAM)*DF		
Chemist			
MJL			
Analyst			
RWK			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time			
04:48 AM			
Sample Point	NH3 Concentration (µg/mL)		< 1.00E+02
AZ-101(2)			

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE WB1 REV 1.0

631001ML

WORKBOOK PAGE: SAM6

AMMONIA (NH3) : LA-631-001 (D-2)**LIQUIDS/SOLIDS**

		SAMPLE
Type	Instrument Data (µg/mL)	ID 1.100
SAMPLE	Blank Result from the Instrument (µg/mL)	BR 0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM 0.500
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL 25.0
Test Code		
NH3-01		
Matrix		
LIQUID	Dilution Factor	DF 1.000
Batch Number		
20001393		
Rerun		
0		
Sample Prep		
N/A	NH3 Concentration (µg/mL)	NH3 CONC < 5.00E+01
Sample #		
S00T000785	Detection Limit (µg/mL)	5.00E+01
Instrument Code		
NH301	Detection Limit = $1.000\mu\text{g} * (\text{FVOL}/\text{VSAM}) * \text{DF}$	
Prepared By		
MF	NH3 Concentration (µg/mL) = $(\text{ID}-\text{BR}) * (\text{FVOL} / \text{VSAM}) * \text{DF}$	
Chemist		
MJL		
Analyst		
RWK		
Date Complete		
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
04:48 AM		
Sample Point	NH3 Concentration (µg/mL)	< 5.00E+01
AZ-101(2)		

Analyst:

Signature of Chemist:

SAMPLE.WB1 REV 1.0

RWK Date: 04/19/2000

MJL Date:

631001ML

WORKBOOK PAGE: ST_END7

AMMONIA (NH3) : LA-631-001 (D-2)

LIQUIDS/SOLIDS

			STD
Type	Instrument Data (µg/mL)	ID	9.560
STD	Blank Result from the Instrument (µg/mL)	BR	0.988
Work List	Vol of Sample for Dilution (mL) or Vol of Sample Direct (mL)	VSAM	0.500
33292	Final Vol of Dilution (mL) or Vol of Sample Direct (mL)	FVOL	25.0
Test Code	LCS Standard Book Number	LCS	71N19C
NH3-01	LCS Standard Concentration (µg/mL)	STD VAL	4.76E+02
Matrix			
Batch Number			
20001393			
Rerun			
0			
Sample Prep			
N/A	NH3 Concentration (µg/mL)	NH3 CONC	4.29E+02
Sample #			
STD	Detection Limit (µg/mL)		5.00E+01
Instrument Code			
NH301	Detection Limit = 1.000µg * (FVOL/VSAM)		
Prepared By			
MF	NH3 Concentration (µg/mL) = (ID-BR)*(FVOL /VSAM)		
Chemist			
MJL	QC ACTUAL = STD VAL		
Analyst	QC FOUND = (ID-BR) * (FVOL/VSAM)		
RWK			
Date Complete			
04/19/2000			
Analysis Date	QC ACTUAL (µg)		4.76E+02
04/18/2000	QC FOUND (µg)		4.29E+02
Analysis Time			
04:48 AM			
Sample Point			
AZ-101(2)			

Analyst:

RWK Date: 04/19/2000

Signature of Chemist:

MJL Date:

SAMPLE.WB1 REV 1.0

631001ML

LABCORE Completed Worklist Report for Worklist# 33242

Analyst: jis

Instrument: SP04

Book#: 131N8C

Method: LA-695-102 Rev/Mod 1/1

Worklist Comment: AZ-101 (2), CN-03 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCV	0		CN-03	SOLID	651	5.84e2	89.708 % Recovery	
2 CCB	0		CN-03	SOLID	1	<1.10e-2	Ratio	
3 BLNK-PREP	0		CN-03	SOLID	1	<11.3	Ratio	
4 SAMPLE	S00T000806	0 W	CN-03	SOLID	N/A	< 11.3	11.300 ug/g	
5 SPK	S00T000806	0 W	CN-03	SOLID	100	81.3	81.300 % Recovery	
6 SAMPLE	S00T000807	0 W	CN-03	SOLID	N/A	< 10.9	10.900 ug/g	
7 SAMPLE	S00T000808	0 W	CN-03	SOLID	N/A	< 9.59	9.590 ug/g	

Final page for worklist# 33242

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

worklistrpt Version 2.1 05/15/95
04/17/00 10:40

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33242

Analyst: VIS Instrument: SP04 Book # 131N8-CMethod: LA-695-102 Rev/Mod H-1

Worklist Comment: AZ-101 (2), CN-03 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 CCV			CN-03	SOLID			N/A	ug/g
		2 CCB			CN-03	SOLID			N/A	ug/g
		3 BLNK-PREP			CN-03	SOLID			N/A	ug/g
99000433	AZ-101 (2)	4 SAMPLE	S00T000806	0 W	CN-03	SOLID	N/A			ug/g
99000433	AZ-101 (2)	5 SPK	S00T000806	0 W	CN-03	SOLID			N/A	ug/g
99000433	AZ-101 (2)	6 SAMPLE	S00T000807	0 W	CN-03	SOLID	N/A			ug/g
99000433	AZ-101 (2)	7 SAMPLE	S00T000808	0 W	CN-03	SOLID	N/A			ug/g

Final page for worklist # 33242

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units, DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

CN- DETERMINATION : LA-695-102(H-1)

		STANDARD
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCV	DISSOLUTION INFORMATION:	
Work List	STANDARD ALIQUOT (mL)	N/A
33242	FINAL VOLUME (mL)	N/A
Test Code	DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	0.250
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	25.000
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF STANDARD (CCV)	0.483
0	STANDARD BOOK NUMBER	131N8C
Sample Prep	STANDARD VALUE OF CN- ($\mu\text{g} / \text{mL}$)	651
N/A	Y-INTERCEPT VALUE	-0.003650
Sample #	SLOPE VALUE	0.166250
CCV	AMOUNT OF CN- IN STANDARD (μg)	2.921
Instrument Code	CONCENTRATION OF CN- IN STANDARD ($\mu\text{g} / \text{mL}$)	584.241
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By		
MF	AMOUNT OF CN- (μg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- ($\mu\text{g} / \text{mL}$) = (AMOUNT OF CN- in μg) / (SS in mL) * (FDV/SSD)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT ($\mu\text{g} / \text{mL}$) = (0.055 μg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC ACTUAL ($\mu\text{g}/\text{mL}$) = STANDARD VALUE OF CN- in $\mu\text{g}/\text{mL}$	
Date Complete	QC FOUND ($\mu\text{g}/\text{mL}$) = CONCENTRATION OF CN- in $\mu\text{g}/\text{mL}$	
04/24/2000	% RECOVERY = QC FOUND / QC ACTUAL *100	
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in $\mu\text{g}/\text{mL}$	1.10E+01
11:00 AM	QC Actual in $\mu\text{g}/\text{mL}$	6.51E+02
Sample Point	QC Found in $\mu\text{g}/\text{mL}$	5.84E+02
AZ-101 (2)	Percent Standard Recovery	89.7

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

STANDARD.WB1 REV.1.

69510NML

WORKBOOK PAGE: BLANK2

CN- DETERMINATION : LA-695-102(H-1)

		BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCB	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL) (SA)	N/A
33242	FINAL VOLUME (mL) (FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	5.0000
	ABSORBANCE OF BLANK (REAGENT, PREP) (CCB)	0.001
Rerun	Y-INTERCEPT VALUE	-0.003650
0	SLOPE VALUE	0.166250
Sample Prep	AMOUNT OF CN- IN BLANK (µg)	0.028
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)	0.006
Sample #		
CCB		
Instrument Code	Post-Distillation Dilution Factor PDDF	1.00
SP04	NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000	
Prepared By		
MF	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-02
11:00 AM		
Sample Point	QC Found in µg/mL	< 1.10E-02
AZ-101 (2)		

Analyst:

Signature of Chemist:

BLANK.WB1 REV.1.3

JIS

Date: 04/24/2000

MJL

Date:

69510NML

WORKBOOK PAGE: BLANK3

CN- DETERMINATION : LA-695-102(H-1)

		BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
BLNK-PREP	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g) (SA)	N/A
33242	FINAL VOLUME (mL) (FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
20001341	ABSORBANCE OF BLANK (REAGENT, PREP) (CCB)	0.001
Rerun	Y-INTERCEPT VALUE	-0.003650
0	SLOPE VALUE	0.166250
Sample Prep	AMOUNT OF CN- IN BLANK (µg)	0.028
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)	0.056
Sample #		
BLNK-PREP		
Instrument Code	Post-Distillation Dilution Factor PDDF	1.00
SP04	NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000	
Prepared By		
MF	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000	11.3	
Analysis Time	Method Detection Limit in µg/mL	1.40E-01
11:00 AM		N/A 4/26/00
Sample Point	QC Found in µg/g	< 1.40E-01
AZ-101 (2)		11.3

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

BLANK.WB1 REV.1.3

69510NML

WORKBOOK PAGE: SAM4

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g)	N/A
33242	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	0.5000
20001341	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.002
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.028
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.056
S00T000806		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	1.10E-01
11:00 AM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g) <	1.10E-01
AZ-101 (2)		

$$0.110 \mu\text{g/mL} \times \frac{\text{L}}{9.71\text{g}} \times \frac{1000\text{mL}}{\text{L}}$$

11.3

m/L 4/26/00

11.3

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:

69510NML

SAMPLE.WB1 REV 1.1

WORKBOOK PAGE: SPIKE5

CN- DETERMINATION : LA-695-102(H-1)

		SPIKE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SPK	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33242	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
20001341	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SPIKE	0.222
0	AMOUNT OF SPIKE STANDARD ADDED (mL)	0.250
Sample Prep	SPIKE BOOK NUMBER	131N8C
H2ODIGHC	SPIKE VALUE OF CN- (µg / mL)	651
Sample #	Y-INTERCEPT VALUE	-0.003650
S00T000806	SLOPE VALUE	0.166250
Instrument Code	AMOUNT OF CN- IN SPIKE (µg)	1.351
SP04	AMOUNT OF CN- FROM SAMPLE (µg)	0.028
Prepared By	Post-Distillation Dilution Factor PDDF	1.00
MF		
Chemist	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MJL	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
Analyst	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
JIS	% REC = 100 * (AMT OF CN- IN SPK - AMT OF CN- FROM SAM) / (SPK VAL / 100 * AMT OF SPK STD ADDED)	
Date Complete	QC ACTUAL = SPIKE VALUE OF CN- in µg/mL	
04/24/2000	QC FOUND = % RECOVERY * QC ACTUAL * 100	
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-01
11:00 AM	QC Actual in µg/mL	6.51E+02
Sample Point	QC Found in µg/mL	5.29E+02
AZ-101 (2)	Percent Standard Recovery	81.3

Analyst:		JIS	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SPIKE.WB1 REV.1.3

69510NML

CN- DETERMINATION : LA-695-102(H-1)

Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	SAMPLE
SAMPLE	DISSOLUTION INFORMATION:	N
Work List	SAMPLE WEIGHT (g)	N/A
33242	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	0.5000
20001341	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.002
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.028
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.056
S00T000807		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	1.40E-04
11:00 AM		10.9
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g)	1.40E-04
AZ-101 (2)		10.9

$$0.110 \frac{\mu\text{g}}{\text{mL}} \times \frac{\text{L}}{10.12 \text{ g}} \times \frac{1000 \text{ mL}}{\text{L}}$$

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

WORKBOOK PAGE: SAM7

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g)	N/A
33242	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	0.5000
20001341	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.002
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.028
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.056
S00T000808		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	9.59 4.10E-01
11:00 AM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g)	< 9.59 4.10E-01
AZ-101 (2)		

Analyst:		JIS	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

LABCORE Completed Worklist Report for Worklist# 33243

Analyst: jis

Instrument: SP04

Book#: 131N8C

Method: LA-695-102 Rev/Mod H-1

Worklist Comment: AZ-101 (2), CN-03 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCV		0		CN-03	SOLID	651	6.23e2	95.699 %	Recovery
2	CCB		0		CN-03	SOLID	1	<1.10e-2		Ratio
3	BLNK-PREP		0		CN-03	SOLID	1	<5.23		Ratio
4	SAMPLE	S00T000812	0	W	CN-03	SOLID	N/A <	5.23	5.230	ug/g
5	SPK	S00T000812	0	W	CN-03	SOLID	100	87.6	87.600 %	Recovery
6	SAMPLE	S00T000813	0	W	CN-03	SOLID	N/A <	5.19	5.190	ug/g
7	SAMPLE	S00T000814	0	W	CN-03	SOLID	N/A <	4.11	4.110	ug/g

Final page for worklist# 33243

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

worklistrpt Version 2.1 05/15/95
04/17/00 10:43

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33243

Analyst: JIS Instrument: SP04 Book # 131118-CMethod: LA-695-102 Rev/Mod H-1

Worklist Comment: AZ-101 (2), CN-03 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 CCV			CN-03	SOLID			N/A	ug/g
		2 CCB			CN-03	SOLID			N/A	ug/g
		3 BLNK-PREP			CN-03	SOLID			N/A	ug/g
99000438	AZ-101 (2)	4 SAMPLE	S00T000812	0 W	CN-03	SOLID	N/A			ug/g
99000438	AZ-101 (2)	5 SPK	S00T000812	0 W	CN-03	SOLID			N/A	ug/g
99000438	AZ-101 (2)	6 SAMPLE	S00T000813	0 W	CN-03	SOLID	N/A			ug/g
99000438	AZ-101 (2)	7 SAMPLE	S00T000814	0 W	CN-03	SOLID	N/A			ug/g

Final page for worklist # 33243

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

CN- DETERMINATION : LA-695-102(H-1)

		STANDARD
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCV	DISSOLUTION INFORMATION:	
Work List	STANDARD ALIQUOT (mL)	N/A
33243	FINAL VOLUME (mL)	N/A
Test Code	DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	0.250
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	25.000
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF STANDARD (CCV)	0.515
0	STANDARD BOOK NUMBER	131N8C
Sample Prep	STANDARD VALUE OF CN- ($\mu\text{g} / \text{mL}$)	651
N/A	Y-INTERCEPT VALUE	-0.003650
Sample #	SLOPE VALUE	0.166250
CCV	AMOUNT OF CN- IN STANDARD (μg)	3.114
Instrument Code	CONCENTRATION OF CN- IN STANDARD ($\mu\text{g} / \text{mL}$)	622.737
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By		
MF	AMOUNT OF CN- (μg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- ($\mu\text{g} / \text{mL}$) = (AMOUNT OF CN- in μg) / (SS in mL) * (FDV/SSD)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT ($\mu\text{g} / \text{mL}$) = (0.055 μg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC ACTUAL ($\mu\text{g}/\text{mL}$) = STANDARD VALUE OF CN- in $\mu\text{g}/\text{mL}$	
Date Complete	QC FOUND ($\mu\text{g}/\text{mL}$) = CONCENTRATION OF CN- in $\mu\text{g}/\text{mL}$	
04/24/2000	% RECOVERY = QC FOUND / QC ACTUAL *100	
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in $\mu\text{g}/\text{g}$	1.10E+01
03:30 PM	QC Actual in $\mu\text{g}/\text{mL}$	6.51E+02
Sample Point	QC Found in $\mu\text{g}/\text{mL}$	6.23E+02
AZ-101 (2)	Percent Standard Recovery	95.7

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

STANDARD.WB1 REV.1.

69510NML

WORKBOOK PAGE: BLANK2

CN- DETERMINATION : LA-695-102(H-1)

		BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCB	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g) (SA)	N/A
33243	FINAL VOLUME (mL) (FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	5.0000
	ABSORBANCE OF BLANK (REAGENT, PREP) (CCB)	0.001
Rerun	Y-INTERCEPT VALUE	-0.003650
0	SLOPE VALUE	0.166250
Sample Prep	AMOUNT OF CN- IN BLANK (µg)	0.028
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)	0.006
Sample #		
CCB		
Instrument Code	Post-Distillation Dilution Factor PDDF	1.00
SP04	NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000	
Prepared By		
MF	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-02
03:30 PM		
Sample Point	QC Found in µg/g	< 1.10E-02
AZ-101 (2)		

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

BLANK.WB1 REV.1.3

69510NML

WORKBOOK PAGE: BLANK3

CN- DETERMINATION : LA-695-102(H-1)

		BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
BLNK-PREP	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g) (SA)	N/A
33243	FINAL VOLUME (mL) (FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	1.0000
20001342	ABSORBANCE OF BLANK (REAGENT, PREP) (CCB)	0.001
Rerun	Y-INTERCEPT VALUE	-0.003650
0	SLOPE VALUE	0.166250
Sample Prep	AMOUNT OF CN- IN BLANK (µg)	0.028
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)	0.028
Sample #		
BLNK-PREP		
Instrument Code	Post-Distillation Dilution Factor PDDF	1.00
SP04	NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000	
Prepared By		
MF	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)	
MJL	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.23 5.50E-02
03:30 PM		µg/L 4/26/00
Sample Point	QC Found in µg/g	< 5.50E-02
AZ-101(2)		5.23

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

BLANK.WB1 REV.1.3

69510NML

CN- DETERMINATION : LA-695-102(H-1)

CN- DETERMINATION : LA-695-102(H-1)		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g)	N/A
33243	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	1.0000
20001342	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.003
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.034
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.034
S00T000812		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	5.23 5.50E-02
03:30 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g)	5.23 5.50E-02
AZ-101(2)		

$$0.055 \frac{\mu\text{g}}{\text{mL}} \times \frac{\text{L}}{10.52\text{g}} \times \frac{1000\text{mL}}{\text{L}}$$

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

SAMPLE.WB1 REV 1.1

WORKBOOK PAGE: SPIKE5

CN- DETERMINATION : LA-695-102(H-1)

		SPIKE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SPK	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33243	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID-Solid	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	1.0000
20001342	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SPIKE	0.240
0	AMOUNT OF SPIKE STANDARD ADDED (mL)	0.250
Sample Prep	SPIKE BOOK NUMBER	131N8C
H2ODIGHC	SPIKE VALUE OF CN- (µg / mL)	651
Sample #	Y-INTERCEPT VALUE	-0.003650
S00T000812	SLOPE VALUE	0.166250
Instrument Code	AMOUNT OF CN- IN SPIKE (µg)	1.460
SP04	AMOUNT OF CN- FROM SAMPLE (µg)	0.034
Prepared By	Post-Distillation Dilution Factor PDDF	1.00
MF		
Chemist	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MJL	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
Analyst	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
JIS	% REC = 100 * (AMT OF CN- IN SPK - AMT OF CN- FROM SAM) / (SPK VAL / 100 * AMT OF SPK STD ADDED)	
Date Complete	QC ACTUAL = SPIKE VALUE OF CN- in µg/mL	
04/24/2000	QC FOUND = % RECOVERY * QC ACTUAL * 100	
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E-02
03:30 PM	QC Actual in µg/mL	6.51E+02
Sample Point	QC Found in µg/mL	5.70E+02
AZ-101(2)	Percent Standard Recovery	87.6

Analyst:		JIS	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SPIKE.WB1 REV.1.3

69510NML

WORKBOOK PAGE: SAM6

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g)	N/A
33243	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	1.0000
20001342	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.003
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.034
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.034
S00T000813		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	5.19 -5.50E-02
03:30 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g)	< 5.50E-02 5.19
AZ-101(2)		

$$0.055 \mu\text{g/mL} \times \frac{1}{10.60 \text{ g}} \times \frac{1000 \text{ mL}}{1} = 5.19$$

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

69510NML

SAMPLE.WB1 REV 1.1

WORKBOOK PAGE: SAM7

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE WEIGHT (g)	N/A
33243	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
SOLID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (g) (SS)	1.0000
20001342	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.004
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
H2ODIGHC	AMOUNT OF CN- IN SAMPLE (µg)	0.040
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / g)	0.040
S00T000814		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / g) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2 in mL/g)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in g)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
JIS	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/19/2000		
Analysis Time	Method Detection Limit in µg/g	4.11 -5.50E-02
03:30 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / g)	4.11 -5.50E-02
AZ-101(2)		

$$0.055 \mu\text{g/mL} \times \frac{1}{13.37\text{g}} \times \frac{1000 \text{ mL}}{1} = 4.11$$

Analyst:	JIS	Date:	04/24/2000
Signature of Chemist:	MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

LABCORE Completed Worklist Report for Worklist# 33288

Analyst: krm

Instrument: SP04

Book#: 131N8C

Method: LA-695-102 Rev/Mod H-1

Worklist Comment: AZ-101 (2), CN-03 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCV		0		CN-03	LIQUID	651	6.42e2	98.618 % Recovery	
2	CCB		0		CN-03	LIQUID	1	<1.10e-2	Ratio	
3	SAMPLE	S00T000779	0		CN-03	LIQUID	N/A	4.77e-1	0.110 ug/mL	
4	SPK	S00T000779	0		CN-03	LIQUID	100	111.2	111.200 % Recovery	
5	SAMPLE	S00T000782	0		CN-03	LIQUID	N/A	1.24e-1	5.50e-002 ug/mL	
6	SAMPLE	S00T000785	0		CN-03	LIQUID	N/A	3.23e-1	5.50e-002 ug/mL	

Final page for worklist# 33288

Analyst Signature _____ Date _____

Analyst Signature Mary Frank Date 4/27/00

Reviewer Signature [Signature] Date 5/1/00

04/18/00 14:32

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 33288Analyst: KRM Instrument: SP04 Book# 131W8CMethod: LA-695-102 Rev/Mod H-1

Worklist Comment: AZ-101 (2), CN-03 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCV			CN-03	LIQUID		
2 CCB			CN-03	LIQUID		
3 SAMPLE	S00T000779 0		CN-03	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: CN-03					
4 SPK	S00T000779 0		CN-03	LIQUID		
5 SAMPLE	S00T000782 0		CN-03	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: CN-03					
6 SAMPLE	S00T000785 0		CN-03	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: CN-03					

Final page for worklist # 33288

[Signature] 4-23-00
Signature Date

[Signature] 4/27/00
Signature Date

FAVED
4-23-00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code:

WORKBOOK PAGE: STD1

CN- DETERMINATION : LA-695-102(H-1)

		STANDARD
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCV	DISSOLUTION INFORMATION:	
Work List	STANDARD ALIQUOT (mL)	N/A
33288	FINAL VOLUME (mL)	N/A
Test Code	DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	0.250
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	25.000
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF STANDARD (CCV)	0.531
0	STANDARD BOOK NUMBER	131N8C
Sample Prep	STANDARD VALUE OF CN- ($\mu\text{g} / \text{mL}$)	651
N/A	Y-INTERCEPT VALUE	-0.003650
Sample #	SLOPE VALUE	0.166250
CCV	AMOUNT OF CN- IN STANDARD (μg)	3.210
Instrument Code	CONCENTRATION OF CN- IN STANDARD ($\mu\text{g} / \text{mL}$)	641.985
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By		
MF	AMOUNT OF CN- (μg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- ($\mu\text{g} / \text{mL}$) = (AMOUNT OF CN- in μg) / (SS in mL) * (FDV/SSD)	
4/24	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT ($\mu\text{g} / \text{mL}$) = (0.055 μg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC ACTUAL ($\mu\text{g}/\text{mL}$) = STANDARD VALUE OF CN- in $\mu\text{g}/\text{mL}$	
Date Complete	QC FOUND ($\mu\text{g}/\text{mL}$) = CONCENTRATION OF CN- in $\mu\text{g}/\text{mL}$	
04/24/2000	% RECOVERY = QC FOUND / QC ACTUAL * 100	
Analysis Date		
04/23/2000		
Analysis Time	Method Detection Limit in $\mu\text{g}/\text{mL}$	1.10E+01
03:43 PM	QC Actual in $\mu\text{g}/\text{mL}$	6.51E+02
Sample Point	QC Found in $\mu\text{g}/\text{mL}$	6.42E+02
AZ-101(2)	Percent Standard Recovery	98.6

Analyst:	KRM	Date:	04/24/2000
Signature of Chemist:	4/24	Date:	

STANDARD.WB1 REV.1.

69510NML

WORKBOOK PAGE: BLANK2

CN- DETERMINATION : LA-695-102(H-1)

		BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
CCB	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL) (SA)	N/A
33288	FINAL VOLUME (mL) (FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL) (SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL) (FDV)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	5.0000
	ABSORBANCE OF BLANK (REAGENT, PREP) (CCB)	0.001
Rerun	Y-INTERCEPT VALUE	-0.003650
0	SLOPE VALUE	0.166250
Sample Prep	AMOUNT OF CN- IN BLANK (µg)	0.028
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)	0.006
Sample #		
CCB		
Instrument Code	Post-Distillation Dilution Factor PDDF	1.00
SP04	NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000	
Prepared By		
MF	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)	
4/24	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date	NOTE: Reported Result is Below Detection Level.	
04/23/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-02
03:43 PM		
Sample Point	QC Found in µg/mL	< 1.10E-02
AZ-101(2)		

Analyst:		KRM	Date:	04/24/2000
Signature of Chemist:		4/24	Date:	

BLANK.WB1 REV.1.3

69510NML

WORKBOOK PAGE: SAM3

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33288	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
20001386	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.037
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
N/A	AMOUNT OF CN- IN SAMPLE (µg)	0.238
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	0.477
S00T000779		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date		
04/23/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-01
03:43 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	4.77E-01
AZ-101(2)		

Analyst:		KRM	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

WORKBOOK PAGE: SPIKE4

CN- DETERMINATION : LA-695-102(H-1)

		SPIKE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SPK	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33288	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.5000
20001386	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SPIKE	0.338
0	AMOUNT OF SPIKE STANDARD ADDED (mL)	0.250
Sample Prep	SPIKE BOOK NUMBER	131N8C
N/A	SPIKE VALUE OF CN- (µg / mL)	651
Sample #	Y-INTERCEPT VALUE	-0.003650
S00T000779	SLOPE VALUE	0.166250
Instrument Code	AMOUNT OF CN- IN SPIKE (µg)	2.049
SP04	AMOUNT OF CN- FROM SAMPLE (µg)	0.238
Prepared By	Post-Distillation Dilution Factor PDDF	1.00
MF		
Chemist	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MJL	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
Analyst	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
KRM	% REC = 100 * (AMT OF CN- IN SPK - AMT OF CN- FROM SAM) / (SPK VAL /100 * AMT OF SPK STD ADDED)	
Date Complete	QC ACTUAL = SPIKE VALUE OF CN- in µg/mL	
04/24/2000	QC FOUND = % RECOVERY * QC ACTUAL *100	
Analysis Date		
04/23/2000		
Analysis Time	Method Detection Limit in µg/mL	1.10E-01
03:43 PM	QC Actual in µg/mL	6.51E+02
Sample Point	QC Found in µg/mL	7.24E+02
AZ-101(2)	Percent Standard Recovery	111.2

Analyst:		KRM	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SPIKE.WB1 REV.1.3

69510NML

WORKBOOK PAGE: SAM5

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33288	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	1.0000
20001386	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.018
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
N/A	AMOUNT OF CN- IN SAMPLE (µg)	0.124
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	0.124
S00T000782		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date		
04/23/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E-02
03:43 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	1.24E-01
AZ-101(2)		

Analyst:		KRM	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

WORKBOOK PAGE: SAM6

CN- DETERMINATION : LA-695-102(H-1)

		SAMPLE
Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION:	
Work List	SAMPLE ALIQUOT (mL)	N/A
33288	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION:	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION:	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	1.0000
20001386	ABSORBANCE OF BLANK (CCB)	0.001
Rerun	ABSORBANCE OF SAMPLE	0.051
0	Y-INTERCEPT VALUE	-0.003650
Sample Prep	SLOPE VALUE	0.166250
N/A	AMOUNT OF CN- IN SAMPLE (µg)	0.323
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	0.323
S00T000785		
Instrument Code		
SP04	Post-Distillation Dilution Factor PDDF	1.00
Prepared By	AMOUNT OF CN- (µg) = [(ABSORB. OF SAMPLE - ABSORB. OF BLANK - (Y-INTERCEPT)) / SLOPE VALUE] * PDDF	
MF	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
MJL	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
04/24/2000		
Analysis Date		
04/23/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E-02
03:43 PM		
Sample Point	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	3.23E-01
AZ-101(2)		

Analyst:		KRM	Date:	04/24/2000
Signature of Chemist:		MJL	Date:	

SAMPLE.WB1 REV 1.1

69510NML

LABCORE Completed Worklist Report for Worklist# 33317

Analyst: pjm

Instrument: FIAS

Book#: 10/N/1-B

Method: LA-325-106 Rev/Mod A-3

Worklist Comment: AZ-101 (2), HG-02 skm

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	ICV		0	HG-02	LIQUID	0.1	.1010	101.000 % Recovery	
2	ICB		0	HG-02	LIQUID	1	<6.0e-5	ug/mL	
3	LLS		0	HG-02	LIQUID	.100	.0744	74.400 % Recovery	
4	SAMPLE	S00T000826	0	HG-02	LIQUID	N/A	.0112	2.40e-003	ug/mL
5	SPK	S00T000826	0	HG-02	LIQUID	100	92	92.000 % Recovery	
6	SAMPLE	S00T000828	0	HG-02	LIQUID	N/A	.0171	2.40e-003	ug/mL
7	SAMPLE	S00T000830	0	HG-02	LIQUID	N/A	.0173	2.40e-003	ug/mL
8	CCV		0	HG-02	LIQUID	0.1	.1008	100.800 % Recovery	
9	CCB		0	HG-02	LIQUID	1	<6.0e-5	ug/mL	

Final page for worklist# 33317

Analyst Signature _____ Date _____

Mary Fran 5/01/00
Analyst Signature Date

Jenn M. Lyle 5/1/00
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 33317

Analyst: DM Instrument: FIAS Book # 101N11B

Method: LA-325-106 Rev/Mod A-3

Worklist Comment: AZ-101 (2), HG-02 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 ICV			HG-02	LIQUID	.100	.1010	N/A	ug/mL
		2 ICB			HG-02	LIQUID	1	26.0e ⁻⁵	N/A	ug/mL
		3 LLS			HG-02	LIQUID	.100	.0744	N/A	ug/mL
99000438	AZ-101 (2)	4 SAMPLE	S00T000826	0	HG-02	LIQUID	N/A	.0112	.0024	ug/mL
99000438	AZ-101 (2)	5 SPK	S00T000826	0	HG-02	LIQUID	100 100	92.0	N/A	ug/mL
99000438	AZ-101 (2)	6 SAMPLE	S00T000828	0	HG-02	LIQUID	N/A	.0171	.0024	ug/mL
99000438	AZ-101 (2)	7 SAMPLE	S00T000830	0	HG-02	LIQUID	N/A	.0173	.0024	ug/mL
		8 CCV			HG-02	LIQUID	.100	.1008	N/A	ug/mL
		9 CCB			HG-02	LIQUID	1	26.0e ⁻⁵	N/A	ug/mL

Final page for worklist # 33317

DM 04/24/00
Analyst Signature Date

Mary Farn 5/01/00
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number.
R = Replicate Number, A = Aliquot Code.

Seq. No.	1	AS Loc:	1	Date:	4/24/00			
Sample ID:	Calib Blank							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0007	0.0045		0.0007		13:32:07
Auto-zero performed.								
Mean:			0.0007					
SD:								
%RSD:								
Seq. No.	2	AS Loc:	2	Date:	4/24/00			
Sample ID:	0.25 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0014	0.0123		0.0021		13:33:06
Standard number 1 applied. [0.25]								
Correlation Coefficient: 1.0000 Slope: 0.0054								
Mean:			0.0014					
SD:								
%RSD:								
Seq. No.	3	AS Loc:	3	Date:	4/24/00			
Sample ID:	0.50 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0026	0.0243		0.0033		13:34:07
Standard number 2 applied. [0.50]								
Correlation Coefficient: 1.0000 Slope: 0.0056								
Mean:			0.0026					
SD:								
%RSD:								
Seq. No.	4	AS Loc:	4	Date:	4/24/00			
Sample ID:	1.00 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0052	0.0453		0.0059		13:35:06
S-shaped calibration curve detected. Two-coefficient equation used.								
Standard number 3 applied. [1.00]								
Correlation Coefficient: 0.9999 Slope: 0.0055								
Mean:			0.0052					
SD:								
%RSD:								
Seq. No.	5	AS Loc:	5	Date:	4/24/00			
Sample ID:	2.50 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0139	0.1173		0.0146		13:36:07
S-shaped calibration curve detected. Two-coefficient equation used.								
Standard number 4 applied. [2.50]								
Correlation Coefficient: 0.9998 Slope: 0.0053								
Mean:			0.0139					
SD:								
%RSD:								

Seq. No.	6	AS Loc:	6	Date:	4/24/00				
Sample ID:	5.00 ppb Hg 100N11B								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0279	0.2364		0.0286		13:37:06	
S-shaped calibration curve detected. Two-coefficient equation used.									
Standard number 5 applied. [5.00]									
Correlation Coefficient: 0.9999			Slope: 0.0053						
An extra autosampler wash has been performed.									
Mean:	0.0279								
SD:									
%RSD:									

Seq. No.	7	AS Loc:	7	Date:	4/24/00					
Sample ID:	7.50 ppb Hg 100N11B									
Elem	SampleConc	StdConc	Blank	Corr	Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg					0.0434	0.3662		0.0441		13:38:34
Standard number 6 applied. [7.5]										
Correlation Coefficient: 0.9999 Slope: 0.0053										
An extra autosampler wash has been performed.										
Mean:					0.0434					
SD:										
%RSD:										

Seq. No.	8	AS Loc:	8	Date:	4/24/00				
Sample ID:	10.0 ppb Hg 100N11B								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0578	0.4886		0.0585		13:40:01	
Standard number 7 applied. [10.0]									
Correlation Coefficient: 0.9997			Slope: 0.0053						
The calibration curve has been edited.									
The calibration curve has been edited.									
Mean:	0.0578								
SD:									
%RSD:									

Seq. No.	9	AS Loc:	9	Date:	4/24/00				
Sample ID:	ICV 101N11B .500ML								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	2.526µg/L	2.526µg/L	0.0145	0.1294		0.0152		13:48:19	
Mean:	2.526µg/L	2.526µg/L	0.0145						
SD:	0.000µg/L	0.000µg/L							
%RSD:									

2.526

2.5

x100 = 101.0%

Seq. No.	10	AS Loc:	10	Date:	4/24/00				
Sample ID:	ICB								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	-0.012µg/L	-0.012µg/L	-0.0001	0.0003		0.0006		13:49:19	
Mean:	-0.012µg/L	-0.012µg/L	-0.0001						
SD:	0.000µg/L	0.000µg/L							
%RSD:									

Seq. No.	11	AS Loc:	11	Date:	4/24/00			
Sample ID:	LLS 101N11B .050MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.186µg/L	0.186µg/L	0.0011	0.0108		0.0018		13:50:19
Mean:	0.186µg/L	0.186µg/L	0.0011					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$\frac{.186}{.25} \times 100 = 74.4\%$								
Seq. No.	12	AS Loc:	12	Date:	4/24/00			
Sample ID:	S00T000826 .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.280µg/L	0.280µg/L	0.0018	0.0173		0.0023		13:51:19
Mean:	0.280µg/L	0.280µg/L	0.0018					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$.280 \times 40 = 11.2 \mu\text{g/L} \times \frac{.0001}{.0001} = .0112 \mu\text{g/ml}$ $.06 \times 40 = 2.4 \times .0024 \mu\text{g/ml}$								
Seq. No.	13	AS Loc:	13	Date:	4/24/00			
Sample ID:	S00T000826 Spk .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	2.580µg/L	2.580µg/L	0.0148	0.1300		0.0155		13:52:19
Mean:	2.580µg/L	2.580µg/L	0.0148					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$\frac{2.580 - .280}{2.5} \times 100 = 92.0\%$								
Seq. No.	14	AS Loc:	14	Date:	4/24/00			
Sample ID:	S00T000828 .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.429µg/L	0.429µg/L	0.0025	0.0244		0.0032		13:53:19
Mean:	0.429µg/L	0.429µg/L	0.0025					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$.429 \times 40 = 17.16 \mu\text{g/L} = .0171 \mu\text{g/ml}$								
Seq. No.	15	AS Loc:	15	Date:	4/24/00			
Sample ID:	S00T000830 .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.434µg/L	0.434µg/L	0.0025	0.0256		0.0032		13:54:20
Mean:	0.434µg/L	0.434µg/L	0.0025					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$.434 \times 40 = 17.36 \mu\text{g/L} = .0173 \mu\text{g/ml}$								
Seq. No.	16	AS Loc:	16	Date:	4/24/00			
Sample ID:	CCV 101N11B .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	2.521µg/L	2.521µg/L	0.0145	0.1303		0.0152		13:55:20
Mean:	2.521µg/L	2.521µg/L	0.0145					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
$\frac{2.521}{2.5} \times 100 = 100.8\%$								
Seq. No.	17	AS Loc:	17	Date:	4/24/00			
Sample ID:	CCB							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.007µg/L	0.007µg/L	0.0000	0.0013		0.0007		13:56:20

Mean:	0.007µg/L	0.007µg/L	0.0000
SD:	0.000µg/L	0.000µg/L	
%RSD:			

LABCORE Completed Worklist Report for Worklist# 33563

Analyst: pjm

Instrument: FIAS

Book#: 101N11B

Method: LA-325-106 Rev/Mod A-3

Worklist Comment: Hg-02 on AZ-101. jmf

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0		HG-02	LIQUID	0.1	0.1088	108.800 % Recovery	
2 ICB	0		HG-02	LIQUID	1	<6.0e-05		ug/mL
3 ILS	0		HG-02	LIQUID	0.100	0.1020	102.000 % Recovery	
4 SAMPLE	S00T000819	0	HG-02	SOLID	N/A	2.043	2.40e-002	ug/g
5 SPK	S00T000819	0	HG-02	SOLID	160	92.32	92.320 % Recovery	
6 SAMPLE	S00T000819	0	HG-02	SOLID	N/A	1.837	2.40e-002	ug/g
7 SAMPLE	S00T000820	0	HG-02	SOLID	N/A	1.882	2.40e-002	ug/g
8 CCV	0		HG-02	LIQUID	0.1	0.1084	108.400 % Recovery	
9 CCB	0		HG-02	LIQUID	1	<6.0e-05		ug/mL

Final page for worklist# 33563

Analyst Signature

Date

Analyst Signature

Date

Jane M. Lye
Reviewer Signature

5/17/00
Date

worklistrpt Version 2.1 05/15/95
05/15/00 07:50

Page: 1

LABCORE Data Entry Template for Worklist# 33563

Analyst: BAW Instrument: FIAS Book # 101011B

Method: LA-325-106 Rev/Mod A-3

Worklist Comment: Hg-02 on AZ-101. jmf

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 ICV			HG-02	LIQUID	<u>.100</u>	<u>.1088</u>	<u>N/A</u>	ug/mL
		2 ICB			HG-02	LIQUID	<u>1</u>	<u><6.0e⁻⁵</u>	<u>N/A</u>	ug/mL
		3 LLS			HG-02	LIQUID	<u>.100</u>	<u>.1020</u>	<u>N/A</u>	ug/mL
99000438	AZ-101 (2)	4 SAMPLE	S00T000818	0	HG-02	SOLID	<u>N/A</u>	<u>2.043</u>	<u>.024</u>	ug/g
99000438	AZ-101 (2)	5 SPK	S00T000818	0	HG-02	SOLID	<u>100</u>	<u>92.32</u>	<u>N/A</u>	ug/g
99000438	AZ-101 (2)	6 SAMPLE	S00T000819	0	HG-02	SOLID	<u>N/A</u>	<u>1.837</u>	<u>.024</u>	ug/g
99000438	AZ-101 (2)	7 SAMPLE	S00T000820	0	HG-02	SOLID	<u>N/A</u>	<u>1.882</u>	<u>.024</u>	ug/g
		8 CCV			HG-02	LIQUID	<u>.100</u>	<u>.1084</u>	<u>N/A</u>	ug/mL
		9 CCB			HG-02	LIQUID	<u>1</u>	<u><6.0e⁻⁵</u>	<u>N/A</u>	ug/mL

Final page for worklist # 33563

BAW 05/15/00
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

DATA ENTRY 5-16-00

validated 5/16/00 JMF

JH Howell

33563

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Seq. No.	1	AS Loc:	1	Date:	5/15/00				
Sample ID:	Calib Blank								
Elem	SampleConc	StndConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0005	0.0005		0.0005		14:43:28	
Auto-zero performed.									
Mean:			0.0005						
SD:									
%RSD:									
Seq. No.	2	AS Loc:	2	Date:	5/15/00				
Sample ID:	0.25 ppb Hg 100N11B								
Elem	SampleConc	StndConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0023	0.0115		0.0028		14:44:28	
Standard number 1 applied. [0.25]									
Correlation Coefficient: 1.0000 Slope: 0.0092									
Mean:			0.0023						
SD:									
%RSD:									
Seq. No.	3	AS Loc:	3	Date:	5/15/00				
Sample ID:	0.50 ppb Hg 100N11B								
Elem	SampleConc	StndConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0054	0.0264		0.0059		14:45:28	
Standard number 2 applied. [0.50]									
Correlation Coefficient: 1.0000 Slope: 0.0081									
Mean:			0.0054						
SD:									
%RSD:									
Seq. No.	4	AS Loc:	4	Date:	5/15/00				
Sample ID:	1.00 ppb Hg 100N11B								
Elem	SampleConc	StndConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0106	0.0523		0.0112		14:46:28	
S-shaped calibration curve detected. Two-coefficient equation used.									
Standard number 3 applied. [1.00]									
Correlation Coefficient: 0.9975 Slope: 0.0093									
Mean:			0.0106						
SD:									
%RSD:									
Seq. No.	5	AS Loc:	5	Date:	5/15/00				
Sample ID:	2.50 ppb Hg 100N11B								
Elem	SampleConc	StndConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0280	0.1310		0.0286		14:47:28	
S-shaped calibration curve detected. Two-coefficient equation used.									
Standard number 4 applied. [2.50]									
Correlation Coefficient: 0.9996 Slope: 0.0098									
An extra autosampler wash has been performed.									
Mean:			0.0280						
SD:									
%RSD:									

DATA
NOT USED

Seq. No.	6	AS Loc:	6	Date:	5/15/00				
Sample ID:	5.00 ppb Hg 100N11B								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0543	0.2631		0.0548		14:48:53	
S-shaped calibration curve detected. Two-coefficient equation used.									
Standard number 5 applied. [5.00]									
Correlation Coefficient: 0.9989 Slope: 0.0102									
An extra autosampler wash has been performed.									
Mean:			0.0543						
SD:									
%RSD:									

Seq. No.	7	AS Loc:	7	Date:	5/15/00				
Sample ID:	7.50 ppb Hg 100N11B								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.0857	0.4148		0.0862		14:50:22	
Standard number 6 applied. [7.5]									
Correlation Coefficient: 0.9987 Slope: 0.0103									
An extra autosampler wash has been performed.									
Mean:			0.0857						
SD:									
%RSD:									

Seq. No.	8	AS Loc:	8	Date:	5/15/00				
Sample ID:	10.0 ppb Hg 100N11B								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg			0.1153	0.5581		0.1159		14:51:48	
Standard number 7 applied. [10.0]									
Correlation Coefficient: 0.9997 Slope: 0.0103									
The calibration curve has been edited.									
The calibration curve has been edited.									
Mean:			0.1153						
SD:									
%RSD:									

Seq. No.	9	AS Loc:	9	Date:	5/15/00				
Sample ID:	ICV 101N11B .500MI								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	2.769µg/L	2.769µg/L	0.0295	0.1442		0.0300		14:54:22	
An extra autosampler wash has been performed.									
Mean:	2.769µg/L	2.769µg/L	0.0295						
SD:	0.000µg/L	0.000µg/L							
%RSD:									

Seq. No.	10	AS Loc:	10	Date:	5/15/00				
Sample ID:	ICB								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	0.005µg/L	0.005µg/L	0.0000	0.0013		0.0006		14:55:43	
Mean:	0.005µg/L	0.005µg/L	0.0000						
SD:	0.000µg/L	0.000µg/L							
%RSD:									

DATA
NOT USED

Seq. No.	11	AS Loc:	11	Date:	5/15/00			
Sample ID:	LLS 101N11B .050 MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.282µg/L	0.282µg/L	0.0029	0.0166		0.0035		14:56:42
Mean:	0.282µg/L	0.282µg/L	0.0029					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	12	AS Loc:	12	Date:	5/15/00			
Sample ID:	Lot 208 .4056g 10X							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	3.007µg/L	3.007µg/L	0.0321	0.1601		0.0327		14:57:43
An extra autosampler wash has been performed.								
Mean:	3.007µg/L	3.007µg/L	0.0321					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	13	AS Loc:	13	Date:	5/15/00			
Sample ID:	S00T000818 .0490g 40X							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.093µg/L	0.093µg/L	0.0010	0.0074		0.0015		14:58:06
Mean:	0.093µg/L	0.093µg/L	0.0010					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	14	AS Loc:	14	Date:	5/15/00			
Sample ID:	S00T000818 Spk .0490g 40X							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	5.191µg/L	5.191µg/L	0.0570	0.2829		0.0576		15:00:06
An extra autosampler wash has been performed.								
Mean:	5.191µg/L	5.191µg/L	0.0570					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	15	AS Loc:	15	Date:	5/15/00			
Sample ID:	S00T000819 .0493g 40X							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.075µg/L	0.075µg/L	0.0008	0.0055		0.0013		15:01:30
Mean:	0.075µg/L	0.075µg/L	0.0008					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	16	AS Loc:	16	Date:	5/15/00			
Sample ID:	S00T000820 .0481g 40X							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.067µg/L	0.067µg/L	0.0007	0.0044		0.0012		15:02:30
Mean:	0.067µg/L	0.067µg/L	0.0007					
SD:	0.000µg/L	0.000µg/L						
%RSD:								

DATA
NOT USED

Seq. No.	17	AS Loc:	17	Date:	5/15/00			
Sample ID:	CCV 101N11b .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	2.739µg/L	2.739µg/L	0.0292	0.1435		0.0297		15:03:31
An extra autosampler wash has been performed.								
Mean:	2.739µg/L	2.739µg/L	0.0292					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	18	AS Loc:	18	Date:	5/15/00			
Sample ID:	CCB							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.010µg/L	0.010µg/L	0.0001	0.0023		0.0007		15:04:57
Mean:	0.010µg/L	0.010µg/L	0.0001					
SD:	0.000µg/L	0.000µg/L						
%RSD:								
Seq. No.	19	AS Loc:	1	Date:	5/15/00			
Sample ID:	Calib Blank							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			-0.0000	-0.0000		0.0005		15:12:03
Auto-zero performed.								
Mean:			-0.0000					
SD:								
%RSD:								
Seq. No.	20	AS Loc:	2	Date:	5/15/00			
Sample ID:	0.25 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0027	0.0136		0.0032		15:13:03
Standard number 1 applied. [0.25]								
Correlation Coefficient: 1.0000 Slope: 0.0107								
Mean:			0.0027					
SD:								
%RSD:								
Seq. No.	21	AS Loc:	3	Date:	5/15/00			
Sample ID:	0.50 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0053	0.0268		0.0058		15:14:03
Standard number 2 applied. [0.50]								
Correlation Coefficient: 1.0000 Slope: 0.0110								
Mean:			0.0053					
SD:								
%RSD:								
Seq. No.	22	AS Loc:	4	Date:	5/15/00			
Sample ID:	1.00 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0110	0.0564		0.0115		15:15:03
S-shaped calibration curve detected. Two-coefficient equation used.								
Standard number 3 applied. [1.00]								
Correlation Coefficient: 0.9998 Slope: 0.0105								
Mean:			0.0110					

SD:
%RSD:

Seq. No.	23	AS Loc:	5	Date:	5/15/00			
Sample ID:	2.50 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0287	0.1423		0.0292		15:18:03
Standard number 4 applied. [2.50] Correlation Coefficient: 0.9999 Slope: 0.0107 An extra autosampler wash has been performed.								
Mean:			0.0287					
SD:								
%RSD:								

Seq. No.	24	AS Loc:	6	Date:	5/15/00			
Sample ID:	5.00 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0561	0.2766		0.0566		15:17:27
S-shaped calibration curve detected. Two-coefficient equation used. Standard number 5 applied. [5.00] Correlation Coefficient: 0.9995 Slope: 0.0107 An extra autosampler wash has been performed.								
Mean:			0.0561					
SD:								
%RSD:								

Seq. No.	25	AS Loc:	7	Date:	5/15/00			
Sample ID:	7.50 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.0879	0.4361		0.0884		15:18:53
Standard number 6 applied. [7.5] Correlation Coefficient: 0.9997 Slope: 0.0108 An extra autosampler wash has been performed.								
Mean:			0.0879					
SD:								
%RSD:								

Seq. No.	26	AS Loc:	8	Date:	5/15/00			
Sample ID:	10.0 ppb Hg 100N11B							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg			0.1180	0.5895		0.1185		15:20:21
Standard number 7 applied. [10.0] Correlation Coefficient: 0.9998 Slope: 0.0109								
Mean:			0.1180					
SD:								
%RSD:								

Seq. No.	27	AS Loc:	9	Date:	5/15/00			
Sample ID:	ICV 101N11B .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	2.721µg/L	2.721µg/L	0.0301	0.1485		0.0306		15:22:16
An extra autosampler wash has been performed.								
Mean:	2.721µg/L	2.721µg/L	0.0301					
SD:	0.000µg/L	0.000µg/L						
%RSD:								

$$\frac{2.721}{2.5} \times 100 = 108.8\%$$

Seq. No.	28	AS Loc:	10	Date:	5/15/00				
Sample ID:	ICB								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	0.004µg/L	0.004µg/L	0.0000	0.0012		0.0006		15:23:36	
Mean:	0.004µg/L	0.004µg/L	0.0000						
SD:	0.000µg/L	0.000µg/L							
%RSD:									$26.0e^{-5}$
Seq. No.	29	AS Loc:	11	Date:	5/15/00				
Sample ID:	LLS 101N11B .050 MI								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	0.255µg/L	0.255µg/L	0.0028	0.0144		0.0033		15:24:36	
Mean:	0.255µg/L	0.255µg/L	0.0028						
SD:	0.000µg/L	0.000µg/L							
%RSD:									$\frac{.255}{.25} \times 100 = 102.0\%$
Seq. No.	30	AS Loc:	12	Date:	5/15/00				
Sample ID:	Lot 208 .4056g 10X								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	2.996µg/L	2.996µg/L	0.0332	0.1668		0.0337		15:25:36	
An extra autosampler wash has been performed.									
Mean:	2.996µg/L	2.996µg/L	0.0332						
SD:	0.000µg/L	0.000µg/L							
%RSD:									$\frac{2.996 \times 10}{.4056g \cdot 1.02L} = \frac{29.96}{20.28} = \frac{1.477}{1.4} = 105.5\%$
Seq. No.	31	AS Loc:	13	Date:	5/15/00				
Sample ID:	S00T000818 .0490g								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	5.006µg/L	5.006µg/L	0.0566	0.2887		0.0571		15:26:58	
An extra autosampler wash has been performed.									
Mean:	5.006	5.006	0.0566						
SD:	0.000	0.000							
%RSD:									$\frac{.06}{2.45} = .024$
Seq. No.	32	AS Loc:	14	Date:	5/15/00				
Sample ID:	S00T000818 Spk .0426g								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	6.660µg/L	6.660µg/L	0.0766	0.3908		0.0771		15:39:29	
An extra autosampler wash has been performed.									
Mean:	6.660µg/L	6.660µg/L	0.0766						
SD:	0.000µg/L	0.000µg/L							
%RSD:									$\frac{.06}{2.13} = .028$
Seq. No.	33	AS Loc:	15	Date:	5/15/00				
Sample ID:	S00T000819 .0493g								
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time	
Hg	4.529µg/L	4.529µg/L	0.0510	0.2622		0.0515		15:40:53	
An extra autosampler wash has been performed.									
Mean:	4.529µg/L	4.529µg/L	0.0510						
SD:	0.000µg/L	0.000µg/L							
%RSD:									$\frac{.06}{2.465} = .024$

Seq. No.	34	AS Loc:	18	Date:	5/15/00			
Sample ID:	S00T000820 .0481g							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	4.527µg/L	4.527µg/L	0.0510	0.2802		0.0515		15:42:18
An extra autosampler wash has been performed.								
Mean:	4.527µg/L	4.527µg/L	0.0510					
SD:	0.000µg/L	0.000µg/L						
%RSD:	<div><div>$\frac{.06}{2.405} = .024$</div><div>$\frac{4.527 \mu\text{g/L}}{.0481\text{g}} = 1.02\text{L}$</div><div>$\frac{4.527}{2.405} = 1.882 \mu\text{g/g}$</div></div>							

Seq. No.	35	AS Loc:	17	Date:	5/15/00			
Sample ID:	CCV 101N11b .500MI							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	2.712µg/L	2.712µg/L	0.0300	0.1495		0.0305		15:43:43
An extra autosampler wash has been performed.								
Mean:	2.712µg/L	2.712µg/L	0.0300					
SD:	0.000µg/L	0.000µg/L						
%RSD:	<div>2.712 2.5 x 100 = 108.4%</div>							

Seq. No.	36	AS Loc:	18	Date:	5/15/00			
Sample ID:	CCB							
Elem	SampleConc	StdConc	Blank Corr Signal	Pk Area	BG Area	Pk Ht	BG Ht	Time
Hg	0.001µg/L	0.001µg/L	0.0000	-0.0014		0.0005		15:45:10
Mean:	0.001µg/L	0.001µg/L	0.0000					
SD:	0.000µg/L	0.000µg/L						
%RSD:				1.02 ⁻⁵				

LABCORE Completed Worklist Report for Worklist# 31866

Analyst: adp

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	01C-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	0	01C-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	0	01C-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	0	01C-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	0	01C-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	0	01C-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	0	01C-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	0	01C-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 LCS-INST	0	0	01C-QC F	QC	64.0	6.45e+01	100.781 % Recovery	
2 LCS-INST	0	0	01C-QC CL	QC	90.0	8.57e+01	95.222 % Recovery	
2 LCS-INST	0	0	01C-QC NO2	QC	529	4.92e+02	93.006 % Recovery	
2 LCS-INST	0	0	01C-QC BR	QC	625	6.08e+02	97.280 % Recovery	
2 LCS-INST	0	0	01C-QC NO3	QC	690	7.20e+02	104.348 % Recovery	
2 LCS-INST	0	0	01C-QC PO4	QC	635	6.14e+02	96.693 % Recovery	
2 LCS-INST	0	0	01C-QC SO4	QC	690	6.79e+02	98.406 % Recovery	
2 LCS-INST	0	0	01C-QC OXALATE2	QC	531	5.49e+02	103.390 % Recovery	
3 CCV	0	0	01C-QC F	QC	63.5	6.24e+01	98.268 % Recovery	
3 CCV	0	0	01C-QC CL	QC	87.5	8.60e+01	98.286 % Recovery	
3 CCV	0	0	01C-QC NO2	QC	534	5.28e+02	98.876 % Recovery	
3 CCV	0	0	01C-QC BR	QC	630	6.41e+02	101.746 % Recovery	
3 CCV	0	0	01C-QC NO3	QC	700	6.84e+02	97.714 % Recovery	
3 CCV	0	0	01C-QC PO4	QC	635	6.10e+02	96.063 % Recovery	
3 CCV	0	0	01C-QC SO4	QC	690	6.91e+02	100.145 % Recovery	
3 CCV	0	0	01C-QC OXALATE2	QC	539	5.51e+02	102.226 % Recovery	
4 SAMPLE	S99T001832	0	01C-01 F-02	LIQUID	N/A	1.872e+03	25.450	ug/mL
4 SAMPLE	S99T001832	0	01C-01 CL-02	LIQUID	N/A	1.577e+02	36.060	ug/mL
4 SAMPLE	S99T001832	0	01C-01 NO2-02	LIQUID	N/A	7.175e+04	229.100	ug/mL
4 SAMPLE	S99T001832	0	01C-01 BR-02	LIQUID	N/A	< 2.651e+02	265.100	ug/mL
4 SAMPLE	S99T001832	0	01C-01 NO3-02	LIQUID	N/A	7.334e+04	294.800	ug/mL
4 SAMPLE	S99T001832	0	01C-01 PO4-02	LIQUID	N/A	1.151e+03	254.500	ug/mL
4 SAMPLE	S99T001832	0	01C-01 SO4-02	LIQUID	N/A	1.593e+04	292.700	ug/mL
4 SAMPLE	S99T001832	0	01C-01 OXALATE2	LIQUID	N/A	2.251e+03	222.700	ug/mL
5 DUP	S99T001832	0	01C-01 F-02	LIQUID	1.87e+03	1.77e+03	5.495	RPD
5 DUP	S99T001832	0	01C-01 CL-02	LIQUID	1.58e+02	1.49e+02	5.863	RPD
5 DUP	S99T001832	0	01C-01 NO2-02	LIQUID	7.18e+04	7.16e+04	0.279	RPD
5 DUP	S99T001832	0	01C-01 BR-02	LIQUID	<2.65e2	<2.65e2		RPD
5 DUP	S99T001832	0	01C-01 NO3-02	LIQUID	7.33e+04	7.27e+04	0.822	RPD
5 DUP	S99T001832	0	01C-01 PO4-02	LIQUID	1.15e+03	1.26e+03	9.129	RPD
5 DUP	S99T001832	0	01C-01 SO4-02	LIQUID	1.59e+04	1.60e+04	0.627	RPD
5 DUP	S99T001832	0	01C-01 OXALATE2	LIQUID	2.25e+03	2.00e+03	11.765	RPD
6 SAMPLE	S99T001833	0	01C-01 F-02	LIQUID	N/A	1.810e+03	25.450	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-1701 REV. 0

LABCORE Completed Worklist Report for Worklist# 31866

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001833	0	IC-01	CL-02	LIQUID	N/A	1.754e+02	36.060 ug/mL
6 SAMPLE	S99T001833	0	IC-01	NO2-02	LIQUID	N/A	7.416e+04	229.100 ug/mL
6 SAMPLE	S99T001833	0	IC-01	BR-02	LIQUID	N/A	9.841e+02	265.100 ug/mL
6 SAMPLE	S99T001833	0	IC-01	NO3-02	LIQUID	N/A	7.368e+04	294.800 ug/mL
6 SAMPLE	S99T001833	0	IC-01	PO4-02	LIQUID	N/A	1.082e+03	254.500 ug/mL
6 SAMPLE	S99T001833	0	IC-01	SO4-02	LIQUID	N/A	1.618e+04	292.700 ug/mL
6 SAMPLE	S99T001833	0	IC-01	OXALATE2	LIQUID	N/A	7.719e+02	222.700 ug/mL
7 DUP	S99T001833	0	IC-01	F-02	LIQUID	1.81e+03	1.84e+03	1.644 RPD
7 DUP	S99T001833	0	IC-01	CL-02	LIQUID	1.75e+02	1.61e+02	8.333 RPD
7 DUP	S99T001833	0	IC-01	NO2-02	LIQUID	7.42e+04	7.38e+04	0.541 RPD
7 DUP	S99T001833	0	IC-01	BR-02	LIQUID	9.84e+02	9.13e+02	7.486 RPD
7 DUP	S99T001833	0	IC-01	NO3-02	LIQUID	7.37e+04	7.39e+04	0.271 RPD
7 DUP	S99T001833	0	IC-01	PO4-02	LIQUID	1.08e+03	1.12e+03	3.636 RPD
7 DUP	S99T001833	0	IC-01	SO4-02	LIQUID	1.62e+04	1.61e+04	0.619 RPD
7 DUP	S99T001833	0	IC-01	OXALATE2	LIQUID	7.72e+02	8.76e+02	12.621 RPD
8 SPK	S99T001833	0	IC-01	F-02	LIQUID	64.0	6.19e+01	96.719 % Recovery
8 SPK	S99T001833	0	IC-01	CL-02	LIQUID	90.0	8.27e+01	91.889 % Recovery
8 SPK	S99T001833	0	IC-01	NO2-02	LIQUID	529	4.70e+02	88.847 % Recovery
8 SPK	S99T001833	0	IC-01	BR-02	LIQUID	625	5.88e+02	94.080 % Recovery
8 SPK	S99T001833	0	IC-01	NO3-02	LIQUID	690	7.29e+02	105.652 % Recovery
8 SPK	S99T001833	0	IC-01	PO4-02	LIQUID	635	6.37e+02	100.315 % Recovery
8 SPK	S99T001833	0	IC-01	SO4-02	LIQUID	690	6.76e+02	97.971 % Recovery
8 SPK	S99T001833	0	IC-01	OXALATE2	LIQUID	531	5.32e+02	100.188 % Recovery
9 SAMPLE	S99T001834	0	IC-01	F-02	LIQUID	N/A	1.635e+03	25.450 ug/mL
9 SAMPLE	S99T001834	0	IC-01	CL-02	LIQUID	N/A	1.288e+02	36.060 ug/mL
9 SAMPLE	S99T001834	0	IC-01	NO2-02	LIQUID	N/A	6.841e+04	229.100 ug/mL
9 SAMPLE	S99T001834	0	IC-01	BR-02	LIQUID	N/A	9.277e+02	265.100 ug/mL
9 SAMPLE	S99T001834	0	IC-01	NO3-02	LIQUID	N/A	6.807e+04	294.800 ug/mL
9 SAMPLE	S99T001834	0	IC-01	PO4-02	LIQUID	N/A	1.173e+03	254.500 ug/mL
9 SAMPLE	S99T001834	0	IC-01	SO4-02	LIQUID	N/A	1.512e+04	292.700 ug/mL
9 SAMPLE	S99T001834	0	IC-01	OXALATE2	LIQUID	N/A	1.346e+03	222.700 ug/mL
10 DUP	S99T001834	0	IC-01	F-02	LIQUID	1.64e+03	1.76e+03	7.059 RPD
10 DUP	S99T001834	0	IC-01	CL-02	LIQUID	1.29e+02	1.29e+02	0.000 RPD
10 DUP	S99T001834	0	IC-01	NO2-02	LIQUID	6.84e+04	6.91e+04	1.018 RPD
10 DUP	S99T001834	0	IC-01	BR-02	LIQUID	9.28e+02	1.00e+03	7.469 RPD
10 DUP	S99T001834	0	IC-01	NO3-02	LIQUID	6.81e+04	6.88e+04	1.023 RPD
10 DUP	S99T001834	0	IC-01	PO4-02	LIQUID	1.17e+03	1.22e+03	4.184 RPD
10 DUP	S99T001834	0	IC-01	SO4-02	LIQUID	1.51e+04	1.53e+04	1.316 RPD
10 DUP	S99T001834	0	IC-01	OXALATE2	LIQUID	1.35e+03	1.25e+03	7.692 RPD

Final page for worklist# 31866

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature Date 1/20/00

LABCORE Data Entry Template for Worklist# 31866

Analyst: ADP Instrument: ICBook# 100N21-E CCVMethod: LA-533-105 Rev/Mod F-2101N21-E LCS

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001832 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S99T001832 0		@IC-01	LIQUID		
6 SAMPLE	S99T001833 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S99T001833 0		@IC-01	LIQUID		
8 SPK	S99T001833 0		@IC-01	LIQUID		
9 SAMPLE	S99T001834 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
10 DUP	S99T001834 0		@IC-01	LIQUID		

Final page for worklist # 31866

Anthony 01072000
Signature Date

Signature Date

Data Entry Comments:

upgraded 1-18-00Fixed 01-08-2000John WarellValidated 1/19/00 JMF31866JAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: 101N21-E LCS Date: 01/07/2000 23:41:34
 Data File : C:\DX\DATA\00070121.D09
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 140 System: 1 Inject#: 9 Detector: CDM-1
 Analyst : *Anthony Parut* Column: AG4A/AS4A anion column

1-7-2000
 Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 101 3300 5Hz 0.00 11.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.04	fluoride	64.482	1480	5910	2	-0.95
3	1.54	chloride	85.711	1434	5465	1	-0.65
4	1.83	nitrite	492.101	3999	19875	1	0.18
5	2.72	bromide	607.593	2918	16646	1	-0.37
6	3.08	nitrate	720.226	3718	25463	1	-0.32
7	4.35	phosphate	613.527	927	11188	1	-0.53
8	5.65	sulfate	679.496	2030	32228	1	0.06
9	7.36	oxalate	549.268	1014	20541	1	0.00
Totals			3812.405	17520	137317

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 666 TO 675.

Sample Name: CCB BLANK Date: 01/07/2000 23:27:56
Data File : C:\DX\DATA\00070121.D08
Method : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 1 3300 5Hz 0.00 11.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	9.01		0.000	4	53	1	
Totals			0.000	4	53		

File: 00070121.D08 Sample: CCB BLANK

```

=====
Sample Name: 100N21-E CCV                      Date: 01/07/2000 23:55:12
Data File  : C:\DX\DATA\00070121.D10
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 10           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          101   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.04	fluoride	62.414	1493	5716	1	-0.95
2	1.54	chloride	85.975	1407	5482	1	-0.65
3	1.83	nitrite	528.245	4177	21384	1	0.18
4	2.72	bromide	640.646	2974	17587	1	-0.37
5	3.08	nitrate	683.929	3587	24145	1	-0.32
6	4.35	phosphate	610.078	953	11125	1	-0.53
7	5.65	sulfate	690.914	2118	32784	1	0.06
8	7.36	oxalate	550.924	1031	20604	1	0.00
Totals			3853.125	17740	138826		

File: 00070121.D10 Sample: 100N21-E CCV

```

=====
Sample Name: S99T001832 SAM                      Date: 01/08/2000 00:08:51
Data File  : C:\DX\DATA\00070121.D11
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 11              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          2121   3300   5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	70	299	2	
2	1.04	fluoride	1871.666	1994	8240	2	-0.95
3	1.54	chloride	157.738	118	484	1	-0.65
4	1.84	nitrite	71748.496	28024	151313	1	0.55
5	3.02	nitrate	73340.504	18874	135437	1	-2.27
6	4.35	phosphate	1151.444	95	1041	1	-0.53
7	5.65	sulfate	15934.797	2405	36095	1	0.06
8	7.41	oxalate	2251.184	201	3743	1	0.72
9	8.69		0.000	17	452	1	
Totals			166455.829	51798	337104		

File: 00070121.D11 Sample: S99T001832 SAM

```

=====
Sample Name: S99T001832 DUP                      Date: 01/08/2000 00:22:29
Data File  : C:\DX\DATA\00070121.D12
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 12              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300 5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	56	241	2	
2	1.04	fluoride	1773.092	1984	7794	2	-0.95
3	1.54	chloride	148.718	111	457	1	-0.65
4	1.84	nitrite	71586.506	28075	150938	1	0.55
5	3.02	nitrate	72713.576	18927	134136	1	-2.27
6	4.35	phosphate	1264.280	99	1138	1	-0.53
7	5.65	sulfate	15980.138	2403	36201	1	0.06
8	7.41	oxalate	1998.171	185	3286	1	0.72
Totals			165464.481	51841	334190		

File: 00070121.D12 Sample: S99T001832 DUP

```

=====
Sample Name: S99T001833 SAM                      Date: 01/08/2000 00:36:07
Data File  : C:\DX\DATA\00070121.D13
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 13              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	63	282	2	
2	1.04	fluoride	1810.326	1991	7962	2	-0.95
3	1.54	chloride	175.444	119	537	1	-0.65
4	1.84	nitrite	74156.927	28212	156922	1	0.55
5	2.73	bromide	984.107	187	1000	1	-0.12
6	3.02	nitrate	73682.326	19007	136148	1	-2.27
7	4.37	phosphate	1081.714	96	982	1	0.08
8	5.65	sulfate	16177.570	2420	36660	1	0.06
9	7.41	oxalate	771.911	70	1072	1	0.72
Totals			168840.324	52164	341565		

File: 00070121.D13 Sample: S99T001833 SAM

```

=====
Sample Name: S99T001833 DUP                      Date: 01/08/2000 00:49:45
Data File  : C:\DX\DATA\00070121.D14
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 14              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1       2121   3300  5Hz  0.00 11.00       50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	66	296	2	
2	1.04	fluoride	1841.422	1987	8103	2	-0.95
3	1.53	chloride	161.319	114	495	1	-1.08
4	1.84	nitrite	73766.923	28358	156011	1	0.55
5	2.73	bromide	912.860	179	907	1	-0.12
6	3.01	nitrate	73872.788	18865	136544	1	-2.48
7	4.35	phosphate	1122.264	94	1016	1	-0.53
8	5.65	sulfate	16055.125	2445	36375	1	0.06
9	7.41	oxalate	876.101	70	1260	1	0.72
Totals			168608.803	52178	341007		

File: 00070121.D14 Sample: S99T001833 DUP

```

=====
Sample Name: S99T001833 SPK                      Date: 01/08/2000 01:03:24
Data File  : C:\DX\DATA\00070121.D15
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 15              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1      2121  3300  5Hz  0.00 11.00      50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	72	302	2	
2	1.04	fluoride	3061.362	3434	13705	2	-0.95
3	1.53	chloride	1846.908	1342	5608	1	-1.08
4	1.84	nitrite	83657.069	32219	179454	1	0.55
5	2.71	bromide	12865.458	3074	16790	1	-0.61
6	3.00	nitrate	88411.357	22980	167697	1	-2.91
7	4.35	phosphate	13945.920	1031	12121	1	-0.53
8	5.65	sulfate	29836.561	5102	68943	1	0.06
9	7.36	oxalate	11524.983	1087	20523	1	0.00
Totals			245149.618	70342	485143		

File: 00070121.D15 Sample: S99T001833 SPK

HNF-1701 REV.0

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=====
Sample Name: S99T001834 SAM                      Date: 01/08/2000 01:17:03
Data File  : C:\DX\DATA\00070121.D16
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 16              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300 5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	53	236	2	
2	1.04	fluoride	1634.540	1832	7169	2	-0.95
3	1.53	chloride	128.754	96	396	1	-1.08
4	1.84	nitrite	68413.234	26485	143612	1	0.55
5	2.73	bromide	927.662	191	926	1	-0.12
6	3.02	nitrate	68069.841	17530	124593	1	-2.27
7	4.35	phosphate	1172.654	92	1059	1	-0.53
8	5.65	sulfate	15116.894	2248	34194	1	0.06
9	7.41	oxalate	1345.986	104	2108	1	0.72
Totals			156809.566	48630	314294		

File: 00070121.D16 Sample: S99T001834 SAM

HNF-1701 REV.0

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=====
Sample Name: S99T001834  DUP                      Date: 01/08/2000 01:30:41
Data File  : C:\DX\DATA\00070121.D17
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 17                Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          2121  3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	60	251	2	
2	1.04	fluoride	1761.427	1877	7741	2	-0.95
3	1.53	chloride	128.787	99	397	1	-1.08
4	1.84	nitrite	69065.333	27073	145112	1	0.55
5	2.73	bromide	1002.971	200	1024	1	-0.12
6	3.02	nitrate	68836.269	17926	126157	1	-2.27
7	4.35	phosphate	1218.352	90	1098	1	-0.53
8	5.65	sulfate	15267.136	2338	34543	1	0.06
9	7.41	oxalate	1252.558	110	1939	1	0.72
Totals			158532.832	49771	318263		

File: 00070121.D17 Sample: S99T001834 DUP

LABCORE Completed Worklist Report for Worklist# 31873

Analyst: kjt

Instrument: IC45S1

Book#: 101N21D

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	0IC-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	0IC-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	0	0IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	0IC-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	0IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	0	0IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	0IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	0IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 LCS-INST	0	0	0IC-QC	F	QC	64.0	6.86e+01	107.187 % Recovery
2 LCS-INST	0	0	0IC-QC	CL	QC	90.0	8.55e+01	95.000 % Recovery
2 LCS-INST	0	0	0IC-QC	NO2	QC	540	4.54e+02	84.074 % Recovery
2 LCS-INST	0	0	0IC-QC	BR	QC	625	6.06e+02	96.960 % Recovery
2 LCS-INST	0	0	0IC-QC	NO3	QC	690	7.61e+02	110.290 % Recovery
2 LCS-INST	0	0	0IC-QC	PO4	QC	635	5.89e+02	92.756 % Recovery
2 LCS-INST	0	0	0IC-QC	SO4	QC	690	6.74e+02	97.681 % Recovery
2 LCS-INST	0	0	0IC-QC	OXALATE2	QC	525	5.40e+02	102.857 % Recovery
3 CCV	0	0	0IC-QC	F	QC	63.5	6.47e+01	101.890 % Recovery
3 CCV	0	0	0IC-QC	CL	QC	87.5	8.44e+01	96.457 % Recovery
3 CCV	0	0	0IC-QC	NO2	QC	542	5.02e+02	92.620 % Recovery
3 CCV	0	0	0IC-QC	BR	QC	630	6.05e+02	96.032 % Recovery
3 CCV	0	0	0IC-QC	NO3	QC	700	6.76e+02	96.571 % Recovery
3 CCV	0	0	0IC-QC	PO4	QC	635	5.93e+02	93.386 % Recovery
3 CCV	0	0	0IC-QC	SO4	QC	690	6.69e+02	96.812 % Recovery
3 CCV	0	0	0IC-QC	OXALATE2	QC	518	5.07e+02	97.876 % Recovery
4 SAMPLE	S99T001835	0	0IC-01	F-02	LIQUID	N/A	1.781e+03	25.450 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	CL-02	LIQUID	N/A	1.560e+02	36.060 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	NO2-02	LIQUID	N/A	6.907e+04	229.100 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	BR-02	LIQUID	N/A	< 2.651e+02	265.100 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	NO3-02	LIQUID	N/A	7.080e+04	294.600 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	PO4-02	LIQUID	N/A	8.287e+02	254.500 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	SO4-02	LIQUID	N/A	1.552e+04	292.700 ug/mL
4 SAMPLE	S99T001835	0	0IC-01	OXALATE2	LIQUID	N/A	1.392e+03	222.700 ug/mL
5 DUP	S99T001835	0	0IC-01	F-02	LIQUID	1.78e+03	1.72e+03	3.429 RPD
5 DUP	S99T001835	0	0IC-01	CL-02	LIQUID	1.56e+02	1.41e+02	10.101 RPD
5 DUP	S99T001835	0	0IC-01	NO2-02	LIQUID	6.91e+04	7.22e+04	4.388 RPD
5 DUP	S99T001835	0	0IC-01	BR-02	LIQUID	<2.65e2	2.69e+02	RPD
5 DUP	S99T001835	0	0IC-01	NO3-02	LIQUID	7.08e+04	7.27e+04	2.648 RPD
5 DUP	S99T001835	0	0IC-01	PO4-02	LIQUID	8.29e+02	1.14e+03	31.590 RPD
5 DUP	S99T001835	0	0IC-01	SO4-02	LIQUID	1.55e+04	1.57e+04	1.282 RPD
5 DUP	S99T001835	0	0IC-01	OXALATE2	LIQUID	1.39e+03	1.19e+03	15.504 RPD
6 SAMPLE	S99T001836	0	0IC-01	F-02	LIQUID	N/A	1.715e+03	25.450 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31873

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001836	0	②IC-01 CL-02	LIQUID	N/A	1.428e+02	36.060	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 NO2-02	LIQUID	N/A	6.811e+04	229.100	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 BR-02	LIQUID	N/A	6.158e+02	265.100	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 NO3-02	LIQUID	N/A	6.876e+04	294.800	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 PO4-02	LIQUID	N/A	1.229e+03	254.500	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 SO4-02	LIQUID	N/A	1.527e+04	292.700	ug/mL
6 SAMPLE	S99T001836	0	②IC-01 OXALATE2	LIQUID	N/A	1.193e+03	222.700	ug/mL
7 DUP	S99T001836	0	②IC-01 F-02	LIQUID	1.72e+03	1.76e+03	2.299	RPD
7 DUP	S99T001836	0	②IC-01 CL-02	LIQUID	1.43e+02	1.34e+02	6.498	RPD
7 DUP	S99T001836	0	②IC-01 NO2-02	LIQUID	6.81e+04	7.28e+04	6.671	RPD
7 DUP	S99T001836	0	②IC-01 BR-02	LIQUID	6.16e+02	6.55e+02	6.137	RPD
7 DUP	S99T001836	0	②IC-01 NO3-02	LIQUID	6.88e+04	7.29e+04	5.787	RPD
7 DUP	S99T001836	0	②IC-01 PO4-02	LIQUID	1.23e+03	1.05e+03	15.789	RPD
7 DUP	S99T001836	0	②IC-01 SO4-02	LIQUID	1.53e+04	1.61e+04	5.096	RPD
7 DUP	S99T001836	0	②IC-01 OXALATE2	LIQUID	1.19e+03	1.41e+03	16.923	RPD
8 SAMPLE	S99T001837	0	②IC-01 F-02	LIQUID	N/A	1.668e+03	25.450	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 CL-02	LIQUID	N/A	1.751e+02	36.060	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 NO2-02	LIQUID	N/A	6.768e+04	229.100	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 BR-02	LIQUID	N/A	1.109e+03	265.100	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 NO3-02	LIQUID	N/A	6.761e+04	294.800	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 PO4-02	LIQUID	N/A	9.841e+02	254.500	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 SO4-02	LIQUID	N/A	1.508e+04	292.700	ug/mL
8 SAMPLE	S99T001837	0	②IC-01 OXALATE2	LIQUID	N/A	1.196e+03	222.700	ug/mL
9 DUP	S99T001837	0	②IC-01 F-02	LIQUID	1.67e+03	1.80e+03	7.493	RPD
9 DUP	S99T001837	0	②IC-01 CL-02	LIQUID	1.75e+02	1.40e+02	22.222	RPD
9 DUP	S99T001837	0	②IC-01 NO2-02	LIQUID	6.77e+04	7.05e+04	4.052	RPD
9 DUP	S99T001837	0	②IC-01 BR-02	LIQUID	1.11e+03	1.14e+03	2.667	RPD
9 DUP	S99T001837	0	②IC-01 NO3-02	LIQUID	6.76e+04	7.11e+04	5.047	RPD
9 DUP	S99T001837	0	②IC-01 PO4-02	LIQUID	9.84e+02	1.15e+03	15.558	RPD
9 DUP	S99T001837	0	②IC-01 SO4-02	LIQUID	1.51e+04	1.60e+04	5.788	RPD
9 DUP	S99T001837	0	②IC-01 OXALATE2	LIQUID	1.20e+03	1.22e+03	1.653	RPD
10 SPK	S99T001837	0	②IC-01 F-02	LIQUID	64.0	6.06e+01	94.688	% Recovery
10 SPK	S99T001837	0	②IC-01 CL-02	LIQUID	90.0	8.25e+01	91.667	% Recovery
10 SPK	S99T001837	0	②IC-01 NO2-02	LIQUID	540	5.66e+02	104.815	% Recovery
10 SPK	S99T001837	0	②IC-01 BR-02	LIQUID	625	5.83e+02	93.280	% Recovery
10 SPK	S99T001837	0	②IC-01 NO3-02	LIQUID	690	8.76e+02	126.957	% Recovery
10 SPK	S99T001837	0	②IC-01 PO4-02	LIQUID	635	6.02e+02	94.803	% Recovery
10 SPK	S99T001837	0	②IC-01 SO4-02	LIQUID	690	6.66e+02	96.522	% Recovery
10 SPK	S99T001837	0	②IC-01 OXALATE2	LIQUID	525	5.14e+02	97.905	% Recovery

Final page for worklist# 31873

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-1701 REV. 0

Page: 1

12/03/99 15:09

ws2

LABCORE Data Entry Template for Worklist# 31873

Analyst: KET Instrument: IC 4500 sy 1 Book# 101N210-LCS
100N210 CCV

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001835 0		@IC-01	LIQUID	99000433	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S99T001835 0		@IC-01	LIQUID		
6 SAMPLE	S99T001836 0		@IC-01	LIQUID	99000433	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S99T001836 0		@IC-01	LIQUID		
8 SAMPLE	S99T001837 0		@IC-01	LIQUID	99000433	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
9 DUP	S99T001837 0		@IC-01	LIQUID		
10 SPK	S99T001837 0		@IC-01	LIQUID		

Final page for worklist # 31873

K. S. Phorndorff 1-5-00
 Signature Date

 Signature Date

Data Entry Comments:

NP loaded 1-5-00

Validated 1/6/00 JM Luge

John W. Wall
31873TAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

Sample Name: CCB Date: 01/05/2000 11:00:44
 Data File : C:\DX\DATA\00010521.D07
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 7 Detector: CDM-1
 Analyst : *KS Thorndike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.40		0.000	12	53	1	
Totals			0.000	12	53		

File: 00010521.D07 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 679 TO 688.

Sample Name: LCS 101N21D Date: 01/05/2000 11:13:07
 Data File : C:\DX\DATA\00010521.D08
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst : *Ks Thorndike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.05	fluoride	68.629	107.2%	1514	6300	1 -0.32
2	1.55	chloride	85.496	95.0%	1435	5451	1 0.22
3	1.85	nitrite	453.611	84.0%	3709	18271	1 0.91
4	2.75	bromide	605.933	96.9%	2904	16599	1 0.61
5	3.11	nitrate	760.865	110.3%	3990	26943	1 0.54
6	4.40	phosphate	589.032	90.8%	946	10738	1 0.69
7	5.81	sulfate	673.588	97.6%	2362	31940	1 2.89
8	7.52	oxalate	539.564	102.8%	1025	20171	1 2.17
Totals			3776.719		17884	136414	

File: 00010521.D08 Sample: LCS 101N21D

HNF-1701 REV. 0

Sample Name: CCV 100N21D Date: 01/05/2000 11:26:24
 Data File : C:\DX\DATA\00010521.D09
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
 Analyst : *Ks Thorndike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	11	51	2	
2	1.05	fluoride	64.678 <i>101.8%</i>	1440	5929	2	-0.32
3	1.55	chloride	84.439 <i>96.5%</i>	1355	5383	1	0.22
4	1.85	nitrite	502.108 <i>92.6%</i>	4067	20293	1	0.91
5	2.75	bromide	604.688 <i>95.9%</i>	2838	16564	1	0.61
6	3.11	nitrate	675.995 <i>96.6%</i>	3450	23857	1	0.76
7	4.40	phosphate	592.768 <i>93.3%</i>	919	10807	1	0.69
8	5.81	sulfate	667.695 <i>96.8%</i>	2313	31653	1	2.89
9	7.52	oxalate	506.686 <i>97.6%</i>	910	18920	1	2.17
10	10.29		0.000	17	338	1	
Totals			3699.057	17320	133794		

File: 00010521.D09 Sample: CCV 100N21D

HNF-1701 REV. 0

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Sample Name: S99T001835	Date: 01/05/2000 13:27:03
Data File : C:\DX\DATA\00010521.D11	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 11	Detector: CDM-1
Analyst : <i>KS Thorndike</i>	Column: AG4A/AS4A anion column

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Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	79	372	2	
2	1.05	fluoride	1780.756	1902	7828	2	-0.32
3	1.55	chloride	155.981	119	479	1	0.22
4	1.86	nitrite	69067.027	26942	145116	1	1.64
5	3.06	nitrate	70803.018	18094	130190	1	-0.97
6	4.40	phosphate	828.716	86	766	1	0.69
7	5.81	sulfate	15517.100	2571	35124	1	2.89
8	7.57	oxalate	1392.449	104	2192	1	2.90
Totals			159545.047	49897	322067		

File: 00010521.D11 Sample: S99T001835

HNF-1701 REV. 0

Sample Name: S99T001835 DUP Date: 01/05/2000 13:42:32
 Data File : C:\DX\DATA\00010521.D12
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 12 Detector: CDM-1
 Analyst : *KS Thorndike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3006	5Hz	0.00	10.02		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	68	310	2	
2	1.05	fluoride	1721.637	1876	7562	2	-0.32
3	1.55	chloride	141.356	108	434	1	0.22
4	1.86	nitrite	72212.654	27316	152391	1	1.64
5	2.74	bromide	269.467	15	69	1	0.37
6	3.05	nitrate	72735.669	18255	134182	1	-1.19
7	4.40	phosphate	1137.265	92	1029	1	0.69
8	5.76	sulfate	15673.662	2208	35488	1	1.95
9	7.57	oxalate	1194.130	106	1834	1	2.90
Totals			165085.841	50045	333299		

File: 00010521.D12 Sample: S99T001835 DUP

HNF-1701 REV. 0

Sample Name: S99T001836 Date: 01/05/2000 13:56:23
 Data File : C:\DX\DATA\00010521.D13
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 13 Detector: CDM-1
 Analyst : *RS Thorndike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	73	333	2	
2	1.04	fluoride	1714.808	1851	7531	2	-0.95
3	1.55	chloride	142.816	108	439	1	0.22
4	1.86	nitrite	68112.681	26981	142922	1	1.64
5	2.75	bromide	615.814	105	520	1	0.85
6	3.05	nitrate	68756.536	17763	125994	1	-1.19
7	4.40	phosphate	1229.014	98	1108	1	0.69
8	5.76	sulfate	15264.984	2055	34538	1	1.95
9	7.57	oxalate	1192.800	106	1831	1	2.90
Totals			157029.452	49140	315215		

File: 00010521.D13 Sample: S99T001836

HNF-1701 REV. 0

Sample Name: S99T001836 DUP Date: 01/05/2000 14:09:17
 Data File : C:\DX\DATA\00010521.D14
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 14 Detector: CDM-1
 Analyst : *K3 Thornike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3027	5Hz	0.00	10.09		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	64	295	2	
2	1.05	fluoride	1758.843	1965	7729	2	-0.32
3	1.55	chloride	134.359	101	413	1	-0.22
4	1.85	nitrite	72820.926	27634	153806	1	1.28
5	2.75	bromide	654.888	115	571	1	0.85
6	3.05	nitrate	72943.877	18470	134614	1	-1.40
7	4.40	phosphate	1053.818	97	958	1	0.69
8	5.76	sulfate	16114.332	2281	36513	1	1.95
9	7.57	oxalate	1408.896	112	2222	1	2.90
Totals			166889.940	50838	337121		

File: 00010521.D14 Sample: S99T001836 DUP

HNF-1701 REV. 0

Sample Name: S99T001837 Date: 01/05/2000 14:24:19
 Data File : C:\DX\DATA\00010521.D15
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 15 Detector: CDM-1
 Analyst : *Ks Thomdike* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	57	259	2	
2	1.04	fluoride	1668.389	1785	7321	2	-0.95
3	1.55	chloride	175.079	123	536	1	0.22
4	1.85	nitrite	67681.093	26206	141932	1	1.28
5	2.75	bromide	1109.307	221	1163	1	0.61
6	3.05	nitrate	67610.845	17434	123658	1	-1.19
7	4.40	phosphate	984.072	88	899	1	0.69
8	5.76	sulfate	15077.410	2140	34102	1	1.95
9	7.57	oxalate	1196.234	105	1838	1	2.90
Totals			155502.430	48158	311708		

File: 00010521.D15 Sample: S99T001837

HNF-1701 REV. 0

Sample Name: S99T001837 DUP Date: 01/05/2000 14:37:05
 Data File : C:\DX\DATA\00010521.D16
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 16 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	66	296	2	
2	1.04	fluoride	1800.371	1900	7917	2	-0.95
3	1.55	chloride	140.494	105	432	1	-0.22
4	1.85	nitrite	70455.061	27605	148318	1	1.28
5	2.75	bromide	1144.643	234	1209	1	0.61
6	3.05	nitrate	71123.159	18206	130849	1	-1.40
7	4.40	phosphate	1153.202	102	1043	1	0.69
8	5.76	sulfate	16019.030	2312	36291	1	1.95
9	7.52	oxalate	1218.221	95	1877	1	2.17
Totals			163054.181	50625	328232		

File: 00010521.D16 Sample: S99T001837 DUP

HNF-1701 REV. 0

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Sample Name: S99T001837 SPK	Date: 01/05/2000 14:52:13
Data File : C:\DX\DATA\00010521.D17	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 17	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3036	5Hz	0.00	10.12		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	85	400	2	
2	1.04	fluoride	2892.563	3230	12920	2	-0.95
3	1.55	chloride	1840.878	1331	5590	1	-0.22
4	1.85	nitrite	79124.247	29799	168620	1	1.28
5	2.73	bromide	12892.471	3039	16826	1	0.12
6	3.03	nitrate	85299.637	21955	160874	1	-1.83
7	4.37	phosphate	13151.695	937	11423	1	0.08
8	5.76	sulfate	28534.162	4632	65821	1	1.95
9	7.52	oxalate	11584.565	1096	20631	1	2.17
Totals			235320.217	66103	463106		

File: 00010521.D17 Sample: S99T001837 SPK

LABCORE Completed Worklist Report for Worklist# 31874

Analyst: krm

Instrument: IC45S1

Book#: 100N21E

Method: LA-533-105 Rev/Mod F-7

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	0	IC-QC	F	QC	1	<1.20e-2	ug/mL
1	CCB	0	0	0	IC-QC	CL	QC	1	<1.70e-2	ug/mL
1	CCB	0	0	0	IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1	CCB	0	0	0	IC-QC	BR	QC	1	<1.25e-1	ug/mL
1	CCB	0	0	0	IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1	CCB	0	0	0	IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1	CCB	0	0	0	IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1	CCB	0	0	0	IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2	LCS-INST	0	0	0	IC-QC	F	QC	64.0	6.73e+01	105.156 % Recovery
2	LCS-INST	0	0	0	IC-QC	CL	QC	90.0	8.53e+01	94.778 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO2	QC	529	5.08e+02	96.030 % Recovery
2	LCS-INST	0	0	0	IC-QC	BR	QC	625	6.07e+02	97.120 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO3	QC	690	7.05e+02	102.174 % Recovery
2	LCS-INST	0	0	0	IC-QC	PO4	QC	635	5.92e+02	93.228 % Recovery
2	LCS-INST	0	0	0	IC-QC	SO4	QC	690	6.73e+02	97.536 % Recovery
2	LCS-INST	0	0	0	IC-QC	OXALATE2	QC	531	5.44e+02	102.448 % Recovery
3	CCV	0	0	0	IC-QC	F	QC	63.5	6.42e+01	101.102 % Recovery
3	CCV	0	0	0	IC-QC	CL	QC	87.5	8.54e+01	97.600 % Recovery
3	CCV	0	0	0	IC-QC	NO2	QC	534	5.24e+02	98.127 % Recovery
3	CCV	0	0	0	IC-QC	BR	QC	630	6.30e+02	100.000 % Recovery
3	CCV	0	0	0	IC-QC	NO3	QC	700	6.80e+02	97.143 % Recovery
3	CCV	0	0	0	IC-QC	PO4	QC	635	6.11e+02	96.220 % Recovery
3	CCV	0	0	0	IC-QC	SO4	QC	690	6.92e+02	100.290 % Recovery
3	CCV	0	0	0	IC-QC	OXALATE2	QC	539	5.46e+02	101.299 % Recovery
4	SAMPLE	S99T001838	0	0	IC-01	F-02	LIQUID	N/A	1.739e+03	25.450 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	CL-02	LIQUID	N/A	1.711e+02	36.060 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	NO2-02	LIQUID	N/A	7.108e+04	229.100 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	BR-02	LIQUID	N/A	1.140e+03	265.100 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	NO3-02	LIQUID	N/A	7.053e+04	294.800 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	PO4-02	LIQUID	N/A	1.102e+03	254.500 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	SO4-02	LIQUID	N/A	1.567e+04	292.700 ug/mL
4	SAMPLE	S99T001838	0	0	IC-01	OXALATE2	LIQUID	N/A	1.368e+03	222.700 ug/mL
5	DUP	S99T001838	0	0	IC-01	F-02	LIQUID	1.74e+03	1.70e+03	2.326 RPD
5	DUP	S99T001838	0	0	IC-01	CL-02	LIQUID	1.71e+02	1.66e+02	2.967 RPD
5	DUP	S99T001838	0	0	IC-01	NO2-02	LIQUID	7.11e+04	7.29e+04	2.500 RPD
5	DUP	S99T001838	0	0	IC-01	BR-02	LIQUID	1.14e+03	1.27e+03	10.788 RPD
5	DUP	S99T001838	0	0	IC-01	NO3-02	LIQUID	7.06e+04	7.22e+04	2.241 RPD
5	DUP	S99T001838	0	0	IC-01	PO4-02	LIQUID	1.10e+03	1.04e+03	5.607 RPD
5	DUP	S99T001838	0	0	IC-01	SO4-02	LIQUID	1.57e+04	1.58e+04	0.635 RPD
5	DUP	S99T001838	0	0	IC-01	OXALATE2	LIQUID	1.37e+03	1.35e+03	1.471 RPD
6	SAMPLE	S99T001839	0	0	IC-01	F-02	LIQUID	N/A	1.725e+03	25.450 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-1701 REV. 0

LABCORE Completed Worklist Report for Worklist# 31874

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001839	0	IC-01	CL-02	LIQUID	N/A	1.429e+02	36.060 ug/mL
6 SAMPLE	S99T001839	0	IC-01	NO2-02	LIQUID	N/A	7.013e+04	229.100 ug/mL
6 SAMPLE	S99T001839	0	IC-01	BR-02	LIQUID	N/A	1.245e+03	265.100 ug/mL
6 SAMPLE	S99T001839	0	IC-01	NO3-02	LIQUID	N/A	6.971e+04	294.800 ug/mL
6 SAMPLE	S99T001839	0	IC-01	PO4-02	LIQUID	N/A	1.320e+03	254.500 ug/mL
6 SAMPLE	S99T001839	0	IC-01	SO4-02	LIQUID	N/A	1.536e+04	292.700 ug/mL
6 SAMPLE	S99T001839	0	IC-01	OXALATE2	LIQUID	N/A	1.479e+03	222.700 ug/mL
7 DUP	S99T001839	0	IC-01	F-02	LIQUID	1.72e+03	1.69e+03	1.760 RPD
7 DUP	S99T001839	0	IC-01	CL-02	LIQUID	1.43e+02	1.43e+02	0.000 RPD
7 DUP	S99T001839	0	IC-01	NO2-02	LIQUID	7.01e+04	7.16e+04	2.117 RPD
7 DUP	S99T001839	0	IC-01	BR-02	LIQUID	1.24e+03	1.22e+03	1.626 RPD
7 DUP	S99T001839	0	IC-01	NO3-02	LIQUID	6.97e+04	7.11e+04	1.989 RPD
7 DUP	S99T001839	0	IC-01	PO4-02	LIQUID	1.32e+03	1.04e+03	23.729 RPD
7 DUP	S99T001839	0	IC-01	SO4-02	LIQUID	1.54e+04	1.54e+04	0.000 RPD
7 DUP	S99T001839	0	IC-01	OXALATE2	LIQUID	1.48e+03	1.07e+03	32.157 RPD
8 SAMPLE	S99T001840	0	IC-01	F-02	LIQUID	N/A	1.755e+03	25.450 ug/mL
8 SAMPLE	S99T001840	0	IC-01	CL-02	LIQUID	N/A	1.457e+02	36.060 ug/mL
8 SAMPLE	S99T001840	0	IC-01	NO2-02	LIQUID	N/A	6.939e+04	229.100 ug/mL
8 SAMPLE	S99T001840	0	IC-01	BR-02	LIQUID	N/A	1.181e+03	265.100 ug/mL
8 SAMPLE	S99T001840	0	IC-01	NO3-02	LIQUID	N/A	6.925e+04	294.800 ug/mL
8 SAMPLE	S99T001840	0	IC-01	PO4-02	LIQUID	N/A	9.449e+02	254.500 ug/mL
8 SAMPLE	S99T001840	0	IC-01	SO4-02	LIQUID	N/A	1.519e+04	292.700 ug/mL
8 SAMPLE	S99T001840	0	IC-01	OXALATE2	LIQUID	N/A	1.152e+03	222.700 ug/mL
9 DUP	S99T001840	0	IC-01	F-02	LIQUID	1.76e+03	1.71e+03	2.882 RPD
9 DUP	S99T001840	0	IC-01	CL-02	LIQUID	1.46e+02	1.50e+02	2.703 RPD
9 DUP	S99T001840	0	IC-01	NO2-02	LIQUID	6.94e+04	6.93e+04	0.144 RPD
9 DUP	S99T001840	0	IC-01	BR-02	LIQUID	1.18e+03	1.16e+03	1.709 RPD
9 DUP	S99T001840	0	IC-01	NO3-02	LIQUID	6.92e+04	6.84e+04	1.163 RPD
9 DUP	S99T001840	0	IC-01	PO4-02	LIQUID	9.45e+02	9.22e+02	2.464 RPD
9 DUP	S99T001840	0	IC-01	SO4-02	LIQUID	1.52e+04	1.51e+04	0.660 RPD
9 DUP	S99T001840	0	IC-01	OXALATE2	LIQUID	1.15e+03	1.23e+03	6.723 RPD

Final page for worklist# 31874

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature *James M. Lyle* Date *1/13/00*

12/03/99 15:10

ws2

Page: 1

LABCORE Data Entry Template for Worklist# 31874

Analyst: KRM Instrument: IC 4551 Book# 101231R
100231RMethod: LA-533-105 Rev/Mod F2

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001838 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S99T001838 0		@IC-01	LIQUID		
6 SAMPLE	S99T001839 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S99T001839 0		@IC-01	LIQUID		
8 SAMPLE	S99T001840 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9 DUP	S99T001840 0		@IC-01	LIQUID		

Final page for worklist # 31874

1-7-00
Signature Date

Signature Date

Data Entry Comments:

uploaded 1-10-00
John Howell

validated 1/13/00 JML

31874.JAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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=====
Sample Name: CCB                                     Date: 01/07/2000 13:05:36
Data File  : C:\DX\DATA\00010711.D21
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System 1 Inject#: 21                Detector: CDM-1
Analyst    : [Signature] Column: AG4A/AS4A anion column
=====
  
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 692 TO 700.

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=====
Sample Name: LCS 101N21E                      Date: 01/07/2000 13:19:14
Data File  : C:\DX\DATA\00010711.D22
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 22           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.04	fluoride <i>105.2</i>	67.342	1502	6179	2	-0.95
3	1.55	chloride <i>94.8</i>	85.301	1414	5438	1	-0.22
4	1.84	nitrite <i>96.0</i>	507.768	4077	20529	1	0.55
5	2.73	bromide <i>97.2</i>	607.227	2909	16636	1	0.12
6	3.10	nitrate <i>102.2</i>	704.967	3654	24909	1	0.32
7	4.37	phosphate <i>93.2</i>	591.675	951	10786	1	0.08
8	5.71	sulfate <i>97.5</i>	672.904	2368	31907	1	1.00
9	7.41	oxalate <i>102.4</i>	543.896	1104	20336	1	0.72
Totals			3781.080	17978	136720		

File: 00010711.D22 Sample: LCS 101N21E

Sample Name: CCV 100N21E Date: 01/07/2000 13:32:53
 Data File : C:\DX\DATA\00010711.D23
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 23 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.04	fluoride 101.0	64.164	1502	5881	1	-0.95
2	1.54	chloride 97.6	85.385	1360	5444	1	-0.65
3	1.84	nitrite 98.2	524.391	4242	21223	1	0.55
4	2.73	bromide 100.0	630.295	2958	17292	1	0.12
5	3.09	nitrate 97.1	679.774	3579	23994	1	0.11
6	4.35	phosphate 96.2	610.947	931	11141	1	-0.53
7	5.71	sulfate 100.3	691.957	2442	32834	1	1.00
8	7.41	oxalate 101.3	546.239	1125	20426	1	0.72
Totals			3833.152	18138	138234		

File: 00010711.D23 Sample: CCV 100N21E

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=====
Sample Name: S99T001838                      Date: 01/07/2000 13:46:32
Data File  : C:\DX\DATA\00010711.D24
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 24        Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121  3300  5Hz   0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	63	292	2	
2	1.04	fluoride	1739.064	1927	7640	2	-0.95
3	1.54	chloride	171.101	123	524	1	-0.65
4	1.85	nitrite	71078.002	27727	149759	1	0.91
5	2.73	bromide	1139.508	239	1202	1	0.12
6	3.03	nitrate	70592.363	18304	129757	1	-1.83
7	4.37	phosphate	1101.872	96	999	1	0.08
8	5.71	sulfate	15668.072	2646	35475	1	1.00
9	7.41	oxalate	1367.750	116	2147	1	0.72
Totals			162857.731	51242	327796		

File: 00010711.D24 Sample: S99T001838

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=====
Sample Name: S99T001838 DUP                      Date: 01/07/2000 14:00:12
Data File  : C:\DX\DATA\00010711.D25
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 25              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	59	250	2	
2	1.04	fluoride	1701.552	1915	7471	2	-0.95
3	1.54	chloride	166.326	124	510	1	-0.65
4	1.84	nitrite	72874.490	27418	153931	1	0.55
5	2.73	bromide	1274.915	250	1379	1	0.12
6	3.03	nitrate	72174.271	18228	133019	1	-2.05
7	4.35	phosphate	1040.104	91	946	1	-0.53
8	5.65	sulfate	15822.175	2193	35833	1	0.06
9	7.41	oxalate	1349.308	115	2114	1	0.72
Totals			166403.142	50391	335454		

File: 00010711.D25 Sample: S99T001838 DUP

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=====
Sample Name: S99T001839                      Date: 01/07/2000 14:13:52
Data File  : C:\DX\DATA\00010711.D26
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 26          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	59	261	2	
2	1.04	fluoride	1724.633	1888	7575	2	-0.95
3	1.54	chloride	142.915	109	439	1	-0.65
4	1.85	nitrite	70130.408	27451	147568	1	0.91
5	2.73	bromide	1244.650	250	1340	1	0.12
6	3.03	nitrate	69710.147	18055	127945	1	-1.83
7	4.37	phosphate	1320.159	99	1185	1	0.08
8	5.65	sulfate	15363.153	2156	34766	1	0.06
9	7.41	oxalate	1479.448	115	2349	1	0.72
Totals			161115.514	50183	323428		

File: 00010711.D26 Sample: S99T001839

```

=====
Sample Name: S99T001839 DUP                      Date: 01/07/2000 14:27:31
Data File   : C:\DX\DATA\00010711.D27
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 27              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	59	270	2	
2	1.04	fluoride	1693.075	1894	7433	2	-0.95
3	1.54	chloride	143.081	109	440	1	-0.65
4	1.85	nitrite	71623.411	27495	151023	1	0.91
5	2.73	bromide	1222.966	250	1311	1	0.12
6	3.03	nitrate	71079.964	18070	130760	1	-1.83
7	4.37	phosphate	1041.628	96	948	1	0.08
8	5.65	sulfate	15427.268	2186	34915	1	0.06
9	7.41	oxalate	1065.970	106	1602	1	0.72
Totals			163297.363	50265	328703		

File: 00010711.D27 Sample: S99T001839 DUP

```

=====
Sample Name: S99T001840                      Date: 01/07/2000 14:41:11
Data File  : C:\DX\DATA\00010711.D28
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 28        Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	63	262	2	
2	1.04	fluoride	1754.921	1871	7712	2	-0.95
3	1.54	chloride	145.668	109	447	1	-0.65
4	1.85	nitrite	69388.095	27068	145855	1	0.91
5	2.73	bromide	1181.431	242	1257	1	0.12
6	3.03	nitrate	69248.027	17712	126999	1	-1.83
7	4.37	phosphate	944.916	90	865	1	0.08
8	5.71	sulfate	15186.812	2578	34357	1	1.00
9	7.41	oxalate	1152.038	101	1758	1	0.72
10	9.12		0.000	17	851	1	
Totals			159001.908	49850	320363		

File: 00010711.D28 Sample: S99T001840

```

=====
Sample Name: S99T001840 DUP                      Date: 01/07/2000 14:54:50
Data File  : C:\DX\DATA\00010711.D29
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 29              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	64	284	2	
2	1.04	fluoride	1707.059	1874	7496	2	-0.95
3	1.54	chloride	149.581	107	459	1	-0.65
4	1.85	nitrite	69278.849	26919	145604	1	0.91
5	2.73	bromide	1164.264	238	1235	1	0.12
6	3.03	nitrate	68417.667	17625	125302	1	-1.83
7	4.37	phosphate	921.702	89	845	1	0.08
8	5.65	sulfate	15071.123	2111	34088	1	0.06
9	7.41	oxalate	1231.236	103	1901	1	0.72
Totals			157941.481	49132	317213		

File: 00010711.D29 Sample: S99T001840 DUP

LABCORE Completed Worklist Report for Worklist# 31875

Analyst: jds

Instrument: IC45S1

Book#: 100N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	IC-QC	F	QC	1	<1.20e-2	ug/mL
1	CCB	0	0	IC-QC	CL	QC	1	<1.70e-2	ug/mL
1	CCB	0	0	IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1	CCB	0	0	IC-QC	BR	QC	1	<1.25e-1	ug/mL
1	CCB	0	0	IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1	CCB	0	0	IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1	CCB	0	0	IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1	CCB	0	0	IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2	LCS-INST	0	0	IC-QC	F	QC	64.0	6.30e+01	98.438 % Recovery
2	LCS-INST	0	0	IC-QC	CL	QC	90.0	8.88e+01	98.667 % Recovery
2	LCS-INST	0	0	IC-QC	NO2	QC	529	5.06e+02	95.652 % Recovery
2	LCS-INST	0	0	IC-QC	BR	QC	625	6.13e+02	98.080 % Recovery
2	LCS-INST	0	0	IC-QC	NO3	QC	690	6.84e+02	99.130 % Recovery
2	LCS-INST	0	0	IC-QC	PO4	QC	635	5.98e+02	94.173 % Recovery
2	LCS-INST	0	0	IC-QC	SO4	QC	690	6.66e+02	96.522 % Recovery
2	LCS-INST	0	0	IC-QC	OXALATE2	QC	531	5.50e+02	103.578 % Recovery
3	CCV	0	0	IC-QC	F	QC	63.5	6.44e+01	101.417 % Recovery
3	CCV	0	0	IC-QC	CL	QC	87.5	8.37e+01	95.657 % Recovery
3	CCV	0	0	IC-QC	NO2	QC	534	5.24e+02	98.127 % Recovery
3	CCV	0	0	IC-QC	BR	QC	630	6.23e+02	98.889 % Recovery
3	CCV	0	0	IC-QC	NO3	QC	700	6.96e+02	99.429 % Recovery
3	CCV	0	0	IC-QC	PO4	QC	635	6.07e+02	95.591 % Recovery
3	CCV	0	0	IC-QC	SO4	QC	690	6.87e+02	99.565 % Recovery
3	CCV	0	0	IC-QC	OXALATE2	QC	539	5.53e+02	102.597 % Recovery
4	SAMPLE	S99T001841	0	IC-01	F-02	LIQUID	N/A	1.682e+03	25.450 ug/mL
4	SAMPLE	S99T001841	0	IC-01	CL-02	LIQUID	N/A	1.392e+02	36.060 ug/mL
4	SAMPLE	S99T001841	0	IC-01	NO2-02	LIQUID	N/A	6.814e+04	229.100 ug/mL
4	SAMPLE	S99T001841	0	IC-01	BR-02	LIQUID	N/A	1.131e+03	265.100 ug/mL
4	SAMPLE	S99T001841	0	IC-01	NO3-02	LIQUID	N/A	6.746e+04	294.800 ug/mL
4	SAMPLE	S99T001841	0	IC-01	PO4-02	LIQUID	N/A	1.290e+03	254.500 ug/mL
4	SAMPLE	S99T001841	0	IC-01	SO4-02	LIQUID	N/A	1.494e+04	292.700 ug/mL
4	SAMPLE	S99T001841	0	IC-01	OXALATE2	LIQUID	N/A	1.019e+03	222.700 ug/mL
5	DUP	S99T001841	0	IC-01	F-02	LIQUID	1.682e+03	1.61e+03	4.255 RPD
5	DUP	S99T001841	0	IC-01	CL-02	LIQUID	1.392e+02	1.21e+02	13.846 RPD
5	DUP	S99T001841	0	IC-01	NO2-02	LIQUID	6.81e+04	6.88e+04	1.023 RPD
5	DUP	S99T001841	0	IC-01	BR-02	LIQUID	1.13e+03	1.20e+03	6.009 RPD
5	DUP	S99T001841	0	IC-01	NO3-02	LIQUID	6.75e+04	6.78e+04	0.443 RPD
5	DUP	S99T001841	0	IC-01	PO4-02	LIQUID	1.29e+03	1.22e+03	5.578 RPD
5	DUP	S99T001841	0	IC-01	SO4-02	LIQUID	1.49e+04	1.47e+04	1.351 RPD
5	DUP	S99T001841	0	IC-01	OXALATE2	LIQUID	1.02e+03	1.34e+03	27.119 RPD
6	SAMPLE	S99T001842	0	IC-01	F-02	LIQUID	N/A	1.774e+03	25.450 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31875

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001842	0	IC-01	CL-02	LIQUID	N/A	1.403e+02	36.060 ug/mL
6 SAMPLE	S99T001842	0	IC-01	NO2-02	LIQUID	N/A	6.868e+04	229.100 ug/mL
6 SAMPLE	S99T001842	0	IC-01	BR-02	LIQUID	N/A	8.900e+02	265.100 ug/mL
6 SAMPLE	S99T001842	0	IC-01	NO3-02	LIQUID	N/A	6.917e+04	294.800 ug/mL
6 SAMPLE	S99T001842	0	IC-01	PO4-02	LIQUID	N/A	8.701e+02	254.500 ug/mL
6 SAMPLE	S99T001842	0	IC-01	SO4-02	LIQUID	N/A	1.521e+04	292.700 ug/mL
6 SAMPLE	S99T001842	0	IC-01	OKALATE2	LIQUID	N/A	1.271e+03	222.700 ug/mL
7 DUP	S99T001842	0	IC-01	F-02	LIQUID	1.77e+03	1.71e+03	3.448 RPD
7 DUP	S99T001842	0	IC-01	CL-02	LIQUID	1.40e+02	1.36e+02	2.899 RPD
7 DUP	S99T001842	0	IC-01	NO2-02	LIQUID	6.87e+04	7.00e+04	1.875 RPD
7 DUP	S99T001842	0	IC-01	BR-02	LIQUID	8.90e+02	8.86e+02	0.450 RPD
7 DUP	S99T001842	0	IC-01	NO3-02	LIQUID	6.92e+04	6.94e+04	0.289 RPD
7 DUP	S99T001842	0	IC-01	PO4-02	LIQUID	8.70e+02	1.03e+03	16.842 RPD
7 DUP	S99T001842	0	IC-01	SO4-02	LIQUID	1.52e+04	1.52e+04	0.000 RPD
7 DUP	S99T001842	0	IC-01	OKALATE2	LIQUID	1.27e+03	1.49e+03	15.942 RPD
8 SAMPLE	S99T001843	0	IC-01	F-02	LIQUID	N/A	1.834e+03	25.450 ug/mL
8 SAMPLE	S99T001843	0	IC-01	CL-02	LIQUID	N/A	1.532e+02	36.060 ug/mL
8 SAMPLE	S99T001843	0	IC-01	NO2-02	LIQUID	N/A	7.668e+04	229.100 ug/mL
8 SAMPLE	S99T001843	0	IC-01	BR-02	LIQUID	N/A	8.899e+02	265.100 ug/mL
8 SAMPLE	S99T001843	0	IC-01	NO3-02	LIQUID	N/A	7.632e+04	294.800 ug/mL
8 SAMPLE	S99T001843	0	IC-01	PO4-02	LIQUID	N/A	8.705e+02	254.500 ug/mL
8 SAMPLE	S99T001843	0	IC-01	SO4-02	LIQUID	N/A	1.656e+04	292.700 ug/mL
8 SAMPLE	S99T001843	0	IC-01	OKALATE2	LIQUID	N/A	9.219e+02	222.700 ug/mL
9 DUP	S99T001843	0	IC-01	F-02	LIQUID	1.83e+03	1.89e+03	3.226 RPD
9 DUP	S99T001843	0	IC-01	CL-02	LIQUID	1.53e+02	1.47e+02	4.000 RPD
9 DUP	S99T001843	0	IC-01	NO2-02	LIQUID	7.67e+04	7.81e+04	1.809 RPD
9 DUP	S99T001843	0	IC-01	BR-02	LIQUID	8.90e+02	9.18e+02	3.097 RPD
9 DUP	S99T001843	0	IC-01	NO3-02	LIQUID	7.63e+04	7.79e+04	2.075 RPD
9 DUP	S99T001843	0	IC-01	PO4-02	LIQUID	8.70e+02	1.29e+03	38.889 RPD
9 DUP	S99T001843	0	IC-01	SO4-02	LIQUID	1.66e+04	1.68e+04	1.198 RPD
9 DUP	S99T001843	0	IC-01	OKALATE2	LIQUID	9.22e+02	1.16e+03	22.863 RPD

Final page for worklist# 31875

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

1/13/00
Reviewer Signature _____ Date _____

12/03/99 15:11

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 31875

Analyst: JS Instrument: IC 400 sys 1 Book# WINZIE LCS
LODIE CCVMethod: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001841 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S99T001841 0		@IC-01	LIQUID		
6 SAMPLE	S99T001842 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S99T001842 0		@IC-01	LIQUID		
8 SAMPLE	S99T001843 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9 DUP	S99T001843 0		@IC-01	LIQUID		

Final page for worklist # 31875

Signature JS Date 11/7/00

Signature _____ Date _____

Data Entry Comments:

uploaded 1-10-00
John Wauell
31875JAN.CSVValidated 1/13/00 JPM Jags

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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=====
Sample Name: CCB                               Date: 01/07/2000 02:22:49
Data File  : C:\DX\DATA\99101411.D07
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 7           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1    3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.42		0.000	20	92	1	
Totals			0.000	20	92

Signature
1/7/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 704 TO 712.

Sample Name: LCS 101N21E Date: 01/07/2000 02:36:27
 Data File : C:\DX\DATA\99101401.D08
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	18	77	2	
2	1.05	fluoride	63.024	1487	5773	2	-0.32
3	1.55	chloride	88.777	1465	5661	1	0.22
4	1.85	nitrite	505.985	4131	20454	1	0.91
5	2.75	bromide	613.042	2892	16801	1	0.61
6	3.11	nitrate	684.455	3605	24164	1	0.76
7	4.37	phosphate	598.047	934	10904	1	0.08
8	5.76	sulfate	665.896	2231	31566	1	1.95
9	7.52	oxalate	549.500	1117	20550	1	2.17
Totals			3768.726	17881	135950		

File: 99101401.D08 Sample: LCS 101N21E

Handwritten signature 1/7/00

Sample Name: CCV 100N21E Date: 01/07/2000 02:50:05
 Data File : C:\DX\DATA\99101401.D09
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.05	fluoride	64.422	1520	5905	2	-0.32
3	1.39		0.000	18	78	1	
4	1.55	chloride	83.674	1445	5334	1	0.22
5	1.85	nitrite	524.075	4299	21210	1	0.91
6	2.75	bromide	622.549	2972	17072	1	0.61
7	3.11	nitrate	696.172	3569	24589	1	0.76
8	4.37	phosphate	607.182	954	11072	1	0.08
9	5.76	sulfate	687.152	2309	32600	1	1.95
10	7.52	oxalate	553.209	1122	20691	1	2.17
Totals			3838.435	18207	138550		

File: 99101401.D09 Sample: CCV 100N21E

[Signature]
 1/7/00


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=====
Sample Name: S99T001841                      Date: 01/07/2000 03:03:44
Data File  : C:\DX\DATA\99101401.D10
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 10          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	67	316	2	
2	1.04	fluoride	1682.088	1814	7383	2	-0.95
3	1.55	chloride	139.201	96	428	1	-0.22
4	1.85	nitrite	68135.897	26125	142975	1	1.28
5	2.75	bromide	1131.000	231	1191	1	0.85
6	3.05	nitrate	67456.005	17129	123343	1	-1.19
7	4.37	phosphate	1290.170	92	1160	1	0.08
8	5.76	sulfate	14936.497	2380	33775	1	1.95
9	7.52	oxalate	1019.335	97	1518	1	2.17
Totals			155790.192	48031	312090		

File: 99101401.D10 Sample: S99T001841

Sample Name: S99T001841DUP Date: 01/07/2000 03:17:22
 Data File : C:\DX\DATA\99101401.D11
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 11 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	63	296	2	
2	1.04	fluoride	1607.446	1807	7047	2	-0.95
3	1.55	chloride	121.192	94	374	1	-0.22
4	1.85	nitrite	68789.871	26071	144478	1	1.28
5	2.75	bromide	1203.655	239	1286	1	0.85
6	3.06	nitrate	67842.624	17176	124130	1	-0.97
7	4.37	phosphate	1215.071	98	1096	1	0.08
8	5.76	sulfate	14748.661	2343	33339	1	1.95
9	7.52	oxalate	1337.900	100	2093	1	2.17
Totals			156866.420	47989	314139		

File: 99101401.D11 Sample: S99T001841DUP

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=====
Sample Name: S99T001842                      Date: 01/07/2000 03:31:00
Data File  : C:\DX\DATA\99101401.D12
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 12          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====
  
```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         2121   3300  5Hz   0.00 11.00         50
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	72	321	2	
2	1.04	fluoride	1773.782	1836	7797	2	-0.95
3	1.55	chloride	140.295	107	431	1	0.22
4	1.85	nitrite	68678.041	26535	144221	1	1.28
5	2.75	bromide	890.002	174	877	1	0.85
6	3.05	nitrate	69168.022	17530	126835	1	-1.19
7	4.37	phosphate	870.111	79	801	1	0.08
8	5.76	sulfate	15205.366	2388	34400	1	1.95
9	7.52	oxalate	1270.557	106	1972	1	2.17
Totals			157996.175	48828	317654		

File: 99101401.D12 Sample: S99T001842

```

=====
Sample Name: S99T001842DUP          Date: 01/07/2000 03:44:38
Data File  : C:\DX\DATA\99101401.D13
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 13 Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	59	274	2	
2	1.04	fluoride	1710.367	1829	7511	2	-0.95
3	1.55	chloride	136.448	96	420	1	-0.22
4	1.86	nitrite	70026.771	26814	147328	1	1.64
5	2.76	bromide	886.397	172	872	1	1.10
6	3.06	nitrate	69440.977	17615	127394	1	-0.97
7	4.37	phosphate	1027.211	84	935	1	0.08
8	5.76	sulfate	15190.299	2389	34365	1	1.95
9	7.52	oxalate	1493.846	106	2375	1	2.17
Totals			159912.315	49164	321473		

File: 99101401.D13 Sample: S99T001842DUP

```

=====
Sample Name: S99T001843                      Date: 01/07/2000 03:58:16
Data File  : C:\DX\DATA\99101401.D14
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 14          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	63	294	2	
2	1.04	fluoride	1833.958	2054	8069	2	-0.95
3	1.55	chloride	153.162	115	470	1	-0.22
4	1.85	nitrite	76680.479	29479	162843	1	1.28
5	2.75	bromide	889.925	176	877	1	0.85
6	3.05	nitrate	76318.028	19741	141659	1	-1.40
7	4.37	phosphate	870.463	85	802	1	0.08
8	5.76	sulfate	16564.282	2756	37561	1	1.95
9	7.52	oxalate	921.853	73	1342	1	2.17
Totals			174232.150	54543	353917		

File: 99101401.D14 Sample: S99T001843

```

=====
Sample Name: S99T001843DUP                      Date: 01/07/2000 04:11:54
Data File  : C:\DX\DATA\99101401.D15
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 15              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121    3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	78	356	2	
2	1.04	fluoride	1894.827	1995	8345	2	-0.95
3	1.55	chloride	147.425	113	453	1	-0.22
4	1.86	nitrite	78099.437	29641	166192	1	1.64
5	2.76	bromide	918.152	171	914	1	1.10
6	3.05	nitrate	77897.144	19668	144988	1	-1.19
7	4.37	phosphate	1288.179	105	1158	1	0.08
8	5.76	sulfate	16790.079	2687	38087	1	1.95
9	7.52	oxalate	1164.776	81	1781	1	2.17
Totals			178200.018	54538	362273		

File: 99101401.D15 Sample: S99T001843DUP

LABCORE Completed Worklist Report for Worklist# 31876

Analyst: jds

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	0IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	0	0IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	0	0IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	0	0IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	0	0IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	0	0IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	0	0IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	0	0IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 LCS-INST	0	0	0IC-QC F	QC	64.0	6.30e+01	98.438 % Recovery	
2 LCS-INST	0	0	0IC-QC CL	QC	90.0	9.07e+01	100.778 % Recovery	
2 LCS-INST	0	0	0IC-QC NO2	QC	529	5.05e+02	95.463 % Recovery	
2 LCS-INST	0	0	0IC-QC BR	QC	625	6.11e+02	97.760 % Recovery	
2 LCS-INST	0	0	0IC-QC NO3	QC	690	6.94e+02	100.580 % Recovery	
2 LCS-INST	0	0	0IC-QC PO4	QC	635	5.92e+02	93.228 % Recovery	
2 LCS-INST	0	0	0IC-QC SO4	QC	690	6.78e+02	98.261 % Recovery	
2 LCS-INST	0	0	0IC-QC OXALATE2	QC	531	5.40e+02	101.695 % Recovery	
3 CCV	0	0	0IC-QC F	QC	63.5	6.31e+01	99.370 % Recovery	
3 CCV	0	0	0IC-QC CL	QC	87.5	8.24e+01	94.171 % Recovery	
3 CCV	0	0	0IC-QC NO2	QC	534	5.05e+02	94.569 % Recovery	
3 CCV	0	0	0IC-QC BR	QC	630	6.16e+02	97.778 % Recovery	
3 CCV	0	0	0IC-QC NO3	QC	700	6.85e+02	97.857 % Recovery	
3 CCV	0	0	0IC-QC PO4	QC	635	6.16e+02	97.008 % Recovery	
3 CCV	0	0	0IC-QC SO4	QC	690	6.86e+02	99.420 % Recovery	
3 CCV	0	0	0IC-QC OXALATE2	QC	539	5.48e+02	101.670 % Recovery	
4 SAMPLE	S99T001844	0	0IC-01 F-02	LIQUID	N/A	1.740e+03	25.450	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 CL-02	LIQUID	N/A	1.557e+02	36.060	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 NO2-02	LIQUID	N/A	7.180e+04	229.100	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 BR-02	LIQUID	N/A	3.524e+02	265.100	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 NO3-02	LIQUID	N/A	7.319e+04	294.800	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 PO4-02	LIQUID	N/A	1.197e+03	254.500	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 SO4-02	LIQUID	N/A	1.638e+04	292.700	ug/mL
4 SAMPLE	S99T001844	0	0IC-01 OXALATE2	LIQUID	N/A	1.178e+03	222.700	ug/mL
5 DUP	S99T001844	0	0IC-01 F-02	LIQUID	1.74e+03	1.84e+03	5.587	RPD
5 DUP	S99T001844	0	0IC-01 CL-02	LIQUID	1.56e+02	1.59e+02	1.905	RPD
5 DUP	S99T001844	0	0IC-01 NO2-02	LIQUID	7.18e+04	7.28e+04	1.383	RPD
5 DUP	S99T001844	0	0IC-01 BR-02	LIQUID	3.52e+02	3.55e+02	0.849	RPD
5 DUP	S99T001844	0	0IC-01 NO3-02	LIQUID	7.32e+04	7.42e+04	1.357	RPD
5 DUP	S99T001844	0	0IC-01 PO4-02	LIQUID	1.20e+03	1.37e+03	13.230	RPD
5 DUP	S99T001844	0	0IC-01 SO4-02	LIQUID	1.64e+04	1.65e+04	0.608	RPD
5 DUP	S99T001844	0	0IC-01 OXALATE2	LIQUID	1.18e+03	1.18e+03	0.000	RPD
6 SAMPLE	S99T001845	0	0IC-01 F-02	LIQUID	N/A	1.622e+03	25.450	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31876

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001845	0	IC-01	CL-02	LIQUID	N/A	1.557e+02	36.060 ug/mL
6 SAMPLE	S99T001845	0	IC-01	NO2-02	LIQUID	N/A	6.786e+04	229.100 ug/mL
6 SAMPLE	S99T001845	0	IC-01	BR-02	LIQUID	N/A	1.254e+03	265.100 ug/mL
6 SAMPLE	S99T001845	0	IC-01	NO3-02	LIQUID	N/A	6.868e+04	294.800 ug/mL
6 SAMPLE	S99T001845	0	IC-01	PO4-02	LIQUID	N/A	1.024e+03	254.500 ug/mL
6 SAMPLE	S99T001845	0	IC-01	SO4-02	LIQUID	N/A	1.498e+04	292.700 ug/mL
6 SAMPLE	S99T001845	0	IC-01	OXALATE2	LIQUID	N/A	1.061e+03	222.700 ug/mL
7 DUP	S99T001845	0	IC-01	F-02	LIQUID	1.62e+03	1.66e+03	2.439 RPD
7 DUP	S99T001845	0	IC-01	CL-02	LIQUID	1.56e+02	1.84e+02	16.471 RPD
7 DUP	S99T001845	0	IC-01	NO2-02	LIQUID	6.79e+04	6.79e+04	0.000 RPD
7 DUP	S99T001845	0	IC-01	BR-02	LIQUID	1.25e+03	1.25e+03	0.000 RPD
7 DUP	S99T001845	0	IC-01	NO3-02	LIQUID	6.87e+04	6.88e+04	0.145 RPD
7 DUP	S99T001845	0	IC-01	PO4-02	LIQUID	1.02e+03	8.19e+02	21.860 RPD
7 DUP	S99T001845	0	IC-01	SO4-02	LIQUID	1.50e+04	1.52e+04	1.325 RPD
7 DUP	S99T001845	0	IC-01	OXALATE2	LIQUID	1.06e+03	1.07e+03	0.939 RPD
8 SPK	S99T001845	0	IC-01	F-02	LIQUID	64.0	6.19e+01	96.719 % Recovery
8 SPK	S99T001845	0	IC-01	CL-02	LIQUID	90.0	8.70e+01	96.667 % Recovery
8 SPK	S99T001845	0	IC-01	NO2-02	LIQUID	529	5.04e+02	95.274 % Recovery
8 SPK	S99T001845	0	IC-01	BR-02	LIQUID	625	5.93e+02	94.880 % Recovery
8 SPK	S99T001845	0	IC-01	NO3-02	LIQUID	690	6.83e+02	98.986 % Recovery
8 SPK	S99T001845	0	IC-01	PO4-02	LIQUID	635	6.20e+02	97.638 % Recovery
8 SPK	S99T001845	0	IC-01	SO4-02	LIQUID	690	6.76e+02	97.971 % Recovery
8 SPK	S99T001845	0	IC-01	OXALATE2	LIQUID	531	5.58e+02	105.085 % Recovery
9 SAMPLE	S99T001846	0	IC-01	F-02	LIQUID	N/A	1.698e+03	25.450 ug/mL
9 SAMPLE	S99T001846	0	IC-01	CL-02	LIQUID	N/A	1.295e+02	36.060 ug/mL
9 SAMPLE	S99T001846	0	IC-01	NO2-02	LIQUID	N/A	7.064e+04	229.100 ug/mL
9 SAMPLE	S99T001846	0	IC-01	BR-02	LIQUID	N/A	8.795e+02	265.100 ug/mL
9 SAMPLE	S99T001846	0	IC-01	NO3-02	LIQUID	N/A	7.046e+04	294.800 ug/mL
9 SAMPLE	S99T001846	0	IC-01	PO4-02	LIQUID	N/A	1.262e+03	254.500 ug/mL
9 SAMPLE	S99T001846	0	IC-01	SO4-02	LIQUID	N/A	1.552e+04	292.700 ug/mL
9 SAMPLE	S99T001846	0	IC-01	OXALATE2	LIQUID	N/A	1.224e+03	222.700 ug/mL
10 DUP	S99T001846	0	IC-01	F-02	LIQUID	1.70e+03	1.66e+03	2.381 RPD
10 DUP	S99T001846	0	IC-01	CL-02	LIQUID	1.30e+02	1.41e+02	8.118 RPD
10 DUP	S99T001846	0	IC-01	NO2-02	LIQUID	7.06e+04	7.24e+04	2.517 RPD
10 DUP	S99T001846	0	IC-01	BR-02	LIQUID	8.80e+02	9.88e+02	11.563 RPD
10 DUP	S99T001846	0	IC-01	NO3-02	LIQUID	7.05e+04	7.12e+04	0.988 RPD
10 DUP	S99T001846	0	IC-01	PO4-02	LIQUID	1.26e+03	1.03e+03	20.087 RPD
10 DUP	S99T001846	0	IC-01	SO4-02	LIQUID	1.55e+04	1.57e+04	1.282 RPD
10 DUP	S99T001846	0	IC-01	OXALATE2	LIQUID	1.22e+03	1.19e+03	2.490 RPD

Final page for worklist# 31876

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Jan Lutz 1/13/00
 Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

12/03/99 15:11

ws2

Page: 1

LABCORE Data Entry Template for Worklist# 31876

Analyst: Yts Instrument: IC 4500 SPK Book# 181N21G LCS
100N21E CCV

Method: LA-533-105 Rev/Mod FZ

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001844 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S99T001844 0		@IC-01	LIQUID		
6 SAMPLE	S99T001845 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S99T001845 0		@IC-01	LIQUID		
8 SPK	S99T001845 0		@IC-01	LIQUID		
9 SAMPLE	S99T001846 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
10 DUP	S99T001846 0		@IC-01	LIQUID		

Final page for worklist # 31876

Signature

Date

Signature

Date

Data Entry Comments:

uploaded 1-10-00

validated 1/13/00 mtj

John Wamell

31876 JAN. CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 01/06/2000 19:03:24
 Data File : C:\DX\DATA\00010631.D01
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.42		0.000	17	100	1	
Totals			0.000	17	100

[Signature] 1/7/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 716 TO 725.

=====

Sample Name: LCS 101N21E	Date: 01/06/2000 19:42:04
Data File : C:\DX\DATA\00010631.D03	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 3	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	17	58	2	
2	1.05	fluoride	63.021	1462	5773	2	-0.32
3	1.56	chloride	90.678	1491	5783	1	0.65
4	1.85	nitrite	505.091	4060	20417	1	1.28
5	2.76	bromide	611.418	2910	16755	1	1.10
6	3.13	nitrate	694.424	3616	24525	1	1.19
7	4.40	phosphate	592.186	947	10796	1	0.69
8	5.81	sulfate	677.787	2362	32144	1	2.89
9	7.52	oxalate	539.700	1005	20177	1	2.17
Totals			3774.305	17870	136429		

File: 00010631.D03 Sample: LCS 101N21E

Handwritten signature and date: 1/7/00

717

CCV 1/13/00 MF
 Sample Name: ~~LCS~~ 100N21E

Date: 01/06/2000 20:00:48

Data File : C:\DX\DATA\00010631.D04

Method : C:\DX\METHOD\ANIONS.MET

ACI Address: 1 System: 1 Inject#: 4

Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.05	fluoride	63.059	1468	5777	2	-0.32
3	1.55	chloride	82.406	1380	5253	1	0.22
4	1.85	nitrite	504.861	4099	20408	1	1.28
5	2.76	bromide	615.818	2937	16880	1	1.10
6	3.13	nitrate	685.279	3527	24194	1	1.19
7	4.40	phosphate	615.999	949	11234	1	0.69
8	5.76	sulfate	685.883	1940	32539	1	1.95
9	7.52	oxalate	547.871	1028	20488	1	2.17
Totals			3801.176	17329	136771		

CCV 1/13/00 MF
 File: 00010631.D04 Sample: ~~LCS~~ 100N21E

JSF
 1/7/00

```

=====
Sample Name: S99T001844                      Date: 01/06/2000 20:14:04
Data File  : C:\DX\DATA\00010631.D05
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1  System: 1  Inject#: 5          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	82	365	2	
2	1.05	fluoride	1740.158	1956	7645	2	-0.32
3	1.55	chloride	155.682	116	478	1	0.22
4	1.86	nitrite	71802.878	27845	151440	1	1.64
5	2.76	bromide	352.381	42	177	1	1.10
6	3.05	nitrate	73186.162	18709	135117	1	-1.19
7	4.40	phosphate	1197.261	106	1080	1	0.69
8	5.76	sulfate	16377.322	2359	37126	1	1.95
9	7.57	oxalate	1178.345	106	1805	1	2.90
Totals			165990.189	51321	335232		

File: 00010631.D05 Sample: S99T001844

```

=====
Sample Name: S99T001844DUP          Date: 01/06/2000 20:29:56
Data File  : C:\DX\DATA\00010631.D06
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 6   Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	85	406	2	
2	1.05	fluoride	1838.274	1985	8089	2	-0.32
3	1.55	chloride	159.131	116	488	1	0.22
4	1.86	nitrite	72813.494	28391	153789	1	1.64
5	2.77	bromide	354.993	38	180	1	1.34
6	3.05	nitrate	74238.193	19017	137306	1	-1.19
7	4.40	phosphate	1370.059	110	1228	1	0.69
8	5.76	sulfate	16472.893	2432	37348	1	1.95
9	7.57	oxalate	1176.739	112	1802	1	2.90
Totals			168423.777	52286	340636		

File: 00010631.D06 Sample: S99T001844DUP

```

=====
Sample Name: S99T001845                      Date: 01/06/2000 20:47:59
Data File  : C:\DX\DATA\00010631.D07
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 7           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	61	254	2	
2	1.05	fluoride	1622.178	1783	7113	2	-0.32
3	1.55	chloride	155.749	122	478	1	0.22
4	1.86	nitrite	67860.558	26218	142343	1	1.64
5	2.76	bromide	1254.305	257	1352	1	1.10
6	3.06	nitrate	68681.627	17291	125841	1	-0.97
7	4.40	phosphate	1024.280	94	933	1	0.69
8	5.76	sulfate	14978.491	2111	33873	1	1.95
9	7.57	oxalate	1061.207	96	1594	1	2.90
Totals			156638.394	48031	313781		

File: 00010631.D07 Sample: S99T001845

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=====
Sample Name: S99T001845DUP                      Date: 01/06/2000 21:15:25
Data File  : C:\DX\DATA\99101411.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 1              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	66	287	2	
2	1.05	fluoride	1655.112	1835	7262	2	-0.32
3	1.55	chloride	184.064	142	563	1	0.22
4	1.86	nitrite	67949.907	26490	142548	1	1.64
5	2.76	bromide	1252.542	263	1350	1	1.10
6	3.06	nitrate	68828.390	17482	126141	1	-0.97
7	4.40	phosphate	818.748	80	757	1	0.69
8	5.76	sulfate	15196.972	2085	34380	1	1.95
9	7.57	oxalate	1068.739	91	1607	1	2.90
Totals			156954.474	48535	314896		

File: 99101411.D01 Sample: S99T001845DUP

```

=====
Sample Name: S99T001845SPK                      Date: 01/06/2000 21:29:03
Data File  : C:\DX\DATA\99101411.D02
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 2              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	74	333	2	
2	1.05	fluoride	2871.721	3235	12823	2	-0.32
3	1.55	chloride	1914.266	1381	5814	1	-0.22
4	1.86	nitrite	78040.164	29933	166052	1	1.64
5	2.75	bromide	13240.980	3136	17299	1	0.61
6	3.05	nitrate	82488.559	21204	154785	1	-1.40
7	4.37	phosphate	13542.389	974	11766	1	0.08
8	5.76	sulfate	28627.678	4684	66045	1	1.95
9	7.52	oxalate	12329.011	1144	21981	1	2.17
Totals			233054.767	65765	456898		

File: 99101411.D02 Sample: S99T001845SPK

```

=====
Sample Name: S99T001846                      Date: 01/06/2000 21:42:42
Data File  : C:\DX\DATA\99101411.D03
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 3           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	69	310	2	
2	1.05	fluoride	1698.021	1894	7455	2	-0.32
3	1.55	chloride	129.517	105	399	1	0.22
4	1.86	nitrite	70637.226	27452	148739	1	1.64
5	2.75	bromide	879.493	177	863	1	0.85
6	3.05	nitrate	70463.137	18022	129491	1	-1.19
7	4.37	phosphate	1262.405	95	1136	1	0.08
8	5.76	sulfate	15523.811	2327	35140	1	1.95
9	7.52	oxalate	1223.925	89	1888	1	2.17
Totals			161817.535	50231	325420		

File: 99101411.D03 Sample: S99T001846

```

=====
Sample Name: S99T001846DUP                      Date: 01/06/2000 21:56:20
Data File   : C:\DX\DATA\99101411.D04
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 4              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         2121   3300  5Hz   0.00 11.00         50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	60	277	2	
2	1.05	fluoride	1664.463	1904	7304	2	-0.32
3	1.55	chloride	141.124	104	434	1	-0.22
4	1.86	nitrite	72435.075	27654	152908	1	1.64
5	2.75	bromide	988.171	189	1005	1	0.85
6	3.05	nitrate	71164.405	18143	130934	1	-1.19
7	4.40	phosphate	1028.969	94	937	1	0.69
8	5.76	sulfate	15664.201	2358	35466	1	1.95
9	7.52	oxalate	1193.686	99	1833	1	2.17
Totals			164280.094	50606	331098		

File: 99101411.D04 Sample: S99T001846DUP

LABCORE Completed Worklist Report for Worklist# 31877

Analyst: jds

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	0IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	0	0IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	0	0IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	0	0IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	0	0IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	0	0IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	0	0IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	0	0IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 LCS-INST	0	0	0IC-QC F	QC	64.0	6.48e+01	101.250 % Recovery	
2 LCS-INST	0	0	0IC-QC CL	QC	90.0	8.58e+01	95.333 % Recovery	
2 LCS-INST	0	0	0IC-QC NO2	QC	529	5.10e+02	96.408 % Recovery	
2 LCS-INST	0	0	0IC-QC BR	QC	625	6.12e+02	97.920 % Recovery	
2 LCS-INST	0	0	0IC-QC NO3	QC	690	7.03e+02	101.884 % Recovery	
2 LCS-INST	0	0	0IC-QC PO4	QC	635	6.08e+02	95.748 % Recovery	
2 LCS-INST	0	0	0IC-QC SO4	QC	690	6.75e+02	97.826 % Recovery	
2 LCS-INST	0	0	0IC-QC OXALATE2	QC	531	5.42e+02	102.072 % Recovery	
3 CCV	0	0	0IC-QC F	QC	63.5	6.26e+01	98.583 % Recovery	
3 CCV	0	0	0IC-QC CL	QC	87.5	8.90e+01	101.714 % Recovery	
3 CCV	0	0	0IC-QC NO2	QC	534	5.19e+02	97.191 % Recovery	
3 CCV	0	0	0IC-QC BR	QC	630	6.14e+02	97.460 % Recovery	
3 CCV	0	0	0IC-QC NO3	QC	700	6.72e+02	96.000 % Recovery	
3 CCV	0	0	0IC-QC PO4	QC	635	6.12e+02	96.378 % Recovery	
3 CCV	0	0	0IC-QC SO4	QC	690	6.89e+02	99.855 % Recovery	
3 CCV	0	0	0IC-QC OXALATE2	QC	539	5.40e+02	100.186 % Recovery	
4 SAMPLE	S99T001847	0	0IC-01 F-02	LIQUID	N/A	1.834e+03	25.450	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 CL-02	LIQUID	N/A	1.572e+02	36.060	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 NO2-02	LIQUID	N/A	9.007e+04	229.100	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 BR-02	LIQUID	N/A	3.844e+02	265.100	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 NO3-02	LIQUID	N/A	6.993e+04	294.800	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 PO4-02	LIQUID	N/A	1.453e+03	254.500	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 SO4-02	LIQUID	N/A	1.672e+04	292.700	ug/mL
4 SAMPLE	S99T001847	0	0IC-01 OXALATE2	LIQUID	N/A	1.096e+03	222.700	ug/mL
5 DUP	S99T001847	0	0IC-01 F-02	LIQUID	1.83e+03	1.75e+03	4.469	RPD
5 DUP	S99T001847	0	0IC-01 CL-02	LIQUID	1.57e+02	1.67e+02	6.173	RPD
5 DUP	S99T001847	0	0IC-01 NO2-02	LIQUID	9.01e+04	9.21e+04	2.195	RPD
5 DUP	S99T001847	0	0IC-01 BR-02	LIQUID	3.84e+02	4.16e+02	8.000	RPD
5 DUP	S99T001847	0	0IC-01 NO3-02	LIQUID	6.99e+04	7.09e+04	1.420	RPD
5 DUP	S99T001847	0	0IC-01 PO4-02	LIQUID	1.45e+03	1.14e+03	23.938	RPD
5 DUP	S99T001847	0	0IC-01 SO4-02	LIQUID	1.67e+04	1.67e+04	0.000	RPD
5 DUP	S99T001847	0	0IC-01 OXALATE2	LIQUID	1.10e+03	1.04e+03	5.607	RPD
6 SAMPLE	S99T001858	0	0IC-01 F-02	LIQUID	N/A	1.643e+03	25.450	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31877

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001858	0	②IC-01 CL-02	LIQUID	N/A	1.296e+02	36.060	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 NO2-02	LIQUID	N/A	7.054e+04	229.100	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 BR-02	LIQUID	N/A	1.305e+03	265.100	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 NO3-02	LIQUID	N/A	6.911e+04	294.800	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 PO4-02	LIQUID	N/A	9.430e+02	254.500	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 SO4-02	LIQUID	N/A	1.510e+04	292.700	ug/mL
6 SAMPLE	S99T001858	0	②IC-01 OXALATE2	LIQUID	N/A	1.619e+03	222.700	ug/mL
7 DUP	S99T001858	0	②IC-01 F-02	LIQUID	1.64e+03	1.70e+03	3.593	RPD
7 DUP	S99T001858	0	②IC-01 CL-02	LIQUID	1.30e+02	1.57e+02	18.815	RPD
7 DUP	S99T001858	0	②IC-01 NO2-02	LIQUID	7.05e+04	6.80e+04	3.610	RPD
7 DUP	S99T001858	0	②IC-01 BR-02	LIQUID	1.30e+03	1.26e+03	3.125	RPD
7 DUP	S99T001858	0	②IC-01 NO3-02	LIQUID	6.91e+04	6.79e+04	1.752	RPD
7 DUP	S99T001858	0	②IC-01 PO4-02	LIQUID	9.43e+02	1.04e+03	9.783	RPD
7 DUP	S99T001858	0	②IC-01 SO4-02	LIQUID	1.51e+04	1.51e+04	0.000	RPD
7 DUP	S99T001858	0	②IC-01 OXALATE2	LIQUID	1.62e+03	1.24e+03	26.573	RPD
8 SAMPLE	S99T001859	0	②IC-01 F-02	LIQUID	N/A	1.799e+03	25.450	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 CL-02	LIQUID	N/A	1.742e+02	36.060	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 NO2-02	LIQUID	N/A	7.426e+04	229.100	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 BR-02	LIQUID	N/A	1.137e+03	265.100	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 NO3-02	LIQUID	N/A	7.420e+04	294.800	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 PO4-02	LIQUID	N/A	1.224e+03	254.500	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 SO4-02	LIQUID	N/A	1.629e+04	292.700	ug/mL
8 SAMPLE	S99T001859	0	②IC-01 OXALATE2	LIQUID	N/A	1.086e+03	222.700	ug/mL
9 DUP	S99T001859	0	②IC-01 F-02	LIQUID	1.80e+03	1.89e+03	4.878	RPD
9 DUP	S99T001859	0	②IC-01 CL-02	LIQUID	1.74e+02	1.76e+02	1.143	RPD
9 DUP	S99T001859	0	②IC-01 NO2-02	LIQUID	7.43e+04	7.35e+04	1.083	RPD
9 DUP	S99T001859	0	②IC-01 BR-02	LIQUID	1.14e+03	1.16e+03	1.739	RPD
9 DUP	S99T001859	0	②IC-01 NO3-02	LIQUID	7.42e+04	7.36e+04	0.812	RPD
9 DUP	S99T001859	0	②IC-01 PO4-02	LIQUID	1.22e+03	1.28e+03	4.800	RPD
9 DUP	S99T001859	0	②IC-01 SO4-02	LIQUID	1.63e+04	1.63e+04	0.000	RPD
9 DUP	S99T001859	0	②IC-01 OXALATE2	LIQUID	1.09e+03	1.47e+03	29.688	RPD

Final page for worklist# 31877

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Jane M. Lyle
Reviewer Signature _____ Date 1/13/00

12/03/99 15:12
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 31877

Analyst: Jds Instrument: IC 4500 Sys1 Book# 101N21E LCS
160AL21E CCVMethod: LA-533-105 Rev/Mod F2

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001847 0		@IC-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S99T001847 0		@IC-01	LIQUID		
6 SAMPLE	S99T001858 0		@IC-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S99T001858 0		@IC-01	LIQUID		
8 SAMPLE	S99T001859 0		@IC-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9 DUP	S99T001859 0		@IC-01	LIQUID		

Final page for worklist # 31877

[Signature] 1-7-00
Signature Date

Signature Date

Data Entry Comments:

uploaded 1-10-00 validated 1/13/00 JmFye
Jm Worell

318775AN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

```

=====
Sample Name: CCB                               Date: 01/06/2000 22:09:58
Data File  : C:\DX\DATA\99101411.D05
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1   System: 1   Inject#: 5         Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

Calibration Volume  Dilution Points Rate  Start  Stop Area Reject
-----
External           1           1  3300  5Hz   0.00  11.00         50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.39		0.000	14	73	1	
Totals			0.000	14	73		

File: 99101411.D05 Sample: CCB

Minutes

[Signature]
1/7/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 729 TO 737.

Sample Name: LCS 101N21E Date: 01/06/2000 22:23:37
 Data File : C:\DX\DATA\99101401.D06
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	18	71	2	
2	1.05	fluoride	64.754	1510	5936	2	-0.32
3	1.39		0.000	28	127	1	
4	1.55	chloride	85.766	1520	5468	1	0.22
5	1.85	nitrite	509.565	4183	20604	1	0.91
6	2.75	bromide	612.282	2928	16780	1	0.61
7	3.11	nitrate	703.082	3677	24840	1	0.76
8	4.37	phosphate	607.921	937	11085	1	0.08
9	5.76	sulfate	674.644	2174	31991	1	1.95
10	7.52	oxalate	541.728	1115	20254	1	2.17
Totals			3799.743	18089	137156		

File: 99101401.D06 Sample: LCS 101N21E

Sample Name: CCV 100N21E Date: 01/06/2000 22:37:15
 Data File : C:\DX\DATA\99101401.D07
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 7 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	18	71	2	
2	1.05	fluoride	62.583	1492	5732	2	-0.32
3	1.55	chloride	88.992	1441	5675	1	0.22
4	1.85	nitrite	518.859	4172	20992	1	0.91
5	2.75	bromide	613.569	2896	16816	1	0.61
6	3.11	nitrate	672.163	3526	23718	1	0.76
7	4.37	phosphate	612.289	925	11166	1	0.08
8	5.76	sulfate	689.423	2196	32711	1	1.95
9	7.52	oxalate	540.044	1085	20190	1	2.17
Totals			3797.923	17749	137070		

File: 99101401.D07 Sample: CCV 100N21E

IRG 1/7/00

Sample Name: S99T001847 Date: 01/07/2000 01:00:55
 Data File : C:\DX\DATA\99101421.D01
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	82	373	2	
2	1.05	fluoride	1834.201	1969	8070	2	-0.32
3	1.55	chloride	157.241	113	482	1	0.22
4	1.87	nitrite	90074.505	35232	195065	1	2.00
5	2.76	bromide	384.419	49	218	1	1.10
6	3.06	nitrate	69933.139	17992	128403	1	-0.97
7	4.40	phosphate	1452.626	120	1298	1	0.69
8	5.76	sulfate	16723.192	2467	37931	1	1.95
9	7.57	oxalate	1095.657	91	1656	1	2.90
Totals			181654.979	58116	373496		

File: 99101421.D01 Sample: S99T001847

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=====
Sample Name: S99T001847DUP                      Date: 01/07/2000 01:14:37
Data File   : C:\DX\DATA\99101421.D02
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 2              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	70	314	2	
2	1.05	fluoride	1750.024	1905	7690	2	-0.32
3	1.54	chloride	167.022	113	512	1	-0.65
4	1.86	nitrite	92097.856	35138	200055	1	1.64
5	2.75	bromide	415.839	49	259	1	0.85
6	3.05	nitrate	70944.368	17788	130481	1	-1.40
7	4.37	phosphate	1141.835	100	1033	1	0.08
8	5.76	sulfate	16715.212	2636	37913	1	1.95
9	7.52	oxalate	1037.889	87	1552	1	2.17
Totals			184270.046	57885	379809		

File: 99101421.D02 Sample: S99T001847DUP

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=====
Sample Name: S99T001858                      Date: 01/07/2000 01:28:16
Data File  : C:\DX\DATA\99101421.D03
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 3           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1       2121   3300  5Hz   0.00 11.00         50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	58	276	2	
2	1.05	fluoride	1642.938	1848	7207	2	-0.32
3	1.55	chloride	129.616	98	399	1	-0.22
4	1.85	nitrite	70540.966	26683	148516	1	1.28
5	2.75	bromide	1305.406	266	1419	1	0.85
6	3.05	nitrate	69112.587	17632	126722	1	-1.19
7	4.37	phosphate	943.040	79	863	1	0.08
8	5.76	sulfate	15098.250	2290	34151	1	1.95
9	7.52	oxalate	1619.438	115	2602	1	2.17
10	8.64		0.000	14	390	1	
Totals			160392.241	49084	322544		

File: 99101421.D03 Sample: S99T001858

734

Sample Name: S99T001858DUP Date: 01/07/2000 01:41:54
 Data File : C:\DX\DATA\99101421.D04
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 4 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	75	329	2	
2	1.04	fluoride	1703.703	1799	7481	2	-0.95
3	1.55	chloride	157.406	104	483	1	-0.22
4	1.85	nitrite	68035.312	26124	142744	1	1.28
5	2.75	bromide	1263.882	266	1365	1	0.85
6	3.05	nitrate	67918.008	17279	124284	1	-1.19
7	4.40	phosphate	1038.815	88	945	1	0.69
8	5.76	sulfate	15059.841	2315	34062	1	1.95
9	7.52	oxalate	1237.328	101	1912	1	2.17
Totals			156414.295	48150	313603		

File: 99101421.D04 Sample: S99T001858DUP

=====

Sample Name: S99T001859	Date: 01/07/2000 01:55:33
Data File : C:\DX\DATA\99101421.D05	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 System: 1 Inject#: 5	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 2121 3300 5Hz 0.00 11.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	72	335	2	
2	1.05	fluoride	1799.247	1991	7912	2	-0.32
3	1.55	chloride	174.217	121	534	1	-0.22
4	1.86	nitrite	74259.767	28644	157163	1	1.64
5	2.75	bromide	1137.438	239	1200	1	0.85
6	3.05	nitrate	74196.797	18921	137220	1	-1.19
7	4.37	phosphate	1224.211	93	1103	1	0.08
8	5.76	sulfate	16285.982	2551	36913	1	1.95
9	7.52	oxalate	1086.352	105	1639	1	2.17
Totals			170164.010	52736	344018		

File: 99101421.D05 Sample: S99T001859

=====

Sample Name: S99T001859DUP	Date: 01/07/2000 02:09:11
Data File : C:\DX\DATA\99101411.D06	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 System: 1 Inject#: 6	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	69	316	2	
2	1.04	fluoride	1892.216	2001	8333	2	-0.95
3	1.55	chloride	176.273	122	540	1	-0.22
4	1.85	nitrite	73506.381	28527	155403	1	1.28
5	2.75	bromide	1163.038	246	1233	1	0.85
6	3.05	nitrate	73578.099	18960	135931	1	-1.40
7	4.37	phosphate	1277.167	97	1149	1	0.08
8	5.76	sulfate	16295.129	2640	36934	1	1.95
9	7.52	oxalate	1467.597	118	2328	1	2.17
Totals			169355.899	52781	342166		

File: 99101411.D06 Sample: S99T001859DUP

LABCORE Completed Worklist Report for Worklist# 31878

Analyst: krm

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	IC-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	IC-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	0	IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	IC-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	0	IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 LCS-INST	0	0	IC-QC	F	QC	64.0	6.53e+01	102.031 % Recovery
2 LCS-INST	0	0	IC-QC	CL	QC	90.0	8.69e+01	96.556 % Recovery
2 LCS-INST	0	0	IC-QC	NO2	QC	529	5.05e+02	95.463 % Recovery
2 LCS-INST	0	0	IC-QC	BR	QC	625	6.12e+02	97.920 % Recovery
2 LCS-INST	0	0	IC-QC	NO3	QC	690	7.03e+02	101.884 % Recovery
2 LCS-INST	0	0	IC-QC	PO4	QC	635	6.27e+02	98.740 % Recovery
2 LCS-INST	0	0	IC-QC	SO4	QC	690	6.72e+02	97.391 % Recovery
2 LCS-INST	0	0	IC-QC	OXALATE2	QC	531	5.44e+02	102.448 % Recovery
3 CCV	0	0	IC-QC	F	QC	63.5	6.30e+01	99.213 % Recovery
3 CCV	0	0	IC-QC	CL	QC	87.5	8.30e+01	94.857 % Recovery
3 CCV	0	0	IC-QC	NO2	QC	534	5.07e+02	94.944 % Recovery
3 CCV	0	0	IC-QC	BR	QC	630	6.17e+02	97.937 % Recovery
3 CCV	0	0	IC-QC	NO3	QC	700	6.79e+02	97.000 % Recovery
3 CCV	0	0	IC-QC	PO4	QC	635	6.28e+02	98.898 % Recovery
3 CCV	0	0	IC-QC	SO4	QC	690	6.93e+02	100.435 % Recovery
3 CCV	0	0	IC-QC	OXALATE2	QC	539	5.38e+02	99.814 % Recovery
4 SAMPLE	S99T001860	0	IC-01	F-02	LIQUID	N/A	1.942e+03	25.450 ug/mL
4 SAMPLE	S99T001860	0	IC-01	CL-02	LIQUID	N/A	1.614e+02	36.060 ug/mL
4 SAMPLE	S99T001860	0	IC-01	NO2-02	LIQUID	N/A	7.981e+04	229.100 ug/mL
4 SAMPLE	S99T001860	0	IC-01	BR-02	LIQUID	N/A	1.199e+03	265.100 ug/mL
4 SAMPLE	S99T001860	0	IC-01	NO3-02	LIQUID	N/A	8.087e+04	294.800 ug/mL
4 SAMPLE	S99T001860	0	IC-01	PO4-02	LIQUID	N/A	1.139e+03	254.500 ug/mL
4 SAMPLE	S99T001860	0	IC-01	SO4-02	LIQUID	N/A	1.772e+04	292.700 ug/mL
4 SAMPLE	S99T001860	0	IC-01	OXALATE2	LIQUID	N/A	1.254e+03	222.700 ug/mL
5 DUP	S99T001860	0	IC-01	F-02	LIQUID	1.94e+03	1.90e+03	2.083 RPD
5 DUP	S99T001860	0	IC-01	CL-02	LIQUID	1.61e+02	1.57e+02	2.516 RPD
5 DUP	S99T001860	0	IC-01	NO2-02	LIQUID	7.98e+04	8.17e+04	2.353 RPD
5 DUP	S99T001860	0	IC-01	BR-02	LIQUID	1.20e+03	1.19e+03	0.837 RPD
5 DUP	S99T001860	0	IC-01	NO3-02	LIQUID	8.09e+04	8.17e+04	0.984 RPD
5 DUP	S99T001860	0	IC-01	PO4-02	LIQUID	1.14e+03	1.37e+03	18.327 RPD
5 DUP	S99T001860	0	IC-01	SO4-02	LIQUID	1.77e+04	1.79e+04	1.124 RPD
5 DUP	S99T001860	0	IC-01	OXALATE2	LIQUID	1.25e+03	1.41e+03	12.030 RPD
6 SPK	S99T001860	0	IC-01	F-02	LIQUID	64.0	6.45e+01	100.781 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31878

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S99T001860	0	•IC-01 CL-02	LIQUID	90.0	8.32e+01	92.444 % Recovery	
6 SPK	S99T001860	0	•IC-01 NO2-02	LIQUID	529	6.12e+02	115.690 % Recovery	
6 SPK	S99T001860	0	•IC-01 BR-02	LIQUID	625	6.13e+02	98.080 % Recovery	
6 SPK	S99T001860	0	•IC-01 NO3-02	LIQUID	690	7.60e+02	110.145 % Recovery	
6 SPK	S99T001860	0	•IC-01 PO4-02	LIQUID	635	6.09e+02	95.906 % Recovery	
6 SPK	S99T001860	0	•IC-01 SO4-02	LIQUID	690	7.02e+02	101.739 % Recovery	
6 SPK	S99T001860	0	•IC-01 OXALATE2	LIQUID	531	5.36e+02	100.942 % Recovery	
7 SAMPLE	S99T001861	0	•IC-01 F-02	LIQUID	N/A	1.851e+03	25.450 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 CL-02	LIQUID	N/A	1.546e+02	36.060 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 NO2-02	LIQUID	N/A	7.649e+04	229.100 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 BR-02	LIQUID	N/A	1.584e+03	265.100 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 NO3-02	LIQUID	N/A	7.547e+04	294.800 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 PO4-02	LIQUID	N/A	1.154e+03	254.500 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 SO4-02	LIQUID	N/A	1.658e+04	292.700 ug/mL	
7 SAMPLE	S99T001861	0	•IC-01 OXALATE2	LIQUID	N/A	1.300e+03	222.700 ug/mL	
8 DUP	S99T001861	0	•IC-01 F-02	LIQUID	1.85e+03	1.85e+03	0.000 RPD	
8 DUP	S99T001861	0	•IC-01 CL-02	LIQUID	1.55e+02	1.55e+02	0.000 RPD	
8 DUP	S99T001861	0	•IC-01 NO2-02	LIQUID	7.65e+04	7.53e+04	1.581 RPD	
8 DUP	S99T001861	0	•IC-01 BR-02	LIQUID	1.58e+03	1.54e+03	2.564 RPD	
8 DUP	S99T001861	0	•IC-01 NO3-02	LIQUID	7.55e+04	7.48e+04	0.931 RPD	
8 DUP	S99T001861	0	•IC-01 PO4-02	LIQUID	1.15e+03	8.85e+02	26.044 RPD	
8 DUP	S99T001861	0	•IC-01 SO4-02	LIQUID	1.66e+04	1.64e+04	1.212 RPD	
8 DUP	S99T001861	0	•IC-01 OXALATE2	LIQUID	1.30e+03	1.18e+03	9.677 RPD	
9 SAMPLE	S99T001862	0	•IC-01 F-02	LIQUID	N/A	1.723e+03	25.450 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 CL-02	LIQUID	N/A	1.270e+02	36.060 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 NO2-02	LIQUID	N/A	6.954e+04	229.100 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 BR-02	LIQUID	N/A	1.119e+03	265.100 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 NO3-02	LIQUID	N/A	6.938e+04	294.800 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 PO4-02	LIQUID	N/A	1.084e+03	254.500 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 SO4-02	LIQUID	N/A	1.510e+04	292.700 ug/mL	
9 SAMPLE	S99T001862	0	•IC-01 OXALATE2	LIQUID	N/A	1.266e+03	222.700 ug/mL	
10 DUP	S99T001862	0	•IC-01 F-02	LIQUID	1.72e+03	1.69e+03	1.760 RPD	
10 DUP	S99T001862	0	•IC-01 CL-02	LIQUID	1.27e+02	1.64e+02	25.430 RPD	
10 DUP	S99T001862	0	•IC-01 NO2-02	LIQUID	6.95e+04	7.06e+04	1.570 RPD	
10 DUP	S99T001862	0	•IC-01 BR-02	LIQUID	1.12e+03	1.16e+03	3.509 RPD	
10 DUP	S99T001862	0	•IC-01 NO3-02	LIQUID	6.94e+04	6.98e+04	0.575 RPD	
10 DUP	S99T001862	0	•IC-01 PO4-02	LIQUID	1.08e+03	1.06e+03	1.869 RPD	
10 DUP	S99T001862	0	•IC-01 SO4-02	LIQUID	1.51e+04	1.52e+04	0.660 RPD	
10 DUP	S99T001862	0	•IC-01 OXALATE2	LIQUID	1.27e+03	1.19e+03	6.504 RPD	

Final page for worklist# 31878

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

 Reviewer Signature _____ Date 1/13/00

Units shown for QC (BLK/BKG) may not reflect the actual units.

12/03/99 15:12
ws2

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 31878

Analyst: KRM Instrument: IC 4551 Book# 101N21R
100N21R

Method: LA-533-105 Rev/Mod F2

Worklist Comment: AZ-101 (2), @IC-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	LCS-INST				@IC-QC	QC		
3	CCV				@IC-QC	QC		
4	SAMPLE	S99T001860 0			@IC-01	LIQUID	99000438	AZ-101 (2)
					Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02			
5	DUP	S99T001860 0			@IC-01	LIQUID		
6	SPK	S99T001860 0			@IC-01	LIQUID		
7	SAMPLE	S99T001861 0			@IC-01	LIQUID	99000438	AZ-101 (2)
					Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02			
8	DUP	S99T001861 0			@IC-01	LIQUID		
9	SAMPLE	S99T001862 0			@IC-01	LIQUID	99000438	AZ-101 (2)
					Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02			
10	DUP	S99T001862 0			@IC-01	LIQUID		

Final page for worklist # 31878

1-7-00
Signature Date

Signature Date

Data Entry Comments:

uploaded 1-10-00
John Howell
31878 JAN. CSV

validated 1/13/00 JML

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 01/07/2000 08:32:25
 Data File : C:\DX\DATA\00010711.D01
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst: *[Signature]* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 741 TO 756.

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=====
Sample Name: LCS 101N21E                      Date: 01/07/2000 08:46:07
Data File  : C:\DX\DATA\00010711.D02
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 2           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	15	55	2	
2	1.04	fluoride 102.1	65.334	1497	5990	2	-0.95
3	1.55	chloride 96.6	86.946	1443	5544	1	-0.22
4	1.84	nitrite 95.6	505.494	4101	20434	1	0.55
5	2.74	bromide 91.9	611.643	2945	16761	1	0.37
6	3.10	nitrate 101.9	703.280	3676	24847	1	0.32
7	4.37	phosphate 98.7	626.787	979	11433	1	0.08
8	5.71	sulfate 91.5	672.460	2353	31885	1	1.00
9	7.41	oxalate 102.4	543.841	1093	20334	1	0.72
Totals			3815.784	18102	137283		

File: 00010711.D02 Sample: LCS 101N21E

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=====
Sample Name: CCV 100N21E                      Date: 01/07/2000 08:59:46
Data File  : C:\DX\DATA\00010711.D03
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 3           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.04	fluoride 99.3	63.043	1458	5775	1	-0.95
2	1.55	chloride 94.8	82.965	1363	5289	1	-0.22
3	1.84	nitrite 94.9	506.872	4129	20491	1	0.55
4	2.73	bromide 98.0	617.111	2921	16917	1	0.12
5	3.10	nitrate 96.9	678.570	3547	23950	1	0.32
6	4.37	phosphate 98.0	628.350	967	11462	1	0.08
7	5.71	sulfate 100.4	692.560	2411	32864	1	1.00
8	7.41	oxalate 98.9	538.478	1093	20130	1	0.72
Totals			3807.949	17887	136878		

File: 00010711.D03 Sample: CCV 100N21E

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=====
Sample Name: S99T001860                      Date: 01/07/2000 09:13:26
Data File  : C:\DX\DATA\00010711.D04
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 4           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	80	347	2	
2	1.04	fluoride	1942.135	2120	8559	2	-0.95
3	1.54	chloride	161.352	118	495	1	-0.65
4	1.85	nitrite	79812.821	30602	170256	1	0.91
5	2.74	bromide	1199.210	253	1280	1	0.37
6	3.03	nitrate	80865.711	20689	151302	1	-2.05
7	4.37	phosphate	1138.671	108	1030	1	0.08
8	5.71	sulfate	17716.647	3006	40249	1	1.00
9	7.41	oxalate	1254.053	92	1942	1	0.72
Totals			184090.602	57067	375461		

File: 00010711.D04 Sample: S99T001860

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=====
Sample Name: S99T001860 DUP                      Date: 01/07/2000 09:27:05
Data File  : C:\DX\DATA\00010711.D05
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 5                Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	72	297	2	
2	1.04	fluoride	1903.409	2157	8383	2	-0.95
3	1.54	chloride	157.473	118	483	1	-0.65
4	1.85	nitrite	81677.774	30893	174704	1	0.91
5	2.74	bromide	1186.566	250	1264	1	0.37
6	3.03	nitrate	81701.335	20828	153093	1	-2.05
7	4.37	phosphate	1369.005	113	1227	1	0.08
8	5.71	sulfate	17931.778	2990	40752	1	1.00
9	7.41	oxalate	1409.506	95	2223	1	0.72
Totals			187336.845	57516	382426		

File: 00010711.D05 Sample: S99T001860 DUP

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=====
Sample Name: S99T001860 SPK                      Date: 01/07/2000 09:40:45
Data File  : C:\DX\DATA\00010711.D06
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 6                Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	83	368	2	
2	1.04	fluoride	3245.695	3647	14566	2	-0.95
3	1.54	chloride	1842.811	1307	5596	1	-0.65
4	1.85	nitrite	92169.360	34984	200233	1	1.28
5	2.73	bromide	13583.339	3165	17764	1	-0.12
6	3.01	nitrate	96223.333	24893	185237	1	-2.48
7	4.35	phosphate	13489.538	990	11676	1	-0.53
8	5.65	sulfate	31903.363	4983	73915	1	0.06
9	7.41	oxalate	12081.529	1168	21532	1	0.72
Totals			264488.968	75219	530885		

File: 00010711.D06 Sample: S99T001860 SPK

```

=====
Sample Name: S99T001861                      Date: 01/07/2000 09:54:24
Data File  : C:\DX\DATA\00010711.D07
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 7           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	60	283	2	
2	1.04	fluoride	1850.999	2013	8146	2	-0.95
3	1.54	chloride	154.588	107	474	1	-0.65
4	1.85	nitrite	76490.168	28931	162395	1	0.91
5	2.74	bromide	1583.984	320	1783	1	0.37
6	3.03	nitrate	75466.458	19166	139873	1	-1.83
7	4.37	phosphate	1153.671	100	1043	1	0.08
8	5.71	sulfate	16584.884	2773	37609	1	1.00
9	7.41	oxalate	1299.798	109	2025	1	0.72
Totals			174584.549	53579	353631		

File: 00010711.D07 Sample: S99T001861

```

=====
Sample Name: S99T001861 DUP                      Date: 01/07/2000 10:08:04
Data File  : C:\DX\DATA\00010711.D08
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 8                Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	68	303	2	
2	1.04	fluoride	1851.929	2002	8150	2	-0.95
3	1.55	chloride	154.754	110	475	1	-0.22
4	1.85	nitrite	75348.999	28523	159713	1	0.91
5	2.74	bromide	1539.587	313	1725	1	0.37
6	3.03	nitrate	74761.968	18981	138399	1	-1.83
7	4.35	phosphate	884.885	85	814	1	-0.53
8	5.71	sulfate	16391.491	2769	37158	1	1.00
9	7.41	oxalate	1176.019	104	1801	1	0.72
Totals			172109.632	52954	348539		

File: 00010711.D08 Sample: S99T001861 DUP

```

=====
Sample Name: S99T001862                      Date: 01/07/2000 10:21:44
Data File  : C:\DX\DATA\00010711.D09
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 9           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1       2121    3300   5Hz   0.00 11.00         50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	61	268	2	
2	1.04	fluoride	1722.515	1873	7565	2	-0.95
3	1.54	chloride	126.963	99	391	1	-0.65
4	1.85	nitrite	69542.422	26973	146211	1	0.91
5	2.74	bromide	1119.042	236	1176	1	0.37
6	3.03	nitrate	69376.268	17716	127261	1	-1.83
7	4.37	phosphate	1083.706	94	983	1	0.08
8	5.71	sulfate	15099.801	2571	34154	1	1.00
9	7.41	oxalate	1266.459	109	1964	1	0.72
Totals			159337.176	49731	319975		

File: 00010711.D09 Sample: S99T001862

=====

Sample Name: S99T001862 DUP	Date: 01/07/2000 10:35:23
Data File : C:\DX\DATA\00010711.D10	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 System: 1 Inject#: 10	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	64	297	2	
2	1.04	fluoride	1685.107	1873	7397	2	-0.95
3	1.54	chloride	164.337	109	504	1	-0.65
4	1.85	nitrite	70623.908	26746	148708	1	0.91
5	2.74	bromide	1159.742	235	1229	1	0.37
6	3.03	nitrate	69846.217	17655	128224	1	-1.83
7	4.37	phosphate	1060.851	96	964	1	0.08
8	5.71	sulfate	15170.496	2559	34319	1	1.00
9	7.41	oxalate	1188.702	103	1824	1	0.72
Totals			160899.359	49440	323465		

File: 00010711.D10 Sample: S99T001862 DUP

LABCORE Completed Worklist Report for Worklist# 31879

Analyst: krm

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	0IC-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	0IC-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	0	0IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	0IC-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	0IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	0	0IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	0IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	0IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 LCS-INST	0	0	0IC-QC	F	QC	64.0	6.52e+01	101.875 % Recovery
2 LCS-INST	0	0	0IC-QC	CL	QC	90.0	8.58e+01	95.333 % Recovery
2 LCS-INST	0	0	0IC-QC	NO2	QC	529	5.02e+02	94.896 % Recovery
2 LCS-INST	0	0	0IC-QC	BR	QC	625	6.09e+02	97.440 % Recovery
2 LCS-INST	0	0	0IC-QC	NO3	QC	690	7.13e+02	103.333 % Recovery
2 LCS-INST	0	0	0IC-QC	PO4	QC	635	6.32e+02	99.528 % Recovery
2 LCS-INST	0	0	0IC-QC	SO4	QC	690	6.65e+02	96.377 % Recovery
2 LCS-INST	0	0	0IC-QC	OXALATE2	QC	531	5.47e+02	103.013 % Recovery
3 CCV	0	0	0IC-QC	F	QC	63.5	6.45e+01	101.575 % Recovery
3 CCV	0	0	0IC-QC	CL	QC	87.5	8.30e+01	94.857 % Recovery
3 CCV	0	0	0IC-QC	NO2	QC	534	5.14e+02	96.255 % Recovery
3 CCV	0	0	0IC-QC	BR	QC	630	6.10e+02	96.825 % Recovery
3 CCV	0	0	0IC-QC	NO3	QC	700	6.75e+02	96.429 % Recovery
3 CCV	0	0	0IC-QC	PO4	QC	635	6.06e+02	95.433 % Recovery
3 CCV	0	0	0IC-QC	SO4	QC	690	6.81e+02	98.696 % Recovery
3 CCV	0	0	0IC-QC	OXALATE2	QC	539	5.32e+02	98.701 % Recovery
4 SAMPLE	S99T001863	0	0IC-01	F-02	LIQUID	N/A	2.034e+03	25.450 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	CL-02	LIQUID	N/A	1.926e+02	36.060 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	NO2-02	LIQUID	N/A	8.276e+04	229.100 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	BR-02	LIQUID	N/A	8.905e+02	265.100 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	NO3-02	LIQUID	N/A	8.245e+04	294.800 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	PO4-02	LIQUID	N/A	1.552e+03	254.500 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	SO4-02	LIQUID	N/A	1.822e+04	292.700 ug/mL
4 SAMPLE	S99T001863	0	0IC-01	OXALATE2	LIQUID	N/A	1.078e+03	222.700 ug/mL
5 DUP	S99T001863	0	0IC-01	F-02	LIQUID	2.03e+03	2.10e+03	3.390 RPD
5 DUP	S99T001863	0	0IC-01	CL-02	LIQUID	1.93e+02	1.64e+02	16.246 RPD
5 DUP	S99T001863	0	0IC-01	NO2-02	LIQUID	8.28e+04	8.23e+04	0.606 RPD
5 DUP	S99T001863	0	0IC-01	BR-02	LIQUID	8.90e+02	9.35e+02	4.932 RPD
5 DUP	S99T001863	0	0IC-01	NO3-02	LIQUID	8.24e+04	8.33e+04	1.086 RPD
5 DUP	S99T001863	0	0IC-01	PO4-02	LIQUID	1.55e+03	1.22e+03	23.827 RPD
5 DUP	S99T001863	0	0IC-01	SO4-02	LIQUID	1.82e+04	1.81e+04	0.551 RPD
5 DUP	S99T001863	0	0IC-01	OXALATE2	LIQUID	1.08e+03	8.06e+02	29.056 RPD
6 SAMPLE	S99T001867	0	0IC-01	F-02	LIQUID	N/A	1.757e+03	25.450 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31879

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	SAMPLE	S99T001867	0	0	IC-01	CL-02	LIQUID	N/A	1.370e+02	36.060 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	NO2-02	LIQUID	N/A	6.947e+04	229.100 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	BR-02	LIQUID	N/A	1.287e+03	265.100 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	NO3-02	LIQUID	N/A	6.896e+04	294.800 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	PO4-02	LIQUID	N/A	1.019e+03	254.500 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	SO4-02	LIQUID	N/A	1.531e+04	292.700 ug/mL
6	SAMPLE	S99T001867	0	0	IC-01	OXALATE2	LIQUID	N/A	1.421e+03	222.700 ug/mL
7	DUP	S99T001867	0	0	IC-01	F-02	LIQUID	1.76e+03	1.72e+03	2.299 RPD
7	DUP	S99T001867	0	0	IC-01	CL-02	LIQUID	1.37e+02	1.60e+02	15.488 RPD
7	DUP	S99T001867	0	0	IC-01	NO2-02	LIQUID	6.95e+04	7.08e+04	1.853 RPD
7	DUP	S99T001867	0	0	IC-01	BR-02	LIQUID	1.29e+03	1.34e+03	3.802 RPD
7	DUP	S99T001867	0	0	IC-01	NO3-02	LIQUID	6.90e+04	6.97e+04	1.009 RPD
7	DUP	S99T001867	0	0	IC-01	PO4-02	LIQUID	1.02e+03	1.20e+03	16.216 RPD
7	DUP	S99T001867	0	0	IC-01	SO4-02	LIQUID	1.53e+04	1.52e+04	0.656 RPD
7	DUP	S99T001867	0	0	IC-01	OXALATE2	LIQUID	1.42e+03	1.31e+03	8.059 RPD
8	SAMPLE	S99T001868	0	0	IC-01	F-02	LIQUID	N/A	1.861e+03	25.450 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	CL-02	LIQUID	N/A	1.657e+02	36.060 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	NO2-02	LIQUID	N/A	7.532e+04	229.100 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	BR-02	LIQUID	N/A	5.388e+02	265.100 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	NO3-02	LIQUID	N/A	7.473e+04	294.800 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	PO4-02	LIQUID	N/A	1.255e+03	254.500 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	SO4-02	LIQUID	N/A	1.667e+04	292.700 ug/mL
8	SAMPLE	S99T001868	0	0	IC-01	OXALATE2	LIQUID	N/A	1.290e+03	222.700 ug/mL
9	DUP	S99T001868	0	0	IC-01	F-02	LIQUID	1.86e+03	1.87e+03	0.536 RPD
9	DUP	S99T001868	0	0	IC-01	CL-02	LIQUID	1.66e+02	1.38e+02	18.421 RPD
9	DUP	S99T001868	0	0	IC-01	NO2-02	LIQUID	7.53e+04	7.66e+04	1.712 RPD
9	DUP	S99T001868	0	0	IC-01	BR-02	LIQUID	5.39e+02	5.35e+02	0.745 RPD
9	DUP	S99T001868	0	0	IC-01	NO3-02	LIQUID	7.47e+04	7.65e+04	2.381 RPD
9	DUP	S99T001868	0	0	IC-01	PO4-02	LIQUID	1.26e+03	9.57e+02	27.334 RPD
9	DUP	S99T001868	0	0	IC-01	SO4-02	LIQUID	1.67e+04	1.68e+04	0.597 RPD
9	DUP	S99T001868	0	0	IC-01	OXALATE2	LIQUID	1.29e+03	1.29e+03	0.000 RPD
10	SPK	S99T001868	0	0	IC-01	F-02	LIQUID	64.0	6.17e+01	96.406 % Recovery
10	SPK	S99T001868	0	0	IC-01	CL-02	LIQUID	90.0	8.46e+01	94.000 % Recovery
10	SPK	S99T001868	0	0	IC-01	NO2-02	LIQUID	529	4.78e+02	90.359 % Recovery
10	SPK	S99T001868	0	0	IC-01	BR-02	LIQUID	625	6.00e+02	96.000 % Recovery
10	SPK	S99T001868	0	0	IC-01	NO3-02	LIQUID	690	6.87e+02	99.565 % Recovery
10	SPK	S99T001868	0	0	IC-01	PO4-02	LIQUID	635	6.09e+02	95.906 % Recovery
10	SPK	S99T001868	0	0	IC-01	SO4-02	LIQUID	690	6.96e+02	100.870 % Recovery
10	SPK	S99T001868	0	0	IC-01	OXALATE2	LIQUID	531	5.44e+02	102.448 % Recovery

Final page for worklist# 31879

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature *Jane Lyle* Date *1/13/00*

12/03/99 15:13

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 31879

Analyst: KRM Instrument: IC 4551 Book# 101 N 21.8
100 N 21.8Method: LA-533-105 Rev/Mod F2

Worklist Comment: AZ-101 (2), @IC-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	LCS-INST				@IC-QC	QC		
3	CCV				@IC-QC	QC		
4	SAMPLE	S99T001863 0			@IC-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5	DUP	S99T001863 0			@IC-01	LIQUID		
6	SAMPLE	S99T001867 0			@IC-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7	DUP	S99T001867 0			@IC-01	LIQUID		
8	SAMPLE	S99T001868 0			@IC-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9	DUP	S99T001868 0			@IC-01	LIQUID		
10	SPK	S99T001868 0			@IC-01	LIQUID		

Final page for worklist # 31879

[Signature] 1-7-00
Signature Date

Signature Date

Data Entry Comments:

Updated 1-10-00Validated 1/12/00 JML31879JAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

=====

Sample Name: CCB	Date: 01/07/2000 10:49:01
Data File : C:\DX\DATA\00010711.D11	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 System: 1 Inject#: 11	Detector: CDM-1
Analyst : <i>[Signature]</i>	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
------------	-------------	-------------------	------------------------	--------	------	-------------	--------

Totals			0.000	0	0		
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SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 754 TO 763.

Sample Name: LCS 101N21E Date: 01/07/2000 11:02:40
 Data File : C:\DX\DATA\00010711.D12
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 12 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.05	fluoride 101.9	65.236	1522	5981	2	-0.32
3	1.54	chloride 95.3	85.794	1405	5470	1	-0.65
4	1.84	nitrite 95.0	502.434	4072	20306	1	0.55
5	2.73	bromide 97.4	608.500	2919	16672	1	0.12
6	3.10	nitrate 103.3	712.564	3640	25185	1	0.32
7	4.37	phosphate 99.6	632.279	967	11534	1	0.08
8	5.71	sulfate 96.4	664.920	2379	31518	1	1.00
9	7.41	oxalate 102.9	546.520	1109	20436	1	0.72
Totals			3818.248	18012	137102		

File: 00010711.D12 Sample: LCS 101N21E

Sample Name: CCV 100N21E Date: 01/07/2000 11:16:20
 Data File : C:\DX\DATA\00010711.D13
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 13 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	14	53	2	
2	1.04	fluoride 101.5	64.465	1480	5909	2	-0.95
3	1.54	chloride 97.8	82.957	1358	5288	1	-0.65
4	1.83	nitrite 96.7	513.892	4135	20784	1	0.18
5	2.73	bromide 96.8	610.033	2926	16716	1	0.12
6	3.09	nitrate 96.4	674.620	3498	23807	1	0.11
7	4.35	phosphate 95.5	606.329	911	11056	1	-0.53
8	5.71	sulfate 98.7	680.953	2401	32299	1	1.00
9	7.41	oxalate 98.8	532.265	1097	19894	1	0.72
Totals			3765.513	17820	135805		

File: 00010711.D13 Sample: CCV 100N21E

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Sample Name: S99T001863                      Date: 01/07/2000 11:29:59
Data File  : C:\DX\DATA\00010711.D14
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 14          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	80	363	2	
2	1.04	fluoride	2034.066	2235	8976	2	-0.95
3	1.54	chloride	192.618	130	589	1	-0.65
4	1.85	nitrite	82756.707	31748	177290	1	0.91
5	2.73	bromide	890.539	176	878	1	0.12
6	3.03	nitrate	82450.943	21466	154704	1	-2.05
7	4.37	phosphate	1551.570	125	1383	1	0.08
8	5.65	sulfate	18221.399	2508	41429	1	0.06
9	7.41	oxalate	1078.487	82	1625	1	0.72
Totals			189176.329	58549	387238		

File: 00010711.D14 Sample: S99T001863

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=====
Sample Name: S99T001863 DUP                      Date: 01/07/2000 11:43:39
Data File  : C:\DX\DATA\00010711.D15
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 15              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	79	360	2	
2	1.04	fluoride	2095.508	2229	9256	2	-0.95
3	1.55	chloride	164.436	119	504	1	-0.22
4	1.85	nitrite	82264.897	31746	176110	1	0.91
5	2.73	bromide	934.719	177	935	1	0.12
6	3.03	nitrate	83295.819	21489	156527	1	-2.05
7	4.37	phosphate	1219.524	106	1099	1	0.08
8	5.71	sulfate	18074.943	3096	41086	1	1.00
9	7.41	oxalate	806.476	70	1134	1	0.72
10	9.49		0.000	20	928	1	
Totals			188856.321	59131	387941		

File: 00010711.D15 Sample: S99T001863 DUP

```

=====
Sample Name: S99T001867                      Date: 01/07/2000 11:57:18
Data File  : C:\DX\DATA\00010711.D16
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 16          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	58	259	2	
2	1.04	fluoride	1757.339	1862	7723	2	-0.95
3	1.54	chloride	136.979	103	421	1	-0.65
4	1.85	nitrite	69467.458	27046	146038	1	0.91
5	2.73	bromide	1287.326	272	1395	1	0.12
6	3.03	nitrate	68955.410	17745	126400	1	-1.83
7	4.37	phosphate	1018.888	89	928	1	0.08
8	5.71	sulfate	15313.361	2561	34650	1	1.00
9	7.41	oxalate	1420.914	110	2243	1	0.72
Totals			159357.675	49845	320059		

File: 00010711.D16 Sample: S99T001867

```

=====
Sample Name: S99T001867 DUP                      Date: 01/07/2000 12:10:58
Data File  : C:\DX\DATA\00010711.D17
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 17              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	56	256	2	
2	1.04	fluoride	1715.311	1877	7533	2	-0.95
3	1.54	chloride	159.893	113	490	1	-0.65
4	1.84	nitrite	70840.250	26651	149209	1	0.55
5	2.73	bromide	1338.805	269	1463	1	0.12
6	3.03	nitrate	69743.073	17712	128013	1	-1.83
7	4.37	phosphate	1197.027	98	1080	1	0.08
8	5.65	sulfate	15173.165	2083	34325	1	0.06
9	7.41	oxalate	1309.767	110	2043	1	0.72
Totals			161477.292	48969	324410		

File: 00010711.D17 Sample: S99T001867 DUP

```

=====
Sample Name: S99T001868                      Date: 01/07/2000 12:24:38
Data File  : C:\DX\DATA\00010711.D18
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 18          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	74	334	2	
2	1.04	fluoride	1861.402	2045	8193	2	-0.95
3	1.54	chloride	165.696	116	508	1	-0.65
4	1.85	nitrite	75316.299	29183	159637	1	0.91
5	2.74	bromide	538.803	80	420	1	0.37
6	3.03	nitrate	74733.293	19315	138339	1	-1.83
7	4.37	phosphate	1255.141	108	1130	1	0.08
8	5.65	sulfate	16671.573	2315	37811	1	0.06
9	7.41	oxalate	1289.941	112	2007	1	0.72
Totals			171832.148	53346	348378		

File: 00010711.D18 Sample: S99T001868

```

=====
Sample Name: S99T001868 DUP                      Date: 01/07/2000 12:38:17
Data File  : C:\DX\DATA\00010711.D19
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 19              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	84	385	2	
2	1.04	fluoride	1874.364	2040	8252	2	-0.95
3	1.54	chloride	138.305	112	425	1	-0.65
4	1.85	nitrite	76586.548	29467	162622	1	0.91
5	2.73	bromide	534.887	81	414	1	0.12
6	3.03	nitrate	76515.567	19531	142075	1	-1.83
7	4.37	phosphate	956.991	97	875	1	0.08
8	5.71	sulfate	16811.957	2852	38138	1	1.00
9	7.41	oxalate	1291.768	109	2010	1	0.72
Totals			174710.387	54372	355196		

File: 00010711.D19 Sample: S99T001868 DUP

```

=====
Sample Name: S99T001868 SPK                      Date: 01/07/2000 12:51:57
Data File  : C:\DX\DATA\00010711.D20
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 20              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121  3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	74	296	2	
2	1.04	fluoride	3108.646	3545	13925	2	-0.95
3	1.54	chloride	1873.776	1375	5690	1	-0.65
4	1.85	nitrite	84975.730	32958	182635	1	0.91
5	2.73	bromide	12663.303	3059	16516	1	-0.12
6	3.02	nitrate	88602.157	23309	168119	1	-2.27
7	4.35	phosphate	13558.447	1022	11780	1	-0.53
8	5.65	sulfate	30733.887	4782	71099	1	0.06
9	7.41	oxalate	12281.965	1226	21896	1	0.72
10	8.64		0.000	22	927	1	
Totals			247797.911	71372	492883		

File: 00010711.D20 Sample: S99T001868 SPK

LABCORE Completed Worklist Report for Worklist# 31888

Analyst: adp

Instrument: IC45S1

Book#: 101N21E

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ101 FOR @IC-01, RLC

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	0	IC-QC	F	QC	1	<1.20e-2	ug/mL
1	CCB	0	0	0	IC-QC	CL	QC	1	<1.70e-2	ug/mL
1	CCB	0	0	0	IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1	CCB	0	0	0	IC-QC	BR	QC	1	<1.25e-1	ug/mL
1	CCB	0	0	0	IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1	CCB	0	0	0	IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1	CCB	0	0	0	IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1	CCB	0	0	0	IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2	LCS-INST	0	0	0	IC-QC	F	QC	64.0	7.14e+01	111.563 % Recovery
2	LCS-INST	0	0	0	IC-QC	CL	QC	90.0	8.79e+01	97.667 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO2	QC	529	5.17e+02	97.732 % Recovery
2	LCS-INST	0	0	0	IC-QC	BR	QC	625	6.26e+02	100.160 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO3	QC	690	7.31e+02	105.942 % Recovery
2	LCS-INST	0	0	0	IC-QC	PO4	QC	635	6.26e+02	98.583 % Recovery
2	LCS-INST	0	0	0	IC-QC	SO4	QC	690	6.92e+02	100.290 % Recovery
2	LCS-INST	0	0	0	IC-QC	OXALATE2	QC	531	5.55e+02	104.520 % Recovery
3	CCV	0	0	0	IC-QC	F	QC	63.5	6.60e+01	107.087 % Recovery
3	CCV	0	0	0	IC-QC	CL	QC	87.5	8.46e+01	96.686 % Recovery
3	CCV	0	0	0	IC-QC	NO2	QC	534	5.28e+02	98.876 % Recovery
3	CCV	0	0	0	IC-QC	BR	QC	630	6.28e+02	99.683 % Recovery
3	CCV	0	0	0	IC-QC	NO3	QC	700	7.09e+02	101.286 % Recovery
3	CCV	0	0	0	IC-QC	PO4	QC	635	6.27e+02	98.740 % Recovery
3	CCV	0	0	0	IC-QC	SO4	QC	690	7.13e+02	103.333 % Recovery
3	CCV	0	0	0	IC-QC	OXALATE2	QC	539	5.57e+02	103.340 % Recovery
4	SAMPLE	S99T001891	0	0	IC-01	F-02	LIQUID	N/A	< 1.212e+00	1.212 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	CL-02	LIQUID	N/A	3.041e+00	1.717 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	NO2-02	LIQUID	N/A	< 1.091e+01	10.910 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	BR-02	LIQUID	N/A	2.369e+04	1275.000 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	NO3-02	LIQUID	N/A	< 1.404e+01	14.040 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	PO4-02	LIQUID	N/A	< 1.212e+01	12.120 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	SO4-02	LIQUID	N/A	< 1.394e+01	13.940 ug/mL
4	SAMPLE	S99T001891	0	0	IC-01	OXALATE2	LIQUID	N/A	< 1.061e+01	10.610 ug/mL
5	DUP	S99T001891	0	0	IC-01	F-02	LIQUID	<1.21e0	<1.21e0	RPD
5	DUP	S99T001891	0	0	IC-01	CL-02	LIQUID	3.04e+00	4.01e+00	27.518 RPD
5	DUP	S99T001891	0	0	IC-01	NO2-02	LIQUID	<1.09e1	<1.09e1	RPD
5	DUP	S99T001891	0	0	IC-01	BR-02	LIQUID	2.37e+04	2.40e+04	1.258 RPD
5	DUP	S99T001891	0	0	IC-01	NO3-02	LIQUID	<1.40e1	<1.40e1	RPD
5	DUP	S99T001891	0	0	IC-01	PO4-02	LIQUID	<1.21e1	<1.21e1	RPD
5	DUP	S99T001891	0	0	IC-01	SO4-02	LIQUID	<1.39e1	<1.39e1	RPD
5	DUP	S99T001891	0	0	IC-01	OXALATE2	LIQUID	<1.06e1	<1.06e1	RPD
6	SAMPLE	S99T001892	0	0	IC-01	F-02	LIQUID	N/A	< 1.200e-02	1.20e-002 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31888

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	899T001892	0	●IC-01 CL-02	LIQUID	N/A	6.900e-02	1.70e-002	ug/mL
6 SAMPLE	899T001892	0	●IC-01 NO2-02	LIQUID	N/A <	1.080e-01	0.108	ug/mL
6 SAMPLE	899T001892	0	●IC-01 BR-02	LIQUID	N/A <	1.250e-01	0.125	ug/mL
6 SAMPLE	899T001892	0	●IC-01 NO3-02	LIQUID	N/A <	1.390e-01	0.139	ug/mL
6 SAMPLE	899T001892	0	●IC-01 PO4-02	LIQUID	N/A <	1.200e-01	0.120	ug/mL
6 SAMPLE	899T001892	0	●IC-01 SO4-02	LIQUID	N/A	2.190e-01	0.138	ug/mL
6 SAMPLE	899T001892	0	●IC-01 OXALATE2	LIQUID	N/A	1.670e-01	0.105	ug/mL
7 DUP	899T001892	0	●IC-01 F-02	LIQUID	<1.20e-2	<1.20e-2		RPD
7 DUP	899T001892	0	●IC-01 CL-02	LIQUID	6.90e-02	6.10e-02	12.308	RPD
7 DUP	899T001892	0	●IC-01 NO2-02	LIQUID	<1.08e-1	<1.08e-1		RPD
7 DUP	899T001892	0	●IC-01 BR-02	LIQUID	<1.25e-1	<1.25e-1		RPD
7 DUP	899T001892	0	●IC-01 NO3-02	LIQUID	<1.39e-1	<1.39e-1		RPD
7 DUP	899T001892	0	●IC-01 PO4-02	LIQUID	<1.20e-1	<1.20e-1		RPD
7 DUP	899T001892	0	●IC-01 SO4-02	LIQUID	2.19e-01	1.93e-01	12.621	RPD
7 DUP	899T001892	0	●IC-01 OXALATE2	LIQUID	1.67e-01	<1.05e-1		RPD

Final page for worklist# 31888

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

1/13/00
Reviewer Signature _____ Date _____

12/07/99 11:24
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 31888

Analyst: ADP Instrument: ICBook# 101N21-E LCS
100U21-E CCVMethod: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ101 FOR @IC-01, RLC

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001891 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S99T001891 0		@IC-01	LIQUID		
6 SAMPLE	S99T001892 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S99T001892 0		@IC-01	LIQUID		

Final page for worklist # 31888

Authentic 1-7-2000
Signature Date

Signature Date

Data Entry Comments:

uploaded 1-10-00Validated 1/12/00 mtfJohn Howell31888 JAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: 101N21-E LCS Date: 01/08/2000 02:52:32
 Data File : C:\DX\DATA\00070121.D23
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 23 Detector: CDM-1
 Analyst : *Anthony Pantoja* Column: AG4A/AS4A anion column

1-8-2000

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.04	fluoride	71.432	1580	6564	1	-0.95
2	1.54	chloride	87.873	1477	5603	1	-0.65
3	1.83	nitrite	516.965	4194	20913	1	0.18
4	2.72	bromide	625.576	3002	17158	1	-0.37
5	3.08	nitrate	731.046	3812	25857	1	-0.32
6	4.35	phosphate	625.522	965	11409	1	-0.53
7	5.65	sulfate	691.932	2118	32833	1	0.06
8	7.36	oxalate	555.179	1047	20766	1	0.00

Totals	3905.525	18194	141103
--------	----------	-------	--------

File: 00070121.D23 Sample: 101N21-E LCS

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 767 TO 768.

Sample Name: CCB BLANK Date: 01/07/2000 21:52:28
Data File : C:\DX\DATA\00070141.D01
Method : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
---------	----------	----------------	---------------------	--------	------	----------	--------

Totals			0.000	0	0		
--------	--	--	-------	---	---	--	--

```

=====
Sample Name: 100N21-E CCV                      Date: 01/08/2000 03:06:10
Data File  : C:\DX\DATA\00070121.D24
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 24             Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3300   5Hz   0.00 11.00         50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.04	fluoride	67.974	1551	6239	1	-0.95
2	1.54	chloride	84.587	1408	5393	1	-0.65
3	1.83	nitrite	527.872	4310	21368	1	0.18
4	2.73	bromide	628.072	3018	17229	1	-0.12
5	3.09	nitrate	709.127	3750	25060	1	-0.11
6	4.35	phosphate	627.465	979	11445	1	-0.53
7	5.65	sulfate	713.165	2145	33868	1	0.06
8	7.36	oxalate	556.761	1054	20826	1	0.00
Totals			3915.024	18215	141428		

File: 00070121.D24 Sample: 100N21-E CCV

```

=====
Sample Name: S99T001891 SAM                      Date: 01/07/2000 22:33:23
Data File  : C:\DX\DATA\00070121.D04
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 4              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3300   5Hz   0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	229	2910	1	
2	1.54	chloride	3.041	51	201	1	-0.65
3	2.63	bromide	-4271.824	152490	948220	1	-3.79
Totals			-4268.783	152770	951331		

File: 00070121.D04 Sample: S99T001891 SAM

```

=====
Sample Name: S99T001891 SAM                      Date: 01/08/2000 03:20:47
Data File  : C:\DX\DATA\00070151.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 1              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1       10201   3300 5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	2.73	bromide	23693.869	1039	6173	1	-0.12
Totals			23693.869	1039	6173		

File: 00070151.D01 Sample: S99T001891 SAM

```

=====
Sample Name: S99T001891  DUP                      Date: 01/07/2000 22:47:01
Data File   : C:\DX\DATA\00070121.D05
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address : 1 System: 1 Inject#: 5              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	165	1289	1	
2	1.53	chloride	4.011	55	262	1	-1.08
3	2.63	bromide	-4817.034	152091	960035	1	-3.79
Totals			-4813.023	152310	961586		

File: 00070121.D05 Sample: S99T001891 DUP

```

=====
Sample Name: S99T001891  DUP                      Date: 01/08/2000 03:34:25
Data File   : C:\DX\DATA\00070131.D02
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address : 1   System: 1   Inject#: 2           Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1       10201    3300  5Hz   0.00 11.00         50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	2.73	bromide	23973.248	1067	6249	1	0.12
Totals			23973.248	1067	6249		

File: 00070131.D02 Sample: S99T001891 DUP

```

=====
Sample Name: S99T001892 SAM                      Date: 01/07/2000 23:00:40
Data File  : C:\DX\DATA\00070121.D06
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 6              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1 3300 5Hz 0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.55	chloride	0.069	110	449	1	-0.22
3	5.71	sulfate	0.219	45	687	1	1.00
4	7.04	oxalate	0.167	18	318	1	-4.35
Totals			0.456	174	1454

```

=====
Sample Name: S99T001892  DUP                      Date: 01/07/2000 23:14:18
Data File  : C:\DX\DATA\00070121.D07
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 7              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1  3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.55	chloride	0.061	127	397	1	-0.22
2	3.12	nitrate	0.092	20	97	1	0.97
3	5.76	sulfate	0.193	40	559	1	1.95
Totals			0.346	187	1053

LABCORE Completed Worklist Report for Worklist# 32197

Analyst: adp

Instrument: IC45S1

Book#: 102N21B

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	01C-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	0	01C-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	0	01C-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	0	01C-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	0	01C-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	0	01C-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	0	01C-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	0	01C-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 LCS-INST	0	0	01C-QC F	QC	63.5	6.27e+01	98.740 % Recovery	
2 LCS-INST	0	0	01C-QC CL	QC	87.5	8.24e+01	94.171 % Recovery	
2 LCS-INST	0	0	01C-QC NO2	QC	529	4.40e+02	83.176 % Recovery	
2 LCS-INST	0	0	01C-QC BR	QC	625	6.14e+02	98.240 % Recovery	
2 LCS-INST	0	0	01C-QC NO3	QC	710	7.79e+02	109.718 % Recovery	
2 LCS-INST	0	0	01C-QC PO4	QC	630	6.20e+02	98.413 % Recovery	
2 LCS-INST	0	0	01C-QC SO4	QC	680	6.60e+02	97.059 % Recovery	
2 LCS-INST	0	0	01C-QC OXALATE2	QC	526	5.38e+02	102.281 % Recovery	
3 CCV	0	0	01C-QC F	QC	64.5	6.38e+01	98.915 % Recovery	
3 CCV	0	0	01C-QC CL	QC	86.0	8.66e+01	100.698 % Recovery	
3 CCV	0	0	01C-QC NO2	QC	528	5.25e+02	99.432 % Recovery	
3 CCV	0	0	01C-QC BR	QC	635	6.42e+02	101.102 % Recovery	
3 CCV	0	0	01C-QC NO3	QC	695	7.04e+02	101.295 % Recovery	
3 CCV	0	0	01C-QC PO4	QC	625	6.17e+02	98.720 % Recovery	
3 CCV	0	0	01C-QC SO4	QC	695	7.03e+02	101.151 % Recovery	
3 CCV	0	0	01C-QC OXALATE2	QC	523	5.16e+02	98.662 % Recovery	
4 SAMPLE	S99T001918	0	01C-01 F-02	LIQUID	N/A	1.777e+03	49.690	ug/mL
4 SAMPLE	S99T001918	0	01C-01 CL-02	LIQUID	N/A	1.440e+02	70.400	ug/mL
4 SAMPLE	S99T001918	0	01C-01 NO2-02	LIQUID	N/A	7.156e+04	447.200	ug/mL
4 SAMPLE	S99T001918	0	01C-01 BR-02	LIQUID	N/A	< 5.176e+02	517.600	ug/mL
4 SAMPLE	S99T001918	0	01C-01 NO3-02	LIQUID	N/A	7.082e+04	575.600	ug/mL
4 SAMPLE	S99T001918	0	01C-01 PO4-02	LIQUID	N/A	1.039e+03	496.900	ug/mL
4 SAMPLE	S99T001918	0	01C-01 SO4-02	LIQUID	N/A	1.585e+04	571.500	ug/mL
4 SAMPLE	S99T001918	0	01C-01 OXALATE2	LIQUID	N/A	1.395e+03	434.800	ug/mL
5 DUP	S99T001918	0	01C-01 F-02	LIQUID	1.78e+03	1.72e+03	3.429	RPD
5 DUP	S99T001918	0	01C-01 CL-02	LIQUID	1.44e+02	2.20e+02	41.758	RPD
5 DUP	S99T001918	0	01C-01 NO2-02	LIQUID	7.16e+04	7.24e+04	1.111	RPD
5 DUP	S99T001918	0	01C-01 BR-02	LIQUID	<5.18e2	<5.18e2		RPD
5 DUP	S99T001918	0	01C-01 NO3-02	LIQUID	7.08e+04	7.19e+04	1.542	RPD
5 DUP	S99T001918	0	01C-01 PO4-02	LIQUID	1.04e+03	1.12e+03	7.407	RPD
5 DUP	S99T001918	0	01C-01 SO4-02	LIQUID	1.58e+04	1.59e+04	0.631	RPD
5 DUP	S99T001918	0	01C-01 OXALATE2	LIQUID	1.40e+03	1.27e+03	9.738	RPD
6 SAMPLE	S99T001919	0	01C-01 F-02	LIQUID	N/A	1.647e+03	49.690	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 32197

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001919	0	②IC-01 CL-02	LIQUID	N/A	1.301e+02	70.400	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 NO2-02	LIQUID	N/A	6.799e+04	447.200	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 BR-02	LIQUID	N/A	1.027e+03	517.600	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 NO3-02	LIQUID	N/A	6.829e+04	575.600	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 PO4-02	LIQUID	N/A	6.279e+02	496.900	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 SO4-02	LIQUID	N/A	1.530e+04	571.500	ug/mL
6 SAMPLE	S99T001919	0	②IC-01 OXALATE2	LIQUID	N/A	1.464e+03	434.800	ug/mL
7 DUP	S99T001919	0	②IC-01 F-02	LIQUID	1.65e+03	1.67e+03	1.205	RPD
7 DUP	S99T001919	0	②IC-01 CL-02	LIQUID	1.30e+02	1.62e+02	21.918	RPD
7 DUP	S99T001919	0	②IC-01 NO2-02	LIQUID	6.80e+04	6.87e+04	1.024	RPD
7 DUP	S99T001919	0	②IC-01 BR-02	LIQUID	1.03e+03	1.09e+03	5.660	RPD
7 DUP	S99T001919	0	②IC-01 NO3-02	LIQUID	6.83e+04	6.77e+04	0.882	RPD
7 DUP	S99T001919	0	②IC-01 PO4-02	LIQUID	6.28e+02	1.01e+03	46.642	RPD
7 DUP	S99T001919	0	②IC-01 SO4-02	LIQUID	1.53e+04	1.52e+04	0.656	RPD
7 DUP	S99T001919	0	②IC-01 OXALATE2	LIQUID	1.46e+03	1.49e+03	2.034	RPD
8 SAMPLE	S99T001920	0	②IC-01 F-02	LIQUID	N/A	1.640e+03	49.690	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 CL-02	LIQUID	N/A	1.699e+02	70.400	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 NO2-02	LIQUID	N/A	6.702e+04	447.200	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 BR-02	LIQUID	N/A	1.364e+03	517.600	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 NO3-02	LIQUID	N/A	6.561e+04	575.600	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 PO4-02	LIQUID	N/A	8.747e+02	496.900	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 SO4-02	LIQUID	N/A	1.500e+04	571.500	ug/mL
8 SAMPLE	S99T001920	0	②IC-01 OXALATE2	LIQUID	N/A	1.387e+03	434.800	ug/mL
9 DUP	S99T001920	0	②IC-01 F-02	LIQUID	1.64e+03	1.70e+03	3.593	RPD
9 DUP	S99T001920	0	②IC-01 CL-02	LIQUID	1.70e+02	1.73e+02	1.749	RPD
9 DUP	S99T001920	0	②IC-01 NO2-02	LIQUID	6.70e+04	6.69e+04	0.149	RPD
9 DUP	S99T001920	0	②IC-01 BR-02	LIQUID	1.36e+03	1.35e+03	0.738	RPD
9 DUP	S99T001920	0	②IC-01 NO3-02	LIQUID	6.56e+04	6.56e+04	0.000	RPD
9 DUP	S99T001920	0	②IC-01 PO4-02	LIQUID	8.75e+02	8.10e+02	7.715	RPD
9 DUP	S99T001920	0	②IC-01 SO4-02	LIQUID	1.50e+04	1.48e+04	1.342	RPD
9 DUP	S99T001920	0	②IC-01 OXALATE2	LIQUID	1.39e+03	1.80e+03	25.705	RPD

Final page for worklist# 32197

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Luge 1/26/00
Reviewer Signature _____ Date _____

01/24/00 13:10
ws2

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 32197

Analyst: ADD Instrument: IC 4551 Book# 103 N21-B LCS
102 N21-B CCV
Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001918 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S99T001918 0		@IC-01	LIQUID		
6 SAMPLE	S99T001919 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S99T001919 0		@IC-01	LIQUID		
8 SAMPLE	S99T001920 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
9 DUP	S99T001920 0		@IC-01	LIQUID		

Final page for worklist # 32197

[Signature] 01-25-00
Signature Date

Signature Date

Data Entry Comments:

upgraded 1-25-00

validated 1/26/00 JmLye

32197 JAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Data Reprocessed On 01/25/2000 11:53:57

Sample Name: 103N21-B LCS Date: 01/25/2000 10:43:06
 Data File : C:\DX\DATA\00012501.D02
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System 1 Inject#: 2 Detector: CDM-1
 Analyst : *Anthony Smith* Column: AG4A/AS4A anion column

01-25-00

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	18	68	2	
2	1.04	fluoride	62.671	1462	5740	2	-0.95
3	1.53	chloride	82.380	1418	5251	1	-1.08
4	1.82	nitrite	439.701	3608	17693	1	-0.55
5	2.69	bromide	613.829	3017	16824	1	-1.59
6	3.04	nitrate	779.498	4222	27622	1	-1.62
7	4.37	phosphate	620.299	973	11313	1	0.08
8	5.71	sulfate	659.773	2204	31268	1	1.00
9	7.41	oxalate	537.932	1052	20109	1	0.72
Totals			3796.082	17975	135889		

File: 00012501.D02 Sample: 103N21-B LCS

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 779 TO 787

```

=====
Sample Name: BLANK CCB                      Date: 01/25/2000 10:29:27
Data File  : C:\DX\DATA\00012511.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 1          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1 3300 5Hz 0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.39		0.000	22	145	2	
2	1.55	chloride	0.013	26	94	2	-0.22
Totals			0.013	48	239

```

=====
Sample Name: 102N21-B CCV                      Date: 01/25/2000 10:56:45
Data File  : C:\DX\DATA\00012501.D03
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 3              Detector: CDM-1
Analyst    :                                  Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	20	89	2	
2	1.04	fluoride	63.765	1512	5843	2	-0.95
3	1.53	chloride	86.592	1412	5521	1	-1.08
4	1.82	nitrite	524.625	4245	21233	1	-0.55
5	2.68	bromide	642.274	3118	17634	1	-1.83
6	3.04	nitrate	704.348	3732	24886	1	-1.62
7	4.37	phosphate	617.003	1001	11253	1	0.08
8	5.71	sulfate	703.487	2407	33396	1	1.00
9	7.41	oxalate	515.931	1061	19272	1	0.72
Totals			3858.025	18507	139127		

File: 00012501.D03 Sample: 102N21-B CCV

```

=====
Sample Name: S99T001918 SAM                      Date: 01/25/2000 11:10:25
Data File   : C:\DX\DATA\00012501.D04
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address : 1 System: 1 Inject#: 4              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         4141   3300  5Hz   0.00 11.00         50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	38	169	2	
2	1.04	fluoride	1777.299	992	3935	2	-0.95
3	1.53	chloride	143.996	64	231	1	-1.08
4	1.83	nitrite	71559.628	14705	73732	1	-0.18
5	3.01	nitrate	70823.317	9502	63168	1	-2.48
6	4.40	phosphate	1038.519	54	513	1	0.69
7	5.71	sulfate	15853.318	1243	18064	1	1.00
8	7.47	oxalate	1394.700	57	968	1	1.45
Totals			162590.778	26656	160780		

File: 00012501.D04 Sample: S99T001918 SAM

```

=====
Sample Name: S99T001918  DUP                      Date: 01/25/2000 11:24:03
Data File   : C:\DX\DATA\00012501.D05
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address : 1  System: 1  Inject#: 5              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	37	151	2	
2	1.04	fluoride	1715.445	997	3795	2	-0.95
3	1.53	chloride	219.516	83	347	1	-1.51
4	1.82	nitrite	72402.446	14574	74644	1	-0.55
5	3.01	nitrate	71902.883	9367	64184	1	-2.70
6	4.35	phosphate	1119.849	49	549	1	-0.53
7	5.71	sulfate	15926.352	1315	18150	1	1.00
8	7.41	oxalate	1273.465	47	856	1	0.72
Totals			164559.956	26469	162675

```

=====
Sample Name: S99T001919 SAM                      Date: 01/25/2000 11:37:41
Data File  : C:\DX\DATA\00012501.D06
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 6                Detector: CDM-1
Analyst    :                                     Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         4141   3300  5Hz   0.00 11.00         50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	36	160	2	
2	1.04	fluoride	1647.494	964	3641	2	-0.95
3	1.53	chloride	130.069	60	209	1	-1.08
4	1.82	nitrite	67990.140	14031	69882	1	-0.55
5	2.69	bromide	1027.211	83	403	1	-1.59
6	3.01	nitrate	68292.777	8936	60792	1	-2.70
7	4.37	phosphate	627.861	39	334	1	0.08
8	5.71	sulfate	15296.507	1297	17412	1	1.00
9	7.41	oxalate	1463.698	52	1031	1	0.72
Totals			156475.757	25498	153864		

File: 00012501.D06 Sample: S99T001919 SAM

```

=====
Sample Name: S99T001919  DUP                      Date: 01/25/2000 11:51:19
Data File   : C:\DX\DATA\00012501.D07
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 7              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	40	184	2	
2	1.04	fluoride	1666.259	965	3683	2	-0.95
3	1.53	chloride	161.745	67	258	1	-1.51
4	1.82	nitrite	68697.128	14157	70643	1	-0.55
5	2.69	bromide	1085.531	90	442	1	-1.34
6	3.01	nitrate	67728.057	8988	60263	1	-2.70
7	4.35	phosphate	1008.735	43	500	1	-0.53
8	5.71	sulfate	15234.694	1285	17340	1	1.00
9	7.41	oxalate	1485.544	56	1052	1	0.72
Totals			157067.693	25692	154364		

File: 00012501.D07 Sample: S99T001919 DUP

```

=====
Sample Name: S99T001920 SAM                      Date: 01/25/2000 12:04:59
Data File  : C:\DX\DATA\00012501.D08
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 8                Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         4141   3300  5Hz   0.00 11.00         50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	35	150	2	
2	1.04	fluoride	1640.262	941	3625	2	-0.95
3	1.53	chloride	169.906	74	271	1	-1.08
4	1.82	nitrite	67017.430	13788	68836	1	-0.55
5	2.69	bromide	1363.561	120	627	1	-1.59
6	3.01	nitrate	65609.801	8701	58282	1	-2.70
7	4.35	phosphate	874.692	46	441	1	-0.53
8	5.71	sulfate	14997.907	1256	17062	1	1.00
9	7.41	oxalate	1387.130	52	961	1	0.72
Totals			153060.690	25014	150255

```

=====
Sample Name: S99T001920  DUP                      Date: 01/25/2000 12:18:39
Data File  : C:\DX\DATA\00012501.D09
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 9              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	29	119	2	
2	1.03	fluoride	1694.996	930	3749	2	-1.59
3	1.53	chloride	173.404	76	276	1	-1.08
4	1.82	nitrite	66926.254	13847	68738	1	-0.55
5	2.69	bromide	1349.475	125	618	1	-1.59
6	3.01	nitrate	65592.767	8750	58267	1	-2.70
7	4.35	phosphate	809.610	42	413	1	-0.53
8	5.71	sulfate	14766.186	1249	16791	1	1.00
9	7.41	oxalate	1795.914	69	1339	1	0.72
10	9.87		0.000	23	1648	1	
Totals			153108.605	25140	151957		

File: 00012501.D09 Sample: S99T001920 DUP

LABCORE Completed Worklist Report for Worklist# 32198

Analyst: adp

Instrument: IC45S1

Book#: 103N21C

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	0IC-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	0IC-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	0	0IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	0IC-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	0IC-QC	NO3	QC	1	<1.33e-1	ug/mL
1 CCB	0	0	0IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	0IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	0IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 LCS-INST	0	0	0IC-QC	F	QC	63.5	6.15e+01	96.850 % Recovery
2 LCS-INST	0	0	0IC-QC	CL	QC	87.5	8.72e+01	99.657 % Recovery
2 LCS-INST	0	0	0IC-QC	NO2	QC	536	5.10e+02	95.149 % Recovery
2 LCS-INST	0	0	0IC-QC	BR	QC	625	6.04e+02	96.640 % Recovery
2 LCS-INST	0	0	0IC-QC	NO3	QC	710	6.98e+02	98.310 % Recovery
2 LCS-INST	0	0	0IC-QC	PO4	QC	630	5.97e+02	94.762 % Recovery
2 LCS-INST	0	0	0IC-QC	SO4	QC	680	6.47e+02	95.147 % Recovery
2 LCS-INST	0	0	0IC-QC	OXALATE2	QC	523	5.22e+02	99.809 % Recovery
3 CCV	0	0	0IC-QC	F	QC	64.5	6.43e+01	99.690 % Recovery
3 CCV	0	0	0IC-QC	CL	QC	86.0	8.18e+01	95.116 % Recovery
3 CCV	0	0	0IC-QC	NO2	QC	544	5.21e+02	95.772 % Recovery
3 CCV	0	0	0IC-QC	BR	QC	635	6.24e+02	98.268 % Recovery
3 CCV	0	0	0IC-QC	NO3	QC	695	6.75e+02	97.122 % Recovery
3 CCV	0	0	0IC-QC	PO4	QC	625	5.96e+02	95.360 % Recovery
3 CCV	0	0	0IC-QC	SO4	QC	695	6.85e+02	98.561 % Recovery
3 CCV	0	0	0IC-QC	OXALATE2	QC	529	5.31e+02	100.378 % Recovery
4 SAMPLE	S99T001921	0	0IC-01	F-02	LIQUID	N/A	1.666e+03	49.690 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	CL-02	LIQUID	N/A	1.294e+02	70.400 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	NO2-02	LIQUID	N/A	6.708e+04	447.200 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	BR-02	LIQUID	N/A	1.260e+03	517.600 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	NO3-02	LIQUID	N/A	6.808e+04	575.600 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	PO4-02	LIQUID	N/A	8.213e+02	496.900 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	SO4-02	LIQUID	N/A	1.539e+04	571.500 ug/mL
4 SAMPLE	S99T001921	0	0IC-01	OXALATE2	LIQUID	N/A	1.874e+03	434.800 ug/mL
5 DUP	S99T001921	0	0IC-01	F-02	LIQUID	1.67e+03	1.71e+03	2.367 RPD
5 DUP	S99T001921	0	0IC-01	CL-02	LIQUID	1.29e+02	1.35e+02	4.545 RPD
5 DUP	S99T001921	0	0IC-01	NO2-02	LIQUID	6.71e+04	6.85e+04	2.065 RPD
5 DUP	S99T001921	0	0IC-01	BR-02	LIQUID	1.26e+03	1.29e+03	2.353 RPD
5 DUP	S99T001921	0	0IC-01	NO3-02	LIQUID	6.81e+04	6.74e+04	1.033 RPD
5 DUP	S99T001921	0	0IC-01	PO4-02	LIQUID	8.21e+02	7.04e+02	15.344 RPD
5 DUP	S99T001921	0	0IC-01	SO4-02	LIQUID	1.54e+04	1.56e+04	1.290 RPD
5 DUP	S99T001921	0	0IC-01	OXALATE2	LIQUID	1.87e+03	1.31e+03	35.220 RPD
6 SPK	S99T001921	0	0IC-01	F-02	LIQUID	63.5	6.34e+01	99.843 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 32198

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	999T001921	0	•IC-01	CL-02	LIQUID	87.5	8.51e+01	97.257 % Recovery
6 SPK	999T001921	0	•IC-01	NO2-02	LIQUID	536	6.11e+02	113.993 % Recovery
6 SPK	999T001921	0	•IC-01	BR-02	LIQUID	525	6.06e+02	96.960 % Recovery
6 SPK	999T001921	0	•IC-01	NO3-02	LIQUID	710	7.39e+02	104.085 % Recovery
6 SPK	999T001921	0	•IC-01	PO4-02	LIQUID	630	6.19e+02	98.254 % Recovery
6 SPK	999T001921	0	•IC-01	SO4-02	LIQUID	680	6.60e+02	97.059 % Recovery
6 SPK	999T001921	0	•IC-01	OXALATE2	LIQUID	523	5.10e+02	97.514 % Recovery
7 SAMPLE	999T001922	0	•IC-01	F-02	LIQUID	N/A	1.610e+03	49.690 ug/mL
7 SAMPLE	999T001922	0	•IC-01	CL-02	LIQUID	N/A	1.329e+02	70.400 ug/mL
7 SAMPLE	999T001922	0	•IC-01	NO2-02	LIQUID	N/A	6.903e+04	447.200 ug/mL
7 SAMPLE	999T001922	0	•IC-01	BR-02	LIQUID	N/A	1.330e+03	517.600 ug/mL
7 SAMPLE	999T001922	0	•IC-01	NO3-02	LIQUID	N/A	6.688e+04	575.600 ug/mL
7 SAMPLE	999T001922	0	•IC-01	PO4-02	LIQUID	N/A	8.266e+02	496.900 ug/mL
7 SAMPLE	999T001922	0	•IC-01	SO4-02	LIQUID	N/A	1.503e+04	571.500 ug/mL
7 SAMPLE	999T001922	0	•IC-01	OXALATE2	LIQUID	N/A	1.313e+03	434.800 ug/mL
8 DUP	999T001922	0	•IC-01	F-02	LIQUID	1.61e+03	1.63e+03	1.235 RPD
8 DUP	999T001922	0	•IC-01	CL-02	LIQUID	1.33e+02	1.50e+02	12.014 RPD
8 DUP	999T001922	0	•IC-01	NO2-02	LIQUID	6.90e+04	6.78e+04	1.754 RPD
8 DUP	999T001922	0	•IC-01	BR-02	LIQUID	1.33e+03	1.42e+03	6.545 RPD
8 DUP	999T001922	0	•IC-01	NO3-02	LIQUID	6.69e+04	6.68e+04	0.150 RPD
8 DUP	999T001922	0	•IC-01	PO4-02	LIQUID	8.27e+02	9.02e+02	8.676 RPD
8 DUP	999T001922	0	•IC-01	SO4-02	LIQUID	1.50e+04	1.57e+04	4.560 RPD
8 DUP	999T001922	0	•IC-01	OXALATE2	LIQUID	1.31e+03	2.03e+03	43.114 RPD

Final page for worklist# 32198

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lyle
Reviewer Signature _____ Date 1/28/00

01/24/00 13:10

LABCORE Data Entry Template for Worklist# 32198

Page: 1

Analyst: ADP Instrument: IC 4551 Book# 103N21-C LCS
102N21-C CCV
 Method: LA-533-105 Rev/Mod F-2
 Worklist Comment: AZ-101 (2), @IC-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	LCS-INST				@IC-QC	QC		
3	CCV				@IC-QC	QC		
4	SAMPLE	S99T001921 0			@IC-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5	DUP	S99T001921 0			@IC-01	LIQUID		
6	SPK	S99T001921 0			@IC-01	LIQUID		
7	SAMPLE	S99T001922 0			@IC-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
8	DUP	S99T001922 0			@IC-01	LIQUID		

Final page for worklist # 32198

ADP 01-27-00
 Signature Date

 Signature Date

Data Entry Comments:

uploaded 1-28-00
John W. Wainwright

validated 1/28/00 Jm Faye

32198TAN.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: 103N21-C LCS Date: 01/27/2000 14:33:53
 Data File : C:\DX\DATA\00012711.D02
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
 Analyst : *Anthony Furuta* Column: AG4A/AS4A anion column

01-27-00

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	18	72	2	
2	1.03	fluoride	61.481	1475	5629	2	-1.59
3	1.51	chloride	87.199	1394	5560	1	-2.37
4	1.80	nitrite	510.025	4236	20623	1	-1.64
5	2.64	bromide	603.883	3035	16541	1	-3.30
6	2.99	nitrate	698.036	3757	24657	1	-3.34
7	4.29	phosphate	597.259	933	10889	1	-1.75
8	5.60	sulfate	647.360	2343	30664	1	-0.88
9	7.25	oxalate	522.225	1065	19512	1	-1.45
Totals			3727.468	18257	134146		

File: 00012711.D02 Sample: 103N21-C LCS

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 791 TO 798.

=====

Sample Name: BLANK CCB	Date: 01/27/2000 14:20:13
Data File : C:\DX\DATA\00012731.D01	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 System: 1 Inject#: 1	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0		

File: 00012731.D01 Sample: BLANK CCB

Sample Name: 102N21-C CCV Date: 01/27/2000 14:47:31
 Data File : C:\DX\DATA\00012711.D03
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 3 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	15	60	2	
2	1.03	fluoride	64.265	1522	5890	2	-1.59
3	1.51	chloride	81.848	1379	5217	1	-2.37
4	1.80	nitrite	520.866	4409	21076	1	-1.64
5	2.64	bromide	624.473	3116	17127	1	-3.30
6	2.99	nitrate	675.353	3748	23833	1	-3.13
7	4.29	phosphate	595.856	973	10863	1	-1.75
8	5.60	sulfate	684.668	2485	32479	1	-0.88
9	7.25	oxalate	530.872	1101	19841	1	-1.45
Totals			3778.202	18749	136386		

File: 00012711.D03 Sample: 102N21-C CCV

```

=====
Sample Name: S99T001921 SAM                      Date: 01/27/2000 15:01:09
Data File   : C:\DX\DATA\00012701.D04
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 4              Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	40	167	2	
2	1.03	fluoride	1665.890	971	3683	2	-1.59
3	1.52	chloride	129.356	57	208	1	-1.94
4	1.80	nitrite	67081.340	14085	68904	1	-1.64
5	2.65	bromide	1259.708	118	558	1	-2.81
6	2.97	nitrate	68081.890	9146	60594	1	-3.99
7	4.29	phosphate	821.298	42	418	1	-1.75
8	5.60	sulfate	15387.596	1294	17519	1	-0.88
9	7.25	oxalate	1874.423	62	1411	1	-1.45
Totals			156301.502	25814	153462		

File: 00012701.D04 Sample: S99T001921 SAM

```

=====
Sample Name: S99T001921  DUP                      Date: 01/27/2000 15:14:48
Data File   : C:\DX\DATA\00012701.D05
Method      : C:\DX\METHOD\ANIONSa.met
ACI Address : 1   System: 1   Inject#: 5           Detector: CDM-1
Analyst     :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	29	123	2	
2	1.03	fluoride	1710.898	972	3785	2	-1.59
3	1.51	chloride	134.862	57	217	1	-2.37
4	1.80	nitrite	68547.090	14126	70481	1	-1.64
5	2.65	bromide	1291.630	117	579	1	-3.05
6	2.96	nitrate	67398.720	9072	59955	1	-4.21
7	4.32	phosphate	704.416	34	367	1	-1.14
8	5.60	sulfate	15590.658	1302	17757	1	-0.88
9	7.31	oxalate	1313.697	51	893	1	-0.72
Totals			156691.970	25760	154156		

File: 00012701.D05 Sample: S99T001921 DUP

```

=====
Sample Name: S99T001921 SPK                      Date: 01/27/2000 15:28:27
Data File  : C:\DX\DATA\00012701.D06
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 6              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300   5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	48	209	2	
2	1.03	fluoride	4220.352	2451	9557	2	-1.59
3	1.51	chloride	3562.614	1395	5540	1	-2.37
4	1.80	nitrite	91718.672	18547	95809	1	-1.64
5	2.63	bromide	25679.714	3217	17180	1	-3.54
6	2.95	nitrate	97875.682	13397	89159	1	-4.64
7	4.29	phosphate	25767.916	1018	11464	1	-1.75
8	5.60	sulfate	41995.928	3872	49147	1	-0.88
9	7.25	oxalate	22438.899	1149	20466	1	-1.45
Totals			313259.776	45095	298530		

File: 00012701.D06 Sample: S99T001921 SPK

```

=====
Sample Name: S99T001922 SAM                      Date: 01/27/2000 15:42:05
Data File  : C:\DX\DATA\00012701.D07
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 7              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	38	191	2	
2	1.03	fluoride	1609.873	945	3556	2	-1.59
3	1.51	chloride	132.854	58	213	1	-2.37
4	1.80	nitrite	69027.003	13952	70998	1	-1.64
5	2.65	bromide	1330.294	127	605	1	-3.05
6	2.96	nitrate	66876.126	8933	59466	1	-4.21
7	4.29	phosphate	826.569	40	420	1	-1.75
8	5.60	sulfate	15030.615	1278	17101	1	-0.88
9	7.31	oxalate	1312.615	57	892	1	-0.72
Totals			156145.950	25427	153442		

File: 00012701.D07 Sample: S99T001922 SAM

```

=====
Sample Name: S99T001922 DUP                      Date: 01/27/2000 15:55:43
Data File  : C:\DX\DATA\00012701.D08
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 8                Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	33	146	2	
2	1.03	fluoride	1633.557	940	3609	2	-1.59
3	1.51	chloride	150.085	60	240	1	-2.37
4	1.80	nitrite	67800.005	13960	69677	1	-1.64
5	2.65	bromide	1423.048	131	667	1	-3.05
6	2.96	nitrate	66758.810	8895	59356	1	-4.21
7	4.29	phosphate	902.189	45	454	1	-1.75
8	5.60	sulfate	15687.266	1285	17870	1	-0.88
9	7.25	oxalate	2031.330	63	1556	1	-1.45
Totals			156386.290	25411	153575		

File: 00012701.D08 Sample: S99T001922 DUP

LABCORE Completed Worklist Report for Worklist# 32199

Analyst: adp

Instrument: IC45S1

Book#: 103N21C

Method: LA-533-105 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @IC-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	0	IC-QC	F	QC	1	<1.20e-2	ug/mL
1	CCB	0	0	0	IC-QC	CL	QC	1	<1.70e-2	ug/mL
1	CCB	0	0	0	IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1	CCB	0	0	0	IC-QC	BR	QC	1	<1.25e-1	ug/mL
1	CCB	0	0	0	IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1	CCB	0	0	0	IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1	CCB	0	0	0	IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1	CCB	0	0	0	IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2	LCS-INST	0	0	0	IC-QC	F	QC	63.5	6.43e+01	101.260 % Recovery
2	LCS-INST	0	0	0	IC-QC	CL	QC	87.5	8.42e+01	96.229 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO2	QC	536	5.22e+02	97.388 % Recovery
2	LCS-INST	0	0	0	IC-QC	BR	QC	625	6.28e+02	100.480 % Recovery
2	LCS-INST	0	0	0	IC-QC	NO3	QC	710	7.14e+02	100.563 % Recovery
2	LCS-INST	0	0	0	IC-QC	PO4	QC	630	6.01e+02	95.397 % Recovery
2	LCS-INST	0	0	0	IC-QC	SO4	QC	680	6.67e+02	98.088 % Recovery
2	LCS-INST	0	0	0	IC-QC	OXALATE2	QC	523	5.11e+02	97.706 % Recovery
3	CCV	0	0	0	IC-QC	F	QC	64.5	6.36e+01	98.605 % Recovery
3	CCV	0	0	0	IC-QC	CL	QC	86.0	8.60e+01	100.000 % Recovery
3	CCV	0	0	0	IC-QC	NO2	QC	528	5.12e+02	96.970 % Recovery
3	CCV	0	0	0	IC-QC	BR	QC	635	6.31e+02	99.370 % Recovery
3	CCV	0	0	0	IC-QC	NO3	QC	695	6.93e+02	99.712 % Recovery
3	CCV	0	0	0	IC-QC	PO4	QC	625	6.14e+02	98.240 % Recovery
3	CCV	0	0	0	IC-QC	SO4	QC	695	6.96e+02	100.144 % Recovery
3	CCV	0	0	0	IC-QC	OXALATE2	QC	523	5.19e+02	99.235 % Recovery
4	SAMPLE	S99T001923	0	0	IC-01	F-02	LIQUID	N/A	1.675e+03	49.690 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	CL-02	LIQUID	N/A	1.101e+02	70.400 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	NO2-02	LIQUID	N/A	6.910e+04	447.200 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	BR-02	LIQUID	N/A	1.108e+03	517.600 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	NO3-02	LIQUID	N/A	6.880e+04	575.600 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	PO4-02	LIQUID	N/A	1.001e+03	496.900 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	SO4-02	LIQUID	N/A	1.565e+04	571.500 ug/mL
4	SAMPLE	S99T001923	0	0	IC-01	OXALATE2	LIQUID	N/A	1.814e+03	434.800 ug/mL
5	DUP	S99T001923	0	0	IC-01	F-02	LIQUID	1.68e+03	1.64e+03	2.410 RPD
5	DUP	S99T001923	0	0	IC-01	CL-02	LIQUID	1.10e+02	1.31e+02	17.427 RPD
5	DUP	S99T001923	0	0	IC-01	NO2-02	LIQUID	6.91e+04	7.02e+04	1.579 RPD
5	DUP	S99T001923	0	0	IC-01	BR-02	LIQUID	1.11e+03	1.19e+03	6.957 RPD
5	DUP	S99T001923	0	0	IC-01	NO3-02	LIQUID	6.88e+04	6.92e+04	0.580 RPD
5	DUP	S99T001923	0	0	IC-01	PO4-02	LIQUID	1.00e+03	5.49e+02	58.231 RPD
5	DUP	S99T001923	0	0	IC-01	SO4-02	LIQUID	1.56e+04	1.55e+04	0.643 RPD
5	DUP	S99T001923	0	0	IC-01	OXALATE2	LIQUID	1.81e+03	1.49e+03	19.394 RPD
6	SAMPLE	S99T001924	0	0	IC-01	F-02	LIQUID	N/A	1.660e+03	49.690 ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 32199

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S99T001924	0		IC-01	CL-02	LIQUID	N/A	1.224e+02	70.400 ug/mL
6 SAMPLE	S99T001924	0		IC-01	NO2-02	LIQUID	N/A	8.563e+04	447.200 ug/mL
6 SAMPLE	S99T001924	0		IC-01	BR-02	LIQUID	N/A	1.195e+03	517.600 ug/mL
6 SAMPLE	S99T001924	0		IC-01	NO3-02	LIQUID	N/A	6.926e+04	575.600 ug/mL
6 SAMPLE	S99T001924	0		IC-01	PO4-02	LIQUID	N/A	5.696e+02	496.900 ug/mL
6 SAMPLE	S99T001924	0		IC-01	SO4-02	LIQUID	N/A	1.606e+04	571.500 ug/mL
6 SAMPLE	S99T001924	0		IC-01	OXALATE2	LIQUID	N/A	7.391e+02	434.800 ug/mL
7 DUP	S99T001924	0		IC-01	F-02	LIQUID	1.66e+03	1.69e+03	1.791 RPD
7 DUP	S99T001924	0		IC-01	CL-02	LIQUID	1.22e+02	1.39e+02	13.027 RPD
7 DUP	S99T001924	0		IC-01	NO2-02	LIQUID	8.56e+04	8.23e+04	3.931 RPD
7 DUP	S99T001924	0		IC-01	BR-02	LIQUID	1.20e+03	1.20e+03	0.000 RPD
7 DUP	S99T001924	0		IC-01	NO3-02	LIQUID	6.93e+04	6.75e+04	2.632 RPD
7 DUP	S99T001924	0		IC-01	PO4-02	LIQUID	5.70e+02	8.20e+02	35.971 RPD
7 DUP	S99T001924	0		IC-01	SO4-02	LIQUID	1.61e+04	1.63e+04	1.235 RPD
7 DUP	S99T001924	0		IC-01	OXALATE2	LIQUID	7.39e+02	9.19e+02	21.713 RPD

Final page for worklist# 32199

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 1/27/00

01/24/00 13:11

WS2

Page: 1

LABCORE Data Entry Template for Worklist# 32199

Analyst: ADP Instrument: IC 4551 Book# 103N21-C LCS
102N21-B CCV
 Method: LA-533-105 Rev/Mod F-2
 Worklist Comment: AZ-101 (2), @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 LCS-INST			@IC-QC	QC		
3 CCV			@IC-QC	QC		
4 SAMPLE	S99T001923 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S99T001923 0		@IC-01	LIQUID		
6 SAMPLE	S99T001924 0		@IC-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S99T001924 0		@IC-01	LIQUID		

Final page for worklist # 32199

Anthony P. ... 01-27-00
 Signature Date

 Signature Date

Data Entry Comments:

Uploaded 1-27-00
JR Worell
32199.TAN.CSV

Validated 1/27/00 9 M Hux

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

=====

Sample Name: 103N21-C LCS	Date: 01/27/2000 13:08:55
Data File : C:\DX\DATA\00012721.D01	
Method : C:\DX\METHOD\ANIONSa.met	
ACI Address: 1 AS System: 1 Inject#: 1	Detector: CDM-1
Analyst : <i>Anthony Purita</i>	Column: AG4A/AS4A anion column

=====

01-27-000

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	20	87	2	
2	1.04	fluoride	64.321	1493	5895	2	-0.95
3	1.53	chloride	84.199	1405	5368	1	-1.51
4	1.81	nitrite	521.929	4182	21120	1	-1.28
5	2.66	bromide	627.886	3077	17224	1	-2.56
6	3.01	nitrate	713.595	3808	25222	1	-2.48
7	4.29	phosphate	601.167	914	10961	1	-1.75
8	5.60	sulfate	667.049	2289	31622	1	-0.88
9	7.25	oxalate	511.249	1005	19094	1	-1.45
Totals			3791.395	18194	136592		

File: 00012721.D01 Sample: 103N21-C LCS

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 807 TO 808.


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Sample Name: BLANK CCB                      Date: 01/27/2000 10:30:57
Data File  : C:\DX\DATA\00012701.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 1          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0

Sample Name: 102N21-B CCV Date: 01/27/2000 10:58:17
 Data File : C:\DX\DATA\00012701.D03
 Method : C:\DX\METHOD\ANIONSa.met
 ACI Address: 1 System: 1 Inject#: 3 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3300	5Hz	0.00	11.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	17	53	2	
2	1.03	fluoride	63.616	1520	5829	2	-1.59
3	1.51	chloride	85.978	1370	5482	1	-2.37
4	1.80	nitrite	512.174	4153	20713	1	-1.64
5	2.65	bromide	630.586	3139	17301	1	-3.05
6	3.00	nitrate	692.804	3759	24467	1	-2.91
7	4.29	phosphate	613.940	957	11196	1	-1.75
8	5.60	sulfate	696.452	2496	33053	1	-0.88
9	7.25	oxalate	519.284	1043	19400	1	-1.45
Totals			3814.836	18454	137493		

File: 00012701.D03 Sample: 102N21-B CCV

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=====
Sample Name: S99T001923 SAM                      Date: 01/27/2000 11:13:47
Data File  : C:\DX\DATA\00012711.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1   System: 1   Inject#: 1           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	30	117	2	
2	1.03	fluoride	1675.152	956	3704	2	-1.59
3	1.52	chloride	110.051	53	178	1	-1.94
4	1.80	nitrite	69097.713	13891	71075	1	-1.64
5	2.66	bromide	1108.017	94	457	1	-2.56
6	2.97	nitrate	68804.774	9277	61272	1	-3.78
7	4.32	phosphate	1001.403	51	497	1	-1.14
8	5.60	sulfate	15650.911	1289	17827	1	-0.88
9	7.31	oxalate	1813.866	68	1355	1	-0.72
Totals			159261.886	25709	156481		

File: 00012711.D01 Sample: S99T001923 SAM

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=====
Sample Name: S99T001923  DUP                      Date: 01/27/2000 13:27:43
Data File  : C:\DX\DATA\00012751.D01
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 1              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	39	178	2	
2	1.03	fluoride	1643.566	944	3632	2	-1.59
3	1.52	chloride	130.587	56	210	1	-1.94
4	1.80	nitrite	70230.993	13990	72297	1	-1.64
5	2.66	bromide	1193.010	106	514	1	-2.56
6	2.97	nitrate	69217.392	9263	61659	1	-3.78
7	4.32	phosphate	549.466	37	300	1	-1.14
8	5.60	sulfate	15504.795	1264	17656	1	-0.88
9	7.31	oxalate	1486.193	58	1052	1	-0.72
Totals			159956.002	25757	157497		

File: 00012751.D01 Sample: S99T001923 DUP

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=====
Sample Name: S99T001924 SAM                      Date: 01/27/2000 13:41:22
Data File  : C:\DX\DATA\00012751.D02
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1 System: 1 Inject#: 2              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          4141   3300  5Hz   0.00 11.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	48	233	2	
2	1.03	fluoride	1659.641	943	3668	2	-1.59
3	1.52	chloride	122.360	56	197	1	-1.94
4	1.80	nitrite	85626.769	16786	89076	1	-1.64
5	2.65	bromide	1195.109	108	515	1	-2.81
6	2.97	nitrate	69258.202	9137	61697	1	-3.99
7	4.29	phosphate	569.639	48	308	1	-1.75
8	5.60	sulfate	16062.165	1348	18309	1	-0.88
9	7.36	oxalate	739.065	25	361	1	0.00
Totals			175232.949	28499	174366		

File: 00012751.D02 Sample: S99T001924 SAM

```

=====
Sample Name: S99T001924  DUP                      Date: 01/27/2000 13:55:00
Data File  : C:\DX\DATA\00012751.D03
Method     : C:\DX\METHOD\ANIONSa.met
ACI Address: 1  System: 1  Inject#: 3              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          4141    3300  5Hz   0.00 11.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	38	161	2	
2	1.03	fluoride	1690.556	968	3738	2	-1.59
3	1.52	chloride	138.879	63	223	1	-1.94
4	1.80	nitrite	82322.290	16643	85447	1	-1.64
5	2.65	bromide	1198.856	106	518	1	-2.81
6	2.97	nitrate	67465.391	9086	60017	1	-3.99
7	4.29	phosphate	819.923	47	418	1	-1.75
8	5.60	sulfate	16264.653	1335	18547	1	-0.88
9	7.31	oxalate	918.718	33	528	1	-0.72
Totals			170819.266	28318	169595		

File: 00012751.D03 Sample: S99T001924 DUP

LABCORE Completed Worklist Report for Worklist# 33291

Analyst: kjt

Instrument: IC50S1

Book#: 112N21D

Method: LA-533-115 Rev/Mod

B-0

Worklist Comment: AZ-101 (2), @IC6-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	0	IC6-QC F-06	QC	1	<3.00e-2		Ratio
1	CCB	0	0	0	IC6-QC GLYCOLT6	QC	1	<1.90e-1		Ratio
1	CCB	0	0	0	IC6-QC ACETATE6	QC	1	<2.30e-1		Ratio
1	CCB	0	0	0	IC6-QC FORMATE6	QC	1	<2.30e-1		Ratio
1	CCB	0	0	0	IC6-QC CL-06	QC	1	<4.00e-2		Ratio
1	CCB	0	0	0	IC6-QC NO2-06	QC	1	6.50e-01	0.650	Ratio
1	CCB	0	0	0	IC6-QC SO4-06	QC	1	<3.20e-1		Ratio
1	CCB	0	0	0	IC6-QC OXALATE6	QC	1	<2.70e-1		Ratio
1	CCB	0	0	0	IC6-QC BR-06	QC	1	<2.90e-1		Ratio
1	CCB	0	0	0	IC6-QC NO3-06	QC	1	<3.00e-1		Ratio
1	CCB	0	0	0	IC6-QC PO4-06	QC	1	<2.70e-1		Ratio
2	LCS-INST	0	0	0	IC6-QC F-06	QC	58.2	5.79e+01	99.485	% Recovery
2	LCS-INST	0	0	0	IC6-QC GLYCOLT6	QC	387	3.85e+02	99.483	% Recovery
2	LCS-INST	0	0	0	IC6-QC ACETATE6	QC	463	4.49e+02	96.976	% Recovery
2	LCS-INST	0	0	0	IC6-QC FORMATE6	QC	463	4.57e+02	98.704	% Recovery
2	LCS-INST	0	0	0	IC6-QC CL-06	QC	77.6	8.10e+01	104.381	% Recovery
2	LCS-INST	0	0	0	IC6-QC NO2-06	QC	532	5.15e+02	96.805	% Recovery
2	LCS-INST	0	0	0	IC6-QC SO4-06	QC	641	6.58e+02	102.652	% Recovery
2	LCS-INST	0	0	0	IC6-QC OXALATE6	QC	514	5.23e+02	101.751	% Recovery
2	LCS-INST	0	0	0	IC6-QC BR-06	QC	580	6.20e+02	106.897	% Recovery
2	LCS-INST	0	0	0	IC6-QC NO3-06	QC	594	6.47e+02	112.290	% Recovery
2	LCS-INST	0	0	0	IC6-QC PO4-06	QC	544	6.06e+02	111.397	% Recovery
3	CCV	0	0	0	IC6-QC F-06	QC	57.3	5.27e+01	91.972	% Recovery
3	CCV	0	0	0	IC6-QC GLYCOLT6	QC	376	3.46e+02	92.021	% Recovery
3	CCV	0	0	0	IC6-QC ACETATE6	QC	463	4.04e+02	87.257	% Recovery
3	CCV	0	0	0	IC6-QC FORMATE6	QC	465	4.20e+02	90.323	% Recovery
3	CCV	0	0	0	IC6-QC CL-06	QC	79.2	7.41e+01	93.561	% Recovery
3	CCV	0	0	0	IC6-QC NO2-06	QC	528	4.67e+02	88.447	% Recovery
3	CCV	0	0	0	IC6-QC SO4-06	QC	644	6.03e+02	93.634	% Recovery
3	CCV	0	0	0	IC6-QC OXALATE6	QC	516	5.14e+02	99.612	% Recovery
3	CCV	0	0	0	IC6-QC BR-06	QC	578	5.59e+02	96.713	% Recovery
3	CCV	0	0	0	IC6-QC NO3-06	QC	588	6.17e+02	104.932	% Recovery
3	CCV	0	0	0	IC6-QC PO4-06	QC	546	5.47e+02	100.183	% Recovery
4	SAMPLE	500T000782	0	0	IC6-01 F-06	LIQUID	N/A	2.524e+03	33.330	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 GLYCOLT6	LIQUID	N/A	2.111e+02	211.100	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 FORMATE6	LIQUID	N/A	2.555e+02	255.500	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 CL-06	LIQUID	N/A	2.026e+02	44.440	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 SO4-06	LIQUID	N/A	2.493e+04	355.500	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 OXALATE6	LIQUID	N/A	1.679e+03	300.000	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 BR-06	LIQUID	N/A	1.154e+03	322.200	ug/mL
4	SAMPLE	500T000782	0	0	IC6-01 NO3-06	LIQUID	N/A	3.423e+04	1242.000	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33291

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 SAMPLE	S00T000782	0	•IC6-01 PO4-06	LIQUID	N/A	2.627e+03	300.000	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 F-06	LIQUID	N/A	1.864e+03	33.330	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 GLYCOLT6	LIQUID	N/A	< 2.111e+02	211.100	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 FORMATE6	LIQUID	N/A	< 2.555e+02	255.500	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 CL-06	LIQUID	N/A	1.412e+02	44.440	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 SO4-06	LIQUID	N/A	1.717e+04	355.500	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 OXALATE6	LIQUID	N/A	1.056e+03	300.000	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 BR-06	LIQUID	N/A	8.916e+02	322.200	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 NO3-06	LIQUID	N/A	7.106e+04	1242.000	ug/mL
5 SAMPLE	S00T000785	0	•IC6-01 PO4-06	LIQUID	N/A	1.578e+03	300.000	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 F-06	LIQUID	N/A	2.486e+03	33.330	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 GLYCOLT6	LIQUID	N/A	< 2.111e+02	211.100	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 FORMATE6	LIQUID	N/A	< 2.555e+02	255.500	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 CL-06	LIQUID	N/A	1.719e+02	44.440	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 SO4-06	LIQUID	N/A	2.462e+04	355.500	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 OXALATE6	LIQUID	N/A	1.553e+03	300.000	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 BR-06	LIQUID	N/A	1.113e+03	322.200	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 NO3-06	LIQUID	N/A	7.165e+04	1242.000	ug/mL
6 SAMPLE	S00T000827	0	•IC6-01 PO4-06	LIQUID	N/A	2.685e+03	300.000	ug/mL
7 SPK	S00T000827	0	•IC6-01 F-06	LIQUID	59.2	4.87e+01	83.677 %	Recovery
7 SPK	S00T000827	0	•IC6-01 GLYCOLT6	LIQUID	387	3.73e+02	96.382 %	Recovery
7 SPK	S00T000827	0	•IC6-01 ACETATE6	LIQUID	463	4.57e+02	98.704 %	Recovery
7 SPK	S00T000827	0	•IC6-01 FORMATE6	LIQUID	463	4.58e+02	98.920 %	Recovery
7 SPK	S00T000827	0	•IC6-01 CL-06	LIQUID	77.6	8.03e+01	103.479 %	Recovery
7 SPK	S00T000827	0	•IC6-01 NO2-06	LIQUID	532	4.94e+02	92.857 %	Recovery
7 SPK	S00T000827	0	•IC6-01 SO4-06	LIQUID	641	5.57e+02	86.895 %	Recovery
7 SPK	S00T000827	0	•IC6-01 OXALATE6	LIQUID	514	6.25e+02	121.595 %	Recovery
7 SPK	S00T000827	0	•IC6-01 BR-06	LIQUID	580	6.85e+02	118.103 %	Recovery
7 SPK	S00T000827	0	•IC6-01 NO3-06	LIQUID	594	6.18e+02	104.040 %	Recovery
7 SPK	S00T000827	0	•IC6-01 PO4-06	LIQUID	544	6.07e+02	111.581 %	Recovery

Final page for worklist# 33291

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature Date 5/15/00

HNF-1701 REV. 0

Page: 1

04/24/00 09:15

ws2

LABCORE Data Entry Template for Worklist# 33291

Analyst: K37 Instrument: IC50S1 Book# 112NADMethod: LA-533-115 Rev/Mod D-O113NAD

Worklist Comment: AZ-101 (2), @IC6-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC6-QC	QC		
2 LCS-INST			@IC6-QC	QC		
3 CCV			@IC6-QC	QC		
4 SAMPLE	S00T000782 0		@IC6-01 LIQUID		99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
5 SAMPLE	S00T000785 0		@IC6-01 LIQUID		99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
6 SAMPLE	S00T000827 0		@IC6-01 LIQUID		99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
7 SPK	S00T000827 0		@IC6-01 LIQUID			

Final page for worklist # 33291

K3 Promelia 4-24-00
Signature Date

Signature Date

Acetate & NO₂ rejected
on all rest validated
J M Lyle
5/11/00

Data Entry Comments:

uploaded 5-10-00 / Reuploaded 5-11-00
JH Worell 33291MAY.CSV

S - Worklist Slot Number, R - Replicate Number, A - Aliquot Count

Reanalyzed on Wt# 33564. Steer 7/12/00.

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : BLK

Data File Name : C:\PEAKNET\DATA\00042700_002.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1.00

Date Time Collected : 4/24/00 11:05:53 AM

Injection Number : 2

System Operator : KJT

Vial ID : A01

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1		1.62	0.00	28849	1048
2	NITRITE	12.60	0.65	145981	1029
3		24.36	0.00	1907	365

BLK

Travis Dean
for
KJ Thordike 6/21/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 812 TO 824.

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : 112N21D

Data File Name : C:\PEAKNET\DATA\00042700_A002.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 101.00

Date Time Collected : 4/24/00 2:01:50 PM

Injection Number : 2

System Operator : KJT

Vial ID : A02

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.87	57.88	333841	39280
2	GLYCOLATE	5.89	385.27	514608	43407
3	ACETATE	6.45	449.34	532093	34228
4	FORMATE	7.10	457.43	1121386	82052
5	CHLORIDE	11.18	80.96	243395	34487
6	NITRITE	12.46	514.92	1145537	123413
7		13.70	0.00	12426	1207
8	SULFATE	15.13	657.57	1567863	138291
9	OXALATE	15.79	523.12	1077135	79224
10	BROMIDE	17.48	620.15	799514	43066
11	NITRATE	19.14	667.37	1136564	48955
12	PHOSPHATE	21.92	606.02	491312	16622

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : 113N21D

Data File Name : C:\PEAKNET\DATA\00042700_A001.DXD

Method File Name : c:\peaknet\method\as15anion2.met
 Date Time Collected : 4/24/00 1:29:40 PM
 System Operator : KJT

Dilution Factor : 101.00
 Injection Number : 1
 Vial ID : A01

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.85	52.69	303931	35326
2	GLYCOLATE	5.87	346.48	464324	39104
3	ACETATE	6.43	403.75	486224	31667
4	FORMATE	7.09	420.25	1034786	77215
5	CHLORIDE	11.18	74.11	222280	31489
6	NITRITE	12.47	467.03	1039424	113219
7		13.68	0.00	4462	503
8	SULFATE	15.11	602.77	1435012	127306
9	OXALATE	15.76	514.15	1059122	77215
10	BROMIDE	17.52	559.18	718343	38720
11	NITRATE	19.18	617.09	1048164	45232
12	PHOSPHATE	21.82	547.30	441760	14952

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000782

Data File Name : C:\PEAKNET\DATA\00042700_A005.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 4/24/00 5:54:17 PM
System Operator : KJT

Dilution Factor : 1111.00
Injection Number : 5
Vial ID : A05

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	2523.90	1317772	141868
2	ACETATE	6.44	61.37	8165	755
3	FORMATE	7.09	51.48	12157	1115
4	CHLORIDE	11.18	202.62	54232	7904
5	NITRITE	12.26	91060.90	17338387	1114216
6		13.61	0.00	562026	22365
7	SULFATE	15.09	24929.70	5670901	476973
8	OXALATE	15.79	1678.50	320168	21767
9	BROMIDE	17.38	1154.49	131446	7605
10	NITRATE	18.34	57572.77	15900251	470076
11		20.54	0.00	38329	1259
12	PHOSPHATE	21.96	2627.41	188572	6332

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000782

Data File Name : C:\PEAKNET\DATA\00042700_005.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 4141.00

Date Time Collected : 4/24/00 12:42:25 PM

Injection Number : 5

System Operator : KJT

Vial ID : A04

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1		1.95	0.00	19551	356
2	FLUORIDE	4.85	809.72	114011	13708
3	FORMATE	7.07	163.34	10349	938
4	CHLORIDE	11.19	87.80	6272	949
5	NITRITE	12.44	37775.89	2042714	210832
6		13.68	0.00	40122	3301
7	SULFATE	15.14	6344.59	363933	32488
8	OXALATE	15.78	282.09	14548	1270
9	BROMIDE	17.58	469.03	14256	778
10	NITRATE	19.12	34230.80	1434587	60827
11	PHOSPHATE	21.98	638.44	12109	412
12		24.14	0.00	1146	116
13		24.84	0.00	946	83

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : S00T000785

Data File Name : C:\PEAKNET\DATA\00042700_006.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 4/24/00 6:26:27 PM
System Operator : KJT

Dilution Factor : 1111.00
Injection Number : 6
Vial ID : A06

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	1863.71	974503	108127
2	ACETATE	6.43	53.43	7112	706
3	FORMATE	7.08	52.57	12412	1146
4	CHLORIDE	11.18	141.20	37724	5488
5	NITRITE	12.30	72754.51	14020944	974257
6		13.63	0.00	281248	15876
7	SULFATE	15.10	17173.41	3821350	329993
8	OXALATE	15.79	1055.71	201972	14396
9	BROMIDE	17.44	891.57	101381	5812
10	NITRATE	18.48	53075.42	12313212	389904
11	PHOSPHATE	21.94	1578.23	112531	3921

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000785

Data File Name : C:\PEAKNET\DATA\00042700_B002.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 4/24/00 4:17:49 PM
System Operator : KJT

Dilution Factor : 4141.00
Injection Number : 2
Vial ID : A02

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	1677.09	236017	27847
2	FORMATE	7.10	110.89	7027	723
3	CHLORIDE	11.19	179.68	12845	1860
4	NITRITE	12.42	78680.94	4219483	400105
5		13.71	0.00	58985	4646
6	SULFATE	15.17	10400.79	598189	52765
7	OXALATE	15.83	630.55	32504	2401
8	BROMIDE	17.54	945.76	28764	1557
9	NITRATE	18.94	71063.04	3138836	127367
10	PHOSPHATE	22.02	907.99	17228	593

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827 ~~SPK~~ *SAM 9MF 5/11/00*

Data File Name : C:\PEAKNET\DATA\00042700_008.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 4/24/00 7:30:49 PM
System Operator : KJT

Dilution Factor : 1111.00
Injection Number : 8
Vial ID : A08

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.87	2486.25	1298221	140312
2	FORMATE	7.06	44.40	10484	984
3	CHLORIDE	11.18	171.87	45962	6605
4	NITRITE	12.26	88585.04	16894108	1095613
5		13.59	0.00	404244	20012
6	SULFATE	15.06	24617.15	5594663	472720
7	OXALATE	15.77	1553.31	296466	21080
8	BROMIDE	17.40	1112.83	126677	7236
9	NITRATE	18.36	57359.97	15562053	460426
10		20.50	0.00	41309	1292
11	PHOSPHATE	21.92	2684.53	192741	6309

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827

Data File Name : C:\PEAKNET\DATA\00042700_A003.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 4141.00

Date Time Collected : 4/24/00 4:49:55 PM

Injection Number : 3

System Operator : KJT

Vial ID : A03

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	1856.98	261306	30924
2	CHLORIDE	11.19	145.32	10386	1574
3	NITRITE	12.41	78406.53	4204999	397739
4		13.69	0.00	94155	6863
5	SULFATE	15.17	17152.13	990904	87755
6	OXALATE	15.83	1023.49	52732	3871
7	BROMIDE	17.54	783.98	23839	1401
8	NITRATE	18.92	71645.97	3167453	128644
9	PHOSPHATE	22.04	1695.51	32212	1109

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : S00T000827 SPK

Data File Name : C:\PEAKNET\DATA\00042700_007.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1111.00

Date Time Collected : 4/24/00 6:58:38 PM

Injection Number : 7

System Operator : KJT

Vial ID : A07

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	2978.39	1553504	164554
2	GLYCOLATE	5.88	3771.71	459642	38524
3	ACETATE	6.44	4621.08	502824	32377
4	FORMATE	7.09	4626.73	1035632	76157
5	CHLORIDE	11.18	982.88	269425	39635
6	NITRITE	12.26	90605.23	17256719	1111467
7		13.60	0.00	540894	21325
8	SULFATE	15.05	30244.83	6991215	580937
9	OXALATE	15.75	7865.12	1458525	95965
10	BROMIDE	17.34	8028.95	947156	51671
11	NITRATE	18.34	57829.88	16464404	478505
12		20.50	0.00	57141	1597
13	PHOSPHATE	21.82	8812.66	659355	22163

PeakNet 5.1

Page 1 of 1

Current Date : 4/24/0
Current Time : 19:28:4

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827 SPK

Data File Name : C:\PEAKNET\DATA\00042700_A004.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 4/24/00 5:22:06 PM
System Operator : KJT

Dilution Factor : 4141.00
Injection Number : 4
Vial ID : A04

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.88	4277.55	601040	68310
2	GLYCOLATE	5.91	15075.27	491857	41609
3	ACETATE	6.47	18100.05	524260	33815
4	FORMATE	7.12	18430.46	1103037	81627
5	CHLORIDE	11.19	3840.67	282884	41175
6	NITRITE	12.40	98340.55	5253174	480411
7		13.69	0.00	92287	6757
8	SULFATE	15.14	42952.29	2525640	222624
9	OXALATE	15.80	23473.66	1175997	84779
10	BROMIDE	17.44	25432.96	799731	43911
11	NITRATE	18.84	96559.36	4449588	172550
12	PHOSPHATE	21.92	25201.78	498657	17116

**This document was too large to scan
as a single document. It has
been divided into smaller sections.**

Section 3 of 5

Document Information			
Document #	HNF-1701	Revision	0
Title	TANK 241AZ101, CORES 266, 269 ANALYTICAL RESULTS FOR THE FINAL REPORT		
Date			
Originator	STEEN FH	Originator Co.	FH
Recipient		Recipient Co.	
References			
Keywords			
Projects			
Other Information			

LABCORE Completed Worklist Report for Worklist# 33564

Analyst: vlm

Instrument: IC50S1

Book#: 117N21B

Method: LA-533-115 Rev/Mod D-0

Worklist Comment: AZ101(2)@IC6-01 RERUN FOR ACETATE&NO2 DF=1111&4141 JHW

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC6-QC	F-06	QC	1	<3.00e-2		Ratio
1 CCB	0	@IC6-QC	GLYCOLT6	QC	1	<1.90e-1		Ratio
1 CCB	0	@IC6-QC	ACETATE6	QC	1	<2.30e-1		Ratio
1 CCB	0	@IC6-QC	FORMATE6	QC	1	<2.30e-1		Ratio
1 CCB	0	@IC6-QC	CL-06	QC	1	<4.00e-2		Ratio
1 CCB	0	@IC6-QC	NO2-06	QC	1	<2.70e-1		Ratio
1 CCB	0	@IC6-QC	SO4-06	QC	1	<3.20e-1		Ratio
1 CCB	0	@IC6-QC	OXALATE6	QC	1	<2.70e-1		Ratio
1 CCB	0	@IC6-QC	BR-06	QC	1	<2.90e-1		Ratio
1 CCB	0	@IC6-QC	NO3-06	QC	1	<3.00e-1		Ratio
1 CCB	0	@IC6-QC	PO4-06	QC	1	<2.70e-1		Ratio
2 LCS-INST	0	@IC6-QC	F-06	QC	57.3	5.64e+01	98.429 % Recovery	
2 LCS-INST	0	@IC6-QC	GLYCOLT6	QC	376	3.76e+02	100.000 % Recovery	
2 LCS-INST	0	@IC6-QC	ACETATE6	QC	463	4.56e+02	98.488 % Recovery	
2 LCS-INST	0	@IC6-QC	FORMATE6	QC	465	4.55e+02	97.849 % Recovery	
2 LCS-INST	0	@IC6-QC	CL-06	QC	79.2	6.96e+01	87.879 % Recovery	
2 LCS-INST	0	@IC6-QC	NO2-06	QC	548	5.38e+02	98.175 % Recovery	
2 LCS-INST	0	@IC6-QC	SO4-06	QC	644	6.28e+02	97.516 % Recovery	
2 LCS-INST	0	@IC6-QC	OXALATE6	QC	535	5.54e+02	103.551 % Recovery	
2 LCS-INST	0	@IC6-QC	BR-06	QC	578	5.92e+02	102.422 % Recovery	
2 LCS-INST	0	@IC6-QC	NO3-06	QC	588	6.18e+02	105.102 % Recovery	
2 LCS-INST	0	@IC6-QC	PO4-06	QC	546	5.53e+02	101.282 % Recovery	
3 CCV	0	@IC6-QC	F-06	QC	58.2	5.94e+01	102.062 % Recovery	
3 CCV	0	@IC6-QC	GLYCOLT6	QC	387	3.99e+02	103.101 % Recovery	
3 CCV	0	@IC6-QC	ACETATE6	QC	463	4.81e+02	103.888 % Recovery	
3 CCV	0	@IC6-QC	FORMATE6	QC	463	4.75e+02	102.592 % Recovery	
3 CCV	0	@IC6-QC	CL-06	QC	77.6	6.89e+01	88.789 % Recovery	
3 CCV	0	@IC6-QC	NO2-06	QC	538	5.45e+02	101.301 % Recovery	
3 CCV	0	@IC6-QC	SO4-06	QC	641	6.43e+02	100.312 % Recovery	
3 CCV	0	@IC6-QC	OXALATE6	QC	521	5.27e+02	101.152 % Recovery	
3 CCV	0	@IC6-QC	BR-06	QC	580	6.04e+02	104.138 % Recovery	
3 CCV	0	@IC6-QC	NO3-06	QC	594	6.11e+02	102.862 % Recovery	
3 CCV	0	@IC6-QC	PO4-06	QC	544	5.72e+02	105.147 % Recovery	
4 SAMPLE	S00T000782	0	@IC6-01	ACETATE6 LIQUID	N/A	< 2.555e+02	255.500	ug/mL
4 SAMPLE	S00T000782	0	@IC6-01	NO2-06 LIQUID	N/A	7.320e+04	1118.000	ug/mL
5 SAMPLE	S00T000785	0	@IC6-01	ACETATE6 LIQUID	N/A	< 2.555e+02	255.500	ug/mL
5 SAMPLE	S00T000785	0	@IC6-01	NO2-06 LIQUID	N/A	7.614e+04	1118.000	ug/mL
6 SAMPLE	S00T000827	0	@IC6-01	ACETATE6 LIQUID	N/A	< 2.555e+02	255.500	ug/mL
6 SAMPLE	S00T000827	0	@IC6-01	NO2-06 LIQUID	N/A	7.091e+04	1118.000	ug/mL
7 SPK	S00T000827	0	@IC6-01	F-06 LIQUID	57.3	0.00e+00	0.000 % Recovery	
7 SPK	S00T000827	0	@IC6-01	GLYCOLT6 LIQUID	376	0.00e+00	0.000 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33564

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
7 SPK	S00T000827	0	@IC6-01	ACETATE6	LIQUID	463	4.71e+02	101.728 %	Recovery
7 SPK	S00T000827	0	@IC6-01	FORMATE6	LIQUID	465	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	CL-06	LIQUID	79.2	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	NO2-06	LIQUID	548	5.45e+02	99.453 %	Recovery
7 SPK	S00T000827	0	@IC6-01	SO4-06	LIQUID	644	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	OXALATE6	LIQUID	535	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	BR-06	LIQUID	578	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	NO3-06	LIQUID	588	0.00e+00	0.000 %	Recovery
7 SPK	S00T000827	0	@IC6-01	PO4-06	LIQUID	546	0.00e+00	0.000 %	Recovery

Final page for worklist# 33564

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

5/23/00
Reviewer Signature _____ Date _____

05/15/00 08:07
ws2

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33564

Analyst: VLM Instrument: IC50S1Book# 117NA1B CCS
116NA1B CCVMethod: LA-533-115 Rev/Mod D-0

Worklist Comment: AZ101(2)@IC6-01 RERUN FOR ACETATE&NO2 DF=1111&4141 JHW

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC6-QC	QC		
2 LCS-INST			@IC6-QC	QC		
3 CCV			@IC6-QC	QC		
4 SAMPLE	S00T000782 0		@IC6-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, NO2-06					
5 SAMPLE	S00T000785 0		@IC6-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, NO2-06					
6 SAMPLE	S00T000827 0		@IC6-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, NO2-06					
7 SPK	S00T000827 0		@IC6-01	LIQUID		

Final page for worklist # 33564

Valerie Massie 05-17-00
Signature Date_____
Signature Date

Data Entry Comments:

if needed 5-22-00Validated 5/22/00 JMF33564MAY.CSV

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : BLK

Data File Name : C:\PEAKNET\DATA\00051700_002.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1.00

Date Time Collected : 5/17/00 10:59:50 AM

Injection Number : 2

System Operator : VLM

Vial ID : A01

Trace Dry for VL Masse 12/21/00

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1		1.58	0.00	14711	621
2		23.46	0.00	1522	132
3		24.88	0.00	662	111

SIGNATURE ABOVE REPRESENTS ONE (CALIBRATIONIST/CHEMIST) THAT
COMPLETED/VERIFIED THE CALIBRATION ANALYSIS ON PAGES 826 TO 836

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : 117N21B LCS

Data File Name : C:\PEAKNET\DATA\00051700_003.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 101.00

Date Time Collected : 5/17/00 11:31:58 AM

Injection Number : 3

System Operator : VLM

Vial ID : A02

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1		1.83	0.00	16572	387
2	FLUORIDE	4.84	98.45 56.41	330389	38377
3	GLYCOLATE	5.85	100.13 376.49	503987	42075
4	ACETATE	6.40	98.44 455.79	538120	34347
5	FORMATE	7.04	97.92 455.34	1089837	79721
6	CHLORIDE	11.13	87.82 69.55	253031	36295
7	NITRITE	12.39	98.19 538.07	1200876	129689
8	SULFATE	15.06	627.95	1565708	136641
9	OXALATE	15.70	553.79	1207432	86789
10	BROMIDE	17.32	591.60	797341	44097
11	NITRATE	18.92	618.05	1172599	51504
12	PHOSPHATE	21.70	553.31	493933	16511
13		24.44	0.00	2168	174

117N21B LCS

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : 116N21B CCV

Data File Name : C:\PEAKNET\DATA\00051700_004.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 101.00

Date Time Collected : 5/17/00 12:04:10 PM

Injection Number : 4

System Operator : VLM

Vial ID : A03

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.84	59.37	347676	40401
2	GLYCOLATE	5.85	399.42	533663	44269
3	ACETATE	6.40	103.83	562790	35592
4	FORMATE	7.04	474.88	1134360	82549
5	CHLORIDE	11.13	101.22	250753	35899
6	NITRITE	12.39	544.56	1215283	131457
7		13.63	0.00	6385	619
8	SULFATE	15.05	643.49	1604794	141056
9	OXALATE	15.69	526.83	1151208	83706
10	BROMIDE	17.34	604.45	815159	45355
11	NITRATE	18.96	610.83	1158611	51607
12	PHOSPHATE	21.70	572.18	511346	17288

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : S00T000782

Data File Name : C:\PEAKNET\DATA\00051700_009.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Date Time Collected : 5/17/00 2:44:58 PM

System Operator : VLM

Dilution Factor : 1111.00

Injection Number : 9

Vial ID : A08

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1837.73	974051	107605
2	ACETATE	6.35	61.10	8014	725
3	CHLORIDE	11.13	116.23	38896	5747
4	NITRITE	12.23	71606.65	13688416	973785
5		13.57	0.00	309648	17181
6	SULFATE	15.01	16295.42	3737977	322133
7	OXALATE	15.69	957.80	197707	14536
8	BROMIDE	17.32	828.62	99141	5893
9	NITRATE	18.32	56016.05	12110361	386504
10	PHOSPHATE	21.74	1419.58	112503	3960

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000782

Data File Name : C:\PEAKNET\DATA\00051700_005.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 4141.00

Date Time Collected : 5/17/00 12:36:19 PM

Injection Number : 5

System Operator : VLM

Vial ID : A04

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1734.41	247925	29179
2	CHLORIDE	11.13	417.12	37454	5343
3	NITRITE	12.35	73199.37	3931807	383315
4		13.63	0.00	103780	7508
5	SULFATE	15.06	14994.82	908637	80488
6	OXALATE	15.71	842.91	46971	3493
7	BROMIDE	17.40	676.16	21649	1266
8	NITRATE	18.78	61757.64	2955200	123931
9	PHOSPHATE	21.74	1335.80	28256	970
10		23.08	0.00	732	132

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000785

Data File Name : C:\PEAKNET\DATA\00051700_010.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1111.00

Date Time Collected : 5/17/00 3:17:11 PM

Injection Number : 10

System Operator : VLM

Vial ID : A09

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1828.81	969354	107185
2	ACETATE	6.33	75.59	9906	891
3	CHLORIDE	11.13	117.61	39359	5914
4	NITRITE	12.23	72937.28	13927371	982601
5		13.57	0.00	416896	18810
6	SULFATE	15.01	16568.27	3801907	326320
7	OXALATE	15.68	1014.97	209408	15044
8	BROMIDE	17.32	864.61	103463	6081
9	NITRATE	18.32	56743.82	12330646	393396
10	PHOSPHATE	21.74	1472.41	116719	4096

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000785

Data File Name : C:\PEAKNET\DATA\00051700_006.DXD

Method File Name : c:\peaknet\method\as15anion2.met
Date Time Collected : 5/17/00 1:08:30 PM
System Operator : VLM

Dilution Factor : 4141.00
Injection Number : 6
Vial ID : A05

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1739.57	248661	29595
2	CHLORIDE	11.14	111.29	10009	1495
3	NITRITE	12.35	76137.86	4086577	395949
4		13.63	0.00	108357	7837
5	SULFATE	15.06	15400.73	933358	82882
6	OXALATE	15.70	854.11	47594	3563
7	BROMIDE	17.42	751.31	24056	1357
8	NITRATE	18.78	63769.59	3057451	127884
9	PHOSPHATE	21.78	1128.02	23854	870

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827

Data File Name : C:\PEAKNET\DATA\00051700_011.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1111.00

Date Time Collected : 5/17/00 3:49:21 PM

Injection Number : 11

System Operator : VLM

Vial ID : A10

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1754.98	930476	103506
2	CHLORIDE	11.13	103.38	34604	5166
3	NITRITE	12.24	68534.15	13134746	946515
4		13.57	0.00	308652	16637
5	SULFATE	15.01	15552.69	3564183	307479
6	OXALATE	15.68	918.27	189609	13808
7	BROMIDE	17.32	765.69	91588	5533
8	NITRATE	18.36	54161.50	11562667	375828
9	PHOSPHATE	21.74	1383.30	109607	3771

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827

Data File Name : C:\PEAKNET\DATA\00051700_007.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 4141.00

Date Time Collected : 5/17/00 1:40:40 PM

Injection Number : 7

System Operator : VLM

Vial ID : A06

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	1679.48	240086	28318
2	CHLORIDE	11.14	82.18	7392	1214
3	NITRITE	12.35	70906.62	3810890	372587
4		13.63	0.00	100105	7253
5	SULFATE	15.06	14262.93	864077	77056
6	OXALATE	15.70	731.69	40784	3182
7	BROMIDE	17.42	667.36	21366	1224
8	NITRATE	18.80	59272.15	2829464	119307
9	PHOSPHATE	21.74	1228.49	25982	894
10		24.82	0.00	593	117

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : S00T000827 SPK

Data File Name : C:\PEAKNET\DATA\00051700_012.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 1111.00

Date Time Collected : 5/17/00 4:21:28 PM

Injection Number : 12

System Operator : VLM

Vial ID : A11

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.84	2337.55	1236645	134376
2	GLYCOLATE	5.83	3797.01	463280	38925
3	ACETATE	6.37	4753.53	514377	32982
4	FORMATE	7.02	4650.79	1015334	74660
5	CHLORIDE	11.12	807.39	266814	39275
6	NITRITE	12.23	73490.38	14026551	988258
7		13.57	0.00	319145	17031
8	SULFATE	14.99	21977.37	5078948	433536
9	OXALATE	15.66	6520.44	1288309	92636
10	BROMIDE	17.24	6723.63	824590	49120
11	NITRATE	18.30	58386.41	12839881	405987
12	PHOSPHATE	21.66	7007.44	571472	19831
13		24.68	0.00	1737	179

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000827 SPK

Data File Name : C:\PEAKNET\DATA\00051700_008.DXD

Method File Name : c:\peaknet\method\as15anion2.met

Dilution Factor : 4141.00

Date Time Collected : 5/17/00 2:12:49 PM

Injection Number : 8

System Operator : VLM

Vial ID : A07

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.84	4063.23	579437	66336
2	GLYCOLATE	5.84	15241.06	497812	41769
3	ACETATE	6.39	18781.60	540404	34673
4	FORMATE	7.03	18396.23	1074651	79559
5	CHLORIDE	11.13	2802.79	248746	36483
6	NITRITE	12.33	92895.83	4964904	462493
7		13.62	0.00	96770	6981
8	SULFATE	15.03	45773.96	2802603	245761
9	OXALATE	15.68	22377.63	1190781	87297
10	BROMIDE	17.32	23961.02	787393	44765
11	NITRATE	18.70	86030.60	4218589	166298
12	PHOSPHATE	21.66	21748.78	472910	16413

LABCORE Completed Worklist Report for Worklist# 34119

Analyst: vlm

Instrument: IC50S1

Book#: 129N21A

Method: LA-533-115 Rev/Mod D-0

Worklist Comment: AZ-101 (2) IC lad

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC6-QC	F-06	QC	1	<3.00e-2		ug/mL
1 CCB	0	@IC6-QC	GLYCOLT6	QC	1	<1.90e-1		ug/mL
1 CCB	0	@IC6-QC	ACETATE6	QC	1	<2.30e-1		ug/mL
1 CCB	0	@IC6-QC	FORMATE6	QC	1	<2.30e-1		ug/mL
1 CCB	0	@IC6-QC	CL-06	QC	1	<4.00e-2		ug/mL
1 CCB	0	@IC6-QC	NO2-06	QC	1	<2.70e-1		ug/mL
1 CCB	0	@IC6-QC	SO4-06	QC	1	<3.20e-1		ug/mL
1 CCB	0	@IC6-QC	OXALATE6	QC	1	<2.70e-1		ug/mL
1 CCB	0	@IC6-QC	BR-06	QC	1	<2.90e-1		ug/mL
1 CCB	0	@IC6-QC	NO3-06	QC	1	<3.00e-1		ug/mL
1 CCB	0	@IC6-QC	PO4-06	QC	1	<2.70e-1		ug/mL
2 LCS-INST	0	@IC6-QC	F-06	QC	57.3	5.75e+01	100.349 % Recovery	
2 LCS-INST	0	@IC6-QC	GLYCOLT6	QC	376	3.84e+02	102.128 % Recovery	
2 LCS-INST	0	@IC6-QC	ACETATE6	QC	463	4.69e+02	101.296 % Recovery	
2 LCS-INST	0	@IC6-QC	FORMATE6	QC	465	4.67e+02	100.430 % Recovery	
2 LCS-INST	0	@IC6-QC	CL-06	QC	79.2	8.00e+01	101.010 % Recovery	
2 LCS-INST	0	@IC6-QC	NO2-06	QC	538	5.21e+02	96.840 % Recovery	
2 LCS-INST	0	@IC6-QC	SO4-06	QC	644	6.39e+02	99.224 % Recovery	
2 LCS-INST	0	@IC6-QC	OXALATE6	QC	536	5.48e+02	102.239 % Recovery	
2 LCS-INST	0	@IC6-QC	BR-06	QC	578	5.81e+02	100.519 % Recovery	
2 LCS-INST	0	@IC6-QC	NO3-06	QC	588	6.12e+02	104.082 % Recovery	
2 LCS-INST	0	@IC6-QC	PO4-06	QC	546	5.35e+02	97.985 % Recovery	
3 CCV	0	@IC6-QC	F-06	QC	58.2	5.91e+01	101.546 % Recovery	
3 CCV	0	@IC6-QC	GLYCOLT6	QC	387	3.94e+02	101.809 % Recovery	
3 CCV	0	@IC6-QC	ACETATE6	QC	463	4.74e+02	102.376 % Recovery	
3 CCV	0	@IC6-QC	FORMATE6	QC	463	4.72e+02	101.944 % Recovery	
3 CCV	0	@IC6-QC	CL-06	QC	77.6	7.66e+01	98.711 % Recovery	
3 CCV	0	@IC6-QC	NO2-06	QC	538	5.34e+02	99.257 % Recovery	
3 CCV	0	@IC6-QC	SO4-06	QC	641	6.43e+02	100.312 % Recovery	
3 CCV	0	@IC6-QC	OXALATE6	QC	521	5.24e+02	100.576 % Recovery	
3 CCV	0	@IC6-QC	BR-06	QC	580	5.84e+02	100.690 % Recovery	
3 CCV	0	@IC6-QC	NO3-06	QC	594	6.11e+02	102.862 % Recovery	
3 CCV	0	@IC6-QC	PO4-06	QC	544	5.40e+02	99.265 % Recovery	
4 BLNK-PREP	0	@IC6-01	F-06	SOLID	1	<3.00e-2		ug/mL
4 BLNK-PREP	0	@IC6-01	GLYCOLT6	SOLID	1	<1.90e-1		ug/mL
4 BLNK-PREP	0	@IC6-01	ACETATE6	SOLID	1	<2.30e-1		ug/mL
4 BLNK-PREP	0	@IC6-01	FORMATE6	SOLID	1	<2.30e-1		ug/mL
4 BLNK-PREP	0	@IC6-01	CL-06	SOLID	1	1.10e-01	0.110	ug/mL
4 BLNK-PREP	0	@IC6-01	NO2-06	SOLID	1	<2.70e-1		ug/mL
4 BLNK-PREP	0	@IC6-01	SO4-06	SOLID	1	<3.20e-1		ug/mL
4 BLNK-PREP	0	@IC6-01	OXALATE6	SOLID	1	<2.70e-1		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 34119

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 BLNK-PREP		0	@IC6-01 BR-06	SOLID	1	<2.90e-1		ug/mL
4 BLNK-PREP		0	@IC6-01 NO3-06	SOLID	1	<3.00e-1		ug/mL
4 BLNK-PREP		0	@IC6-01 PO4-06	SOLID	1	<2.70e-1		ug/mL
5 SAMPLE	S00T000806	0 W	@IC6-01 F-06	SOLID	N/A	3.743e+04	12790.000	ug/g
5 SAMPLE	S00T000806	0 W	@IC6-01 SO4-06	SOLID	N/A	1.738e+05	136500.000	ug/g
6 SPK	S00T000806	0 W	@IC6-01 F-06	SOLID	57.3	5.86e+01	102.269 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 GLYCOLT6	SOLID	376	3.85e+02	102.394 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 ACETATE6	SOLID	463	4.70e+02	101.512 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 FORMATE6	SOLID	465	4.67e+02	100.430 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 CL-06	SOLID	79.2	7.15e+01	90.278 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 NO2-06	SOLID	538	5.29e+02	98.327 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 SO4-06	SOLID	644	6.50e+02	100.932 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 OXALATE6	SOLID	536	5.56e+02	103.731 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 BR-06	SOLID	578	5.75e+02	99.481 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 NO3-06	SOLID	588	6.19e+02	105.272 % Recovery	
6 SPK	S00T000806	0 W	@IC6-01 PO4-06	SOLID	546	5.32e+02	97.436 % Recovery	
8 SAMPLE	S00T000808	0 W	@IC6-01 F-06	SOLID	N/A	2.567e+04	10830.000	ug/g
8 SAMPLE	S00T000808	0 W	@IC6-01 SO4-06	SOLID	N/A	1.762e+05	115500.000	ug/g
9 BLNK-PREP		0	@IC6-01 F-06	SOLID	1	<3.00e-2		ug/mL
9 BLNK-PREP		0	@IC6-01 GLYCOLT6	SOLID	1	<1.90e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 ACETATE6	SOLID	1	<2.30e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 FORMATE6	SOLID	1	1.03e+00	1.030	ug/mL
9 BLNK-PREP		0	@IC6-01 CL-06	SOLID	1	1.00e-01	0.100	ug/mL
9 BLNK-PREP		0	@IC6-01 NO2-06	SOLID	1	<2.70e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 SO4-06	SOLID	1	<3.20e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 OXALATE6	SOLID	1	<2.70e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 BR-06	SOLID	1	<2.90e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 NO3-06	SOLID	1	<3.00e-1		ug/mL
9 BLNK-PREP		0	@IC6-01 PO4-06	SOLID	1	<2.70e-1		ug/mL

Final page for worklist# 34119

Valerie M. Mose 07-17-00
Analyst Signature Date

Analyst Signature Date

James M. Lutz 7/17/00
Reviewer Signature Date

J 13:22

LABCORE Data Entry Template for Worklist# 34119

Analyst:

JLM

Instrument: IC50S1

Book#

129N21 A CCS
128N21 A CCV

Method: LA-533-115

Rev/Mod D-0

Worklist Comment: AZ-101 (2) IC lad

Rush!

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC6-QC	QC		
2 LCS-INST			@IC6-QC	QC		
3 CCV			@IC6-QC	QC		
4 BLNK-PREP			@IC6-01	SOLID		
5 SAMPLE	S00T000806 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06
6 SPK	S00T000806 0 W		@IC6-01	SOLID		
7 SAMPLE	S00T000807 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06
8 SAMPLE	S00T000808 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06
9 BLNK-PREP			@IC6-01	SOLID		
10 SAMPLE	S00T000812 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06
11 SAMPLE	S00T000813 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06
12 SAMPLE	S00T000814 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ACETATE6, BR-06				CL-06	F-06	FORMATE6,
GLYCOLT6, NO2-06				NO3-06	OXALATE6,	PO4-06 , SO4-06

Data Entry Comments:

uploaded 7-14-00

JL Wauell

34119 JUL. CSV

all rejected 7/14/00 JMW

These will be rerun at a
more concentrated dilution.

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

836.3

After running the rerun 34144
we decided to use the F+SO₄
from this WKL on 806 & 808. JMW
7/17/00

222-S Sample Analysis Report

Sample Name : BLK

Data File Name : J:\DATA\00071300_A002.DXD

7/17/00

Testing for V. Mearns

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 1.00

Date Time Collected : 7/13/00 3:40:42 PM

Injection Number : 2

System Operator : VLM

Vial ID : A01

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	NITRITE	11.67	0.08	18732	1776

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES ____ TO ____.

222-S Sample Analysis Report

Sample Name : 129N21-A LCS

Data File Name : J:\DATA\00071300_A003.DXD

Method File Name : c:\peaknet\method\as15anion3.met.

Date Time Collected : 7/13/00 4:12:51 PM

System Operator : VLM

Dilution Factor : 101.00

Injection Number : 3

Vial ID : A02

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.79	57.51	344574	40370
2	GLYCOLATE	5.76	383.81	529224	44180
3	ACETATE	6.29	468.79	578349	36578
4	FORMATE	6.92	466.97	1144099	83256
5	CHLORIDE	10.16	80.03	268152	46212
6	NITRITE	11.18	520.88	1266793	146767
7		11.65	0.00	17477	1567
8	SULFATE	12.88	639.16	1622563	141924
9	OXALATE	13.48	548.28	1241590	89957
10	BROMIDE	15.80	580.71	836605	46833
11	NITRATE	17.30	612.05	1141205	51594
12	PHOSPHATE	18.68	535.00	512670	18041

222-S Sample Analysis Report

Sample Name : 128N21-A CCV

Data File Name : J:\DATA\00071300_A004.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 4:45:01 PM

System Operator : VLM

Dilution Factor : 101.00

Injection Number : 4

Vial ID : A03

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	59.06	353864	41161
2	GLYCOLATE	5.76	393.55	542270	45325
3	ACETATE	6.29	474.13	583874	37004
4	FORMATE	6.92	472.34	1156691	84491
5	CHLORIDE	10.16	76.61	256471	45008
6	NITRITE	11.17	533.76	1297674	149133
7		11.66	0.00	17329	1582
8	SULFATE	12.88	643.17	1632872	143268
9	OXALATE	13.48	524.03	1188763	86533
10	BROMIDE	15.80	584.31	841915	47375
11	NITRATE	17.30	610.69	1138605	51734
12	PHOSPHATE	18.68	540.25	517882	18301

836.6

222-S Sample Analysis Report

Sample Name : PREP BLANK 1

Data File Name : J:\DATA\00071300_A005.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 5:17:11 PM

System Operator : VLM

Dilution Factor : 1.00

Injection Number : 5

Vial ID : A04

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	ACETATE	6.27	0.08	11836	1042
2	CHLORIDE	10.17	0.11	35075	6255
3	NITRITE	11.66	0.22	55136	4390
4	SULFATE	12.89	0.10	26160	2396

222-S Sample Analysis Report

Sample Name : S00T000806 SAM

Data File Name : J:\DATA\00071300_A006.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 4141.00

Date Time Collected : 7/13/00 5:49:21 PM

Injection Number : 6

System Operator : VLM

Vial ID : A05

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	363.49	53114	6640
2	CHLORIDE	10.16	258.76	20794	3712
3	NITRITE	11.19	269.50	16217	1935
4		11.66	0.00	24669	2261
5	SULFATE	12.89	1688.00	103252	9247
6	OXALATE	13.49	140.62	8100	714
7	NITRATE	17.46	261.93	11651	606

222-S Sample Analysis Report

Sample Name : S00T000806 SPK

Data File Name : J:\DATA\00071300_A007.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 6:21:29 PM

System Operator : VLM

Dilution Factor : 4141.00

Injection Number : 7

Vial ID : A06

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.79	2728.22	398695	46724
2	GLYCOLATE	5.76	15538.29	522752	43891
3	ACETATE	6.29	18942.64	571322	36383
4	FORMATE	6.92	18848.35	1127066	82831
5	CHLORIDE	10.16	3140.66	256452	44718
6	NITRITE	11.18	21313.24	1264297	147590
7		11.66	0.00	16218	1534
8	SULFATE	12.88	27896.50	1728736	151633
9	OXALATE	13.48	22399.71	1237353	89764
10	BROMIDE	15.80	23194.51	814517	46200
11	NITRATE	17.30	24975.89	1135699	51902
12	PHOSPHATE	18.70	21471.01	501457	17664

222-S Sample Analysis Report

Sample Name : S00T000807 SAM

Data File Name : J:\DATA\00071300_A008.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 6:53:38 PM

System Operator : VLM

Dilution Factor : 4141.00

Injection Number : 8

Vial ID : A07

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	298.76	43656	5436
2	NITRITE	11.19	246.59	14839	1777
3		11.67	0.00	18684	1813
4	SULFATE	12.90	1318.39	80628	7220
5	OXALATE	13.49	123.81	7132	680
6	NITRATE	17.50	200.76	8930	460

S00T000807 SAM

222-S Sample Analysis Report

Sample Name : S00T000808 SAM

Data File Name : J:\DATA\00071300_009.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 7:25:47 PM

System Operator : VLM

Dilution Factor : 4141.00

Injection Number : 9

Vial ID : A08

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	294.43	43023	5327
2	CHLORIDE	10.17	164.85	13241	2407
3	NITRITE	11.19	205.65	12376	1550
4		11.67	0.00	28050	2575
5	SULFATE	12.90	2020.80	123628	11132
6	NITRATE	17.48	433.31	19277	919

222-S Sample Analysis Report

Sample Name : PREP BLANK 2

Data File Name : J:\DATA\00071300_010.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/13/00 7:57:56 PM

System Operator : VLM

Dilution Factor : 1.00

Injection Number : 10

Vial ID : A09

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	ACETATE	6.26	0.03	4337	449
2	FORMATE	6.90	1.03	264333	21386
3	CHLORIDE	10.17	0.10	32586	5694
4	NITRITE	11.67	0.12	29206	2592
5	SULFATE	12.90	0.07	17497	1613

222-S Sample Analysis Report

Sample Name : S00T000812 SAM

Data File Name : J:\DATA\00071300_011.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 4141.00

Date Time Collected : 7/13/00 8:30:04 PM

Injection Number : 11

System Operator : VLM

Vial ID : A10

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	36.65	5355	713
2	NITRITE	11.20	280.81	16898	2064
3		11.68	0.00	22671	2084
4	SULFATE	12.90	233.04	14245	1346
5	NITRATE	17.48	248.04	11033	588

222-S Sample Analysis Report

MNF-1701 REV. 0

Sample Name : S00T000813 SAM

Data File Name : J:\DATA\00071300_012.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 4141.00

Date Time Collected : 7/13/00 9:02:13 PM

Injection Number : 12

System Operator : VLM

Vial ID : A11

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	34.64	5062	687
2	CHLORIDE	10.17	59.63	4786	889
3	NITRITE	11.20	289.95	17448	2130
4		11.67	0.00	23245	2145
5	SULFATE	12.91	420.00	25675	2325
6	NITRATE	17.46	268.69	11952	592

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : S00T000814 SAM

Data File Name : J:\DATA\00071300_013.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 4141.00

Date Time Collected : 7/13/00 9:34:22 PM

Injection Number : 13

System Operator : VLM

Vial ID : A12

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	51.16	7476	1034
2	CHLORIDE	10.16	154.06	12373	2215
3	NITRITE	11.19	423.66	25492	2960
4		11.67	0.00	38654	3322
5	SULFATE	12.90	713.30	43611	3937
6	NITRATE	17.46	547.41	24356	1209

LABCORE Completed Worklist Report for Worklist# 34144

Analyst: vlm

Instrument: IC50S1

Book#: 129N21A

Method: LA-533-115 Rev/Mod D-0

Worklist Comment: Rerun AZ-101 @IC6-01, Use DF 41. jmf

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	IC6-QC F-06 QC		1	<3.00e-2		ug/mL
1 CCB	0	0	IC6-QC GLYCOLT6 QC		1	<1.90e-1		ug/mL
1 CCB	0	0	IC6-QC ACETATE6 QC		1	<2.30e-1		ug/mL
1 CCB	0	0	IC6-QC FORMATE6 QC		1	<2.30e-1		ug/mL
1 CCB	0	0	IC6-QC CL-06 QC		1	<4.00e-2		ug/mL
1 CCB	0	0	IC6-QC NO2-06 QC		1	<2.70e-1		ug/mL
1 CCB	0	0	IC6-QC SO4-06 QC		1	<3.20e-1		ug/mL
1 CCB	0	0	IC6-QC OXALATE6 QC		1	<2.70e-1		ug/mL
1 CCB	0	0	IC6-QC BR-06 QC		1	<2.90e-1		ug/mL
1 CCB	0	0	IC6-QC NO3-06 QC		1	<3.00e-1		ug/mL
1 CCB	0	0	IC6-QC PO4-06 QC		1	<2.70e-1		ug/mL
2 LCS-INST	0	0	IC6-QC F-06 QC		57.3	5.88e+01	102.618 % Recovery	
2 LCS-INST	0	0	IC6-QC GLYCOLT6 QC		376	3.93e+02	104.521 % Recovery	
2 LCS-INST	0	0	IC6-QC ACETATE6 QC		463	4.78e+02	103.240 % Recovery	
2 LCS-INST	0	0	IC6-QC FORMATE6 QC		465	4.76e+02	102.366 % Recovery	
2 LCS-INST	0	0	IC6-QC CL-06 QC		79.2	7.99e+01	100.884 % Recovery	
2 LCS-INST	0	0	IC6-QC NO2-06 QC		538	5.22e+02	97.026 % Recovery	
2 LCS-INST	0	0	IC6-QC SO4-06 QC		644	6.56e+02	101.863 % Recovery	
2 LCS-INST	0	0	IC6-QC OXALATE6 QC		536	5.61e+02	104.664 % Recovery	
2 LCS-INST	0	0	IC6-QC BR-06 QC		578	5.96e+02	103.114 % Recovery	
2 LCS-INST	0	0	IC6-QC NO3-06 QC		588	6.42e+02	109.184 % Recovery	
2 LCS-INST	0	0	IC6-QC PO4-06 QC		546	5.60e+02	102.564 % Recovery	
3 CCV	0	0	IC6-QC F-06 QC		58.2	6.08e+01	104.467 % Recovery	
3 CCV	0	0	IC6-QC GLYCOLT6 QC		387	4.11e+02	106.202 % Recovery	
3 CCV	0	0	IC6-QC ACETATE6 QC		463	4.97e+02	107.343 % Recovery	
3 CCV	0	0	IC6-QC FORMATE6 QC		463	4.88e+02	105.400 % Recovery	
3 CCV	0	0	IC6-QC CL-06 QC		77.4	7.94e+01	102.320 % Recovery	
3 CCV	0	0	IC6-QC NO2-06 QC		538	5.43e+02	100.929 % Recovery	
3 CCV	0	0	IC6-QC SO4-06 QC		641	6.68e+02	104.212 % Recovery	
3 CCV	0	0	IC6-QC OXALATE6 QC		521	5.43e+02	104.223 % Recovery	
3 CCV	0	0	IC6-QC BR-06 QC		580	5.98e+02	103.103 % Recovery	
3 CCV	0	0	IC6-QC NO3-06 QC		594	6.33e+02	106.566 % Recovery	
3 CCV	0	0	IC6-QC PO4-06 QC		544	5.47e+02	100.551 % Recovery	
4 BLNK-PREP	0	0	IC6-01 F-06 SOLID		1	<3.00e-2		ug/mL
4 BLNK-PREP	0	0	IC6-01 GLYCOLT6 SOLID		1	<1.90e-1		ug/mL
4 BLNK-PREP	0	0	IC6-01 ACETATE6 SOLID		1	<2.30e-1		ug/mL
4 BLNK-PREP	0	0	IC6-01 FORMATE6 SOLID		1	<2.30e-1		ug/mL
4 BLNK-PREP	0	0	IC6-01 CL-06 SOLID		1	1.30e-01	0.130	ug/mL
4 BLNK-PREP	0	0	IC6-01 NO2-06 SOLID		1	2.80e-01	0.280	ug/mL
4 BLNK-PREP	0	0	IC6-01 SO4-06 SOLID		1	<3.20e-1		ug/mL
4 BLNK-PREP	0	0	IC6-01 OXALATE6 SOLID		1	<2.70e-1		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 34144

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 BLNK-PREP	0	0	01C6-01 BR-06	SOLID	1	<2.90e-1		ug/mL
4 BLNK-PREP	0	0	01C6-01 NO3-06	SOLID	1	<3.00e-1		ug/mL
4 BLNK-PREP	0	0	01C6-01 PO4-06	SOLID	1	<2.70e-1		ug/mL
5 SAMPLE	S00T000806	0 W	01C6-01 GLYCOLT6	SOLID	N/A	< 8.023e+02	802.300	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 ACETATE6	SOLID	N/A	< 9.712e+02	971.200	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 FORMATE6	SOLID	N/A	< 9.712e+02	971.200	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 CL-06	SOLID	N/A	< 1.689e+02	168.900	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 NO2-06	SOLID	N/A	< 3.812e+04	1140.000	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 OXALATE6	SOLID	N/A	< 2.483e+04	1140.000	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 BR-06	SOLID	N/A	< 1.225e+03	1225.000	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 NO3-06	SOLID	N/A	< 3.539e+04	1267.000	ug/g
5 SAMPLE	S00T000806	0 W	01C6-01 PO4-06	SOLID	N/A	< 1.140e+03	1140.000	ug/g
6 SPK	S00T000806	0 W	01C6-01 F-06	SOLID	57.3	4.92e+01	85.864	% Recovery
6 SPK	S00T000806	0 W	01C6-01 GLYCOLT6	SOLID	376	4.08e+02	108.511	% Recovery
6 SPK	S00T000806	0 W	01C6-01 ACETATE6	SOLID	463	4.96e+02	107.127	% Recovery
6 SPK	S00T000806	0 W	01C6-01 FORMATE6	SOLID	465	4.87e+02	104.731	% Recovery
6 SPK	S00T000806	0 W	01C6-01 CL-06	SOLID	79.2	8.24e+01	104.040	% Recovery
6 SPK	S00T000806	0 W	01C6-01 NO2-06	SOLID	538	5.29e+02	98.327	% Recovery
6 SPK	S00T000806	0 W	01C6-01 SO4-06	SOLID	544	5.41e+02	84.006	% Recovery
6 SPK	S00T000806	0 W	01C6-01 OXALATE6	SOLID	536	5.49e+02	102.425	% Recovery
6 SPK	S00T000806	0 W	01C6-01 BR-06	SOLID	578	6.02e+02	104.152	% Recovery
6 SPK	S00T000806	0 W	01C6-01 NO3-06	SOLID	588	6.51e+02	110.714	% Recovery
6 SPK	S00T000806	0 W	01C6-01 PO4-06	SOLID	546	5.67e+02	103.846	% Recovery
7 SAMPLE	S00T000807	0 W	01C6-01 F-06	SOLID	N/A	< 3.236e+04	1189.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 GLYCOLT6	SOLID	N/A	< 7.698e+02	769.800	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 ACETATE6	SOLID	N/A	< 9.318e+02	931.800	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 FORMATE6	SOLID	N/A	< 9.318e+02	931.800	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 CL-06	SOLID	N/A	< 1.621e+02	162.100	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 NO2-06	SOLID	N/A	< 3.389e+04	1094.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 SO4-06	SOLID	N/A	< 1.615e+05	12680.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 OXALATE6	SOLID	N/A	< 2.242e+04	1094.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 BR-06	SOLID	N/A	< 1.175e+03	1175.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 NO3-06	SOLID	N/A	< 3.115e+04	1215.000	ug/g
7 SAMPLE	S00T000807	0 W	01C6-01 PO4-06	SOLID	N/A	< 1.094e+03	1094.000	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 GLYCOLT6	SOLID	N/A	< 6.792e+02	679.200	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 ACETATE6	SOLID	N/A	< 8.221e+02	822.100	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 FORMATE6	SOLID	N/A	< 8.221e+02	822.100	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 CL-06	SOLID	N/A	< 1.430e+02	143.000	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 NO2-06	SOLID	N/A	< 2.633e+04	965.100	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 OXALATE6	SOLID	N/A	< 1.443e+04	965.100	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 BR-06	SOLID	N/A	< 1.837e+03	1837.000	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 NO3-06	SOLID	N/A	< 2.421e+04	1072.000	ug/g
8 SAMPLE	S00T000808	0 W	01C6-01 PO4-06	SOLID	N/A	< 9.681e+02	965.100	ug/g
9 BLNK-PREP	0	0	01C6-01 F-06	SOLID	1	<3.00e-2		ug/mL
9 BLNK-PREP	0	0	01C6-01 GLYCOLT6	SOLID	1	<1.30e-1		ug/mL
9 BLNK-PREP	0	0	01C6-01 ACETATE6	SOLID	1	<2.30e-1		ug/mL
9 BLNK-PREP	0	0	01C6-01 FORMATE6	SOLID	1	1.01e+00	1.010	ug/mL
9 BLNK-PREP	0	0	01C6-01 CL-06	SOLID	1	7.00e-02	0.070	ug/mL
9 BLNK-PREP	0	0	01C6-01 NO2-06	SOLID	1	<2.70e-1		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 34144

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
9 BLNK-PREP	0	0	③IC6-01 SO4-06	SOLID	1	<3.20e-1		ug/mL
9 BLNK-PREP	0	0	③IC6-01 OXALATE6	SOLID	1	<2.70e-1		ug/mL
9 BLNK-PREP	0	0	③IC6-01 BR-06	SOLID	1	<2.90e-1		ug/mL
9 BLNK-PREP	0	0	③IC6-01 NO3-06	SOLID	1	<3.00e-1		ug/mL
9 BLNK-PREP	0	0	③IC6-01 PO4-06	SOLID	1	<2.70e-1		ug/mL
10 SAMPLE	S00T000812	0 W	③IC6-01 F-06	SOLID	N/A	4.739e+03	116.900	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 GLYCOLT6	SOLID	N/A	7.405e+02	740.500	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 ACETATE6	SOLID	N/A	8.964e+02	896.400	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 FORMATE6	SOLID	N/A	8.964e+02	896.400	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 CL-06	SOLID	N/A	1.559e+02	155.900	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 NO2-06	SOLID	N/A	3.721e+04	1052.000	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 SO4-06	SOLID	N/A	2.732e+04	1247.000	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 OXALATE6	SOLID	N/A	4.710e+03	1052.000	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 BR-06	SOLID	N/A	1.130e+03	1130.000	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 NO3-06	SOLID	N/A	3.483e+04	1169.000	ug/g
10 SAMPLE	S00T000812	0 W	③IC6-01 PO4-06	SOLID	N/A	1.052e+03	1052.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 F-06	SOLID	N/A	4.834e+03	116.900	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 GLYCOLT6	SOLID	N/A	7.349e+02	734.900	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 ACETATE6	SOLID	N/A	8.896e+02	889.600	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 FORMATE6	SOLID	N/A	8.896e+02	889.600	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 CL-06	SOLID	N/A	1.547e+02	154.700	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 NO2-06	SOLID	N/A	3.822e+04	1044.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 SO4-06	SOLID	N/A	2.815e+04	1238.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 OXALATE6	SOLID	N/A	5.077e+03	1044.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 BR-06	SOLID	N/A	1.122e+03	1122.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 NO3-06	SOLID	N/A	3.580e+04	1160.000	ug/g
11 SAMPLE	S00T000813	0 W	③IC6-01 PO4-06	SOLID	N/A	1.044e+03	1044.000	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 F-06	SOLID	N/A	4.961e+03	92.000	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 GLYCOLT6	SOLID	N/A	5.826e+02	582.600	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 ACETATE6	SOLID	N/A	7.053e+02	705.300	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 FORMATE6	SOLID	N/A	7.053e+02	705.300	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 CL-06	SOLID	N/A	1.227e+02	122.700	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 NO2-06	SOLID	N/A	3.810e+04	828.000	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 SO4-06	SOLID	N/A	2.865e+04	981.300	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 OXALATE6	SOLID	N/A	5.438e+03	828.000	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 BR-06	SOLID	N/A	8.893e+02	889.300	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 NO3-06	SOLID	N/A	3.610e+04	920.000	ug/g
12 SAMPLE	S00T000814	0 W	③IC6-01 PO4-06	SOLID	N/A	8.280e+02	828.000	ug/g

Final page for worklist# 34144

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Luge 7/17/00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

836.18

HNF-1701 REV. 0

07/14/00 09:21

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 34144

Analyst: VLM Instrument: IC50S1 Book# 129N21AMethod: LA-533-115 Rev/Mod D-0128N21A

Worklist Comment: Rerun AZ-101 @IC6-01, Use DF 41. jmf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC6-QC	QC		
2 LCS-INST			@IC6-QC	QC		
3 CCV			@IC6-QC	QC		
4 BLNK-PREP			@IC6-01	SOLID		
5 SAMPLE	S00T000806 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
6 SPK	S00T000806 0 W		@IC6-01	SOLID		
7 SAMPLE	S00T000807 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
8 SAMPLE	S00T000808 0 W		@IC6-01	SOLID	99000433	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
9 BLNK-PREP			@IC6-01	SOLID		
10 SAMPLE	S00T000812 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
11 SAMPLE	S00T000813 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					
12 SAMPLE	S00T000814 0 W		@IC6-01	SOLID	99000438	AZ-101 (2)
	Analytes Requested: ACETATE6, BR-06 , CL-06 , F-06 , FORMATE6, GLYCOLT6, NO2-06 , NO3-06 , OXALATE6, PO4-06 , SO4-06					

Data Entry Comments:

34144 jul.csv uploaded 7/17/00 gmtj

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

836.19

07/14/00 09:21

Page: 2

WS2

LABCORE Data Entry Template for Worklist# 34144

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 34144

Signature**Date**

Signature**Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

836.20

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : BLK

Data File Name : C:\PEAKNET\DATA\00071400_002.DXD

7/17/00

Analyst: J. J. Messier

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 1.00

Date Time Collected : 7/14/00 9:57:54 AM

Injection Number : 2

System Operator : VLM

Vial ID : A01

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES ____ TO ____.

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : 129N21-A LCS

Data File Name : C:\PEAKNET\DATA\00071400_003.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Dilution Factor : 101.00

Date Time Collected : 7/14/00 10:30:02 AM

Injection Number : 3

System Operator : VLM

Vial ID : A02

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.77	102.62	352333	41164
2	GLYCOLATE	5.74	104.59	541846	45234
3	ACETATE	6.27	103.27	588015	37251
4	FORMATE	6.89	102.45	1166233	85001
5	CHLORIDE	10.16	100.93	267830	47303
6	NITRITE	11.17	96.97	1268764	148200
7	SULFATE	12.87	101.90	1666523	146029
8	OXALATE	13.47	104.74	1270048	92022
9	BROMIDE	15.79	103.09	858903	47920
10	NITRATE	17.30	109.11	1197602	53971
11	PHOSPHATE	18.68	102.51	537205	18380

222-S Sample Analysis Report

Sample Name : 128N21-A CCV

Data File Name : J:\DATA\00071400_015.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/14/00 5:14:18 PM

System Operator : VLM

Dilution Factor : 101.00

Injection Number : 15

Vial ID : A14

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.77	60.83	364487	42153
2	GLYCOLATE	5.74	411.46	566191	46812
3	ACETATE	6.27	497.39	607733	38138
4	FORMATE	6.90	488.26	1193975	86357
5	CHLORIDE	10.15	79.44	266131	46578
6	NITRITE	11.16	542.96	1319716	150694
7		11.64	0.00	12619	1208
8	SULFATE	12.88	667.94	1696630	147485
9	OXALATE	13.48	543.24	1230630	88398
10	BROMIDE	15.79	597.95	862055	47931
11	NITRATE	17.30	632.91	1181016	53252
12	PHOSPHATE	18.76	547.39	524974	18484

222-S Sample Analysis Report

HNF-1701 REV. 0

Sample Name : PREP BLANK 1

Data File Name : C:\PEAKNET\DATA\00071400_005.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 11:34:21 AM
System Operator : VLM

Dilution Factor : 1.00
Injection Number : 5
Vial ID : A04

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	CHLORIDE	10.16	0.13	42222	7367
2	NITRITE	11.66	0.28	69407	5153
3	SULFATE	12.88	0.11	28595	2577

PREP BLANK 1

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000806 SAM

Data File Name : C:\PEAKNET\DATA\00071400_006.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 12:06:30 PM
System Operator : VLM

Dilution Factor : 41.00
Injection Number : 6
Vial ID : A05

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.86	353.35	5221704	476228
2	ACETATE	6.25	2.75	10305	950
3	FORMATE	6.88	2.16	13640	1268
4	CHLORIDE	10.16	1.17	9485	1710
5	NITRITE	11.16	370.12	2194257	246475
6		11.64	0.00	167496	10218
7	SULFATE	12.78	1889.77	13011722	1049034
8	OXALATE	13.46	241.10	1340543	91477
9	NITRATE	17.24	343.66	1592730	72241
10		24.02	0.00	12639	393

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000806 SPK

Data File Name : C:\PEAKNET\DATA\00071400_007.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 12:38:40 PM
System Operator : VLM

Dilution Factor : 41.00
Injection Number : 7
Vial ID : A06

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.86	373.03	5512970	494453
2	GLYCOLATE	5.75	163.21	553639	45495
3	ACETATE	6.28	198.53	599234	37806
4	FORMATE	6.90	194.80	1174373	85628
5	CHLORIDE	10.16	32.95	272075	48593
6	NITRITE	11.15	581.83	3402987	364773
7		11.64	0.00	153286	9730
8	SULFATE	12.76	2106.33	14726893	1173361
9	OXALATE	13.44	460.72	2469031	164688
10	BROMIDE	15.77	240.90	855405	48837
11	NITRATE	17.14	604.14	2873427	124118
12	PHOSPHATE	18.68	226.92	536525	18574
13		23.98	0.00	15499	453

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000807 SAM

Data File Name : C:\PEAKNET\DATA\00071400_008.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 1:04:08 PM
System Operator : VLM

Dilution Factor : 41.00
Injection Number : 8
Vial ID : A07

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.84	296.95	4387335 4x over	412611
2	ACETATE	6.24	2.23	83380K	781
3	FORMATE	6.90	2.23	140850K	1278
4	CHLORIDE	10.16	0.81	6601 OK	1206
5	NITRITE	11.16	342.92	2036637 OK	229036
6		11.63	0.00	234082	12626
7	SULFATE	12.79	1600.13	10806072 out	886253
8	OXALATE	13.46	226.92	1264881 OK	87786
9	NITRATE	17.24	315.22	1456940 OK	66034

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000807 SAM

Data File Name : C:\PEAKNET\DATA\00071400_014.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 4:42:09 PM
System Operator : VLM

Dilution Factor : 401.00
Injection Number : 14
Vial ID : A13

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.77	327.53	494291	56523
2	NITRITE	11.18	301.52	187001	23045
3		11.65	0.00	35448	3033
4	SULFATE	12.87	1634.45	1040179	89629
5	OXALATE	13.48	193.61	114741	8718
6	NITRATE	17.44	245.35	112925	5196

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000808 SAM

Data File Name : C:\PEAKNET\DATA\00071400_009.DXD

Method File Name : c:\peaknet\method\as15anion3.met
Date Time Collected : 7/14/00 2:08:42 PM
System Operator : VLM

Dilution Factor : 41.00
Injection Number : 9
Vial ID : A08

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.83	288.54	4262892	399996
2	ACETATE	6.25	1.66	6213	636
3	FORMATE	6.88	2.13	13425	1199
4	CHLORIDE	10.16	0.90	7264	1320
5	NITRITE	11.17	302.03	1798603	202819
6		11.65	0.00	152903	9756
7	SULFATE	12.81	1544.13	10390269	850049
8	OXALATE	13.48	165.47	932668	64985
9	NITRATE	17.28	277.64	1278722	57622
10		24.00	0.00	8067	280

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222-S Sample Analysis Report

Sample Name : PREP BLANK 2

Data File Name : C:\PEAKNET\DATA\00071400_010.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/14/00 2:32:08 PM

System Operator : VLM

Dilution Factor : 1.00

Injection Number : 10

Vial ID : A09

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FORMATE	6.90	1.01	259480	20801
2	CHLORIDE	10.16	0.07	22299	3790
3	NITRITE	11.66	0.12	29812	2579
4	SULFATE	12.90	0.06	16100	1500

PREP BLANK 2

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000812 SAM

Data File Name : C:\PEAKNET\DATA\00071400_011.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/14/00 3:05:42 PM

System Operator : VLM

Dilution Factor : 41.00

Injection Number : 11

Vial ID : A10

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.79	49.85	735867	82828
2	ACETATE	6.26	4.23	15781	1334
3	FORMATE	6.88	2.56	16148	1427
4	CHLORIDE	10.16	0.75	6067	1126
5	NITRITE	11.16	391.47	2317569	257247
6		11.62	0.00	294594	14788
7	SULFATE	12.86	287.45	1800151	155104
8	OXALATE	13.47	49.55	285532	21422
9	NITRATE	17.24	366.45	1702060	76376
10		24.00	0.00	15358	437

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000813 SAM

Data File Name : C:\PEAKNET\DATA\00071400_012.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/14/00 3:37:50 PM

System Operator : VLM

Dilution Factor : 41.00

Injection Number : 12

Vial ID : A11

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	51.24	756413	84762
2	ACETATE	6.25	3.36	12558	1116
3	FORMATE	6.88	2.75	17332	1525
4	CHLORIDE	10.16	0.75	6091	1134
5	NITRITE	11.15	405.10	2396168	263271
6		11.63	0.00	295930	14973
7	SULFATE	12.87	298.44	1870024	160445
8	OXALATE	13.49	53.82	309878	23267
9	BROMIDE	15.86	3.13	10852	697
10	NITRATE	17.24	379.46	1764679	78978
11		24.02	0.00	16482	463

PeakNet 5.1

836.32

VLM
7/14/00Current Date : 7/14/0
Current Time : 16:07:5

HNF-1701 REV. 0

222-S Sample Analysis Report

Sample Name : S00T000814 SAM

Data File Name : C:\PEAKNET\DATA\00071400_013.DXD

Method File Name : c:\peaknet\method\as15anion3.met

Date Time Collected : 7/14/00 4:09:59 PM

System Operator : VLM

Dilution Factor : 41.00

Injection Number : 13

Vial ID : A12

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	FLUORIDE	4.78	66.33	979228	108041
2	ACETATE	6.25	7.39	27450	2320
3	FORMATE	6.89	2.77	17463	1598
4	CHLORIDE	10.15	1.53	12415	2204
5	NITRITE	11.15	509.35	2992703	324997
6		11.63	0.00	291689	15834
7	SULFATE	12.87	383.00	2410410	207757
8	OXALATE	13.49	72.71	417084	31352
9	NITRATE	17.18	482.71	2267714	99296
10		24.02	0.00	20769	590

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12/02/99 15:20

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ws2

LABCORE Data Entry Template for Worklist# 31843

Analyst: JK Scto Instrument: ICP014 12.03.99Book# 808486Method: LA-505-151/161 Rev/Mod C5Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysisWorklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		•ICP-QC	QC		
2	ICB		•ICP-QC	QC		
3	ILS		•ICP-QC	QC		
4	ICSA		•ICP-QC	QC		
5	ICSAB		•ICP-QC	QC		
6	SERDIL	S99T001833	0 D	•ICP-D01	LIQUID	
7	SAMPLE	S99T001833	0 D	•ICP-D01	LIQUID	99000433 AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8	DUP	S99T001833	0 D	•ICP-D01	LIQUID	
9	SPK (1pp4)	S99T001833	0 D	•ICP-D01	LIQUID	
10	CCV	S99T001833	0 D	•ICP-QC	QC	
11	CCB			•ICP-QC	QC	
12	SAMPLE	S99T001832	0 D	•ICP-D01	LIQUID	99000433 AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						

Data Entry Comments:

uploaded 12-6-99John Howell31843DEC.CSV

Validated by:

Sam M. Pang12/08/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

12/02/99 15:20

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LABCORE Data Entry Template for Worklist# 31843

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S99T001832	0 D	@ICP-D01	LIQUID		
14 SAMPLE	S99T001834	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
15 DUP	S99T001834	0 D	@ICP-D01	LIQUID		
16 SAMPLE	S99T001835	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
17 DUP	S99T001835	0 D	@ICP-D01	LIQUID		
18 SAMPLE	S99T001836	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
19 DUP	S99T001836	0 D	@ICP-D01	LIQUID		
20 ICSA			@ICP-QC	QC		
21 ICSAB			@ICP-QC	QC		
22 CCV			@ICP-QC	QC		
23 CCB			@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Allquot Code.

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LABCORE Data Entry Template for Worklist# 31843

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 31843

JK JGD 12-06-99

Signature	Date	
5997001833-L	.025-10-2-8	DF 2005
5997001833	.025-10	401
5997001833-D	.025-10	401
5997001833-G	.025-10	401
5997001833-X	.025-10-1-9	4010
5997001833-GX	.025-10-1-9	4010
5997001833	.025-10	DF 401
5997001833-D	.025-10	401
5997001834	.025-10	DF 401
5997001834-D	.025-10	401
5997001835	.025-10	DF 401
5997001835-D	.025-10	401
5997001836	.025-10	DF 401
5997001836-D	.025-10	401

Signature	Date
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Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91206A	ICP2	12/06/99	08:43	DKS	Q	CONC
2	ICB	91206A	ICP2	12/06/99	08:47	DKS	Q	CONC
3	LLS	91206A	ICP2	12/06/99	08:50	DKS	Q	CONC
4	ICSA	91206A	ICP2	12/06/99	08:53	DKS	Q	CONC
5	ICSAB	91206A	ICP2	12/06/99	08:56	DKS	Q	CONC
6	S99T001833_L	91206A	ICP2	12/06/99	08:59	DKS	S	CONC
7	S99T001833	91206A	ICP2	12/06/99	09:02	DKS	S	CONC
8	S99T001833_D	91206A	ICP2	12/06/99	09:06	DKS	S	CONC
9	S99T001833_A	91206A	ICP2	12/06/99	09:09	DKS	S	CONC
10	S99T001833_X	91206A	ICP2	12/06/99	09:15	DKS	S	CONC
11	S99T001833_AX	91206A	ICP2	12/06/99	09:18	DKS	S	CONC
12	CCV	91206A	ICP2	12/06/99	09:27	DKS	Q	CONC
13	CCB	91206A	ICP2	12/06/99	09:30	DKS	Q	CONC
14	S99T001832	91206A	ICP2	12/06/99	09:34	DKS	S	CONC
15	S99T001832_D	91206A	ICP2	12/06/99	09:37	DKS	S	CONC
16	S99T001834	91206A	ICP2	12/06/99	09:41	DKS	S	CONC
17	S99T001834_D	91206A	ICP2	12/06/99	09:44	DKS	S	CONC
18	S99T001835	91206A	ICP2	12/06/99	09:47	DKS	S	CONC
19	S99T001835_D	91206A	ICP2	12/06/99	09:50	DKS	S	CONC
20	S99T001836	91206A	ICP2	12/06/99	09:53	DKS	S	CONC
21	S99T001836_D	91206A	ICP2	12/06/99	09:57	DKS	S	CONC
22	ICSA	91206A	ICP2	12/06/99	10:00	DKS	Q	CONC
23	ICSAB	91206A	ICP2	12/06/99	10:03	DKS	Q	CONC
24	CCV	91206A	ICP2	12/06/99	10:06	DKS	Q	CONC
25	CCB	91206A	ICP2	12/06/99	10:09	DKS	Q	CONC

JK Lgt

12-06-99

Work/15f #31843

QZ-101

S99T001832 → S99T001836

S99T001833

$$Li = < 4.01 \frac{\mu g}{ml}$$

$$Spk: Li = \frac{(387.58)}{4.01} - 0 \times 100 = 96.7\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 840 TO 844.

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Analysis Report

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8385	4.9576	5.0577	5.0993	4.9427	4.9096
2	ICB	-.00047	-.00323	-.00784	.00026	-.00004	.00000
3	LLS	.02011	.10000	.20075	.10264	.09722	.01002
4	ICSA	.00025	250.49	-.03395	.00368	.00027	.00010
5	ICSAB	.95739	249.70	-.05025	.00890	.45724	.46375
6	S99T001833_L	12.897	8695.1	-126.34	9.1826	.24102	.44355
7	S99T001833	8.2537	8523.1	-87.031	8.8559	.22493	.36364
8	S99T001833_D	8.0564	8432.3	-96.321	9.1798	.21263	.37054
9	S99T001833_A	351.90	8803.6	310.79	409.85	377.71	386.35
10	S99T001833_X	16.756	8610.5	-145.02	-1.0713	-.12693	.74172
11	S99T001833_AX	39638.	47902.	39845.	39728.	39878.	39797.
12	CCV	4.8277	4.9423	5.0522	5.0853	4.9471	4.9262
13	CCB	.00008	.00009	-.00852	-.00080	.00001	.00007
14	S99T001832	8.6472	9197.1	10.193	11.124	1.1640	.37138
15	S99T001832_D	7.8656	9152.8	3.8523	9.0707	1.1321	.39320
16	S99T001834	7.4548	8470.2	-42.038	8.7485	.87857	.34122
17	S99T001834_D	7.4779	8537.8	-41.493	9.9367	.92975	.35613
18	S99T001835	7.9793	9220.9	7.2346	10.047	1.1774	.38541
19	S99T001835_D	7.5978	9318.6	7.9658	10.261	1.1426	.38580
20	S99T001836	7.9666	8951.4	-4.0236	7.2366	.93539	.38539
21	S99T001836_D	7.7808	8931.6	-5.4551	7.4530	.93640	.39282
22	ICSA	-.00365	249.28	-.01569	-.00350	.00017	.00023
23	ICSAB	.95603	249.78	-.01603	.00082	.45768	.46571
24	CCV	4.8392	4.9413	5.0757	5.1383	4.9339	4.9790
25	CCB	-.00171	.00023	-.00363	-.00053	-.00007	.00012

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0683	5.1500	5.0225	5.0761	5.0397	5.0106
2	ICB	-.01837	-.00184	-.00117	-.00566	-.00067	-.00045
3	LLS	.17987	.24829	.00906	.20314	.04010	.02028
4	ICSA	-.00726	262.45	-.00626	.01231	-.00084	-.00218
5	ICSAB	.00335	262.36	.94059	.01044	.46876	.47268
6	S99T001833_L	-.81895	9.1287	-1.7281	4.1942	-1.1807	743.30
7	S99T001833	-7.6960	28.047	-.40112	-.74652	.10449	727.83
8	S99T001833_D	-1.4675	3.9054	-.40750	-.55688	.46991	720.21
9	S99T001833_A	392.76	413.85	400.70	398.15	401.09	1115.3
10	S99T001833_X	-101.76	-11.999	-1.4513	-35.719	-5.5171	740.12
11	S99T001833_AX	40350.	39701.	39887.	39758.	39830.	40558.
12	CCV	5.0358	5.1324	5.0257	5.0636	5.0331	5.0064
13	CCB	-.02285	-.00118	-.00014	-.00634	-.00039	-.00023
14	S99T001832	-6.7508	1.5858	.37505	-2.9053	-.18691	727.06
15	S99T001832_D	-9.2064	2.1827	.33904	-3.9490	.09905	719.11
16	S99T001834	-.35158	.33462	-.54181	-1.4948	.10409	710.26
17	S99T001834_D	1.3514	18.068	-.38765	-2.8941	-.28799	715.70
18	S99T001835	-10.554	4.5855	.11374	-.92510	-.36582	730.88
19	S99T001835_D	-6.8614	2.5218	.59862	-5.1586	-.26469	735.43
20	S99T001836	-4.5400	3.2799	.10648	-1.2118	.38937	727.76
21	S99T001836_D	-2.2324	3.0561	.12851	-.46536	.18112	727.30
22	ICSA	-.02829	260.88	-.00675	.00519	-.00031	-.00272
23	ICSAB	.00555	261.83	.94025	.01067	.46903	.47460
24	CCV	5.0431	5.2044	5.0786	5.0834	5.0806	5.0542

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Analysis Report

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
25	CCB	-.03894	-.00188	-.00039	-.00935	-.00117	-.00053

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0827	.03342	5.1073	5.4843	5.1284	5.0302
2	ICB	.00004	-.00101	.00129	-.32135	-.00106	-.00073
3	LLS	.01880	.00053	.10373	.62051	.10083	.02036
4	ICSA	-.00246	.29958	99.433	.04232	-.00624	.00276
5	ICSAB	.48137	.30139	99.153	.10513	-.00646	.97741
6	S99T001833_L	-.15079	.57182	4.3224	4984.1	1.5473	1.4794
7	S99T001833	-1.2388	.02498	.85243	4897.8	-.01892	2.3299
8	S99T001833_D	-.99980	-.24948	.49260	4889.0	.00988	2.2557
9	S99T001833_A	392.91	2.4776	404.20	5116.4	403.02	387.58
10	S99T001833_X	-4.7908	-.89851	-.41550	4848.7	-4.3556	-1.1092
11	S99T001833_AX	39542.	270.49	39609.	45734.	39697.	39776.
12	CCV	5.0682	.03338	5.0764	5.3114	5.1330	5.0267
13	CCB	-.00024	.00002	.00061	.00744	-.00091	-.00046
14	S99T001832	-.47370	-.40558	1.4401	4851.2	-.48407	.07357
15	S99T001832_D	-.76772	-.72639	1.1503	4854.6	-.18324	-.14802
16	S99T001834	-.96433	-.40792	-.29561	4742.3	-.39718	17.939
17	S99T001834_D	.93350	-.34332	-.44879	4781.7	-.43755	18.161
18	S99T001835	-.58590	-.19244	.80058	4920.2	.18419	4.3638
19	S99T001835_D	-1.0828	-.67164	.70635	4956.0	-.34713	4.0683
20	S99T001836	-.93181	-.36780	-.07977	4878.2	-.18049	18.790
21	S99T001836_D	-.85117	-.43135	-.25744	4905.6	.03406	18.642
22	ICSA	-.00264	.29939	98.879	-.03123	-.00753	.00248
23	ICSAB	.48283	.30329	99.147	.19079	-.00669	.98350
24	CCV	5.0543	.03594	5.0977	5.0443	5.1397	4.9932
25	CCB	-.00025	.00055	.00050	-.29055	-.00159	-.00018

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0521	4.7304	4.9997	5.2266	5.0713	4.9770
2	ICB	-.00449	-.00004	.00814	.02097	-.00092	.00498
3	LLS	.19079	.01912	.10417	.21811	.20283	.04205
4	ICSA	258.14	-.00931	-.00723	194.46	.01001	-.00200
5	ICSAB	256.68	.42642	-.00819	192.24	.01048	.92679
6	S99T001833_L	6.7545	.34709	98.034	115630.	-2.8230	-3.2298
7	S99T001833	1.0059	.10832	92.574	111030.	-1.3174	-.93773
8	S99T001833_D	-.30691	.04697	92.809	109880.	-.44210	-1.1836
9	S99T001833_A	393.81	361.68	491.21	109450.	396.22	394.53
10	S99T001833_X	-6.4595	.41762	99.026	115050.	-15.341	5.4611
11	S99T001833_AX	39592.	39654.	39943.	151950.	39703.	39799.
12	CCV	4.9999	4.7016	4.9789	5.1609	5.0713	4.9712
13	CCB	.00167	.00003	.00553	.02032	-.00218	-.00330
14	S99T001832	-.55673	-.11169	94.757	110610.	-.28381	.09245
15	S99T001832_D	-1.7581	-.12009	93.275	110820.	-1.6205	-.86954
16	S99T001834	-2.3134	-.05306	91.915	107990.	-1.0395	-1.0415
17	S99T001834_D	.70434	-.04210	92.303	108800.	-.71740	-.60733
18	S99T001835	.62861	-.09847	95.502	110780.	-.57999	-.51284
19	S99T001835_D	-1.0051	-.18403	95.501	112140.	-2.0199	-1.5931
20	S99T001836	-1.8445	-.07154	95.031	110690.	.02118	1.3168

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#	Sample Name	Hg	Mn	Mo	Na	Nd	Ni
21	S99T001836_D	.39284	-.09538	93.862	110060.	-.15597	1.1732
22	ICSA	255.71	-.00909	-.01159	191.37	.00798	-.00860
23	ICSAB	256.22	.42514	-.00780	191.66	.01113	.92575
24	CCV	5.0037	4.7313	5.0150	5.1111	5.0562	5.0219
25	CCB	-.00840	.00018	.00447	.01871	-.00260	-.00599

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1238	4.9192	4.8895	5.0218	4.9118	5.1267
2	ICB	.00319	.00476	.01070	-.00171	.00122	-.00118
3	LLS	.40866	.21715	.19021	.09319	.19811	.12250
4	ICSA	-.01757	.06125	-.02347	.00208	-.06788	-.00972
5	ICSAB	-.01481	1.0325	-.02683	.00762	-.04404	-.00831
6	S99T001833_L	414.07	-.13.680	5105.9	28.234	31.685	220.27
7	S99T001833	423.75	.94018	5099.3	4.1251	24.488	76.369
8	S99T001833_D	423.84	2.8139	5009.9	2.4921	25.006	79.169
9	S99T001833_A	840.84	387.19	5388.7	404.73	427.05	490.07
10	S99T001833_X	449.41	-.90967	5043.5	-28.602	69.898	156.12
11	S99T001833_AX	40457.	39967.	44919.	39980.	40031.	40691.
12	CCV	5.1411	4.9033	4.8941	5.0046	4.9256	5.1167
13	CCB	.00064	-.00360	.00168	-.00134	.01056	.00319
14	S99T001832	437.95	1.5739	5082.7	3.9775	18.813	86.403
15	S99T001832_D	433.54	1.9154	5014.8	.78862	19.307	64.369
16	S99T001834	417.29	1.7886	4967.3	2.7209	21.133	60.202
17	S99T001834_D	428.66	.14950	4998.4	1.2000	17.924	59.609
18	S99T001835	440.82	1.7146	5097.3	2.9195	23.010	68.358
19	S99T001835_D	449.24	.45780	5146.8	1.9050	23.810	69.725
20	S99T001836	429.94	4.7247	5081.0	5.1658	19.208	97.316
21	S99T001836_D	440.81	1.3408	5060.2	6.7962	19.947	98.036
22	ICSA	-.01276	.06049	-.03186	.00393	-.03945	.01062
23	ICSAB	-.01395	1.0501	-.03836	.00963	-.02996	.00208
24	CCV	5.1638	4.9521	4.9111	5.0448	4.9614	5.1641
25	CCB	.00905	.00479	.00162	-.00484	.00882	.00683

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.0956	4.9144	.38260	5.1239	4.9130	9.9364
2	ICB	-.01212	-.00017	-.00336	.00013	.01365	-.04340
3	LLS	.19537	.01990	.01676	.02001	.42551	.47426
4	ICSA	-.01824	.00143	.10115	.00198	-.05218	.10943
5	ICSAB	-.01766	.00152	.11300	.00243	-.05219	.13430
6	S99T001833_L	-4.8857	-.06167	-4.8244	-.02705	-28.147	3.0847
7	S99T001833	-2.3245	.01049	-6.1960	-.08741	-4.4925	8.3484
8	S99T001833_D	-3.9374	-.03790	-6.4588	.13187	1.3851	12.657
9	S99T001833_A	398.02	383.57	27.652	404.02	384.73	792.10
10	S99T001833_X	-18.759	-.36519	-7.8926	-1.1767	106.52	-9.9651
11	S99T001833_AX	39735.	39601.	3010.5	39766.	39736.	79277.
12	CCV	5.1020	4.9154	.38588	5.1218	4.9207	9.9685
13	CCB	-.00475	-.00005	.00005	-.00013	.00969	-.01457
14	S99T001832	-5.1717	-.02515	-5.5781	.02357	2.2826	7.5806
15	S99T001832_D	-6.6197	-.03682	-6.9904	-.09304	3.7837	1.1565
16	S99T001834	-3.4556	-.03784	-6.8376	.07453	4.3763	13.431

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Analysis Report

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
17	S99T001834_D	-2.4189	-.02616	-6.7650	.13305	3.1554	12.432
18	S99T001835	-2.8167	.02258	-6.0568	.18793	3.3230	19.159
19	S99T001835_D	-6.1977	-.03777	-8.0896	-.15826	2.1965	11.793
20	S99T001836	-5.3286	-.00144	-6.5602	.18441	3.6745	15.090
21	S99T001836_D	-4.6388	-.02569	-5.0135	.13606	3.2342	13.176
22	ICSA	-.01717	.00152	.11173	.00173	-.06555	.12998
23	ICSAB	-.01033	.00160	.10861	.00257	-.08110	.13182
24	CCV	5.1204	4.9270	.39320	5.1505	4.9785	9.9808
25	CCB	-.00246	-.00003	-.00484	-.00016	-.00606	-.00425

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0627	.01235	5.0002	5.0771
2	ICB	-.00204	-.00084	-.00045	-.00052
3	LLS	.09980	.00003	.02039	.01841
4	ICSA	-.00753	.01048	-.00660	-.00345
5	ICSAB	.46856	.01070	1.0041	-.00426
6	S99T001833_L	.07751	-.31642	-1.0088	.70982
7	S99T001833	.89166	-.22412	-.77789	.39746
8	S99T001833_D	.76315	-.38350	-.81831	.16735
9	S99T001833_A	401.29	.79773	399.44	402.67
10	S99T001833_X	-1.7116	-1.2562	-1.2526	.57213
11	S99T001833_AX	39735.	106.21	39865.	39560.
12	CCV	5.0570	.01250	4.9893	5.0740
13	CCB	-.00068	-.00030	.00017	-.00019
14	S99T001832	.76779	-.38135	-.16557	.02428
15	S99T001832_D	.25741	-.53617	-.15841	-.10779
16	S99T001834	.72395	-.32081	-1.2000	.19640
17	S99T001834_D	.68397	-.35190	-.18889	.27255
18	S99T001835	1.1523	-.22872	-.60633	.37656
19	S99T001835_D	.64390	-.38314	-.70146	.04605
20	S99T001836	.91869	-.29001	-.71448	.17256
21	S99T001836_D	.91968	-.38372	-.85052	.05990
22	ICSA	-.00680	.01047	-.00539	-.00363
23	ICSAB	.46972	.01086	1.0017	-.00333
24	CCV	5.0930	.01328	5.0277	5.0944
25	CCB	.00031	-.00031	.00065	.00077

JK
1206-99

12/02/99 15:30

ws2

File #: 91206B

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LABCORE Data Entry Template for Worklist# 31844

Analyst: JK Seto Instrument: ICP012 12-3-99Book# 808488Method: LA-505-151/161 Rev/Mod C-5Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysisWorklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			ICP-QC	QC		
2 ICB			ICP-QC	QC		
3 LLS			ICP-QC	QC		
4 ICSA			ICP-QC	QC		
5 ICSAB			ICP-QC	QC		
6 SERDIL	S99T001837	0 D	ICP-D01	LIQUID		
7 SAMPLE	S99T001837	0 D	ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8 DUP	S99T001837	0 D	ICP-D01	LIQUID		
9 SPK	(1 pp4) S99T001837	0 D	ICP-D01	LIQUID		
10 CCV	SPK EX (10 pp4) <u>12-3-99</u>		ICP-QC	QC		
11 CCB			ICP-QC	QC		
12 SAMPLE	S99T001838	0 D	ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						

Data Entry Comments:

Upload + Validated by:

Sal M. Pang

12/08/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31844

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S99T001838	0 D	@ICP-D01	LIQUID		
14 SAMPLE	S99T001839	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
15 DUP	S99T001839	0 D	@ICP-D01	LIQUID		
16 SAMPLE	S99T001840	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
17 DUP	S99T001840	0 D	@ICP-D01	LIQUID		
18 SAMPLE	S99T001841	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
19 DUP	S99T001841	0 D	@ICP-D01	LIQUID		
20 ICSA			@ICP-QC	QC		
21 ICSAB			@ICP-QC	QC		
22 CCV			@ICP-QC	QC		
23 CCB			@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31844

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 31844

JK *[Signature]* 12-06-99

Signature	Date
599T001837L	.025-10-1-8, JF 1005
599T001837	.025-10 401
599T001837D	.025-10 401
599T001837G	.025-10 401
599T001837X	.025-10-1-9 4010
599T001837GX	.025-10-1-9 4010
599T001838	.025-10, JF 401
599T001838D	.025-10 401
599T001839	.025-10, JF 401
599T001839D	.025-10 401
599T001840	.025-10, JF 401
599T001840D	.025-10 401
599T001841	.025-10, JF 401
599T001841D	.025-10 401

Signature	Date
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Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91206B	ICP2	12/06/99	11:22	DKS	Q	CONC
2	ICB	91206B	ICP2	12/06/99	11:25	DKS	Q	CONC
3	ILS	91206B	ICP2	12/06/99	11:28	DKS	Q	CONC
4	ICSA	91206B	ICP2	12/06/99	11:31	DKS	Q	CONC
5	ICSAB	91206B	ICP2	12/06/99	11:34	DKS	Q	CONC
6	S99T001837_L	91206B	ICP2	12/06/99	11:38	DKS	S	CONC
7	S99T001837	91206B	ICP2	12/06/99	11:41	DKS	S	CONC
8	S99T001837_D	91206B	ICP2	12/06/99	11:44	DKS	S	CONC
9	S99T001837_A	91206B	ICP2	12/06/99	11:47	DKS	S	CONC
10	S99T001837_X	91206B	ICP2	12/06/99	11:53	DKS	S	CONC
11	S99T001837_AX	91206B	ICP2	12/06/99	11:56	DKS	S	CONC
12	CCV	91206B	ICP2	12/06/99	12:03	DKS	Q	CONC
13	CCB	91206B	ICP2	12/06/99	12:06	DKS	Q	CONC
14	S99T001838	91206B	ICP2	12/06/99	12:09	DKS	S	CONC
15	S99T001838_D	91206B	ICP2	12/06/99	12:12	DKS	S	CONC
16	S99T001839	91206B	ICP2	12/06/99	12:16	DKS	S	CONC
17	S99T001839_D	91206B	ICP2	12/06/99	12:19	DKS	S	CONC
18	S99T001840	91206B	ICP2	12/06/99	12:22	DKS	S	CONC
19	S99T001840_D	91206B	ICP2	12/06/99	12:25	DKS	S	CONC
20	S99T001841	91206B	ICP2	12/06/99	12:28	DKS	S	CONC
21	S99T001841_D	91206B	ICP2	12/06/99	12:31	DKS	S	CONC
22	ICSA	91206B	ICP2	12/06/99	12:36	DKS	Q	CONC
23	ICSAB	91206B	ICP2	12/06/99	12:39	DKS	Q	CONC
24	CCV	91206B	ICP2	12/06/99	12:42	DKS	Q	CONC
25	CCB	91206B	ICP2	12/06/99	12:45	DKS	Q	CONC

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Wank/ist # 31844

QZ-102

S99T001837 → S99T001841

S99T001837

Li = 16.608 ~~ug~~ ^{mg}

$$SPK: Li = \left(\frac{401.71}{401} \right) - \left(\frac{16.608}{401} \right) \times 100 = 96.0\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 848 TO 852.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8228	4.9670	5.1127	5.1163	4.9328	4.9882
2	ICB	-.00009	.01654	-.00841	.00027	.00009	.00018
3	LLS	.01885	.11171	.19863	.09941	.09574	.01013
4	ICSA	-.00038	248.55	-.01226	.00144	.00024	.00034
5	ICSAB	.95479	250.73	-.01734	-.00176	.45704	.46582
6	S99T001837_L	11.562	8545.4	-23.083	-.54999	1.0187	.81387
7	S99T001837	7.5849	8433.4	-18.520	8.0980	.86751	.43054
8	S99T001837_D	8.0897	8419.2	-23.168	9.8270	.93676	.44416
9	S99T001837_A	337.77	8770.1	386.48	409.53	374.78	386.46
10	S99T001837_X	18.785	8529.7	-52.159	-4.3050	1.2103	1.0316
11	S99T001837_AX	39788.	48476.	40225.	40133.	40297.	40295.
12	CCV	4.7772	4.9032	5.0355	5.0560	4.8845	4.9080
13	CCB	.00025	.00893	-.00102	-.00054	.00000	.00022
14	S99T001838	7.4321	8274.7	-22.904	9.0743	.87058	.40724
15	S99T001838_D	7.3042	8489.7	-23.902	8.6401	.87574	.40771
16	S99T001839	7.7193	8321.6	-18.523	8.7468	.95233	.41535
17	S99T001839_D	7.5937	8302.2	-19.657	8.8534	.98360	.42282
18	S99T001840	7.2716	8511.2	-7.9622	8.4237	.86464	.42985
19	S99T001840_D	7.3922	8501.0	-10.910	8.1002	.83614	.42240
20	S99T001841	6.7643	8314.1	-14.546	10.475	.89718	.41558
21	S99T001841_D	7.3655	8250.9	-10.996	8.3172	.97076	.41498
22	ICSA	-.00268	249.49	-.02929	-.00037	.00017	.00034
23	ICSAB	.95226	249.36	-.02674	.00054	.45605	.46503
24	CCV	4.7820	4.9078	5.0321	5.0657	4.8840	4.9092
25	CCB	-.00171	.00963	-.00173	-.00107	-.00005	.00027

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0641	5.1268	5.0425	5.0857	5.0457	5.0248
2	ICB	-.00785	-.00060	-.00005	.00112	-.00085	-.00033
3	LLS	.18808	.24717	.01011	.19897	.04089	.02190
4	ICSA	.00419	259.15	-.00681	.01441	.00248	-.00178
5	ICSAB	-.00197	259.17	.93777	.00740	.46595	.47263
6	S99T001837_L	-40.795	-9.8885	.87918	-7.0952	1.9400	734.57
7	S99T001837	-5.6605	6.0585	-.51633	-2.7194	.41486	719.12
8	S99T001837_D	-3.8397	-.57921	.03842	.74744	.70488	716.98
9	S99T001837_A	386.90	408.96	400.36	391.40	398.84	1111.0
10	S99T001837_X	-109.38	-31.882	-1.9309	-2.8178	2.1223	724.02
11	S99T001837_AX	40634.	39612.	40042.	40268.	39962.	40693.
12	CCV	4.9891	5.1149	5.0154	5.0203	5.0112	4.9850
13	CCB	.01922	-.00010	.00030	-.00236	.00149	.00022
14	S99T001838	-8.7041	-1.3037	-.12617	.95248	.37026	706.64
15	S99T001838_D	-6.0230	-2.1885	-.41140	-2.6306	.10179	710.79
16	S99T001839	-13.553	-.77908	-.08952	-1.2376	.22797	702.04
17	S99T001839_D	1.1318	-.38636	-.04258	-.38580	.80523	699.86
18	S99T001840	-17.487	-2.6828	-.43706	-3.2933	-.29277	721.16
19	S99T001840_D	-14.316	-.98370	-.43238	-1.4153	-.02921	722.18
20	S99T001841	-2.8139	-2.1689	-.41755	-6.2779	.31295	704.08
21	S99T001841_D	-8.5773	-1.9385	-.02811	-.08311	.50034	703.38
22	ICSA	.00169	260.21	-.00699	.01027	.00078	-.00170
23	ICSAB	.00266	259.49	.93625	.01187	.46823	.47188
24	CCV	5.0434	5.1016	4.9983	5.0403	5.0045	4.9763

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Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
25	CCB	-.04809	-.00191	-.00113	-.00445	.00039	-.00020

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0836	.03334	5.0867	5.1687	5.1637	5.0915
2	ICB	.00084	.00005	.00010	-.13080	.00019	-.00036
3	LLS	.01929	.00141	.10184	.50278	.10095	.02082
4	ICSA	-.00164	.29935	98.433	.01510	-.00691	.00248
5	ICSAB	.48443	.30616	98.700	-.23387	-.00738	.98793
6	S99T001837_L	-.44022	-.92606	.11376	5049.8	-1.1331	15.907
7	S99T001837	-1.2015	-.19019	-.01291	4794.0	-.36732	16.608
8	S99T001837_D	-1.3187	-.48675	-.11170	4802.7	.34084	16.571
9	S99T001837_A	390.02	2.4986	399.82	5051.0	402.24	401.71
10	S99T001837_X	-8.1642	1.9827	-2.2183	5165.7	.12733	20.339
11	S99T001837_AX	40040.	272.53	39685.	44649.	40291.	40875.
12	CCV	4.9968	.03387	5.0364	5.3699	5.0835	4.9773
13	CCB	.00077	-.00052	.00058	-.12426	-.00057	-.00027
14	S99T001838	-1.5565	-.04149	-.26276	4636.7	-.20408	24.930
15	S99T001838_D	-1.7245	-.59376	.00134	4654.9	-.29412	32.957
16	S99T001839	-1.3523	-.93317	.15658	4778.0	-.04622	18.939
17	S99T001839_D	-1.1273	-.87733	.13472	4636.9	-.05711	24.894
18	S99T001840	-1.8412	-.85171	-.04501	4800.3	-.49829	22.046
19	S99T001840_D	-1.5585	-.63189	-.55165	4838.6	-.29742	21.749
20	S99T001841	-1.5335	-.51165	-.56683	4645.9	-.63318	23.525
21	S99T001841_D	-1.4048	-.26640	-.23687	4675.6	-.01010	22.156
22	ICSA	-.00241	.29930	98.602	-.02211	-.00744	.00285
23	ICSAB	.48197	.30344	98.388	.02499	-.00557	.98452
24	CCV	5.0031	.03443	5.0163	5.3981	5.0953	5.0045
25	CCB	-.00019	-.00003	-.00018	.16808	-.00150	-.00009

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0170	4.7019	4.9895	5.2031	5.0682	4.9892
2	ICB	.00524	.00027	.00311	.01125	-.00291	-.00492
3	LLS	.18926	.01920	.10322	.19711	.20237	.04186
4	ICSA	254.98	-.00909	-.00752	190.58	.01210	-.01242
5	ICSAB	255.66	.42367	-.00957	192.37	.01104	.91483
6	S99T001837_L	-6.5362	.08776	94.105	112390.	.65173	.96035
7	S99T001837	-3.7308	.04629	92.414	108740.	.03652	-1.1254
8	S99T001837_D	.26287	-.01997	92.769	108800.	-.24467	-.89408
9	S99T001837_A	386.81	359.65	490.79	108320.	393.13	391.52
10	S99T001837_X	10.986	1.0492	95.969	112050.	-15.707	12.951
11	S99T001837_AX	39771.	39739.	40127.	153750.	40023.	39697.
12	CCV	4.9552	4.6724	4.9593	5.0871	4.9867	4.9190
13	CCB	-.00080	.00012	.00699	.00256	-.00100	.00000
14	S99T001838	5.4772	.08127	92.972	105090.	-.09268	-2.9150
15	S99T001838_D	-.98450	-.04537	93.550	108450.	-1.4661	-1.3281
16	S99T001839	1.5784	-.13655	91.403	108230.	-1.1245	.86566
17	S99T001839_D	2.6523	-.11293	92.492	106930.	.66372	.09201
18	S99T001840	-3.3358	-.08104	93.472	110030.	-1.9670	-.98525
19	S99T001840_D	-.55292	-.09023	93.862	110190.	-1.3340	-.84101
20	S99T001841	-3.1937	-.02253	91.600	106920.	-1.5268	-1.2567

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Analysis Report

Averages

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
21	S99T001841_D	2.9356	-.00257	93.359	105650.	-.29848	-1.7898
22	ICSA	255.30	-.00917	-.01180	190.87	.00930	-.01022
23	ICSAB	254.79	.42193	-.00977	190.78	.01330	.92297
24	CCV	4.9462	4.6623	4.9466	5.1235	4.9891	4.9347
25	CCB	-.00621	.00013	.00564	.00836	-.00298	-.00792

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1595	4.8973	4.9233	5.0276	4.9519	5.1031
2	ICB	.01400	-.00547	.00374	-.00647	.03341	-.00375
3	ILS	.41110	.22257	.18986	.09284	.22286	.11777
4	ICSA	-.01522	.07123	-.02427	.00556	-.02565	-.01284
5	ICSAB	-.01563	1.0343	-.02858	.00551	-.02547	-.01669
6	S99T001837_L	434.89	4.5367	5010.0	5.0719	38.668	50.089
7	S99T001837	423.92	2.0534	5021.3	2.4949	20.907	38.705
8	S99T001837_D	426.27	4.5942	5000.6	4.8826	30.378	38.391
9	S99T001837_A	836.23	390.22	5357.8	407.98	436.90	453.48
10	S99T001837_X	456.54	~4.2536	4933.0	2.7301	135.90	85.369
11	S99T001837_AX	40616.	39792.	45437.	40402.	40278.	40227.
12	CCV	5.0859	4.8871	4.8547	4.9914	4.9362	5.0538
13	CCB	.00618	.01585	-.00576	-.00703	.02915	-.00098
14	S99T001838	423.79	.29271	4922.3	3.4940	30.907	67.185
15	S99T001838_D	425.29	-1.5424	4962.1	3.5165	27.717	76.925
16	S99T001839	419.18	-3.3313	4921.2	4.3374	23.387	41.324
17	S99T001839_D	418.99	3.0800	4880.7	3.7658	20.501	44.157
18	S99T001840	423.17	1.4007	5029.2	2.6157	27.666	55.202
19	S99T001840_D	431.17	.99945	5042.2	3.6479	27.753	55.620
20	S99T001841	420.43	-.78290	4925.4	2.5469	23.042	48.343
21	S99T001841_D	418.81	2.6003	4895.3	6.4710	24.278	49.095
22	ICSA	-.01079	.06823	-.02887	.00335	-.02973	-.00570
23	ICSAB	-.00487	1.0345	-.03155	.00300	-.02198	-.00956
24	CCV	5.0580	4.8564	4.8509	5.0022	4.8960	5.0531
25	CCB	.01280	-.00901	-.00188	-.00742	.02335	.00059

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.1505	4.9457	.40182	5.1667	4.9179	10.024
2	ICB	-.00457	-.00009	.00583	.00015	.01161	-.00183
3	ILS	.19990	.01974	.01789	.02056	.42921	.50527
4	ICSA	-.02073	.00152	.12810	.00221	-.05414	.12198
5	ICSAB	-.02313	.00152	.10918	.00187	-.03408	.10212
6	S99T001837_L	-16.158	-.30193	4.4624	.57358	16.337	-35.546
7	S99T001837	-4.2230	-.03680	-5.1601	.14321	-7.7249	-.67175
8	S99T001837_D	-4.3968	-.03748	-3.5678	.25612	1.5623	9.6948
9	S99T001837_A	397.65	382.00	24.412	404.52	385.56	792.56
10	S99T001837_X	12.780	-.13019	14.589	-1.6656	23.681	103.97
11	S99T001837_AX	40500.	40056.	3147.3	40367.	39623.	80688.
12	CCV	5.0634	4.8575	.39865	5.0815	4.9208	9.8726
13	CCB	-.00510	-.00009	.00361	-.00027	.00196	-.00730
14	S99T001838	-2.1423	-.00231	-3.2716	.08315	-6.0898	26.796
15	S99T001838_D	-5.3801	-.06173	-6.2657	-.14832	3.2464	8.2543
16	S99T001839	-7.3065	-.08527	-2.8173	-.13257	1.4145	-2.4722

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Analysis Report

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
17	S99T001839_D	-6.2982	-.07334	-1.2719	.15420	5.4388	.72729
18	S99T001840	-6.1737	-.07355	-6.8504	.01910	-3.5892	4.0246
19	S99T001840_D	-5.2974	-.04974	-3.2980	.08685	-5.5327	10.319
20	S99T001841	-4.3058	-.04956	-7.2027	-.15056	4.2225	8.7521
21	S99T001841_D	-1.5366	-.01402	-1.5396	.03722	4.9877	21.266
22	ICSA	-.01837	.00154	.11630	.00190	-.03689	.10445
23	ICSAB	-.02044	.00154	.11868	.00246	-.03731	.10651
24	CCV	5.0872	4.8683	.40632	5.0898	4.8747	9.8970
25	CCB	-.00224	-.00006	-.00173	-.00043	.00420	.00489

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0798	.01239	4.9833	5.0970
2	ICB	.00018	-.00047	.00062	-.00001
3	ILS	.10065	.00025	.02187	.01932
4	ICSA	-.00605	.01008	-.00522	-.00546
5	ICSAB	.46804	.00962	.99459	-.00499
6	S99T001837_L	-.67842	-1.2453	1.0475	-.75661
7	S99T001837	.94709	-.34633	-.65251	.24683
8	S99T001837_D	.84247	-.41376	-.52385	.03847
9	S99T001837_A	400.41	.70300	397.23	402.75
10	S99T001837_X	4.9254	-.04419	3.8014	2.8892
11	S99T001837_AX	40071.	104.67	39898.	40038.
12	CCV	5.0266	.01285	4.9540	5.0384
13	CCB	-.00051	-.00054	.00050	.00015
14	S99T001838	1.5816	-.16894	-.37521	.49279
15	S99T001838_D	.64853	-.47616	-.59596	.07774
16	S99T001839	.25621	-.59765	-.72452	-.49510
17	S99T001839_D	.52896	-.56750	-.66890	-.36925
18	S99T001840	.53618	-.56890	-.68449	-.03787
19	S99T001840_D	.63712	-.47704	-.73932	-.14467
20	S99T001841	.89632	-.44487	-.57525	.22981
21	S99T001841_D	1.2624	-.26112	-.40205	.20453
22	ICSA	-.00636	.01009	-.00544	-.00477
23	ICSAB	.46761	.00993	.99549	-.00487
24	CCV	5.0291	.01253	4.9380	5.0396
25	CCB	-.00031	-.00055	.00089	.00033

JK 12-06-99

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LABCORE Data Entry Template for Worklist# 31845

Analyst: DK SGT Instrument: ICP01-4 12-03-99 Book# 80898BMethod: LA-505-151/161 Rev/Mod C-5
12-3-99Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysis

Worklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		•ICP-QC	QC		
2	ICB		•ICP-QC	QC		
3	ILS		•ICP-QC	QC		
4	ICSA		•ICP-QC	QC		
5	ICSAB		•ICP-QC	QC		
6	SERDIL	S99T001845 0 D	•ICP-D01	LIQUID		
7	SAMPLE	S99T001845 0 D	•ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8	DUP	S99T001845 0 D	•ICP-D01	LIQUID		
9	SPK (10ppb)	S99T001845 0 D	•ICP-D01	LIQUID		
10	CCV	Spike of (10ppb) 12-3-99	•ICP-QC	QC		
11	CCB		•ICP-QC	QC		
12	SAMPLE	S99T001842 0 D	•ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						

Data Entry Comments:

Uploaded + Validated by:

Saul M. Pang

12/13/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31845

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S99T001842	0 D	@ICP-D01	LIQUID		
14 SAMPLE	S99T001843	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
15 DUP	S99T001843	0 D	@ICP-D01	LIQUID		
16 SAMPLE	S99T001844	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
17 DUP	S99T001844	0 D	@ICP-D01	LIQUID		
18 SAMPLE	S99T001846	0 D	@ICP-D01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
19 DUP	S99T001846	0 D	@ICP-D01	LIQUID		
20 ICSA			@ICP-QC	QC		
21 ICSAB			@ICP-QC	QC		
22 CCV			@ICP-QC	QC		
23 CCB			@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31845

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 31845

DK *[Signature]* 12-13-99

Signature	Date	
5997001845-L	025-10-2-8	JF 401
5997001845	025-10	401
5997001845-D	025-10	401
5997001845-Q	025-10	401
5997001845-X	025-10-1-9	4010
5997001845-QX	025-10-1-9	4010
5997001842	025-10	JF 401
5997001842-D	025-10	401
5997001843	025-10	JF 401
5997001843-D	025-10	401
5997001844	025-10	JF 401
5997001844-D	025-10	401
5997001846	025-10	JF 401
5997001846-D	025-10	401

Signature	Date
-----------	------

5997001845:

$$AL = 8.11e + 03 \text{ ug/ml}$$

$$Spk: AL = \left(\frac{8413.8}{401} \right) - \left(\frac{8105.0}{401} \right) \times 100 = 75.0 \text{ } 77.0\%$$

8/12/13/99

Spk Na:

$$Na = \left(\frac{152820}{4010} \right) - \left(\frac{111900}{4010} \right) \times 100 = 102.0\%$$

$$Na = 1.12e + 5 \text{ ug/ml}$$

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91213A	ICP2	12/13/99	08:13	DKS	Q	CONC
2	ICB	91213A	ICP2	12/13/99	08:17	DKS	Q	CONC
3	ILS	91213A	ICP2	12/13/99	08:28	DKS	Q	CONC
4	ICSA	91213A	ICP2	12/13/99	08:32	DKS	Q	CONC
5	ICSAB	91213A	ICP2	12/13/99	08:35	DKS	Q	CONC
6	S99T001845_L	91213A	ICP2	12/13/99	08:39	DKS	S	CONC
7	S99T001845	91213A	ICP2	12/13/99	08:42	DKS	S	CONC
8	S99T001845_D	91213A	ICP2	12/13/99	08:45	DKS	S	CONC
9	S99T001845_A	91213A	ICP2	12/13/99	08:49	DKS	S	CONC
10	S99T001845_X	91213A	ICP2	12/13/99	08:53	DKS	S	CONC
11	S99T001845_AX	91213A	ICP2	12/13/99	08:56	DKS	S	CONC
12	CCV	91213A	ICP2	12/13/99	09:04	DKS	Q	CONC
13	CCB	91213A	ICP2	12/13/99	09:08	DKS	Q	CONC
14	S99T001842	91213A	ICP2	12/13/99	09:11	DKS	S	CONC
15	S99T001842_D	91213A	ICP2	12/13/99	09:15	DKS	S	CONC
16	S99T001843	91213A	ICP2	12/13/99	09:18	DKS	S	CONC
17	S99T001843_D	91213A	ICP2	12/13/99	09:21	DKS	S	CONC
18	S99T001844	91213A	ICP2	12/13/99	09:25	DKS	S	CONC
19	S99T001844_D	91213A	ICP2	12/13/99	09:28	DKS	S	CONC
20	S99T001846	91213A	ICP2	12/13/99	09:31	DKS	S	CONC
21	S99T001846_D	91213A	ICP2	12/13/99	09:34	DKS	S	CONC
22	ICSA	91213A	ICP2	12/13/99	09:40	DKS	Q	CONC
23	ICSAB	91213A	ICP2	12/13/99	09:43	DKS	Q	CONC
24	CCV	91213A	ICP2	12/13/99	09:46	DKS	Q	CONC
25	CCB	91213A	ICP2	12/13/99	09:50	DKS	Q	CONC

K [Signature]

QZ-101

12-13-99

Worklist #31845

S99T001842 → S99T001846

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 856 TO 860.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8544	4.9667	5.1003	5.1252	4.9670	4.9486
2	ICB	.00006	.00224	-.00174	.00402	-.00003	.00001
3	LLS	.01967	.10995	.19381	.10314	.09709	.00990
4	ICSA	-.00163	251.92	-.03876	.00772	.00017	.00008
5	ICSAB	.96657	253.36	-.02615	.01033	.46638	.46997
6	S99T001845_L	9.9066	8227.1	-10.179	16.139	.81914	.40429
7	S99T001845	8.1110	8105.0	-7.0055	13.243	.85975	.34465
8	S99T001845_D	7.3742	8156.5	-6.0274	11.090	.80780	.35142
9	S99T001845_A	337.88	8413.8	405.69	410.49	378.25	385.03
10	S99T001845_X	21.485	8297.8	38.783	11.809	1.1415	.36890
11	S99T001845_AX	40262.	48502.	40554.	40527.	40948.	40461.
12	CCV	4.8740	4.9948	5.1272	5.1733	5.0183	4.9862
13	CCB	.00113	.00422	-.00691	.00643	-.00004	.00005
14	S99T001842	8.2562	8586.2	-1.2090	10.767	1.0612	.35157
15	S99T001842_D	7.6056	8605.7	-3.2515	10.012	1.0078	.34450
16	S99T001843	7.8329	9059.0	-.58209	11.520	.82301	.35948
17	S99T001843_D	8.3902	8894.2	2.9370	10.552	.88925	.36627
18	S99T001844	7.6404	9235.1	7.1406	11.736	1.2416	.34472
19	S99T001844_D	7.8476	9255.0	3.4475	11.305	1.2900	.35939
20	S99T001846	7.2950	8968.8	-4.0704	11.198	1.0605	.35930
21	S99T001846_D	7.5802	9024.0	-7.1487	10.984	1.0608	.33693
22	ICSA	-.00120	252.43	-.01479	.01020	.00015	.00008
23	ICSAB	.95644	250.95	-.04115	.00240	.46462	.46577
24	CCV	4.8895	4.9809	5.1276	5.1580	5.0105	5.0051
25	CCB	-.00010	-.00021	-.01479	.00509	-.00006	.00001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.1136	5.2067	5.0800	5.0739	5.0947	5.0554
2	ICB	-.01933	.00706	-.00042	-.00448	.00063	.00044
3	LLS	.20701	.21099	.00979	.20232	.04280	.02152
4	ICSA	.02171	264.06	-.00785	.01005	.00051	-.00150
5	ICSAB	.01215	265.66	.95042	.01157	.47675	.48279
6	S99T001845_L	-18.733	-8.6229	.51055	-12.374	-1.7065	718.02
7	S99T001845	-5.0180	2.8382	.15260	-.85222	.09805	705.81
8	S99T001845_D	-5.9354	1.5378	-.44502	-5.5562	.22766	710.18
9	S99T001845_A	401.66	413.46	402.10	390.59	402.46	1098.6
10	S99T001845_X	-21.755	-16.238	.77970	-2.0992	1.2120	724.23
11	S99T001845_AX	41247.	39957.	40377.	40560.	40400.	41046.
12	CCV	5.1366	5.1871	5.0906	5.1215	5.0937	5.0654
13	CCB	-.00981	.00848	-.00097	-.00546	.00075	.00029
14	S99T001842	-1.3666	6.9352	.27331	-2.2649	.50959	714.61
15	S99T001842_D	-4.3843	2.6047	-.00952	-4.5255	.74033	716.12
16	S99T001843	-.64180	3.9571	-.35376	-6.5189	.11924	746.46
17	S99T001843_D	-7.0878	4.2760	-.03660	-1.5109	.74238	739.39
18	S99T001844	.25454	2.7989	.23750	-7.0561	.38135	735.47
19	S99T001844_D	.59942	1.9276	.44297	-6.5074	.12165	734.80
20	S99T001846	-2.9393	4.4857	-.17019	-5.3778	.22765	742.69
21	S99T001846_D	-7.7064	.65106	-.09248	-5.1687	-.20973	745.30
22	ICSA	.00515	263.36	-.00686	.00644	.00172	-.00204
23	ICSAB	-.01004	261.73	.94358	.00686	.47058	.47739
24	CCV	5.1642	5.2253	5.1208	5.1207	5.1243	5.0914

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Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
25	CCB	.00060	.00770	-.00045	-.00168	.00043	.00064
#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0921	.03409	5.1392	5.2817	5.1346	4.9926
2	ICB	.00055	-.00040	.00045	-.17348	.00004	.00028
3	LLS	.01745	.00064	.10211	.45067	.10136	.02042
4	ICSA	-.00301	.30167	99.951	-.19809	-.00659	.00308
5	ICSAB	.49145	.30674	100.74	-.07484	-.00672	.98955
6	S99T001845_L	-3.3880	-1.9441	-2.0414	4465.2	-1.3819	8.8463
7	S99T001845	-1.1035	-.36668	.01579	4705.7	.30942	9.4818
8	S99T001845_D	-1.4711	-.60034	-.67515	4676.7	-.32860	9.5942
9	S99T001845_A	392.30	2.4984	401.25	5073.4	401.52	390.04
10	S99T001845_X	-3.1585	-4.9251	-3.3804	5179.2	1.3172	9.7919
11	S99T001845_AX	40633.	267.28	40217.	45389.	40565.	40912.
12	CCV	5.1395	.03300	5.1350	5.2245	5.1861	5.0586
13	CCB	.00044	-.00079	-.00026	-.07477	-.00024	-.00037
14	S99T001842	-1.4503	-.67643	-.06212	4706.9	-.03729	18.888
15	S99T001842_D	-1.1444	-.78312	-.72080	4800.6	-.13362	17.797
16	S99T001843	-1.7187	-1.0714	-.64282	5043.1	-.48720	21.297
17	S99T001843_D	-1.3261	-.60936	.00621	4954.5	.26042	20.958
18	S99T001844	-1.2725	-.73684	-.28158	4838.3	-.55618	12.755
19	S99T001844_D	-1.6411	-.94327	-.14940	4914.2	-.38970	12.793
20	S99T001846	-1.4980	-.73401	-.78969	4851.7	-.41376	33.487
21	S99T001846_D	-1.5681	-.68887	-1.0715	4972.4	-.29664	34.766
22	ICSA	-.00253	.30272	100.13	.15552	-.00662	.00243
23	ICSAB	.48815	.30521	99.561	.12583	-.00590	.99114
24	CCV	5.1353	.03377	5.1427	5.1546	5.1938	5.0575
25	CCB	.00025	-.00068	.00035	-.20987	-.00061	.00018

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0568	4.7599	5.0325	5.1705	5.0733	5.0406
2	ICB	-.00635	-.00011	.00191	.01231	.00157	-.00241
3	LLS	.19671	.01884	.10299	.22154	.20508	.04148
4	ICSA	259.12	-.00981	-.00899	193.88	.01185	-.00488
5	ICSAB	260.34	.43066	-.00631	194.13	.01584	.93231
6	S99T001845_L	-4.4469	-.65364	93.590	109810.	-4.1522	-6.4936
7	S99T001845	1.2227	-.11371	92.155	106590.	1.0171	-1.6135
8	S99T001845_D	-1.8706	-.14769	91.890	106970.	-.06205	-1.8973
9	S99T001845_A	387.82	361.57	492.93	105460.	396.57	394.96
10	S99T001845_X	42.713	-1.7205	94.865	111900.	9.5658	4.0531
11	S99T001845_AX	40151.	40226.	40611.	152820.	40600.	40254.
12	CCV	5.0424	4.7538	5.0582	5.1961	5.1148	5.0316
13	CCB	-.00454	-.00022	.00036	.04085	-.00031	-.00317
14	S99T001842	1.8108	-.19899	93.161	108190.	.38204	-.78750
15	S99T001842_D	-1.8094	-.20634	94.514	108730.	.53628	-1.2563
16	S99T001843	-3.1428	-.29294	97.252	115030.	-.32383	-1.4421
17	S99T001843_D	1.7845	-.19079	97.256	112110.	.85874	-7.1423
18	S99T001844	-4.7550	-.20296	96.676	111210.	.81036	-1.5405
19	S99T001844_D	-1.3847	-.26346	96.367	111630.	-.10445	-.66429
20	S99T001846	-1.8032	-.17919	97.334	111860.	-1.3973	-1.3540

Analysis Report

Averages

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#	Sample Name	Hg	Mn	Mo	Na	Nd	Ni
21	S99T001846_D	-3.2115	-.19435	97.565	113380.	.44829	-.41215
22	ICSA	258.91	-.00995	-.00803	193.97	.01295	-.00726
23	ICSAB	256.99	.42562	-.00880	193.02	.01491	.93057
24	CCV	5.0317	4.7628	5.0882	5.2114	5.1319	5.0544
25	CCB	-.00500	-.00017	.00036	.05189	.00041	-.00111

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1488	4.9500	4.9098	5.0424	4.9911	5.1340
2	ICB	.00469	-.00091	.01886	-.00004	.00586	.00473
3	LLS	.40830	.20086	.18827	.09510	.20695	.11521
4	ICSA	-.02053	.04687	-.03089	.00462	-.06480	-.01112
5	ICSAB	-.01351	1.0471	-.02191	.00176	-.06675	-.00909
6	S99T001845_L	419.18	-34.325	4932.1	-24.607	15.219	341.94
7	S99T001845	416.80	1.4557	4912.7	.33001	15.550	108.23
8	S99T001845_D	417.36	-6.9310	4931.6	2.5581	16.529	111.66
9	S99T001845_A	822.98	388.15	5256.5	400.82	423.90	520.74
10	S99T001845_X	406.23	-48.335	4923.2	3.8499	-11.427	612.17
11	S99T001845_AX	41137.	40303.	45578.	40618.	40801.	41780.
12	CCV	5.2007	4.9578	4.9337	5.0711	5.0100	5.1594
13	CCB	.00096	-.00776	.01678	-.00115	.01019	.00858
14	S99T001842	425.03	-1.3157	4967.3	6.0313	9.0761	108.40
15	S99T001842_D	428.86	3.4571	4985.8	.96801	17.628	105.51
16	S99T001843	443.07	-4.4376	5205.3	1.4280	16.233	102.08
17	S99T001843_D	447.34	3.9845	5136.5	3.3361	20.930	104.78
18	S99T001844	448.69	1.2141	5120.0	2.9205	15.732	106.15
19	S99T001844_D	444.84	3.4067	5111.9	1.6833	17.064	105.49
20	S99T001846	446.28	-4.5773	5156.7	3.0039	19.885	110.73
21	S99T001846_D	438.82	-2.5218	5173.6	-.00543	21.018	106.18
22	ICSA	-.01248	.04843	-.03700	.00369	-.05348	.00722
23	ICSAB	-.01676	1.0293	-.04236	.00559	-.06440	.00036
24	CCV	5.1991	4.9887	4.9277	5.0804	5.0568	5.1742
25	CCB	.01068	-.01012	.01917	-.00022	.01059	.00934

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.1085	4.9272	.37452	5.1528	4.9523	9.9778
2	ICB	-.00947	-.00009	-.00173	-.00043	.00414	-.02051
3	LLS	.19492	.01989	.01327	.01971	.43132	.47897
4	ICSA	-.02119	.00151	.10988	.00158	-.03000	.12452
5	ICSAB	-.02517	.00152	.11245	.00158	-.05943	.12640
6	S99T001845_L	-26.022	-.23932	-5.0273	-1.7059	15.248	-73.224
7	S99T001845	-5.3124	-.03674	-3.4899	-.01949	9.0730	-3.0147
8	S99T001845_D	-6.3363	-.03735	-7.6441	-.26537	6.4927	4.4057
9	S99T001845_A	398.95	383.00	21.286	402.79	387.16	790.69
10	S99T001845_X	-46.858	-.60007	21.089	-.46617	8.8773	-165.16
11	S99T001845_AX	40727.	40520.	3073.7	40621.	40357.	81403.
12	CCV	5.1545	4.9723	.37858	5.1786	4.9635	10.061
13	CCB	-.01289	-.00008	.00201	-.00027	-.00359	-.03647
14	S99T001842	-5.5453	-.04936	-4.8553	.14260	10.279	-1.0921
15	S99T001842_D	-7.5114	-.03714	-5.5807	.02316	2.9494	1.6276
16	S99T001843	-9.7068	-.06107	-5.4278	-.25626	2.1865	-6.6205

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Analysis Report

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
17	S99T001843_D	-5.8321	-.03744	-1.7348	-.07360	5.2700	4.4058
18	S99T001844	-6.3504	-.03724	-9.0251	-.04495	4.0723	2.7137
19	S99T001844_D	-7.7346	-.02459	-6.0848	-.14636	3.3001	-.93632
20	S99T001846	-6.0160	-.03737	-6.0079	-.31440	7.6093	3.4374
21	S99T001846_D	-5.8138	-.03772	-10.044	-.05124	10.722	8.9822
22	ICSA	-.02934	.00151	.12165	.00161	-.06733	.11929
23	ICSAB	-.02448	.00156	.10881	.00185	-.05291	.12818
24	CCV	5.1567	4.9857	.37457	5.1923	4.9989	10.074
25	CCB	-.00918	-.00012	-.00135	-.00056	.00110	-.02726

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0968	.01273	5.0394	5.1015
2	ICB	-.00186	-.00062	-.00040	-.00066
3	LLS	.09878	-.00012	.02082	.01834
4	ICSA	-.00842	.00985	-.00688	-.00517
5	ICSAB	.47438	.01016	1.0131	-.00570
6	S99T001845_L	-3.8024	-1.7023	-.93933	-2.8674
7	S99T001845	.49651	-.31389	-.45237	-.12012
8	S99T001845_D	.17243	-.50614	-.88844	.02186
9	S99T001845_A	402.02	.76705	400.07	403.33
10	S99T001845_X	-10.352	-4.0270	-2.8197	-7.1766
11	S99T001845_AX	40465.	103.45	40326.	40318.
12	CCV	5.1175	.01230	5.0427	5.1321
13	CCB	-.00234	-.00084	-.00055	-.00112
14	S99T001842	.17298	-.50381	-.92701	-.34660
15	S99T001842_D	.12840	-.56800	-.96600	-.37565
16	S99T001843	-.34363	-.72208	-1.0680	-.62351
17	S99T001843_D	.27087	-.44311	-.88260	-.42203
18	S99T001844	.33374	-.50542	-.71895	.04039
19	S99T001844_D	.09165	-.59842	-.98355	-.41745
20	S99T001846	.36443	-.53725	-.81429	-.18244
21	S99T001846_D	.48486	-.41354	-.92824	.19169
22	ICSA	-.00925	.00969	-.00737	-.00645
23	ICSAB	.46968	.00977	1.0036	-.00563
24	CCV	5.1463	.01253	5.0616	5.1423
25	CCB	-.00115	-.00077	-.00069	-.00068

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ws2

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LABCORE Data Entry Template for Worklist# 31846

Analyst: DK Seto Instrument: ICP-AES 1701-99 Book# 805488Method: LA-505-151/161 Rev/Mod C5Worklist Comment: ICP AZ-101 (DIRECT)Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysis

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		•ICP-QC	QC		
2	ICB		•ICP-QC	QC		
3	LIS		•ICP-QC	QC		
4	ICSA		•ICP-QC	QC		
5	ICSAB		•ICP-QC	QC		
6	SERDIL	S99T001860	0 D	•ICP-D01	LIQUID	
7	SAMPLE	S99T001860	0 D	•ICP-D01	LIQUID	99000438 AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8	DUP	S99T001860	0 D	•ICP-D01	LIQUID	
9	SPK (1 ppm)	S99T001860	0 D	•ICP-D01	LIQUID	
10	CCV	S99T001860	0 D	•ICP-QC	QC	
11	CCB			•ICP-QC	QC	
12	SAMPLE	S99T001847	0 D	•ICP-D01	LIQUID	99000433 AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						

Data Entry Comments:

Uploaded + Validated by:

Sant M. Pang

12/03/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31846

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S99T001847	0 D	•ICP-D01	LIQUID		
14 SAMPLE	S99T001858	0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
15 DUP	S99T001858	0 D	•ICP-D01	LIQUID		
16 SAMPLE	S99T001859	0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
17 DUP	S99T001859	0 D	•ICP-D01	LIQUID		
18 SAMPLE	S99T001861	0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
19 DUP	S99T001861	0 D	•ICP-D01	LIQUID		
20 ICSA			•ICP-QC	QC		
21 ICSAB			•ICP-QC	QC		
22 CCV			•ICP-QC	QC		
23 CCB			•ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31846

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 31846

JK 12.03.99

Signature	Date	
5997001860_L	.025-10-2-8	DF 2005
5997001860	.025-10	401
5997001860_D	.025-10	401
5997001860_Q	.025-10	401
5997001860_X	.025-10-1-9	4010
5997001860_QX	.025-10-1-9	4010
5997001847	.025-10	DF 401
5997001847_D	.025-10	401
5997001858	.025-10	DF 401
5997001858_D	.025-10	401
5997001859	.025-10	DF 401
5997001859_D	.025-10	401

Signature	Date
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Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Allquot Code.

599T001860

$$C_2 = 7.03 \pm 2 \frac{\mu\text{g}}{\text{ml}}$$

$$\text{Spk: } C_2 = \frac{\left(\frac{1104.2}{401}\right) - \left(\frac{702.70}{401}\right)}{1} \times 100 = 100.1\%$$

$$Al = 8.68 \pm 3 \frac{\mu\text{g}}{\text{ml}}$$

$$\text{Spk: } Al = \frac{\left(\frac{48440}{4010}\right) - \left(\frac{8681.8}{4010}\right)}{10} \times 100 = 99.1\%$$

$$Na = 1.12 \pm 5 \frac{\mu\text{g}}{\text{ml}}$$

$$\text{Spk: } Na = \frac{\left(\frac{151090}{4010}\right) - \left(\frac{111670}{4010}\right)}{10} \times 100 = 98.3\%$$

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Analysis Report

Summary

12/03/99 11:24:20 AM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91203B	ICP2	12/03/99	09:45	DKS	Q	CONC
2	ICB	91203B	ICP2	12/03/99	09:48	DKS	Q	CONC
3	LLS	91203B	ICP2	12/03/99	09:52	DKS	Q	CONC
4	LLS	91203B	ICP2	12/03/99	09:59	DKS	Q	CONC
5	ICSA	91203B	ICP2	12/03/99	10:05	DKS	Q	CONC
6	ICSAB	91203B	ICP2	12/03/99	10:08	DKS	Q	CONC
7	S99T001860_L	91203B	ICP2	12/03/99	10:12	DKS	S	CONC
8	S99T001860	91203B	ICP2	12/03/99	10:16	DKS	S	CONC
9	S99T001860_D	91203B	ICP2	12/03/99	10:19	DKS	S	CONC
10	S99T001860_A	91203B	ICP2	12/03/99	10:22	DKS	S	CONC
11	S99T001860_X	91203B	ICP2	12/03/99	10:26	DKS	S	CONC
12	S99T001860_AX	91203B	ICP2	12/03/99	10:30	DKS	S	CONC
13	CCV	91203B	ICP2	12/03/99	10:37	DKS	Q	CONC
14	CCB	91203B	ICP2	12/03/99	10:41	DKS	Q	CONC
15	S99T001847	91203B	ICP2	12/03/99	10:44	DKS	S	CONC
16	S99T001847_D	91203B	ICP2	12/03/99	10:48	DKS	S	CONC
17	S99T001858	91203B	ICP2	12/03/99	10:51	DKS	S	CONC
18	S99T001858_D	91203B	ICP2	12/03/99	10:54	DKS	S	CONC
19	S99T001859	91203B	ICP2	12/03/99	10:58	DKS	S	CONC
20	S99T001859_D	91203B	ICP2	12/03/99	11:01	DKS	S	CONC
21	S99T001861	91203B	ICP2	12/03/99	11:04	DKS	S	CONC
22	S99T001861_D	91203B	ICP2	12/03/99	11:08	DKS	S	CONC
23	ICSA	91203B	ICP2	12/03/99	11:11	DKS	Q	CONC
24	ICSAB	91203B	ICP2	12/03/99	11:14	DKS	Q	CONC
25	CCV	91203B	ICP2	12/03/99	11:18	DKS	Q	CONC
26	CCB	91203B	ICP2	12/03/99	11:21	DKS	Q	CONC

JK

12-03-99

Worklist #31846

GZ-101

599T001860

599T001847

599T001858

599T001859

599T001861

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 865 TO 869.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8366	4.9662	5.0814	5.1564	4.9581	4.9119
2	ICB	.00131	.00583	-.00410	.00369	.00005	-.00005
3	LLS	Q.00750	.11834	.19190	.10254	.09674	.00967
4	LLS	.02058	.10527	.18705	.09514	.09601	.00960
5	ICSA	.00021	247.08	-.01639	.00304	.00037	.00003
6	ICSA B	.96694	251.90	-.01705	.00312	.46521	.46362
7	S99T001860_L	11.359	8582.6	-22.682	13.770	1.1873	.31502
8	S99T001860	8.6788	8335.4	2.1993	7.8422	1.0689	.32363
9	S99T001860_D	8.8671	8397.8	11.683	8.1611	1.0683	.32305
10	S99T001860_A	360.68	8863.9	416.99	412.24	381.09	384.30
11	S99T001860_X	26.712	8681.8	.86308	9.5183	.86195	.21543
12	S99T001860_AX	40027.	48440.	40314.	40534.	40670.	40093.
13	CCV	4.8199	4.9031	5.0557	5.1321	4.9314	4.8956
14	CCB	.00193	.00907	.00556	.00238	.00011	-.00007
15	S99T001847	9.6647	7759.2	9.3590	8.9029	.12063	.23323
16	S99T001847_D	9.0438	7770.2	6.5227	8.5834	.07901	.24033
17	S99T001858	7.6995	8344.9	5.0558	6.1493	.91588	.29513
18	S99T001858_D	7.8014	8354.2	2.7462	6.0424	.94579	.32344
19	S99T001859	7.7338	8294.7	2.2249	7.6355	1.0100	.32241
20	S99T001859_D	7.8312	8443.6	3.1087	9.5397	.99760	.33041
21	S99T001861	7.6179	8287.1	6.6520	7.2064	.87704	.33066
22	S99T001861_D	8.2441	8281.2	7.9794	9.0084	.93496	.31661
23	ICSA	-.00103	249.60	.00423	.00133	.00036	.00015
24	ICSA B	.96567	251.14	-.01326	.00027	.46530	.46805
25	CCV	4.8803	4.9588	5.1527	5.2059	4.9868	5.0035
26	CCB	.00002	-.00475	-.00648	-.00210	.00007	.00000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.1153	5.1803	5.0794	5.0688	5.0579	5.0429
2	ICB	-.02194	-.00062	.00030	.00707	.00134	.00060
3	LLS	.19941	.21977	.01024	.21487	.04210	.02172
4	LLS	.20347	.20348	.00959	.21030	.03996	.02080
5	ICSA	.01691	261.79	-.00705	.02426	.00228	-.00050
6	ICSA B	.00376	263.98	.94673	.03189	.47170	.47876
7	S99T001860_L	-3.9095	-1.1323	-.21179	19.240	1.8417	721.96
8	S99T001860	-.63352	10.865	.10014	7.8241	1.1861	702.70
9	S99T001860_D	-1.3271	1.5025	.37642	8.0112	1.3830	706.36
10	S99T001860_A	396.49	415.79	404.15	399.55	402.64	1104.2
11	S99T001860_X	-68.226	-13.052	-.80623	9.9263	-.76194	724.13
12	S99T001860_AX	40472.	40078.	40429.	40207.	40138.	40945.
13	CCV	5.0219	5.2271	5.0870	5.0342	5.0628	5.0454
14	CCB	-.00019	-.00085	-.00058	.01099	.00050	.00091
15	S99T001847	3.5027	.35094	.57544	4.3415	.84027	783.77
16	S99T001847_D	-3.7192	.67256	.64024	5.5125	.49384	782.35
17	S99T001858	-12.164	-.51779	-.00603	-.52131	-.14117	705.03
18	S99T001858_D	9.9998	-.09099	.14229	3.8680	.64381	708.45
19	S99T001859	6.7768	.50663	-.13571	2.9106	.60188	704.68
20	S99T001859_D	8.3775	.06855	-.13778	1.7874	.57348	712.96
21	S99T001861	5.4656	.56188	-.08904	.85790	.88777	702.94
22	S99T001861_D	.63295	.60606	.26655	4.5996	.22635	701.85
23	ICSA	.01470	268.27	-.00771	.03130	.00326	-.00065

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
24	ICSAB	.01757	268.37	.95907	.02467	.47672	.48378
25	CCV	5.1387	5.3137	5.1854	5.0889	5.1509	5.1309
26	CCB	-.00272	-.00199	-.00012	.00373	.00118	.00116

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0663	.03596	5.1174	5.0562	5.1199	4.9600
2	ICB	.00093	.00050	.00039	.01832	.00073	.00000
3	LLS	.01902	.00140	.10558	.57104	.10085	.01998
4	LLS	.01881	.00099	.10064	Q.81584	.10050	.02008
5	ICSA	-.00157	.32638	98.861	.25251	-.00572	.00332
6	ICSAB	.48805	.33026	100.12	.42527	-.00487	.99272
7	S99T001860_L	1.6165	1.3953	1.2287	5103.9	1.1277	42.542
8	S99T001860	-.31403	.84672	.35148	4421.5	1.0836	40.795
9	S99T001860_D	-.42779	.50596	-.09558	4503.6	.97677	40.943
10	S99T001860_A	394.40	2.7883	404.18	4881.9	404.21	422.97
11	S99T001860_X	2.4819	-.84279	1.2501	4671.3	-3.1448	42.734
12	S99T001860_AX	40147.	287.21	40131.	43017.	40205.	40010.
13	CCV	5.0134	.03718	5.1171	5.1734	5.0815	4.8713
14	CCB	.00099	.00116	.00059	.26227	.00047	.00074
15	S99T001847	-.64827	.23654	.13000	4877.7	.73474	3.3050
16	S99T001847_D	-.83157	-.04480	.08486	4855.4	.72004	3.1571
17	S99T001858	-1.0780	.02104	-.24201	4389.9	-.10901	48.895
18	S99T001858_D	-1.0685	.23176	-.22664	4482.8	.28986	49.006
19	S99T001859	-.38570	.85842	-.21607	4424.5	.29846	40.608
20	S99T001859_D	-.78275	.53319	-.26215	4481.5	.28948	41.463
21	S99T001861	-.98670	.14965	-.44212	4417.4	-.04105	53.242
22	S99T001861_D	-.95865	.08316	-.10641	4387.4	.69404	52.648
23	ICSA	-.00230	.31732	100.72	.49108	-.00550	.00434
24	ICSAB	.48507	.32303	101.01	.31928	-.00629	.97789
25	CCV	5.0733	.03900	5.1834	5.1746	5.1565	4.9447
26	CCB	.00082	.00228	-.00079	-.00435	.00002	.00166

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0427	4.7140	5.0022	5.1531	5.0795	5.0435
2	ICB	.00099	.00007	.00698	.00126	.00204	.00303
3	LLS	.19801	.01889	.10321	.24817	.20597	.04393
4	LLS	.19677	.01853	.10017	Q.25236	.20321	.04242
5	ICSA	254.23	-.00919	-.00738	190.77	.01508	-.00634
6	ICSAB	257.49	.42584	-.00641	195.60	.01654	.93825
7	S99T001860_L	17.851	.10982	94.097	110390.	.37907	7.5534
8	S99T001860	8.3852	.05572	91.444	104700.	2.8568	-.12539
9	S99T001860_D	7.3414	-.00205	91.523	105480.	3.0237	1.0291
10	S99T001860_A	393.73	360.93	491.15	107370.	400.34	402.35
11	S99T001860_X	-22.679	-.69336	100.32	111670.	-3.5226	-8.8395
12	S99T001860_AX	39816.	40009.	40318.	151090.	40285.	40398.
13	CCV	4.9810	4.7140	4.9938	5.0356	5.0382	5.0426
14	CCB	.00680	.00010	.00635	.00062	.00277	.00111
15	S99T001847	5.5551	-.07186	103.59	115830.	1.7738	1.2951
16	S99T001847_D	4.7597	-.12515	102.59	115880.	.87096	.73755
17	S99T001858	1.9052	-.05335	92.041	105800.	-.73373	.53139

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
18	S99T001858_D	2.0444	-.06108	92.337	105730.	-.39080	.62082
19	S99T001859	4.6909	.08921	90.683	103830.	2.6947	.61523
20	S99T001859_D	1.6261	-.00180	93.409	106640.	.96879	.25824
21	S99T001861	1.7017	-.02811	91.189	105610.	.39982	1.8882
22	S99T001861_D	5.6328	-.06947	91.521	105620.	.74755	-1.7502
23	ICSA	258.20	-.00922	-.00765	192.14	.01332	-.01291
24	ICSAB	258.71	.42857	-.00778	192.82	.01358	.94499
25	CCV	5.0454	4.7880	5.0802	5.1390	5.0966	5.1389
26	CCB	.00395	.00038	.00692	-.01278	.00215	-.00181

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1215	4.9452	4.9085	5.0390	4.9696	5.1044
2	ICB	.00953	-.01195	.00037	.00329	-.00925	-.00176
3	LLS	.40474	.19845	.19861	.09358	.18996	.18418
4	LLS	.39835	.18929	.18991	.09322	.19189	Q.11040
5	ICSA	-.00562	.04847	-.03228	.00253	-.04351	-.01395
6	ICSAB	-.00811	1.0330	-.03184	-.00449	-.05659	-.01568
7	S99T001860_L	444.00	-17.651	4916.4	-6.8729	20.520	89.636
8	S99T001860	417.20	3.7169	4855.9	6.2014	22.899	49.575
9	S99T001860_D	427.35	-.41099	4867.8	1.7098	23.866	44.131
10	S99T001860_A	834.81	393.03	5271.0	405.39	429.34	472.16
11	S99T001860_X	468.26	-98.794	4930.4	-29.486	58.480	107.14
12	S99T001860_AX	40812.	40308.	45198.	40298.	40621.	40708.
13	CCV	5.1227	4.9722	4.8895	5.0263	4.9469	5.1082
14	CCB	.01612	-.00987	-.00132	.00052	.02204	.00435
15	S99T001847	501.81	4.3434	5030.6	6.4725	25.884	39.176
16	S99T001847_D	504.39	-1.2139	5025.7	2.8388	21.443	39.786
17	S99T001858	427.03	-11.591	4887.3	2.9472	23.663	57.976
18	S99T001858_D	429.05	-6.5685	4876.6	2.5760	22.628	57.583
19	S99T001859	423.87	1.0410	4843.9	6.3406	28.168	45.455
20	S99T001859_D	429.00	3.1542	4913.5	5.5483	27.879	42.809
21	S99T001861	419.75	-2.6860	4851.4	1.7905	27.112	57.218
22	S99T001861_D	418.70	-6.1602	4840.7	9.4694	27.206	54.463
23	ICSA	.00054	.05592	-.03763	.00269	-.02439	-.00308
24	ICSAB	.00574	1.0471	-.03907	.01106	-.03128	-.00695
25	CCV	5.2293	5.0427	4.9692	5.1052	5.0894	5.1798
26	CCB	.01875	-.00318	.00882	.00280	.02611	.00756

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.0817	4.9202	.42174	5.0985	4.9575	9.9156
2	ICB	.00137	-.00005	-.00054	.00041	.01027	-.00893
3	LLS	.19929	.01967	.02154	.02053	.42613	.47878
4	LLS	.20135	.01958	.01702	.02013	.40829	.47568
5	ICSA	-.00862	.00139	.14300	.00220	-.07544	.15482
6	ICSAB	-.01637	.00149	.15020	.00291	-.09471	.12945
7	S99T001860_L	5.2446	-.06116	-9.0328	.78015	21.724	13.382
8	S99T001860	4.9572	.06899	-.13561	.53371	6.1995	30.144
9	S99T001860_D	4.5835	.04452	.54249	.53114	1.0021	39.123
10	S99T001860_A	400.45	385.12	28.672	402.48	388.67	797.45
11	S99T001860_X	-15.391	-.59139	-.12699	-1.0590	66.843	-95.396

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
12	S99T001860_AX	40263.	40145.	3419.5	40039.	40033.	80210.
13	CCV	5.0455	4.8762	.42230	5.0602	4.9945	9.8493
14	CCB	.01004	.00000	.00788	.00044	.01515	.02022
15	S99T001847	1.8179	.00894	-3.3423	.40617	9.9141	34.626
16	S99T001847_D	.25829	-.03795	-3.7840	.19181	3.6631	21.794
17	S99T001858	1.1887	.00955	-6.3696	.01746	5.2515	28.008
18	S99T001858_D	1.4740	.00927	-3.3427	.19052	5.7885	31.074
19	S99T001859	5.0482	.07932	-6.8967	.38786	5.3700	53.295
20	S99T001859_D	3.2802	.04459	-6.0670	.23306	4.0620	38.898
21	S99T001861	1.5167	.02161	-6.8961	.17917	5.0644	27.033
22	S99T001861_D	.79838	.00966	-2.0956	.30516	3.4966	26.345
23	ICSA	-.00132	.00149	.14870	.00251	-.05024	.15800
24	ICSAB	-.00603	.00149	.14363	.00249	-.06837	.13636
25	CCV	5.1233	4.9486	.43185	5.1460	5.0429	9.9833
26	CCB	.01456	.00017	.00051	.00040	-.00026	.05519

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0782	.01362	5.0141	5.0697
2	ICB	-.00037	.00016	-.00019	.00003
3	LLS	.09977	.00050	.02095	.01848
4	LLS	.09844	.00034	.01940	.01843
5	ICSA	-.00634	.01109	-.00624	-.00631
6	ICSAB	.47063	.01079	1.0064	-.00734
7	S99T001860_L	2.1980	.15189	-.23584	1.7780
8	S99T001860	2.0729	.30236	-.69991	.78885
9	S99T001860_D	1.9392	.20399	-.74659	.49414
10	S99T001860_A	403.02	.95333	400.20	403.47
11	S99T001860_X	-2.6708	-.90501	-5.5760	-.74956
12	S99T001860_AX	40190.	111.21	40107.	39986.
13	CCV	5.0636	.01452	5.0262	5.0524
14	CCB	.00080	.00046	-.00045	.00076
15	S99T001847	1.4759	.07983	-.61593	.54541
16	S99T001847_D	1.1526	-.10382	-.74275	.35450
17	S99T001858	1.5890	.11416	-.96017	.70834
18	S99T001858_D	1.5753	.11286	-.82100	.63782
19	S99T001859	2.2051	.35556	-.64490	1.4313
20	S99T001859_D	2.0317	.14105	-.54399	1.0671
21	S99T001861	1.6318	.02002	-.98425	.90536
22	S99T001861_D	1.4649	-.01120	-.45345	.46996
23	ICSA	-.00469	.01203	-.00592	-.00474
24	ICSAB	.47706	.01165	1.0160	-.00526
25	CCV	5.1524	.01501	5.0947	5.1266
26	CCB	.00230	.00115	.00033	.00246

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File #: 91213B

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LABCORE Data Entry Template for Worklist# 31847

Analyst: JK 5670 Instrument: ICP01 JK 12-3-99 Book# 808488Method: LA-505-151/161 Rev/Mod C-5Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysis

Worklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		•ICP-QC	QC		
2	ICB		•ICP-QC	QC		
3	LLS		•ICP-QC	QC		
4	ICSA		•ICP-QC	QC		
5	ICSAB		•ICP-QC	QC		
6	SERDIL	S99T001868 0 D	•ICP-D01	LIQUID		
7	SAMPLE	S99T001868 0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8	DUP	S99T001868 0 D	•ICP-D01	LIQUID		
9	SPK	S99T001868 0 D	•ICP-D01	LIQUID		
Spike Gx (10 ppb) JK 12-3-99						
10	CCV		•ICP-QC	QC		
11	CCB		•ICP-QC	QC		
12	SAMPLE	S99T001862 0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						

Data Entry Comments:

uploaded 12-12-99

John Howell

Validated by:

Sally M. Pong

12/13/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 31847

S Type	Sample#	R A Test	Matrix	Group#	Project
13 DUP	S99T001862	0 D	●ICP-D01 LIQUID		
14 SAMPLE	S99T001863	0 D	●ICP-D01 LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
15 DUP	S99T001863	0 D	●ICP-D01 LIQUID		
16 SAMPLE	S99T001867	0 D	●ICP-D01 LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
17 DUP	S99T001867	0 D	●ICP-D01 LIQUID		
18 ICSA			●ICP-QC QC		
19 IC SAB			●ICP-QC QC		
20 CCV			●ICP-QC QC		
21 CCB			●ICP-QC QC		

Final page for worklist # 31847

JK 12-13-99

Signature	Date	
S99T001868-L	025-10-28	JF 2605
S99T001868	025-10	401
S99T001868-D	025-10	401
S99T001868-E	025-10	401
S99T001868-X	025-10-1-2	4010
S99T001868-EX	025-10-1-9	4010

Data Entry Comments:

Signature	Date	
S99T001868	025-10	401
S99T001868-D	025-10	401
S99T001868	025-10	401
S99T001868-D	025-10	401
S99T001867	025-10	401
S99T001867-D	025-10	401

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

$$Al = 9.242 + 3 \frac{\mu g}{ml}$$

$$SPK: Al = \frac{\left(\frac{9715.6}{401}\right) - \left(\frac{9239.6}{401}\right)}{1} \times 100 = 119.0\%$$

$$Na = 1.172 + 5 \frac{\mu g}{ml}$$

$$SPK: Na = \frac{\left(\frac{157330}{4010}\right) - \left(\frac{117150}{4010}\right)}{10} \times 100 = 100.2\%$$

$$K = 4.742 + 3 \frac{\mu g}{ml}$$

$$SPK: K = \frac{\left(\frac{44585}{4010}\right) - \left(\frac{4739.7}{4010}\right)}{10} \times 100 = 99.4\%$$

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Analysis Report

Summary

12/13/99 12:27:42 PM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91213B	ICP2	12/13/99	09:55	DKS	Q	CONC
2	ICB	91213B	ICP2	12/13/99	09:58	DKS	Q	CONC
3	ILS	91213B	ICP2	12/13/99	10:01	DKS	Q	CONC
4	ICSA	91213B	ICP2	12/13/99	10:04	DKS	Q	CONC
5	ICSAB	91213B	ICP2	12/13/99	10:07	DKS	Q	CONC
6	S99T001868_L	91213B	ICP2	12/13/99	11:26	DKS	S	CONC
7	S99T001868	91213B	ICP2	12/13/99	11:29	DKS	S	CONC
8	S99T001868_D	91213B	ICP2	12/13/99	11:32	DKS	S	CONC
9	S99T001868_A	91213B	ICP2	12/13/99	11:35	DKS	S	CONC
10	S99T001868_X	91213B	ICP2	12/13/99	11:39	DKS	S	CONC
11	S99T001868_AX	91213B	ICP2	12/13/99	11:43	DKS	S	CONC
12	CCV	91213B	ICP2	12/13/99	11:48	DKS	Q	CONC
13	CCB	91213B	ICP2	12/13/99	11:51	DKS	Q	CONC
14	S99T001862	91213B	ICP2	12/13/99	11:54	DKS	S	CONC
15	S99T001862_D	91213B	ICP2	12/13/99	11:58	DKS	S	CONC
16	S99T001863	91213B	ICP2	12/13/99	12:01	DKS	S	CONC
17	S99T001863_D	91213B	ICP2	12/13/99	12:04	DKS	S	CONC
18	S99T001867	91213B	ICP2	12/13/99	12:08	DKS	S	CONC
19	S99T001867_D	91213B	ICP2	12/13/99	12:11	DKS	S	CONC
20	ICSA	91213B	ICP2	12/13/99	12:15	DKS	Q	CONC
21	ICSAB	91213B	ICP2	12/13/99	12:18	DKS	Q	CONC
22	CCV	91213B	ICP2	12/13/99	12:21	DKS	Q	CONC
23	CCB	91213B	ICP2	12/13/99	12:24	DKS	Q	CONC

JK

12-13-99

Worklist #31847

QZ-101

S99T001862

S99T001863

S99T001867

S99T001868

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 873 TO 877.

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Analysis Report

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8525	4.9410	5.0795	5.1212	4.9748	4.9606
2	ICB	.00025	.00301	-.00028	.00482	.00001	.00001
3	LLS	.02112	.10962	.18766	.10368	.09825	.00999
4	ICSA	-.00078	252.47	-.02270	.00278	.00013	.00008
5	ICSAB	.95506	250.19	-.01651	.00649	.46286	.46580
6	S99T001868_L	8.4373	9366.1	-4.9830	6.4437	.91851	.40588
7	S99T001868	8.0297	9239.6	2.9064	9.0443	1.1325	.34502
8	S99T001868_D	8.1590	9343.1	2.0137	9.0446	1.1384	.35914
9	S99T001868_A	322.17	9715.6	419.63	415.55	382.81	389.93
10	S99T001868_X	23.285	9461.5	19.642	12.898	1.4424	.36695
11	S99T001868_AX	40370.	49668.	40832.	40516.	40935.	40732.
12	CCV	4.8751	4.9728	5.1071	5.1462	5.0080	4.9785
13	CCB	.00041	-.00251	-.01440	.00616	-.00014	.00003
14	S99T001862	8.0795	8453.8	3.7965	11.196	.99690	.32982
15	S99T001862_D	7.6671	8416.9	3.4023	10.766	.98615	.30843
16	S99T001863	8.2350	9280.0	2.1724	11.306	1.1295	.34515
17	S99T001863_D	7.9960	9260.4	4.8186	11.522	1.1198	.36646
18	S99T001867	7.8888	8282.1	2.5350	12.165	.84829	.35182
19	S99T001867_D	7.5235	8246.9	6.3894	11.951	.82145	.32254
20	ICSA	-.00083	252.25	-.01727	-.00063	.00027	.00003
21	ICSAB	.95707	250.20	-.01338	.00495	.46239	.46683
22	CCV	4.8726	4.9640	5.1186	5.1368	4.9923	4.9919
23	CCB	-.00144	-.00333	-.00487	.00536	-.00005	.00001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.1303	5.1984	5.0938	5.0792	5.0896	5.0622
2	ICB	.00113	.00978	-.00042	-.00543	.00012	.00001
3	LLS	.22006	.21306	.01039	.20608	.04106	.02130
4	ICSA	.00994	263.83	-.00673	.00415	.00031	-.00271
5	ICSAB	.00052	262.69	.94805	.00900	.47597	.47899
6	S99T001868_L	51.443	-6.8891	-.84070	-27.885	-.54869	754.58
7	S99T001868	2.1592	9.4954	.10197	-4.0529	.04665	743.92
8	S99T001868_D	-3.1069	4.5760	.69049	-2.5598	-.00764	750.47
9	S99T001868_A	411.84	417.60	404.02	396.38	404.36	1149.6
10	S99T001868_X	-11.281	-17.437	.00405	-10.501	-1.6119	769.62
11	S99T001868_AX	41286.	40053.	40575.	40650.	40492.	41219.
12	CCV	5.1466	5.2142	5.1091	5.1056	5.1083	5.0792
13	CCB	.00584	.00813	-.00042	-.01106	.00101	.00085
14	S99T001862	-1.3510	1.7601	-.06586	-1.4261	.45385	710.79
15	S99T001862_D	1.9676	.26223	-.24945	-3.4067	-.00903	708.14
16	S99T001863	-.26447	-.73581	.26855	-4.7273	-.31523	762.13
17	S99T001863_D	6.3950	-1.2290	.03069	-5.7401	-.15909	761.15
18	S99T001867	1.4752	.68567	-.02527	-1.4199	.48331	706.61
19	S99T001867_D	-1.8164	.81160	.05623	-2.0734	.61601	704.44
20	ICSA	.03999	264.82	-.00666	.00990	.00103	-.00074
21	ICSAB	-.00419	263.65	.94889	.01285	.47399	.47779
22	CCV	5.1103	5.2321	5.1184	5.1125	5.1122	5.0885
23	CCB	-.00758	.00771	-.00044	-.00799	-.00103	-.00019

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Analysis Report

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#	Sample Name	Cu	Bu	Fe	K	La	Li
1	ICV	5.0839	.03319	5.1212	4.8869	5.1461	4.9935
2	ICB	.00040	-.00086	.00090	-.24248	.00013	-.00018
3	LLS	.01872	.00056	.10221	Q.33668	.10288	.02108
4	ICSA	-.00245	.30091	100.39	.11980	-.00695	.00262
5	ICSAB	.48563	.30345	99.757	-.02663	-.00623	.97641
6	S99T001868_L	-3.0523	-3.8446	-2.9404	4551.4	-2.2665	18.254
7	S99T001868	-1.3820	-.54119	.49434	4759.5	-.30885	17.910
8	S99T001868_D	-1.3313	-.89607	2.8368	4863.1	-.08988	18.136
9	S99T001868_A	397.99	1.7252	408.11	5290.5	408.60	404.67
10	S99T001868_X	-1.8869	-5.7839	-3.9615	4739.7	.45185	17.315
11	S99T001868_AX	40618.	263.11	40395.	44585.	40708.	40837.
12	CCV	5.1051	.03287	5.1514	5.0509	5.1799	5.0023
13	CCB	.00106	-.00118	-.00017	-.26455	-.00125	-.00009
14	S99T001862	-1.4232	-.78807	-.66727	4550.0	.31272	32.284
15	S99T001862_D	-1.6066	-1.0024	-.41693	4588.4	-.24065	32.321
16	S99T001863	-1.6897	-.95337	-.03926	4833.8	-.18290	30.891
17	S99T001863_D	-1.4473	-.74618	-.59500	4824.1	-.35718	29.499
18	S99T001867	-1.1861	-.67845	-.47453	4552.9	.18723	31.870
19	S99T001867_D	-1.5413	-.60042	-.62881	4476.1	-.17524	31.681
20	ICSA	-.00275	.29558	100.57	-.13839	-.00572	.00308
21	ICSAB	.48402	.29936	99.922	.13774	-.00615	.96900
22	CCV	5.0992	.03388	5.1384	4.9100	5.1736	4.9955
23	CCB	.00026	-.00061	-.00156	-.06042	-.00084	-.00018

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.9996	4.7336	5.0520	5.1570	5.0882	5.0474
2	ICB	.00393	-.00017	.00191	.02756	-.00041	-.00324
3	LLS	.20209	.01892	.10308	.23451	.20712	.03775
4	ICSA	258.83	-.00980	-.00870	193.43	.01187	-.01152
5	ICSAB	256.58	.42667	-.00929	190.98	.01402	.92764
6	S99T001868_L	-12.804	-.73282	103.23	117060.	-2.5485	-12.177
7	S99T001868	-.25806	-.18864	96.790	112000.	-.27146	-1.4156
8	S99T001868_D	.54358	-.21646	98.182	113940.	-.80173	-.02853
9	S99T001868_A	390.64	363.04	503.10	113600.	402.71	399.21
10	S99T001868_X	-10.647	-.90155	102.23	117150.	5.6458	1.6507
11	S99T001868_AX	40167.	40263.	40907.	157330.	40686.	40600.
12	CCV	5.0299	4.7689	5.0794	5.1368	5.1149	5.0636
13	CCB	-.00642	-.00012	.00094	.02692	.00142	.00047
14	S99T001862	1.6770	-.21772	93.158	107260.	.33400	1.7226
15	S99T001862_D	.28462	-.21772	93.044	107070.	.10042	.13440
16	S99T001863	1.1850	-.21652	99.805	114510.	-1.2552	-.19375
17	S99T001863_D	.13908	-.20514	99.650	114210.	.34523	-2.3206
18	S99T001867	1.6293	-.13706	93.469	106050.	.85228	-.97471
19	S99T001867_D	.58593	-.16286	92.198	105400.	-.36682	-1.3284
20	ICSA	259.41	-.00978	-.00389	192.60	.01622	-.00811
21	ICSAB	256.88	.42651	-.00919	190.06	.01381	.93150
22	CCV	5.0099	4.7621	5.0848	5.1326	5.1098	5.0826
23	CCB	-.00683	-.00003	.00172	.03633	-.00124	-.00418

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1782	4.9755	4.9240	5.0598	4.9837	5.1273
2	ICB	.00948	-.00064	.01509	.00396	.00605	.00550
3	LLS	.39888	.19562	.18199	.09618	.20846	.12069
4	ICSA	-.02091	.06882	-.03230	-.00069	-.05265	-.00723
5	ICSAB	-.01090	1.0464	-.04474	.00120	-.00053	-.00831
6	S99T001868_L	479.40	-30.478	5179.2	-10.360	31.510	279.57
7	S99T001868	452.45	-3.9439	5198.3	1.2397	14.253	103.56
8	S99T001868_D	456.97	-.33014	5214.1	2.7222	19.985	109.09
9	S99T001868_A	873.63	397.63	5601.2	408.65	433.35	525.56
10	S99T001868_X	527.11	-16.498	5140.1	-30.167	46.415	639.40
11	S99T001868_AX	41302.	40452.	45885.	40835.	41177.	41835.
12	CCV	5.2184	4.9923	4.9216	5.0895	5.0493	5.1494
13	CCB	.01190	.00106	.00838	-.00368	.03035	.01226
14	S99T001862	425.54	-3.7302	4954.7	5.1940	17.718	111.01
15	S99T001862_D	426.59	-5.0560	4929.4	1.1105	19.283	114.64
16	S99T001863	465.34	.06565	5286.0	1.9613	26.596	116.05
17	S99T001863_D	459.30	-1.6119	5296.7	2.1852	24.583	117.37
18	S99T001867	428.83	3.5121	4899.4	3.0268	25.988	120.57
19	S99T001867_D	423.79	-1.2670	4881.3	4.1456	24.265	116.30
20	ICSA	-.00487	.06945	-.02856	-.00231	-.03364	.01403
21	ICSAB	-.00029	1.0512	-.05353	-.00185	-.01717	.00705
22	CCV	5.2078	4.9921	4.9375	5.0874	5.0925	5.1516
23	CCB	.01911	-.00587	-.00144	-.00497	.02601	.01067

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.1121	4.9374	.37113	5.1419	4.9794	9.9819
2	ICB	-.00655	-.00009	.00184	-.00041	.01188	-.02043
3	LLS	.19840	.02004	.02015	.02003	.45221	.46535
4	ICSA	-.02626	.00149	.10796	.00129	-.04748	.11821
5	ICSAB	-.02620	.00147	.11852	.00189	-.05140	.11589
6	S99T001868_L	-27.040	-.29950	-19.912	-2.0367	33.387	-89.097
7	S99T001868	-5.0838	-.02460	-7.9036	-.09168	-3.1036	-3.8418
8	S99T001868_D	-7.8978	-.04918	-6.0831	-.20216	7.1628	-2.1824
9	S99T001868_A	400.56	388.87	21.145	407.57	403.94	785.59
10	S99T001868_X	-48.078	-.48033	-25.539	-1.7884	49.411	-127.21
11	S99T001868_AX	40862.	40615.	3040.5	40635.	40448.	81611.
12	CCV	5.1425	4.9589	.37392	5.1542	5.0543	10.058
13	CCB	-.01113	-.00015	-.00490	-.00030	.00308	-.02847
14	S99T001862	-8.0890	-.06101	-6.7355	.02206	6.0493	-6.4302
15	S99T001862_D	-8.5372	-.06112	-5.1295	-.02964	11.668	-4.5766
16	S99T001863	-7.0818	-.03694	-3.3138	-.24810	5.9703	.63936
17	S99T001863_D	-6.8604	-.04961	-6.8769	-.09495	3.1179	5.0557
18	S99T001867	-6.2429	-.03683	-3.1548	.09187	7.7725	-1.1836
19	S99T001867_D	-3.9197	-.03737	-4.5223	-.19408	4.3140	4.9979
20	ICSA	-.02004	.00151	.11051	.00129	-.06770	.13945
21	ICSAB	-.01991	.00153	.11071	.00186	-.03170	.13073
22	CCV	5.1341	4.9561	.36640	5.1593	5.0370	10.041
23	CCB	-.00481	-.00009	-.00690	-.00058	.00694	-.01205

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Analysis Report

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.1077	.01265	5.0334	5.1044
2	ICB	-.00137	-.00054	-.00049	-.00092
3	LLS	.09929	-.00027	.02037	.01784
4	ICSA	-.00918	.00961	-.00692	-.00522
5	ICSAB	.47075	.00977	1.0048	-.00592
6	S99T001868_L	-4.3532	-2.3259	.36854	-.92887
7	S99T001868	.62378	-.40809	-.68989	.20744
8	S99T001868_D	.33214	-.62941	-.35927	-.25363
9	S99T001868_A	406.19	.48556	401.88	408.24
10	S99T001868_X	-5.8820	-3.7280	-.16727	-2.1047
11	S99T001868_AX	40667.	102.41	40392.	40519.
12	CCV	5.1350	.01262	5.0507	5.1410
13	CCB	-.00214	-.00093	-.00034	-.00062
14	S99T001862	.14695	-.59609	-.83151	-.20014
15	S99T001862_D	.01946	-.62839	-.98345	-.23717
16	S99T001863	.15786	-.59909	-.86302	-.46212
17	S99T001863_D	.32016	-.53794	-1.0908	-.12197
18	S99T001867	.37003	-.56680	-.58966	-.30909
19	S99T001867_D	.44497	-.47488	-.74181	-.13069
20	ICSA	-.00791	.01023	-.00731	-.00461
21	ICSAB	.47217	.00992	1.0087	-.00494
22	CCV	5.1406	.01294	5.0575	5.1363
23	CCB	-.00066	-.00046	.00031	.00032

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12-13-99

File # 912090

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ws2

LABCORE Data Entry Template for Worklist# 31936

Analyst: JK 5/10 Instrument: ICP01 2 12/9/99 Book# 70848BMethod: LA-505-151/161 Rev/Mod C-5Worklist Comment: 12/9/99 ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	SAMPLE	S99T001891 0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested:	AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , <u>Li Br</u> CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
7	DUP	S99T001891 0 D	@ICP-D01	LIQUID		
8	SAMPLE	S99T001892 0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested:	AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , <u>FB</u> BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
9	DUP	S99T001892 0 D	@ICP-D01	LIQUID		
10	ICSA		@ICP-QC	QC		
11	ICSAB		@ICP-QC	QC		
12	CCV		@ICP-QC	QC		

Data Entry Comments:

Uploaded + Validated by:
Saul M. Pang
12/13/99

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

12/09/99 09:28

ws2

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LABCORE Data Entry Template for Worklist# 31936

S Type	Sample#	R A	Test	Matrix	Group#	Project
13	CCB		@ICP-QC	QC		

Final page for worklist # 31936

Signature	Date
<i>JK</i>	12-09-99
599T001891	1-9
599T001891-D	1-9
599T001892	Direct
599T001892-D	Direct

Signature	Date
-----------	------

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	91209A	ICP2	12/09/99	09:19	DKS	Q	CONC
2	ICB	91209A	ICP2	12/09/99	09:23	DKS	Q	CONC
3	LLS	91209A	ICP2	12/09/99	09:26	DKS	Q	CONC
4	ICSA	91209A	ICP2	12/09/99	09:29	DKS	Q	CONC
5	ICSAB	91209A	ICP2	12/09/99	09:50	DKS	Q	CONC
6	S99T001891	91209A	ICP2	12/09/99	09:55	DKS	S	CONC
7	S99T001891_D	91209A	ICP2	12/09/99	09:58	DKS	S	CONC
8	S99T001892	91209A	ICP2	12/09/99	10:03	DKS	S	CONC
9	S99T001892_D	91209A	ICP2	12/09/99	10:05	DKS	S	CONC
10	ICSA	91209A	ICP2	12/09/99	10:09	DKS	Q	CONC
11	ICSAB	91209A	ICP2	12/09/99	10:13	DKS	Q	CONC
12	CCV	91209A	ICP2	12/09/99	10:17	DKS	Q	CONC
13	CCB	91209A	ICP2	12/09/99	10:20	DKS	Q	CONC

JK

QZ-101

12-09-99

599T001891

Work list # 31936

599T001892

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 880 TO 883.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8191	4.9053	5.0729	5.1398	4.8841	4.8964
2	ICB	.00118	.00458	.00385	.00520	.00004	-.00012
3	LLS	.01574	.10750	.19306	.10043	.09480	.00964
4	ICSA	.00052	244.30	-.03375	.00081	.00043	.00001
5	ICSAB	.95910	251.36	-.03836	.00010	.46379	.46296
6	S99T001891	.01475	.33497	-.08002	.01372	.06126	-.00071
7	S99T001891_D	.00757	.29465	.00802	-.02730	.06004	.00000
8	S99T001892	-.00029	.00105	-.00542	.08616	.00060	-.00010
9	S99T001892_D	.00079	.00698	.00485	.09026	.00066	-.00001
10	ICSA	-.00084	251.46	-.01082	.00400	.00029	.00006
11	ICSAB	.95874	250.75	-.02416	.00458	.46197	.46410
12	CCV	4.8114	4.9097	5.0633	5.1540	4.9179	4.9200
13	CCB	.00127	.00658	.00026	.00328	.00006	-.00001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0054	5.2171	5.0834	5.0051	5.0723	5.0394
2	ICB	-.00256	.00812	.00086	.00290	-.00049	.00071
3	LLS	.20867	Q.25202	.01159	.20634	.03982	.02100
4	ICSA	.04344	264.15	-.00560	.02995	.00022	-.00170
5	ICSAB	.00550	260.17	.93510	.02442	.46859	.47427
6	S99T001891	-.07933	1.2889	.01224	.07519	-.02400	.00598
7	S99T001891_D	.01526	1.2069	.00353	.04934	-.02136	-.00122
8	S99T001892	.00282	.34370	.00078	-.00209	-.00335	.00000
9	S99T001892_D	-.02503	.32530	.00164	.00715	-.00108	.00046
10	ICSA	.02300	259.54	-.00666	.02081	-.00044	-.00093
11	ICSAB	.00141	262.27	.94040	.01889	.46691	.47609
12	CCV	5.0883	5.1847	5.0361	5.0505	5.0446	5.0213
13	CCB	-.00714	.00918	.00118	.00903	.00014	.00072

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0112	.03513	5.1199	4.8049	5.0593	4.8162
2	ICB	-.00108	.00246	.00090	-.20312	.00041	.00141
3	LLS	.01754	.00336	.10374	.58092	.10027	.02089
4	ICSA	-.00348	.28875	98.834	.45092	-.00360	.00519
5	ICSAB	.48868	.30160	99.381	.19433	-.00395	.99698
6	S99T001891	.07279	.00432	.08204	4.0741	.01319	2037.9
7	S99T001891_D	.05065	.00478	.03527	.18758	.00110	2007.9
8	S99T001892	.00088	.00183	-.00063	-.14075	.00038	.00028
9	S99T001892_D	.00118	.00224	-.00020	.11036	.00091	.00056
10	ICSA	-.00220	.30311	99.384	.03117	-.00487	.00235
11	ICSAB	.48656	.30129	99.635	.20917	-.00510	.97691
12	CCV	5.0443	.03479	5.0756	5.0160	5.1114	4.8870
13	CCB	.00031	.00215	.00111	.09697	.00142	.00103

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0146	4.7470	4.9901	4.9912	4.9877	5.0291
2	ICB	.00616	.00035	.00003	-.05599	.00053	.00046
3	LLS	.21146	.01912	.09965	.17387	.19914	.04142
4	ICSA	254.25	-.00868	-.01078	185.10	.01343	-.00814
5	ICSAB	257.08	.42418	-.01110	195.24	.01473	.92126
6	S99T001891	.13703	.00172	.04804	6.1406	-.00268	.01787
7	S99T001891_D	.13962	-.00001	.04236	6.1605	-.01389	.01197
8	S99T001892	.03744	.00141	-.00113	1.0201	-.00171	-.00040
9	S99T001892_D	.04298	.00148	-.00103	.96378	.00183	.00088
10	ICSA	256.78	-.00970	-.01254	194.80	.01285	-.01189
11	ICSAB	256.75	.42614	-.01110	193.60	.01252	.93019
12	CCV	4.9700	4.7099	4.9784	5.1005	5.0446	5.0034
13	CCB	.00773	.00028	.00069	.02171	.00220	.00004

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1413	4.9548	4.8790	5.0102	4.9579	5.1101
2	ICB	.00617	-.00454	.02355	-.00104	.01562	.00898
3	LLS	.41073	.20504	.20066	.09273	.20362	.13079
4	ICSA	-.00150	.07020	-.01776	.00180	-.02523	-.00300
5	ICSAB	-.01446	1.0382	-.02956	.00449	-.04624	-.01434
6	S99T001891	.18928	-.12748	1.7285	-.08272	.20241	2.8586
7	S99T001891_D	.15414	-.06098	1.6869	-.02398	.21306	2.7830
8	S99T001892	.00526	-.00802	.10091	-.01245	.00425	.45365
9	S99T001892_D	.00441	-.00642	.09941	-.00013	.00565	.44521
10	ICSA	-.02329	.05477	-.02114	.00995	-.06301	-.00786
11	ICSAB	-.01727	1.0343	-.02809	.01076	-.06155	-.00403
12	CCV	5.1081	4.9217	4.8931	5.0091	4.9280	5.0963
13	CCB	.00930	.00414	.02060	-.00270	.01181	.01149

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.0184	4.8545	.36918	5.0905	4.9409	9.7940
2	ICB	.01259	.00011	.00460	.00000	-.00661	.06575
3	LLS	.20754	.01954	.01665	.01953	.39355	.53978
4	ICSA	.00149	.00145	.11266	.00216	-.09147	.19004
5	ICSAB	-.01920	.00162	.11520	.00244	-.06122	.14617
6	S99T001891	-.08523	.01049	.05172	-.00125	-.00455	-.15344
7	S99T001891_D	-.05318	.01048	.03734	-.00274	-.12018	-.02661
8	S99T001892	.00044	.00478	.00171	.00000	-.02005	.02049
9	S99T001892_D	.00639	.00453	.00658	.00001	-.00831	.04331
10	ICSA	-.02482	.00161	.10963	.00186	-.06842	.13633
11	ICSAB	-.01513	.00161	.11619	.00273	-.05566	.14694
12	CCV	5.0839	4.9123	.37958	5.1016	4.9478	9.8980
13	CCB	.00939	.00011	.00484	.00029	-.00181	.04251

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Analysis Report

Averages

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0619	.01391	5.0386	5.0478
2	ICB	.00249	.00122	-.00016	.00143
3	ILS	.10152	.00142	.02057	.02000
4	ICSA	-.00358	.01225	-.00614	-.00189
5	ICSAB	.46747	.01038	.99974	-.00547
6	S99T001891	.00305	-.00072	-.55791	.00047
7	S99T001891_D	.00491	-.00077	-.55292	.00348
8	S99T001892	.00015	.00022	.02447	.00026
9	S99T001892_D	.00121	.00061	.02316	.00027
10	ICSA	-.00839	.01007	-.00672	-.00513
11	ICSAB	.47082	.01078	1.0018	-.00431
12	CCV	5.0673	.01347	4.9986	5.0633
13	CCB	.00203	.00068	-.00049	.00081

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11-00

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LABCORE Data Entry Template for Worklist# 32091

Analyst: JKS/v Instrument: ICP01 11-00Book# 808488Method: LA-505-151/161 Rev/Mod C-5Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysis

Worklist Comment: ICP AZ-101 (FUSION)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPBLKTJA		@ICP-F01	SOLID		
7	SAMPLE	S00T000015 O F	@ICP-F01	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SE-F-01, SI-F-01, SM-F-01, SR-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, ZN-F-01, ZR-F-01						
8	DUP	S00T000015 O F	@ICP-F01	SOLID		
9	CCV		@ICP-QC	QC		
10	CCB		@ICP-QC	QC		
11	SERDIL	S00T000021 O F	@ICP-F01	SOLID		
12	SAMPLE	S00T000021 O F	@ICP-F01	SOLID	99000438	AZ-101 (2)
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SE-F-01, SI-F-01, SM-F-01, SR-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, ZN-F-01, ZR-F-01						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

Uploaded + Validated by:
Sail M. Pang
 01/11/2000

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01/11/00 08:21
ws2

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LABCORE Data Entry Template for Worklist# 32091

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S00T000021	0 F	@ICP-F01	SOLID		
14 SPK-POST Sealtec X Spike Ex (10 ppb) 1-11-90	S00T000021	0 F	@ICP-F01	SOLID		
15 ICSA			@ICP-QC	QC		
16 ICSAB			@ICP-QC	QC		
17 CCV			@ICP-QC	QC		
18 CCB			@ICP-QC	QC		

Final page for worklist # 32091

Signature	Date
Prep blktja	1-10
S00T000015	1-10
S00T000015-D	1-10
Prep blktja	1-10
S00T000021-L	1-10-28
S00T000021	1-10
S00T000021-D	1-10
S00T000021-G	1-10
S00T000021-X	1-10-28
S00T000021-QX	1-10-28

Signature	Date
-----------	------

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

S00T000021

$$Al = 251.36 \frac{\mu g}{ml} \times \frac{1}{5.13 \frac{g}{L} \times \frac{1L}{1000ml}} = 4.90 \pm 4 \frac{\mu g}{g}$$

Post Spike:

$$Al = \frac{\left(\frac{347.10}{101}\right) - \left(\frac{251.36}{101}\right)}{1} \times 100 = 94.8\%$$

S00T000015

$$Al = 122.21 \frac{\mu g}{ml} \times \frac{1}{5.22 \frac{g}{L} + \frac{1L}{1000ml}} = 2.34 \pm 4 \frac{\mu g}{g}$$

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	11100A	ICP2	01/11/00	10:03	DKS	Q	CONC
2	ICB	11100A	ICP2	01/11/00	10:07	DKS	Q	CONC
3	ICB	11100A	ICP2	01/11/00	10:11	DKS	Q	CONC
4	LLS	11100A	ICP2	01/11/00	10:18	DKS	Q	CONC
5	ICSA	11100A	ICP2	01/11/00	10:21	DKS	Q	CONC
6	ICSAB	11100A	ICP2	01/11/00	10:23	DKS	Q	CONC
7	PREPBLKTJA	11100A	ICP2	01/11/00	11:30	DKS	Q	CONC
8	SOOT000015	11100A	ICP2	01/11/00	11:35	DKS	S	CONC
9	SOOT000015_D	11100A	ICP2	01/11/00	11:38	DKS	S	CONC
10	CCV	11100A	ICP2	01/11/00	11:42	DKS	Q	CONC
11	CCB	11100A	ICP2	01/11/00	11:45	DKS	Q	CONC
12	PREPBLKTJA	11100A	ICP2	01/11/00	11:48	DKS	Q	CONC
13	SOOT000021_L	11100A	ICP2	01/11/00	11:52	DKS	S	CONC
14	SOOT000021	11100A	ICP2	01/11/00	11:55	DKS	S	CONC
15	SOOT000021_D	11100A	ICP2	01/11/00	11:58	DKS	S	CONC
16	SOOT000021_A	11100A	ICP2	01/11/00	12:01	DKS	S	CONC
17	SOOT000021_X	11100A	ICP2	01/11/00	12:05	DKS	S	CONC
18	SOOT000021_AX	11100A	ICP2	01/11/00	12:08	DKS	S	CONC
19	ICSA	11100A	ICP2	01/11/00	12:19	DKS	Q	CONC
20	ICSAB	11100A	ICP2	01/11/00	12:22	DKS	Q	CONC
21	CCV	11100A	ICP2	01/11/00	12:25	DKS	Q	CONC
22	CCB	11100A	ICP2	01/11/00	12:29	DKS	Q	CONC

CL-101

01-11-00

SOOT000015

Worklist # 32091

SOOT000021

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 882 TO 891.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8402	4.9437	5.0529	5.0975	4.9224	4.9190
2	ICB	.00128	.00714	.00323	.00388	.00008	.00003
3	ICB	.00073	.00768	.00545	.00081	.00005	.00003
4	LLS	.02218	.11460	.20804	.10244	.09620	.00976
5	ICSA	-.00163	250.67	.00103	.00531	.00039	.00010
6	ICSAB	.95965	250.79	-.02458	.00108	.46306	.46660
7	PREPBLKTJA	.00023	.01440	.00896	.01254	.00031	.00009
8	SOOT000015	.95061	122.21	-.28405	4.5564	2.6812	.04633
9	SOOT000015_D	1.0824	119.31	.11679	4.6856	2.5896	.04647
10	CCV	4.8255	4.9353	5.0625	5.0817	4.8758	4.9326
11	CCB	.00110	.01739	.00232	.00437	.00009	.00010
12	PREPBLKTJA	.00074	.02449	-.00904	.01420	.00017	.00012
13	SOOT000021_L	1.7643	266.14	-.18484	4.8747	3.6904	.09004
14	SOOT000021	1.3148	251.36	.08313	3.9595	3.6138	.06624
15	SOOT000021_D	1.4116	319.89	.46677	3.4878	3.7242	.06219
16	SOOT000021_A	89.168	347.10	101.20	103.56	97.198	95.735
17	SOOT000021_X	2.2305	277.31	-.75663	5.4303	3.7869	.12629
18	SOOT000021_AX	8192.4	10269.	10150.	10140.	10107.	10135.
19	ICSA	.01126	246.89	.00384	.00495	.00042	.00023
20	ICSAB	.96229	250.40	-.02385	.00075	.46087	.46748
21	CCV	4.8518	4.9364	5.0996	5.1466	4.9350	4.9663
22	CCB	.00519	.01863	.00678	.00327	.00013	.00012

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0896	5.2189	5.0451	5.0702	5.0638	5.0305
2	ICB	.02941	.00117	.00094	.00594	.00148	.00095
3	ICB	.00076	-.00403	.00054	.00758	.00113	.00105
4	LLS	.21331	.22801	.01050	.21350	.04266	.02063
5	ICSA	.02559	263.87	-.00561	.02659	.00207	.00018
6	ICSAB	.02833	261.99	.94424	.01819	.47316	.47720
7	PREPBLKTJA	.00670	-.00384	.00055	.00046	.00337	.00177
8	SOOT000015	1.6600	11.942	32.157	3.7646	.52407	2.8064
9	SOOT000015_D	3.0845	11.964	31.518	4.0729	.46313	2.9014
10	CCV	5.0518	5.1917	5.0378	5.0343	5.0622	5.0315
11	CCB	.02645	-.00285	.00037	.01380	.00345	.00240
12	PREPBLKTJA	.01078	-.00262	.00090	.00576	.00365	.00097
13	SOOT000021_L	-.31348	11.361	41.613	10.027	1.7032	3.0520
14	SOOT000021	3.0120	13.013	40.464	4.9704	.50232	2.8173
15	SOOT000021_D	2.9656	14.100	43.010	5.5553	.61413	3.1973
16	SOOT000021_A	102.38	114.94	140.85	102.94	101.62	103.09
17	SOOT000021_X	24.520	7.6514	42.120	12.816	.87570	3.2535
18	SOOT000021_AX	10230.	9944.5	10091.	10102.	10100.	10088.
19	ICSA	.03810	260.08	-.00570	.02732	.00432	.00012
20	ICSAB	-.00734	260.77	.94375	.01906	.47243	.47706
21	CCV	5.0493	5.2054	5.0602	5.0758	5.0870	5.0566
22	CCB	.02838	-.00294	.00027	.01065	.00213	.00047

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Analysis Report

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#	Sample Name	Cu	Bu	Fe	K	La	Li
1	ICV	5.0455	.03557	5.1105	5.4379	5.1092	4.9587
2	ICB	.00053	.00000	.00037	.13458	.00023	.00036
3	ICB	.00052	.00101	-.00024	.10825	.00004	.00036
4	LLS	.01853	.00233	.10310	.40059	.10109	.02159
5	ICSA	.00016	.30095	99.858	.39610	-.00528	.00404
6	ICSAB	.48936	.30753	99.690	-.00894	-.00500	.98010
7	PREPBLKTJA	.00236	.00049	.01476	Q257.99	-.00062	.00092
8	SOOT000015	1.1314	.25340	378.20	26640.	8.1443	.24966
9	SOOT000015_D	1.1180	.23834	354.74	27633.	8.0535	.21251
10	CCV	5.0178	.03527	5.0857	5.1586	5.0991	4.9204
11	CCB	.00220	.00155	.00134	.15399	.00123	.00110
12	PREPBLKTJA	.00110	.00128	.00037	.28830	.00036	.00082
13	SOOT000021_L	1.4305	1.1667	483.01	27406.	20.924	1.0659
14	SOOT000021	1.4379	.41451	475.00	26367.	20.105	.46305
15	SOOT000021_D	1.6258	.46477	464.84	27005.	21.987	.48132
16	SOOT000021_A	99.884	1.0846	572.06	26510.	120.05	94.378
17	SOOT000021_X	2.3029	1.0161	481.18	27965.	21.483	1.4832
18	SOOT000021_AX	10056.	68.851	10483.	37963.	10138.	10092.
19	ICSA	.00000	.30012	98.824	.26684	-.00501	.00450
20	ICSAB	.48662	.30685	99.519	.03265	-.00589	.96694
21	CCV	5.0566	.03613	5.0907	4.8258	5.1435	4.9616
22	CCB	.00072	.00099	-.00005	-.01305	.00087	.00055

H-11-00

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0336	4.7140	4.9938	5.1068	5.0571	5.0097
2	ICB	-.00121	.00011	.00358	-.00345	.00568	.00054
3	ICB	.00628	.00008	.00319	-.02367	.00269	-.00134
4	LLS	.20250	.01918	.10157	.20400	.20453	.04693
5	ICSA	258.36	-.00915	-.00691	192.69	.01783	-.00742
6	ICSAB	257.01	.42813	-.01158	191.73	.01577	.92788
7	PREPBLKTJA	-.00355	.00715	.00175	.08919	.00480	Q3.0412
8	SOOT000015	3.2304	6.7571	.17911	591.45	7.9941	788.19
9	SOOT000015_D	3.6268	6.4412	.12826	604.06	8.1070	773.55
10	CCV	5.0061	4.7211	4.9964	5.0301	5.0065	4.9926
11	CCB	.00984	.00045	.00768	-.02146	.00949	.00462
12	PREPBLKTJA	.00975	.00048	.00459	-.02947	.00656	.00055
13	SOOT000021_L	9.5937	7.3565	.96115	320.02	13.287	532.45
14	SOOT000021	4.6907	7.1118	.23524	329.26	12.183	520.65
15	SOOT000021_D	5.6085	7.9801	.20634	370.69	13.248	918.96
16	SOOT000021_A	102.93	97.908	99.994	436.53	110.20	617.66
17	SOOT000021_X	9.6536	7.4822	1.2158	309.99	16.485	530.21
18	SOOT000021_AX	10021.	10013.	10087.	10327.	10070.	10546.
19	ICSA	254.29	-.00879	-.00660	186.22	.01647	-.00509
20	ICSAB	256.21	.42782	-.01049	189.10	.01500	.92410
21	CCV	4.9899	4.7282	5.0297	5.0339	5.0412	5.0234
22	CCB	.00805	.00022	.00290	-.02882	.00088	.00164

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Analysis Report

Averages

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1372	4.9431	4.9178	5.0236	4.9471	5.1691
2	ICB	.00538	.01277	.008316	.00113	.00343	.01424
3	ICB	.00605	.00242	.02693	.00789	.01621	.00833
4	LLS	.40843	.20510	.20014	.11151	.21326	.13605
5	ICSA	-.01033	.08123	-.00848	.02361	-.03438	-.00564
6	ICSAB	.00341	1.0489	-.00227	.00416	-.02057	-.00727
7	PREPBLKTJA	.00633	.00421	.00009	.00140	.01784	.03203
8	SOOT000015	10.025	2.1862	114.88	.61018	1.4598	15.743
9	SOOT000015_D	11.137	3.1436	122.05	.73152	1.6094	15.863
10	CCV	5.1205	4.9316	4.9011	5.0463	4.9577	5.1198
11	CCB	.01255	.01175	.02721	.01191	.02330	-.00508
12	PREPBLKTJA	.01972	.00238	.00533	.01001	.02861	.03043
13	SOOT000021_L	5.9620	1.7030	14.757	8.6853	17.219	22.251
14	SOOT000021	2.9400	1.7492	17.709	1.1355	2.8573	22.043
15	SOOT000021_D	3.8304	2.9689	20.575	1.8089	2.1314	23.282
16	SOOT000021_A	106.18	101.86	116.69	101.54	101.43	124.97
17	SOOT000021_X	14.626	3.8247	20.312	3.1857	28.710	15.907
18	SOOT000021_AX	10122.	10067.	10184.	10145.	10168.	10085.
19	ICSA	-.00812	.08492	-.01709	.00294	-.00951	-.01537
20	ICSAB	-.00205	1.0377	-.01035	.01448	-.03556	-.01376
21	CCV	5.1799	4.9411	4.9490	5.0791	4.9962	5.1347
22	CCB	.01580	-.00067	.01476	.01000	.02911	-.00869

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.0781	4.9034	.37047	5.1062	4.9668	9.9457
2	ICB	.00508	.00002	.01021	.00000	.00251	.01050
3	ICB	.00564	.00000	.00661	.00072	.00063	.01706
4	LLS	.20857	.01985	.02225	.02066	.39560	.52366
5	ICSA	-.00483	.00158	.12887	.00335	-.04520	.15903
6	ICSAB	-.01217	.00168	.11200	.00272	-.06033	.14958
7	PREPBLKTJA	.00592	.00012	.00878	.00147	-.01526	-.05533
8	SOOT000015	2.2285	2.1859	5.4107	.40934	-1.0394	24.057
9	SOOT000015_D	2.2847	2.1672	6.8281	.45769	-.51395	23.550
10	CCV	5.0866	4.8851	.38962	5.1181	4.9231	9.9186
11	CCB	.01177	.00011	.01030	.00157	-.00529	.06112
12	PREPBLKTJA	.01276	.00008	.00973	.00087	-.02324	.05105
13	SOOT000021_L	8.2566	2.0678	16.656	.54430	-5.8267	55.350
14	SOOT000021	2.8649	1.9888	7.6349	.35820	-.38225	31.242
15	SOOT000021_D	3.5340	2.2501	8.3496	.51514	-1.6906	37.205
16	SOOT000021_A	101.79	97.144	14.757	101.77	98.726	223.64
17	SOOT000021_X	13.272	2.0820	15.344	1.0351	-11.990	72.681
18	SOOT000021_AX	10159.	10081.	766.15	10158.	10079.	20261.
19	ICSA	-.00195	.00162	.11398	.00315	-.06273	.17308
20	ICSAB	-.01004	.00169	.11017	.00258	-.01816	.14316
21	CCV	5.1297	4.9244	.38589	5.1613	4.9780	10.008
22	CCB	.00903	.00002	.01410	.00046	-.01471	.03731

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Analysis Report

Averages

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0714	.01376	5.0201	5.0724
2	ICB	.00056	.00038	.00030	.00025
3	ICB	.00056	.00038	.00061	.00051
4	LLS	.10100	.00119	.02170	.01952
5	ICSA	-.00518	.01116	-.00590	-.00389
6	ICSAB	.47322	.01078	1.0102	-.00337
7	PREPBLKTJA	.00078	.00018	-.00314	.00082
8	SOOT000015	.19994	1.7597	-.30976	155.74
9	SOOT000015_D	.18213	1.7440	-.29237	153.95
10	CCV	5.0758	.01385	5.0052	5.0725
11	CCB	.00230	.00083	.00106	.00121
12	PREPBLKTJA	.00212	.00068	.00152	.00148
13	SOOT000021_L	1.2044	2.3575	1.0128	173.62
14	SOOT000021	.28405	1.9947	.12982	172.65
15	SOOT000021_D	.36719	2.0398	-.35608	161.60
16	SOOT000021_A	100.83	2.2383	100.52	273.60
17	SOOT000021_X	2.1551	2.4295	.61247	174.43
18	SOOT000021_AX	10099.	29.009	10059.	10256.
19	ICSA	-.00444	.01124	-.00484	-.00258
20	ICSAB	.47436	.01062	1.0084	-.00343
21	CCV	5.1037	.01342	5.0267	5.1007
22	CCB	.00111	.00029	.00113	.00035

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KLP
01-11-00

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ws2

File # 12000G

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LABCORE Data Entry Template for Worklist# 32139

Analyst:

JK Seto

Instrument:

ICP01 1-17-00

Book#

803480

Method: LA-505-151/161 Rev/Mod

C-5

Worklist Comment: AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		•ICP-QC	QC		
2	ICB		•ICP-QC	QC		
3	LLS		•ICP-QC	QC		
4	ICSA		•ICP-QC	QC		
5	ICSAB		•ICP-QC	QC		
6	SAMPLE	S99T001918 0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 ,						
BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 ,						
CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,						
MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 ,						
P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,						
SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 ,						
ZN-D-01 , ZR-D-01						
7	DUP	S99T001918 0 D	•ICP-D01	LIQUID		
8	SAMPLE	S99T001919 0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 ,						
BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 ,						
CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,						
MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 ,						
P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,						
SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 ,						
ZN-D-01 , ZR-D-01						
9	DUP	S99T001919 0 D	•ICP-D01	LIQUID		
10	SAMPLE	S99T001920 0 D	•ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 ,						
BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 ,						
CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,						
MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 ,						

Data Entry Comments:

updated 1-24-00

John Woull

Validated by:

Saul M. Pang

01/25/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 32139

S Type	Sample#	R A	Test	Matrix	Group#	Project
			P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
11 DUP	S99T001920	0 D	@ICP-D01	LIQUID		
12 CCV			@ICP-QC	QC		
13 CCB			@ICP-QC	QC		
14 SAMPLE	S99T001922	0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
15 DUP	S99T001922	0 D	@ICP-D01	LIQUID		
16 SAMPLE	S99T001923	0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
17 DUP	S99T001923	0 D	@ICP-D01	LIQUID		
18 SAMPLE	S99T001924	0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
19 DUP	S99T001924	0 D	@ICP-D01	LIQUID		
20 CCV			@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 32139

S Type	Sample#	R A	Test	Matrix	Group#	Project
21 CCB			@ICP-QC	QC		
22 SERDIL	S99T001921	0 D	@ICP-D01	LIQUID		
23 SAMPLE	S99T001921	0 D	@ICP-D01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PE-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
24 DUP	S99T001921	0 D	@ICP-D01	LIQUID		
25 SPK	S99T001921	0 D	@ICP-D01	LIQUID		
26 ICSA			@ICP-QC	QC		
27 ICSAB			@ICP-QC	QC		
28 CCV			@ICP-QC	QC		
29 CCB			@ICP-QC	QC		

Final page for worklist # 32139

K 1.8

01-20-00

Signature	Date
S99T001918	01-15-00, JF 601
S99T001918-D	01-15-00, 601
S99T001919	01-15-00, JF 601
S99T001919-D	01-15-00, 601
S99T001920	01-15-00, JF 601
S99T001920-D	01-15-00, 601
S99T001922	01-15-00, JF 601
S99T001922-D	01-15-00, 601
S99T001923	01-15-00, JF 601
S99T001923-D	01-15-00, 601

Signature	Date
S99T001924	01-15-00, JF 601
S99T001924-D	01-15-00, 601
S99T001922-L	01-15-00-2-8, JF 3005
S99T001921	01-15-00, 601
S99T001921-D	01-15-00, 601
S99T001921-G	01-15-00, 601
S99T001921-X	01-15-00-1-9, 6010
S99T001921-DX	01-15-00-1-9, 6010
S99T001921-QX	01-15-00-1-9, 6010

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

$$Al = 8.242 + 3 \frac{\mu g}{ml}$$

$$Spk: Al = \frac{\left(\frac{8863.7}{601}\right) - \left(\frac{8242.9}{601}\right)}{1} \times 100 =$$
$$= 103 \%$$

$$Na = 1.142 + 5 \frac{\mu g}{ml}$$

$$Spk: Na = \frac{\left(\frac{177970}{6010}\right) - \left(\frac{113880}{6010}\right)}{10} \times 100 =$$
$$= 107 \%$$

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Analysis Report

Summary

01/20/00 02:05:32 PM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	12000A	ICP2	01/20/00	11:50	DKS	Q	CONC
2	ICB	12000A	ICP2	01/20/00	11:55	DKS	Q	CONC
3	LLS	12000A	ICP2	01/20/00	11:58	DKS	Q	CONC
4	LLS	12000A	ICP2	01/20/00	12:05	DKS	Q	CONC
5	ICSA	12000A	ICP2	01/20/00	12:09	DKS	Q	CONC
6	ICSAB	12000A	ICP2	01/20/00	12:12	DKS	Q	CONC
7	S99T001918	12000A	ICP2	01/20/00	12:15	DKS	S	CONC
8	S99T001918_D	12000A	ICP2	01/20/00	12:19	DKS	S	CONC
9	S99T001919	12000A	ICP2	01/20/00	12:22	DKS	S	CONC
10	S99T001919_D	12000A	ICP2	01/20/00	12:25	DKS	S	CONC
11	S99T001920	12000A	ICP2	01/20/00	12:29	DKS	S	CONC
12	S99T001920_D	12000A	ICP2	01/20/00	12:32	DKS	S	CONC
13	CCV	12000A	ICP2	01/20/00	12:36	DKS	Q	CONC
14	CCB	12000A	ICP2	01/20/00	12:41	DKS	Q	CONC
15	S99T001922	12000A	ICP2	01/20/00	12:47	DKS	S	CONC
16	S99T001922_D	12000A	ICP2	01/20/00	12:50	DKS	S	CONC
17	S99T001923	12000A	ICP2	01/20/00	12:53	DKS	S	CONC
18	S99T001923_D	12000A	ICP2	01/20/00	12:56	DKS	S	CONC
19	S99T001924	12000A	ICP2	01/20/00	13:00	DKS	S	CONC
20	S99T001924_D	12000A	ICP2	01/20/00	13:03	DKS	S	CONC
21	CCV	12000A	ICP2	01/20/00	13:10	DKS	Q	CONC
22	CCB	12000A	ICP2	01/20/00	13:13	DKS	Q	CONC
23	S99T001921_L	12000A	ICP2	01/20/00	13:17	DKS	S	CONC
24	S99T001921	12000A	ICP2	01/20/00	13:20	DKS	S	CONC
25	S99T001921_D	12000A	ICP2	01/20/00	13:23	DKS	S	CONC
26	S99T001921_A	12000A	ICP2	01/20/00	13:30	DKS	S	CONC
27	S99T001921_X	12000A	ICP2	01/20/00	13:36	DKS	S	CONC
28	S99T001921_DX	12000A	ICP2	01/20/00	13:40	DKS	S	CONC
29	S99T001921_AX	12000A	ICP2	01/20/00	13:43	DKS	S	CONC
30	ICSA	12000A	ICP2	01/20/00	13:52	DKS	Q	CONC
31	ICSAB	12000A	ICP2	01/20/00	13:55	DKS	Q	CONC
32	CCV	12000A	ICP2	01/20/00	13:58	DKS	Q	CONC
33	CCB	12000A	ICP2	01/20/00	14:02	DKS	Q	CONC

KAB

AZ-101

01-10-00

Worklist #32139

S99T001918

S99T001919

S99T001920

S99T001921

S99T001922

S99T001923

S99T001924

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 896 TO 904.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Ba
1	ICV	4.8383	5.0184	5.0243	5.2085	5.0058	4.9258
2	ICB	.00236	.02007	-.00315	-.00165	.00012	.00018
3	LLS	.01807	.12402	.18959	.09742	.09725	.00991
4	LLS	.02261	9.12942	.19948	.09416	.09585	.00985
5	ICSA	-.00193	248.63	-.05815	.00475	.00026	.00020
6	ICSAB	.94243	249.08	-.03624	.00051	.45836	.45379
7	S99T001918	9.8578	9267.2	9.1555	8.1963	1.4285	.46091
8	S99T001918_D	7.5524	9231.5	9.5109	7.7034	1.2720	.44082
9	S99T001919	7.7900	8525.2	-2.4661	8.6882	1.0420	.46147
10	S99T001919_D	8.7698	8555.0	-1.1369	7.7070	1.1727	.45001
11	S99T001920	8.2210	8256.2	-.96283	7.5428	1.0438	.44003
12	S99T001920_D	8.1963	8340.3	4.4313	8.1913	.99929	.44149
13	CCV	4.9004	5.0621	5.1183	5.2938	5.0956	5.0114
14	CCB	.00005	.01155	-.01436	-.00493	.00006	.00018
15	S99T001922	9.0546	8312.2	4.0046	10.655	1.0222	.43067
16	S99T001922_D	7.7630	8392.4	8.8831	9.5028	.98915	.45157
17	S99T001923	8.0983	8568.1	6.0414	8.6837	.97161	.41950
18	S99T001923_D	9.0450	8504.8	8.0570	6.5501	.94241	.44126
19	S99T001924	9.4417	7378.7	7.3814	9.1791	.14437	.23885
20	S99T001924_D	9.8810	7377.5	3.3443	8.3600	.21130	.31300
21	CCV	4.8350	4.9885	5.0543	5.2248	5.0278	4.9249
22	CCB	.00094	.01858	-.00104	.00243	.00001	.00021
23	S99T001921_L	12.474	8447.1	-26.857	3.2437	1.2299	.97102
24	S99T001921	8.9765	8242.9	9.5646	7.8637	1.0590	.45245
25	S99T001921_D	9.0576	8223.6	7.1294	9.5034	.99900	.45207
26	S99T001921_A	509.07	8863.7	623.05	618.91	579.45	571.19
27	S99T001921_X	25.495	8575.3	-53.199	-1.7540	1.3508	1.7241
28	S99T001921_DX	23.440	8562.1	-79.507	-14.873	1.7658	1.9443
29	S99T001921_AX	63181.	72097.	63523.	61015.	65460.	63751.
30	ICSA	.00000	251.02	-.03481	-.00029	.00032	.00024
31	ICSAB	.95531	252.48	-.03156	.00290	.47123	.45991
32	CCV	4.8548	5.0472	5.0544	5.2426	5.1134	4.9232
33	CCB	.00217	.02226	-.00281	-.00030	.00010	.00025
#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0941	5.0435	4.9427	5.1329	4.9925	4.9779
2	ICB	-.01819	.00309	.00058	.00598	.00071	-.00042
3	LLS	.21871	.22718	.00998	.20729	.04174	.01927
4	LLS	.22650	.21563	.01031	.21774	.04038	.02088
5	ICSA	.02041	254.73	-.00832	.01339	.00169	-.00333
6	ICSAB	.01109	253.12	.90568	.00664	.45475	.46075
7	S99T001918	4.1258	5.6599	1.4719	7.7527	.06039	730.30
8	S99T001918_D	3.4114	1.1307	.20275	-4.3198	.43692	727.78
9	S99T001919	8.2717	-.16372	.31765	-4.3034	.32424	710.04
10	S99T001919_D	-4.6098	4.3414	.02847	4.3757	.82119	713.89
11	S99T001920	19.534	2.9086	.39447	-1.1914	-.04816	704.83
12	S99T001920_D	8.4954	1.3568	-.09131	-2.9460	.01285	707.44
13	CCV	5.1857	5.1335	5.0284	5.2101	5.0731	5.0530
14	CCB	.01542	-.00011	-.00036	-.00703	.00089	-.00078
15	S99T001922	1.8527	1.5218	-.13144	-.51212	-1.0701	708.98
16	S99T001922_D	6.2021	1.6913	-.18583	-6.0298	.57917	712.48

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
17	S99T001923	10.904	3.2559	.28643	-.51689	.24036	709.77
18	S99T001923_D	4.2146	2.8255	.28296	1.6154	.46489	707.37
19	S99T001924	-.97527	2.2606	1.0539	-.20598	.01977	797.73
20	S99T001924_D	8.6418	1.1810	.83848	4.4872	.51147	800.52
21	CCV	5.0885	5.1220	4.9977	5.1165	5.0345	5.0099
22	CCB	.00785	.00076	-.00038	.00360	-.00022	-.00054
23	S99T001921_L	-1.2797	2.0148	-.10279	8.7736	.10536	710.53
24	S99T001921	-8.4255	17.886	.25978	4.1803	.32117	701.10
25	S99T001921_D	6.7215	19.992	.26684	3.4789	.69915	698.44
26	S99T001921_A	591.82	609.91	592.74	602.72	595.04	1292.8
27	S99T001921_X	6.3071	12.841	-3.0899	-6.5893	10.311	718.50
28	S99T001921_DX	105.42	6.4732	.01021	-4.0919	-1.3723	709.02
29	S99T001921_AX	64518.	61662.	62618.	64292.	59114.	63599.
30	ICSA	.00068	254.43	-.00761	.01569	.00092	-.00242
31	ICSAB	-.00571	256.62	.92295	.01558	.46599	.46799
32	CCV	5.0918	5.0682	4.9684	5.1776	5.0007	4.9895
33	CCB	-.00636	.00137	.00048	-.00023	.00056	-.00034

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.1610	.03124	5.0646	4.6551	5.2164	5.1837
2	ICB	-.00034	-.00270	.00296	.14819	.00158	-.00165
3	LLS	.01815	-.00184	.10346	Q.29761	.10175	.01918
4	LLS	.01813	-.00006	.10174	Q.67190	.10306	.02005
5	ICSA	-.00399	.31838	97.461	.15775	-.00623	.00194
6	ICSAB	.48260	.32494	97.182	.08226	-.00692	.99884
7	S99T001918	-1.0490	-1.5751	2.6595	4994.8	1.4957	-.64363
8	S99T001918_D	-1.7600	-1.8347	.98676	4851.6	-.08504	-.70242
9	S99T001919	-1.3691	-1.7677	-.04625	4728.1	-.49921	5.9765
10	S99T001919_D	-1.0851	-1.2059	.79231	4661.1	1.0799	9.0807
11	S99T001920	-1.8953	-1.8276	.31939	4827.7	.58403	7.8509
12	S99T001920_D	-2.1526	-2.6243	.55461	4714.2	.18904	7.2671
13	CCV	5.2302	.03170	5.1279	5.1950	5.2903	5.2181
14	CCB	.00010	-.00344	.00182	.03987	.00021	-.00223
15	S99T001922	-1.4604	-2.0697	1.0122	4751.3	.81556	7.5592
16	S99T001922_D	-1.3013	-2.4914	.06108	4794.8	-.08754	7.2667
17	S99T001923	-1.6716	-2.6379	1.1955	4750.0	.38476	10.724
18	S99T001923_D	-1.3483	-2.6342	.83519	4811.0	.78567	7.5017
19	S99T001924	-1.3766	-2.3600	.86305	5188.4	.74447	-.76068
20	S99T001924_D	-1.4488	-1.9223	1.5946	5199.9	1.0553	-.35111
21	CCV	5.1222	.03273	5.0756	5.2142	5.1829	5.1045
22	CCB	.00041	-.00301	.00284	-.01330	.00058	-.00233
23	S99T001921_L	-4.7789	-7.5281	10.313	4721.0	4.3881	9.0929
24	S99T001921	-1.1575	-1.5722	3.6562	4783.9	1.2561	11.486
25	S99T001921_D	-1.4065	-1.6865	1.3860	4737.5	1.0592	11.016
26	S99T001921_A	597.67	2.2023	599.34	5444.4	610.36	600.19
27	S99T001921_X	-3.3722	-19.459	10.799	4282.0	2.3894	-.55678
28	S99T001921_DX	-7.3455	-21.201	9.9776	4248.4	2.8578	-3.4791
29	S99T001921_AX	60630.	416.13	62794.	67756.	64501.	65409.
30	ICSA	-.00236	.32130	97.870	.07193	-.00531	.00038
31	ICSAB	.48995	.32688	98.589	.16469	-.00553	1.0083
32	CCV	5.2043	.03132	5.0457	5.3488	5.2488	5.2157
33	CCB	.00112	-.00451	.00305	.22038	.00075	-.00301

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0205	4.6926	4.9580	5.3797	5.1525	4.9358
2	ICB	.01700	-.00032	.00119	.00933	-.00172	-.00240
3	LLS	.20341	.01832	.10034	.24214	.20003	.03528
4	LLS	.21596	.01856	.09970	.21500	.20029	.03240
5	ICSA	254.08	-.00979	-.01067	195.60	.00901	-.01160
6	ICSAB	253.08	.41609	-.01364	195.70	.00940	.90161
7	S99T001918	14.451	-.32462	94.402	114190.	-1.2917	.76503
8	S99T001918_D	-.06474	-.36687	95.380	113360.	-3.0297	-3.9073
9	S99T001919	3.7401	-.32500	91.601	110750.	-1.2060	-2.2847
10	S99T001919_D	9.9072	-.15684	93.555	110110.	-.91391	-3.2924
11	S99T001920	5.3267	-.34074	90.750	110030.	-3.2709	-1.3526
12	S99T001920_D	3.6904	-.47075	92.447	111350.	-3.5680	-4.7334
13	CCV	5.0652	4.7792	5.0445	5.3685	5.2120	5.0336
14	CCB	.00801	-.00044	.00260	.05691	-.00313	-.00584
15	S99T001922	9.3510	-.31469	93.712	111290.	-2.8588	-3.5253
16	S99T001922_D	-.20621	-.40155	94.391	112700.	-1.2879	-3.1445
17	S99T001923	4.5554	-.46903	92.791	112180.	-2.2439	-4.6308
18	S99T001923_D	8.7277	-.46491	92.895	111920.	-.47907	-4.3478
19	S99T001924	7.7475	-.45582	104.65	123580.	-.91634	-4.0454
20	S99T001924_D	12.694	-.35379	104.54	123600.	-1.4760	.10092
21	CCV	5.0198	4.7301	5.0088	5.2679	5.1065	4.9973
22	CCB	.00211	-.00043	.00423	.04919	-.00287	-.00734
23	S99T001921_L	33.858	-1.0170	98.383	112430.	-16.093	-11.385
24	S99T001921	9.9682	-.31748	91.124	109130.	-2.0108	-3.8284
25	S99T001921_D	11.520	-.33888	90.273	108820.	-1.7904	-3.6275
26	S99T001921_A	601.10	539.25	686.74	110730.	598.32	589.41
27	S99T001921_X	41.838	-2.7629	98.777	113880.	-16.807	-32.401
28	S99T001921_DX	49.748	-3.8729	91.299	115120.	-37.060	-35.145
29	S99T001921_AX	63081.	62867.	59652.	177970.	64293.	62860.
30	ICSA	255.03	-.01022	-.01098	196.80	.01109	-.00577
31	ICSAB	256.42	.42075	-.01079	197.13	.00932	.92370
32	CCV	5.0072	4.6968	4.9931	5.4098	5.1805	4.9607
33	CCB	.00953	-.00081	.00391	.06894	-.00252	-.00232

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.0921	4.8045	4.8790	5.0030	4.9244	5.1208
2	ICB	-.00184	-.01201	.00322	.00208	.02081	-.00965
3	LLS	.40147	.19917	.18317	.09642	.20280	Q.10731
4	LLS	.39731	.20417	.18230	.10586	.22071	.14867
5	ICSA	-.01726	.06446	-.04919	-.00642	-.03812	-.01842
6	ICSAB	-.01643	.98209	-.04141	.00422	-.05282	-.02368
7	S99T001918	437.60	-.99642	5054.6	9.0075	33.796	49.115
8	S99T001918_D	442.55	-.62565	5044.2	-5.7878	35.467	50.479
9	S99T001919	422.55	-1.4273	4907.5	.57748	30.992	54.301
10	S99T001919_D	420.30	-1.7008	4945.8	7.7344	36.580	59.992
11	S99T001920	418.81	-2.9741	4877.4	8.1345	33.357	57.218
12	S99T001920_D	422.96	-5.6396	4929.6	2.7334	27.738	55.434
13	CCV	5.1969	4.8831	4.9737	5.0815	5.0361	5.1939
14	CCB	.00273	-.00737	.00063	.00167	.01733	-.00927
15	S99T001922	421.64	-1.7825	4941.9	7.8404	30.193	43.479
16	S99T001922_D	423.55	.18342	4972.1	3.6779	34.359	45.963

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#	Sample Name	P	Pb	S	Sb	Se	Si
17	S99T001923	417.69	2.0850	4942.6	3.2618	29.910	53.001
18	S99T001923_D	422.67	2.4246	4918.9	4.0440	28.424	46.214
19	S99T001924	530.26	-3.4737	5227.5	7.5185	29.168	84.938
20	S99T001924_D	534.55	.84272	5231.2	4.3774	37.692	89.423
21	CCV	5.1192	4.8926	4.9252	5.0321	4.9728	5.1415
22	CCB	.00788	-.01003	-.00211	.00637	.01790	-.00452
23	S99T001921_L	447.65	-24.817	4899.8	-3.6847	111.38	96.230
24	S99T001921	413.77	-.53896	4877.9	3.2447	31.634	72.338
25	S99T001921_D	408.37	-.64450	4860.7	7.6242	24.779	69.374
26	S99T001921_A	1023.8	578.66	5467.9	605.35	641.81	714.57
27	S99T001921_X	461.21	17.119	4824.4	14.884	137.54	63.247
28	S99T001921_DX	430.24	-49.576	4843.8	49.599	91.948	59.509
29	S99T001921_AX	59959.	62471.	64495.	60032.	64183.	60468.
30	ICSA	-.02182	.05440	-.04000	.00568	-.05625	-.01876
31	ICSAB	-.01416	1.0044	-.04055	.00920	-.05585	-.01906
32	CCV	5.1195	4.8447	4.9240	5.0533	4.9663	5.1138
33	CCB	.00636	.00324	-.00824	.00670	.00526	-.01407

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.2049	5.0088	.37251	5.1621	4.8723	10.113
2	ICB	-.02081	-.00030	.02359	-.00017	.01444	-.08805
3	LLS	.18194	.01962	.02538	.01973	.42010	.39651
4	LLS	.19322	.01956	.03597	.02017	.40818	.45204
5	ICSA	-.02840	.00152	.11928	.00157	-.04899	.17393
6	ICSAB	-.03566	.00149	.11367	.00183	-.09394	.14120
7	S99T001918	-11.873	-.12934	4.5691	.09138	-.40919	-15.717
8	S99T001918_D	-13.708	-.14794	-3.5356	-.35975	.39113	-14.508
9	S99T001919	-13.177	-.16692	-4.7129	.05141	3.6954	-10.193
10	S99T001919_D	-7.9862	-.07558	3.9430	.08179	3.9108	9.8148
11	S99T001920	-11.970	-.14911	1.7157	-.42712	4.9378	-1.9616
12	S99T001920_D	-21.281	-.25781	.90226	-.34223	3.4578	-37.533
13	CCV	5.2771	5.0676	.38466	5.2455	4.9190	10.237
14	CCB	-.02651	-.00039	.00896	-.00022	-.00348	-.11641
15	S99T001922	-16.180	-.20281	4.8481	.00840	3.7091	-26.834
16	S99T001922_D	-17.726	-.25833	-7.8236	.04397	4.8622	-31.746
17	S99T001923	-19.190	-.27686	1.5725	-.08835	3.8264	-33.672
18	S99T001923_D	-18.124	-.25748	5.2609	.01481	-2.0065	-41.861
19	S99T001924	-16.853	-.22226	.23081	-.01456	1.9205	-18.140
20	S99T001924_D	-13.190	-.16718	4.4275	.00145	6.3236	-7.8274
21	CCV	5.1761	4.9557	.37505	5.1403	4.9539	10.075
22	CCB	-.02696	-.00036	.01354	-.00021	-.00373	-.10111
23	S99T001921_L	-52.665	-.91375	50.604	-1.0276	29.976	-212.57
24	S99T001921	-12.093	-.16507	6.7589	-.13924	-3.8035	-38.436
25	S99T001921_D	-11.046	-.18459	7.9712	-.13776	1.5224	-29.326
26	S99T001921_A	595.24	578.87	51.918	604.47	588.52	1173.7
27	S99T001921_X	-127.20	-2.0042	65.547	-2.9983	19.489	-539.23
28	S99T001921_DX	-158.73	-2.5517	96.681	-7.8631	33.528	-672.73
29	S99T001921_AX	65054.	64436.	4611.6	60223.	62882.	122230.
30	ICSA	-.03741	.00141	.12447	.00201	-.04196	-.13735
31	ICSAB	-.03891	.00149	.12328	.00172	-.03286	.14035
32	CCV	5.2457	5.0263	.40110	5.1724	4.9180	10.157
33	CCB	-.03415	-.00057	.01428	-.00019	.01283	-.15968

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0738	.01095	4.9506	5.1103
2	ICB	-.00356	-.00169	.00001	-.00408
3	LLS	.09569	-.00150	.02009	Q.01497
4	LLS	.09833	-.00042	.01964	.01595
5	ICSA	-.00853	.00912	-.00751	-.00740
6	ICSAB	.45884	.00835	.97745	-.00829
7	S99T001918	-.94151	-1.2217	.37049	-1.8339
8	S99T001918_D	-.74431	-1.1750	.59379	-1.4720
9	S99T001919	-.74412	-1.1768	.24926	-1.2667
10	S99T001919_D	-.21062	-.75998	.21122	-1.2025
11	S99T001920	-.71476	-1.0858	-.15918	-1.5048
12	S99T001920_D	-1.6017	-1.5432	.06658	-2.5026
13	CCV	5.1599	.01105	5.0215	5.1915
14	CCB	-.00416	-.00207	-.00030	-.00377
15	S99T001922	-1.3361	-1.2642	.51543	-2.2027
16	S99T001922_D	-1.3553	-1.4511	.16239	-1.5010
17	S99T001923	-1.8489	-1.6393	.43023	-2.4374
18	S99T001923_D	-1.9033	-1.5886	-.23219	-2.5855
19	S99T001924	-1.4141	-1.5042	.00581	-1.7528
20	S99T001924_D	-.73018	-1.2251	.45906	-1.7115
21	CCV	5.0874	.01206	4.9879	5.1161
22	CCB	-.00391	-.00192	-.00061	-.00352
23	S99T001921_L	-7.0092	-4.6343	5.1460	-10.872
24	S99T001921	-.72349	-1.0703	-.03212	-1.9739
25	S99T001921_D	-.80058	-1.1214	.43389	-2.1935
26	S99T001921_A	598.22	.16260	592.65	602.40
27	S99T001921_X	-21.316	-11.110	6.2251	-20.141
28	S99T001921_DX	-24.111	-13.416	7.6735	-27.156
29	S99T001921_AX	59696.	155.94	58976.	59812.
30	ICSA	-.01098	.00835	-.00812	-.00877
31	ICSAB	.46330	.00850	.98923	-.00861
32	CCV	5.0860	.01061	4.9575	5.1324
33	CCB	-.00618	-.00276	-.00083	-.00555

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LABCORE Data Entry Template for Worklist# 33353

Analyst: VLM Instrument: ICP02

Book#

84B48-A
81B48AMethod: LA-505-151(161) Rev/Mod C-5

Worklist Comment: ICP AZ-101 (SOLID ACID DIGEST)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPSTD TJ A		@ICP-A05	SOLID		
7	PREPBLK TJ A		@ICP-A05	SOLID		
8	SERDIL	S00T000804 0 A	@ICP-A05	SOLID		
9	SAMPLE	S00T000804 0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , EU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SN-A-01 , SR-A-01 , TA-A-01 , TE-A-01 , TH-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , W-A-01 , Y-A-01 , ZN-A-01 , ZR-A-01						
10	DUP	S00T000804 0 A	@ICP-A05	SOLID		
11	SPK-PREDIG	S00T000804 0 A	@ICP-A05	SOLID		
12	SPK-POST	S00T000804 0 A	@ICP-A05	SOLID		
13	CCV		@ICP-QC	QC		
14	CCB		@ICP-QC	QC		

Data Entry Comments:

*Uploaded And Validated by:**Sand M. Parang**05/02/2000*

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 33353

S Type	Sample#	R A	Test	Matrix	Group#	Project
15 SAMPLE	S00T000803	0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , EU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SN-A-01 , SR-A-01 , TA-A-01 , TE-A-01 , TH-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , W-A-01 , Y-A-01 , ZN-A-01 , ZR-A-01						
16 SAMPLE	S00T000805	0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , EU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SN-A-01 , SR-A-01 , TA-A-01 , TE-A-01 , TH-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , W-A-01 , Y-A-01 , ZN-A-01 , ZR-A-01						
17 CCV			@ICP-QC	QC		
18 CCB			@ICP-QC	QC		
19 ICSA			@ICP-QC	QC		
20 ICSAB			@ICP-QC	QC		

Final page for worklist # 33353

Sandh. Pang
for VLM *05/02/00*

Signature

Date

Signature

Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SDOT000 804

9/5/10

$$C_r = \frac{3.6827 \frac{\mu\text{g}}{\text{ml}}}{9.11 \frac{\text{g}}{\text{L}} \times \frac{1\text{L}}{1000\text{ml}}} = \frac{4.04}{\cancel{26.2} + 2 \frac{\mu\text{g}}{\text{g}}}$$

Spike prep dig:

$$C_r = \frac{\left(\frac{8.3366 \mu\text{g/ml}}{8.99 \text{ g/L} \left(\frac{1\text{L}}{1000\text{ml}} \right)} \right) - \left(\frac{3.6827 \mu\text{g/ml}}{9.11 \frac{\text{g}}{\text{L}} \times \frac{1\text{L}}{1000\text{ml}}} \right)}{5.0 \frac{\mu\text{g}}{\text{ml}} \times \frac{1}{8.99 \frac{\text{g}}{\text{L}} \times \frac{1\text{L}}{1000\text{ml}}}} \times 100 =$$

$$94.0$$

$$= \cancel{90.1\%} \quad 9/5/10$$

Post Spike:

$$Al = \frac{\left(\frac{1190.7}{50} \right) - \left(\frac{714.74}{50} \right)}{10} \times 100 = 96.8\%$$

$$Cd = \frac{\left(\frac{534.56}{50} \right) - \left(\frac{43.852}{50} \right)}{10} \times 100 = 98.1\%$$

$$Fe = \frac{\left(\frac{1019.6}{50} \right) - \left(\frac{543.40}{50} \right)}{10} \times 100 = 95.3\%$$

$$Na = \frac{\left(\frac{1677.0}{50} \right) - \left(\frac{1217.6}{50} \right)}{10} \times 100 = 91.9\%$$

$$Zr = \frac{\left(\frac{691.63}{50} \right) - \left(\frac{195.96}{50} \right)}{10} \times 100 = 99.1\%$$

$$Si = \frac{\left(\frac{510.54}{50} \right) - \left(\frac{6.529\text{f}}{50} \right)}{10} \times 100 = \cancel{10.8\%} \quad 101.0 \quad 9/5/10$$

HNF-1701 REV. 0

Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	BLANK	42400A	ICP2	04/24/00	08:13		X	IR
2	10 ppm std	42400A	ICP2	04/24/00	08:16		X	IR
3	10 ppm Eu	42400A	ICP2	04/24/00	08:20		X	IR
4	10 ppm Si	42400A	ICP2	04/24/00	08:22		X	IR
5	10 ppm Th	42400A	ICP2	04/24/00	08:24		X	IR
6	10 ppm Y	42400A	ICP2	04/24/00	08:26		X	IR
7	ICV SST5	42400A	ICP2	04/24/00	08:28	VLM	Q	CONC
8	ICV SST5 7 80 4/24/00	42400A	ICP2	04/24/00	08:33	VLM	Q	CONC
9	ICV1	42400A	ICP2	04/24/00	08:56	VLM	Q	CONC
10	ICV1A	42400A	ICP2	04/24/00	09:01	VLM	Q	CONC
11	ICB1	42400A	ICP2	04/24/00	09:32	VLM	Q	CONC
12	LLS1	42400A	ICP2	04/24/00	09:38	VLM	Q	CONC
13	LLS1A	42400A	ICP2	04/24/00	09:44	VLM	Q	CONC
14	ICSA	42400A	ICP2	04/24/00	09:48	VLM	Q	CONC
15	ICSAB	42400A	ICP2	04/24/00	09:58	VLM	Q	CONC
16	Prepstdtja	42400A	ICP2	04/24/00	10:02	VLM	S	CONC
17	Prepb1ktja	42400A	ICP2	04/24/00	10:07	VLM	Q	CONC
18	S00T000804_L	42400A	ICP2	04/24/00	10:10	VLM	S	CONC
19	S00T000804	42400A	ICP2	04/24/00	10:14	VLM	S	CONC
20	S00T000804_D	42400A	ICP2	04/24/00	10:18	VLM	S	CONC
21	S00T000804_S	42400A	ICP2	04/24/00	10:22	VLM	S	CONC
22	S00T000804_X	42400A	ICP2	04/24/00	10:26	VLM	S	CONC
23	S00T000804_DX 80 4/24/00	42400A	ICP2	04/24/00	10:29	VLM	S	CONC
24	S00T000804_AX	42400A	ICP2	04/24/00	10:34	VLM	S	CONC
25	S00T000804_AX1 804	42400A	ICP2	04/24/00	10:38	VLM	S	CONC
26	CCV SST5 80 4/24/00	42400A	ICP2	04/24/00	10:42	VLM	Q	CONC
27	CCV SST7	42400A	ICP2	04/24/00	10:46	VLM	Q	CONC
28	CCB1	42400A	ICP2	04/24/00	10:49	VLM	Q	CONC
29	S00T000803	42400A	ICP2	04/24/00	10:53	VLM	S	CONC
30	S00T000805	42400A	ICP2	04/24/00	10:56	VLM	S	CONC
31	ICSA	42400A	ICP2	04/24/00	11:00	VLM	Q	CONC
32	ICSAB	42400A	ICP2	04/24/00	11:04	VLM	Q	CONC
33	CCV	42400A	ICP2	04/24/00	11:08	VLM	Q	CONC
34	CCV1A	42400A	ICP2	04/24/00	11:12	VLM	Q	CONC
35	CCB1	42400A	ICP2	04/24/00	11:18	VLM	Q	CONC

*Assie Ding for
Sam Paung 6/21/00*

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 905 TO 910.

HNF-1701 REV. 0

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	BLANK	-.01439	.06313	-.01093	.00146	-.0008	.012
2	10 ppm std	6.67513	2.28026	4.94339	2.15713	24.1104	33.1674
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.8021	4.9288	5.0063	5.0249	4.8879	4.8540
8	ICV SST5	.01883	.13461	-.03990	.00186	.00016	-.00056
9	ICV1	4.7745	4.8693	4.9940	4.9936	4.8428	4.8274
10	ICV1A	.01884	.12779	-.05134	-.00185	.00024	-.00062
11	ICB1	-.00079	-.00261	.00838	.00000	.00006	-.00002
12	LLS1	.01992	.10188	.20558	.09386	.09724	.00981
13	LLS1A	-.00012	.00505	-.00264	-.00247	.00007	-.00006
14	ICSA	-.00519	246.91	.05088	.00279	.00023	-.00002
15	ICSAB	.93825	243.34	.05612	.00422	.44885	.45759
16	Prepstdtja	.88004	4.6351	4.1330	4.9600	4.3008	4.3673
17	Prepbktja	.00109	Q.12132	.00903	Q.50095	.00137	.00080
18	S00T000804_L	1.1574	717.55	.25753	.66365	4.2062	.06725
19	S00T000804	1.1611	689.81	.30309	.61985	4.0385	.06612
20	S00T000804_D	1.1620	683.55	.34014	.57260	4.0081	.06593
21	S00T000804_S	2.1644	530.43	4.3572	5.2498	8.2587	4.4769
22	S00T000804_X	1.2048	714.74	.81097	.33189	4.1965	.06574
23	S00T000804_D	1.1790	721.08	.76099	.42384	4.2318	.06681
24	S00T000804_AX	417.50	1198.7	495.93	496.54	500.57	490.32
25	S00T000408_AX1	3.5878	725.12	-9.7285	.84081	4.2002	.01753
26	CCV SST5	4.9047	4.9602	5.0556	5.0862	4.9704	4.9081
27	CCV SST7	.10799	.12523	-.09005	.00588	.00010	-.00056
28	CCB1	Q.04951	.01123	.01857	.00277	.00032	-.00006
29	S00T000803	1.3317	428.63	.13824	.58344	4.1692	.06697
30	S00T000805	1.2970	401.49	.15846	.36147	4.2132	.06692
31	ICSA	.01427	251.02	.04821	.00293	.00014	-.00002
32	ICSAB	.93724	242.48	.03478	.00562	.45003	.45051
33	CCV	4.8592	4.9456	5.0691	5.0859	4.9612	4.9053
34	CCV1A	.02403	.12151	-.09504	.00464	.00009	-.00052
35	CCB1	.00086	-.01036	.00167	-.00186	-.00007	-.00017

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	BLANK	.0096	-.03593	-.0032	.01006	.00426	.00706
2	10 ppm std	1.35306	12.6704	20.9097	2.55686	8.94206	13.6435
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9825	4.9305	4.9880	4.9896	5.0203	4.9719
8	ICV SST5	-.22075	.39491	.00116	.00154	-.00036	-.00019
9	ICV1	4.9324	4.8922	4.9673	4.9537	4.9924	4.9484
10	ICV1A	-.24846	.39339	.00046	.00255	.00141	.00073
11	ICB1	-.00879	.00662	.00077	-.00279	.00067	.00101
12	LLS1	.19977	.23044	.01018	.20929	.03910	.01994
13	LLS1A	-.00197	.01600	.00119	.00556	.00119	.00095
14	ICSA	-.02071	248.91	-.00671	.01025	-.00076	-.00270

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Analysis Report		Averages		04/24/00 02:58:19 PM			page 3
#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
15	ICSAB	.00746	248.16	.93284	.02678	.46580	.46999
16	Prepstdtja	3.9597	7.7980	4.1669	4.4197	4.2288	4.3095
17	Prepblktja	.00638	.03241	.00309	.00395	.00313	.00674
18	S00T000804_L	-.34424	17.932	43.340	4.7810	.29639	3.8771
19	S00T000804	.28939	17.165	41.303	4.5308	.28326	3.6827
20	S00T000804_D	.49036	17.147	41.288	4.5095	.30229	3.6804
21	S00T000804_S	4.7758	25.964	44.248	9.1588	4.7776	8.3366
22	S00T000804_X	.56691	18.381	43.852	5.1949	.24558	3.8791
23	S00T000804_D	.80248	18.518	43.507	4.5466	.33108	3.8261
24	S00T000804_AX	495.63	489.62	534.56	497.28	494.41	496.88
25	S00T000408_AX1	-20.954	54.572	42.970	5.1744	.38189	3.8637
26	CCV SST5	5.0099	4.9844	5.0389	5.0626	5.0483	5.0213
27	CCV SST7	-.23530	.39959	.00020	-.00275	.00000	.00062
28	CCB1	-.02824	.00401	.00191	.02237	-.00108	-.00006
29	S00T000803	.58032	18.928	42.141	4.6334	.30844	4.3500
30	S00T000805	.57807	19.233	43.411	4.6394	.31678	4.5507
31	ICSA	-.02158	248.21	-.00656	.01317	.00113	-.00266
32	ICSAB	-.03504	244.59	.91687	.01877	.46072	.46508
33	CCV	5.0048	4.9718	5.0261	5.0468	5.0362	5.0142
34	CCV1A	-.25388	.40291	.00044	-.00494	.00005	-.00012
35	CCB1	-.05727	.00454	-.00023	-.00968	-.00114	-.00104
#	Sample Name	Cu	Eu	Fe	K	La	Li
1	BLANK	.00273	.13366	-.00146	.00198	-.00206	.0412
2	10 ppm std	3.83146		13.4878	.12612	19.5706	6.87326
3	10 ppm Eu		20.7556				
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9778	Q.01101	5.0623	5.2374	5.0606	4.9278
8	ICV SST5	.01068	4.8745	-.00151	-.11886	-.01150	-.00039
9	ICV1	4.9331	.00996	5.0350	4.7611	5.0193	4.6583
10	ICV1A	.01044	4.8680	-.00084	.17563	-.01287	-.00039
11	ICB1	.00078	.00071	-.00003	-.09181	.00012	.00126
12	LLS1	.01870	-.00061	.10107	Q.14953	.10198	.02007
13	LLS1A	.00207	.09491	.00175	-.09821	.00105	.00000
14	ICSA	-.00402	.07664	98.837	-.02048	-.00372	.00310
15	ICSAB	.47472	.07678	98.367	.56382	-.00149	.88638
16	Prepstdtja	4.3569	4.3706	4.4104	4.1414	4.4476	4.2738
17	Prepblktja	.00472	-.00187	Q.06271	.28639	.00178	-.00194
18	S00T000804_L	1.5042	.07841	540.43	15.230	15.071	3.2356
19	S00T000804	1.4252	.07882	523.19	15.581	14.522	2.9976
20	S00T000804_D	1.4189	.07780	521.25	15.385	14.433	2.9005
21	S00T000804_S	5.9777	4.5765	477.30	21.250	18.446	8.0668
22	S00T000804_X	1.6046	.08074	543.40	8.2707	15.084	3.0771
23	S00T000804_D	1.5694	.04847	541.84	15.882	15.229	3.2821
24	S00T000804_AX	498.10	1.0664	1019.6	497.97	509.23	482.12
25	S00T000408_AX1	2.5385	495.76	535.06	24.267	13.735	3.2328
26	CCV SST5	5.0266	.01072	5.1061	4.6915	5.1236	4.8679
27	CCV SST7	.01163	4.9905	-.00115	-.05916	-.01270	-.00087
28	CCB1	.00078	-.00127	.00324	-.25601	.00419	-.00106
29	S00T000803	1.4969	.07585	561.73	20.568	13.142	3.9641

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Analysis Report

Averages

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#	Sample Name	Cu	Eu	Fe	K	La	Li
30	S00T000805	1.5001	.07129	580.87	16.834	13.113	3.7977
31	ICSA	-.00359	.08166	99.310	.14381	-.00415	.00154
32	ICSAB	.47494	.07989	97.074	.40646	-.00354	.90873
33	CCV	5.0289	.00951	5.0870	4.9283	5.1225	4.7566
34	CCV1A	.01024	4.9970	-.00053	-.16482	-.01319	-.00136
35	CCB1	.00017	-.00123	-.00005	-.11849	-.00150	-.00077

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	BLANK	.00266	.07586	.00026	-.21933	.00233	-.03886
2	10 ppm std	2.39566	37.7152	5.84219	1.76006	12.1484	9.82106
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9928	4.7113	4.9247	5.0930	5.0122	4.9427
8	ICV SST5	-.02003	.00043	.00094	-.02911	-.05762	.00308
9	ICV1	4.9363	4.6782	4.9117	4.8392	4.9786	4.9129
10	ICV1A	-.02532	.00042	.00219	.00062	-.05580	-.00002
11	ICB1	-.00096	.00027	-.00010	-.04626	.00396	.00229
12	LLS1	.20151	.01900	.10025	.18712	.20439	.04601
13	LLS1A	.00916	.00011	.00113	-.01555	.00574	-.00155
14	ICSA	255.11	-.00891	-.00757	183.70	.00909	-.01257
15	ICSAB	252.15	.42666	-.00946	177.40	.01417	.92521
16	Prepstdtja	4.3092	4.0952	4.4462	5.4035	4.4916	4.2120
17	Prepblktja	.01219	.00144	.00286	9.92473	.00791	.00402
18	S00T000804-L	3.8830	6.4363	.33233	1267.7	11.380	28.609
19	SQ0T000804	3.8840	6.1985	.33821	1152.2	10.891	27.412
20	S00T000804_D	3.8624	6.1858	.34798	1123.4	10.817	27.329
21	S00T000804_S	8.4585	10.302	5.0785	1336.2	15.469	30.827
22	S00T000804_X	4.6253	6.4609	.41466	1217.6	11.473	29.253
23	S00T000804_D	3.9797	6.4107	.38539	1294.9	11.542	28.852
24	S00T000804_AX	492.41	498.08	498.81	1677.0	507.76	518.09
25	S00T000408_AX1	1.8453	6.4182	.55020	1279.3	5.7965	28.906
26	CCV SST5	5.0197	4.7466	4.9874	4.9882	5.0869	5.0043
27	CCV SST7	-.03201	.00044	.00206	.01447	-.05700	.00233
28	CCB1	.02354	-.00046	.00028	.00706	.00077	.00184
29	S00T000803	4.1023	6.7571	.42977	1506.4	10.889	27.747
30	S00T000805	4.0314	6.9949	.42467	1378.3	10.942	28.637
31	ICSA	257.40	-.00950	-.00681	187.84	.00694	-.00125
32	ICSAB	249.75	.42028	-.00798	180.66	.01501	.91267
33	CCV	4.9890	4.7288	4.9807	4.9548	5.0848	4.9814
34	CCV1A	-.02455	.00028	.00125	.04352	-.05790	-.00015
35	CCB1	-.01259	-.00030	-.00163	.00238	-.00179	-.00302

#	Sample Name	P	Pb	S	Sb	Se	Si
1	BLANK	.29573	.04806	.02406	.00786	.30573	.17906
2	10 ppm std	5.53613	7.49126	7.97219	3.05826	2.95166	
3	10 ppm Eu						
4	10 ppm Si						5.8636
5	10 ppm Th						

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Analysis Report		Averages		04/24/00 02:58:19 PM			page 5
#	Sample Name	P	Pb	S	Sb	Se	Si
6	10 ppm Y						
7	ICV SST5	5.0700	4.8979	4.9848	4.9815	4.8919	5.1524
8	ICV SST5	.01303	.02508	.03419	.01031	.01639	-.00618
9	ICV1	5.0107	4.8890	4.9825	4.9432	4.8682	5.1141
10	ICV1A	.01608	.03265	.02052	.00010	-.00160	-.00933
11	ICB1	.02398	.01097	.00798	-.00451	.03212	.00239
12	LLS1	.42045	.20686	.19548	.10844	.21823	.10883
13	LLS1A	.01363	.02155	.00319	-.00323	.02328	.00340
14	ICSA	.01034	.07630	-.01871	.01339	.00335	-.00543
15	ICSAB	.01735	1.0565	-.03249	.00887	.01399	.04224
16	Prepstdtja	4.4913	4.1296	4.3238	4.3695	4.2579	5.3662
17	Prepblktja	.03128	.02764	Q.11087	.00418	.02802	Q.29468
18	S00T000804_L	5.5451	2.5399	372.26	-.02758	.91734	6.6037
19	S00T000804	5.0537	2.2919	360.87	.04528	.13986	6.3461
20	S00T000804_D	5.0325	2.3239	358.36	.08858	.16042	6.3091
21	S00T000804_S	9.3168	6.5937	431.28	4.6710	4.5299	12.772
22	S00T000804_X	5.5016	2.8739	372.43	.18602	1.9297	6.5298
23	S00T000804_D	6.0222	3.1966	372.24	-.02141	1.3533	6.2465
24	S00T000804_AX	503.46	496.11	861.65	501.10	495.75	510.54
25	S00T000408_AX1	7.0027	4.8608	367.90	.58756	2.7306	6.3330
26	CCV SST5	5.1102	4.9478	5.0495	5.0274	4.9944	5.1885
27	CCV SST7	.02474	.02207	-.00142	.01050	.03599	-.00920
28	CCB1	.00672	.00192	-.01348	.01684	.00328	-.00741
29	S00T000803	9.0100	2.4997	479.08	.07708	-.06740	8.5334
30	S00T000805	7.2698	2.5039	446.67	.01154	-.09409	7.8344
31	ICSA	-.00212	.05482	-.03405	.00708	-.01385	-.01078
32	ICSAB	.02261	1.0363	-.03087	.01268	.00577	.03989
33	CCV	5.1058	4.9504	5.0455	5.0414	4.9681	5.1707
34	CCV1A	.02548	.03149	.00965	-.00208	.04608	-.01238
35	CCB1	.00931	.00289	.00252	-.00788	.02602	-.00636

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	BLANK	.14073	.01919	.01373	.00273	-.01246	1.54073
2	10 ppm std	2.27633	19.8247		4.29279	2.65913	12.929
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th			3.23086			
6	10 ppm Y						
7	ICV SST5	5.0209	4.8674	Q-.07187	5.0241	4.8725	9.8633
8	ICV SST5	.00243	.00008	4.8909	.00145	.01192	.05158
9	ICV1	4.9577	4.8248	-.08063	4.9739	4.8646	9.7470
10	ICV1A	-.00491	.00001	4.8958	.00177	.00031	.04545
11	ICB1	.00663	.00013	.00049	.00108	-.00480	.02458
12	LLS1	.19378	.02001	-.00192	.02023	.41891	.46707
13	LLS1A	-.00234	.00000	.10444	.00117	.00714	-.00301
14	ICSA	-.00930	.00203	-.01456	.00207	-.01255	.35737
15	ICSAB	-.00782	.00199	-.00623	.00351	-.04605	.34207
16	Prepstdtja	4.4326	4.3551	4.2276	4.6158	4.1347	9.0452
17	Prepblktja	-.04019	.00061	.01102	.00286	.00702	-.15959
18	S00T000804-L	1.8482	3.1720	1.0538	.26421	.31618	35.564
19	S00T000804	1.8711	3.0639	1.0516	.24009	-.32033	34.164
20	S00T000804_D	1.8935	3.0408	1.0183	.24170	-.15138	33.883

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Analysis Report		Averages		04/24/00 02:58:19 PM		page 6	
#	Sample Name	Sm	Sr	Th	Ti	Tl	U
21	S00T000804_S	6.4999	7.7723	5.5321	5.0349	4.2955	44.632
22	S00T000804_X	1.8536	3.1644	1.3938	.30077	.96937	34.939
23	S00T000804_D	1.4630	3.1931	1.2104	.26122	-.29919	33.875
24	S00T000804_AX	495.68	497.09	-7.3992	493.43	489.76	1028.8
25	S00T000408_AX1	2.4764	3.1456	487.88	.39659	.03383	42.496
26	CCV SST5	5.0714	4.9242	-.07864	5.0760	4.9614	9.9753
27	CCV SST7	-.00544	.00001	4.9688	.00206	.02593	.02284
28	CCB1	-.02357	-.00026	.01816	.00023	.00964	-.09377
29	S00T000803	1.8552	3.5371	1.0498	.26539	-.09801	36.269
30	S00T000805	1.9208	3.5513	.99425	.26125	-.13126	36.544
31	ICSA	-.03156	.00199	-.00551	.00165	-.06325	.28309
32	ICSAB	-.01396	.00198	-.00969	.00349	-.05962	.33360
33	CCV	5.0730	4.9227	-.07904	5.0459	4.9462	9.9404
34	CCV1A	-.01301	-.00008	5.0149	.00177	.02146	-.00501
35	CCB1	-.01565	-.00022	-.00051	.00016	-.00818	-.07351

#	Sample Name	V	Y	Zn	Zr
1	BLANK	.07713	.04073	.04333	.02973
2	10 ppm std	6.02933		18.0215	2.96066
3	10 ppm Eu				
4	10 ppm Si				
5	10 ppm Th				
6	10 ppm Y		13.1721		
7	ICV SST5	5.0187	0.00525	4.9718	5.0287
8	ICV SST5	.00311	4.9308	-.00028	-.01089
9	ICV1	4.9926	.00524	4.9430	5.0015
10	ICV1A	.00333	4.9341	-.00021	-.01054
11	ICB1	.00119	.00004	.00080	.00130
12	LLS1	.09925	-.00040	.02067	.01960
13	LLS1A	-.00070	.01990	.00071	-.00031
14	ICSA	-.00540	.00594	-.00587	.00656
15	ICSAB	.46814	.00620	.99561	.00607
16	Prepstdtja	4.3736	4.3974	4.2327	4.6330
17	Prepbiktja	-.00483	-.00120	.00780	.00551
18	S00T000804_L	.06823	1.2655	.56265	196.89
19	S00T000804	.06901	1.2415	.52924	194.46
20	S00T000804_D	.06681	1.2365	.53002	193.73
21	S00T000804_S	4.6770	5.9106	5.2123	206.38
22	S00T000804_X	.05941	1.2569	.57188	195.96
23	S00T000804_D	-.02811	1.2396	.60883	196.09
24	S00T000804_AX	497.64	1.8017	496.64	691.63
25	S00T000408_AX1	.48760	496.02	.54707	192.85
26	CCV SST5	5.0757	.00510	5.0126	5.0680
27	CCV SST7	.00229	5.0056	-.00005	-.01156
28	CCB1	-.00416	-.00122	.00031	-.00399
29	S00T000803	.05218	1.3092	.56470	209.80
30	S00T000805	.06132	1.3321	.58416	209.83
31	ICSA	-.00990	.00485	-.00593	.00344
32	ICSAB	.46131	.00564	.98324	.00496
33	CCV	5.0723	.00501	5.0088	5.0546
34	CCV1A	.00099	5.0434	.00054	-.01475
35	CCB1	-.00335	-.00113	-.00013	-.00216

Valerie R Massie
04-24-00

LABCORE Data Entry Template for Worklist# 33384

Analyst: KRM Instrument: ICP02

Book#

83B48A
84B48AMethod: LA-505-151/161 Rev/Mod C-5

Worklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	SERDIL	S00T000778 0 D	@ICP-D05	LIQUID		
7	SAMPLE	S00T000778 0 D	@ICP-D05	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , EU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , PD-D-01 , PR-D-01 , RB-D-01 , RH-D-01 , RU-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SN-D-01 , SR-D-01 , TA-D-01 , TE-D-01 , TH-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , W-D-01 , Y-D-01 , ZN-D-01 , ZR-D-01					
8	DUP	S00T000778 0 D	@ICP-D05	LIQUID		
9	SPK-POST	S00T000778 0 D	@ICP-D05	LIQUID		
10	CCV		@ICP-QC	QC		
11	CCB		@ICP-QC	QC		
12	SAMPLE	S00T000781 0 D	@ICP-D05	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , EU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , PD-D-01 , PR-D-01 , RB-D-01 ,					

Data Entry Comments:

Uploaded & Validated by.Saul M. Pang05/02/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

04/27/00 15:17

ws2

Page: 2

LABCORE Data Entry Template for Worklist# 33384

S Type	Sample#	R A	Test	Matrix	Group#	Project
			RH-D-01	RU-D-01	S-D-01	SB-D-01 , SE-D-01 , SI-D-01 ,
			SM-D-01	SN-D-01	SR-D-01	TA-D-01 , TE-D-01 , TH-D-01 ,
			TI-D-01	TL-D-01	U-D-01	V-D-01 , W-D-01 , Y-D-01 ,
			ZN-D-01	ZR-D-01		

13 SAMPLE S00T000784 0 D @ICP-D05 LIQUID 99000438 AZ-101 (2)

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 ,
 BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 ,
 CR-D-01 , CU-D-01 , EU-D-01 , FE-D-01 , K-D-01 , LA-D-01 ,
 LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 ,
 NI-D-01 , P-D-01 , PB-D-01 , PD-D-01 , PR-D-01 , RB-D-01 ,
 RH-D-01 , RU-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,
 SM-D-01 , SN-D-01 , SR-D-01 , TA-D-01 , TE-D-01 , TH-D-01 ,
 TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , W-D-01 , Y-D-01 ,
 ZN-D-01 , ZR-D-01

14 ICSA @ICP-QC QC

15 ICSAB @ICP-QC QC

16 CCV @ICP-QC QC

17 CCB @ICP-QC QC

Final page for worklist # 33384

for KRM Salt M. Long 05/02/00

Signature

Date

Signature

Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	42100A	ICP2	04/21/00	22:12	KRM	Q	CONC
2	ICV1	42100A	ICP2	04/21/00	22:16	KRM	Q	CONC
3	ICB	42100A	ICP2	04/21/00	22:25	KRM	Q	CONC
4	ILS	42100A	ICP2	04/21/00	22:30	KRM	Q	CONC
5	ILS	42100A	ICP2	04/21/00	22:37	KRM	Q	CONC
6	ILS	42100A	ICP2	04/21/00	22:41	KRM	Q	CONC
7	ILS1	42100A	ICP2	04/21/00	22:45	KRM	Q	CONC
8	ICSA	42100A	ICP2	04/21/00	22:52	KRM	Q	CONC
9	ICSA	42100A	ICP2	04/21/00	22:57	KRM	Q	CONC
10	ICSA	42100A	ICP2	04/21/00	23:00	KRM	Q	CONC
11	S00T000778_L	42100A	ICP2	04/21/00	23:10	KRM	S	CONC
12	S00T000778	42100A	ICP2	04/21/00	23:13	KRM	S	CONC
13	S00T000778_D	42100A	ICP2	04/21/00	23:16	KRM	S	CONC
14	S00T000778_A	42100A	ICP2	04/21/00	23:21	KRM	S	CONC
15	S00T000778	42100A	ICP2	04/21/00	23:27	KRM	S	CONC
16	S00T000778_DX	42100A	ICP2	04/21/00	23:33	KRM	S	CONC
17	S00T000778_AX	42100A	ICP2	04/21/00	23:37	KRM	S	CONC
18	CCV	42100A	ICP2	04/22/00	00:56	KRM	Q	CONC
19	CCV1	42100A	ICP2	04/22/00	01:00	KRM	Q	CONC
20	CCB	42100A	ICP2	04/22/00	01:04	KRM	Q	CONC
21	S00T000781	42100A	ICP2	04/22/00	01:08	KRM	S	CONC
22	S00T000784	42100A	ICP2	04/22/00	01:12	KRM	S	CONC
23	ICSA	42100A	ICP2	04/22/00	01:16	KRM	Q	CONC
24	ICSA	42100A	ICP2	04/22/00	01:21	KRM	Q	CONC
25	CCV	42100A	ICP2	04/22/00	01:32	KRM	Q	CONC
26	CCV1	42100A	ICP2	04/22/00	01:35	KRM	Q	CONC
27	CCB	42100A	ICP2	04/22/00	01:46	KRM	Q	CONC

S00T000778:

Foot Spike:

$$Al = \frac{\left(\frac{8592.0}{401}\right) - \left(\frac{8257.1}{401}\right)}{1} \times 100 = 83.5\%$$

$$Si = \frac{\left(\frac{42037}{401}\right) - \left(\frac{189.96}{401}\right)}{10} \times 100 = 105.0\%$$

$$Na = \frac{\left(\frac{155160}{401}\right) - \left(\frac{114530}{401}\right)}{10} \times 100 = 101.0\%$$

$$K = \frac{\left(\frac{42760}{401}\right) - \left(\frac{5341.6}{401}\right)}{10} \times 100 = 93.3\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 913 TO 917.

HNF-1701 REV. 0

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.9171	5.0242	5.0988	5.1367	5.0638	4.9929
2	ICV1	.02031	.11906	-.15905	.00565	.00023	-.00038
3	ICB	.00165	.00326	.00389	.00377	.00009	.00000
4	LLS	.02613	.10959	.19887	.09988	.09984	.01800
5	LLS	.02468	.11269	.20028	.10031	.09880	.00987
6	LLS	.02231	.09502	.20042	.10157	.09930	.00993
7	LLS1	.00311	.00843	.00314	.00251	.00021	-.00002
8	ICSA	-.00046	248.33	.06376	.00633	.00025	-.00004
9	ICSA	.72084	2184.23	.17879	.01612	.34728	.34299
10	ICSA	.97062	251.23	.01405	.00365	.46952	.46875
11	S00T000778_L	10.732	8462.0	17.038	9.4668	.55865	.08778
12	S00T000778	9.8696	8257.1	13.080	9.9740	.53451	.26416
13	S00T000778_D	9.0946	8227.3	6.3985	10.605	.45541	.23917
14	S00T000778_A	369.75	8592.0	406.90	410.26	380.86	386.85
15	S00T000778	23.590	8388.9	41.236	16.436	1.2260	-.08907
16	S00T000778_DX	21.330	8327.0	41.697	16.443	1.2750	-.09381
17	S00T000778_AX	40542.	48740.	40863.	40491.	41014.	40653.
18	CCV	4.9776	5.1201	5.1884	5.2210	5.1807	5.0847
19	CCV1	.02102	.11333	-.13080	.01164	.00035	-.00045
20	CCB	.00188	.00757	.00154	.00252	.00015	-.00012
21	S00T000781	7.7367	7894.0	7.3881	10.354	.49297	.23041
22	S00T000784	8.2506	8049.1	4.9539	10.466	.17538	.21404
23	ICSA	-.00267	247.88	.05432	.00904	.00030	-.00004
24	ICSA	.96708	250.47	.05050	.00830	.47438	.47154
25	CCV	4.9104	4.9884	5.1480	5.1238	5.0757	4.9869
26	CCV1	.02225	.10581	-.13222	.00882	.00033	-.00053
27	CCB	.00292	.00495	.00720	.00283	.00021	-.00014

#	Sample Name	Bi	Ce	Cd	Ce	Co	Cr
1	ICV	5.0368	5.0562	5.1190	5.1103	5.1343	5.0864
2	ICV1	-.15920	.40809	.00176	.00609	.00161	.00073
3	ICB	-.01596	.00612	.00228	.01492	-.00111	-.00011
4	LLS	.17718	.22524	.01172	.21913	.04895	.02027
5	LLS	.20494	.21725	.01315	.23898	.04315	.02144
6	LLS	.18262	.23605	.01141	.21706	.03984	.02009
7	LLS1	-.00196	.03006	.00316	.02135	.00347	.00142
8	ICSA	-.02273	250.89	-.00341	.02506	.00026	-.00250
9	ICSA	.13215	2188.74	.71498	.05691	.24468	.23641
10	ICSA	-.03644	254.61	.95662	.02797	.47665	.47883
11	S00T000778_L	-48.733	42.522	7.1662	14.109	-3.5538	764.45
12	S00T000778	-1.4757	25.927	4.8795	5.6004	-.57490	752.92
13	S00T000778_D	-14.121	25.809	4.5620	5.1780	-1.1868	748.23
14	S00T000778_A	373.91	431.76	404.63	401.84	407.59	1150.0
15	S00T000778	12.265	88.222	12.218	58.098	-.86622	771.51
16	S00T000778_DX	-87.736	68.494	12.325	80.313	10.168	766.97
17	S00T000778_AX	40589.	39765.	40959.	40368.	40822.	41546.
18	CCV	5.1345	5.1134	5.1557	5.2384	5.1495	5.1307
19	CCV1	-.19347	.42831	.00237	.01011	.00010	.00103
20	CCB	-.04405	.00894	.00144	.01076	-.00038	-.00065
21	S00T000781	-2.1058	8.2269	5.1043	.47123	-.79600	725.51
22	S00T000784	-8.4958	2.3755	.95119	3.4883	.17280	738.51

HNF-1701 REV.0

Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
23	ICSA	-.03578	256.39	-.00495	.02939	-.00084	-.00223
24	ICSAB	-.04343	255.85	.96093	.02015	.47488	.47898
25	CCV	5.0021	5.1399	5.1388	5.1018	5.1094	5.0896
26	CCV1	-.18948	.42883	.00296	.01933	-.00165	.00008
27	CCB	-.00196	.01176	.00198	.01547	.00081	.00052

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.0808	.00952	5.1731	4.9182	5.1665	5.0210
2	ICV1	.01063	4.9827	.00002	.30580	-.00057	-.00018
3	ICB	-.00022	.00031	.00071	.13015	.00312	.00037
4	LLS	-.01852	-.00063	-.10292	-.31070	-.10459	-.02127
5	LLS	-.01847	-.00111	-.10339	-.33570	-.10523	-.02173
6	LLS	.01704	.00041	.10149	.38236	.10349	.02041
7	LLS1	.00167	.09604	.00164	.22747	.00396	.00075
8	ICSA	-.00257	.05502	98.743	.18641	-.00133	.00290
9	ICSA	-.35367	-.05365	974.242	-.17393	-.00148	-.60250
10	ICSAB	.49366	.05698	99.923	.19482	-.00076	.98310
11	S00T000778_L	-2.8667	-.63222	27.617	5051.9	5.9699	-.18825
12	S00T000778	-1.1807	-.04044	27.597	4550.7	5.4038	.60271
13	S00T000778_D	-1.1446	.03946	25.782	4629.1	4.4409	.67831
14	S00T000778_A	393.36	379.02	400.80	4596.1	395.06	368.57
15	S00T000778	3.7799	4.6417	30.553	5341.6	15.205	5.6562
16	S00T000778_DX	1.1892	6.1490	27.915	5967.3	17.293	6.7813
17	S00T000778_AX	40348.	78.799	40723.	42760.	40341.	40063.
18	CCV	5.1782	.00830	5.2456	4.9643	5.2940	5.0739
19	CCV1	.01012	4.9029	-.00123	.03326	-.00369	.00103
20	CCB	-.00071	.00131	.00050	.03379	.00283	.00112
21	S00T000781	-1.2571	.30281	26.279	3970.1	4.1927	1.8112
22	S00T000784	-1.6339	.12715	.00402	4145.7	1.1534	.71605
23	ICSA	-.00261	.04626	100.13	.34838	-.00168	.00337
24	ICSAB	.49181	.05064	100.59	-.22792	-.00280	.92261
25	CCV	5.0385	.00962	5.1826	4.6772	5.1535	4.8746
26	CCV1	.00922	4.8351	-.00033	.25770	-.00572	.00159
27	CCB	.00002	.00067	.00053	.48258	.00337	.00103

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0954	4.8155	5.0415	5.2519	5.1032	5.0782
2	ICV1	-.02391	.00046	.00377	.02783	-.05943	-.00593
3	ICB	.01003	.00010	-.00108	.00704	-.00115	-.00266
4	LLS	.21524	.01915	.10222	.21485	.20666	.03435
5	LLS	.23294	.01974	.10507	.20823	.20433	.04178
6	LLS	.20604	.01973	.10191	.16930	.19969	.03805
7	LLS1	.01926	.00014	.00389	-.01312	.00211	.00035
8	ICSA	254.43	-.00890	-.01069	184.47	.00333	-.00787
9	ICSA	2189.81	-.32595	-.05083	2134.84	-.06286	-.71133
10	ICSAB	256.80	.43771	-.01120	191.86	.00597	.94891
11	S00T000778_L	9.1620	.14242	96.745	118930.	-7.6985	-5.0409
12	S00T000778	10.232	.41520	97.486	109280.	.77579	4.0542
13	S00T000778_D	4.4803	.41657	97.730	110000.	.37565	1.3463
14	S00T000778_A	390.76	374.62	508.21	107000.	388.36	404.34

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Analysis Report

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
15	S00T000778	66.117	1.8983	107.32	114530.	8.7330	-7.5227
16	S00T000778 DX	97.783	3.1172	107.89	116890.	9.3051	-12.019
17	S00T000778 AX	40409.	40711.	40994.	155160.	40395.	40953.
18	CCV	5.1447	4.8583	5.0932	5.3259	5.2545	5.1275
19	CCV1	-.00410	.00097	.00210	-.01145	-.05954	-.00212
20	CCB	.00848	.00033	.00209	-.03461	-.00414	.00232
21	S00T000781	2.3095	.49513	95.205	101960.	-.25125	4.6750
22	S00T000784	5.6327	.05717	95.787	105390.	-2.0714	-3.0605
23	ICSA	255.55	-.00859	-.01105	180.63	.00444	-.01118
24	ICSAB	256.81	.43821	-.00866	182.68	.00236	.94549
25	CCV	5.0441	4.8304	5.0522	5.0430	5.1100	5.1053
26	CCV1	-.00374	.00094	.00077	.01542	-.05988	-.00249
27	CCB	.01671	.00034	.00159	-.00773	-.00187	.00165

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.1624	5.0094	5.0559	5.0534	5.0084	5.1390
2	ICV1	.01866	.01887	.01514	.01027	.00511	-.00631
3	ICB	.01552	-.00815	.03811	.00748	.02961	.00403
4	LLS	.42242	.21372	.21363	.18642	.21523	.13829
5	LLS	.43106	.22035	.20167	.11072	.24202	.18948
6	LLS	.42449	.20116	.19955	.11394	.22611	.11271
7	LLS1	.01188	.01889	.02014	.01949	.03154	.00845
8	ICSA	-.00556	.05558	-.02863	.01934	-.01399	-.00933
9	ICSAB	.02369	.069377	.13655	.06790	.08180	.03773
10	ICSAB	.00635	1.0474	-.03037	.01656	.00111	.03940
11	S00T000778 I	488.31	-12.666	5276.3	5.6160	37.556	156.97
12	S00T000778	466.56	6.9626	5233.9	10.521	25.541	104.33
13	S00T000778 D	461.95	1.3690	5205.5	5.3737	27.248	108.78
14	S00T000778 A	862.11	400.90	5607.3	417.02	449.17	657.62
15	S00T000778	543.50	73.906	5276.6	45.235	202.18	189.96
16	S00T000778 DX	554.50	67.131	5199.8	63.562	209.36	180.35
17	S00T000778 AX	41287.	40998.	45694.	40773.	41076.	42037.
18	CCV	5.2412	5.0423	5.1289	5.1407	5.1217	5.1663
19	CCV1	.03353	.02801	.03646	.01078	.07057	.00193
20	CCB	.03042	.00529	.02319	.00457	.04746	.00768
21	S00T000781	460.63	2.0427	5020.9	9.7611	42.531	86.474
22	S00T000784	462.82	-1.2962	5126.5	5.7860	43.157	81.062
23	ICSA	.02622	.06498	-.01718	.02634	.02590	.00243
24	ICSAB	.01680	1.0630	-.01587	.00700	.02746	.04027
25	CCV	5.1868	5.0402	5.0594	5.0607	5.0537	5.1197
26	CCV1	.03324	.02263	.03125	.01214	.07190	.00404
27	CCB	.02891	.00537	.01342	.00953	.05445	.00673

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.1177	4.9881	-.05955	5.1742	5.0070	10.085
2	ICV1	.00362	.00015	5.0513	.00157	.02405	.02483
3	ICB	.00450	.00006	.00832	-.00061	.00947	.01976
4	LLS	.20064	.02024	.00226	.01973	.45283	.46811
5	LLS	.21345	.02026	.00200	.01986	.43152	.54788
6	LLS	.20834	.02030	-.00372	.01968	.41392	.52840

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
7	LLS1	.00875	.00009	.10921	.00025	.01682	.02724
8	ICSA	-.01537	.00200	-.00126	.00034	-.02703	.21790
9	ICSAB	.00260	.00172	.00005	.00022	.00453	.20774
10	ICSAB	-.01183	.00208	-.00939	.00126	.01324	.23285
11	S00T000778_L	-5.3103	.20407	-1.8303	-.97041	38.115	-12.704
12	S00T000778	1.3714	.20047	-.33672	-.08118	12.311	34.785
13	S00T000778_D	1.5109	.21415	-.67327	-.21017	3.1609	34.207
14	S00T000778_A	392.23	389.25	399.44	400.22	405.67	831.40
15	S00T000778	63.138	.93170	9.4612	.65747	123.94	218.98
16	S00T000778_DX	96.350	1.3273	26.931	1.3325	166.32	377.37
17	S00T000778_AX	40204.	40468.	-511.69	40627.	40706.	80805.
18	CCV	5.2372	5.1109	-.06172	5.2348	5.0893	10.329
19	CCV1	.01312	.00035	5.0287	.00179	.02209	.07919
20	CCB	.01231	.00013	.00373	-.00030	.02145	.04294
21	S00T000781	3.9319	.40436	-3.8045	-.22561	6.3157	48.091
22	S00T000784	3.6923	.05134	-1.4885	-.21052	16.871	35.101
23	ICSA	-.00590	.00191	-.00249	.00130	-.01067	.23113
24	ICSAB	-.01515	.00207	-.01090	.00095	-.02444	.19908
25	CCV	5.0870	4.9655	-.06556	5.1105	5.0804	10.017
26	CCV1	.01863	.00038	5.0041	.00090	.01332	.09682
27	CCB	.00947	.00009	.00600	.00018	.03692	.02972

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.1346	.00588	5.0727	5.1439
2	ICV1	.00322	4.9959	.00052	-.00569
3	ICB	.00088	.00024	.00072	.00006
4	LLS	.10018	.00000	.02097	.01890
5	LLS	.10426	.00094	.02163	.02145
6	LLS	.10349	.00059	.02115	.02126
7	LLS1	.00156	.02074	.00156	-.00022
8	ICSA	-.00551	.00604	-.00572	.00457
9	ICSAB	.035632	.00497	.075667	.00219
10	ICSAB	.47967	.00634	1.0191	.00621
11	S00T000778_L	.59652	.00539	.04108	14.758
12	S00T000778	1.7846	.16970	-.01784	15.821
13	S00T000778_D	1.9295	.21095	-.15149	15.752
14	S00T000778_A	405.25	394.53	407.85	406.54
15	S00T000778	11.248	2.5719	2.7384	25.443
16	S00T000778_DX	17.543	4.3495	3.8725	27.760
17	S00T000778_AX	40760.	48.681	40899.	40711.
18	CCV	5.2052	.00562	5.1150	5.2383
19	CCV1	.00614	4.9388	.00127	-.00426
20	CCB	.00238	.00059	.00160	.00132
21	S00T000781	2.1531	.28704	-.25404	14.175
22	S00T000784	1.8959	.14907	-.55574	.68084
23	ICSA	-.00388	.00659	-.00554	.00702
24	ICSAB	.48039	.00610	1.0200	.00614
25	CCV	5.1386	.00622	5.0876	5.1442
26	CCV1	.00640	4.8835	.00154	-.00599
27	CCB	.00205	.00060	.00123	.00164

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FILE # 50600Q

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ws2

ICP 2

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LABCORE Data Entry Template for Worklist# 33387

Analyst: JK Set Instrument: ICP02Book# 840182Method: LA-505-451/161 Rev/Mod C-5Ensure dose rate at 30cm
is ≤ 50 mrem/hr prior to
performing this analysis

Worklist Comment: ICP AZ-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				ICP-QC	QC		
2	ICB				ICP-QC	QC		
3	ILS				ICP-QC	QC		
4	ICSA				ICP-QC	QC		
5	ICSAB				ICP-QC	QC		
6	PREPSTDITJA				ICP-A05	SOLID		
7	PREPBLKTJA				ICP-A05	SOLID		
8	SERDIL	S00T000809	0	A	ICP-A05	SOLID		
9	SAMPLE	S00T000809	0	A	ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested: AG-A-01, AL-A-01, AS-A-01, B-A-01, BA-A-01, BE-A-01, BI-A-01, CA-A-01, CD-A-01, CE-A-01, CO-A-01, CR-A-01, CU-A-01, EU-A-01, FE-A-01, K-A-01, LA-A-01, LI-A-01, MG-A-01, MN-A-01, MO-A-01, NA-A-01, ND-A-01, NI-A-01, P-A-01, PB-A-01, PD-A-01, PR-A-01, RB-A-01, RH-A-01, RU-A-01, S-A-01, SB-A-01, SE-A-01, SI-A-01, SM-A-01, SN-A-01, SR-A-01, TA-A-01, TE-A-01, TH-A-01, TI-A-01, TL-A-01, U-A-01, V-A-01, W-A-01, Y-A-01, ZN-A-01, ZR-A-01								
10	DUP	S00T000809	0	A	ICP-A05	SOLID		
11	SPK-POST	S00T000809	0	A	ICP-A05	SOLID		
12	SPK-POST	S00T000809	0	A	ICP-A05	SOLID		
13	CCV				ICP-QC	QC		
14	CCB				ICP-QC	QC		

Data Entry Comments:

Uploaded + Validated by:
Sail M. Pang
 05/04/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Data Entry Comments:

Both the digested duplicate and digested spike were not done with the digest. The duplicate was made from the sample and the spike (POST-1ppm) was made from the sample. JK 5-2-00

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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vs2

LABCORE Data Entry Template for Worklist# 33387

S Type	Sample#	R A	Test	Matrix	Group#	Project
15 SAMPLE	S00T000810	0 A	ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested:						
AG-A-01, AL-A-01, AS-A-01, B-A-01, BA-A-01, BE-A-01, BI-A-01, CA-A-01, CD-A-01, CE-A-01, CO-A-01, CR-A-01, CU-A-01, EU-A-01, FE-A-01, K-A-01, LA-A-01, LI-A-01, MG-A-01, MN-A-01, MO-A-01, NA-A-01, ND-A-01, NI-A-01, P-A-01, PB-A-01, PD-A-01, PR-A-01, RB-A-01, RH-A-01, RU-A-01, S-A-01, SB-A-01, SE-A-01, SI-A-01, SM-A-01, SN-A-01, SR-A-01, TA-A-01, TE-A-01, TH-A-01, TI-A-01, TL-A-01, U-A-01, V-A-01, W-A-01, Y-A-01, ZN-A-01, ZR-A-01						
16 SAMPLE	S00T000811	0 A	ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested:						
AG-A-01, AL-A-01, AS-A-01, B-A-01, BA-A-01, BE-A-01, BI-A-01, CA-A-01, CD-A-01, CE-A-01, CO-A-01, CR-A-01, CU-A-01, EU-A-01, FE-A-01, K-A-01, LA-A-01, LI-A-01, MG-A-01, MN-A-01, MO-A-01, NA-A-01, ND-A-01, NI-A-01, P-A-01, PB-A-01, PD-A-01, PR-A-01, RB-A-01, RH-A-01, RU-A-01, S-A-01, SB-A-01, SE-A-01, SI-A-01, SM-A-01, SN-A-01, SR-A-01, TA-A-01, TE-A-01, TH-A-01, TI-A-01, TL-A-01, U-A-01, V-A-01, W-A-01, Y-A-01, ZN-A-01, ZR-A-01						
17 ICSA			ICP-QC	QC		
18 ICSAB			ICP-QC	QC		
19 CCV			ICP-QC	QC		
CCU	10/14/00					
20 CCB			ICP-QC	QC		

Final page for worklist # 33387

JK *[Signature]* 05-01-00

Signature	Date
Prep JTK	Direct, JF 1
Prep JTK	Direct, JF 1
S00T000809_L	2-8-1-8, JF 25
S00T000809	2-8, 5
S00T000809_5	2-8, 5
S00T000809_K	2-8, 5
S00T000809_JK	2-8-1-9, 50

Signature	Date
S00T000809_EX	2-8-1-9, JF 50
S00T000810	2-8, JF 5
S00T000811	2-8, JF 5

Data Entry Comments:

Both the digested duplicate and digested spike were not done with the digest. The duplicate was made from the sample and the spike (post-1 ppm) was made from the sample. JK 5-1-00

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

$$Cr = 4.7653 \frac{\mu g}{ml} \times \frac{1}{7.86 \frac{g}{L} \times \frac{1L}{1000ml}} = 6.06 \pm 2 \frac{\mu g}{g}$$

Pre-dig Spk:

$$Cr = \frac{\left(\frac{9.6366 \mu g/ml}{7.86 \frac{g}{L} \times \frac{1L}{1000ml}} \right) - \left(\frac{4.7653 \mu g/ml}{7.86 \frac{g}{L} \times \frac{1L}{1000ml}} \right)}{\frac{5.0 \mu g/ml}{7.86 \frac{g}{L} \times \frac{1L}{1000ml}}} \times 100 = 97.4\%$$

Post Spike:

$$Al = \frac{\left(\frac{945.34}{50} \right) - \left(\frac{469.99}{50} \right)}{10} \times 100 = 95.1$$

sp 5/3/2000

$$Fe = \frac{\left(\frac{1080.9}{50} \right) - \left(\frac{639.37}{50} \right)}{10} \times 100 = 88.3\%$$

$$K = \frac{\left(\frac{499.31}{50} \right) - \left(\frac{37.959}{50} \right)}{10} \times 100 = 92.3\%$$

$$Na = \frac{\left(\frac{1234.2}{50} \right) - \left(\frac{771.63}{50} \right)}{10} \times 100 = 92.5$$

$$Zr = \frac{\left(\frac{736.71}{50} \right) - \left(\frac{223.39}{50} \right)}{10} \times 100 = 103.0\%$$

$$Ag = \frac{\left(\frac{430.74}{50} \right) - \left(\frac{1.3448}{50} \right)}{10} \times 100 = 85.9\%$$

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	BLANK	50200A	ICP2	05/02/00	08:30		X	IR
2	10 ppm std	50200A	ICP2	05/02/00	08:33		X	IR
3	10 ppm Eu	50200A	ICP2	05/02/00	08:36		X	IR
4	10 ppm Si	50200A	ICP2	05/02/00	08:37		X	IR
5	10 ppm Th	50200A	ICP2	05/02/00	08:39		X	IR
6	10 ppm Y	50200A	ICP2	05/02/00	08:41		X	IR
7	ICV SST5	50200A	ICP2	05/02/00	08:57	DKS	Q	CONC
8	ICV1	50200A	ICP2	05/02/00	09:00	DKS	Q	CONC
9	ICV	50200A	ICP2	05/02/00	09:03	DKS	Q	CONC
10	ICV1	50200A	ICP2	05/02/00	09:07	DKS	Q	CONC
11	ICB	50200A	ICP2	05/02/00	09:12	DKS	Q	CONC
12	LLS	50200A	ICP2	05/02/00	09:16	DKS	Q	CONC
13	LLS1	50200A	ICP2	05/02/00	09:20	DKS	Q	CONC
14	ICSA	50200A	ICP2	05/02/00	09:22	DKS	Q	CONC
15	ICSAB	50200A	ICP2	05/02/00	09:26	DKS	Q	CONC
16	PREPSTDJJA	50200A	ICP2	05/02/00	09:29	DKS	Q	CONC
17	PREPBLKTJA	50200A	ICP2	05/02/00	09:33	DKS	Q	CONC
18	S00T000809_L	50200A	ICP2	05/02/00	09:36	DKS	S	CONC
19	S00T000809	50200A	ICP2	05/02/00	09:40	DKS	S	CONC
20	S00T000809_D	50200A	ICP2	05/02/00	09:43	DKS	S	CONC
21	S00T000809_S	50200A	ICP2	05/02/00	09:47	DKS	S	CONC
22	S00T000809_X	50200A	ICP2	05/02/00	09:52	DKS	S	CONC
23	S00T000809_DX	50200A	ICP2	05/02/00	09:55	DKS	S	CONC
24	S00T000809_AX	50200A	ICP2	05/02/00	10:05	DKS	S	CONC
25	CCV	50200A	ICP2	05/02/00	11:19	DKS	Q	CONC
26	CCV1	50200A	ICP2	05/02/00	11:22	DKS	Q	CONC
27	CCB	50200A	ICP2	05/02/00	11:26	DKS	Q	CONC
28	S00T000810	50200A	ICP2	05/02/00	11:29	DKS	S	CONC
29	S00T000811	50200A	ICP2	05/02/00	11:32	DKS	S	CONC
30	ICSA	50200A	ICP2	05/02/00	11:36	DKS	Q	CONC
31	ICSAB	50200A	ICP2	05/02/00	11:39	DKS	Q	CONC
32	CCV	50200A	ICP2	05/02/00	11:42	DKS	Q	CONC
33	CCV1	50200A	ICP2	05/02/00	11:45	DKS	Q	CONC
34	CCB	50200A	ICP2	05/02/00	11:49	DKS	Q	CONC

 05-02-00 GZ-101
 S00T000809
 S00T000810
 S00T000811

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 921 TO 924.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	BLANK	-.01293	.0754	-.00019	.00013	-.00033	.01379
2	10 ppm std	6.61653	2.35139	4.79279	2.21433	25.2072	33.3302
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.8405	4.9570	5.0680	5.0183	4.8761	4.8583
8	ICV1	.01412	.10460	-.11909	.00934	-.00010	-.00052
9	ICV	4.8719	4.9750	5.1092	5.0384	4.9129	4.8998
10	ICV1	.01659	.10968	-.09363	.00723	.00006	-.00058
11	ICB	-.00310	-.02108	-.01028	.00481	-.00013	-.00017
12	LLS	.01967	.08475	.16965	.10162	.09478	.00950
13	LLS1	-.00142	-.00823	-.01762	.00271	-.00005	-.00012
14	ICSA	-.00507	245.25	.04052	.00893	-.00003	-.00007
15	ICSAB	.94444	245.46	.07683	.01365	.44854	.45387
16	PREPSTD TJJA	.89385	4.9883	4.2847	Q7.0030	4.2780	4.4314
17	PREPBLK TJJA	-.00197	Q.36928	-.01277	Q2.6795	.00720	.00194
18	S00T000809_L	1.4391	463.80	.05732	1.9932	4.9976	.07923
19	S00T000809	1.4159	451.06	.19727	1.7214	4.8606	.07996
20	S00T000809_D	1.4445	456.05	.14433	1.7976	4.9433	.08127
21	S00T000809_S	5.8959	458.30	5.1470	6.5045	9.4538	4.6890
22	S00T000809_X	1.3448	469.99	-.40354	2.0096	5.0472	.08017
23	S00T000809_DX	1.3713	470.54	-.63714	1.9937	5.0459	.08024
24	S00T000809_AX	430.74	945.34	477.25	527.19	478.37	471.77
25	CCV	4.7645	4.8219	4.9789	4.8914	4.7403	4.7367
26	CCV1	.01292	.09029	-.09429	.00694	-.00011	-.00060
27	CCB	-.00158	-.01566	-.01463	.00362	-.00001	-.00008
28	S00T000810	1.3978	396.81	.11469	2.4039	4.8446	.07522
29	S00T000811	1.5578	528.90	.25355	3.2971	5.4229	.08096
30	ICSA	-.00469	243.06	.06895	.00630	.00002	.00000
31	ICSAB	.94103	244.52	.04084	.01116	.44398	.44755
32	CCV	4.8557	4.9342	5.0626	5.0131	4.8846	4.8513
33	CCV1	.01630	.10053	-.13186	.00572	-.00001	-.00059
34	CCB	-.00181	-.01765	-.01536	.00602	-.00006	-.00009

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	BLANK	.00833	-.04166	-.0002	.01146	.0054	.00813
2	10 ppm std	1.33713	11.3507	19.9031	2.65293	8.6538	13.1897
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9733	5.1613	4.9865	4.9978	4.9775	4.9951
8	ICV1	-.15449	.43289	-.00093	-.01888	-.00138	-.00018
9	ICV	4.9896	5.2182	5.0322	5.0379	5.0157	5.0413
10	ICV1	-.19484	.43804	-.00025	-.00530	.00132	.00027
11	ICB	-.02774	.01272	-.00078	-.01098	.00069	.00085
12	LLS	.16786	.21031	.00954	.20355	.04025	.02120
13	LLS1	-.00845	.02018	-.00086	-.00216	-.00069	-.00001
14	ICSA	-.01764	257.90	-.00781	.00849	-.00108	-.00324
15	ICSAB	-.05930	261.33	.92834	.00302	.46238	.46933

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
16	PREPSTD TJ A	4.1695	Q8.4352	4.2866	4.3864	4.2801	4.3895
17	PREPB LK TJ A	-.00337	Q.10204	Q.01093	-.00407	.00465	Q.02137
18	S00T000809_L	.60125	17.088	56.793	6.8977	.38964	5.0041
19	S00T000809	.66889	16.124	53.435	6.4680	.36260	4.7653
20	S00T000809_D	.53430	16.252	54.256	6.6238	.35098	4.8224
21	S00T000809_S	5.0472	21.806	59.140	11.257	5.1595	9.6366
22	S00T000809_X	-.96822	16.991	57.149	6.7183	.38009	4.9656
23	S00T000809_DX	-1.0120	16.813	56.824	6.3437	.32224	4.9627
24	S00T000809_AX	464.31	543.14	535.55	477.97	525.55	487.46
25	CCV	4.8733	5.1191	4.9120	4.8554	4.8872	4.9215
26	CCV1	-.18761	.41997	-.00203	-.01802	-.00066	-.00051
27	CCB	-.00482	.00663	-.00081	.00629	-.00059	-.00005
28	S00T000810	.47450	15.043	51.920	6.4326	.33052	4.7209
29	S00T000811	.57376	17.789	58.807	7.1150	.37735	4.6591
30	ICSA	-.02536	258.54	-.00648	.01306	-.00092	-.00294
31	ICSAB	-.06676	258.35	.91540	.01158	.45422	.46275
32	CCV	4.9434	5.2160	4.9866	5.0001	4.9738	5.0064
33	CCV1	-.17102	.44225	-.00015	-.00770	.00021	-.00012
34	CCB	.00308	.00588	-.00115	-.00753	.00052	.00089

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	BLANK	.00419	.1216	.00086	.00006	.00293	.03853
2	10 ppm std	4.0454		13.2791	.13259	20.6233	7.44886
3	10 ppm Eu		21.7659				
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9399	.00833	5.0533	5.1605	5.0367	5.0468
8	ICV1	.00819	4.8988	-.00270	-.01461	-.00558	-.00152
9	ICV	4.9512	.00994	5.0994	4.9437	5.0579	4.9559
10	ICV1	.00866	4.8555	-.00166	.10436	-.00365	-.00036
11	ICB	-.00044	-.00015	-.00047	-.04499	-.00320	-.00134
12	LLS	.01924	-.00038	.09825	Q.70578	.09778	.01994
13	LLS1	-.00067	.09427	-.00059	.15282	-.00124	-.00080
14	ICSA	-.00329	.03004	96.949	.22564	-.00620	.00161
15	ICSAB	.47146	.02757	97.405	.24956	-.00621	.92645
16	PREPSTD TJ A	4.3202	4.3469	4.5933	4.2580	4.4041	4.2533
17	PREPB LK TJ A	.00859	.00018	Q.24964	.13099	.00520	.00306
18	S00T000809_L	1.8168	.17514	636.24	33.950	28.590	4.7975
19	S00T000809	1.7927	.14052	611.92	22.634	27.800	4.6789
20	S00T000809_D	1.8088	.13963	621.71	22.051	28.259	4.5389
21	S00T000809_S	6.4216	4.5701	625.64	26.341	32.717	8.9656
22	S00T000809_X	1.7890	.17766	639.37	37.959	28.926	5.0089
23	S00T000809_DX	1.7924	.15911	637.21	26.872	28.896	5.0494
24	S00T000809_AX	520.72	460.76	1080.9	499.31	496.23	486.06
25	CCV	4.7926	.00861	4.9608	4.7795	4.8892	4.8423
26	CCV1	.00665	4.6676	-.00313	.00341	-.00504	.00008
27	CCB	-.00150	.00065	-.00107	.06994	-.00079	.00026
28	S00T000810	1.7728	.14242	603.10	23.469	27.312	5.3290
29	S00T000811	2.0063	.15252	680.08	20.750	30.699	5.2131
30	ICSA	-.00332	.02616	96.328	.22957	-.00528	.00242
31	ICSAB	.46878	.02982	96.315	.17648	-.00514	.96658

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#	Sample Name	Cu	Bu	Fe	K	La	Li
32	CCV	4.9263	.00919	5.0324	4.7716	5.0207	5.0840
33	CCV1	.00879	4.9166	-.00192	.08635	-.00191	-.00188
34	CCB	-.00091	-.00073	-.00079	.05092	-.00117	-.00098

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	BLANK	.00833	.07086	.00173	-.2008	.0096	-.037
2	10 ppm std	2.39993	36.3732	5.70626	1.90066	12.7003	9.40566
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	5.0413	4.7647	4.8990	5.2486	5.0010	4.9115
8	ICV1	-.06687	.00033	-.00221	.01555	-.06068	-.00227
9	ICV	5.0677	4.8076	4.9391	5.1085	5.0242	4.9609
10	ICV1	-.03996	.00050	-.00021	-.00513	-.05767	-.00031
11	ICB	-.01861	-.00017	-.00165	.01403	.00084	-.00621
12	LLS	.20097	.01880	.09671	.21317	.19814	.03140
13	LLS1	-.00703	-.00002	-.00152	.01337	-.00213	-.00048
14	ICSA	253.04	-.00884	-.01365	183.53	-.00171	-.01182
15	ICSAB	253.05	.43040	-.01227	182.41	.00051	.90749
16	PREPSTD TJ A	4.4105	4.1932	4.4452	Q9.5038	4.4381	4.2608
17	PREPBK TJ A	-.00167	.00560	.00100	Q4.2086	.00292	.01635
18	S00T000809_I	5.0788	8.3826	.38871	744.89	17.362	41.073
19	S00T000809	5.0120	8.0216	.37171	715.04	16.895	38.858
20	S00T000809_D	5.1257	8.1601	.35698	696.73	17.143	39.351
21	S00T000809_S	9.7809	12.718	5.1399	701.15	21.636	44.075
22	S00T000809_X	4.7498	8.4341	.26908	771.63	17.395	41.461
23	S00T000809_DX	4.8223	8.3947	.18694	784.76	17.421	41.289
24	S00T000809_AX	483.18	491.70	527.71	1234.2	483.26	517.41
25	CCV	4.9093	4.6611	4.8205	4.9693	4.8518	4.8407
26	CCV1	-.06618	.00062	-.00159	-.05185	-.06274	-.01064
27	CCB	-.00288	.00015	-.00091	-.04291	-.00161	-.00828
28	S00T000810	4.9527	7.9202	.35891	724.85	16.767	37.890
29	S00T000811	5.5834	8.8183	.32659	755.97	18.690	42.255
30	ICSA	251.33	-.00845	-.01071	181.39	-.00233	-.01430
31	ICSAB	251.53	.42527	-.01191	187.97	-.00044	.89137
32	CCV	5.0061	4.7514	4.8977	5.1646	4.9815	4.9199
33	CCV1	-.04958	.00001	-.00259	.03464	-.06017	-.00762
34	CCB	-.01970	-.00022	-.00153	.02262	-.00129	-.00508

#	Sample Name	P	Pb	S	Sb	Se	Si
1	BLANK	.29193	.06566	.02146	.00846	.30379	.1632
2	10 ppm std	5.4158	7.08113	8.34119	3.065	2.911	
3	10 ppm Eu						
4	10 ppm Si						5.84653
5	10 ppm Th						
6	10 ppm Y						
7	ICV SST5	4.9750	4.9260	4.7289	4.9281	4.8768	5.0774
8	ICV1	.01114	-.00342	.04622	-.00723	-.00979	-.00829
9	ICV	5.0164	4.9442	4.7642	4.9443	4.9347	5.1056

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#	Sample Name	P	Pb	S	Sb	Se	Si
10	ICV1	.01308	.00402	.03178	.00124	.00919	-.00442
11	ICB	-.00259	-.00689	.01558	.00469	-.01503	.00077
12	LLS	.39612	.20040	.18761	.10595	.19392	.11112
13	LLS1	.01629	-.01154	.00517	.00411	-.01966	.00712
14	ICSA	-.00669	.04581	-.01544	-.00326	-.04407	-.00612
15	ICSAB	-.00327	1.0189	-.03029	.02216	-.02067	.04391
16	PREPSTD TJ A	4.4811	4.2888	4.1138	4.3281	4.3168	10.081
17	PREPBLKTJA	.03757	.04652	Q.05886	.01393	.01505	Q5.0578
18	S00T000809_L	1.2629	2.5350	76.670	.08396	.36581	14.399
19	S00T000809	.87783	2.3999	74.498	.01250	-.19590	12.880
20	S00T000809_D	.94754	2.3443	75.735	.00437	-.19397	12.986
21	S00T000809_S	5.8168	7.2309	79.930	4.7696	4.6636	17.967
22	S00T000809_X	1.7259	1.2724	77.573	.47249	1.2236	15.426
23	S00T000809_DX	1.6657	1.8980	77.105	.24450	1.0055	15.557
24	S00T000809_AX	526.10	489.47	573.99	524.83	480.32	555.77
25	CCV	4.9068	4.8634	4.6260	4.8224	4.8149	4.9855
26	CCV1	.02056	-.00083	.02107	-.00791	.03085	-.00108
27	CCB	.01384	-.00742	-.00685	.00669	.01799	.00636
28	S00T000810	.81911	2.1827	58.283	-.00203	-.24659	11.162
29	S00T000811	.83719	3.0519	84.255	-.01640	-.27506	14.765
30	ICSA	-.00583	.04059	-.03791	.01663	.00311	-.00236
31	ICSAB	.00595	1.0035	-.02917	-.00385	-.02730	.04123
32	CCV	5.0136	4.9230	4.7307	4.9012	4.9243	5.0840
33	CCV1	.02088	.00311	.01661	.00116	-.00605	-.01054
34	CCB	.01304	-.01975	.00785	.00555	-.00113	.00104

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	BLANK	.12739	.01759	.01866	.00333	-.00939	1.40579
2	10 ppm std	2.4314	20.5237		4.41166	2.51979	13.6506
3	10 ppm Eu						
4	10 ppm Si						
5	10 ppm Th			3.20093			
6	10 ppm Y						
7	ICV SST5	4.9956	4.9187	-.04381	4.9763	4.9485	9.7888
8	ICV1	-.00015	.00004	4.9425	.00076	-.00805	.00333
9	ICV	5.0091	4.9380	-.03776	5.0133	5.0091	9.8359
10	ICV1	.00582	.00014	4.9163	.00156	.00574	.03550
11	ICB	-.00131	-.00009	-.01031	-.00018	.00595	-.02260
12	LLS	.18591	.01952	-.00600	.01966	.40125	.46171
13	LLS1	-.00320	-.00003	.09452	-.00024	-.00630	-.01612
14	ICSA	-.02565	.00150	-.01288	.00033	-.00132	.06207
15	ICSAB	-.01718	.00147	-.01193	.00079	.00337	.07598
16	PREPSTD TJ A	4.3755	4.3648	4.3337	4.6351	4.2202	8.8875
17	PREPBLKTJA	-.02084	.00289	.00066	.00605	-.00335	-.07502
18	S00T000809_L	3.0367	2.6575	2.2362	.28652	.35158	48.756
19	S00T000809	2.5478	2.5909	2.1941	.27798	.09184	46.004
20	S00T000809_D	2.5692	2.6325	2.1888	.27387	.08997	46.680
21	S00T000809_S	7.2823	7.2314	6.7886	5.0152	4.7279	55.532
22	S00T000809_X	3.1101	2.6924	1.9515	.25117	.26981	49.457
23	S00T000809_DX	3.1142	2.6924	1.9968	.26660	-1.0033	49.209
24	S00T000809_AX	471.85	478.19	460.43	517.95	485.04	1078.2
25	CCV	4.8469	4.7785	-.04343	4.8616	4.8860	9.5133

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
26	CCV1	.01124	.00020	4.7408	.00043	-.00558	.07061
27	CCB	.00843	.00009	-.00784	-.00018	.00154	.03603
28	S00T000810	2.5032	2.4887	2.2373	.26691	.06851	45.668
29	S00T000811	2.7821	2.9119	2.4139	.29547	.05789	51.047
30	ICSA	-.01587	.00147	-.00590	.00036	.00752	.07911
31	ICSAB	-.01160	.00151	-.00926	.00066	-.00069	.08257
32	CCV	4.9850	4.9052	-.05264	4.9944	4.9423	9.7913
33	CCV1	-.00844	-.00007	4.9531	.00111	-.02087	-.03474
34	CCB	-.00840	-.00015	-.00494	-.00016	.01020	-.03563

#	Sample Name	V	Y	Zn	Zr
1	BLANK	.07013	.03693	.04353	.02759
2	10 ppm std	6.04013		17.5901	3.02953
3	10 ppm Eu				
4	10 ppm Si				
5	10 ppm Th				
6	10 ppm Y		13.7615		
7	ICV SST5	4.9868	.00516	4.9292	4.9878
8	ICV1	.00212	4.8785	.00018	-.01099
9	ICV	5.0230	.00534	4.9707	5.0193
10	ICV1	.00426	4.8185	-.00030	-.01161
11	ICB	-.00094	-.00037	.00018	.00034
12	ILS	.09695	-.00034	.01936	.01855
13	ILS1	-.00076	.01938	.00016	-.00040
14	ICSA	-.00689	.00536	-.00594	.00493
15	ICSAB	.46160	.00569	.98594	.00585
16	PREPSTD TJ A	4.3677	4.3292	4.3808	4.6292
17	PREPBLK TJ A	-.00162	.00105	Q.01197	Q.04509
18	S00T000809 L	.16986	1.5264	.78500	222.55
19	S00T000809	.09067	1.4768	.72622	219.60
20	S00T000809 D	.08128	1.4979	.73826	223.84
21	S00T000809 S	4.8884	6.0368	5.5046	227.57
22	S00T000809 X	.16565	1.5407	.81497	223.39
23	S00T000809 DX	.16107	1.5335	.78152	222.71
24	S00T000809 AX	524.84	460.67	530.26	736.71
25	CCV	4.8885	.00542	4.8723	4.8491
26	CCV1	.00441	4.6563	.00037	-.01134
27	CCB	.00108	.00008	.00120	.00099
28	S00T000810	.07392	1.4643	.71724	221.64
29	S00T000811	.08010	1.6208	.78549	243.26
30	ICSA	-.00527	.00564	-.00584	.00530
31	ICSAB	.45735	.00574	.97846	.00519
32	CCV	4.9932	.00526	4.9526	4.9565
33	CCV1	.00048	4.8719	-.00009	-.01448
34	CCB	-.00183	-.00051	.00053	-.00159

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LABCORE Completed Worklist Report for Worklist# 33397

Analyst: dks

Instrument: ICP02

Book#: _____

Method: LA-505-151/161 Rev/Mod C-5

Worklist Comment: ICP AZ-101 (FUSION)

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	ICV	0	0	0	ICP-QC	AG	QC	5.0	4.83e+00	95.600 % Recovery
1	ICV	0	0	0	ICP-QC	AL	QC	5.0	4.91e+00	98.200 % Recovery
1	ICV	0	0	0	ICP-QC	AS	QC	5.0	5.06e+00	101.200 % Recovery
1	ICV	0	0	0	ICP-QC	B	QC	5.0	5.07e+00	101.400 % Recovery
1	ICV	0	0	0	ICP-QC	BA	QC	5.0	4.86e+00	97.200 % Recovery
1	ICV	0	0	0	ICP-QC	BE	QC	5.0	4.90e+00	98.000 % Recovery
1	ICV	0	0	0	ICP-QC	BI	QC	5.0	5.06e+00	101.200 % Recovery
1	ICV	0	0	0	ICP-QC	CA	QC	5.0	5.28e+00	105.600 % Recovery
1	ICV	0	0	0	ICP-QC	CD	QC	5.0	5.08e+00	101.600 % Recovery
1	ICV	0	0	0	ICP-QC	CE	QC	5.0	4.96e+00	99.200 % Recovery
1	ICV	0	0	0	ICP-QC	CO	QC	5.0	5.09e+00	101.800 % Recovery
1	ICV	0	0	0	ICP-QC	CR	QC	5.0	5.04e+00	100.800 % Recovery
1	ICV	0	0	0	ICP-QC	CU	QC	5.0	4.94e+00	98.800 % Recovery
1	ICV	0	0	0	ICP-QC	EU	QC	5.0	4.86e+00	97.200 % Recovery
1	ICV	0	0	0	ICP-QC	FE	QC	5.0	5.11e+00	102.200 % Recovery
1	ICV	0	0	0	ICP-QC	K	QC	5.0	4.71e+00	94.200 % Recovery
1	ICV	0	0	0	ICP-QC	LA	QC	5.0	5.03e+00	100.600 % Recovery
1	ICV	0	0	0	ICP-QC	LI	QC	5.0	4.72e+00	94.400 % Recovery
1	ICV	0	0	0	ICP-QC	MG	QC	5.0	5.01e+00	100.200 % Recovery
1	ICV	0	0	0	ICP-QC	MN	QC	5.0	4.76e+00	95.200 % Recovery
1	ICV	0	0	0	ICP-QC	MO	QC	5.0	4.98e+00	99.600 % Recovery
1	ICV	0	0	0	ICP-QC	NA	QC	5.0	4.92e+00	98.400 % Recovery
1	ICV	0	0	0	ICP-QC	ND	QC	5.0	4.96e+00	99.200 % Recovery
1	ICV	0	0	0	ICP-QC	NI	QC	5.0	5.03e+00	100.600 % Recovery
1	ICV	0	0	0	ICP-QC	P	QC	5.0	5.10e+00	102.000 % Recovery
1	ICV	0	0	0	ICP-QC	PB	QC	5.0	4.99e+00	99.800 % Recovery
1	ICV	0	0	0	ICP-QC	S	QC	5.0	5.00e+00	100.000 % Recovery
1	ICV	0	0	0	ICP-QC	SB	QC	5.0	5.02e+00	100.400 % Recovery
1	ICV	0	0	0	ICP-QC	SE	QC	5.0	4.93e+00	98.600 % Recovery
1	ICV	0	0	0	ICP-QC	SI	QC	5.0	5.12e+00	102.400 % Recovery
1	ICV	0	0	0	ICP-QC	SM	QC	5.0	4.97e+00	99.400 % Recovery
1	ICV	0	0	0	ICP-QC	SR	QC	5.0	4.84e+00	96.800 % Recovery
1	ICV	0	0	0	ICP-QC	TH	QC	5.0	4.98e+00	99.600 % Recovery
1	ICV	0	0	0	ICP-QC	TI	QC	5.0	5.04e+00	100.800 % Recovery
1	ICV	0	0	0	ICP-QC	TL	QC	5.00	4.92e+00	98.400 % Recovery
1	ICV	0	0	0	ICP-QC	U	QC	10.	9.79e+00	97.900 % Recovery
1	ICV	0	0	0	ICP-QC	V	QC	5.0	5.06e+00	101.200 % Recovery
1	ICV	0	0	0	ICP-QC	Y	QC	5	4.92e+00	98.400 % Recovery
1	ICV	0	0	0	ICP-QC	ZN	QC	5.0	5.04e+00	100.800 % Recovery
1	ICV	0	0	0	ICP-QC	ZR	QC	5.0	5.05e+00	101.000 % Recovery
2	ICB	0	0	0	ICP-QC	AG	QC	1	<1.00e-2	ug/mL

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
2	ICB	0	@ICP-QC	AL	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	AS	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	B	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	BA	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	BE	QC	1	<5.00e-3		ug/mL
2	ICB	0	@ICP-QC	BI	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	CA	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	CD	QC	1	<5.00e-3		ug/mL
2	ICB	0	@ICP-QC	CE	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	CO	QC	1	<2.00e-2		ug/mL
2	ICB	0	@ICP-QC	CR	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	CU	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	EU	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	FE	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	K	QC	1	<5.00e-1		ug/mL
2	ICB	0	@ICP-QC	LA	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	LI	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	MG	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	MN	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	MO	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	NA	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	ND	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	NI	QC	1	<2.00e-2		ug/mL
2	ICB	0	@ICP-QC	P	QC	1	<2.00e-1		ug/mL
2	ICB	0	@ICP-QC	PB	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	S	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	SB	QC	1	<6.00e-2		ug/mL
2	ICB	0	@ICP-QC	SE	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	SI	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	SM	QC	1	<1.00e-1		ug/mL
2	ICB	0	@ICP-QC	SR	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	TH	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	TI	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	TL	QC	1	<2.00e-1		ug/mL
2	ICB	0	@ICP-QC	U	QC	1	<5.00e-1		ug/mL
2	ICB	0	@ICP-QC	V	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	Y	QC	1	<5.00e-2		ug/mL
2	ICB	0	@ICP-QC	ZN	QC	1	<1.00e-2		ug/mL
2	ICB	0	@ICP-QC	ER	QC	1	<1.00e-2		ug/mL
3	LLS	0	@ICP-QC	AG	QC	0.02	2.26e-02	113.000 % Recovery	
3	LLS	0	@ICP-QC	AL	QC	0.10	1.11e-01	111.000 % Recovery	
3	LLS	0	@ICP-QC	AS	QC	0.20	2.05e-01	102.500 % Recovery	
3	LLS	0	@ICP-QC	B	QC	0.10	1.01e-01	101.000 % Recovery	
3	LLS	0	@ICP-QC	BA	QC	0.10	9.80e-02	98.000 % Recovery	
3	LLS	0	@ICP-QC	BE	QC	0.01	9.92e-03	99.200 % Recovery	
3	LLS	0	@ICP-QC	BI	QC	0.20	2.49e-01	124.500 % Recovery	
3	LLS	0	@ICP-QC	CA	QC	0.20	2.14e-01	107.000 % Recovery	
3	LLS	0	@ICP-QC	CD	QC	0.01	1.11e-02	111.000 % Recovery	
3	LLS	0	@ICP-QC	CE	QC	0.20	2.10e-01	105.000 % Recovery	

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
3	LLS	0	@ICP-QC	CO	QC	0.04	4.08e-02	102.000 % Recovery	
3	LLS	0	@ICP-QC	CR	QC	0.02	2.05e-02	102.500 % Recovery	
3	LLS	0	@ICP-QC	CU	QC	0.02	1.78e-02	89.000 % Recovery	
3	LLS	0	@ICP-QC	EU	QC	0.10	9.48e-02	94.800 % Recovery	
3	LLS	0	@ICP-QC	FE	QC	0.10	1.01e-01	101.000 % Recovery	
3	LLS	0	@ICP-QC	K	QC	0.50	<5.00e-1	% Recovery	
3	LLS	0	@ICP-QC	LA	QC	0.10	1.03e-01	103.000 % Recovery	
3	LLS	0	@ICP-QC	LI	QC	0.02	2.02e-02	101.000 % Recovery	
3	LLS	0	@ICP-QC	MG	QC	0.20	2.04e-01	102.000 % Recovery	
3	LLS	0	@ICP-QC	MN	QC	0.02	1.88e-02	94.000 % Recovery	
3	LLS	0	@ICP-QC	MO	QC	0.10	1.01e-01	101.000 % Recovery	
3	LLS	0	@ICP-QC	NA	QC	0.20	2.48e-01	124.000 % Recovery	
3	LLS	0	@ICP-QC	ND	QC	0.20	2.05e-01	102.500 % Recovery	
3	LLS	0	@ICP-QC	NI	QC	0.04	4.37e-02	109.250 % Recovery	
3	LLS	0	@ICP-QC	P	QC	0.40	4.07e-01	101.750 % Recovery	
3	LLS	0	@ICP-QC	PB	QC	0.20	2.00e-01	100.000 % Recovery	
3	LLS	0	@ICP-QC	S	QC	0.20	1.80e-01	90.000 % Recovery	
3	LLS	0	@ICP-QC	SB	QC	0.10	1.15e-01	115.000 % Recovery	
3	LLS	0	@ICP-QC	SE	QC	0.20	2.16e-01	108.000 % Recovery	
3	LLS	0	@ICP-QC	SI	QC	0.10	1.05e-01	105.000 % Recovery	
3	LLS	0	@ICP-QC	SM	QC	0.20	1.86e-01	93.000 % Recovery	
3	LLS	0	@ICP-QC	SR	QC	0.02	1.99e-02	99.500 % Recovery	
3	LLS	0	@ICP-QC	TH	QC	0.10	9.92e-02	99.200 % Recovery	
3	LLS	0	@ICP-QC	TI	QC	0.02	2.00e-02	100.000 % Recovery	
3	LLS	0	@ICP-QC	TL	QC	0.40	4.32e-01	108.000 % Recovery	
3	LLS	0	@ICP-QC	U	QC	0.50	<5.00e-1	% Recovery	
3	LLS	0	@ICP-QC	V	QC	0.10	9.86e-02	98.600 % Recovery	
3	LLS	0	@ICP-QC	Y	QC	0.10	<5.00e-2	% Recovery	
3	LLS	0	@ICP-QC	ZN	QC	0.02	2.10e-02	105.000 % Recovery	
3	LLS	0	@ICP-QC	ZR	QC	0.02	1.83e-02	91.500 % Recovery	
4	ICSA	0	@ICP-QC	AG	QC	1	<1.00e-2	ug/g	
4	ICSA	0	@ICP-QC	AL	QC	250	2.47e+02	98.800 % Recovery	
4	ICSA	0	@ICP-QC	AS	QC	1.0	<1.00e-1	ug/g	
4	ICSA	0	@ICP-QC	B	QC	1	<5.00e-2	ug/g	
4	ICSA	0	@ICP-QC	BA	QC	1	<5.00e-2	ug/g	
4	ICSA	0	@ICP-QC	BE	QC	1	<5.00e-3	ug/g	
4	ICSA	0	@ICP-QC	BI	QC	1.0	<1.00e-1	ug/g	
4	ICSA	0	@ICP-QC	CA	QC	250	2.51e+02	100.400 % Recovery	
4	ICSA	0	@ICP-QC	CD	QC	1	<5.00e-3	ug/g	
4	ICSA	0	@ICP-QC	CE	QC	1	<1.00e-1	ug/g	
4	ICSA	0	@ICP-QC	CO	QC	1	<2.00e-2	ug/g	
4	ICSA	0	@ICP-QC	CR	QC	1	<1.00e-2	ug/g	
4	ICSA	0	@ICP-QC	CU	QC	1	<1.00e-2	ug/g	
4	ICSA	0	@ICP-QC	EU	QC	1	7.51e-02	0.075 ug/mL	
4	ICSA	0	@ICP-QC	FE	QC	100	9.91e+01	99.100 % Recovery	
4	ICSA	0	@ICP-QC	K	QC	1	<5.00e-1	ug/g	
4	ICSA	0	@ICP-QC	LA	QC	1.0	<5.00e-2	ug/g	
4	ICSA	0	@ICP-QC	LI	QC	1	<1.00e-2	ug/g	
4	ICSA	0	@ICP-QC	MG	QC	250	2.56e+02	102.400 % Recovery	

DATA
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LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	ICSA	0	0	ICP-QC MN	QC	1.0	<1.00e-2		ug/g
4	ICSA	0	0	ICP-QC MO	QC	1	<5.00e-2		ug/g
4	ICSA	0	0	ICP-QC NA	QC	200	1.81e+02	90.500 % Recovery	
4	ICSA	0	0	ICP-QC ND	QC	1	<1.00e-1		ug/g
4	ICSA	0	0	ICP-QC NI	QC	1	<2.00e-2		ug/g
4	ICSA	0	0	ICP-QC P	QC	1.0	<2.00e-1		ug/g
4	ICSA	0	0	ICP-QC PB	QC	1	<1.00e-1		ug/g
4	ICSA	0	0	ICP-QC S	QC	1.0	<1.00e-1		ug/g
4	ICSA	0	0	ICP-QC SB	QC	1	<6.00e-2		ug/g
4	ICSA	0	0	ICP-QC SE	QC	1	<1.00e-1		ug/g
4	ICSA	0	0	ICP-QC SI	QC	1	<5.00e-2		ug/g
4	ICSA	0	0	ICP-QC SM	QC	1	<1.00e-1		ug/g
4	ICSA	0	0	ICP-QC SR	QC	1	<1.00e-2		ug/g
4	ICSA	0	0	ICP-QC TH	QC	1	<5.00e-2		ug/mL
4	ICSA	0	0	ICP-QC TI	QC	1	<1.00e-2		ug/g
4	ICSA	0	0	ICP-QC TL	QC	1.0	<2.00e-1		ug/g
4	ICSA	0	0	ICP-QC U	QC	1	<5.00e-1		ug/g
4	ICSA	0	0	ICP-QC V	QC	1	<5.00e-2		ug/g
4	ICSA	0	0	ICP-QC Y	QC	1	<5.00e-2		ug/mL
4	ICSA	0	0	ICP-QC ZN	QC	1.0	<1.00e-2		ug/g
4	ICSA	0	0	ICP-QC ZR	QC	1	<1.00e-2		ug/g
5	ICSAB	0	0	ICP-QC AG	QC	1.0	9.62e-01	96.200 % Recovery	
5	ICSAB	0	0	ICP-QC AL	QC	250	2.51e+02	100.400 % Recovery	
5	ICSAB	0	0	ICP-QC AS	QC	1.0	<1.00e-1		ug/g
5	ICSAB	0	0	ICP-QC B	QC	1.0	<5.00e-2		ug/g
5	ICSAB	0	0	ICP-QC BA	QC	0.5	4.67e-01	93.400 % Recovery	
5	ICSAB	0	0	ICP-QC BE	QC	0.5	4.71e-01	94.200 % Recovery	
5	ICSAB	0	0	ICP-QC BI	QC	1.0	<1.00e-1		ug/g
5	ICSAB	0	0	ICP-QC CA	QC	250	2.52e+02	100.800 % Recovery	
5	ICSAB	0	0	ICP-QC CD	QC	1.0	9.51e-01	95.100 % Recovery	
5	ICSAB	0	0	ICP-QC CE	QC	1.0	<1.00e-1		ug/g
5	ICSAB	0	0	ICP-QC CO	QC	0.5	4.77e-01	95.400 % Recovery	
5	ICSAB	0	0	ICP-QC CR	QC	0.5	4.78e-01	95.600 % Recovery	
5	ICSAB	0	0	ICP-QC CU	QC	0.5	4.90e-01	98.000 % Recovery	
5	ICSAB	0	0	ICP-QC EU	QC	1.0	8.00e-02	0.080 ug/mL	
5	ICSAB	0	0	ICP-QC FE	QC	100	9.99e+01	99.900 % Recovery	
5	ICSAB	0	0	ICP-QC K	QC	1.0	<5.00e-1		ug/g
5	ICSAB	0	0	ICP-QC LA	QC	1.0	<5.00e-2		ug/g
5	ICSAB	0	0	ICP-QC LI	QC	1.0	9.45e-01	94.500 % Recovery	
5	ICSAB	0	0	ICP-QC MG	QC	250	2.58e+02	103.200 % Recovery	
5	ICSAB	0	0	ICP-QC MN	QC	0.5	4.38e-01	87.600 % Recovery	
5	ICSAB	0	0	ICP-QC MO	QC	1.0	<5.00e-2		ug/g
5	ICSAB	0	0	ICP-QC NA	QC	200	1.87e+02	93.500 % Recovery	
5	ICSAB	0	0	ICP-QC ND	QC	1.0	<1.00e-1		ug/g
5	ICSAB	0	0	ICP-QC NI	QC	1.0	9.33e-01	93.300 % Recovery	
5	ICSAB	0	0	ICP-QC P	QC	1.0	<2.00e-1		ug/g
5	ICSAB	0	0	ICP-QC PB	QC	1.0	1.05e+00	105.000 % Recovery	
5	ICSAB	0	0	ICP-QC S	QC	1.0	<1.00e-1		ug/g
5	ICSAB	0	0	ICP-QC SB	QC	1.0	<6.00e-2		ug/g

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LABCORE Completed Worklist Report for Worklist# 33397

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
5 ICSAB	0	@ICP-QC	SE	QC	1.0	<1.00e-1		ug/g
5 ICSAB	0	@ICP-QC	SI	QC	1.0	<5.00e-2		ug/g
5 ICSAB	0	@ICP-QC	SM	QC	1.0	<1.00e-1		ug/g
5 ICSAB	0	@ICP-QC	SR	QC	1.0	<1.00e-2		ug/g
5 ICSAB	0	@ICP-QC	TH	QC	1.0	<5.00e-2		ug/mL
5 ICSAB	0	@ICP-QC	TI	QC	1.0	<1.00e-2		ug/g
5 ICSAB	0	@ICP-QC	TL	QC	1.0	<2.00e-1		ug/g
5 ICSAB	0	@ICP-QC	U	QC	1.0	<5.00e-1		ug/g
5 ICSAB	0	@ICP-QC	V	QC	0.5	4.78e-01	95.600 % Recovery	
5 ICSAB	0	@ICP-QC	Y	QC	1	<5.00e-2		ug/mL
5 ICSAB	0	@ICP-QC	ZN	QC	1.0	1.02e+00	102.000 % Recovery	
5 ICSAB	0	@ICP-QC	ZR	QC	1.0	<1.00e-2		ug/g
6 PREPBLKTJA	0	@ICP-F05	AG-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	AL-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	AS-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	B-F-01	SOLID	1	2.88e+00	2.880	ug/g
6 PREPBLKTJA	0	@ICP-F05	BA-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	BE-F-01	SOLID	1	<2.05e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	BI-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	CA-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	CD-F-01	SOLID	1	<2.05e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	CE-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	CO-F-01	SOLID	1	<8.20e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	CR-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	CU-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	EU-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	FE-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	LA-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	LI-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	MG-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	MN-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	MO-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	NA-F-01	SOLID	1	1.47e+01	14.700	ug/g
6 PREPBLKTJA	0	@ICP-F05	ND-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	NI-F-01	SOLID	1	1.59e+02	159.000	ug/g
6 PREPBLKTJA	0	@ICP-F05	P-F-01	SOLID	1	<8.20e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	PB-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	S-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	SB-F-01	SOLID	1	<2.46e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	SE-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	SI-F-01	SOLID	1	8.07e+00	8.070	ug/g
6 PREPBLKTJA	0	@ICP-F05	SM-F-01	SOLID	1	<4.10e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	SR-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	TH-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	TI-F-01	SOLID	1	<4.10e-1		ug/g
6 PREPBLKTJA	0	@ICP-F05	TL-F-01	SOLID	1	<8.20e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	U-F-01	SOLID	1	<2.05e1		ug/g
6 PREPBLKTJA	0	@ICP-F05	V-F-01	SOLID	1	<2.05e0		ug/g
6 PREPBLKTJA	0	@ICP-F05	Y-F-01	SOLID	1	<2.05e0		ug/g

DATA
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LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	PREFBLKTJA	0	F	QICP-F05 ZN-F-01	SOLID	1	<4.10e-1		ug/g
6	PREFBLKTJA	0	F	QICP-F05 ZR-F-01	SOLID	1	<4.10e-1		ug/g
7	SERDIL	S00T000797	0	F	QICP-F05 AG-F-01	SOLID	1.42e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 AL-F-01	SOLID	3.90e+04	4.01e+04	2.781 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 AS-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 B-F-01	SOLID	1.09e+03	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 BA-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 BE-F-01	SOLID	<4.18e1	<2.09e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 BI-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CA-F-01	SOLID	2.67e+03	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CD-F-01	SOLID	3.96e+03	4.05e+03	2.247 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CE-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CO-F-01	SOLID	<1.67e2	<8.37e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CR-F-01	SOLID	4.34e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 CU-F-01	SOLID	1.96e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 EU-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 FE-F-01	SOLID	4.47e+04	4.59e+04	2.649 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 LA-F-01	SOLID	1.18e+03	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 LI-F-01	SOLID	3.48e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 MG-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 MN-F-01	SOLID	1.21e+03	1.23e+03	1.639 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 MO-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 NA-F-01	SOLID	1.37e+05	1.43e+05	4.286 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 ND-F-01	SOLID	9.79e+02	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 NI-F-01	SOLID	3.48e+05	3.52e+05	1.143 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 P-F-01	SOLID	2.01e+03	<8.37e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 PB-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 S-F-01	SOLID	4.23e+04	4.32e+04	2.105 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 SB-F-01	SOLID	<5.02e2	<2.51e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 SE-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 SI-F-01	SOLID	4.27e+03	4.29e+03	0.467 RPD
7	SERDIL	S00T000797	0	F	QICP-F05 SM-F-01	SOLID	<8.37e2	<4.18e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 SR-F-01	SOLID	3.22e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 TH-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 TI-F-01	SOLID	1.11e+02	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 TL-F-01	SOLID	<1.67e3	<8.37e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 U-F-01	SOLID	<4.18e3	<2.09e4	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 V-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 Y-F-01	SOLID	<4.18e2	<2.09e3	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 ZN-F-01	SOLID	<8.37e1	<4.18e2	RPD
7	SERDIL	S00T000797	0	F	QICP-F05 ZR-F-01	SOLID	2.08e+04	2.11e+04	1.432 RPD
8	SAMPLE	S00T000797	0	F	QICP-F05 AG-F-01	SOLID	N/A	1.42e+02	83.700 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 AL-F-01	SOLID	N/A	3.90e+04	418.000 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 AS-F-01	SOLID	N/A	<8.37e+02	837.000 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 B-F-01	SOLID	N/A	1.09e+03	418.000 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 BA-F-01	SOLID	N/A	<4.18e+02	418.000 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 BE-F-01	SOLID	N/A	<4.18e+01	41.800 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 BI-F-01	SOLID	N/A	<8.37e+02	837.000 ug/g
8	SAMPLE	S00T000797	0	F	QICP-F05 CA-F-01	SOLID	N/A	2.67e+03	837.000 ug/g

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
8 SAMPLE	S00T000797	0 F	QICP-F05 CD-F-01	SOLID	N/A	3.96e+03	41.800	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 CE-F-01	SOLID	N/A	8.37e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 CO-F-01	SOLID	N/A	1.67e+02	167.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 CR-F-01	SOLID	N/A	4.34e+02	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 CU-F-01	SOLID	N/A	1.96e+02	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 EU-F-01	SOLID	N/A	4.18e+02	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 FE-F-01	SOLID	N/A	4.47e+04	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 LA-F-01	SOLID	N/A	1.18e+03	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 LI-F-01	SOLID	N/A	3.48e+02	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 MG-F-01	SOLID	N/A	8.37e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 MN-F-01	SOLID	N/A	1.21e+03	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 MO-F-01	SOLID	N/A	4.18e+02	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 NA-F-01	SOLID	N/A	1.37e+05	8370.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 ND-F-01	SOLID	N/A	9.79e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 NI-F-01	SOLID	N/A	3.48e+05	1670.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 P-F-01	SOLID	N/A	2.01e+03	1670.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 PB-F-01	SOLID	N/A	8.37e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 S-F-01	SOLID	N/A	4.23e+04	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 SB-F-01	SOLID	N/A	5.02e+02	502.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 SE-F-01	SOLID	N/A	8.37e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 SI-F-01	SOLID	N/A	4.27e+03	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 SM-F-01	SOLID	N/A	8.37e+02	837.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 SR-F-01	SOLID	N/A	3.22e+02	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 TH-F-01	SOLID	N/A	4.18e+02	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 TI-F-01	SOLID	N/A	1.11e+02	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 TL-F-01	SOLID	N/A	1.67e+03	1670.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 U-F-01	SOLID	N/A	4.18e+03	4180.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 V-F-01	SOLID	N/A	4.18e+02	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 Y-F-01	SOLID	N/A	4.18e+02	418.000	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 ZN-F-01	SOLID	N/A	8.37e+01	83.700	ug/g
8 SAMPLE	S00T000797	0 F	QICP-F05 ZR-F-01	SOLID	N/A	2.08e+04	83.700	ug/g
9 DUP	S00T000797	0 F	QICP-F05 AG-F-01	SOLID	1.42e+02	1.27e+02	11.152	RPD
9 DUP	S00T000797	0 F	QICP-F05 AL-F-01	SOLID	3.90e+04	3.88e+04	0.514	RPD
9 DUP	S00T000797	0 F	QICP-F05 AS-F-01	SOLID	<8.37e2	<8.37e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 B-F-01	SOLID	1.09e+03	1.10e+03	0.913	RPD
9 DUP	S00T000797	0 F	QICP-F05 BA-F-01	SOLID	<4.18e2	<4.18e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 BE-F-01	SOLID	<4.18e1	<4.18e1		RPD
9 DUP	S00T000797	0 F	QICP-F05 BI-F-01	SOLID	<8.37e2	<8.37e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 CA-F-01	SOLID	2.67e+03	2.62e+03	1.890	RPD
9 DUP	S00T000797	0 F	QICP-F05 CD-F-01	SOLID	3.96e+03	3.93e+03	0.760	RPD
9 DUP	S00T000797	0 F	QICP-F05 CE-F-01	SOLID	<8.37e2	<8.37e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 CO-F-01	SOLID	<1.67e2	<1.67e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 CR-F-01	SOLID	4.34e+02	4.00e+02	8.153	RPD
9 DUP	S00T000797	0 F	QICP-F05 CU-F-01	SOLID	1.96e+02	1.61e+02	19.608	RPD
9 DUP	S00T000797	0 F	QICP-F05 EU-F-01	SOLID	<4.18e2	<4.18e2		RPD
9 DUP	S00T000797	0 F	QICP-F05 FE-F-01	SOLID	4.47e+04	4.45e+04	0.448	RPD
9 DUP	S00T000797	0 F	QICP-F05 LA-F-01	SOLID	1.18e+03	1.16e+03	1.709	RPD
9 DUP	S00T000797	0 F	QICP-F05 LI-F-01	SOLID	3.48e+02	3.36e+02	3.509	RPD
9 DUP	S00T000797	0 F	QICP-F05 MG-F-01	SOLID	<8.37e2	<8.37e2		RPD

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
9	DUP	S00T000797	0 F	QICP-F05 MN-F-01	SOLID	1.21e+03	1.20e+03	0.830	RPD
9	DUP	S00T000797	0 F	QICP-F05 MO-F-01	SOLID	<4.18e2	<4.18e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 NA-F-01	SOLID	1.37e+05	1.28e+05	6.792	RPD
9	DUP	S00T000797	0 F	QICP-F05 ND-F-01	SOLID	9.79e+02	8.61e+02	12.826	RPD
9	DUP	S00T000797	0 F	QICP-F05 NI-F-01	SOLID	3.48e+05	3.45e+05	0.866	RPD
9	DUP	S00T000797	0 F	QICP-F05 P-F-01	SOLID	2.01e+03	1.85e+03	8.290	RPD
9	DUP	S00T000797	0 F	QICP-F05 PB-F-01	SOLID	<8.37e2	<8.37e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 S-F-01	SOLID	4.23e+04	4.21e+04	0.474	RPD
9	DUP	S00T000797	0 F	QICP-F05 SB-F-01	SOLID	<5.02e2	<5.02e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 SE-F-01	SOLID	<8.37e2	<8.37e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 SI-F-01	SOLID	4.27e+03	4.24e+03	0.705	RPD
9	DUP	S00T000797	0 F	QICP-F05 SM-F-01	SOLID	<8.37e2	<8.37e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 SR-F-01	SOLID	3.22e+02	3.21e+02	0.311	RPD
9	DUP	S00T000797	0 F	QICP-F05 TH-F-01	SOLID	<4.18e2	<4.18e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 TI-F-01	SOLID	1.11e+02	9.33e+01	17.327	RPD
9	DUP	S00T000797	0 F	QICP-F05 TL-F-01	SOLID	<1.67e3	<1.67e3		RPD
9	DUP	S00T000797	0 F	QICP-F05 U-F-01	SOLID	<4.18e3	<4.18e3		RPD
9	DUP	S00T000797	0 F	QICP-F05 V-F-01	SOLID	<4.18e2	<4.18e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 Y-F-01	SOLID	<4.18e2	<4.18e2		RPD
9	DUP	S00T000797	0 F	QICP-F05 ZN-F-01	SOLID	<8.37e1	<8.37e1		RPD
9	DUP	S00T000797	0 F	QICP-F05 ZR-F-01	SOLID	2.08e+04	2.07e+04	0.482	RPD
10	SPK-POST	S00T000797	0 F	QICP-F05 AG-F-01	SOLID	1.0	8.16e-01	81.600	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 AL-F-01	SOLID	1	7.59e-01	75.900	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 AS-F-01	SOLID	1	9.55e-01	95.500	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 B-F-01	SOLID	1	9.43e-01	94.300	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 BA-F-01	SOLID	1	9.18e-01	91.800	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 BE-F-01	SOLID	1	9.02e-01	90.200	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 BI-F-01	SOLID	1	9.78e-01	97.800	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CA-F-01	SOLID	1	9.29e-01	92.900	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CD-F-01	SOLID	1	9.59e-01	95.900	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CE-F-01	SOLID	1	9.75e-01	97.500	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CO-F-01	SOLID	1	9.88e-01	98.800	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CR-F-01	SOLID	1	9.65e-01	96.500	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 CU-F-01	SOLID	1	9.15e-01	91.500	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 EU-F-01	SOLID	1	9.08e-01	90.800	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 FE-F-01	SOLID	1	7.50e-01	75.000	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 LA-F-01	SOLID	1	9.04e-01	90.400	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 LI-F-01	SOLID	1	8.84e-01	88.400	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 MG-F-01	SOLID	1	9.87e-01	98.700	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 MN-F-01	SOLID	1	8.93e-01	89.300	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 MO-F-01	SOLID	1	9.70e-01	97.000	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 NA-F-01	SOLID	10	9.92e+00	99.200	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 ND-F-01	SOLID	1	9.00e-01	90.000	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 NI-F-01	SOLID	10	9.34e+00	93.400	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 P-F-01	SOLID	1	9.57e-01	95.700	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 PB-F-01	SOLID	1	1.04e+00	104.000	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 S-F-01	SOLID	1	7.97e-01	79.700	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 SB-F-01	SOLID	1	9.60e-01	96.000	% Recovery
10	SPK-POST	S00T000797	0 F	QICP-F05 SE-F-01	SOLID	1	9.87e-01	98.700	% Recovery

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
10 SPK-POST	800T000797	0 F	QICP-F05 SI-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 SM-F-01	SOLID	1	9.51e-01	95.100 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 SR-F-01	SOLID	1	9.00e-01	90.000 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 TH-F-01	SOLID	1	9.91e-01	99.100 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 TI-F-01	SOLID	1	9.25e-01	92.500 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 TL-F-01	SOLID	1	9.80e-01	98.000 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 U-F-01	SOLID	2	2.08e+00	104.000 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 V-F-01	SOLID	1	9.53e-01	95.300 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 Y-F-01	SOLID	1	9.56e-01	95.600 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 ZN-F-01	SOLID	1	9.34e-01	93.400 % Recovery	
10 SPK-POST	800T000797	0 F	QICP-F05 ZR-F-01	SOLID	1	8.43e-01	84.300 % Recovery	
11 SAMPLE	800T000798	0 F	QICP-F05 AG-F-01	SOLID	N/A	1.42e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 AL-F-01	SOLID	N/A	4.62e+04	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 AS-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 B-F-01	SOLID	N/A	7.03e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 BA-F-01	SOLID	N/A	4.06e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 BE-F-01	SOLID	N/A	3.96e+01	39.600 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 BI-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CA-F-01	SOLID	N/A	2.10e+03	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CD-F-01	SOLID	N/A	4.40e+03	39.600 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CE-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CO-F-01	SOLID	N/A	1.58e+02	158.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CR-F-01	SOLID	N/A	4.67e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 CU-F-01	SOLID	N/A	1.62e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 EU-F-01	SOLID	N/A	3.96e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 FE-F-01	SOLID	N/A	5.48e+04	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 LA-F-01	SOLID	N/A	1.25e+03	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 LI-F-01	SOLID	N/A	3.65e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 MG-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 MN-F-01	SOLID	N/A	7.02e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 MO-F-01	SOLID	N/A	3.96e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 NA-F-01	SOLID	N/A	1.41e+05	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 ND-F-01	SOLID	N/A	1.07e+03	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 NI-F-01	SOLID	N/A	6.39e+03	158.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 P-F-01	SOLID	N/A	2.05e+03	1580.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 PB-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 S-F-01	SOLID	N/A	4.51e+04	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 SB-F-01	SOLID	N/A	4.75e+02	475.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 SE-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 SI-F-01	SOLID	N/A	4.60e+03	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 SM-F-01	SOLID	N/A	7.92e+02	792.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 SR-F-01	SOLID	N/A	3.47e+02	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 TH-F-01	SOLID	N/A	3.96e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 TI-F-01	SOLID	N/A	7.92e+01	79.200 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 TL-F-01	SOLID	N/A	1.58e+03	1580.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 U-F-01	SOLID	N/A	3.96e+03	3960.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 V-F-01	SOLID	N/A	3.96e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 Y-F-01	SOLID	N/A	3.96e+02	396.000 ug/g	
11 SAMPLE	800T000798	0 F	QICP-F05 ZN-F-01	SOLID	N/A	7.92e+01	79.200 ug/g	

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
11	SAMPLE	S00T000798	0	F	@ICP-F05 ZR-F-01	SOLID	N/A	2.21e+04	79.200	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 AG-F-01	SOLID	N/A	1.54e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 AL-F-01	SOLID	N/A	4.26e+04	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 AS-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 B-F-01	SOLID	N/A	7.26e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 BA-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 BE-F-01	SOLID	N/A	4.24e+01	42.400	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 BI-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CA-F-01	SOLID	N/A	2.23e+03	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CD-F-01	SOLID	N/A	4.12e+03	42.400	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CE-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CO-F-01	SOLID	N/A	1.69e+02	169.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CR-F-01	SOLID	N/A	4.47e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 CU-F-01	SOLID	N/A	1.50e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 EU-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 FE-F-01	SOLID	N/A	3.73e+04	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 LA-F-01	SOLID	N/A	1.23e+03	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 LI-F-01	SOLID	N/A	3.74e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 MG-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 MN-F-01	SOLID	N/A	8.16e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 MO-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 NA-F-01	SOLID	N/A	1.42e+05	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 ND-F-01	SOLID	N/A	1.06e+03	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 NI-F-01	SOLID	N/A	1.50e+05	169.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 P-F-01	SOLID	N/A	2.12e+03	1690.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 PB-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 S-F-01	SOLID	N/A	4.81e+04	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 SB-F-01	SOLID	N/A	5.08e+02	508.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 SE-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 SI-F-01	SOLID	N/A	5.28e+03	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 SM-F-01	SOLID	N/A	8.47e+02	847.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 SR-F-01	SOLID	N/A	3.44e+02	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 TH-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 TI-F-01	SOLID	N/A	8.47e+01	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 TL-F-01	SOLID	N/A	1.69e+03	1690.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 U-F-01	SOLID	N/A	4.24e+03	4240.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 V-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 Y-F-01	SOLID	N/A	4.24e+02	424.000	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 ZN-F-01	SOLID	N/A	8.47e+01	84.700	ug/g
12	SAMPLE	S00T000799	0	F	@ICP-F05 ZR-F-01	SOLID	N/A	2.26e+04	84.700	ug/g
13	CCV		0		@ICP-QC AG	QC	5.0	4.77e+00	95.400	% Recovery
13	CCV		0		@ICP-QC AL	QC	5.0	4.82e+00	96.400	% Recovery
13	CCV		0		@ICP-QC AS	QC	5.0	5.01e+00	100.200	% Recovery
13	CCV		0		@ICP-QC B	QC	5.0	5.02e+00	100.400	% Recovery
13	CCV		0		@ICP-QC BA	QC	5.0	4.77e+00	95.400	% Recovery
13	CCV		0		@ICP-QC BE	QC	5.0	4.87e+00	97.400	% Recovery
13	CCV		0		@ICP-QC BI	QC	5.0	4.93e+00	98.600	% Recovery
13	CCV		0		@ICP-QC CA	QC	5.0	5.06e+00	101.200	% Recovery
13	CCV		0		@ICP-QC CD	QC	5.0	5.10e+00	102.000	% Recovery

DATA
NOT USED

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
13	CCV	0	@ICP-QC	CE	QC	5.0	4.89e+00	97.800 % Recovery	
13	CCV	0	@ICP-QC	CO	QC	5.0	5.09e+00	101.800 % Recovery	
13	CCV	0	@ICP-QC	CR	QC	5.0	5.03e+00	100.600 % Recovery	
13	CCV	0	@ICP-QC	CU	QC	5.0	4.80e+00	96.000 % Recovery	
13	CCV	0	@ICP-QC	EU	QC	5.0	4.86e+00	97.200 % Recovery	
13	CCV	0	@ICP-QC	FE	QC	5.0	5.08e+00	101.600 % Recovery	
13	CCV	0	@ICP-QC	K	QC	5.0	4.83e+00	96.600 % Recovery	
13	CCV	0	@ICP-QC	LA	QC	5.0	4.92e+00	98.400 % Recovery	
13	CCV	0	@ICP-QC	LI	QC	5.0	4.57e+00	91.400 % Recovery	
13	CCV	0	@ICP-QC	MG	QC	5.0	4.99e+00	99.800 % Recovery	
13	CCV	0	@ICP-QC	MN	QC	5.0	4.74e+00	94.800 % Recovery	
13	CCV	0	@ICP-QC	MO	QC	5.0	4.97e+00	99.400 % Recovery	
13	CCV	0	@ICP-QC	NA	QC	5.0	4.64e+00	92.800 % Recovery	
13	CCV	0	@ICP-QC	ND	QC	5.0	4.84e+00	96.800 % Recovery	
13	CCV	0	@ICP-QC	NI	QC	5.0	5.00e+00	100.000 % Recovery	
13	CCV	0	@ICP-QC	P	QC	5.0	5.07e+00	101.400 % Recovery	
13	CCV	0	@ICP-QC	PB	QC	5.0	4.98e+00	99.600 % Recovery	
13	CCV	0	@ICP-QC	S	QC	5.0	5.01e+00	100.200 % Recovery	
13	CCV	0	@ICP-QC	SB	QC	5.0	4.95e+00	99.000 % Recovery	
13	CCV	0	@ICP-QC	SE	QC	5.0	4.90e+00	98.000 % Recovery	
13	CCV	0	@ICP-QC	SI	QC	5.0	5.21e+00	104.200 % Recovery	
13	CCV	0	@ICP-QC	SM	QC	5.0	4.87e+00	97.400 % Recovery	
13	CCV	0	@ICP-QC	SR	QC	5.0	4.74e+00	94.800 % Recovery	
13	CCV	0	@ICP-QC	TH	QC	5.0	5.02e+00	100.400 % Recovery	
13	CCV	0	@ICP-QC	TI	QC	5.0	4.97e+00	99.400 % Recovery	
13	CCV	0	@ICP-QC	TL	QC	5.0	4.93e+00	98.600 % Recovery	
13	CCV	0	@ICP-QC	U	QC	10.	9.64e+00	96.400 % Recovery	
13	CCV	0	@ICP-QC	V	QC	5.0	5.02e+00	100.400 % Recovery	
13	CCV	0	@ICP-QC	Y	QC	5	4.94e+00	98.800 % Recovery	
13	CCV	0	@ICP-QC	ZN	QC	5.0	5.03e+00	100.600 % Recovery	
13	CCV	0	@ICP-QC	ZR	QC	5.0	4.97e+00	99.400 % Recovery	
14	CCB	0	@ICP-QC	AG	QC	1	<1.00e-2	ug/mL	
14	CCB	0	@ICP-QC	AL	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	AS	QC	1	<1.00e-1	ug/mL	
14	CCB	0	@ICP-QC	B	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	BA	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	BE	QC	1	<5.00e-3	ug/mL	
14	CCB	0	@ICP-QC	BI	QC	1	<1.00e-1	ug/mL	
14	CCB	0	@ICP-QC	CA	QC	1	<1.00e-1	ug/mL	
14	CCB	0	@ICP-QC	CD	QC	1	<5.00e-3	ug/mL	
14	CCB	0	@ICP-QC	CE	QC	1	<1.00e-1	ug/mL	
14	CCB	0	@ICP-QC	CO	QC	1	<2.00e-2	ug/mL	
14	CCB	0	@ICP-QC	CR	QC	1	<1.00e-2	ug/mL	
14	CCB	0	@ICP-QC	CU	QC	1	<1.00e-2	ug/mL	
14	CCB	0	@ICP-QC	EU	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	FE	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	K	QC	1	<5.00e-1	ug/mL	
14	CCB	0	@ICP-QC	LA	QC	1	<5.00e-2	ug/mL	
14	CCB	0	@ICP-QC	LI	QC	1	<1.00e-2	ug/mL	

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
14	CCB	0	0	ICP-QC MG	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC MN	QC	1	<1.00e-2		ug/mL
14	CCB	0	0	ICP-QC MO	QC	1	<5.00e-2		ug/mL
14	CCB	0	0	ICP-QC NA	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC ND	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC NI	QC	1	<2.00e-2		ug/mL
14	CCB	0	0	ICP-QC P	QC	1	<2.00e-1		ug/mL
14	CCB	0	0	ICP-QC PB	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC S	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC SB	QC	1	<6.00e-2		ug/mL
14	CCB	0	0	ICP-QC SE	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC SI	QC	1	<5.00e-2		ug/mL
14	CCB	0	0	ICP-QC SM	QC	1	<1.00e-1		ug/mL
14	CCB	0	0	ICP-QC SR	QC	1	<1.00e-2		ug/mL
14	CCB	0	0	ICP-QC TH	QC	1	<5.00e-2		ug/mL
14	CCB	0	0	ICP-QC TI	QC	1	<1.00e-2		ug/mL
14	CCB	0	0	ICP-QC TL	QC	1	<2.00e-1		ug/mL
14	CCB	0	0	ICP-QC U	QC	1	<5.00e-1		ug/mL
14	CCB	0	0	ICP-QC V	QC	1	<5.00e-2		ug/mL
14	CCB	0	0	ICP-QC Y	QC	1	<5.00e-2		ug/mL
14	CCB	0	0	ICP-QC ZM	QC	1	<1.00e-2		ug/mL
14	CCB	0	0	ICP-QC ZR	QC	1	<1.00e-2		ug/mL
15	SERDIL	S00T0000800	0 F	ICP-F05 AG-F-01	SOLID	1.82e+02	<3.97e2		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 AL-F-01	SOLID	5.38e+04	5.56e+04	3.291	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 AS-F-01	SOLID	<7.93e2	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 B-F-01	SOLID	6.11e+02	<1.98e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 BA-F-01	SOLID	5.36e+02	<1.98e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 BE-F-01	SOLID	<3.97e1	<1.98e2		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 BI-F-01	SOLID	<7.93e2	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CA-F-01	SOLID	2.11e+03	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CD-F-01	SOLID	5.81e+03	6.00e+03	3.218	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CE-F-01	SOLID	8.56e+02	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CO-F-01	SOLID	<1.59e2	<7.93e2		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CR-F-01	SOLID	4.82e+02	4.32e+02	10.941	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 CU-F-01	SOLID	1.81e+02	<3.97e2		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 EV-F-01	SOLID	<3.97e2	<1.98e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 FE-F-01	SOLID	6.66e+04	6.90e+04	3.540	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 LA-F-01	SOLID	3.01e+03	3.10e+03	2.946	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 LI-F-01	SOLID	4.94e+02	5.94e+02	18.382	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 MG-F-01	SOLID	8.51e+02	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 MN-F-01	SOLID	8.63e+02	9.00e+02	4.197	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 MO-F-01	SOLID	<3.97e2	<1.98e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 NA-F-01	SOLID	6.93e+04	7.60e+04	9.222	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 ND-F-01	SOLID	1.71e+03	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 NI-F-01	SOLID	1.68e+04	1.74e+04	3.509	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 P-F-01	SOLID	<1.59e3	<7.93e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 PB-F-01	SOLID	<7.93e2	<3.97e3		RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 S-F-01	SOLID	6.31e+03	6.14e+03	2.731	RPD
15	SERDIL	S00T0000800	0 F	ICP-F05 SB-F-01	SOLID	<4.76e2	<2.38e3		RPD

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
15	SERDIL	S00T000800	0 F	QICP-F05 SE-F-01	SOLID	<7.93e2	<3.97e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 SI-F-01	SOLID	4.39e+03	5.49e+03	22.267	RPD
15	SERDIL	S00T000800	0 F	QICP-F05 SM-F-01	SOLID	<7.93e2	<3.97e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 SR-F-01	SOLID	2.70e+02	<3.97e2		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 TH-F-01	SOLID	<3.97e2	<1.98e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 TI-F-01	SOLID	<7.93e1	<3.97e2		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 TL-F-01	SOLID	<1.59e3	<7.93e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 U-F-01	SOLID	<3.97e3	<1.98e4		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 V-F-01	SOLID	<3.97e2	<1.98e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 Y-F-01	SOLID	<3.97e2	<1.98e3		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 ZN-F-01	SOLID	8.20e+01	<3.97e2		RPD
15	SERDIL	S00T000800	0 F	QICP-F05 ZR-F-01	SOLID	2.34e+04	2.41e+04	2.947	RPD
16	SAMPLE	S00T000800	0 F	QICP-F05 AG-F-01	SOLID	N/A	1.82e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 AL-F-01	SOLID	N/A	5.38e+04	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 AS-F-01	SOLID	N/A	7.93e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 B-F-01	SOLID	N/A	6.11e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 BA-F-01	SOLID	N/A	5.36e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 BE-F-01	SOLID	N/A	3.97e+01	39.700	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 BI-F-01	SOLID	N/A	7.93e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CA-F-01	SOLID	N/A	2.11e+03	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CD-F-01	SOLID	N/A	5.81e+03	39.700	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CE-F-01	SOLID	N/A	8.56e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CO-F-01	SOLID	N/A	1.59e+02	159.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CR-F-01	SOLID	N/A	4.82e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 CU-F-01	SOLID	N/A	1.81e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 EU-F-01	SOLID	N/A	3.97e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 FE-F-01	SOLID	N/A	6.66e+04	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 LA-F-01	SOLID	N/A	3.01e+03	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 LI-F-01	SOLID	N/A	4.94e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 MG-F-01	SOLID	N/A	8.51e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 MN-F-01	SOLID	N/A	8.63e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 MO-F-01	SOLID	N/A	3.97e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 NA-F-01	SOLID	N/A	6.93e+04	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 ND-F-01	SOLID	N/A	1.71e+03	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 NI-F-01	SOLID	N/A	1.68e+04	159.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 P-F-01	SOLID	N/A	1.59e+03	1590.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 PB-F-01	SOLID	N/A	7.93e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 S-F-01	SOLID	N/A	6.31e+03	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 SE-F-01	SOLID	N/A	4.76e+02	476.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 SI-F-01	SOLID	N/A	7.93e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 SM-F-01	SOLID	N/A	4.39e+03	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 SR-F-01	SOLID	N/A	7.93e+02	793.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 TH-F-01	SOLID	N/A	2.70e+02	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 TI-F-01	SOLID	N/A	3.97e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 TL-F-01	SOLID	N/A	7.93e+01	79.300	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 U-F-01	SOLID	N/A	1.59e+03	1590.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 V-F-01	SOLID	N/A	3.97e+03	3970.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 V-F-01	SOLID	N/A	3.97e+02	397.000	ug/g
16	SAMPLE	S00T000800	0 F	QICP-F05 Y-F-01	SOLID	N/A	3.97e+02	397.000	ug/g

DATA
NOT USED

LABCORE Completed Worklist Report for Worklist# 33397

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
16 SAMPLE	S00T000800	0 F	QICP-F05 ZN-F-01	SOLID	N/A	8.20e+01	79.300	ug/g
16 SAMPLE	S00T000800	0 F	QICP-F05 ZR-F-01	SOLID	N/A	2.34e+04	79.300	ug/g
17 DUP	S00T000800	0 F	QICP-F05 AG-F-01	SOLID	1.82e+02	1.52e+02	17.964	RPD
17 DUP	S00T000800	0 F	QICP-F05 AL-F-01	SOLID	5.38e+04	5.28e+04	1.876	RPD
17 DUP	S00T000800	0 F	QICP-F05 AS-F-01	SOLID	<7.93e2	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 B-F-01	SOLID	6.11e+02	6.04e+02	1.152	RPD
17 DUP	S00T000800	0 F	QICP-F05 BA-F-01	SOLID	5.36e+02	5.24e+02	2.264	RPD
17 DUP	S00T000800	0 F	QICP-F05 BE-F-01	SOLID	<3.97e1	<3.97e1		RPD
17 DUP	S00T000800	0 F	QICP-F05 BI-F-01	SOLID	<7.93e2	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 CA-F-01	SOLID	2.11e+03	1.78e+03	16.967	RPD
17 DUP	S00T000800	0 F	QICP-F05 CD-F-01	SOLID	5.81e+03	5.78e+03	0.518	RPD
17 DUP	S00T000800	0 F	QICP-F05 CE-F-01	SOLID	8.56e+02	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 CO-F-01	SOLID	<1.59e2	<1.59e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 CR-F-01	SOLID	4.82e+02	5.19e+02	7.393	RPD
17 DUP	S00T000800	0 F	QICP-F05 CU-F-01	SOLID	1.81e+02	2.11e+02	15.306	RPD
17 DUP	S00T000800	0 F	QICP-F05 EU-F-01	SOLID	<3.97e2	<3.97e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 FE-F-01	SOLID	6.66e+04	6.58e+04	1.208	RPD
17 DUP	S00T000800	0 F	QICP-F05 LA-F-01	SOLID	3.01e+03	2.93e+03	2.694	RPD
17 DUP	S00T000800	0 F	QICP-F05 LI-F-01	SOLID	4.94e+02	4.93e+02	0.203	RPD
17 DUP	S00T000800	0 F	QICP-F05 MG-F-01	SOLID	8.51e+02	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 MN-F-01	SOLID	8.63e+02	8.57e+02	0.698	RPD
17 DUP	S00T000800	0 F	QICP-F05 MO-F-01	SOLID	<3.97e2	<3.97e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 NA-F-01	SOLID	6.93e+04	6.90e+04	0.434	RPD
17 DUP	S00T000800	0 F	QICP-F05 ND-F-01	SOLID	1.71e+03	1.78e+03	4.011	RPD
17 DUP	S00T000800	0 F	QICP-F05 NI-F-01	SOLID	1.68e+04	1.65e+04	1.802	RPD
17 DUP	S00T000800	0 F	QICP-F05 P-F-01	SOLID	<1.59e3	<1.59e3		RPD
17 DUP	S00T000800	0 F	QICP-F05 PB-F-01	SOLID	<7.93e2	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 S-F-01	SOLID	6.31e+03	6.22e+03	1.437	RPD
17 DUP	S00T000800	0 F	QICP-F05 SE-F-01	SOLID	<4.76e2	<4.76e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 SI-F-01	SOLID	<7.93e2	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 SI-F-01	SOLID	4.39e+03	4.38e+03	0.228	RPD
17 DUP	S00T000800	0 F	QICP-F05 SM-F-01	SOLID	<7.93e2	<7.93e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 SR-F-01	SOLID	2.70e+02	2.66e+02	1.493	RPD
17 DUP	S00T000800	0 F	QICP-F05 TH-F-01	SOLID	<3.97e2	<3.97e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 TI-F-01	SOLID	<7.93e1	<7.93e1		RPD
17 DUP	S00T000800	0 F	QICP-F05 TL-F-01	SOLID	<1.59e3	<1.59e3		RPD
17 DUP	S00T000800	0 F	QICP-F05 U-F-01	SOLID	<3.97e3	4.27e+03		RPD
17 DUP	S00T000800	0 F	QICP-F05 V-F-01	SOLID	<3.97e2	<3.97e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 Y-F-01	SOLID	<3.97e2	<3.97e2		RPD
17 DUP	S00T000800	0 F	QICP-F05 ZN-F-01	SOLID	8.20e+01	<7.93e1		RPD
17 DUP	S00T000800	0 F	QICP-F05 ZR-F-01	SOLID	2.34e+04	2.31e+04	1.290	RPD
18 SPK-POST	S00T000800	0 F	QICP-F05 AG-F-01	SOLID	1.0	8.11e-01	81.100	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 AL-F-01	SOLID	1	1.04e+00	104.000	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 AS-F-01	SOLID	1	9.77e-01	97.700	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 B-F-01	SOLID	1	9.84e-01	98.400	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 BA-F-01	SOLID	1	9.22e-01	92.200	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 BE-F-01	SOLID	1	9.39e-01	93.900	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 BI-F-01	SOLID	1	9.90e-01	99.000	% Recovery
18 SPK-POST	S00T000800	0 F	QICP-F05 CA-F-01	SOLID	1	9.89e-01	98.900	% Recovery

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
18 SPK-POST	S00T000800	0 F	QICP-F05 CD-F-01	SOLID	1	9.97e-01	99.700 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 CE-F-01	SOLID	1	9.40e-01	94.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 CO-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 CR-F-01	SOLID	1	9.93e-01	99.300 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 CU-F-01	SOLID	1	9.63e-01	96.300 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 EU-F-01	SOLID	1	9.52e-01	95.200 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 FE-F-01	SOLID	1	1.00e+00	100.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 LA-F-01	SOLID	1	9.49e-01	94.900 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 LI-F-01	SOLID	1	9.13e-01	91.300 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 MG-F-01	SOLID	1	9.34e-01	93.400 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 MN-F-01	SOLID	1	9.23e-01	92.300 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 MO-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 NA-F-01	SOLID	1	1.10e+00	110.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 ND-F-01	SOLID	1	9.50e-01	95.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 NI-F-01	SOLID	1	9.84e-01	98.400 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 P-F-01	SOLID	1	1.05e+00	105.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 PB-F-01	SOLID	1	1.03e+00	103.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 S-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 SB-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 SE-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 SI-F-01	SOLID	1	1.06e+00	106.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 SM-F-01	SOLID	1	9.98e-01	99.800 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 SR-F-01	SOLID	1	9.43e-01	94.300 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 TH-F-01	SOLID	1	1.04e+00	104.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 TI-F-01	SOLID	1	9.80e-01	98.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 TL-F-01	SOLID	1	9.68e-01	96.800 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 U-F-01	SOLID	2	2.42e+00	121.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 V-F-01	SOLID	1	9.89e-01	98.900 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 Y-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 ZN-F-01	SOLID	1	1.01e+00	101.000 % Recovery	
18 SPK-POST	S00T000800	0 F	QICP-F05 ZR-F-01	SOLID	1	1.00e+00	100.000 % Recovery	
19 SAMPLE	S00T000801	0 F	QICP-F05 AG-F-01	SOLID	N/A	1.50e+02	78.500 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 AL-F-01	SOLID	N/A	4.90e+04	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 AS-F-01	SOLID	N/A	7.85e+02	785.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 B-F-01	SOLID	N/A	4.84e+02	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 BA-F-01	SOLID	N/A	4.81e+02	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 BE-F-01	SOLID	N/A	3.93e+01	39.300 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 BI-F-01	SOLID	N/A	7.85e+02	785.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CA-F-01	SOLID	N/A	1.78e+03	785.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CD-F-01	SOLID	N/A	5.54e+03	39.300 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CE-F-01	SOLID	N/A	7.85e+02	785.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CO-F-01	SOLID	N/A	1.57e+02	157.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CR-F-01	SOLID	N/A	5.40e+02	78.500 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 CU-F-01	SOLID	N/A	2.02e+02	78.500 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 EU-F-01	SOLID	N/A	3.93e+02	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 FE-F-01	SOLID	N/A	5.38e+04	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 LA-F-01	SOLID	N/A	2.93e+03	393.000 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 LI-F-01	SOLID	N/A	4.94e+02	78.500 ug/g	
19 SAMPLE	S00T000801	0 F	QICP-F05 MG-F-01	SOLID	N/A	7.85e+02	785.000 ug/g	

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
19	SAMPLE	S00T000801	0	F	QICP-F05 MN-F-01	SOLID	N/A	8.92e+02	78.500	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 MO-F-01	SOLID	N/A	3.93e+02	393.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 NA-F-01	SOLID	N/A	7.72e+04	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 ND-F-01	SOLID	N/A	1.70e+03	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 NI-F-01	SOLID	N/A	9.42e+04	157.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 P-F-01	SOLID	N/A	1.57e+03	1570.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 PB-F-01	SOLID	N/A	7.85e+02	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 S-F-01	SOLID	N/A	7.38e+03	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 SE-F-01	SOLID	N/A	4.71e+02	471.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 SE-F-01	SOLID	N/A	7.85e+02	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 SI-F-01	SOLID	N/A	3.75e+03	393.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 SM-F-01	SOLID	N/A	7.85e+02	785.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 SR-F-01	SOLID	N/A	2.66e+02	78.500	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 TH-F-01	SOLID	N/A	3.93e+02	393.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 TI-F-01	SOLID	N/A	7.85e+01	78.500	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 TL-F-01	SOLID	N/A	1.57e+03	1570.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 U-F-01	SOLID	N/A	3.93e+03	3930.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 V-F-01	SOLID	N/A	3.93e+02	393.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 Y-F-01	SOLID	N/A	3.93e+02	393.000	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 ZN-F-01	SOLID	N/A	7.85e+01	78.500	ug/g
19	SAMPLE	S00T000801	0	F	QICP-F05 ZR-F-01	SOLID	N/A	1.96e+04	78.500	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 AG-F-01	SOLID	N/A	2.08e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 AL-F-01	SOLID	N/A	5.93e+04	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 AS-F-01	SOLID	N/A	8.13e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 B-F-01	SOLID	N/A	6.75e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 BA-F-01	SOLID	N/A	5.92e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 BE-F-01	SOLID	N/A	4.07e+01	40.700	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 BI-F-01	SOLID	N/A	8.13e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CA-F-01	SOLID	N/A	2.22e+03	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CD-F-01	SOLID	N/A	6.40e+03	40.700	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CE-F-01	SOLID	N/A	8.50e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CO-F-01	SOLID	N/A	1.63e+02	163.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CR-F-01	SOLID	N/A	5.44e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 CU-F-01	SOLID	N/A	2.38e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 EU-F-01	SOLID	N/A	4.07e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 FE-F-01	SOLID	N/A	7.20e+04	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 LA-F-01	SOLID	N/A	3.33e+03	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 LI-F-01	SOLID	N/A	4.83e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 MG-F-01	SOLID	N/A	8.44e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 MN-F-01	SOLID	N/A	9.48e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 MO-F-01	SOLID	N/A	4.07e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 NA-F-01	SOLID	N/A	8.14e+04	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 ND-F-01	SOLID	N/A	2.03e+03	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 NI-F-01	SOLID	N/A	1.71e+04	163.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 P-F-01	SOLID	N/A	1.63e+03	1630.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 PB-F-01	SOLID	N/A	8.13e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 S-F-01	SOLID	N/A	8.69e+03	813.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 SE-F-01	SOLID	N/A	4.88e+02	488.000	ug/g
20	SAMPLE	S00T000802	0	F	QICP-F05 SE-F-01	SOLID	N/A	8.13e+02	813.000	ug/g

DATA
NOT USED

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
20	SAMPLE	S00T000802	0	F	@ICP-F05 SI-F-01	SOLID	N/A	4.19e+03	407.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 SM-F-01	SOLID	N/A	8.13e+02	813.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 SR-F-01	SOLID	N/A	3.05e+02	81.300	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 TH-F-01	SOLID	N/A	4.07e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 TI-F-01	SOLID	N/A	8.13e+01	81.300	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 TL-F-01	SOLID	N/A	1.63e+03	1630.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 U-F-01	SOLID	N/A	4.07e+03	4070.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 V-F-01	SOLID	N/A	4.07e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 Y-F-01	SOLID	N/A	4.07e+02	407.000	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 ZN-F-01	SOLID	N/A	8.29e+01	81.300	ug/g
20	SAMPLE	S00T000802	0	F	@ICP-F05 ZR-F-01	SOLID	N/A	2.72e+04	81.300	ug/g
21	ICSA		0		@ICP-QC AG	QC	1	1.03e-02	0.010	ug/g
21	ICSA		0		@ICP-QC AL	QC	250	2.48e+02	99.200	% Recovery
21	ICSA		0		@ICP-QC AS	QC	1.0	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC B	QC	1	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC BA	QC	1	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC BE	QC	1	<5.00e-3		ug/g
21	ICSA		0		@ICP-QC BI	QC	1.0	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC CA	QC	250	2.50e+02	100.000	% Recovery
21	ICSA		0		@ICP-QC CD	QC	1	<5.00e-3		ug/g
21	ICSA		0		@ICP-QC CE	QC	1	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC CO	QC	1	<2.00e-2		ug/g
21	ICSA		0		@ICP-QC CR	QC	1	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC CU	QC	1	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC EV	QC	1	8.57e-02	0.086	ug/mL
21	ICSA		0		@ICP-QC FE	QC	100	9.87e+01	98.700	% Recovery
21	ICSA		0		@ICP-QC K	QC	1	<5.00e-1		ug/g
21	ICSA		0		@ICP-QC LA	QC	1.0	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC LI	QC	1	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC MG	QC	250	2.56e+02	102.400	% Recovery
21	ICSA		0		@ICP-QC MN	QC	1.0	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC MO	QC	1	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC NA	QC	200	1.87e+02	93.500	% Recovery
21	ICSA		0		@ICP-QC ND	QC	1	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC NI	QC	1	<2.00e-2		ug/g
21	ICSA		0		@ICP-QC P	QC	1.0	<2.00e-1		ug/g
21	ICSA		0		@ICP-QC PB	QC	1	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC S	QC	1.0	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC SB	QC	1	<6.00e-2		ug/g
21	ICSA		0		@ICP-QC SE	QC	1	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC SI	QC	1	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC SM	QC	1	<1.00e-1		ug/g
21	ICSA		0		@ICP-QC SR	QC	1	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC TH	QC	1	<5.00e-2		ug/mL
21	ICSA		0		@ICP-QC TI	QC	1	<1.00e-2		ug/g
21	ICSA		0		@ICP-QC TL	QC	1.0	<2.00e-1		ug/g
21	ICSA		0		@ICP-QC U	QC	1	<5.00e-1		ug/g
21	ICSA		0		@ICP-QC V	QC	1	<5.00e-2		ug/g
21	ICSA		0		@ICP-QC Y	QC	1	<5.00e-2		ug/mL

DATA
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LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
21	ICSA	0	@ICP-QC	ZN	QC	1.0	<1.00e-2		ug/g
21	ICSA	0	@ICP-QC	ZR	QC	1	<1.00e-2		ug/g
22	ICSAB	0	@ICP-QC	AG	QC	1.0	9.66e-01	96.600 % Recovery	
22	ICSAB	0	@ICP-QC	AL	QC	250	2.50e+02	100.000 % Recovery	
22	ICSAB	0	@ICP-QC	AS	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	B	QC	1.0	<5.00e-2		ug/g
22	ICSAB	0	@ICP-QC	BA	QC	0.5	4.63e-01	92.600 % Recovery	
22	ICSAB	0	@ICP-QC	BE	QC	0.5	4.63e-01	92.600 % Recovery	
22	ICSAB	0	@ICP-QC	BI	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	CA	QC	250	2.52e+02	100.800 % Recovery	
22	ICSAB	0	@ICP-QC	CD	QC	1.0	9.47e-01	94.700 % Recovery	
22	ICSAB	0	@ICP-QC	CE	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	CO	QC	0.5	4.73e-01	94.600 % Recovery	
22	ICSAB	0	@ICP-QC	CR	QC	0.5	4.76e-01	95.200 % Recovery	
22	ICSAB	0	@ICP-QC	CU	QC	0.5	4.87e-01	97.400 % Recovery	
22	ICSAB	0	@ICP-QC	EU	QC	1.0	8.74e-02	0.087	ug/mL
22	ICSAB	0	@ICP-QC	FE	QC	100	9.92e+01	99.200 % Recovery	
22	ICSAB	0	@ICP-QC	K	QC	1.0	<5.00e-1		ug/g
22	ICSAB	0	@ICP-QC	LA	QC	1.0	<5.00e-2		ug/g
22	ICSAB	0	@ICP-QC	LI	QC	1.0	9.85e-01	98.500 % Recovery	
22	ICSAB	0	@ICP-QC	MG	QC	250	2.57e+02	102.800 % Recovery	
22	ICSAB	0	@ICP-QC	MN	QC	0.5	4.32e-01	86.400 % Recovery	
22	ICSAB	0	@ICP-QC	MO	QC	1.0	<5.00e-2		ug/g
22	ICSAB	0	@ICP-QC	NA	QC	200	1.93e+02	96.500 % Recovery	
22	ICSAB	0	@ICP-QC	ND	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	NI	QC	1.0	9.37e-01	93.700 % Recovery	
22	ICSAB	0	@ICP-QC	P	QC	1.0	<2.00e-1		ug/g
22	ICSAB	0	@ICP-QC	PB	QC	1.0	1.05e+00	105.000 % Recovery	
22	ICSAB	0	@ICP-QC	S	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	SB	QC	1.0	<6.00e-2		ug/g
22	ICSAB	0	@ICP-QC	SE	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	SI	QC	1.0	<5.00e-2		ug/g
22	ICSAB	0	@ICP-QC	SM	QC	1.0	<1.00e-1		ug/g
22	ICSAB	0	@ICP-QC	SR	QC	1.0	<1.00e-2		ug/g
22	ICSAB	0	@ICP-QC	TH	QC	1.0	<5.00e-2		ug/mL
22	ICSAB	0	@ICP-QC	TI	QC	1.0	<1.00e-2		ug/g
22	ICSAB	0	@ICP-QC	TL	QC	1.0	<2.00e-1		ug/g
22	ICSAB	0	@ICP-QC	U	QC	1.0	<5.00e-1		ug/g
22	ICSAB	0	@ICP-QC	V	QC	0.5	4.75e-01	95.000 % Recovery	
22	ICSAB	0	@ICP-QC	Y	QC	1	<5.00e-2		ug/mL
22	ICSAB	0	@ICP-QC	ZN	QC	1.0	1.02e+00	102.000 % Recovery	
22	ICSAB	0	@ICP-QC	ZR	QC	1.0	<1.00e-2		ug/g
23	CCV	0	@ICP-QC	AG	QC	5.0	4.85e+00	97.000 % Recovery	
23	CCV	0	@ICP-QC	AL	QC	5.0	4.97e+00	99.400 % Recovery	
23	CCV	0	@ICP-QC	AS	QC	5.0	5.05e+00	101.000 % Recovery	
23	CCV	0	@ICP-QC	B	QC	5.0	5.09e+00	101.800 % Recovery	
23	CCV	0	@ICP-QC	BA	QC	5.0	4.93e+00	98.600 % Recovery	
23	CCV	0	@ICP-QC	BE	QC	5.0	4.89e+00	97.800 % Recovery	
23	CCV	0	@ICP-QC	BI	QC	5.0	4.99e+00	99.800 % Recovery	

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LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
23	CCV	0	@ICP-QC	CA	QC	5.0	5.05e+00	101.000 % Recovery	
23	CCV	0	@ICP-QC	CD	QC	5.0	5.06e+00	101.200 % Recovery	
23	CCV	0	@ICP-QC	CE	QC	5.0	5.03e+00	100.600 % Recovery	
23	CCV	0	@ICP-QC	CO	QC	5.0	5.09e+00	101.800 % Recovery	
23	CCV	0	@ICP-QC	CR	QC	5.0	5.04e+00	100.800 % Recovery	
23	CCV	0	@ICP-QC	CU	QC	5.0	4.98e+00	99.600 % Recovery	
23	CCV	0	@ICP-QC	EU	QC	5.0	5.03e+00	100.600 % Recovery	
23	CCV	0	@ICP-QC	FE	QC	5.0	5.09e+00	101.800 % Recovery	
23	CCV	0	@ICP-QC	K	QC	5.0	4.96e+00	99.200 % Recovery	
23	CCV	0	@ICP-QC	LA	QC	5.0	5.06e+00	101.200 % Recovery	
23	CCV	0	@ICP-QC	LI	QC	5.0	5.16e+00	103.200 % Recovery	
23	CCV	0	@ICP-QC	MG	QC	5.0	5.01e+00	100.200 % Recovery	
23	CCV	0	@ICP-QC	MM	QC	5.0	4.75e+00	95.000 % Recovery	
23	CCV	0	@ICP-QC	MO	QC	5.0	4.99e+00	99.800 % Recovery	
23	CCV	0	@ICP-QC	NA	QC	5.0	5.31e+00	106.200 % Recovery	
23	CCV	0	@ICP-QC	ND	QC	5.0	5.02e+00	100.400 % Recovery	
23	CCV	0	@ICP-QC	NI	QC	5.0	5.03e+00	100.600 % Recovery	
23	CCV	0	@ICP-QC	P	QC	5.0	5.08e+00	101.600 % Recovery	
23	CCV	0	@ICP-QC	PB	QC	5.0	4.99e+00	99.800 % Recovery	
23	CCV	0	@ICP-QC	S	QC	5.0	5.03e+00	100.600 % Recovery	
23	CCV	0	@ICP-QC	SB	QC	5.0	5.00e+00	100.000 % Recovery	
23	CCV	0	@ICP-QC	SE	QC	5.0	4.96e+00	99.200 % Recovery	
23	CCV	0	@ICP-QC	SI	QC	5.0	5.26e+00	105.200 % Recovery	
23	CCV	0	@ICP-QC	SM	QC	5.0	5.02e+00	100.400 % Recovery	
23	CCV	0	@ICP-QC	SR	QC	5.0	4.88e+00	97.600 % Recovery	
23	CCV	0	@ICP-QC	TH	QC	5.0	5.08e+00	101.600 % Recovery	
23	CCV	0	@ICP-QC	TI	QC	5.0	5.04e+00	100.800 % Recovery	
23	CCV	0	@ICP-QC	TL	QC	5.0	5.00e+00	100.000 % Recovery	
23	CCV	0	@ICP-QC	U	QC	10.	9.90e+00	99.000 % Recovery	
23	CCV	0	@ICP-QC	V	QC	5.0	5.06e+00	101.200 % Recovery	
23	CCV	0	@ICP-QC	Y	QC	5	5.03e+00	100.600 % Recovery	
23	CCV	0	@ICP-QC	ZN	QC	5.0	5.04e+00	100.800 % Recovery	
23	CCV	0	@ICP-QC	ZR	QC	5.0	5.04e+00	100.800 % Recovery	
24	CCB	0	@ICP-QC	AG	QC	1	<1.00e-2	ug/mL	
24	CCB	0	@ICP-QC	AL	QC	1	<5.00e-2	ug/mL	
24	CCB	0	@ICP-QC	AS	QC	1	<1.00e-1	ug/mL	
24	CCB	0	@ICP-QC	B	QC	1	<5.00e-2	ug/mL	
24	CCB	0	@ICP-QC	BA	QC	1	<5.00e-2	ug/mL	
24	CCB	0	@ICP-QC	BE	QC	1	<5.00e-3	ug/mL	
24	CCB	0	@ICP-QC	BI	QC	1	<1.00e-1	ug/mL	
24	CCB	0	@ICP-QC	CA	QC	1	<1.00e-1	ug/mL	
24	CCB	0	@ICP-QC	CD	QC	1	<5.00e-3	ug/mL	
24	CCB	0	@ICP-QC	CE	QC	1	<1.00e-1	ug/mL	
24	CCB	0	@ICP-QC	CO	QC	1	<2.00e-2	ug/mL	
24	CCB	0	@ICP-QC	CR	QC	1	<1.00e-2	ug/mL	
24	CCB	0	@ICP-QC	CU	QC	1	<1.00e-2	ug/mL	
24	CCB	0	@ICP-QC	EU	QC	1	<5.00e-2	ug/mL	
24	CCB	0	@ICP-QC	FE	QC	1	<5.00e-2	ug/mL	
24	CCB	0	@ICP-QC	K	QC	1	<5.00e-1	ug/mL	

DATA
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Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33397

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
24	CCB	0	@ICP-QC	LA	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	LI	QC	1	<1.00e-2		ug/mL
24	CCB	0	@ICP-QC	MG	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	MN	QC	1	<1.00e-2		ug/mL
24	CCB	0	@ICP-QC	MO	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	NA	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	ND	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	NI	QC	1	<2.00e-2		ug/mL
24	CCB	0	@ICP-QC	P	QC	1	<2.00e-1		ug/mL
24	CCB	0	@ICP-QC	PB	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	S	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	SB	QC	1	<6.00e-2		ug/mL
24	CCB	0	@ICP-QC	SE	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	SI	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	SM	QC	1	<1.00e-1		ug/mL
24	CCB	0	@ICP-QC	SR	QC	1	<1.00e-2		ug/mL
24	CCB	0	@ICP-QC	TH	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	TI	QC	1	<1.00e-2		ug/mL
24	CCB	0	@ICP-QC	TL	QC	1	<2.00e-1		ug/mL
24	CCB	0	@ICP-QC	U	QC	1	<5.00e-1		ug/mL
24	CCB	0	@ICP-QC	V	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	Y	QC	1	<5.00e-2		ug/mL
24	CCB	0	@ICP-QC	ZN	QC	1	<1.00e-2		ug/mL
24	CCB	0	@ICP-QC	ZR	QC	1	<1.00e-2		ug/mL

Final page for worklist# 33397

See other wklist for signatures
Analyst Signature _____ Date 6/21/00

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

DATA
NOT USED

FILE # 42260A

HNF-1701 REV. 0

33397

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04/21/00 08:57

ws2

LABCORE Data Entry Template for Worklist# 33302 8/5/2/0

Analyst:

KRM

Instrument: ICP02

Book#

95848A
84648A

Method: LA-505-151/161 Rev/Mod C-5

At 4-27-00

Worklist Comment: ICP AZ-101 (FUSION)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV	SST5			@ICP-QC	QC		
2	ICV	SST7			@ICP-QC	QC		
3	ICB				@ICP-QC	QC		
4	LLS				@ICP-QC	QC		
5	ICSA				@ICP-QC	QC		
6	ICSAB				@ICP-QC	QC		
7	PREPBLKTJA				@ICP-P05	SOLID		
8	SERDIL	S00T000797	0	F	@ICP-P05	SOLID		
9	SAMPLE	S00T000797	0	F	@ICP-P05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, EU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, PD-F-01, PR-F-01, RB-F-01, RE-F-01, RU-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01, SN-F-01, SR-F-01, TA-F-01, TE-F-01, TH-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, W-F-01, Y-F-01, ZN-F-01, ZR-F-01								
10	DUP	S00T000797	0	F	@ICP-P05	SOLID		
11	SPK-POST	S00T000797	0	F	@ICP-P05	SOLID		
Sample x, Sample Dx, Sample Ax (10ppm)								
12	SAMPLE	S00T000798	0	F	@ICP-P05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, EU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, PD-F-01, PR-F-01, RB-F-01, RE-F-01, RU-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01, SN-F-01, SR-F-01, TA-F-01, TE-F-01, TH-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, W-F-01, Y-F-01, ZN-F-01, ZR-F-01								

DATA
NOT USED

Data Entry Comments:

Uploaded & Validated by

Saul H. Pang

05/02/00

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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04/21/00 08:57

ws2

Page: 2

LABCORE Data Entry Template for Worklist# 33302

p 5/40

S Type	Sample#	R A	Test	Matrix	Group#	Project
			RU-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 ,			
			SN-F-01 , SR-F-01 , TA-F-01 , TE-F-01 , TH-F-01 , TI-F-01 ,			
			TL-F-01 , U-F-01 , V-F-01 , W-F-01 , Y-F-01 , ZN-F-01 ,			
			ZR-F-01			

13 SAMPLE S00T000799 0 F @ICP-F05 SOLID 99000433 AZ-101 (2)

Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 ,
 BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 ,
 CR-F-01 , CU-F-01 , EU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 ,
 MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 ,
 P-F-01 , PB-F-01 , PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 ,
 RU-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 ,
 SN-F-01 , SR-F-01 , TA-F-01 , TE-F-01 , TH-F-01 , TI-F-01 ,
 TL-F-01 , U-F-01 , V-F-01 , W-F-01 , Y-F-01 , ZN-F-01 ,
 ZR-F-01

14 CCV SST
 CCV Cu, Th, Y (SST)

@ICP-QC QC

15 CCB @ICP-QC QC

16 SERDIL S00T000800 0 F @ICP-F05 SOLID

17 SAMPLE S00T000800 0 F @ICP-F05 SOLID 99000438 AZ-101 (2)

Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 ,
 BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 ,
 CR-F-01 , CU-F-01 , EU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 ,
 MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 ,
 P-F-01 , PB-F-01 , PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 ,
 RU-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 ,
 SN-F-01 , SR-F-01 , TA-F-01 , TE-F-01 , TH-F-01 , TI-F-01 ,
 TL-F-01 , U-F-01 , V-F-01 , W-F-01 , Y-F-01 , ZN-F-01 ,
 ZR-F-01

18 DUP S00T000800 0 F @ICP-F05 SOLID

19 SPK-POST S00T000800 0 F @ICP-F05 SOLID

Sample X, Sample DX, Sample AX (10ppm)

20 SAMPLE S00T000801 0 F @ICP-F05 SOLID 99000438 AZ-101 (2)

Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 ,
 BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 ,
 CR-F-01 , CU-F-01 , EU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 ,
 MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 ,
 P-F-01 , PB-F-01 , PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 ,
 RU-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 ,

DATA
NOT USED

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

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WS2

Page: 3

LABCORE Data Entry Template for Worklist# 33302

8/5/2/00

S Type	Sample#	R A	Test	Matrix	Group#	Project		
			SN-F-01	SR-F-01	TA-F-01	TE-F-01	TH-F-01	TI-F-01
			TL-F-01	U-F-01	V-F-01	W-F-01	X-F-01	ZN-F-01
			ZR-F-01					

21 SAMPLE SOOT000802 O F @ICP-F05 SOLID 99000438 AZ-101 (2)
 Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 ,
 BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 ,
 CR-F-01 , CU-F-01 , EU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 ,
 MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 ,
 P-F-01 , PE-F-01 , PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 ,
 RU-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 ,
 SN-F-01 , SR-F-01 , TA-F-01 , TE-F-01 , TH-F-01 , TI-F-01 ,
 TL-F-01 , U-F-01 , V-F-01 , W-F-01 , Y-F-01 , ZN-F-01 ,
 ZR-F-01

22 ICSA OICP-QC QC

23 ICSAB EICP-QC QC

24 CCV 3575-4 ICP-QC QC

25 CCB 61CP-QC QC

Final page for worklist # 33302

5/2/00

Signature

Date**Signature**

Date _____

PROPERTY	DIRECT	AF 1
500T000797-L	-25-10-2-8	410
500T000797	-25-10	41
500T000797-A	-25-10	41
500T000797-A	-25-10	41
500T000797-X	-25-10-1-9	410
500T000797-AX	-25-10-1-9	410
507000797-AX	-25-10-1-9	410
507000798	-25-10	41
507000799	-25-10	41
507000800-L	-25-10-2-8	205

5007000800	-25-10	41
5007000800-A	-25-10	41
5007000800-A	-25-10	41
5007000800-X	-25-10-19	410
5007000800-AX	-25-10-19	410
5007000800-AX	-25-10-19	410
5007000801	-25-10	41
5007000802	-25-10	41

**DATA
NOT USED**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

949

S007000797

$$Al = 191.14 \frac{\mu g}{ml} + \frac{1}{4.90 \frac{g}{L}} = 3.902 + 4 \frac{\mu g}{g}$$

Post Spike:

$$Al = \frac{\left(\frac{222.26}{41} \right) - \left(\frac{191.14}{41} \right)}{1} \times 100 = 75.9\%$$

$$Na = \frac{\left(\frac{4738.0}{410} \right) - \left(\frac{671.02}{410} \right)}{10} \times 100 = 99.2\%$$

$$Ni = \frac{\left(\frac{5534.3}{410} \right) - \left(\frac{1703.3}{410} \right)}{10} \times 100 = 93.4\%$$

DATA
NOT USED

Analysis Report

Summary

04/23/00 03:01:44 AM

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page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	42200A	ICP2	04/22/00	21:43	KRM	Q	CONC
2	ICV1	42200A	ICP2	04/22/00	21:47	KRM	Q	CONC
3	ICB	42200A	ICP2	04/22/00	21:57	KRM	Q	CONC
4	LLS	42200A	ICP2	04/22/00	22:04	KRM	Q	CONC
5	LLS1	42200A	ICP2	04/22/00	22:08	KRM	Q	CONC
6	ICSA	42200A	ICP2	04/22/00	22:11	KRM	Q	CONC
7	ICSAB	42200A	ICP2	04/22/00	22:15	KRM	Q	CONC
8	PREPBLKTJA	42200A	ICP2	04/22/00	22:33	KRM	Q	CONC
9	S00T000797_L	42200A	ICP2	04/23/00	00:34	KRM	Q	CONC
10	S00T000797_L	42200A	ICP2	04/23/00	00:41	KRM	S	CONC
11	S00T000797	42200A	ICP2	04/23/00	00:45	KRM	S	CONC
12	S00T000797_D	42200A	ICP2	04/23/00	00:48	KRM	S	CONC
13	S00T000797_A	42200A	ICP2	04/23/00	00:52	KRM	S	CONC
14	S00T000797_X	42200A	ICP2	04/23/00	00:57	KRM	S	CONC
15	S00T000797_DX	42200A	ICP2	04/23/00	01:00	KRM	S	CONC
16	S00T000797_AX	42200A	ICP2	04/23/00	01:04	KRM	S	CONC
17	S00T000798	42200A	ICP2	04/23/00	01:26	KRM	S	CONC
18	S00T000799	42200A	ICP2	04/23/00	01:31	KRM	S	CONC
19	CCV	42200A	ICP2	04/23/00	01:35	KRM	Q	CONC
20	CCV	42200A	ICP2	04/23/00	01:39	KRM	Q	CONC
21	CCV1	42200A	ICP2	04/23/00	01:43	KRM	Q	CONC
22	CCB	42200A	ICP2	04/23/00	01:47	KRM	Q	CONC
23	S00T000800_L	42200A	ICP2	04/23/00	01:51	KRM	S	CONC
24	S00T000800	42200A	ICP2	04/23/00	01:54	KRM	S	CONC
25	S00T000800_D	42200A	ICP2	04/23/00	01:58	KRM	S	CONC
26	S00T000800_A	42200A	ICP2	04/23/00	02:01	KRM	S	CONC
27	S00T000800_X	42200A	ICP2	04/23/00	02:07	KRM	S	CONC
28	S00T000800_DX	42200A	ICP2	04/23/00	02:10	KRM	S	CONC
29	S00T000800_AX	42200A	ICP2	04/23/00	02:15	KRM	S	CONC
30	S00T000801	42200A	ICP2	04/23/00	02:31	KRM	S	CONC
31	S00T000802	42200A	ICP2	04/23/00	02:35	KRM	S	CONC
32	ICSA	42200A	ICP2	04/23/00	02:42	KRM	Q	CONC
33	ICSAB	42200A	ICP2	04/23/00	02:46	KRM	Q	CONC
34	CCV	42200A	ICP2	04/23/00	02:50	KRM	Q	CONC
35	CCV1	42200A	ICP2	04/23/00	02:54	KRM	Q	CONC
36	CCB	42200A	ICP2	04/23/00	02:57	KRM	Q	CONC

DATA
NOT USE

4-23-00

A2-101

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 951 TO 956

HNF-1701 REV. 0

Analysis Report

Averages

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page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.8332	4.9138	5.0576	5.0726	4.8568	4.9016
2	ICV1	.02123	.13301	-.09746	.00651	.00025	-.00055
3	ICB	.00102	.00287	-.00714	-.00033	.00001	-.00006
4	LLS	.02255	.11149	.20450	.10093	.09795	.00992
5	LLS1	.00174	.01448	.00355	-.00130	.00004	-.00007
6	ICSA	-.00116	247.34	.03858	.00412	.00025	.00003
7	ICSAB	.96202	251.00	.03913	.00645	.46707	.47058
8	PREPELKTJA	Q.06324	Q1.5376	Q-.39933	Q2.8811	Q.05417	-.00371
9	SOOT000797 L	.00503	.07208	.01087	.03021	.00086	.00005
10	SOOT000797 L	.66087	196.39	2.0203	5.3489	1.7956	.02045
11	SOOT000797	.69732	191.14	.00974	5.3346	1.7233	.02343
12	SOOT000797 D	.62205	189.89	-.39981	5.3862	1.7139	.02268
13	SOOT000797 A	34.169	222.26	39.163	44.005	37.643	36.987
14	SOOT000797 X	1.0385	188.67	-.56959	5.2913	1.7357	-.00223
15	SOOT000797 DX	1.9563	192.98	3.7051	4.2519	1.8294	.00560
16	SOOT000797 AX	2396.2	4157.8	3811.1	3899.9	3839.1	3870.8
17	SOOT000798	.73735	239.14	-.08072	3.6439	2.1045	.03242
18	SOOT000799	.74640	206.27	.48198	3.5146	1.5717	.01806
19	CCV	4.8448	4.9184	5.1094	5.1259	4.8598	4.8585
20	CCV	4.7689	4.8178	5.0115	5.0172	4.7654	4.8723
21	CCV1	.02702	.10210	-.10189	.00383	.00025	-.00057
22	CCB	.00694	.00913	-.00311	.00192	.00021	-.00010
23	SOOT000800 L	.68088	287.67	-.19040	3.7796	2.8780	.02271
24	SOOT000800	.94176	277.91	.41305	3.1611	2.7725	.03917
25	SOOT000800 D	.78556	272.97	-.44331	3.1204	2.7071	.03587
26	SOOT000800 A	34.209	320.73	40.039	43.497	40.585	38.492
27	SOOT000800 X	1.3240	282.15	1.1358	2.8690	2.8392	-.00415
28	SOOT000800 DX	2.1162	283.00	.96265	2.8672	2.8863	-.00431
29	SOOT000800 AX	1724.9	4445.1	3831.1	4060.7	4053.0	3968.4
30	SOOT000801	.78528	255.94	.14880	2.5259	2.5129	.03254
31	SOOT000802	1.0458	298.76	.20567	3.4015	2.9829	.04074
32	ICSA	.01030	247.89	.03627	.00544	.00035	-.00004
33	ICSAB	.96632	249.69	.02342	.00407	.46272	.46270
34	CCV	4.8537	4.9654	5.0502	5.0943	4.9261	4.8860
35	CCV1	.02879	.10766	-.17376	.00572	.00036	-.00045
36	CCB	.00394	-.01082	.00290	.00127	-.00004	-.00012

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.0637	5.2755	5.0758	4.9648	5.0939	5.0448
2	ICV1	-.12698	.39955	.00174	.00227	.00262	.00014
3	ICB	.02559	.00062	.00103	-.00434	.00149	-.00045
4	LLS	.24946	.21404	.01113	.20957	.04084	.02046
5	LLS1	.02814	.01757	.00206	.00897	.00308	-.00042
6	ICSA	.00298	251.13	-.00597	.01728	-.00036	-.00244
7	ICSAB	.02731	252.38	.95138	-.00390	.47709	.47835
8	PREPELKTJA	Q2.2483	Q.73711	Q.03882	Q-.22014	Q.06220	-.00336
9	SOOT000797 L	.05418	.05929	.09880	.01966	.00344	.00975
10	SOOT000797 L	13.612	12.595	19.832	1.4152	.37971	1.5442
11	SOOT000797	1.9514	13.067	19.409	2.6651	.56608	2.1289
12	SOOT000797 D	1.4351	12.829	19.272	2.0095	.46923	1.9586
13	SOOT000797 A	40.095	51.156	58.747	39.967	40.510	41.678

DATA
NOT USED

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Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
14	S00T000797_X	18.158	10.979	19.660	4.9116	.60258	1.9659
15	S00T000797_DX	20.783	11.809	20.591	10.579	1.6987	2.2288
16	S00T000797_AX	3767.3	4106.6	3976.8	3849.7	3936.3	3934.8
17	S00T000798	2.9562	10.902	22.767	2.3333	.31638	2.4188
18	S00T000799	3.0134	10.781	19.961	2.7828	.44591	2.1626
19	CCV	5.0122	5.0267	5.1439	4.9898	5.1471	5.0826
20	CCV	4.9255	5.0646	5.0951	4.8918	5.0858	5.0304
21	CCV1	-.10449	.40185	.00161	.01596	.00311	.00148
22	CCB	.02552	.00682	.00170	.01998	.00263	.00094
23	S00T000800_L	9.1407	9.2739	31.002	3.6781	-.18576	2.2313
24	S00T000800	1.9450	10.929	30.048	4.4255	.09463	2.4937
25	S00T000800_D	3.0814	9.2015	29.882	3.4164	.35834	2.6844
26	S00T000800_A	40.591	51.484	70.919	42.970	41.357	43.220
27	S00T000800_X	13.485	12.070	30.385	9.3400	.91858	2.7839
28	S00T000800_DX	26.616	10.362	30.729	15.009	2.2648	3.3186
29	S00T000800_AX	3868.5	4148.6	4011.4	4022.5	3992.7	4000.6
30	S00T000801	3.4906	9.2923	28.923	3.1872	.40501	2.8193
31	S00T000802	3.1528	11.204	32.274	4.2824	.28287	2.7393
32	ICSA	.04474	250.22	-.00557	.02875	.00122	-.00200
33	ICSAB	.05133	251.71	.94659	.03196	.47333	.47640
34	CCV	4.9939	5.0533	5.0627	5.0268	5.0860	5.0354
35	CCV1	-.10558	.40890	.00127	.02305	.00268	.00137
36	CCB	.03787	-.00185	-.00091	-.00467	-.00326	-.00251

4-23-00

#	Sample Name	Cu	Bu	Fe	K	La	Li
1	ICV	4.9403	.01095	5.1064	4.7116	5.0314	4.7159
2	ICV1	.01045	4.8639	.00001	-.08043	-.00767	-.00041
3	ICB	-.00128	-.00032	.00073	-.09614	.00043	-.00030
4	LLS	.01784	-.00088	.10146	Q.34561	.10281	.02017
5	LLS1	.00099	Q.09475	.00102	.13627	.00184	-.00072
6	ICSA	-.00361	.07509	99.075	.15091	-.00202	.00194
7	ICSAB	.48967	.08002	99.930	-.15969	-.00565	.94518
8	PREPBLKTJA	Q.04800	-.05110	Q1.1988	Q25381.	.00171	Q-.05437
9	S00T000797_L	.00499	.00044	1.1867	136.11	.03119	.00768
10	S00T000797_L	.77746	.02349	224.87	28613.	5.9832	1.6751
11	S00T000797	.95880	.08032	219.10	26504.	5.7788	1.7066
12	S00T000797_D	.78670	.07056	218.03	26394.	5.6648	1.6469
13	S00T000797_A	38.491	37.248	249.83	25774.	42.862	37.941
14	S00T000797_X	.52103	1.4208	220.90	29790.	6.1999	2.8290
15	S00T000797_DX	.74899	1.3378	225.60	28106.	7.1521	2.7489
16	S00T000797_AX	3834.7	3880.2	4110.2	33594.	3830.5	4014.0
17	S00T000798	.83846	.09977	284.06	26934.	6.4936	1.8898
18	S00T000799	.72377	.18412	180.68	25157.	5.9310	1.8099
19	CCV	4.9179	.01412	5.1444	4.8428	5.0311	4.6560
20	CCV	4.8039	.01541	5.0753	4.8265	4.9234	4.5654
21	CCV1	.00957	4.8574	-.00153	.29966	-.01275	.00183
22	CCB	.00011	.00349	.00099	.09800	.00389	.00252
23	S00T000800_L	.63486	.51021	356.66	29164.	16.046	3.0693
24	S00T000800	.93587	.13805	344.24	24900.	15.581	2.5515
25	S00T000800_D	1.0907	.17547	340.18	24552.	15.137	2.5474
26	S00T000800_A	40.438	39.019	385.29	25276.	54.500	39.986
27	S00T000800_X	1.1959	1.2619	343.95	30547.	16.588	3.8252

DATA
NOT USED

4-23-00

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Analysis Report

Averages

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#	Sample Name	Cu	Zu	Fe	K	La	Li
28	S00T000800_DX	1.4177	1.3081	343.96	27537.	17.284	3.5059
29	S00T000800_AX	4043.9	4097.4	4311.1	35383.	4018.4	4450.1
30	S00T000801	1.0565	.12562	280.89	27098.	15.320	2.5794
31	S00T000802	1.1971	.06527	362.91	27238.	16.759	2.4359
32	ICSA	-.00205	.08566	98.745	-.12409	-.00096	.00280
33	ICSAB	.48663	.08736	99.199	.05247	-.00225	.98502
34	CCV	4.9796	.01325	5.0922	4.9631	5.0640	5.1555
35	CCV1	.01042	5.0266	.00030	.54572	-.01139	.00096
36	CCB	-.00142	.00095	.00004	-.36795	-.00009	-.00029

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.0060	4.7640	4.9784	4.9156	4.9593	5.0279
2	ICV1	-.02336	.00047	.00074	.05897	-.05894	.00667
3	ICB	-.00626	-.00023	.00010	.01608	-.00137	.00352
4	LLS	.20431	.01883	.10106	.24755	.20468	.04371
5	LLS1	-.00173	-.00019	-.00001	.03358	.00156	.00129
6	ICSA	255.59	-.00911	-.00922	181.27	.00478	-.00450
7	ICSAB	258.11	.43774	-.00938	186.61	.00231	.93280
8	PREPBLKTJA	Q-.22719	Q.28326	Q-.05512	Q14.720	Q-.11215	Q158.73
9	S00T000797_L	.03242	.02960	.00274	3.3458	.02189	8.5411
10	S00T000797_L	3.3720	6.0100	-.94940	700.39	4.0526	1725.0
11	S00T000797	3.3305	5.9124	-.14060	653.61	4.7984	1681.8
12	S00T000797_D	2.5687	5.8760	-.30898	648.47	4.2178	1675.1
13	S00T000797_A	40.485	42.531	39.752	672.95	41.689	1677.3
14	S00T000797_X	5.0377	6.1930	-.17464	671.02	4.9667	1703.3
15	S00T000797_DX	17.611	6.1967	-1.1871	627.92	5.7903	1692.8
16	S00T000797_AX	3890.4	3903.3	3920.9	4738.0	3795.6	5534.3
17	S00T000798	2.6852	3.6359	.24220	731.24	5.5539	33.105
18	S00T000799	2.8877	3.9507	.03679	689.05	5.1126	726.29
19	CCV	5.0455	4.7878	5.0297	4.8873	4.9535	5.0720
20	CCV	4.9882	4.7425	4.9650	4.6370	4.8441	4.9965
21	CCV1	-.00421	.00120	-.00004	-.05356	-.04811	-.00545
22	CCB	.03079	.00066	.00006	-.05426	.00345	-.00038
23	S00T000800_L	3.8604	4.6530	-.28794	392.84	8.4604	89.771
24	S00T000800	4.4015	4.4628	.19202	358.45	8.8528	86.608
25	S00T000800_D	3.4733	4.4315	.34195	356.53	9.2151	85.440
26	S00T000800_A	42.711	42.307	41.393	403.48	47.816	126.94
27	S00T000800_X	14.208	4.6757	-.22416	408.08	10.440	86.159
28	S00T000800_DX	20.434	4.7256	.35347	364.16	12.484	87.638
29	S00T000800_AX	4023.4	3980.8	3999.6	4890.8	4008.6	4069.8
30	S00T000801	3.1066	4.6564	.03758	402.85	8.8604	491.74
31	S00T000802	4.2552	4.7764	.23697	410.10	10.216	86.019
32	ICSA	255.79	-.00898	-.01078	187.32	.01030	-.01220
33	ICSAB	256.90	.43208	-.01094	192.56	.00891	.93710
34	CCV	5.0084	4.7525	4.9870	5.3124	5.0209	5.0321
35	CCV1	.00343	.00089	-.00079	-.02306	-.04644	-.00117
36	CCB	.00352	.00017	-.00303	-.05489	-.00570	-.00715

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.0970	4.9885	5.0019	5.0173	4.9301	5.1235
2	ICV1	.00524	.02370	.02265	.00988	.01551	-.00533
3	ICB	-.00121	-.00949	.00207	.00271	-.00424	-.00237
4	LLS	.40745	.20013	.18026	.11467	.21568	.10458
5	LLS1	.00334	.00986	-.00064	.00818	-.01203	.00249
6	ICSA	-.00277	.06784	-.04337	.00761	-.03798	-.00913
7	ICSAB	.01230	1.0515	-.03937	.00968	-.03633	.03733
8	PREPBLKTJA	.03543	Q-.39525	Q-.18146	Q-.43824	Q-.27263	Q8.0736
9	SOOT000797_L	.85619	.88349	1.8298	.00098	.00494	.11582
10	SOOT000797_L	11.380	-1.0906	211.81	-1.1818	.06873	21.042
11	SOOT000797	9.8378	1.8883	207.21	-.27969	.47537	20.904
12	SOOT000797_D	9.0561	1.1755	206.35	-.84451	-.12626	20.764
13	SOOT000797_A	49.074	42.553	239.89	39.369	40.449	62.216
14	SOOT000797_X	14.060	-1.7104	195.78	.61664	10.087	29.362
15	SOOT000797_DX	15.364	5.4233	195.59	4.5633	13.914	33.530
16	SOOT000797_AX	3909.4	3983.0	4088.0	3910.5	3915.6	4075.0
17	SOOT000798	10.614	1.6332	233.65	-.24154	.56844	23.808
18	SOOT000799	10.252	1.5952	232.65	.13229	1.6065	25.534
19	GGV	5.1369	5.8386	5.8748	5.8112	4.9886	5.2718
20	CCV	5.0663	4.9796	5.0132	4.9497	4.9016	5.2112
21	CCV1	.01998	.02092	.00619	.00508	.03610	.00838
22	CCB	.01981	.01015	-.00165	.01006	.02033	.01469
23	SOOT000800_L	2.9845	-1.8959	31.725	-1.7897	4.0150	28.367
24	SOOT000800	.95463	.37679	32.647	.10410	.91060	22.703
25	SOOT000800_D	1.1775	1.9889	32.168	-.26405	.95132	22.639
26	SOOT000800_A	42.978	42.223	73.945	41.234	41.366	66.187
27	SOOT000800_X	5.8159	3.9211	30.603	1.5286	12.136	35.010
28	SOOT000800_DX	7.0736	10.344	28.827	5.6134	11.022	33.080
29	SOOT000800_AX	4026.0	4027.8	4042.2	4019.8	4017.8	4239.2
30	SOOT000801	2.8555	1.8753	38.514	-.15197	1.2586	19.597
31	SOOT000802	2.5162	1.8083	43.802	.26874	.04882	21.124
32	ICSA	-.00880	.08221	-.02167	.01384	-.03318	-.00009
33	ICSAB	.00644	1.0475	-.02202	.00457	-.03180	.04990
34	CCV	5.0790	4.9871	5.0313	4.9965	4.9553	5.2615
35	CCV1	.01982	.02653	.00668	.00682	.03439	.00107
36	CCB	.01446	-.02009	-.00011	-.00154	.01182	.00436

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.9724	4.8431	-.06099	5.0441	4.9201	9.7909
2	ICV1	-.00143	.00015	4.9845	.00132	.06097	.05505
3	ICB	-.00804	-.00006	-.00096	-.00032	.00828	-.02653
4	LLS	.18607	.01993	.00163	.02004	.43240	.44434
5	LLS1	-.00596	.00000	.09918	-.00011	.01069	-.01449
6	ICSA	-.02053	.00189	-.00703	.00062	-.01943	.25748
7	ICSAB	-.02644	.00199	-.01198	-.00004	.00315	.24517
8	PREPBLKTJA	Q-.83680	.00518	.53247	Q.01948	Q.73891	Q-10.473
9	SOOT000797_L	.88188	.88796	.81324	.00210	.00785	.00472
10	SOOT000797_L	.01688	1.6335	1.4704	.42766	1.5477	.71582
11	SOOT000797	1.0534	1.5789	1.4056	.54248	.68662	7.4355
12	SOOT000797_D	.80735	1.5734	1.1529	.45716	.23707	6.4711
13	SOOT000797_A	38.990	38.463	40.651	38.479	40.165	85.299

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
14	S00T000797_X	13.339	1.7398	-1.1941	.57349	-7.1281	51.658
15	S00T000797_DX	15.201	1.7393	2.0093	.78019	5.6185	57.825
16	S00T000797_AX	3831.1	3838.7	3881.6	3862.6	3936.5	7711.9
17	S00T000798	1.4256	1.7987	.98632	.21403	-.10163	12.232
18	S00T000799	2.3091	1.6669	.95098	.30488	-.21882	14.770
19	CCV	4.9789	4.8524	.85528	5.0623	5.0592	9.8267
20	CCV	4.8719	4.7388	-.04933	4.9695	4.9318	9.6387
21	CCV1	.03837	.00051	5.0172	.00267	.00948	.17761
22	CCB	.03284	.00042	.00044	.00062	-.00366	.12381
23	S00T000800_L	5.7515	1.4992	-.86575	.08571	-1.9244	33.049
24	S00T000800	1.9910	1.3978	1.9049	.16222	-.16710	20.312
25	S00T000800_D	2.3556	1.3769	1.2035	.25017	.84292	22.082
26	S00T000800_A	40.931	40.078	42.571	40.191	39.704	99.306
27	S00T000800_X	14.115	1.5584	-.07685	.50553	-.04737	67.957
28	S00T000800_DX	15.200	1.5857	4.9442	.84885	2.8429	72.410
29	S00T000800_AX	4028.9	4024.9	3971.0	4004.1	4048.4	8123.9
30	S00T000801	1.6916	1.3881	1.3369	.28950	-.55352	20.517
31	S00T000802	1.3147	1.5350	1.8218	.25901	.19235	19.120
32	ICSA	-.00590	.00205	-.00361	.00235	-.03017	.30760
33	ICSA B	-.00533	.00213	-.00321	.00204	-.04027	.30646
34	CCV	5.0173	4.8842	-.05312	5.0421	5.0045	9.9015
35	CCV1	.01866	.00034	5.0820	.00277	.00033	.09677
36	CCB	.00599	.00006	-.00784	-.00050	-.01273	.02557

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.0582	.00566	5.0357	5.0465
2	ICV1	.00359	4.9197	.00045	-.01628
3	ICB	-.00124	-.00040	.00018	-.00108
4	ILS	.09863	-.00060	.02097	.01831
5	ILS1	-.00080	.01980	.00060	-.00124
6	ICSA	-.00734	.00572	-.00604	.00399
7	ICSA B	.47789	.00562	1.0165	.00377
8	PREPBLKTJA	Q-.09409	-.03431	Q-.16176	Q-.09805
9	S00T000797_L	.00050	.00272	.00835	.50882
10	S00T000797_L	-.02736	.58106	-1.7498	103.41
11	S00T000797	.13164	.61697	-1.5317	101.91
12	S00T000797_D	.08732	.61092	-1.5746	101.62
13	S00T000797_A	39.060	39.216	38.276	136.48
14	S00T000797_X	2.3491	1.1408	-1.2934	101.12
15	S00T000797_DX	2.7552	1.1597	-1.3059	100.49
16	S00T000797_AX	3898.5	3908.3	3942.3	3962.4
17	S00T000798	.14988	.70752	.31725	114.51
18	S00T000799	.31084	.72152	-.51844	109.47
19	CCV	5.0925	.80695	5.0804	5.0580
20	CCV	5.0186	.00740	5.0292	4.9725
21	CCV1	.00917	4.9394	.00053	-.02330
22	CCB	.00588	.00126	.00073	.00352
23	S00T000800_L	.78071	.99798	.33120	124.73
24	S00T000800	.16059	.86773	.42411	121.16
25	S00T000800_D	.26458	.88206	.39889	119.46
26	S00T000800_A	40.567	41.240	41.685	162.25
27	S00T000800_X	2.1384	1.3492	.62978	120.40

DATA
NOT USED

LABCORE Data Entry Template for Worklist# 33402

Analyst: VLM Instrument: ICP02 Book# Set # 009111Method: LA-505-151/161 Rev/Mod C-5

Worklist Comment: ICP AZ-101 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@ICP-QC	QC		
2 ICB			@ICP-QC	QC		
3 LLS			@ICP-QC	QC		
4 ICSA			@ICP-QC	QC		
5 ICSAB			@ICP-QC	QC		
6 SERDIL	S00T000778	0 D	@ICP-D05	LIQUID		
7 SAMPLE	S00T000778	0 D	@ICP-D05	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PD-D-01 , PR-D-01 , RB-D-01 , RH-D-01 , RU-D-01 , SN-D-01 , TA-D-01 , TE-D-01 , W-D-01						
8 DUP	S00T000778	0 D	@ICP-D05	LIQUID		
9 SPK-POST	S00T000778	0 D	@ICP-D05	LIQUID		
10 SAMPLE	S00T000781	0 D	@ICP-D05	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PD-D-01 , PR-D-01 , RB-D-01 , RH-D-01 , RU-D-01 , SN-D-01 , TA-D-01 , TE-D-01 , W-D-01						
11 SAMPLE	S00T000784	0 D	@ICP-D05	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PD-D-01 , PR-D-01 , RB-D-01 , RH-D-01 , RU-D-01 , SN-D-01 , TA-D-01 , TE-D-01 , W-D-01						
12 ICSA			@ICP-QC	QC		
13 ICSAB			@ICP-QC	QC		
14 CCV			@ICP-QC	QC		
15 CCB			@ICP-QC	QC		

Data Entry Comments:

Uploaded + Validated by:Saul M. Pung05/02/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 33402

S Type Sample# R A Test Matrix Group# Project

Final page for worklist # 33402

for VLM Saul M. Lay 05/02/00

Signature

Date

Signature

Date

S00T000778

$$S_n = \frac{\left(\frac{457.60}{401} \right) - 0}{1} \times 100 = 114.0\%$$

$$R_b = \frac{\left(\frac{306.87}{401} \right) - 1}{1} \times 100 = 76.5\%$$

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	BLANK	42500A	ICP20	04/25/00	10:20		X	IR
2	10ppm Std2	42500A	ICP20	04/25/00	10:23		X	IR
3	10ppm Std1	42500A	ICP20	04/25/00	10:26		X	IR
4	ICV2	42500A	ICP20	04/25/00	10:29	VLM	Q	CONC
5	ICV2A	42500A	ICP20	04/25/00	10:32	VLM	Q	CONC
6	ICB2	42500A	ICP20	04/25/00	10:36	VLM	Q	CONC
7	LLS2	42500A	ICP20	04/25/00	10:41	VLM	Q	CONC
8	LLS2A	42500A	ICP20	04/25/00	10:45	VLM	Q	CONC
9	ICSA	42500A	ICP20	04/25/00	10:47	VLM	Q	CONC
10	ICSA	42500A	ICP20	04/25/00	10:50	VLM	Q	CONC
11	ICSAB	42500A	ICP20	04/25/00	10:53	VLM	Q	CONC
12	S00T000778_L	42500A	ICP20	04/25/00	10:57	VLM	S	CONC
13	S00T000778	42500A	ICP20	04/25/00	11:00	VLM	S	CONC
14	S00T000778_D	42500A	ICP20	04/25/00	11:03	VLM	S	CONC
15	S00T000778_A	42500A	ICP20	04/25/00	11:07	VLM	S	CONC
16	S00T000778_A	42500A	ICP20	04/25/00	11:10	VLM	S	CONC
17	S00T000781	42500A	ICP20	04/25/00	11:14	VLM	S	CONC
18	S00T000784	42500A	ICP20	04/25/00	11:17	VLM	S	CONC
19	ICSA	42500A	ICP20	04/25/00	11:20	VLM	Q	CONC
20	ICSAB	42500A	ICP20	04/25/00	11:24	VLM	Q	CONC
21	CCV2	42500A	ICP20	04/25/00	11:26	VLM	Q	CONC
22	CCV2A	42500A	ICP20	04/25/00	11:30	VLM	Q	CONC
23	CCB2	42500A	ICP20	04/25/00	11:35	VLM	Q	CONC

~~please attach to worksheet 33301~~

file # 42100A

Valerie L Massie

04-25-00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 959 TO 962

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Analysis Report

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#	Sample Name	Ag	Al	Be	Ca	Cd	Ce
1	BLANK	-.01513	.0696	.01293	-.04266	-.00156	.0102
2	10ppm Std2						2.5174
3	10ppm Std1						
4	ICV2	.06735	.86329	-.00081	.32867	-.00236	5.0909
5	ICV2A	-.00095	.04987	.00210	-.00156	-.02561	.01754
6	ICB2	-.00039	-.00634	.00008	.01302	-.00106	-.00558
7	LLS2	.01416	.18341	-.00012	.07041	-.00040	1.0133
8	LLS2A	.00183	.02094	.00053	-.00125	-.00464	.00558
9	ICSA <i>W Mass 04-25-00</i>	.02229	2241.05	.00027	2229.95	.01164	.00319
10	ICSA	-.02128	241.52	.00019	230.48	.01167	.00425
11	ICSAB	.93492	241.44	.46813	230.08	.96290	-.00372
12	S00T000778_L	-.43452	7756.2	.45006	19.902	1.5671	-10.663
13	S00T000778	.25350	7672.3	.30959	14.531	.98809	4.1584
14	S00T000778_D	-.39495	7557.3	.30200	3.9834	.57026	.53313
15	S00T000778_A	3.8053	7463.4	.19644	31.108	.69640	366.37
16	S00T000778_A	-1.1362	7731.8	.47488	7.7337	-.95566	-3.5187
17	S00T000781	1.0848	7814.9	.33346	5.0802	1.4635	9.3831
18	S00T000784	-.94219	7718.2	.29440	3.5717	.50474	-3.6253
19	ICSA	-.02040	233.99	.00023	229.84	.01219	.01302
20	ICSAB	.91811	235.12	.46005	228.92	.95059	.00079
21	CCV2	.06232	.85149	-.00085	.32875	-.00212	4.9529
22	CCV2A	.00149	.06361	.00204	.00196	-.02405	.03164
23	CCB2	.00213	.01191	.00020	.01590	.00060	.01090

#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
1	BLANK	.00493	.00786	.00293	.124	-.00173	.00219
2	10ppm Std2				21.1974		
3	10ppm Std1						
4	ICV2	-.00227	.00882	.03272	5.0061	.00366	-.08195
5	ICV2A	.00484	-.00378	.07953	.00128	.00378	-.19384
6	ICB2	.00005	.00108	.00142	.000033	.00008	.01251
7	LLS2	.00213	.00231	.00797	.97184	.00381	-.01004
8	LLS2A	.00136	.00018	.01732	.00071	.00574	-.02260
9	ICSA <i>W Mass 04-25-00</i>	.00046	.01732	.00010	.10659	95.971	264.72
10	ICSA	-.00021	-.01667	.00065	.10930	96.068	264.14
11	ICSAB	.47054	.46136	.48588	.11010	95.861	263.59
12	S00T000778_L	7.0270	743.05	3.2005	1.9053	4.4844	19.384
13	S00T000778	.22810	729.52	-.51922	.45941	4.1296	10.115
14	S00T000778_D	-.51434	724.32	-1.0580	.41925	.42664	5.5324
15	S00T000778_A	.97817	711.88	2.4948	353.93	4.3940	-6.2358
16	S00T000778_A	.35457	735.60	5.2136	-.00185	6.7263	-14.253
17	S00T000781	1.4424	745.28	.26661	-.18335	4.8235	16.084
18	S00T000784	.54417	730.15	-.24347	-.35286	1.5913	3.6207
19	ICSA	.00141	-.01601	.00039	.09851	94.726	258.58
20	ICSAB	.46449	.45385	.47096	.10214	94.531	258.36
21	CCV2	-.00427	.00665	.03012	4.8371	.00192	-.09431
22	CCV2A	.00482	-.00361	.07864	.00228	.00569	-.15141
23	CCB2	.00098	.00196	.00228	.00113	.00161	.02602

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#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
1	BLANK	.0114	-.21146	.00293	-.04726	.05119	2.16913
2	10ppm Std2						7.26186
3	10ppm Std1			2.92806			
4	ICV2	-.01366	.05167	-1.6820	.00524	.07409	4.9713
5	ICV2A	-.00027	.01988	5.0051	.00059	1.1536	.20136
6	ICB2	-.00012	.01878	-.00547	.00405	.01687	-.01507
7	LLS2	-.00258	.02390	-.34004	.00380	.03084	.90548
8	LLS2A	.00004	.02299	1.0069	.00311	.24152	.08301
9	ICSA 04-25-00 JLM	-.01511	179.77	-.07454	-.00433	.07770	-.11134
10	ICSA	-.01506	181.20	.07659	-.00195	.06906	.13510
11	ICSAB	.42714	184.28	.07407	.94140	1.0357	.10805
12	S00T000778_L	.06266	106930.	-9.2171	17.813	24.627	105.63
13	S00T000778	.22683	102550.	.21822	2.7149	7.3155	-5.4428
14	S00T000778_D	.13598	99054.	-2.2318	2.2032	-3.2977	-4.6861
15	S00T000778_A	-.84591	97624.	-132.82	1.4166	12.650	373.75
16	S00T000778_A	.15004	100580.	389.19	3.4016	91.451	-41.390
17	S00T000781	.30514	100590.	3.0612	2.4937	7.0882	-29.772
18	S00T000784	.11631	100830.	-2.8804	2.3826	1.6343	-64.973
19	ICSA	-.01448	170.72	.08215	.00384	.08050	.25769
20	ICSAB	.42121	177.30	.08235	.92567	1.0287	.23461
21	CCV2	-.01340	-.02998	-1.6580	.00381	.04987	4.8946
22	CCV2A	-.00004	.01422	4.9796	.00803	1.1537	.31108
23	CCB2	.00032	.01687	.00227	.00590	.00692	.08684

#	Sample Name	Pr	Rb	Rh	Ru	Sn	Ta
1	BLANK	.13653	.05393	.05739	-.03773	-.01386	-.01066
2	10ppm Std2	23.3115	.11733	7.57973	24.0355		
3	10ppm Std1					4.40613	6.42926
4	ICV2	5.0740	4.8238	5.0670	5.0834	.03097	.01726
5	ICV2A	-.01104	-.35639	-.00079	-.07177	5.0305	4.9911
6	ICB2	-.00261	-.09162	-.01240	.00044	.00527	.02331
7	LLS2	1.0131	Q.67355	1.0131	1.0217	.04658	.01913
8	LLS2A	.00195	.25506	.00744	-.01207	1.0508	1.0273
9	ICSA 04-25-00 JLM	-.02085	.05993	-.00168	.95412	-.01453	-.02932
10	ICSA	-.02402	.17218	.00824	.95515	-.01745	.00641
11	ICSAB	-.02931	-.41882	.00797	.94968	-.02227	.00115
12	S00T000778_L	-2.3071	-96.451	-5.6862	-8.3432	79.883	26.769
13	S00T000778	.87669	148.28	8.2450	-3.7436	55.942	4.8082
14	S00T000778_D	-.64598	139.88	4.1936	-3.9196	63.273	4.8851
15	S00T000778_A	365.30	306.87	360.82	377.32	60.985	7.3653
16	S00T000778_A	-4.4988	-162.42	-1.3505	-10.760	457.60	408.99
17	S00T000781	2.3648	377.11	13.505	-.18982	61.793	7.5008
18	S00T000784	-2.5955	-207.28	-.28430	-5.0981	61.864	7.2630
19	ICSA	-.02151	.47718	.00912	.95341	-.02989	.01175
20	ICSAB	-.02577	.48747	.01515	.94866	-.02247	-.01140
21	CCV2	4.9308	Q3.8231	4.8848	5.0631	.03474	.01871
22	CCV2A	-.00163	.61153	.01586	-.06728	5.0605	5.0430
23	CCB2	.00825	.54025	.01462	.00445	.00678	.02221

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#	Sample Name	Te	Th	U	V	W	Y
1	BLANK	-.00806	.01353	1.43906	-.00726	-.00986	.03766
2	10ppm Std2		3.22393	8.38986			13.6977
3	10ppm Std1	1.19046				1.75826	
4	ICV2	.03893	5.0652	5.0763	-.00773	.0464	5.0164
5	ICV2A	4.9778	.00572	.01221	.00129	5.031	.00014
6	ICB2	.04449	0.00180	-.00547	-.00055	.0004	0-.00019
7	LLS2	.02169	1.0179	1.0164	-.00018	.0383	.99647
8	LLS2A	1.0546	.01214	.00963	.00128	1.003	.00000
9	ICSA 04-25-00 vum	.02614	.00883	.14300	-.01560	1.622	.00584
10	ICSA	.02669	.01230	.15410	-.01523	-1.842	.00584
11	ICSAB	-.08121	.00447	.14563	.47683	-1.692	.00579
12	S00T000778_L	33.458	7.0292	80.472	1.4748	-157.3	.65105
13	S00T000778	20.075	2.4347	40.465	2.5096	-177.2	.11985
14	S00T000778_D	6.2454	.72785	50.711	1.8461	-170.8	.13507
15	S00T000778_A	4.0149	379.91	432.27	.58965	-158.0	372.99
16	S00T000778_A	403.94	-1.9232	31.549	1.3287	207.8	-.07214
17	S00T000781	22.305	7.7538	28.476	3.3218	-207.5	-.10999
18	S00T000784	8.9220	-.00300	24.652	1.1812	-178.8	-.18668
19	ICSA	.02558	.02217	.16278	-.01371	-1.476	.00657
20	ICSAB	-.08677	.01684	.18966	.47005	-1.300	.00660
21	CCV2	.06952	4.9915	4.9838	-.00902	.0487	4.9336
22	CCV2A	5.0072	.00991	.05500	.00369	4.960	.00061
23	CCB2	.04728	.01051	.03149	.00331	-.0396	.00027

#	Sample Name	Zn	Zr
1	BLANK	.04479	.028
2	10ppm Std2		
3	10ppm Std1		
4	ICV2	.00089	.3657
5	ICV2A	-.00089	.0023
6	ICB2	.00040	.0000
7	LLS2	.00038	.0727
8	LLS2A	-.00041	.0009
9	ICSA 04-25-00 vum	.01159	.0047
10	ICSA	.01162	.0044
11	ICSAB	.99161	.0050
12	S00T000778_L	-1.1713	3.611
13	S00T000778	-.03729	2.451
14	S00T000778_D	-.22258	.6930
15	S00T000778_A	-.15596	30.76
16	S00T000778_A	-.36074	4.765
17	S00T000781	-.28666	1.263
18	S00T000784	-.39329	-.0188
19	ICSA	.01216	.0065
20	ICSAB	.97904	.0069
21	CCV2	.00118	.3574
22	CCV2A	-.00010	.0045
23	CCB2	.00128	.0011

Valerie L Massie

04-25-00

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LABCORE Data Entry Template for Worklist# 33414

Analyst: VLM Instrument: ICP02 Book# Lot # 009111Method: LA-505-151(161) Rev/Mod C-5

Worklist Comment: ICP AZ-101 (SOLID ACID DIGEST)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPBLKTJA		@ICP-A05	SOLID		
7	SERDIL	S00T000804 0 A	@ICP-A05	SOLID		
8	SAMPLE	S00T000804 0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01						
9	DUP	S00T000804 0 A	@ICP-A05	SOLID		
10	SPK-POST	S00T000804 0 A	@ICP-A05	SOLID		
11	CCV		@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S00T000805 0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01						
14	SAMPLE	S00T000803 0 A	@ICP-A05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01						
15	ICSA		@ICP-QC	QC		
16	ICSAB		@ICP-QC	QC		

Data Entry Comments:

Uploaded + Validated by:Sal M. Pang05/02/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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LABCORE Data Entry Template for Worklist# 33414

S Type	Sample#	R A	Test	Matrix	Group#	Project
17 CCV			@ICP-QC	QC		
18 CCB			@ICP-QC	QC		

Final page for worklist # 33414

for Saul M. Pang
VLM 05/02/2000

Signature

Date

Signature

Date

*Data Entry Comments:**S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.*

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Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	BLANK	990303B	ICP20	04/24/00	12:40	X	IR	
2	10ppm Std2	990303B	ICP20	04/24/00	12:51	X	IR	
3	10ppm Std1	990303B	ICP20	04/24/00	12:53	X	IR	
4	ICV2	990303B	ICP20	04/24/00	12:55	VLM	Q	CONC
5	ICV2A	990303B	ICP20	04/24/00	12:58	VLM	Q	CONC
6	ICV2A	990303B	ICP20	04/24/00	13:03	VLM	Q	CONC
7	BLANK	990303B	ICP20	04/24/00	13:07	X	IR	
8	10ppm Std1	990303B	ICP20	04/24/00	13:10	X	IR	
9	ICV2	990303B	ICP20	04/24/00	13:13	VLM	Q	CONC
10	ICV2A	990303B	ICP20	04/24/00	13:16	VLM	Q	CONC
11	ICB	990303B	ICP20	04/24/00	13:19	VLM	Q	CONC
12	LLS2	990303B	ICP20	04/24/00	13:23	VLM	Q	CONC
13	LLS2A	990303B	ICP20	04/24/00	13:27	VLM	Q	CONC
14	LLS2A	990303B	ICP20	04/24/00	13:21	VLM	Q	CONC
15	LLS2A	990303B	ICP20	04/24/00	13:34	VLM	Q	CONC
16	ICSA	990303B	ICP20	04/24/00	13:37	VLM	Q	CONC
17	ICSAB	990303B	ICP20	04/24/00	13:40	VLM	Q	CONC
18	PREP BLK 804	990303B	ICP20	04/24/00	13:44	VLM	S	CONC
19	SOOT0000204_L	990303B	ICP20	04/24/00	13:48	VLM	S	CONC
20	SOOT000804	990303B	ICP20	04/24/00	13:51	VLM	S	CONC
21	SOOT000804_D	990303B	ICP20	04/24/00	13:54	VLM	S	CONC
22	SOOT000804_X	990303B	ICP20	04/24/00	13:59	VLM	S	CONC
23	SOOT000804_DX	990303B	ICP20	04/24/00	14:02	VLM	S	CONC
24	SOOT000804_AX	990303B	ICP20	04/24/00	14:06	VLM	S	CONC
25	SOOT000804_AX2	990303B	ICP20	04/24/00	14:09	VLM	S	CONC
26	CCV	990303B	ICP20	04/24/00	14:12	VLM	Q	CONC
27	CCV2A	990303B	ICP20	04/24/00	14:15	VLM	Q	CONC
28	CCV2A	990303B	ICP20	04/24/00	14:19	VLM	Q	CONC
29	CCB	990303B	ICP20	04/24/00	14:22	VLM	Q	CONC
30	SOOT000804 ⁵	990303B	ICP20	04/24/00	14:25	VLM	S	CONC
31	SOOT000803	990303B	ICP20	04/24/00	14:29	VLM	S	CONC
32	ICSA	990303B	ICP20	04/24/00	14:33	VLM	Q	CONC
33	ICSAB	990303B	ICP20	04/24/00	14:37	VLM	Q	CONC
34	CCV2	990303B	ICP20	04/24/00	14:40	VLM	Q	CONC
35	CCV2	990303B	ICP20	04/24/00	14:43	VLM	Q	CONC
36	CCV2A	990303B	ICP20	04/24/00	14:46	VLM	Q	CONC
37	CCB	990303B	ICP20	04/24/00	14:50	VLM	Q	CONC

Leslie Dery for U Massey
4/21/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 965 TO 970.

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Analysis Report

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#	Sample Name	Ag	Al	Be	Ca	Cd	Ce
1	BLANK	.01413	.06506	.012	.03066	.00073	.00993
2	10ppm Std2						2.49726
3	10ppm Std1						
4	ICV2	.06665	.85169	.00096	.39197	.00227	5.0206
5	ICV2A	.00174	.04369	.00211	.00930	.02824	.01688
6	ICV2A	.00115	.05093	.00220	.00902	.02910	.01983
7	BLANK	.01486	.06286	.01193	.0346	.0036	.00833
8	10ppm Std1						
9	ICV2	.06850	.87655	.00086	.39978	.00041	5.1471
10	ICV2A	.00090	.06022	.00230	.00558	.02717	.01767
11	ICB	.00010	.00325	.00002	.00683	.00033	.00187
12	LLS2	.01418	.19147	.00023	.08036	.00088	1.0275
13	LLS2A	.00075	.01713	.00046	.00957	.00503	.00696
14	LLS2A	.00192	.01238	.00046	.01202	.00593	.00080
15	LLS2A	.00095	.02566	.00048	.00782	.00425	.01633
16	ICSA	.02452	239.61	.00012	280.52	.01552	.01312
17	ICSAB	.95432	240.05	.48203	280.63	1.0135	.00267
18	PREP BLK 804	.00082	.12156	.00084	.03774	.00260	.00991
19	SOOT0000804-L	1.3123	702.18	.07703	20.046	46.695	4.7142
20	SOOT000804	1.3224	672.42	.07342	19.256	44.138	4.6298
21	SOOT000804_D	1.3234	672.58	.07331	19.227	44.045	4.6231
22	SOOT000804_X	1.4340	698.77	.07790	20.003	46.472	5.4240
23	SOOT000804_DX	1.3980	698.86	.07897	20.015	46.553	5.3035
24	SOOT000804_AX	7.9086	778.63	.01638	59.761	45.481	506.00
25	SOOT000804_AX2	1.2843	697.36	.28951	19.459	43.375	7.3258
26	CCV	.06819	.87710	.00083	.39974	.00109	5.1709
27	CCV2A	.00001	.06106	.00219	.00259	.02689	.02732
28	CCV2A	.00042	.05864	.00219	.00366	.02640	.02973
29	CCB 805	.00084	.01152	.00003	.01010	.00100	.01526
30	SOOT000803	1.4363	415.52	.07505	21.490	45.258	4.6794
31	SOOT000803	1.4393	416.38	.07506	21.493	45.209	4.7075
32	ICSA	.02631	245.36	.00022	278.95	.01411	.00241
33	ICSAB	.96032	242.18	.48531	280.45	1.0130	.01071
34	CCV2	.06767	.87590	.00090	.40164	.00147	5.1599
35	CCV2	.06747	.86968	.00088	.39552	.00095	5.0608
36	CCV2A	.00024	.06560	.00217	.00447	.02557	.03241
37	CCB	.00217	.01640	.00003	.00984	.00160	.01901

#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
1	BLANK	.00506	.0078	.00313	.12686	0	.00413
2	10ppm Std2				20.8673		
3	10ppm Std1						
4	ICV2	.00599	.00671	.02844	4.9396	.00165	.08665
5	ICV2A	.00399	.00315	.07693	.00154	.00343	.18657
6	ICV2A	.00497	.00394	.07924	.00057	.00360	.18913
7	BLANK	.00413	.00686	.00253	.1248	.00159	.0014
8	10ppm Std1						
9	ICV2	.00231	.01024	.03297	5.0316	.00353	.09081
10	ICV2A	.00467	.00325	.08104	.00027	.00488	.20454
11	ICB	.00144	.00086	.00042	.00088	.00072	.00326
12	LLS2	.00070	.00223	.00743	.98157	.00405	.00687

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#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
13	LLS2A	.00272	.00061	.01865	-.00069	.00464	-.04206
14	LLS2A	.00336	.00000	.01827	.00056	.00444	-.05003
15	LLS2A	.00418	.00038	.01751	.00225	.00482	-.02094
16	ICSA	.00205	-.02046	.00129	.00921	99.251	267.44
17	ICSAB	.49257	.48280	.47467	.01237	99.268	267.18
18	PREP BLK 804	.00321	.00752	.00400	-.00054	.06267	.02228
19	SOOT000Q284_L	.26430	4.0671	1.6180	.15516	549.25	2.3236
20	SOOT000804	.30044	3.8811	1.5513	.12232	527.31	2.3607
21	SOOT000804_D	.29884	3.8787	1.5541	.12280	526.59	2.3916
22	SOOT000804_X	.39718	4.1140	1.7611	.18220	546.10	3.6228
23	SOOT000804_DX	.39280	4.0771	1.7253	.18852	546.27	3.3626
24	SOOT000804_AX	-.26734	4.8205	4.5890	501.57	538.23	-6.9245
25	SOOT000804_AX2	.77267	3.6583	9.3459	.25009	544.66	-16.979
26	CCV	-.00351	.00912	.03248	5.1042	.00202	-.09123
27	CCV2A	.00748	-.00141	.08038	.00249	.00547	-.17201
28	CCV2A	.00617	-.00106	.08043	.00161	.00508	-.18538
29	CCB	-.00028	-.00031	-.00016	.00179	.00113	.01936
30	SOOT000803	.31571	4.5883	1.6023	.12318	566.43	2.4520
31	SOOT000803	.32864	4.6047	1.6153	.12602	566.15	2.3978
32	ICSA	.00124	-.02216	-.00180	.01616	99.330	270.75
33	ICSAB	.49135	.48307	.47897	.01320	99.327	268.38
34	CCV2	-.00609	.00706	.03042	5.0564	.00410	-.09446
35	CCV2	-.00271	.00864	.03190	4.9730	.00270	-.08950
36	CCV2A	.00874	-.00180	.08069	.00194	.00509	-.18444
37	CCB	.00184	.00059	.00118	.00179	.00109	.02576

#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
1	BLANK	.01179	-.20793	.0034	-.03586	.05606	2.20553
2	10ppm Std2						7.3796
3	10ppm Std1			2.9168			
4	ICV2	-.01429	-.00998	-1.6105	-.00432	.05444	4.9227
5	ICV2A	-.00029	.01721	5.0527	-.00023	1.2470	Q.16088
6	ICV2A	-.00043	.06721	5.1839	-.00299	1.2656	.04017
7	BLANK	.0114	-.20559	.0014	-.0368	.04173	2.13879
8	10ppm Std1			3.01099			
9	ICV2	-.01481	.05330	-1.5752	-.00523	.08708	4.9933
10	ICV2A	-.00012	.05308	5.0611	-.00676	1.2903	.09714
11	ICB	-.00008	.02470	.00310	-.00416	.02784	-.05724
12	LLS2	-.00287	.03040	-.31742	-.00598	.03569	.94509
13	LLS2A	-.00003	.04804	Q1.0019	-.00339	.28230	-.00508
14	LLS2A	-.00018	-.00846	.98817	-.00756	.28211	Q.06697
15	LLS2A	.00006	-.03305	.98374	-.00018	.27374	.21859
16	ICSA	-.01654	181.80	.07582	-.01500	.11297	.21890
17	ICSAB	.44220	182.73	.07116	.99187	1.1172	.18784
18	PREP BLK 804	.00191	.87915	.00420	-.00646	.02955	-.10775
19	SOOT000Q284_L	6.7165	1215.9	-.02555	31.206	2.3229	2.7781
20	SOOT000804	6.4290	1132.4	.15662	29.148	2.4839	1.3393
21	SOOT000804_D	6.4282	1141.6	.11559	29.243	2.4237	1.3111
22	SOOT000804_X	6.6779	1240.3	.50043	30.517	3.3186	6.8841
23	SOOT000804_DX	6.6807	1238.8	.65549	31.111	3.8898	7.3289
24	SOOT000804_AX	5.1350	1245.7	-154.01	30.427	8.5017	495.79
25	SOOT000804_AX2	6.6314	1252.8	487.37	30.533	128.09	22.454

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#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
26	CCV	-.01467	-.01100	Q-1.5860	-.00533	.07493	5.0371
27	CCV2A 8/5/2/0	-.00001	.00752	4.9329	-.00558	1.3005	.30059
28	CCV2A	.00001	-.00008	4.9546	-.00386	1.2811	.28622
29	CCB	.00015	-.07653	.00487	-.00383	.01733	.16861
30	S00T000803	7.0351	1478.4	.18569	29.880	2.6376	1.2317
31	S00T000803	7.0611	1479.4	.13252	29.851	2.6355	1.1542
32	ICSA	-.01670	194.54	.07242	-.01173	.08166	.10402
33	ICSAB	.44402	186.81	.07645	.98609	1.0980	.17583
34	CCV2 8/5/2/0	-.01452	-.02350	Q-1.5796	-.00734	.06641	5.0350
35	CCV2	-.01423	-.03840	-1.5612	-.00246	.07284	4.9941
36	CCV2A	.00001	.01589	4.9019	-.00552	1.2697	.26610
37	CCB	.00023	-.05515	.00974	-.00190	.02405	.16412

#	Sample Name	Pr	Rb	Rh	Ru	Sn	Ta
1	BLANK	.13686	.05513	.06399	-.03339	-.0086	.00119
2	10ppm Std2	22.8567	.1074	7.40333	24.5361		
3	10ppm Std1 8/5/2/0					4.46273	6.0078
4	ICV2	4.9983	4.9140	5.0004	5.0441	Q.01958	Q.00907
5	ICV2A	Q-.01188	Q-.25961	Q-.00799	Q-.07260	5.0911	5.4375
6	ICV2A	-.01455	-.58075	-.00926	-.07358	5.1723	Q5.5959
7	BLANK	.12606	.05146	.05486	-.03846	-.00953	-.00193
8	10ppm Std1					4.52786	6.15273
9	ICV2	5.1325	4.7558	5.1085	5.1270	.02208	.00449
10	ICV2A	-.01091	-.19623	.00090	-.07372	5.0637	5.4478
11	ICB	-.00041	-.25385	.00444	.00162	.00190	-.00096
12	LLS2	1.0254	1.0943	1.0217	1.0301	.02054	.00594
13	LLS2A 8/5/2/0	-.00029	.10398	.00798	-.01256	Q1.0380	Q1.0737
14	LLS2A	Q-.00331	Q-.34642	Q-.01551	Q-.01687	1.0394	1.0733
15	LLS2A	.00483	.93537	.01378	-.01065	1.0433	1.0491
16	ICSA	-.02179	.42384	.00789	.90691	-.02277	-.01306
17	ICSAB	-.02557	.08908	.00934	.90595	-.03281	-.00844
18	PREP BLK 804 8/5/2/0	.00343	-.09204	.00716	.00396	.06081	.00151
19	S00T0000204_L 8/5/2/0	2.9476	-14.016	.77567	8.7222	2.2251	.04481
20	S00T000804	2.8747	3.5340	1.1236	8.3489	2.2799	.03006
21	S00T000804_D	2.8731	3.3616	1.1118	8.3507	2.2108	.05004
22	S00T000804_X	3.3523	36.523	2.2726	8.9808	2.1337	.08632
23	S00T000804_DX	3.3919	35.369	2.1320	8.8805	2.4202	.04293
24	S00T000804_AX	503.15	443.57	498.22	505.79	1.6179	.80503
25	S00T000804_AX2	2.1835	-6.2104	1.4969	1.7326	496.00	531.38
26	CCV	5.1797	4.5591	5.2054	5.1149	Q.01768	Q.00787
27	CCV2A 8/5/2/0	-.00425	.33491	.01605	-.07033	5.0790	5.4196
28	CCV2A	-.00463	.47354	.00235	-.06854	5.0650	5.3800
29	CCB 805	.00841	.87779	.01796	.00249	.00220	.01192
30	S00T000803 8/5/2/0	2.9332	-.77521	1.0977	8.8871	2.4987	-.00180
31	S00T000803	2.9392	-.71767	1.0810	8.9051	2.4317	.02560
32	ICSA	-.02630	.12440	-.00843	.90725	-.02841	-.01879
33	ICSAB	-.02853	.29724	.01542	.90693	-.02614	-.01613
34	CCV2 8/5/2/0	5.1561	5.1588	5.1591	5.1039	Q.02076	Q.00266
35	CCV2	5.0397	4.7995	5.0199	5.0871	.02987	.00591
36	CCV2A	-.00349	.78539	.00925	-.06952	4.9676	5.2874
37	CCB	.00970	.85476	.02485	.00539	.00102	.00019

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Analysis Report

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#	Sample Name	Te	Th	U	V	W	Y
1	BLANK	-.007	.01513	1.46926	-.006	-.01006	.03853
2	10ppm Std2		3.25713	8.32593			13.7166
3	10ppm Std1	1.1972				1.7288	
4	ICV2	.07363	5.0144	5.0063	-.00982	Q.0441	4.9397
5	ICV2A	5.0579	-.00354	Q.01428	-.00037	5.102	.00014
6	ICV2A	5.1819	Q.00252	-.05182	-.00114	5.265	Q-.00056
7	BLANK	-.00653	.01293	1.43826	-.00706	-.01099	.03779
8	10ppm Std1	1.23486				1.77779	
9	ICV2	.04188	5.1280	5.1093	-.00770	.0666	5.0623
10	ICV2A	5.0271	.00245	-.03104	.00097	5.107	-.00032
11	ICB	.01181	.00581	-.03076	.00057	-.0137	-.00042
12	LLS2	.02631	1.0242	1.0409	-.00019	.0161	.99948
13	LLS2A	Q.95644	.00197	-.02710	.00057	Q1.017	-.00037
14	LLS2A	1.0150	-.00096	.02894	-.00153	1.012	.00023
15	LLS2A	.95161	.00207	.09952	.00211	.9888	.00103
16	ICSA	.01933	.01660	-.08797	-.01679	.2103	.00691
17	ICSAB	-.07249	.01857	-.09772	.48530	.3661	.00681
18	PREP BLK	-.00429	.00918	-.03931	.00210	-.0054	.00021
19	SOOT0000204_L	1.3291	1.2248	33.083	-1.2388	-5.157	1.2561
20	SOOT0000804	1.0204	1.3403	30.233	-1.1504	-5.799	1.2051
21	SOOT0000804_D	1.0284	1.3529	30.277	-1.1397	-5.660	1.2029
22	SOOT0000804_X	2.3361	1.8264	34.677	-1.0312	-5.733	1.2651
23	SOOT0000804_DX	2.2287	1.8713	34.707	-1.0409	-5.714	1.2651
24	SOOT0000804_AX	5.2629	501.78	529.22	-1.9928	-1.730	503.20
25	SOOT0000804_AX2	486.01	1.5607	34.592	-1.0105	491.0	1.2652
26	CCV	Q.04135	5.1159	5.1725	-.00924	Q.0501	5.0779
27	CCV2A	4.9729	Q.00158	.07421	.00270	5.035	Q.00079
28	CCV2A	4.9224	.00377	.05852	.00212	5.000	.00060
29	CCB	-.01396	.00705	.07964	.00269	.0019	.00074
30	SOOT0000803	1.1304	1.3794	32.022	-1.2339	-.5560	1.2617
31	SOOT0000803	1.0365	1.3722	32.023	-1.2338	-.2996	1.2651
32	ICSA	-.01503	.01784	-.10699	-.01792	-.1466	.00628
33	ICSAB	-.10310	.02021	-.10237	.48869	-.0545	.00667
34	CCV2	Q.04618	5.0922	5.1508	-.00828	Q.0516	5.0596
35	CCV2	.05799	5.0498	5.0736	-.00809	.0504	4.9739
36	CCV2A	4.8961	.00563	.05226	.00232	4.956	.00051
37	CCB	.01772	.00887	.07838	.00288	.0173	.00084

#	Sample Name	Zn	Sr
1	BLANK	.04426	.02853
2	10ppm Std2		
3	10ppm Std1		
4	ICV2	.00156	.3697
5	ICV2A	-.00227	.0028
6	ICV2A	-.00206	.0005
7	BLANK	.04313	.02806
8	10ppm Std1		
9	ICV2	.00114	.3798
10	ICV2A	-.00190	.0010
11	ICB	.00018	-.0011
12	LLS2	.00052	.0762

Analysis Report

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#	Sample Name	Zn	Zr
<hr/>			
13	LLS2A	-.00130	-.0007
14	LLS2A	-.00010	.0014
15	LLS2A	-.00004	.0039
16	ICSA	.01468	.0083
17	ICSAB	1.0355	.0082
18	PREP BLK ⁸⁰⁴	.00745	.0087
19	SOOT0000294_L ^{8/5/00}	.72437	203.2
20	SOOT000804	.68452	199.5
21	SOOT000804_D	.68598	199.4
22	SOOT000804_X	.74595	200.6
23	SOOT000804_DX	.74207	200.4
24	SOOT000804_AX	.84017	236.1
25	SOOT000804_AX2	.55009	199.4
26	CCV	.00183	.3806
27	CCV2A	-.00075	.0046
28	CCV2A	-.00128	.0039
29	CCB ⁸⁰⁵	.00064	.0030
30	SOOT000803 ^{8/5/00}	.71365	214.2
31	SOOT000803	.70975	215.3
32	ICSA	.01489	.0064
33	ICSAB	1.0349	.0073
34	CCV2	.00225	.3787
35	CCV2	.00269	.3721
36	CCV2A	-.00079	.0039
37	CCB	.00085	.0025

Valerie L Massie

04-24-00

05/02/00 14:39
ws2

File # 50100A
ICP 20

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LABCORE Data Entry Template for Worklist# 33427

Analyst: JK Sato Instrument: ICP02 Book# lot # 009111

Method: LA-505-151/161 Rev/Mod C-5

5-1-00
Worklist Comment: ICP AZ-101 (FUSION)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV 1 ICV 2	<u>5-1-00</u>			@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS 1 LLS 2	<u>5-1-00</u>			@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPBLKTJA				@ICP-F05	SOLID		
7	SERDIL	S00T000797	0	F	@ICP-F05	SOLID		
8	SAMPLE	S00T000797	0	F	@ICP-F05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01								
9	DUP	S00T000797	0	F	@ICP-F05	SOLID		
10	SPK-POST (1 ppm)	S00T000797	0	F	@ICP-F05	SOLID		
11	SAMPLE	S00T000798	0	F	@ICP-F05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01								
12	SAMPLE	S00T000799	0	F	@ICP-F05	SOLID	99000433	AZ-101 (2)
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01								
13	CCV 1 CCV 2	<u>5-1-00</u>			@ICP-QC	QC		
14	CCB				@ICP-QC	QC		
15	SERDIL	S00T000800	0	F	@ICP-F05	SOLID		
16	SAMPLE	S00T000800	0	F	@ICP-F05	SOLID	99000438	AZ-101 (2)

Data Entry Comments:

Uploaded & Validated by:

Paul M. Pang

05/03/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

971

ws2

LABCORE Data Entry Template for Worklist# 33427

S Type	Sample#	R	A	Test	Matrix	Group#	Project
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01							
17 DUP	S00T000800	0	F	@ICP-F05	SOLID		
18 SPK-POST (1 ppm) 5-1-00	S00T000800	0	F	@ICP-F05	SOLID		
19 SAMPLE	S00T000801	0	F	@ICP-F05	SOLID	99000438	AZ-101 (2)
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01							
20 SAMPLE	S00T000802	0	F	@ICP-F05	SOLID	99000438	AZ-101 (2)
Analytes Requested: PD-F-01 , PR-F-01 , RB-F-01 , RH-F-01 , RU-F-01 , SN-F-01 , TA-F-01 , TE-F-01 , W-F-01							
21 ICSA				@ICP-QC	QC		
22 ICSAB				@ICP-QC	QC		
23 CCV 3 CCV 2 5-1-00				@ICP-QC	QC		
24 CCB				@ICP-QC	QC		

Final page for worklist # 33427

Signature	Date
Prepblktja	.1-10
S00T000797_L	.1-10-2-8
S00T000797	.1-10
S00T000797-D	.1-10
S00T000797-Q	.1-10
S00T000798	.1-10
S00T000799	.1-10
S00T000800_L	.1-10-2-8
S00T000800	.1-10
S00T000800-D	.1-10
S00T000800-Q	.1-10

Signature	Date
S00T000801	.1-10
S00T000802	.1-10

Data Entry Comments:

Duplicates were not prepped by fusion procedure. Duplicates for S00T000797 and S00T000800 were pulled from the samples. JK 05-01-00

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV 2	50100A	ICP20	05/01/00	11:45	DKS	Q	CONC
2	ICV 2A	50100A	ICP20	05/01/00	11:48	DKS	Q	CONC
3	ICB	50100A	ICP20	05/01/00	11:52	DKS	Q	CONC
4	LLS2	50100A	ICP20	05/01/00	11:55	DKS	Q	CONC
5	LLS2	50100A	ICP20	05/01/00	12:03	DKS	Q	CONC
6	LLS2A	50100A	ICP20	05/01/00	12:07	DKS	Q	CONC
7	ICSA	50100A	ICP20	05/01/00	12:10	DKS	Q	CONC
8	ICSAB	50100A	ICP20	05/01/00	12:14	DKS	Q	CONC
9	PREPBLRTJA	50100A	ICP20	05/01/00	12:18	DKS	Q	CONC
10	S00T000797_L	50100A	ICP20	05/01/00	12:22	DKS	S	CONC
11	S00T000797	50100A	ICP20	05/01/00	12:25	DKS	S	CONC
12	S00T000797	50100A	ICP20	05/01/00	12:28	DKS	S	CONC
13	S00T000797_D	50100A	ICP20	05/01/00	12:32	DKS	S	CONC
14	S00T000797_A	50100A	ICP20	05/01/00	12:35	DKS	S	CONC
15	S00T000798	50100A	ICP20	05/01/00	12:39	DKS	S	CONC
16	S00T000799	50100A	ICP20	05/01/00	12:42	DKS	S	CONC
17	CCV2	50100A	ICP20	05/01/00	12:52	DKS	Q	CONC
18	CCV2A	50100A	ICP20	05/01/00	12:55	DKS	Q	CONC
19	CCB	50100A	ICP20	05/01/00	12:59	DKS	Q	CONC
20	S00T000800_L	50100A	ICP20	05/01/00	13:02	DKS	S	CONC
21	S00T000800	50100A	ICP20	05/01/00	13:05	DKS	S	CONC
22	S00T000800_D	50100A	ICP20	05/01/00	13:09	DKS	S	CONC
23	S00T000800_A	50100A	ICP20	05/01/00	13:12	DKS	S	CONC
24	S00T000801	50100A	ICP20	05/01/00	13:15	DKS	S	CONC
25	S00T000802	50100A	ICP20	05/01/00	13:18	DKS	S	CONC
26	ICSA	50100A	ICP20	05/01/00	13:22	DKS	Q	CONC
27	ICSAB	50100A	ICP20	05/01/00	13:25	DKS	Q	CONC
28	CCV2	50100A	ICP20	05/01/00	13:28	DKS	Q	CONC
29	CCV2A	50100A	ICP20	05/01/00	13:31	DKS	Q	CONC
30	CCB	50100A	ICP20	05/01/00	13:36	DKS	Q	CONC
31	S00T000809 TEST	50100A	ICP20	05/01/00	14:03		S	CONC

KAD

QZ-101

05-01-00

5007000797

5007000798

5007000799

5007000800

5007000801

5007000802

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 973 TO 977.

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Analysis Report

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#	Sample Name	Ag	Al	Be	Ca	Cd	Ce
1	ICV 2	.06593	.85144	-.00083	.37801	-.00235	4.8764
2	ICV 2A	.00033	.06259	.00197	.00505	-.02636	.01994
3	ICB	.00000	.00660	.00004	.01549	-.00130	-.00302
4	LLS2	.01205	.17684	-.00005	.07910	-.00157	.96650
5	LLS2	.01580	.21136	-.00021	.10817	-.00124	1.1599
6	LLS2A	-.00148	.01381	.00039	-.00183	-.00562	-.00201
7	ICSA	-.02590	240.89	.00007	254.83	.00988	-.01438
8	ICSAB	.92606	238.39	.45579	257.38	.93868	.00832
9	PREPBLKTJA	-.00160	.00897	.00000	.00467	-.00190	-.01085
10	S00T000797_L	.28165	189.41	.01044	11.410	18.685	-.25494
11	S00T000797	-.16572	38.530	.00237	1.9311	3.7253	-1.5806
12	S00T000797	.95604	187.37	.02800	12.634	19.291	3.3142
13	S00T000797_D	.82561	185.07	.02410	10.546	19.123	2.7279
14	S00T000797_A	1.8434	204.06	.05257	17.859	18.950	96.980
15	S00T000798	.70361	230.75	.03022	11.453	22.545	1.6571
16	S00T000799	.51281	201.55	.03047	10.559	19.751	.68834
17	CCV2	.06425	.84744	-.00085	.37543	-.00123	4.7926
18	CCV2A	-.00276	.05626	.00207	.00090	-.02736	.00732
19	CCB	-.00040	.00570	.00006	.01575	-.00106	-.00201
20	S00T000800_L	.58126	281.98	.07062	13.102	29.199	4.3340
21	S00T000800	.98635	271.45	.04617	14.467	29.761	3.6712
22	S00T000800_D	.67422	272.58	.04448	9.1171	29.519	1.9121
23	S00T000800_A	2.4867	292.83	.07438	17.535	29.416	100.88
24	S00T000801	.87727	243.23	.04005	9.5272	28.168	3.4672
25	S00T000802	.98528	279.86	.04421	10.071	31.604	3.3652
26	ICSA	-.02432	229.91	.00015	252.05	.00958	-.00151
27	ICSAB	.90081	229.77	.44627	254.80	.92594	.00656
28	CCV2	.06128	.82465	-.00083	.37168	-.00203	4.7038
29	CCV2A	-.00112	.06126	.00197	.00406	-.02564	.02296
30	CCB	.00009	.00659	.00004	.01853	-.00067	.00075
31	S00T000809 TEST	.01569	4.3280	.00089	.16580	.54699	.07042
#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
1	ICV 2	-.00836	.00553	.02651	4.7429	.00162	-.09362
2	ICV 2A	.00040	-.00477	.07328	-.00088	.00449	-.22349
3	ICB	-.00205	-.00146	-.00127	-.00169	-.00044	-.00082
4	LLS2	-.00493	-.00009	.00380	.93564	.00270	-.01996
5	LLS2	-.00487	.00134	.00618	1.1112	-.00009	-.01921
6	LLS2A	.00078	-.00046	.01432	-.00001	.00428	-.05790
7	ICSA	-.00454	-.02041	-.00429	.02761	93.291	263.87
8	ICSAB	.45363	.45079	.46657	.02369	93.139	261.83
9	PREPBLKTJA	-.00218	-.00015	-.00076	-.00004	.00896	-.01226
10	S00T000797_L	-1.7741	1.2264	.08011	.06301	216.30	.18108
11	S00T000797	-.14254	.18732	-.09598	-.10081	43.182	-2.1115
12	S00T000797	.16328	1.9919	.84405	-.01309	212.03	3.7095
13	S00T000797_D	.18527	2.0690	.91194	-.04943	212.77	2.5091
14	S00T000797_A	-.05052	2.1126	2.9414	90.346	224.07	-5.8980
15	S00T000798	-.02990	2.3151	.80182	.07022	271.14	1.0607
16	S00T000799	-.09451	2.0421	.71737	.01629	192.36	-.53825
17	CCV2	-.00707	.00691	.02714	4.6715	.00113	-.09301
18	CCV2A	.00129	-.00444	.07308	.00079	.00338	-.22281

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#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
19	CCB	-.00364	-.00152	-.00206	.00033	-.00019	-.00635
20	S00T000800_L	-1.0117	2.1956	.82782	-.32715	332.67	.85312
21	S00T000800	-.11284	2.4756	1.0140	.05614	331.16	2.4120
22	S00T000800_D	-.09890	2.4206	.96193	.00020	330.87	.38595
23	S00T000800_A	-.17220	2.4975	3.0018	91.213	331.94	-2.5782
24	S00T000801	.15559	2.6582	1.0356	.07411	263.58	2.3851
25	S00T000802	-.11099	2.4882	.94534	.06255	341.22	2.0850
26	ICSA	-.00054	-.01798	-.00261	.02042	90.456	253.19
27	ICSAB	.44788	.44361	.44521	.01901	91.069	253.99
28	CCV2	-.00916	.00561	.02569	4.5718	.00142	-.09442
29	CCV2A	-.00010	-.00529	.06989	.00212	.00408	-.19576
30	CCB	-.00121	.00012	-.00097	.00112	-.00054	.00068
31	S00T000809 TEST	-.00322	.04238	.01478	.00310	5.8833	.04525

#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
1	ICV 2	-.01390	-.00193	-1.5918	-.00676	.02855	4.7876
2	ICV 2A	-.00003	.01927	4.8648	-.00074	1.1691	.08740
3	ICB	.00008	.01130	.00108	-.00155	-.02727	-.12748
4	LLS2	-.00276	.02927	-.32407	-.00177	-.00478	.80560
5	LLS2	-.00312	.00091	-.38195	-.00434	.00439	1.1574
6	LLS2A	.00005	-.02441	.96529	-.00469	.23080	.03591
7	ICSA	-.01564	185.96	.06342	-.00999	.01974	-.01305
8	ICSAB	.42114	182.19	.07298	.91152	.99087	.10029
9	PREPBLKTJA	.00286	Q.12058	-.00325	Q1.5210	-.01543	-.00986
10	S00T000797_L	6.0262	665.33	-.44234	1686.6	-11.912	6.0960
11	S00T000797	1.1838	142.72	-1.3146	337.62	-2.0421	-9.5975
12	S00T000797	5.9082	659.07	1.1997	1649.7	.08401	-4.8244
13	S00T000797_D	5.9219	631.52	.63064	1651.4	.16007	-5.0669
14	S00T000797_A	5.7315	647.16	64.189	1655.1	24.729	90.844
15	S00T000798	3.5878	698.10	-.04869	32.169	-.09928	1.4742
16	S00T000799	4.0480	693.44	-.37668	703.24	-.73430	-4.1148
17	CCV2	-.01334	-.01169	-1.5812	-.00290	.03431	4.7801
18	CCV2A	-.00013	-.00772	4.8124	-.00851	1.1696	.15526
19	CCB	.00015	-.03142	.00065	-.00287	-.01930	.03613
20	S00T000800_L	4.4874	383.63	-2.1931	84.027	-5.7747	-20.037
21	S00T000800	4.4526	341.84	.19359	84.563	.09903	.56628
22	S00T000800_D	4.4159	360.61	-.70411	84.602	-1.5117	-7.8412
23	S00T000800_A	4.2024	358.93	66.205	85.270	23.917	100.06
24	S00T000801	4.5533	366.39	.36899	472.78	.85903	1.9069
25	S00T000802	4.6757	360.82	.23726	81.537	-.51374	-.42753
26	ICSA	-.01505	173.86	.05901	-.01536	.04781	.17069
27	ICSAB	.41459	171.51	.07136	.88130	.99826	.23379
28	CCV2	-.01317	-.06880	-1.5413	-.01016	.02992	4.8068
29	CCV2A	.00007	-.06433	4.7066	-.00803	1.1356	.30081
30	CCB	.00011	-.04577	.00151	-.00516	-.01058	.13297
31	S00T000809 TEST	.07952	6.5929	.00709	.38949	-.02762	.18393

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Analysis Report

Averages

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#	Sample Name	Pr	Rb	Rh	Ru	Sn	Ta
1	ICV 2	4.8814	4.6124	4.9129	4.9591	.03104	-.00775
2	ICV 2A	-.00753	-.61510	-.00641	-.07097	4.8812	4.8895
3	ICB	.00130	-1.1020	-.00401	-.00203	.00575	-.00418
4	LLS2	.98239	Q.35068	.98466	.98673	.02905	-.00219
5	LLS2	1.1635	1.2024	1.1710	1.1778	.00484	-.00902
6	LLS2A	-.00070	-.62797	-.00914	-.01813	1.0081	.96664
7	ICSA	-.02963	-1.2407	-.03102	.87621	-.03086	-.02671
8	ICSAB	-.02071	.00242	.01914	.88252	-.01746	-.02421
9	PREPBLKTJA	-.00394	-1.1536	-.01863	-.00624	.00988	-.01460
10	S00T000797_L	1.1395	-245.93	-2.7194	.69868	.20253	-3.1086
11	S00T000797	-.29105	-141.09	-2.5640	-.01488	.86014	-1.4491
12	S00T000797	1.6283	20.797	1.9338	3.6922	1.5739	-.60898
13	S00T000797_D	1.2823	-2.5114	1.1136	3.3608	1.1121	-.72631
14	S00T000797_A	95.515	5.6673	94.142	100.05	99.594	97.376
15	S00T000798	1.4937	-45.239	-.09496	4.2801	1.8672	-.52069
16	S00T000799	1.0187	-112.56	-1.4417	2.5794	1.2892	-1.8060
17	CCV2	4.7833	5.3531	4.8487	4.8982	.03074	-.00730
18	CCV2A	-.00880	-1.0766	-.01119	-.07761	4.8836	4.8529
19	CCB	.00282	-.56398	-.01196	-.00230	.00368	-.00258
20	S00T000800_L	3.7343	-258.76	-1.8129	4.5635	-.47841	-7.4218
21	S00T000800	2.6799	-38.758	.85465	5.5723	2.5631	-.55792
22	S00T000800_D	2.0264	-111.26	-.99278	5.0143	3.0399	-1.0831
23	S00T000800_A	98.733	184.36	98.450	103.44	102.68	100.07
24	S00T000801	2.3065	-29.690	1.3381	4.6871	1.7913	-.98684
25	S00T000802	2.5646	-98.287	.34531	5.5684	2.5026	-.32814
26	ICSA	-.02299	-.61424	-.02068	.86496	-.02360	-.03703
27	ICSAB	-.02044	.10377	.00880	.87108	-.02963	-.02299
28	CCV2	4.6751	4.7109	4.7254	4.8781	.02528	.00286
29	CCV2A	-.00353	-.10261	-.00324	-.06759	4.8359	4.7526
30	CCB	.00557	-.23077	-.00384	-.00246	.00516	-.00098
31	S00T000809 TEST	.04656	-.51132	.01427	.09664	.02608	-.01301

#	Sample Name	Te	Th	U	V	W	Y
1	ICV 2	.07998	4.8987	4.8862	-.00838	.0485	4.8295
2	ICV 2A	4.8690	.00330	-.04748	.00165	4.839	-.00094
3	ICB	.01449	.00130	-.06113	-.00091	-.0174	-.00112
4	LLS2	.01717	.97145	.95046	-.00236	-.0028	.95441
5	LLS2	.01019	1.1626	1.1522	-.00273	.0202	1.1327
6	LLS2A	.97917	-.00168	.01536	.00018	.9677	-.00028
7	ICSA	.04455	.00137	-.11361	-.01924	-1.462	.00492
8	ICSAB	-.09770	.01135	-.09444	.46119	-1.781	.00542
9	PREPBLKTJA	.00429	-.00961	.00685	-.00255	-.0021	-.00037
10	S00T000797_L	2.7110	-1.8716	17.133	-.96599	1.377	.41089
11	S00T000797	4.1207	-.86956	.05632	-.50581	-.8839	.02785
12	S00T000797	2.0603	1.3633	11.387	-.32138	-1.128	.48303
13	S00T000797_D	1.4097	1.0702	12.104	-.46861	-4.660	.47343
14	S00T000797_A	95.968	97.232	108.32	-.70987	95.97	94.565
15	S00T000798	2.4399	.34334	16.567	-.64650	-4.350	.58770
16	S00T000799	-.37953	-.07454	14.981	-.83207	-4.042	.54655
17	CCV2	.04294	4.8173	4.8430	-.00783	.0054	4.7181
18	CCV2A	4.8266	-.00587	.01250	-.00108	4.803	-.00023

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#	Sample Name	Te	Th	U	V	W	Y
19	CCB	.01395	-.00439	.01882	-.00109	-.0113	-.00028
20	S00T000800_L	3.5243	1.0658	8.0446	-.89874	5.004	.34506
21	S00T000800	1.5181	1.1546	22.607	-.65936	-4.267	.72452
22	S00T000800_D	3.3074	.37598	19.878	-1.0086	-4.501	.70245
23	S00T000800_A	102.96	99.982	119.05	-.60413	98.22	95.536
24	S00T000801	.81329	1.4698	21.936	-.53455	-2.691	.63653
25	S00T000802	-.27109	1.3801	23.380	-.80857	-2.797	.76601
26	ICSA	.01503	.00210	-.04922	-.01762	-1.450	.00572
27	ICSAB	-.09287	.01147	-.04941	.45464	-1.252	.00595
28	CCV2	.05046	4.7687	4.7759	-.00856	.0401	4.6552
29	CCV2A	4.7633	-.00402	.07322	.00146	4.704	.00042
30	CCB	.01342	-.00355	.06010	-.00091	-.0138	.00011
31	S00T000809 TEST	.03543	.01983	.47103	-.01145	-.0476	.01424

#	Sample Name	Zn	Zr
1	ICV 2	.00132	.3607
2	ICV 2A	-.00103	.0040
3	ICB	-.00016	-.0024
4	LLS2	.00070	.0712
5	LLS2	.00084	.0850
6	LLS2A	-.00001	.0007
7	ICSA	.01140	.0039
8	ICSAB	.97078	.0055
9	PREPBLKTJA	.00045	.0007
10	S00T000797_L	.64597	101.6
11	S00T000797	.10033	20.35
12	S00T000797	.69511	100.9
13	S00T000797_D	.68743	100.8
14	S00T000797_A	.63083	108.5
15	S00T000798	.37541	112.9
16	S00T000799	.52774	108.2
17	CCV2	.00278	.3537
18	CCV2A	-.00068	.0024
19	CCB	.00056	.0004
20	S00T000800_L	.65012	124.8
21	S00T000800	.57974	125.6
22	S00T000800_D	.59102	124.0
23	S00T000800_A	.71523	135.4
24	S00T000801	.68924	99.03
25	S00T000802	3.1296	135.8
26	ICSA	.01189	.0069
27	ICSAB	.95898	.0075
28	CCV2	.00268	.3489
29	CCV2A	-.00010	.0068
30	CCB	.00094	.0019
31	S00T000809 TEST	.00954	2.128

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05/04/00 08:52
ws2

File # 50200A
ICP 20

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LABCORE Data Entry Template for Worklist# 33446

Analyst: DK Seto Instrument: ICP02 Book# Lot #009111

Method: LA-505-151/161 Rev/Mod C-5

Worklist Comment: 5-2-00 ICP AZ-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV 1 ICV 20	5-2-00			@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS 1 LLS 20	5-2-00			@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPBLKTJA				@ICP-A05	SOLID		
7	SERDIL	S00T000809	0	A	@ICP-A05	SOLID		
8	SAMPLE	S00T000809	0	A	@ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01								
9	DUP	S00T000809	0	A	@ICP-A05	SOLID		
10	SPK-POST (1ppm)	S00T000809	0	A	@ICP-A05	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SAMPLE	S00T000810	0	A	@ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01								
14	SAMPLE	S00T000811	0	A	@ICP-A05	SOLID	99000438	AZ-101 (2)
Analytes Requested: PD-A-01 , PR-A-01 , RB-A-01 , RH-A-01 , RU-A-01 , SN-A-01 , TA-A-01 , TE-A-01 , W-A-01								
15	ICSA				@ICP-QC	QC		
16	ICSAB				@ICP-QC	QC		

Data Entry Comments:

Uploaded + Validated by:
Saul M. Pang
05/04/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 33446

S Type	Sample#	R A	Test	Matrix	Group#	Project
17 CCV ¹ / ₂	5.2.00		@ICP-QC	QC		
18 CCB			@ICP-QC	QC		

Final page for worklist # 33446

JK ¹/₂ 05.02.00

Signature	Date
Prep 5.2.00	Direct, DF 1
Prep 6.1.00	Direct, DF 1
5007000809_L	2-8-2-8, DF 2.5
5007000809	2-8, 5
5007000809_D	2-8, 5
5007000809_a	2-8, 5
5007000810	2-8, DF 5
5007000811	2-8, DF 5

Signature	Date
-----------	------

Data Entry Comments: Digested duplicate and spike were not prepped. Duplicate and spike were made from the digested sample. JK ¹/₂ 5.2.00

$$Pr = 3.8909 \frac{\mu g}{mL} \times \frac{1}{7.86 \frac{g}{L} + \frac{1L}{1000L}} = 4.95e+2 \frac{\mu g}{g}$$

Post Spk:

$$Pr = \frac{\left(\frac{8.3307}{5}\right) - \left(\frac{3.8909}{5}\right)}{1} \times 100 = 88.8\%$$

$$Sn = \frac{\left(\frac{7.3359}{5}\right) - \left(\frac{2.7608}{5}\right)}{1} \times 100 = 91.5\%$$

$$Pd = \frac{\left(\frac{494.14}{50}\right) - \left(\frac{20.274}{50}\right)^{ND}}{10} \times 100 = 9.88\%$$

$$Rb = \frac{\left(\frac{586.07}{50}\right) - (ND)}{10} \times 100 = 117.0\%$$

$$Ru = \frac{\left(\frac{474.84}{50}\right) - \left(\frac{10.242}{50}\right)}{10} \times 100 = 95.0\%$$

$$W = \frac{\left(\frac{469.7}{50}\right) - 0}{10} \times 100 = 93.9\%$$

Analysis Report

Summary

05/02/00 02:26:41 PM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	BLANK	50200A	ICP20	05/02/00	11:55		X	IR
2	10 ppm std	50200A	ICP20	05/02/00	11:57		X	IR
3	10ppm Std2	50200A	ICP20	05/02/00	12:00		X	IR
4	10ppmStd2A	50200A	ICP20	05/02/00	12:02		X	IR
5	ICV2	50200A	ICP20	05/02/00	12:04	DKS	Q	CONC
6	ICV2A	50200A	ICP20	05/02/00	12:07	DKS	Q	CONC
7	ICV2	50200A	ICP20	05/02/00	12:11	DKS	Q	CONC
8	ICV2A	50200A	ICP20	05/02/00	12:14	DKS	Q	CONC
9	ICB	50200A	ICP20	05/02/00	12:19	DKS	Q	CONC
10	LLS2	50200A	ICP20	05/02/00	12:23	DKS	Q	CONC
11	LLS2	50200A	ICP20	05/02/00	12:31	DKS	Q	CONC
12	LLS2	50200A	ICP20	05/02/00	12:37	DKS	Q	CONC
13	LLS2A	50200A	ICP20	05/02/00	12:40	DKS	Q	CONC
14	ICSA	50200A	ICP20	05/02/00	12:42	DKS	Q	CONC
15	ICSAB	50200A	ICP20	05/02/00	12:44	DKS	Q	CONC
16	ICSAB	50200A	ICP20	05/02/00	12:49	DKS	Q	CONC
17	PREPSTD TJ A	50200A	ICP20	05/02/00	12:52	DKS	Q	CONC
18	PREPBLKTJA	50200A	ICP20	05/02/00	12:56	DKS	Q	CONC
19	S00T000809_L	50200A	ICP20	05/02/00	12:59	DKS	S	CONC
20	S00T000809	50200A	ICP20	05/02/00	13:01	DKS	S	CONC
21	S00T000809_D	50200A	ICP20	05/02/00	13:05	DKS	S	CONC
22	S00T000809_A	50200A	ICP20	05/02/00	13:08	DKS	S	CONC
23	S00T000809_X	50200A	ICP20	05/02/00	13:19	DKS	S	CONC
24	S00T000809_DX	50200A	ICP20	05/02/00	13:21	DKS	S	CONC
25	S00T000809_AX	50200A	ICP20	05/02/00	13:25	DKS	S	CONC
26	CCV2	50200A	ICP20	05/02/00	13:38	DKS	Q	CONC
27	CCV2	50200A	ICP20	05/02/00	13:58	DKS	Q	CONC
28	CCV2A	50200A	ICP20	05/02/00	14:00	DKS	Q	CONC
29	CCB	50200A	ICP20	05/02/00	14:03	DKS	Q	CONC
30	S00T000810	50200A	ICP20	05/02/00	14:06	DKS	S	CONC
31	S00T000811	50200A	ICP20	05/02/00	14:08	DKS	S	CONC
32	ICSA	50200A	ICP20	05/02/00	14:11	DKS	Q	CONC
33	ICSAB	50200A	ICP20	05/02/00	14:14	DKS	Q	CONC
34	CCV2	50200A	ICP20	05/02/00	14:16	DKS	Q	CONC
35	CCV2	50200A	ICP20	05/02/00	14:18	DKS	Q	CONC
36	CCV2A	50200A	ICP20	05/02/00	14:21	DKS	Q	CONC
37	CCB	50200A	ICP20	05/02/00	14:24	DKS	Q	CONC

JK *[Signature]* GL-101
05-02-00 S00T000809
S00T000810
S00T000811

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 981 TO 984.

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Analysis Report

Averages

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#	Sample Name	Ag	Al	Be	Ca	Cd	Ce
1	BLANK	-.01446	.0718	.01353	-.04006	-.00139	.00926
2	10 ppm std	6.63413	2.35233	33.1109	11.3533	19.7664	
3	10ppm Std2						2.54313
4	10ppmStd2A						
5	ICV2	.06648	.85409	-.00098	.38656	-.00125	5.1292
6	ICV2A	-.00057	.05564	.00179	.00047	-.02531	.02920
7	ICV2	.06300	.81783	-.00102	.37303	-.00095	4.8598
8	ICV2A	.00013	.04739	.00183	.00243	-.02512	.02552
9	ICB	.00110	.00320	.00000	.00678	.00014	.00894
10	LLS2	-.01596	.30590	-.00024	.12855	.00015	1.1774
11	LLS2	-.00380	.02758	.00003	.01625	.00089	.11829
12	LLS2	.01447	.17656	-.00020	.08030	.00094	.98505
13	LLS2A	.00071	.01782	.00042	-.00346	-.00453	.01736
14	ICSA	-.02380	224.04	.00009	253.64	.01021	-.00368
15	ICSAB	Q-.00813	Q-.11441	Q-.00135	Q.00870	Q-.00018	.09392
16	ICSAB	.87018	220.72	.43379	255.64	.92319	-.01026
17	PREPSTD2JA	.83778	5.1509	4.2363	Q8.2407	4.1768	4.3478
18	PREPBLKTJA	.00145	Q.36774	.00195	Q.10347	Q.01112	.02078
19	SOOT000809_L	1.6224	436.75	.08667	17.197	57.252	6.9196
20	SOOT000809	1.5539	417.35	.08204	16.144	53.252	6.4289
21	SOOT000809_D	1.5552	420.36	.08224	16.074	53.275	6.3908
22	SOOT000809_A	1.6091	422.02	.08287	16.444	53.130	10.900
23	SOOT000809_X	1.6227	432.94	.08412	16.864	56.162	7.7221
24	SOOT000809_DX	1.5124	431.30	.08323	16.751	56.208	6.9591
25	SOOT000809_AX	7.3876	505.62	.17049	51.456	52.588	464.69
26	CCV2	.05900	.79029	-.00096	.36392	-.00153	4.6793
27	CCV2	.05552	.76645	-.00102	.35323	-.00234	4.8046
28	CCV2A	-.00340	.03469	.00175	.00520	-.02649	.00424
29	CCB	-.00139	-.00124	-.00001	.00191	-.00138	-.01357
30	SOOT000810	1.5471	366.76	.07886	15.250	52.620	6.7664
31	SOOT000811	1.7254	487.44	.08513	18.074	59.700	7.4408
32	ICSA	-.02527	222.80	.00005	258.55	.00791	-.01781
33	ICSAB	.89755	228.05	.44700	261.37	.93935	-.02262
34	CCV2	-.06039	.81884	-.00092	.38402	-.00385	5.2485
35	CCV2	.06151	.82683	-.00094	.38061	-.00203	5.1897
36	CCV2A	-.00154	.05462	.00191	.00596	-.02725	.00593
37	CCB	-.00009	-.00098	.00002	.00285	-.00103	-.01159
#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
1	BLANK	.00633	.00926	.00406	.11913	-.0008	.00453
2	10 ppm std	8.59259	13.158	4.05753		13.2163	2.39053
3	10ppm Std2				21.4686		
4	10ppmStd2A						
5	ICV2	-.00837	.00559	.02783	5.0434	.00246	-.09227
6	ICV2A	.00360	-.00382	.07280	.00255	.00432	-.18550
7	ICV2	-.00704	.00622	.02623	4.7566	.00206	-.08435
8	ICV2A	.00265	-.00488	.07112	.00357	.00441	-.18198
9	ICB	.00100	.00144	.00012	.00239	.00121	.00809
10	LLS2	-.00238	.00155	.00525	1.1139	.00095	.00891
11	LLS2	-.00099	-.00063	.00004	.09308	.00115	.01979
12	LLS2	-.00191	.00153	.00660	.93051	.00120	.00064

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#	Sample Name	Co	Cr	Cu	Eu	Fe	Mg
13	LLS2A	-.00009	-.00132	.01356	.00268	.00434	-.03519
14	ICSA	.00138	-.01651	-.00185	.03418	90.221	249.63
15	ICSAB	Q-.01172	Q-.00855	Q-.01358	-.00384	Q.00010	Q.00338
16	ICSAB	.44435	.44463	.42500	.02836	90.298	247.45
17	PREPSTD TJ A	4.1559	4.2428	4.0774	4.1777	4.4172	4.2276
18	PREPBLK TJ A	.00146	Q.02213	.00797	.00369	Q.23737	.02933
19	S00T000809_L	.37568	4.9389	1.9356	.33276	607.33	3.5273
20	S00T000809	.34548	4.6258	1.8568	.22652	576.22	3.2422
21	S00T000809_D	.33412	4.6210	1.8634	.22558	577.62	3.2239
22	S00T000809_A	.32982	4.6218	1.9571	4.5085	576.14	2.9621
23	S00T000809_X	.33313	4.7891	1.8858	.43658	597.09	3.8005
24	S00T000809_DX	.25039	4.7225	1.8123	.42271	598.17	3.2329
25	S00T000809_AX	.27398	5.1283	11.468	455.17	586.75	-22.204
26	CCV2	.00628	.00617	.02551	4.5665	.00262	-.08615
27	CCV2	-.00492	.00614	.02545	4.6844	-.00248	-.09125
28	CCV2A	.00525	-.00559	.06878	.00114	.00170	-.14920
29	CCB	-.00105	-.00116	-.00115	-.00032	-.00162	.00559
30	S00T000810	.33233	4.6609	1.8357	.22714	577.41	3.0823
31	S00T000811	.36007	4.5956	2.0587	.24873	649.59	3.5400
32	ICSA	.00045	-.01750	-.00273	.06101	90.961	251.26
33	ICSAB	.45687	.44917	.44196	.06397	92.406	255.45
34	CCV2	-.00352	.00664	.02797	5.1071	-.00318	-.10376
35	CCV2	-.00311	.00676	.02709	5.0794	-.00294	-.08150
36	CCV2A	.00813	-.00401	.07381	-.00201	.00304	-.15836
37	CCB	-.00088	-.00127	-.00099	-.00291	-.00086	.00675
#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
1	BLANK	.01126	-.18986	.0032	-.0388	.06926	2.08313
2	10 ppm std	35.7604	1.894		9.31266	7.06419	
3	10ppm Std2						7.14773
4	10ppmStd2A			2.95353			
5	ICV2	-.01395	-.03377	-1.6791	-.00353	.04024	4.9814
6	ICV2A	-.00002	-.03472	4.8996	-.00890	1.1655	.31994
7	ICV2	-.01313	-.11763	-1.5973	.00071	.02783	4.9246
8	ICV2A	-.00006	-.08252	4.8657	-.00418	1.1602	.39489
9	ICB	.00026	Q-.11296	-.00045	-.00396	.00137	.21247
10	LLS2	.00296	.13610	.37939	.00091	.00082	Q1.3782
11	LLS2	.00013	.12131	.02078	.00037	.00598	Q.33136
12	LLS2	-.00227	-.14120	-.31363	-.00114	.00116	1.2180
13	LLS2A	.00023	-.11439	.96825	-.00592	.21997	.26097
14	ICSA	-.01439	177.94	.06912	-.01427	.06219	.34342
15	ICSAB	Q.00054	Q-.25187	.00384	Q-.01481	Q-.06952	-.24126
16	ICSAB	.40818	167.48	.06172	.87528	1.0038	.39105
17	PREPSTD TJ A	4.0431	Q10.076	-1.5647	4.1461	4.1287	-.84624
18	PREPBLK TJ A	.00618	Q4.3199	.00449	.01640	.05328	.11224
19	S00T000809_L	8.1959	720.69	.14013	41.156	2.4214	10.784
20	S00T000809	7.7531	687.31	.10091	38.376	2.3597	2.5375
21	S00T000809_D	7.7857	696.48	.05115	38.321	2.2281	2.4054
22	S00T000809_A	7.7683	713.74	3.1050	38.332	3.4950	6.9001
23	S00T000809_X	8.0600	736.93	.50164	40.276	1.7187	20.274
24	S00T000809_DX	8.0637	708.91	.03855	40.444	1.2298	18.259
25	S00T000809_AX	6.6301	732.82	311.90	39.570	120.95	494.14

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#	Sample Name	Mn	Na	Nb	Ni	Pb	Pd
26	CCV2	-.01388	-.19344	-1.5628	-.01004	.03254	4.9701
27	CCV2	-.01287	-.08278	-1.6037	-.00611	.03567	4.9706
28	CCV2A	-.00047	-.25403	4.9648	-.00251	1.1427	.19577
29	CCB	-.00015	-.00475	-.00405	-.00280	-.00560	-.04301
30	S00T000810	7.7738	640.44	.02721	38.185	2.2488	.19352
31	S00T000811	8.6705	664.89	.02074	42.612	3.0171	.52618
32	ICSA	-.01470	166.52	.05817	-.01061	.06453	.04257
33	ICSAB	.42069	169.85	.06193	.90018	1.0160	-.05901
34	CCV2	-.01396	.02333	-1.7199	-.00363	.04955	5.0574
35	CCV2	-.01374	.07385	-1.7168	.00041	.04296	5.0255
36	CCV2A	-.00041	.05159	5.1719	-.00819	1.2052	-.02591
37	CCB	-.00006	.07560	-.00572	-.00533	-.01557	-.19482

#	Sample Name	Pr	Rb	Rh	Ru	Sn	Ta
1	BLANK	.13913	.04933	.05906	-.03333	-.00826	.00033
2	10 ppm std						
3	10ppm Std2	23.6897	.09979	7.56826	24.0891		
4	10ppmStd2A					4.32706	6.43586
5	ICV2	5.1270	5.1751	5.1244	5.0779	.02696	.00581
6	ICV2A	-.00571	.51186	.00710	-.06888	4.9880	4.8882
7	ICV2	4.8238	5.3735	4.8462	4.9295	.03051	.00921
8	ICV2A	-.00416	.63986	-.00008	-.06772	4.9735	4.9131
9	ICB	.00747	.93429	.01047	.00390	-.00384	-.00371
10	LLS2	1.1614	Q2.5317	1.1897	1.1794	-.01017	-.01028
11	LLS2	Q.10598	Q1.7564	Q.12464	Q.10364	-.00753	-.00332
12	LLS2	.98353	Q2.5388	1.0114	.98751	-.00140	.00933
13	LLS2A	.00302	.98544	.01020	-.01187	1.0198	.97314
14	ICSA	-.02612	.47454	-.01606	.87493	-.02640	-.03805
15	ICSAB	.05907	-1.1010	-.08212	.00122	.00354	-.00133
16	ICSAB	-.02850	.29469	-.01376	.86881	-.03510	-.02089
17	PREPSTD TJ A	.61006	.40509	.08922	.02435	-.18725	-.02536
18	PREPB LK TJ A	.00738	.40989	.00150	.01319	.01748	-.00050
19	S00T000809_L	4.2179	38.543	1.6069	10.435	2.7656	.12938
20	S00T000809	3.8909	5.2645	1.4129	9.7158	2.7608	.02594
21	S00T000809_D	3.9011	3.1538	1.3708	9.7018	2.7567	-.02027
22	S00T000809_A	8.3307	7.9037	5.8910	14.180	7.3359	4.5809
23	S00T000809_X	4.3807	72.459	1.6824	10.242	2.8583	.05862
24	S00T000809_DX	4.0579	30.846	.72799	10.046	2.5202	-.36686
25	S00T000809_AX	455.82	586.07	460.62	474.84	480.94	475.59
26	CCV2	4.6191	Q6.2390	4.6884	4.8445	.02559	-.00031
27	CCV2	4.7635	4.8870	4.7518	4.9417	-.01241	.01637
28	CCV2A	-.01561	-.79805	-.02662	-.07829	5.0520	5.0475
29	CCB	-.00242	-.43762	-.00587	-.00505	-.00530	.01112
30	S00T000810	4.1534	-3.3874	1.4288	9.2267	2.1693	.03852
31	S00T000811	4.5479	-5.5616	1.5207	10.881	3.1775	.05599
32	ICSA	-.04093	-.93850	-.03193	.91304	-.03050	-.00616
33	ICSAB	-.04194	-.80914	-.00729	.93115	-.03483	.01675
34	CCV2	5.2569	Q3.2665	5.1976	5.1893	-.01413	-.01017
35	CCV2	5.2076	4.7555	5.1768	5.1674	-.01741	.02744
36	CCV2A	-.01752	-.91356	-.00975	-.07558	5.1096	5.1662
37	CCB	-.00352	-.23145	-.00634	-.00267	-.00468	.01571

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#	Sample Name	Te	Th	U	V	W	Y
1	BLANK	-.0052	.01626	1.38286	-.0072	-.0072	.03599
2	10 ppm std				3.67619		
3	10ppm Std2		3.25313	8.4524			13.84
4	10ppmStd2A	1.18893				1.73993	
5	ICV2	.04298	5.0739	5.0899	-.00760	-.0012	5.0488
6	ICV2A	4.9135	-.00235	.06359	.00272	4.870	.00089
7	ICV2	.03293	4.8704	4.9102	-.00634	.0191	4.8035
8	ICV2A	4.8705	-.00185	.10480	.00218	4.933	.00121
9	ICB	.00111	.00006	.08486	.00235	-.0170	.00102
10	LLS2	-.01284	1.1569	1.2418	-.00054	-.0110	1.1375
11	LLS2	-.00827	-.09826	-.20182	-.00307	-.0109	-.09519
12	LLS2	.00223	.97412	1.0683	.00072	-.0013	.95547
13	LLS2A	.95578	-.00247	.09977	.00235	.9717	.00106
14	ICSA	.05247	.00237	.03561	-.01826	-1.755	.00737
15	ICSAB	.02735	-.01163	.08985	Q.00814	-.0128	-.00201
16	ICSAB	-.11556	-.00189	.04494	.43567	-1.587	.00766
17	PREPSTD TJ A	-.96639	4.3258	Q7.6240	4.1873	-.0659	4.0662
18	PREPBLKTJA	-.00725	.00410	.06541	.00302	-.0371	.00267
19	S00T000809_L	1.3818	2.5802	45.363	-1.1884	-4.797	1.5147
20	S00T000809	1.1808	2.5606	39.659	-1.1764	-4.237	1.4097
21	S00T000809_D	1.0468	2.5745	40.069	-1.1776	-4.314	1.4175
22	S00T000809_A	5.7140	7.1211	44.476	-1.2008	.2847	5.8995
23	S00T000809_X	1.0886	2.6270	49.410	-1.1229	-5.459	1.5468
24	S00T000809_DX	2.3727	2.0138	48.992	-1.2498	-5.243	1.5470
25	S00T000809_AX	468.96	467.23	500.30	-1.7537	469.7	461.32
26	CCV2	.04187	4.7185	4.7903	-.00760	.0108	4.6339
27	CCV2	.05066	4.8834	4.8355	-.00706	.0096	4.7828
28	CCV2A	4.9473	-.01164	.01958	-.00071	4.967	.00030
29	CCB	-.01472	-.00580	-.01227	-.00018	-.0221	-.00020
30	S00T000810	1.2725	2.8115	41.934	-1.2067	-3.465	1.5002
31	S00T000811	1.4080	3.0626	46.763	-1.3371	-5.119	1.6576
32	ICSA	.02827	.00548	.03102	-.01915	-1.978	.00587
33	ICSAB	-.14904	.00877	-.03528	.44890	-2.323	.00539
34	CCV2	-.04123	5.2219	5.1923	-.01092	.0414	5.1987
35	CCV2	.06362	5.2041	5.1218	-.00815	.0346	5.1383
36	CCV2A	5.1393	-.00251	-.09912	.00000	5.153	-.00109
37	CCB	.00706	.00406	-.10273	-.00072	.0103	-.00114

#	Sample Name	Zn	Zr
1	BLANK	.04433	.02686
2	10 ppm std	17.5671	3.01273
3	10ppm Std2		
4	10ppmStd2A		
5	ICV2	.00137	.3609
6	ICV2A	-.00089	.0046
7	ICV2	.00236	.3454
8	ICV2A	-.00122	.0059
9	ICB	.00098	.0033
10	LLS2	-.00164	.0854
11	LLS2	.00126	.0108
12	LLS2	.00261	.0727

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#	Sample Name	Zn	Zr
13	LLS2A	.00042	.0041
14	ICSA	.01088	.0100
15	ICSAB	Q.00378	-.0079
16	ICSAB	.94299	.0115
17	PREPSTD TJ A	4.2535	4.691
18	PREPBLKTJA	Q.01205	Q.0482
19	S00T000809_L	.92344	216.3
20	S00T000809	.86129	209.8
21	S00T000809_D	.86305	211.4
22	S00T000809_A	.86132	211.8
23	S00T000809_X	.95582	211.5
24	S00T000809_DX	.91947	212.5
25	S00T000809_AX	.87399	242.0
26	CCV2	.00204	.3344
27	CCV2	.00103	.3156
28	CCV2A	-.00171	.0024
29	CCB	.00005	.0000
30	S00T000810	.83898	214.8
31	S00T000811	.93718	235.7
32	ICSA	.00889	.0054
33	ICSAB	.96592	.0031
34	CCV2	.00106	.3409
35	CCV2	.00126	.3377
36	CCV2A	-.00043	-.0004
37	CCB	.00015	-.0033

KAP
05-02-00

LABCORE Completed Worklist Report for Worklist# 33308

Analyst: kjt

Instrument: ICPMS1

Book#: 2365-9

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSAC-A1

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0		MSAC-QC TH232	QC	1.00e-2	1.05e-02	105.000 % Recovery	
1 ICV	0		MSAC-QC U235	QC	7.20e-5	8.15e-05	113.194 % Recovery	
1 ICV	0		MSAC-QC U238	QC	9.93e-3	1.03e-02	103.726 % Recovery	
1 ICV	0		MSAC-QC NP237	QC	9.88e-3	1.08e-02	109.312 % Recovery	
1 ICV	0		MSAC-QC PU239	QC	1.00e-2	1.07e-02	107.000 % Recovery	
1 ICV	0		MSAC-QC 241	QC	1.03e-2	1.12e-02	108.738 % Recovery	
2 ICB	0		MSAC-QC PA231	QC	1	<1.50e-5		ug/mL
2 ICB	0		MSAC-QC TH229	QC	1	<1.50e-5		ug/mL
2 ICB	0		MSAC-QC TH230	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC TH232	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC U233	QC	1	<1.20e-5		ug/mL
2 ICB	0		MSAC-QC U234	QC	1	<1.20e-5		ug/mL
2 ICB	0		MSAC-QC U235	QC	1	<1.20e-5		ug/mL
2 ICB	0		MSAC-QC U236	QC	1	<1.60e-5		ug/mL
2 ICB	0		MSAC-QC U238	QC	1	<1.20e-5		ug/mL
2 ICB	0		MSAC-QC NP237	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC PU239	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC PU240	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC 241	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC 243	QC	1	<5.00e-5		ug/mL
2 ICB	0		MSAC-QC 244	QC	1	<5.00e-5		ug/mL
3 STD-PREP	0		MSAC-A1 TH232-A1	SOLID	5.00 0.072	4.86e+00	97.200 % Recovery	
3 STD-PREP	0		MSAC-A1 U235-A1	SOLID	0.0250	2.59e-02	103.600 % Recovery	
3 STD-PREP	0		MSAC-A1 U238-A1	SOLID	10.0	9.83e+00	98.300 % Recovery	
3 STD-PREP	0		MSAC-A1 NP237-A1	SOLID	n/a	<2.26e-2	% Recovery	
3 STD-PREP	0		MSAC-A1 PU239-A1	SOLID	n/a	<2.26e-2	% Recovery	
3 STD-PREP	0		MSAC-A1 241-A1	SOLID	n/a	<2.26e-2	% Recovery	
4 BLNK-PREP	0		MSAC-A1 PA231-A1	SOLID	1	<6.77e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 TH229-A1	SOLID	1	<6.77e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 TH230-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 TH232-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 U233-A1	SOLID	1	<5.41e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 U234-A1	SOLID	1	<5.41e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 U235-A1	SOLID	1	<5.41e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 U236-A1	SOLID	1	<7.22e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 U238-A1	SOLID	1	<5.41e-3		ug/g
4 BLNK-PREP	0		MSAC-A1 NP237-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 PU239-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 PU240-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 PU242-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		MSAC-A1 241-A1	SOLID	1	<2.26e-2		ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33308

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 BLNK-PREP	0		OMSAC-A1 243-A1	SOLID	1	<2.26e-2		ug/g
4 BLNK-PREP	0		OMSAC-A1 244-A1	SOLID	1	<2.26e-2		ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 PA231-A1	SOLID	N/A	< 7.426e-01	0.743	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 TH229-A1	SOLID	N/A	< 7.426e-01	0.743	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 TH230-A1	SOLID	N/A	< 2.475e+00	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 TH232-A1	SOLID	N/A	1.361e+02	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 U233-A1	SOLID	N/A	< 5.941e-01	0.594	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 U234-A1	SOLID	N/A	< 5.941e-01	0.594	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 U235-A1	SOLID	N/A	3.457e+01	0.594	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 U236-A1	SOLID	N/A	3.416e+00	0.792	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 U238-A1	SOLID	N/A	3.988e+03	0.594	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 NP237-A1	SOLID	N/A	5.272e+01	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 PU239-A1	SOLID	N/A	3.908e+01	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 PU240-A1	SOLID	N/A	3.020e+00	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 PU242-A1	SOLID	N/A	< 2.475e+00	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 241-A1	SOLID	N/A	1.661e+01	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 243-A1	SOLID	N/A	< 2.475e+00	2.475	ug/g
5 SAMPLE	S00T000804	0 A	OMSAC-A1 244-A1	SOLID	N/A	< 2.475e+00	2.475	ug/g
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 TH232-A1	SOLID	556.1735	5.16e+02	92.777	% Recovery
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 U235-A1	SOLID	8.010	4.23e+00	52.809	% Recovery
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 U238-A1	SOLID	1112.347	1.12e+03	100.688	% Recovery
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 NP237-A1	SOLID	n/a	3.11e+00		% Recovery
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 PU239-A1	SOLID	n/a	2.57e+00		% Recovery
6 SPK-PREDIGS	S00T000804	0 A	OMSAC-A1 241-A1	SOLID	n/a	2.57e-01		% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 TH232-A1	SOLID	0.020	9.53e-03	47.650	% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 U235-A1	SOLID	0.000140	1.79e-04	127.857	% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 U238-A1	SOLID	0.020	2.40e-02	120.000	% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 NP237-A1	SOLID	0.01968	9.95e-03	50.559	% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 PU239-A1	SOLID	0.02008	9.96e-03	49.602	% Recovery
7 SPK-POST	S00T000804	0 A	OMSAC-A1 241-A1	SOLID	0.02052	1.04e-02	50.682	% Recovery
8 SAMPLE	S00T000803	0 A	OMSAC-A1 PA231-A1	SOLID	N/A	< 7.212e-01	0.721	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 TH229-A1	SOLID	N/A	< 7.212e-01	0.721	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 TH230-A1	SOLID	N/A	< 2.404e+00	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 TH232-A1	SOLID	N/A	1.315e+02	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 U233-A1	SOLID	N/A	< 5.770e-01	0.577	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 U234-A1	SOLID	N/A	< 5.770e-01	0.577	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 U235-A1	SOLID	N/A	3.540e+01	0.577	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 U236-A1	SOLID	N/A	3.419e+00	0.769	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 U238-A1	SOLID	N/A	4.088e+03	0.577	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 NP237-A1	SOLID	N/A	5.500e+01	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 PU239-A1	SOLID	N/A	4.211e+01	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 PU240-A1	SOLID	N/A	3.255e+00	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 PU242-A1	SOLID	N/A	< 2.404e+00	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 241-A1	SOLID	N/A	1.623e+01	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 243-A1	SOLID	N/A	< 2.404e+00	2.404	ug/g
8 SAMPLE	S00T000803	0 A	OMSAC-A1 244-A1	SOLID	N/A	< 2.404e+00	2.404	ug/g
9 SAMPLE	S00T000805	0 A	OMSAC-A1 PA231-A1	SOLID	N/A	< 7.635e-01	0.763	ug/g
9 SAMPLE	S00T000805	0 A	OMSAC-A1 TH229-A1	SOLID	N/A	< 7.635e-01	0.763	ug/g
9 SAMPLE	S00T000805	0 A	OMSAC-A1 TH230-A1	SOLID	N/A	< 2.545e+00	2.545	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

worklistdata2 Version 3.0 01/04/99
05/10/00 11:08

Page: 3

LABCORE Completed Worklist Report for Worklist# 33308

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
9	SAMPLE	S00T000805	0	A	QMSAC-A1 TH232-A1	SOLID	N/A	1.430e+02	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 U233-A1	SOLID	N/A	6.108e-01	0.611	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 U234-A1	SOLID	N/A	6.108e-01	0.611	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 U235-A1	SOLID	N/A	3.828e+01	0.611	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 U236-A1	SOLID	N/A	3.757e+00	0.815	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 U238-A1	SOLID	N/A	4.416e+03	0.611	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 NP237-A1	SOLID	N/A	6.108e+01	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 PU239-A1	SOLID	N/A	4.487e+01	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 PU240-A1	SOLID	N/A	3.370e+00	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 PU242-A1	SOLID	N/A	2.545e+00	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 241-A1	SOLID	N/A	1.771e+01	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 243-A1	SOLID	N/A	2.545e+00	2.545	ug/g
9	SAMPLE	S00T000805	0	A	QMSAC-A1 244-A1	SOLID	N/A	2.545e+00	2.545	ug/g
10	CCV		0		QMSAC-QC TH232	QC	1.00e-2	1.05e-02	105.000	% Recovery
10	CCV		0		QMSAC-QC U235	QC	7.20e-5	8.33e-05	115.694	% Recovery
10	CCV		0		QMSAC-QC U238	QC	9.93e-3	1.04e-02	104.733	% Recovery
10	CCV		0		QMSAC-QC NP237	QC	9.88e-3	1.08e-02	109.312	% Recovery
10	CCV		0		QMSAC-QC PU239	QC	1.00e-2	1.09e-02	109.000	% Recovery
10	CCV		0		QMSAC-QC 241	QC	1.03e-2	1.14e-02	110.680	% Recovery
11	CCB		0		QMSAC-QC PA231	QC	1	<1.50e-5		ug/mL
11	CCB		0		QMSAC-QC TH229	QC	1	<1.50e-5		ug/mL
11	CCB		0		QMSAC-QC TH230	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC TH232	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC U233	QC	1	<1.20e-5		ug/mL
11	CCB		0		QMSAC-QC U234	QC	1	<1.20e-5		ug/mL
11	CCB		0		QMSAC-QC U235	QC	1	<1.20e-5		ug/mL
11	CCB		0		QMSAC-QC U236	QC	1	<1.60e-5		ug/mL
11	CCB		0		QMSAC-QC U238	QC	1	<1.20e-5		ug/mL
11	CCB		0		QMSAC-QC NP237	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC PU239	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC PU240	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC 241	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC 243	QC	1	<5.00e-5		ug/mL
11	CCB		0		QMSAC-QC 244	QC	1	<5.00e-5		ug/mL

Final page for worklist# 33308

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Saul M. Pang 05/10/2000
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

04/21/00 12:47
ws2

file acos9a.txt

Page: 1

LABCORE Data Entry Template for Worklist# 33308

Analyst: KST Instrument: ICPMS1 Book# 23BS9Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSAC-A1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@MSAC-QC QC			
2 ICB			@MSAC-QC QC			
3 STD-PRHP			@MSAC-A1 SOLID			
4 BLNK-PREP			@MSAC-A1 SOLID			
5 SAMPLE	S00T000804 0 A		@MSAC-A1 SOLID		99000433 AZ-101 (2)	
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
6 SPK-PREDIG	S00T000804 0 A		@MSAC-A1 SOLID			
7 SPK-POST	S00T000804 0 A		@MSAC-A1 SOLID			
8 SAMPLE	S00T000803 0 A		@MSAC-A1 SOLID		99000433 AZ-101 (2)	
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
9 SAMPLE	S00T000805 0 A		@MSAC-A1 SOLID		99000433 AZ-101 (2)	
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
10 CCV			@MSAC-QC QC			
11 CCB			@MSAC-QC QC			

Final page for worklist # 33308

K5 Promotto 05-09-00
Signature Date

Signature Date

Data Entry Comments:

Spikes .02ml 10ppm High Purity Uranium
.04ml MSAC SPIKE 8BS9

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 33308

S Type	Sample#	R A Test	Matrix	Group#	Project
--------	---------	----------	--------	--------	---------

STD-PREP			1-10-.25-10		451 df
PINK-PREP			"		"
S00T000804			"		"
S00T000804-S			"		"
S00T000804-a			"		"
S00T000803			"		"
S00T000805			"		"

uploaded + Validated by:
Sam M. Ray
 05/12/2000

possible air bubble just scan on S00T000804-S
 USEP second scan

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report

05/09/00 09:18:45

page 1

Method: MS_TUNE

Sample Name: ms-tune

Operator: kjt

Comment:

Run Time: 05/09/00 09:17 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	132500.	73310.	63490.
Stddev	2813.	1280.	3452.
%RSD	2.122	1.746	5.437
#1	131600.	73780.	65230.
#2	137500.	74880.	67030.
#3	133400.	72600.	60440.
#4	134300.	75390.	69080.
#5	130200.	71830.	65750.
#6	135200.	73940.	64950.
#7	132600.	73280.	60040.
#8	130900.	71440.	62490.
#9	132400.	73670.	58250.
#10	127300.	72300.	61620.

File ac0509atkt
K3 Bromide 5-9-00

Std-Prep
Blk-Prep
SCOT000804
SCOT000804_S
SCOT000803
SCOT000805

451df

1-10-.250-10

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 992 TO 1024.

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:14
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 136600.,3244.,2.375, 139400., 136500., 141700., 138000., 133200., 139500., 136800., 130800., 134800., 135100.,,,
Elem1=Ir[193],[193],,,Cts/S, 74870.,1514.,2.022, 76490., 77110., 76000., 76060., 73200., 75590., 73170., 73510., 73700., 73920.,,,
Elem2=Sc[45],[45],,,Cts/S, 69450.,5318.,7.658, 64550., 67300., 80870., 68350., 71510., 69400., 65350., 62080., 72770., 72270.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:15
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 134100.,2809.,2.095, 131100., 135800., 139200., 135000., 134900., 134000., 132000., 134200., 129100., 1

35800.,,,
Elem1=Ir[193],[193],,,Cts/S, 73840.,1172.,1.587, 73600., 73560., 7
5830., 74560., 74900., 74610., 71950., 73500., 73520., 72330.,,,
Elem2=Sc[45],[45],,,Cts/S, 67360.,4966.,7.372, 61830., 68210., 672
90., 70980., 69000., 73040., 66210., 58070., 64730., 74290.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:17
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 132500.,2813.,2.122, 131600., 137500.
, 133400., 134300., 130200., 135200., 132600., 130900., 132400., 1
27300.,,,
Elem1=Ir[193],[193],,,Cts/S, 73310.,1280.,1.746, 73780., 74880., 7
2600., 75390., 71830., 73940., 73280., 71440., 73670., 72300.,,,
Elem2=Sc[45],[45],,,Cts/S, 63490.,3452.,5.437, 65230., 67030., 604
40., 69080., 65750., 64950., 60040., 62490., 58250., 61620.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=ACT_MS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:19
Sample Type=Std
Mode=IR

CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,Cts/S, 1.536,.2984,19.42, 1.360, 1.885, 1.450, 1.804, 1.182,,,
Elem1=Th[229],[229],,,Cts/S, 1.597,.1625,10.17, 1.755, 1.567, 1.754, 1.369, 1.541,,,
Elem2=Th[230],[230],,,Cts/S, 1.592,.1539,9.666, 1.492, 1.800, 1.689, 1.565, 1.415,,,
Elem3=Th[232],[232],,,Cts/S, 1.501,.0855,5.696, 1.470, 1.588, 1.386, 1.478, 1.584,,,
Elem4=Pa[231],[231],,,Cts/S, 1.557,.1119,7.183, 1.558, 1.609, 1.364, 1.630, 1.626,,,
Elem5=U [233],[233],,,Cts/S, 1.504,.1553,10.32, 1.251, 1.652, 1.494, 1.521, 1.605,,,
Elem6=U [234],[234],,,Cts/S, 1.538,.2184,14.20, 1.887, 1.503, 1.580, 1.325, 1.394,,,
Elem7=U [235],[235],,,Cts/S, 1.606,.0824,5.129, 1.602, 1.609, 1.559, 1.738, 1.520,,,
Elem8=U [236],[236],,,Cts/S, 1.590,.1929,12.13, 1.821, 1.419, 1.754, 1.565, 1.394,,,
Elem9=U [238],[238],,,Cts/S, 1.771,.2063,11.65, 1.558, 1.779, 1.624, 1.804, 2.090,,,
Elem10=Np[237],[237],,,Cts/S, 1.584,.2156,13.61, 1.339, 1.567, 1.840, 1.760, 1.415,,,
Elem11=Pu[239],[239],,,Cts/S, 1.502,.2046,13.62, 1.712, 1.482, 1.624, 1.173, 1.520,,,
Elem12=Pu[240],[240],,,Cts/S, 1.718,.2638,15.36, 1.931, 1.376, 1.515, 1.782, 1.985,,,
Elem13=Pu[242],[242],,,Cts/S, 1.717,.0482,2.807, 1.668, 1.715, 1.689, 1.717, 1.795,,,
Elem14=Pu[244],[244],,,Cts/S, 1.588,.2083,13.11, 1.426, 1.313, 1.710, 1.804, 1.689,,,
Elem15=Am[241],[241],,,Cts/S, 1.752,.1277,7.290, 1.931, 1.673, 1.624, 1.695, 1.837,,,
Elem16=Am[243],[243],,,Cts/S, 1.774,.2783,15.69, 1.492, 1.863, 1.754, 1.565, 2.196,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 23.237,.39115,1.6833,22.787,23.613,23.096,23.010,23.680

[Sample Header]

Method=ACT_MS

SampleName=ACT Cal
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:23
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Np[237],[237],,,Cts/S, 1371.,35.30,2.575, 1401., 1323., 1380
., 1404., 1347.,,
Elem1=Pu[239],[239],,,Cts/S, 1690.,22.95,1.358, 1715., 1657., 1698
., 1702., 1676.,,
Elem2=Pu[240],[240],,,Cts/S, 1690.,22.95,1.358, 1715., 1657., 1698
., 1702., 1676.,,
Elem3=Pu[242],[242],,,Cts/S, 1690.,22.95,1.358, 1715., 1657., 1698
., 1702., 1676.,,
Elem4=Pu[244],[244],,,Cts/S, 1690.,22.95,1.358, 1715., 1657., 1698
., 1702., 1676.,,
Elem5=Am[241],[241],,,Cts/S, 1359.,34.79,2.559, 1365., 1331., 1317
., 1382., 1401.,,
Elem6=Am[243],[243],,,Cts/S, 1359.,34.79,2.559, 1365., 1331., 1317
., 1382., 1401.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 23.898,.27510,1.1511,23.496,23.925,24.
221,23.791,24.057

[Sample Header]

Method=ACT_MS
SampleName=U/Th Cal
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:27
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Th[228],[228],,,Cts/S, 16810.,329.6,1.961, 16900., 17170., 16760., 16920., 16280.,,,

Elem1=Th[229],[229],,,Cts/S, 16810.,329.6,1.961, 16900., 17170., 16760., 16920., 16280.,,,

Elem2=Th[230],[230],,,Cts/S, 16810.,329.6,1.961, 16900., 17170., 16760., 16920., 16280.,,,

Elem3=Th[232],[232],,,Cts/S, 16810.,329.6,1.961, 16900., 17170., 16760., 16920., 16280.,,,

Elem4=Pa[231],[231],,,Cts/S, 16810.,329.6,1.961, 16900., 17170., 16760., 16920., 16280.,,,

Elem5=U [233],[233],,,Cts/S, 173.5,4.990,2.875, 171.7, 177.2, 177.0, 176.2, 165.6,,,

Elem6=U [234],[234],,,Cts/S, 173.5,4.990,2.875, 171.7, 177.2, 177.0, 176.2, 165.6,,,

Elem7=U [235],[235],,,Cts/S, 173.5,4.990,2.875, 171.7, 177.2, 177.0, 176.2, 165.6,,,

Elem8=U [236],[236],,,Cts/S, 173.5,4.990,2.875, 171.7, 177.2, 177.0, 176.2, 165.6,,,

Elem9=U [238],[238],,,Cts/S, 22420.,309.2,1.379, 22460., 22640., 2360., 22720., 21930.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 23.272,.34542,1.4843,23.531,22.915,23.306,22.929,23.677

[Sample Header]

Method=ACT_MS

SampleName=QCStd

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 09:30

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Th[228],[228],,,ppb, .0009,.0013,138.2, -.0010, .0009, .0006

```
, .0023, .0018, None, 0.0, 0.0
Elem1=Th[229],[229],,,,ppb, .0010,.0016,158.9, .0004, .0001, .0017,
.0035, -.0006, None, 0.0, 0.0
Elem2=Th[230],[230],,,,ppb, .0152,.0021,14.06, .0183, .0145, .0123,
.0153, .0154, None, 0.0, 0.0
Elem3=Th[232],[232],,,,ppb, 98.81,2.808,2.842, 99.40, 99.94, 97.01,
102.5, 95.21, None, 0.0, 0.0
Elem4=Pa[231],[231],,,,ppb,Q -.0205,.0087,42.28, -.0294, -.0231, -.
0170, -.0259, -.0073, QC Fail, ñ.0100%, .0000
Elem5=U_[233],[233],,,,ppb, .0192,.0004,1.895, .0193, .0195, .0186,
.0194, .0193, None, 0.0, 0.0
Elem6=U_[234],[234],,,,ppb, .0073,.0012,16.13, .0072, .0056, .0077,
.0071, .0088, None, 0.0, 0.0
Elem7=U_[235],[235],,,,ppb, .7183,.0140,1.942, .7347, .7143, .7038,
.7311, .7074, None, 0.0, 0.0
Elem8=U_[236],[236],,,,ppb, .0173,.0003,1.980, .0167, .0177, .0173,
.0175, .0172, None, 0.0, 0.0
Elem9=U_[238],[238],,,,ppb, 97.54,.7460,.7648, 98.51, 97.54, 96.55,
97.15, 97.96, None, 0.0, 0.0
Elem10=Np[237],[237],,,,ppb, -.0209,.0036,17.31, -.0251, -.0223, -.
0215, -.0203, -.0153, None, 0.0, 0.0
Elem11=Pu[239],[239],,,,ppb, -.0050,.0007,14.59, -.0045, -.0063, -.
0050, -.0045, -.0048, None, 0.0, 0.0
Elem12=Pu[240],[240],,,,ppb, -.0005,.0010,215.9, -.0013, .0007, -.0
016, -.0004, .0003, None, 0.0, 0.0
Elem13=Pu[242],[242],,,,ppb, -.0003,.0007,230.4, -.0008, .0010, -.0
007, -.0005, -.0006, None, 0.0, 0.0
Elem14=Pu[244],[244],,,,ppb, .0003,.0009,260.9, .0016, .0003, -.000
5, .0007, -.0005, None, 0.0, 0.0
Elem15=Am[241],[241],,,,ppb, .0000,.0006,1602., .0002, -.0007, -.00
02, .0009, -.0004, None, 0.0, 0.0
Elem16=Am[243],[243],,,,ppb, -.0008,.0005,66.28, .0000, -.0008, -.0
008, -.0007, -.0014, None, 0.0, 0.0
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 23.582,.32019,1.3578,23.702,23.163,23.
894,23.328,23.823
```

[Sample Header]

```
Method=ACT_MS
SampleName=QCStd
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:37
```

Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0001,.0014,1971., .0005, .0015, -.0018, .0007, -.0012,None,0.0,0.0
Elem1=Th[229],[229],,,ppb, .0010,.0015,151.2, .0034, .0005, .0003, -.0005, .0012,None,0.0,0.0
Elem2=Th[230],[230],,,ppb, .0157,.0010,6.379, .0154, .0143, .0169, .0164, .0155,None,0.0,0.0
Elem3=Th[232],[232],,,ppb, 98.16,2.675,2.725, 98.48, 94.35, 99.07, 101.7, 97.23,None,0.0,0.0
Elem4=Pa[231],[231],,,ppb, -.0044,.0115,263.4, -.0185, .0106, -.0130, -.0007, -.0001,None,0.0,0.0
Elem5=U [233],[233],,,ppb, .0191,.0020,10.57, .0176, .0223, .0199, .0172, .0187,None,0.0,0.0
Elem6=U [234],[234],,,ppb, .0082,.0005,6.250, .0088, .0076, .0077, .0081, .0085,None,0.0,0.0
Elem7=U [235],[235],,,ppb, .7179,.0172,2.390, .7192, .7297, .7349, .7148, .6907,None,0.0,0.0
Elem8=U [236],[236],,,ppb, .0172,.0023,13.28, .0182, .0157, .0207, .0162, .0152,None,0.0,0.0
Elem9=U [238],[238],,,ppb, 98.62,2.265,2.297, 96.00, 100.3, 100.6, 99.95, 96.31,None,0.0,0.0
Elem10=Np[237],[237],,,ppb,Q -.0226,.0062,27.64, -.0138, -.0219, -.0202, -.0293, -.0278,QC Fail,ñ.0100%,.0000
Elem11=Pu[239],[239],,,ppb, -.0063,.0012,19.26, -.0054, -.0061, -.0059, -.0085, -.0058,QC Pass,ñ.0100%,.0000
Elem12=Pu[240],[240],,,ppb, -.0003,.0005,157.9, -.0010, -.0005, .0002, .0001, -.0004,QC Pass,ñ.0100%,.0000
Elem13=Pu[242],[242],,,ppb, -.0005,.0008,161.5, -.0011, -.0005, .0009, -.0009, -.0010,QC Pass,ñ.0100%,.0000
Elem14=Pu[244],[244],,,ppb, .0006,.0004,71.67, .0002, .0009, .0004, .0011, .0002,QC Pass,ñ.0100%,.0000
Elem15=Am[241],[241],,,ppb, -.0006,.0007,115.2, -.0007, -.0014, -.0001, -.0012, .0003,None,0.0,0.0
Elem16=Am[243],[243],,,ppb, -.0005,.0005,103.9, -.0001, -.0003, -.0004, -.0003, -.0015,None,0.0,0.0
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 24.151,.23592,.97686,24.123,23.817,24.062,24.372,24.382
```

[Sample Header]

Method=ACT_MS
 SampleName=icv
 Operator=kjt
 Comment=msact lcs
 CustID=
 CustSmpl=23b59
 LabID=
 Run Time=05/09/2000 09:46
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
 Elem0=Th[228],[228],,,,ppb, -.0008,.0009,119.9, .0006, -.0017, -.0011, -.0004, -.0012,,,
 Elem1=Th[229],[229],,,,ppb, -.0004,.0004,82.42, -.0002, -.0008, -.0006, .0001, -.0007,,,
 Elem2=Th[230],[230],,,,ppb, .0010,.0014,141.7, .0014, .0016, .0028, -.0001, -.0007,,,
 Elem3=Th[232],[232],,,,ppb, 10.54,.1885,1.789, 10.63, 10.33, 10.82, 10.49, 10.45,,,
 Elem4=Pa[231],[231],,,,ppb, -.0006,.0016,261.2, -.0009, -.0005, -.0005, -.0029, .0017,,,
 Elem5=U_[233],[233],,,,ppb, .0015,.0006,37.57, .0021, .0021, .0010, .0010, .0012,,,
 Elem6=U_[234],[234],,,,ppb, .0008,.0007,97.23, .0012, .0018, .0006, .0004, -.0002,,,
 Elem7=U_[235],[235],,,,ppb, .0815,.0008,.9469, .0827, .0810, .0819, .0809, .0810,,,
 Elem8=U_[236],[236],,,,ppb, .0316,.0029,9.263, .0348, .0285, .0327, .0285, .0334,,,
 Elem9=U_[238],[238],,,,ppb, 10.25,.1795,1.751, 10.02, 10.32, 10.47, 10.11, 10.33,,,
 Elem10=Np[237],[237],,,,ppb, 10.75,.3189,2.966, 10.40, 10.84, 11.08, 10.43, 11.01,,,
 Elem11=Pu[239],[239],,,,ppb, 10.68,.2426,2.273, 10.72, 10.72, 11.01, 10.33, 10.60,,,
 Elem12=Pu[240],[240],,,,ppb, .3047,.0075,2.474, .2930, .3077, .3115, .3016, .3097,,,
 Elem13=Pu[242],[242],,,,ppb, .0014,.0010,70.05, .0014, .0007, .0030, .0009, .0009,,,
 Elem14=Pu[244],[244],,,,ppb, .0000,.0008,3998., .0006, .0004, .0002, -.0014, .0000,,,
 Elem15=Am[241],[241],,,,ppb, 11.17,.3622,3.243, 10.67, 11.18, 11.61

, 11.40, 11.00,,,
Elem16=Am[243],[243],,,ppb, -.0003,.0008,254.2, .0007, -.0005, .00
03, -.0009, -.0010,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 24.593,.40884,1.6625,24.995,24.497,23.
938,24.830,24.702

[Sample Header]

Method=ACT_MS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 09:53
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0015,.0017,110.4, -.0022, -.0027, .00
01, -.0034, .0004,,,
Elem1=Th[229],[229],,,ppb, -.0017,.0008,47.19, -.0023, -.0008, -.0
027, -.0014, -.0013,,,
Elem2=Th[230],[230],,,ppb, -.0011,.0012,102.5, -.0022, -.0004, -.0
024, -.0011, .0003,,,
Elem3=Th[232],[232],,,ppb, .0005,.0011,192.3, .0007, .0001, .0010,
-.0009, .0019,,,
Elem4=Pa[231],[231],,,ppb, -.0008,.0019,254.7, -.0018, .0024, -.00
13, -.0026, -.0004,,,
Elem5=U [233],[233],,,ppb, -.0009,.0012,128.8, -.0020, -.0022, -.0
001, .0006, -.0011,,,
Elem6=U [234],[234],,,ppb, -.0008,.0006,75.30, -.0009, -.0009, .00
01, -.0006, -.0015,,,
Elem7=U [235],[235],,,ppb, -.0011,.0009,76.52, -.0010, .0002, -.00
12, -.0021, -.0017,,,
Elem8=U [236],[236],,,ppb, -.0009,.0009,94.36, .0002, -.0016, -.00
04, -.0020, -.0009,,,
Elem9=U [238],[238],,,ppb, -.0012,.0010,84.05, -.0016, -.0021, -.0
006, -.0018, .0003,,,
Elem10=Np[237],[237],,,ppb, -.0002,.0006,368.9, .0002, -.0004, .00
00, -.0011, .0004,,,

Elem11=Pu[239],[239],,,ppb, .0002,.0004,170.3, .0001, .0005, .0005
, -.0004, .0006,,,
Elem12=Pu[240],[240],,,ppb, -.0005,.0007,139.9, -.0009, .0002, .00
01, -.0015, -.0005,,,
Elem13=Pu[242],[242],,,ppb, -.0006,.0006,85.65, .0001, -.0009, -.0
014, -.0004, -.0006,,,
Elem14=Pu[244],[244],,,ppb, -.0006,.0007,112.6, -.0015, .0004, -.0
004, -.0005, -.0011,,,
Elem15=Am[241],[241],,,ppb, -.0009,.0006,72.81, -.0003, -.0005, -.
0018, -.0012, -.0006,,,
Elem16=Am[243],[243],,,ppb, -.0009,.0005,57.04, -.0007, -.0006, -.
0017, -.0007, -.0005,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 24.217,.30761,1.2703,24.008,23.835,24.
488,24.196,24.557

[Sample Header]

Method=ACT_MS

SampleName=std-prep

Operator=kjt

Comment=451 df.

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 09:57

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Th[228],[228],,,ppb, -.0010,.0005,51.76, -.0008, -.0004, -.0
017, -.0015, -.0009,,,

Elem1=Th[229],[229],,,ppb, -.0013,.0009,66.74, -.0007, -.0007, -.0
006, -.0025, -.0021,,,

Elem2=Th[230],[230],,,ppb, .0007,.0016,211.3, .0009, .0003, .0004,
.0033, -.0011,,,

Elem3=Th[232],[232],,,ppb, 10.77,.1593,1.479, 10.91, 10.87, 10.89,
10.57, 10.63,,,

Elem4=Pa[231],[231],,,ppb, -.0007,.0018,255.2, -.0011, .0024, -.00
18, -.0017, -.0013,,,

Elem5=U_[233],[233],,,ppb, .0019,.0009,48.54, .0015, .0023, .0004,
.0025, .0027,,,

Elem6=U_[234],[234],,,ppb, -.0001,.0002,201.0, -.0001, .0001, -.00

03, -.0004, .0001,,,
Elem7=U_[235],[235],,,ppb, .0575,.0038,6.527, .0565, .0581, .0590,
.0620,.0518,,,
Elem8=U_[236],[236],,,ppb, .0033,.0010,30.14, .0033, .0022, .0049,
.0029,.0030,,,
Elem9=U_[238],[238],,,ppb, 21.80,.7186,3.296, 21.68, 22.10, 21.97,
22.60, 20.66,,,
Elem10=Np[237],[237],,,ppb, -.0012,.0007,55.91, -.0020, -.0006, -.
0015, -.0004, -.0018,,,
Elem11=Pu[239],[239],,,ppb, -.0018,.0010,53.88, -.0017, -.0022, -.
0005, -.0031, -.0014,,,
Elem12=Pu[240],[240],,,ppb, -.0006,.0006,108.1, -.0002, -.0006, -.
0016, -.0001, -.0003,,,
Elem13=Pu[242],[242],,,ppb, -.0014,.0007,45.90, -.0008, -.0008, -.
0015, -.0024, -.0015,,,
Elem14=Pu[244],[244],,,ppb, -.0007,.0005,75.63, -.0008, -.0011, -.
0002, -.0013, -.0001,,,
Elem15=Am[241],[241],,,ppb, -.0008,.0006,74.58, -.0002, -.0001, -.
0011, -.0013, -.0015,,,
Elem16=Am[243],[243],,,ppb, -.0006,.0005,87.36, -.0004, -.0009, -.
0008, .0002, -.0009,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 24.472,.26852,1.0972,24.580,24.466,24.
820,24.082,24.411

[Sample Header]

Method=ACT_MS

SampleName=blnk-prep

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 10:06

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Th[228],[228],,,ppb, -.0015,.0012,80.00, -.0016, -.0024, -.0
023, .0005, -.0016,,,

Elem1=Th[229],[229],,,ppb, -.0021,.0014,63.96, -.0020, -.0042, -.0
010, -.0026, -.0008,,,

Elem2=Th[230],[230],,,,ppb, -.0014,.0010,72.66, -.0017, -.0008, -.0
008, -.0006, -.0030,,,
Elem3=Th[232],[232],,,,ppb, .0035,.0014,41.17, .0021, .0023, .0056,
.0034, .0040,,,
Elem4=Pa[231],[231],,,,ppb, -.0020,.0013,65.84, -.0006, -.0027, -.0
028, -.0035, -.0006,,,
Elem5=U [233],[233],,,,ppb, -.0003,.0007,255.4, -.0006, -.0005, -.0
012, .0000, .0008,,,
Elem6=U [234],[234],,,,ppb, -.0003,.0005,171.9, -.0003, -.0005, -.0
009, .0002, .0002,,,
Elem7=U [235],[235],,,,ppb, -.0009,.0012,128.7, -.0008, -.0013, -.0
015, .0010, -.0019,,,
Elem8=U [236],[236],,,,ppb, -.0010,.0003,33.25, -.0011, -.0009, -.0
016, -.0010, -.0007,,,
Elem9=U [238],[238],,,,ppb, .0066,.0013,20.18, .0064, .0067, .0053,
.0087, .0057,,,
Elem10=Np[237],[237],,,,ppb, -.0006,.0009,145.8, .0000, .0005, -.00
12, -.0016, -.0007,,,
Elem11=Pu[239],[239],,,,ppb, -.0004,.0006,149.4, -.0003, -.0002, -.
0015, .0002, -.0003,,,
Elem12=Pu[240],[240],,,,ppb, -.0021,.0006,28.16, -.0014, -.0019, -.
0019, -.0027, -.0028,,,
Elem13=Pu[242],[242],,,,ppb, -.0007,.0003,51.88, -.0005, -.0012, -.
0003, -.0007, -.0007,,,
Elem14=Pu[244],[244],,,,ppb, -.0004,.0010,263.0, -.0016, -.0007, -.
0005, .0012, -.0003,,,
Elem15=Am[241],[241],,,,ppb, -.0009,.0004,41.22, -.0010, -.0009, -.
0015, -.0004, -.0007,,,
Elem16=Am[243],[243],,,,ppb, -.0012,.0005,44.36, -.0013, -.0013, -.
0005, -.0020, -.0011,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 24.557,.53075,2.1613,25.127,24.711,24.
821,23.731,24.393

[Sample Header]

Method=ACT_MS

SampleName=s00t000804

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 10:13

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0014,.0014,97.39, -.0020, -.0030, -.0004, .0004, -.0020,,,
Elem1=Th[229],[229],,,,ppb, -.0025,.0006,25.71, -.0025, -.0019, -.0028, -.0035, -.0020,,,
Elem2=Th[230],[230],,,,ppb, -.0014,.0023,170.6, -.0037, .0017, -.0036, .0001, -.0013,,,
Elem3=Th[232],[232],,,,ppb, 2.750,.0448,1.629, 2.793, 2.805, 2.717, 2.712, 2.725,,,
Elem4=Pa[231],[231],,,,ppb, -.0019,.0009,48.09, -.0028, -.0005, -.0018, -.0019, -.0027,,,
Elem5=U_[233],[233],,,,ppb, .0026,.0011,42.71, .0029, .0017, .0044, .0019, .0022,,,
Elem6=U_[234],[234],,,,ppb, .0075,.0010,12.85, .0087, .0080, .0077, .0066, .0065,,,
Elem7=U_[235],[235],,,,ppb, .6982,.0193,2.769, .7186, .6889, .6697, .7030, .7108,,,
Elem8=U_[236],[236],,,,ppb, .0690,.0024,3.421, .0720, .0686, .0672, .0708, .0664,,,
Elem9=U_[238],[238],,,,ppb, 80.55,1.264,1.570, 82.26, 80.17, 78.85, 80.28, 81.17,,,
Elem10=Np[237],[237],,,,ppb, 1.065,.0309,2.898, 1.095, 1.053, 1.039, 1.037, 1.101,,,
Elem11=Pu[239],[239],,,,ppb, .7894,.0163,2.063, .7967, .7745, .8053, .8011, .7695,,,
Elem12=Pu[240],[240],,,,ppb, .0610,.0023,3.849, .0640, .0606, .0575, .0612, .0617,,,
Elem13=Pu[242],[242],,,,ppb, -.0012,.0006,47.18, -.0019, -.0005, -.0008, -.0013, -.0017,,,
Elem14=Pu[244],[244],,,,ppb, -.0010,.0004,35.74, -.0012, -.0009, -.0016, -.0007, -.0007,,,
Elem15=Am[241],[241],,,,ppb, .3356,.0068,2.030, .3432, .3427, .3296, .3300, .3323,,,
Elem16=Am[243],[243],,,,ppb, .0005,.0010,191.0, .0006, .0022, -.0002, -.0001, .0001,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 24.400,.45042,1.8460,23.738,24.224,24.933,24.629,24.474

```

[Sample Header]

```
Method=ACT_MS
SampleName=s00t000804_s

```

Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 10:19
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0009,.0010,116.6, -.0017, -.0008, -.0
012, -.0015, .0008,,,
Elem1=Th[229],[229],,,,ppb, -.0014,.0011,76.57, -.0023, .0003, -.00
25, -.0014, -.0013,,,
Elem2=Th[230],[230],,,,ppb, .0015,.0013,84.80, .0007, .0032, .0003,
.0026, .0007,,,
Elem3=Th[232],[232],,,,ppb, 10.39,5.284,50.85, 12.52, 12.69, 12.97,
12.83, .9427,,,
Elem4=Pa[231],[231],,,,ppb, .0014,.0022,164.4, -.0001, .0018, -.001
7, .0028, .0039,,,
Elem5=U_[233],[233],,,,ppb, .0031,.0035,111.6, .0035, .0046, .0048,
.0057, -.0030,,,
Elem6=U_[234],[234],,,,ppb, .0073,.0019,25.79, .0074, .0073, .0080,
.0095, .0043,,,
Elem7=U_[235],[235],,,,ppb, .7553,.0179,2.370, .7344, .7798, .7432,
.7651, .7542,,,
Elem8=U_[236],[236],,,,ppb, .0725,.0010,1.399, .0738, .0718, .0729,
.0730, .0713,,,
Elem9=U_[238],[238],,,,ppb, 100.7,3.998,3.970, 102.4, 101.0, 94.34,
105.2, 100.6,,,
Elem10=Np[237],[237],,,,ppb, 1.090,.0185,1.696, 1.092, 1.117, 1.093
, 1.081, 1.067,,,
Elem11=Pu[239],[239],,,,ppb, .8015,.0337,4.208, .8016, .8290, .7465
, .8291, .8011,,,
Elem12=Pu[240],[240],,,,ppb, .0609,.0011,1.863, .0598, .0616, .0615
, .0594, .0619,,,
Elem13=Pu[242],[242],,,,ppb, .0001,.0009,725.2, -.0004, .0005, -.00
02, .0016, -.0008,,,
Elem14=Pu[244],[244],,,,ppb, -.0003,.0008,234.2, -.0001, -.0006, -.
0003, .0007, -.0015,,,
Elem15=Am[241],[241],,,,ppb, .3305,.0082,2.470, .3322, .3407, .3222
, .3352, .3221,,,
Elem16=Am[243],[243],,,,ppb, .0016,.0007,43.68, .0015, .0026, .0011
, .0018, .0008,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 24.225,.52870,2.1825,24.229,23.965,24.
274,23.611,25.044

[Sample Header]

Method=ACT_MS
SampleName=s00t000804_s
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 10:27
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0009,.0013,155.5, .0010, -.0027, -.00
08, -.0011, -.0007,,,
Elem1=Th[229],[229],,,ppb, -.0017,.0007,40.17, -.0016, -.0012, -.0
026, -.0021, -.0009,,,
Elem2=Th[230],[230],,,ppb, .0012,.0005,38.33, .0015, .0005, .0010,
.0015, .0018,,,
Elem3=Th[232],[232],,,ppb, 13.00,.2400,1.846, 12.74, 13.34, 12.80,
13.10, 13.02,,,
Elem4=Pa[231],[231],,,ppb, -.0035,.0026,72.48, -.0024, -.0034, -.0
010, -.0032, -.0078,,,
Elem5=U_[233],[233],,,ppb, .0060,.0012,20.06, .0062, .0071, .0050,
.0045, .0071,,,
Elem6=U_[234],[234],,,ppb, .0083,.0009,10.96, .0088, .0082, .0080,
.0071, .0096,,,
Elem7=U_[235],[235],,,ppb, .7734,.0166,2.147, .7704, .7764, .7882,
.7466, .7856,,,
Elem8=U_[236],[236],,,ppb, .0717,.0020,2.851, .0692, .0746, .0726,
.0706, .0717,,,
Elem9=U_[238],[238],,,ppb, 101.8,1.680,1.651, 100.4, 104.4, 100.9,
102.7, 100.7,,,
Elem10=Np[237],[237],,,ppb, 1.113,.0237,2.132, 1.073, 1.134, 1.121
, 1.124, 1.116,,,
Elem11=Pu[239],[239],,,ppb, .8303,.0122,1.469, .8250, .8348, .8121
, .8359, .8438,,,
Elem12=Pu[240],[240],,,ppb, .0640,.0025,3.924, .0648, .0650, .0598

```
, .0643, .0664,,,
Elem13=Pu[242],[242],,,,ppb, -.0001,.0009,1226., -.0012, .0009, -.0
005, -.0004, .0009,,,
Elem14=Pu[244],[244],,,,ppb, -.0002,.0006,387.7, -.0001, .0008, -.0
005, -.0008, -.0001,,,
Elem15=Am[241],[241],,,,ppb, .3363,.0107,3.168, .3345, .3485, .3200
, .3423, .3361,,,
Elem16=Am[243],[243],,,,ppb, .0013,.0008,61.89, .0012, .0026, .0013
, .0012, .0003,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 23.534,.31268,1.3286,23.948,23.157,23.
595,23.671,23.300
```

[Sample Header]

```
Method=ACT_MS
SampleName=s00t000804_a
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 10:34
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0002,.0010,635.4, -.0012, .0009, .000
7, -.0011, -.0001,,,
Elem1=Th[229],[229],,,,ppb, -.0008,.0006,74.53, -.0005, -.0016, -.0
004, -.0002, -.0013,,,
Elem2=Th[230],[230],,,,ppb, .0015,.0009,62.91, .0003, .0015, .0012,
.0029, .0015,,,
Elem3=Th[232],[232],,,,ppb, 12.28,.2928,2.384, 12.72, 12.03, 12.07,
12.15, 12.44,,,
Elem4=Pa[231],[231],,,,ppb, -.0025,.0022,86.68, .0001, -.0004, -.00
42, -.0042, -.0038,,,
Elem5=U_[233],[233],,,,ppb, .0060,.0012,19.54, .0081, .0053, .0056,
.0055, .0057,,,
Elem6=U_[234],[234],,,,ppb, .0100,.0019,19.01, .0119, .0103, .0117,
.0079, .0082,,,
Elem7=U_[235],[235],,,,ppb, .8776,.0233,2.649, .8964, .8504, .8802,
.9034, .8577,,,
```


Elem8=U_[236],[236],,,,ppb, .1011,.0054,5.362, .1052, .0963, .1051,
.1049, .0942,,,
Elem9=U_[238],[238],,,,ppb, 104.5,1.547,1.480, 105.4, 103.7, 102.6,
106.6, 104.4,,,
Elem10=Np[237],[237],,,,ppb, 11.01,.1513,1.374, 11.18, 10.94, 11.00
, 10.81, 11.15,,,
Elem11=Pu[239],[239],,,,ppb, 10.75,.2419,2.251, 10.85, 10.35, 10.72
, 10.83, 10.98,,,
Elem12=Pu[240],[240],,,,ppb, .3488,.0113,3.230, .3547, .3414, .3366
, .3650, .3464,,,
Elem13=Pu[242],[242],,,,ppb, .0023,.0010,43.05, .0008, .0029, .0028
, .0032, .0018,,,
Elem14=Pu[244],[244],,,,ppb, .0003,.0007,197.3, .0013, -.0005, .000
2, .0003, .0004,,,
Elem15=Am[241],[241],,,,ppb, 10.75,.2400,2.233, 10.98, 10.79, 10.60
, 10.96, 10.42,,,
Elem16=Am[243],[243],,,,ppb, .0014,.0003,22.46, .0017, .0013, .0010
, .0018, .0013,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 23.864,.33054,1.3851,23.486,24.344,23.
950,23.631,23.911

[Sample Header]

Method=ACT_MS

SampleName=s00t000803

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 10:42

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Th[228],[228],,,,ppb, -.0003,.0011,324.4, .0004, .0004, -.000
9, -.0020, .0004,,,

Elem1=Th[229],[229],,,,ppb, -.0013,.0014,106.2, -.0008, -.0026, -.0
010, -.0027, .0006,,,

Elem2=Th[230],[230],,,,ppb, .0007,.0013,194.0, .0022, .0004, .0013,
.0006, -.0013,,,

Elem3=Th[232],[232],,,,ppb, 2.734,.0348,1.273, 2.715, 2.702, 2.734,

2.792, 2.725,,,
Elem4=Pa[231],[231],,,ppb, -.0009,.0003,30.26, -.0005, -.0012, -.0
008, -.0008, -.0010,,,
Elem5=U_[233],[233],,,ppb, .0039,.0015,38.56, .0021, .0040, .0040,
.0061, .0031,,,
Elem6=U_[234],[234],,,ppb, .0079,.0006,7.337, .0079, .0077, .0089,
.0077, .0075,,,
Elem7=U_[235],[235],,,ppb, .7362,.0239,3.240, .7667, .7050, .7485,
.7389, .7217,,,
Elem8=U_[236],[236],,,ppb, .0711,.0033,4.669, .0753, .0679, .0740,
.0688, .0695,,,
Elem9=U_[238],[238],,,ppb, 85.03,1.840,2.164, 84.34, 86.50, 85.52,
86.64, 82.18,,,
Elem10=Np[237],[237],,,ppb, 1.144,.0597,5.218, 1.200, 1.145, 1.146
, 1.183, 1.046,,,
Elem11=Pu[239],[239],,,ppb, .8758,.0209,2.388, .8809, .8499, .8887
, .9004, .8590,,,
Elem12=Pu[240],[240],,,ppb, .0677,.0011,1.629, .0667, .0670, .0692
, .0685, .0671,,,
Elem13=Pu[242],[242],,,ppb, -.0001,.0007,565.6, .0002, -.0005, -.0
009, .0008, -.0002,,,
Elem14=Pu[244],[244],,,ppb, .0002,.0004,231.8, .0004, .0001, -.000
3, .0007, .0000,,,
Elem15=Am[241],[241],,,ppb, .3375,.0082,2.431, .3395, .3316, .3423
, .3472, .3269,,,
Elem16=Am[243],[243],,,ppb, .0022,.0006,25.63, .0027, .0014, .0028
, .0022, .0020,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 23.682,.24869,1.0501,23.792,23.696,23.
690,23.280,23.952

[Sample Header]

Method=ACT MS

SampleName=s00t000805

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 10:48

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0009,.0011,127.6, .0005, -.0021, .0000,
-.0019, -.0009,,,
Elem1=Th[229],[229],,,,ppb, -.0010,.0017,172.4, -.0004, -.0031, -.0007,
-.0019, .0013,,,
Elem2=Th[230],[230],,,,ppb, -.0001,.0018,1713., -.0014, -.0005, -.0013,
.0029, -.0003,,,
Elem3=Th[232],[232],,,,ppb, 2.809,.0137,.4878, 2.813, 2.814, 2.811,
2.822, 2.786,,,
Elem4=Pa[231],[231],,,,ppb, -.0008,.0013,160.0, -.0014, .0000, -.0027,
.0003, -.0001,,,
Elem5=U_[233],[233],,,,ppb, .0031,.0004,11.24, .0028, .0037, .0030,
.0032, .0031,,,
Elem6=U_[234],[234],,,,ppb, .0087,.0012,13.32, .0105, .0075, .0080,
.0090, .0087,,,
Elem7=U_[235],[235],,,,ppb, .7521,.0177,2.352, .7474, .7675, .7450,
.7719, .7286,,,
Elem8=U_[236],[236],,,,ppb, .0738,.0020,2.660, .0711, .0760, .0753,
.0733, .0731,,,
Elem9=U_[238],[238],,,,ppb, 86.76,1.428,1.646, 86.17, 88.86, 86.90,
86.96, 84.93,,,
Elem10=Np[237],[237],,,,ppb, 1.200,.0334,2.783, 1.188, 1.248, 1.165,
1.219, 1.180,,,
Elem11=Pu[239],[239],,,,ppb, .8814,.0235,2.672, .8628, .8995, .9098,
.8806, .8542,,,
Elem12=Pu[240],[240],,,,ppb, .0662,.0029,4.395, .0648, .0674, .0699,
.0670, .0622,,,
Elem13=Pu[242],[242],,,,ppb, -.0005,.0006,109.3, -.0007, -.0014, .0000,
-.0001, -.0005,,,
Elem14=Pu[244],[244],,,,ppb, .0002,.0009,374.8, -.0008, .0011, -.0005,
.0005, .0009,,,
Elem15=Am[241],[241],,,,ppb, .3479,.0041,1.173, .3536, .3508, .3443,
.3465, .3446,,,
Elem16=Am[243],[243],,,,ppb, .0017,.0006,36.27, .0018, .0006, .0022,
.0018, .0018,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 23.568,.46061,1.9544,23.563,22.833,23.990,
23.528,23.927

```

[Sample Header]

```
Method=ACT_MS
SampleName=ccv
Operator=kjt
Comment=msact lcs
CustID=

```

CustSmpl=23b59
LabID=
Run Time=05/09/2000 10:59
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, .0003,.0017,560.9, .0004, -.0011, .0031
, -.0005, -.0004,,,
Elem1=Th[229],[229],,,,ppb, .0001,.0006,506.7, -.0004, -.0003, .0000
, .0002, .0010,,,
Elem2=Th[230],[230],,,,ppb, .0028,.0021,74.81, .0039, .0053, .0033,
.0002, .0012,,,
Elem3=Th[232],[232],,,,ppb, 10.47,.2172,2.074, 10.14, 10.41, 10.58,
10.51, 10.72,,,
Elem4=Pa[231],[231],,,,ppb, .0006,.0020,350.9, .0024, -.0009, -.0007,
-.0010, .0031,,,
Elem5=U [233],[233],,,,ppb, .0037,.0006,17.14, .0030, .0030, .0039,
.0044, .0042,,,
Elem6=U [234],[234],,,,ppb, .0027,.0013,48.43, .0020, .0027, .0040,
.0038, .0009,,,
Elem7=U [235],[235],,,,ppb, .0833,.0045,5.432, .0787, .0857, .0788,
.0891, .0841,,,
Elem8=U [236],[236],,,,ppb, .0323,.0027,8.380, .0288, .0325, .0360,
.0308, .0332,,,
Elem9=U [238],[238],,,,ppb, 10.35,.0664,.6416, 10.36, 10.33, 10.33,
10.45, 10.27,,,
Elem10=Np[237],[237],,,,ppb, 10.82,.1392,1.286, 10.78, 10.65, 10.76,
, 11.01, 10.90,,,
Elem11=Pu[239],[239],,,,ppb, 10.91,.2258,2.070, 10.66, 10.71, 10.92,
, 11.09, 11.17,,,
Elem12=Pu[240],[240],,,,ppb, .3104,.0062,1.990, .3059, .3118, .3168,
, .3151, .3022,,,
Elem13=Pu[242],[242],,,,ppb, .0029,.0008,28.08, .0029, .0034, .0032,
, .0034, .0015,,,
Elem14=Pu[244],[244],,,,ppb, .0007,.0006,87.82, .0002, .0012, .0011,
, -.0001, .0009,,,
Elem15=Am[241],[241],,,,ppb, 11.38,.1319,1.159, 11.26, 11.22, 11.47,
, 11.50, 11.45,,,
Elem16=Am[243],[243],,,,ppb, -.0004,.0005,105.9, -.0009, -.0001, -.0004,
-.0009, .0001,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```
Elem14=Pu[244],[244],,,,ppb, .0001,.0009,1110., -.0010, -.0007, .00  
12, .0001, .0008,,,  
Elem15=Am[241],[241],,,,ppb, -.0004,.0009,226.8, -.0009, .0002, .00  
06, -.0017, -.0003,,,  
Elem16=Am[243],[243],,,,ppb, -.0002,.0004,296.6, -.0006, -.0006, .0  
003, .0000, .0002,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=Ir[193],[193],,Cts/S, 23.701,.25443,1.0735,23.716,24.065,23.  
350,23.651,23.722
```

LABCORE Completed Worklist Report for Worklist# 33309

Analyst: kjt

Instrument: ICPMS1

Book#: 22 B 59

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSAC-D1

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0		QMSAC-QC TH232	QC	1.00e-2	1.02e-02	102.000 % Recovery	
1 ICV	0		QMSAC-QC U235	QC	3.60e-5	4.22e-05	117.222 % Recovery	
1 ICV	0		QMSAC-QC U238	QC	4.96e-3	5.26e-03	106.048 % Recovery	
1 ICV	0		QMSAC-QC NP237	QC	9.88e-3	1.08e-02	109.312 % Recovery	
1 ICV	0		QMSAC-QC PU239	QC	1.00e-2	1.11e-02	111.000 % Recovery	
1 ICV	0		QMSAC-QC 241	QC	1.03e-2	1.12e-02	108.738 % Recovery	
2 ICB	0		QMSAC-QC PA231	QC	1	<1.50e-5		ug/mL
2 ICB	0		QMSAC-QC TH229	QC	1	<1.50e-5		ug/mL
2 ICB	0		QMSAC-QC TH230	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC TH232	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC U233	QC	1	<1.20e-5		ug/mL
2 ICB	0		QMSAC-QC U234	QC	1	<1.20e-5		ug/mL
2 ICB	0		QMSAC-QC U235	QC	1	<1.20e-5		ug/mL
2 ICB	0		QMSAC-QC U236	QC	1	<1.60e-5		ug/mL
2 ICB	0		QMSAC-QC U238	QC	1	<1.20e-5		ug/mL
2 ICB	0		QMSAC-QC NP237	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC PU239	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC PU240	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC 241	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC 243	QC	1	<5.00e-5		ug/mL
2 ICB	0		QMSAC-QC 244	QC	1	<5.00e-5		ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 PA231-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 TH229-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 TH230-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 TH232-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 U233-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 U234-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 U235-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 U236-D1	LIQUID	N/A	< 1.930e-02	1.93e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 U238-D1	LIQUID	N/A	9.554e-01	1.45e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 NP237-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 PU239-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 PU240-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 PU242-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 241-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 243-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
3 SAMPLE	S00T000778	0 D	QMSAC-D1 244-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
4 SPK-POST	S00T000778	0 D	QMSAC-D1 TH232-D1	LIQUID	0.020	1.32e-02	66.000 % Recovery	
4 SPK-POST	S00T000778	0 D	QMSAC-D1 U235-D1	LIQUID	0.00014	1.37e-04	97.857 % Recovery	
4 SPK-POST	S00T000778	0 D	QMSAC-D1 U238-D1	LIQUID	0.020	1.69e-02	84.500 % Recovery	
4 SPK-POST	S00T000778	0 D	QMSAC-D1 NP237-D1	LIQUID	0.01968	1.77e-02	89.939 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33309

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	SPK-POST	800T000778	0	D	EMSAC-D1 PU239-D1	LIQUID	0.02008	1.76e-02	87.649 % Recovery	
4	SPK-POST	800T000778	0	D	EMSAC-D1 241-D1	LIQUID	0.02052	1.58e-02	76.998 % Recovery	
5	SAMPLE	800T000781	0	D	EMSAC-D1 PA231-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 TH229-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 TH230-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 TH232-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 U233-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 U234-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 U235-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 U236-D1	LIQUID	N/A	< 1.930e-02	1.93e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 U238-D1	LIQUID	N/A	1.754e+00	1.45e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 NP237-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 PU239-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 PU240-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 PU242-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 241-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 243-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
5	SAMPLE	800T000781	0	D	EMSAC-D1 244-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 PA231-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 TH229-D1	LIQUID	N/A	< 1.809e-02	1.81e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 TH230-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 TH232-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 U233-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 U234-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 U235-D1	LIQUID	N/A	< 1.447e-02	1.45e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 U236-D1	LIQUID	N/A	< 1.930e-02	1.93e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 U238-D1	LIQUID	N/A	9.589e-01	1.45e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 NP237-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 PU239-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 PU240-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 PU242-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 241-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 243-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
6	SAMPLE	800T000784	0	D	EMSAC-D1 244-D1	LIQUID	N/A	< 6.030e-02	6.03e-002	ug/mL
7	CCV		0		EMSAC-QC TH232	QC	1.00e-2	1.02e-02	102.000 % Recovery	
7	CCV		0		EMSAC-QC U235	QC	3.60e-5	4.50e-05	125.000 % Recovery	
7	CCV		0		EMSAC-QC U238	QC	4.96e-3	5.26e-03	106.048 % Recovery	
7	CCV		0		EMSAC-QC NP237	QC	9.88e-3	1.10e-02	111.336 % Recovery	
7	CCV		0		EMSAC-QC PU239	QC	1.00e-2	1.13e-02	113.000 % Recovery	
7	CCV		0		EMSAC-QC 241	QC	1.03e-2	1.15e-02	111.650 % Recovery	
8	CCB		0		EMSAC-QC PA231	QC	1	<1.50e-5		ug/mL
8	CCB		0		EMSAC-QC TH229	QC	1	<1.50e-5		ug/mL
8	CCB		0		EMSAC-QC TH230	QC	1	<5.00e-5		ug/mL
8	CCB		0		EMSAC-QC TH232	QC	1	<5.00e-5		ug/mL
8	CCB		0		EMSAC-QC U233	QC	1	<1.20e-5		ug/mL
8	CCB		0		EMSAC-QC U234	QC	1	<1.20e-5		ug/mL
8	CCB		0		EMSAC-QC U235	QC	1	<1.20e-5		ug/mL
8	CCB		0		EMSAC-QC U236	QC	1	<1.60e-5		ug/mL
8	CCB		0		EMSAC-QC U238	QC	1	<1.20e-5		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33309

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
8 CCB	0	QMSAC-QC NP237	QC	1	<5.00e-5		ug/mL
8 CCB	0	QMSAC-QC PU239	QC	1	<5.00e-5		ug/mL
8 CCB	0	QMSAC-QC PU240	QC	1	<5.00e-5		ug/mL
8 CCB	0	QMSAC-QC 241	QC	1	<5.00e-5		ug/mL
8 CCB	0	QMSAC-QC 243	QC	1	<5.00e-5		ug/mL
8 CCB	0	QMSAC-QC 244	QC	1	<5.00e-5		ug/mL

Final page for worklist# 33309

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sal M. Pang 05/04/2000
Reviewer Signature _____ Date _____

HNF-1701 REV. 0

04/27/00 14:09

ws2

ac0427b.txt

Page: 1

LABCORE Data Entry Template for Worklist# 33309

Analyst: K57 Instrument: ICPMS1 Book# 22BS9Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSAC-D1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@MSAC-QC QC			
2 ICB			@MSAC-QC QC			
3 SAMPLE	S00T000778 0 D		@MSAC-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: 241-D1 , 243-D1 , 244-D1 , NP237-D1, PA231-D1, PU239-D1, PU240-D1, PU242-D1, TH229-D1, TH230-D1, TH232-D1, U233-D1, U234-D1, U235-D1, U236-D1, U238-D1						
4 SPK-POST	S00T000778 0 D		@MSAC-D1 LIQUID			
5 SAMPLE	S00T000781 0 D		@MSAC-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: 241-D1 , 243-D1 , 244-D1 , NP237-D1, PA231-D1, PU239-D1, PU240-D1, PU242-D1, TH229-D1, TH230-D1, TH232-D1, U233-D1, U234-D1, U235-D1, U236-D1, U238-D1						
6 SAMPLE	S00T000784 0 D		@MSAC-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: 241-D1 , 243-D1 , 244-D1 , NP237-D1, PA231-D1, PU239-D1, PU240-D1, PU242-D1, TH229-D1, TH230-D1, TH232-D1, U233-D1, U234-D1, U235-D1, U236-D1, U238-D1						
7 CCV			@MSAC-QC QC			
8 CCB			@MSAC-QC QC			

Final page for worklist # 33309

K5 Bondlike 04-27-00
 Signature Date

Signature Date

S00T000778

1206 df

05-10-2-10

S00T000778-a

S00T000781

S00T000784

Data Entry Comments:

Spike. Qml. Uppm Uranium. 04ml MSAC spike
 8BS9, Ran 20ppb solution of Uranium after
 Spike failed.

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report

04/27/00 13:10:05 HNF-1701 REV. 0 page 1

Method: MS_TUNE

Sample Name: ms-tune

Operator: kjt

Comment:

Run Time: 04/27/00 13:08 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	74500.	33430.	45190.
Stddev	762.	340.	987.
%RSD	1.022	1.017	2.184
#1	75820.	33310.	45420.
#2	74520.	33540.	43520.
#3	72980.	32740.	45430.
#4	75190.	33660.	45480.
#5	74980.	33920.	45080.
#6	74410.	33180.	43310.
#7	74130.	33520.	45930.
#8	74070.	33770.	46030.
#9	74160.	33210.	46070.
#10	74700.	33490.	45620.

file 0427b.txt
KJ Handlike 04-27-00

SOOT000778 1206 LF
SOOT000778-a
SOOT000781
SOOT000784

05-10-2-10

Uploaded + Validated by:
Sal M. Pang
05/04/2000

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1019 TO 1038

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 13:08
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 74500.,761.7,1.022, 75820., 74520., 72980., 75190., 74980., 74410., 74130., 74070., 74160., 74700.,,
Elem1=Ir[193],[193],,,Cts/S, 33430.,339.9,1.017, 33310., 33540., 32740., 33660., 33920., 33180., 33520., 33770., 33210., 33490.,,
Elem2=Sc[45],[45],,,Cts/S, 45190.,987.0,2.184, 45420., 43520., 45430., 45480., 45080., 43310., 45930., 46030., 46070., 45620.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=ACT_MS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 13:13
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,Cts/S, 3.622,.6766,18.68, 4.433, 2.761, 4.021, 3.776, 3.122,,
Elem1=Th[229],[229],,,Cts/S, 4.227,.4257,10.07, 4.946, 4.165, 3.97

```

4, 4.195, 3.854,,,
Elem2=Th[230],[230],,,Cts/S, 3.562,.2600,7.299, 3.873, 3.463, 3.31
2, 3.356, 3.805,,,
Elem3=Th[232],[232],,,Cts/S, 4.054,.4127,10.18, 3.546, 4.539, 3.78
5, 4.009, 4.390,,,
Elem4=Pa[231],[231],,,Cts/S, 3.708,.4942,13.33, 3.873, 3.744, 4.40
0, 3.449, 3.073,,,
Elem5=U [233],[233],,,Cts/S, 4.033,.3060,7.588, 3.733, 3.744, 4.40
0, 4.288, 4.000,,,
Elem6=U [234],[234],,,Cts/S, 3.670,.6158,16.78, 3.313, 3.463, 4.58
9, 3.962, 3.024,,,
Elem7=U [235],[235],,,Cts/S, 4.097,.7077,17.27, 4.153, 3.089, 4.21
0, 3.962, 5.073,,,
Elem8=U [236],[236],,,Cts/S, 3.846,.3978,10.34, 4.199, 3.276, 3.69
0, 3.822, 4.244,,,
Elem9=U [238],[238],,,Cts/S, 3.932,.4175,10.62, 3.499, 3.463, 4.16
3, 4.195, 4.341,,,
Elem10=Np[237],[237],,,Cts/S, 3.848,.4181,10.86, 3.406, 4.212, 3.7
85, 3.496, 4.341,,,
Elem11=Pu[239],[239],,,Cts/S, 4.075,.7723,18.95, 4.246, 4.820, 3.7
85, 2.890, 4.634,,,
Elem12=Pu[240],[240],,,Cts/S, 3.970,.6039,15.21, 3.313, 3.323, 4.3
52, 4.568, 4.293,,,
Elem13=Pu[242],[242],,,Cts/S, 3.526,.7414,21.03, 4.433, 2.714, 3.3
59, 4.148, 2.976,,,
Elem14=Pu[244],[244],,,Cts/S, 3.966,.3567,8.993, 4.153, 3.510, 3.6
90, 4.381, 4.097,,,
Elem15=Am[241],[241],,,Cts/S, 3.805,.8347,21.94, 2.893, 3.650, 3.2
64, 4.195, 5.024,,,
Elem16=Am[243],[243],,,Cts/S, 4.325,.3435,7.941, 4.759, 3.837, 4.4
94, 4.195, 4.341,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=Ir[193],[193],,Cts/S, 10.589,.19961,1.8850,10.716,10.684,10.
569,10.727,10.250

```

[Sample Header]

Method=ACT_MS

SampleName=ACT Cal

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=04/27/2000 13:19

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Np[237],[237],,,Cts/S, 640.6,24.03,3.751, 635.2, 627.9, 638.8, 619.5, 681.5,,,

Elem1=Pu[239],[239],,,Cts/S, 981.0,38.30,3.905, 1013., 984.9, 956.3, 929.9, 1021.,,,

Elem2=Pu[240],[240],,,Cts/S, 981.0,38.30,3.905, 1013., 984.9, 956.3, 929.9, 1021.,,,

Elem3=Pu[242],[242],,,Cts/S, 981.0,38.30,3.905, 1013., 984.9, 956.3, 929.9, 1021.,,,

Elem4=Pu[244],[244],,,Cts/S, 981.0,38.30,3.905, 1013., 984.9, 956.3, 929.9, 1021.,,,

Elem5=Am[241],[241],,,Cts/S, 1060.,30.51,2.880, 1090., 1063., 1022., 1036., 1088.,,,

Elem6=Am[243],[243],,,Cts/S, 1060.,30.51,2.880, 1090., 1063., 1022., 1036., 1088.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,,Cts/S, 10.289,.38793,3.7703,9.9020,10.482,10.680,10.539,9.8426

[Sample Header]

Method=ACT_MS

SampleName=ACT Cal

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=04/27/2000 13:21

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Np[237],[237],,,Cts/S, 623.0,9.532,1.530, 628.0, 615.3, 622.7, 636.2, 612.8,,,

Elem1=Pu[239],[239],,,Cts/S, 927.9,17.29,1.864, 945.0, 900.2, 927.3, 927.4, 939.7,,,

Elem2=Pu[240],[240],,,Cts/S, 927.9,17.29,1.864, 945.0, 900.2, 927.

```
3, 927.4, 939.7,,,
Elem3=Pu[242],[242],,,Cts/S, 927.9,17.29,1.864, 945.0, 900.2, 927.
3, 927.4, 939.7,,,
Elem4=Pu[244],[244],,,Cts/S, 927.9,17.29,1.864, 945.0, 900.2, 927.
3, 927.4, 939.7,,,
Elem5=Am[241],[241],,,Cts/S, 1010.,20.49,2.029, 1026., 1010., 1003
., 1032., 980.3,,,
Elem6=Am[243],[243],,,Cts/S, 1010.,20.49,2.029, 1026., 1010., 1003
., 1032., 980.3,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,,Cts/S, 10.670,.15780,1.4790,10.713,10.824,10.
795,10.452,10.564
```

[Sample Header]

```
Method=ACT MS
SampleName=U/Th Cal
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 13:25
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,Cts/S, 6808.,96.11,1.412, 6705., 6819., 6951
., 6735., 6828.,,,
Elem1=Th[229],[229],,,Cts/S, 6808.,96.11,1.412, 6705., 6819., 6951
., 6735., 6828.,,,
Elem2=Th[230],[230],,,Cts/S, 6808.,96.11,1.412, 6705., 6819., 6951
., 6735., 6828.,,,
Elem3=Th[232],[232],,,Cts/S, 6808.,96.11,1.412, 6705., 6819., 6951
., 6735., 6828.,,,
Elem4=Pa[231],[231],,,Cts/S, 6808.,96.11,1.412, 6705., 6819., 6951
., 6735., 6828.,,,
Elem5=U [233],[233],,,Cts/S, 78.19,1.891,2.419, 75.54, 79.27, 80.4
6, 78.44, 77.24,,,
Elem6=U [234],[234],,,Cts/S, 78.19,1.891,2.419, 75.54, 79.27, 80.4
6, 78.44, 77.24,,,
Elem7=U [235],[235],,,Cts/S, 78.19,1.891,2.419, 75.54, 79.27, 80.4
6, 78.44, 77.24,,,
```

Elem8=U_[236],[236],,,Cts/S, 78.19,1.891,2.419, 75.54, 79.27, 80.4
6, 78.44, 77.24,,,
Elem9=U_[238],[238],,,Cts/S, 9524.,419.2,4.401, 8966., 9348., 1006
0., 9459., 9786.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,,Cts/S, 10.728,.24573,2.2905,10.822,10.786,10.
297,10.823,10.914

[Sample Header]

Method=ACT_MS

SampleName=QCStd

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=04/27/2000 13:31

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Th[228],[228],,,ppb, -.0047,.0054,115.4, -.0108, -.0038, -.0
072, -.0055, .0038, None, 0.0, 0.0

Elem1=Th[229],[229],,,ppb, -.0080,.0073,90.92, -.0088, -.0079, -.0
196, -.0013, -.0024, None, 0.0, 0.0

Elem2=Th[230],[230],,,ppb, .0256,.0079,30.96, .0225, .0140, .0292,
.0268, .0352, None, 0.0, 0.0

Elem3=Th[232],[232],,,ppb, 99.76,2.175,2.180, 97.76, 101.4, 102.7,
98.26, 98.66, None, 0.0, 0.0

Elem4=Pa[231],[231],,,ppb,Q -.0191,.0062,32.38, -.0116, -.0221, -.
0272, -.0145, -.0199, QC Fail, ñ.0100%, .0000

Elem5=U_[233],[233],,,ppb, .0216,.0024,11.04, .0192, .0239, .0198,
.0244, .0209, None, 0.0, 0.0

Elem6=U_[234],[234],,,ppb, .0058,.0035,60.21, .0053, .0113, .0053,
.0015, .0055, None, 0.0, 0.0

Elem7=U_[235],[235],,,ppb, .7212,.0367,5.096, .7418, .7457, .7505,
.6647, .7032, None, 0.0, 0.0

Elem8=U_[236],[236],,,ppb, .0201,.0038,19.15, .0201, .0235, .0197,
.0231, .0139, None, 0.0, 0.0

Elem9=U_[238],[238],,,ppb, 101.5,2.973,2.930, 99.70, 102.9, 106.0,
99.38, 99.23, None, 0.0, 0.0

Elem10=Np[237],[237],,,ppb, .0023,.0169,731.4, .0085, .0248, -.013

```

4, -.0158, .0074, None, 0.0, 0.0
Elem11=Pu[239], [239], , , ppb, -.0021, .0042, 202.0, -.0022, .0025, -.0
023, -.0086, .0004, None, 0.0, 0.0
Elem12=Pu[240], [240], , , ppb, -.0023, .0030, 133.3, -.0041, .0005, .00
13, -.0058, -.0033, None, 0.0, 0.0
Elem13=Pu[242], [242], , , ppb, .0032, .0023, 70.42, .0029, .0055, .0008
, .0013, .0055, None, 0.0, 0.0
Elem14=Pu[244], [244], , , ppb, -.0028, .0038, 135.6, -.0066, .0031, -.0
051, -.0017, -.0036, None, 0.0, 0.0
Elem15=Am[241], [241], , , ppb, .0012, .0016, 134.8, -.0007, .0024, .000
3, .0031, .0007, None, 0.0, 0.0
Elem16=Am[243], [243], , , ppb, -.0020, .0014, 72.80, -.0006, -.0022, -.
0004, -.0035, -.0032, None, 0.0, 0.0

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193], [193], , Cts/S, 10.919, .25834, 2.3660, 10.897, 10.849, 10.
543, 11.228, 11.077

```

[Sample Header]

```

Method=ACT_MS
SampleName=QCStd
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 13:35
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228], [228], , , ppb, -.0045, .0051, 115.6, -.0082, -.0053, -.0
002, .0018, -.0103, None, 0.0, 0.0
Elem1=Th[229], [229], , , ppb, -.0083, .0032, 38.36, -.0098, -.0037, -.0
117, -.0098, -.0064, None, 0.0, 0.0
Elem2=Th[230], [230], , , ppb, .0186, .0041, 21.82, .0192, .0139, .0164,
.0186, .0248, None, 0.0, 0.0
Elem3=Th[232], [232], , , ppb, 100.5, 2.881, 2.867, 100.7, 100.7, 98.51,
97.47, 105.0, None, 0.0, 0.0
Elem4=Pa[231], [231], , , ppb, -.0084, .0081, 95.69, -.0110, -.0060, -.0
093, .0031, -.0191, None, 0.0, 0.0
Elem5=U_ [233], [233], , , ppb, .0232, .0057, 24.39, .0217, .0263, .0210,
.0160, .0309, None, 0.0, 0.0

```


Elem6=U_[234],[234],,,ppb, .0100,.0032,32.29, .0111, .0090, .0050,
.0116, .0135,None,0.0,0.0
Elem7=U_[235],[235],,,ppb, .7109,.0257,3.620, .7413, .6951, .6756,
.7235, .7189,None,0.0,0.0
Elem8=U_[236],[236],,,ppb, .0172,.0061,35.85, .0243, .0203, .0076,
.0169, .0167,None,0.0,0.0
Elem9=U_[238],[238],,,ppb, 100.1,1.834,1.833, 98.58, 98.92, 99.28,
100.5, 103.1,None,0.0,0.0
Elem10=Np[237],[237],,,ppb, .0012,.0065,530.9, -.0062, .0024, .000
1, .0113, -.0014,QC Pass,ñ.0100%,.0000
Elem11=Pu[239],[239],,,ppb, -.0025,.0036,144.8, -.0012, -.0015, -.
0003, -.0006, -.0088,QC Pass,ñ.0100%,.0000
Elem12=Pu[240],[240],,,ppb, -.0002,.0019,843.7, -.0014, .0011, -.0
017, .0025, -.0017,QC Pass,ñ.0100%,.0000
Elem13=Pu[242],[242],,,ppb, .0000,.0019,28900., .0016, .0022, -.00
03, -.0023, -.0012,QC Pass,ñ.0100%,.0000
Elem14=Pu[244],[244],,,ppb, .0001,.0051,3571., .0069, -.0005, -.00
30, -.0061, .0034,QC Pass,ñ.0100%,.0000
Elem15=Am[241],[241],,,ppb, .0008,.0020,237.9, -.0006, .0037, -.00
08, -.0002, .0021,None,0.0,0.0
Elem16=Am[243],[243],,,ppb, -.0024,.0024,103.6, -.0002, -.0033, -.
0062, -.0012, -.0009,None,0.0,0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 11.111,.10774,.96966,11.096,11.200,11.
220,11.088,10.950

[Sample Header]

Method=ACT_MS

SampleName=icv

Operator=kjt

Comment=msact lcs

CustID=

CustSmpl=22b59

LabID=

Run Time=04/27/2000 13:47

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Th[228],[228],,,ppb, -.0031,.0087,275.4, -.0026, -.0143, .00
02, .0088, -.0078,,,

Elem1=Th[229],[229],,,ppb, -.0062,.0046,74.29, -.0034, -.0021, -.0

```

135, -.0041, -.0080,,,
Elem2=Th[230],[230],,,,ppb, -.0004,.0104,2491., -.0051, .0044, .004
5, .0103, -.0162,,,
Elem3=Th[232],[232],,,,ppb, 10.24,.2427,2.370, 10.50, 10.10, 10.46,
10.22, 9.926,,,
Elem4=Pa[231],[231],,,,ppb, .0019,.0098,521.8, -.0137, -.0010, .006
7, .0056, .0119,,,
Elem5=U_[233],[233],,,,ppb, -.0036,.0083,233.5, .0010, -.0065, -.01
70, .0018, .0028,,,
Elem6=U_[234],[234],,,,ppb, -.0005,.0042,798.5, .0049, -.0051, -.00
39, .0022, -.0007,,,
Elem7=U_[235],[235],,,,ppb, .0422,.0047,11.05, .0468, .0448, .0445,
.0396, .0353,,,
Elem8=U_[236],[236],,,,ppb, .0289,.0069,23.95, .0344, .0384, .0242,
.0243, .0235,,,
Elem9=U_[238],[238],,,,ppb, 5.261,.1653,3.143, 5.217, 5.110, 5.543,
5.243, 5.192,,,
Elem10=Np[237],[237],,,,ppb, 10.77,.1851,1.718, 10.88, 10.80, 10.99
, 10.65, 10.52,,,
Elem11=Pu[239],[239],,,,ppb, 11.07,.2704,2.442, 11.28, 10.82, 11.28
, 10.74, 11.24,,,
Elem12=Pu[240],[240],,,,ppb, .3387,.0149,4.397, .3452, .3315, .3600
, .3204, .3363,,,
Elem13=Pu[242],[242],,,,ppb, .0051,.0019,38.45, .0074, .0045, .0064
, .0045, .0024,,,
Elem14=Pu[244],[244],,,,ppb, .0010,.0037,388.4, .0055, -.0009, .003
4, -.0040, .0008,,,
Elem15=Am[241],[241],,,,ppb, 11.24,.2745,2.443, 11.35, 11.17, 11.64
, 10.92, 11.10,,,
Elem16=Am[243],[243],,,,ppb, .0004,.0014,304.4, .0025, -.0010, .000
4, -.0006, .0009,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=Ir[193],[193],,Cts/S, 10.953,.15673,1.4310,10.887,11.142,10.
724,11.019,10.993

```

[Sample Header]

Method=ACT_MS

SampleName=icb

Operator=kjt

Comment=2% nitric

CustID=

CustSmpl=

LabID=

Run Time=04/27/2000 13:54

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0086,.0058,67.10, -.0069, -.0114, -.0161, -.0081, -.0005,,,
Elem1=Th[229],[229],,,ppb, -.0131,.0072,54.94, -.0042, -.0138, -.0078, -.0177, -.0219,,,
Elem2=Th[230],[230],,,ppb, -.0038,.0075,196.0, -.0115, -.0053, -.0093, .0000, .0070,,,
Elem3=Th[232],[232],,,ppb, -.0015,.0061,410.2, -.0078, .0051, -.0019, -.0072, .0044,,,
Elem4=Pa[231],[231],,,ppb, -.0106,.0037,34.38, -.0137, -.0082, -.0081, -.0154, -.0077,,,
Elem5=U [233],[233],,,ppb, -.0075,.0029,38.53, -.0099, -.0068, -.0085, -.0028, -.0095,,,
Elem6=U [234],[234],,,ppb, -.0040,.0020,49.18, -.0050, -.0050, -.0058, -.0036, -.0008,,,
Elem7=U [235],[235],,,ppb, -.0020,.0053,259.8, .0061, -.0048, -.0065, -.0052, .0003,,,
Elem8=U [236],[236],,,ppb, -.0033,.0027,82.18, -.0049, -.0063, -.0045, -.0001, -.0007,,,
Elem9=U [238],[238],,,ppb, -.0038,.0018,47.26, -.0033, -.0030, -.0053, -.0015, -.0060,,,
Elem10=Np[237],[237],,,ppb, -.0017,.0045,264.3, .0011, .0032, .0002, -.0066, -.0064,,,
Elem11=Pu[239],[239],,,ppb, -.0019,.0014,75.94, .0003, -.0027, -.0012, -.0031, -.0027,,,
Elem12=Pu[240],[240],,,ppb, -.0011,.0031,282.0, -.0039, .0043, -.0017, -.0025, -.0018,,,
Elem13=Pu[242],[242],,,ppb, .0015,.0009,62.38, .0023, -.0001, .0019, .0019, .0015,,,
Elem14=Pu[244],[244],,,ppb, -.0013,.0026,190.2, -.0033, -.0039, .0025, -.0016, -.0004,,,
Elem15=Am[241],[241],,,ppb, -.0005,.0016,309.0, -.0020, .0016, -.0022, .0003, -.0003,,,
Elem16=Am[243],[243],,,ppb, -.0036,.0019,51.60, -.0026, -.0048, -.0011, -.0059, -.0038,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 11.071,.17468,1.5778,10.783,11.254,11.091,11.082,11.143

```

[Sample Header]

Method=ACT_MS

SampleName=s00t000778
Operator=kjt
Comment=1206 df
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 14:02
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, .0062,.0067,108.2, .0098, .0151, -.0006
, -.0003, .0073,,,
Elem1=Th[229],[229],,,,ppb, -.0001,.0074,6391., .0080, .0027, .0004
, -.0122, .0005,,,
Elem2=Th[230],[230],,,,ppb, .0090,.0047,52.32, .0085, .0118, .0045,
.0155, .0047,,,
Elem3=Th[232],[232],,,,ppb, .0052,.0037,71.24, .0062, .0004, .0080,
.0090, .0023,,,
Elem4=Pa[231],[231],,,,ppb, .0078,.0033,41.59, .0099, .0047, .0110,
.0096, .0039,,,
Elem5=U_[233],[233],,,,ppb, .0036,.0060,166.1, .0029, -.0005, .0139
, .0022, -.0006,,,
Elem6=U_[234],[234],,,,ppb, .0078,.0026,33.49, .0060, .0099, .0043,
.0086, .0103,,,
Elem7=U_[235],[235],,,,ppb, .0089,.0029,32.92, .0075, .0100, .0081,
.0055, .0132,,,
Elem8=U_[236],[236],,,,ppb, .0066,.0046,70.07, .0071, -.0010, .0110
, .0094, .0063,,,
Elem9=U_[238],[238],,,,ppb, .7922,.0247,3.123, .8040, .7782, .8134,
.7554, .8097,,,
Elem10=Np[237],[237],,,,ppb, .0305,.0084,27.36, .0276, .0224, .0253
, .0434, .0338,,,
Elem11=Pu[239],[239],,,,ppb, .0129,.0031,24.16, .0162, .0132, .0131
, .0078, .0142,,,
Elem12=Pu[240],[240],,,,ppb, -.0004,.0048,1101., .0064, -.0060, .00
24, -.0026, -.0023,,,
Elem13=Pu[242],[242],,,,ppb, .0029,.0029,101.4, .0029, .0011, .0075
, -.0002, .0030,,,
Elem14=Pu[244],[244],,,,ppb, .0013,.0034,263.9, .0011, -.0002, .003
9, .0052, -.0035,,,
Elem15=Am[241],[241],,,,ppb, .0006,.0018,304.9, .0025, -.0015, -.00
03, .0024, -.0001,,,
Elem16=Am[243],[243],,,,ppb, -.0002,.0021,1174., -.0028, -.0019, .0

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007, .0013, .0018,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
 Elem0=Ir[193],[193],,Cts/S, 10.313,.26346,2.5546,10.382,10.542,10.
 335,9.8625,10.443

[Sample Header]

Method=ACT_MS
 SampleName=s00t000778
 Operator=kjt
 Comment=1206 df
 CustID=
 CustSmpl=
 LabID=
 Run Time=04/27/2000 14:05
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
 ss/fail,chklo,chkhi
 Elem0=Th[228],[228],,,ppb, .0031,.0064,209.1, .0003, .0016, -.0053
 , .0111, .0077,,,
 Elem1=Th[229],[229],,,ppb, -.0091,.0054,59.14, -.0163, -.0016, -.0
 069, -.0102, -.0106,,,
 Elem2=Th[230],[230],,,ppb, .0064,.0073,115.0, -.0031, .0074, .0065
 , .0037, .0173,,,
 Elem3=Th[232],[232],,,ppb, .0045,.0062,136.1, .0059, .0102, .0095,
 -.0049, .0021,,,
 Elem4=Pa[231],[231],,,ppb, .0023,.0051,220.0, -.0002, .0039, -.003
 6, .0016, .0101,,,
 Elem5=U [233],[233],,,ppb, -.0001,.0051,4032., .0018, .0017, -.007
 5, -.0026, .0059,,,
 Elem6=U [234],[234],,,ppb, .0062,.0038,61.70, .0062, .0080, .0104,
 .0000, .0065,,,
 Elem7=U [235],[235],,,ppb, .0067,.0027,39.95, .0067, .0110, .0059,
 .0037, .0062,,,
 Elem8=U [236],[236],,,ppb, .0043,.0041,95.19, .0059, .0026, .0087,
 .0061, -.0019,,,
 Elem9=U [238],[238],,,ppb, .7529,.0249,3.308, .7841, .7246, .7657,
 .7306, .7594,,,
 Elem10=Np[237],[237],,,ppb, .0327,.0070,21.52, .0390, .0255, .0413
 , .0275, .0302,,,
 Elem11=Pu[239],[239],,,ppb, .0086,.0041,47.98, .0071, .0048, .0152
 , .0060, .0099,,,

```

Elem12=Pu[240],[240],,,,ppb, .0054,.0018,33.92, .0027, .0063, .0051
, .0054, .0077,,,
Elem13=Pu[242],[242],,,,ppb, .0046,.0046,100.8, .0095, .0033, .0072
, -.0026, .0053,,,
Elem14=Pu[244],[244],,,,ppb, .0020,.0049,242.0, .0048, -.0038, .002
7, -.0018, .0084,,,
Elem15=Am[241],[241],,,,ppb, .0020,.0019,92.73, .0037, -.0007, .002
6, .0036, .0009,,,
Elem16=Am[243],[243],,,,ppb, -.0002,.0031,1444., -.0025, -.0022, .0
048, -.0018, .0006,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 10.324,.21201,2.0536,10.435,10.327,10.
108,10.615,10.134

```

[Sample Header]

```

Method=ACT_MS
SampleName=s00t000778_a
Operator=kjt
Comment=1206 df
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 14:10
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, .0060,.0096,158.8, .0006, -.0038, .0147
, .0008, .0178,,,
Elem1=Th[229],[229],,,,ppb, -.0046,.0097,212.3, -.0033, -.0028, .01
01, -.0129, -.0139,,,
Elem2=Th[230],[230],,,,ppb, .0068,.0029,43.41, .0029, .0077, .0078,
.0106, .0049,,,
Elem3=Th[232],[232],,,,ppb, 13.19,.2732,2.072, 13.15, 13.54, 12.78,
13.28, 13.19,,,
Elem4=Pa[231],[231],,,,ppb, .0075,.0114,151.1, .0001, .0265, .0017,
-.0006, .0100,,,
Elem5=U_[233],[233],,,,ppb, .0073,.0080,109.2, .0205, .0042, .0090,
.0006, .0023,,,
Elem6=U_[234],[234],,,,ppb, .0069,.0057,82.07, .0142, .0110, .0004,
.0059, .0031,,,
Elem7=U_[235],[235],,,,ppb, .1372,.0049,3.598, .1291, .1395, .1403,

```

```
.1411, .1362,,,
Elem8=U [236],[236],,,,ppb, .0551,.0058,10.57, .0541, .0637, .0565,
.0533, .0477,,,
Elem9=U [238],[238],,,,ppb, 17.67,.2729,1.545, 17.77, 17.78, 17.30,
17.50, 18.00,,,
Elem10=Np[237],[237],,,,ppb, 17.65,.4784,2.710, 16.91, 18.24, 17.79
, 17.67, 17.66,,,
Elem11=Pu[239],[239],,,,ppb, 17.57,.1562,.8891, 17.39, 17.63, 17.80
, 17.58, 17.47,,,
Elem12=Pu[240],[240],,,,ppb, .5157,.0156,3.029, .5323, .5242, .5200
, .4917, .5101,,,
Elem13=Pu[242],[242],,,,ppb, .0097,.0039,39.89, .0143, .0082, .0133
, .0058, .0069,,,
Elem14=Pu[244],[244],,,,ppb, .0016,.0036,233.5, -.0013, .0037, -.00
25, .0014, .0065,,,
Elem15=Am[241],[241],,,,ppb, 15.78,.2876,1.823, 15.75, 15.65, 16.26
, 15.50, 15.75,,,
Elem16=Am[243],[243],,,,ppb, -.0003,.0017,596.4, -.0009, .0009, .00
04, .0011, -.0030,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 10.538,.15820,1.5012,10.501,10.404,10.
383,10.744,10.657
```

[Sample Header]

```
Method=ACT_MS
SampleName=20 ppb th
Operator=kjt
Comment=.02ml 10 ppm th
CustID=
CustSmpl=000427-2
LabID=
Run Time=04/27/2000 14:19
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, .0028,.0094,337.8, .0039, .0085, -.0091
, -.0038, .0144,,,
Elem1=Th[229],[229],,,,ppb, -.0114,.0060,52.80, -.0173, -.0095, -.0
180, -.0085, -.0040,,,
Elem2=Th[230],[230],,,,ppb, .0061,.0077,126.1, -.0019, -.0009, .007
1, .0098, .0166,,,
```

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```

Elem3=Th[232],[232],,,,ppb, 19.14,.5052,2.640, 19.50, 19.00, 18.55,
  18.86, 19.80,,,,
Elem4=Pa[231],[231],,,,ppb, -.0043,.0078,180.3, -.0091, -.0082, -.0
123, .0052, .0028,,,,
Elem5=U [233],[233],,,,ppb, .0024,.0052,220.7, -.0006, -.0008, .011
5, -.0001, .0018,,,,
Elem6=U [234],[234],,,,ppb, -.0012,.0017,134.6, -.0019, -.0005, -.0
016, -.0034, .0011,,,,
Elem7=U [235],[235],,,,ppb, -.0012,.0038,308.9, .0016, .0034, -.001
3, -.0043, -.0055,,,,
Elem8=U [236],[236],,,,ppb, -.0010,.0034,339.6, -.0028, -.0050, .00
39, -.0019, .0007,,,,
Elem9=U [238],[238],,,,ppb, -.0024,.0016,66.39, -.0044, -.0037, -.0
010, -.0017, -.0011,,,,
Elem10=Np[237],[237],,,,ppb, -.0042,.0031,74.41, -.0006, -.0092, -.
0032, -.0034, -.0047,,,,
Elem11=Pu[239],[239],,,,ppb, -.0018,.0041,232.2, .0019, -.0053, -.0
053, -.0034, .0032,,,,
Elem12=Pu[240],[240],,,,ppb, -.0008,.0038,456.0, .0034, -.0011, -.0
065, -.0017, .0018,,,,
Elem13=Pu[242],[242],,,,ppb, .0006,.0032,514.8, -.0001, .0026, -.00
30, -.0015, .0050,,,,
Elem14=Pu[244],[244],,,,ppb, -.0012,.0029,238.9, .0034, -.0034, -.0
041, -.0012, -.0008,,,,
Elem15=Am[241],[241],,,,ppb, -.0007,.0025,379.0, -.0020, -.0019, .0
005, -.0030, .0031,,,,
Elem16=Am[243],[243],,,,ppb, -.0021,.0012,58.52, -.0034, -.0020, -.
0028, -.0025, -.0001,,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=Ir[193],[193],,Cts/S, 11.980,.22253,1.8576,11.955,12.144,11.
989,12.187,11.623

```

[Sample Header]

Method=ACT MS

SampleName=s00t000781

Operator=kjt

Comment=1206 df

CustID=

CustSmpl=

LabID=

Run Time=04/27/2000 14:26

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, .0010,.0059,598.4, -.0016, -.0039, -.0030, .0104, .0031,,,
Elem1=Th[229],[229],,,,ppb, -.0077,.0070,91.12, -.0019, -.0098, -.0112, .0008, -.0162,,,
Elem2=Th[230],[230],,,,ppb, .0044,.0038,86.32, .0036, .0088, .0075, .0032, -.0009,,,
Elem3=Th[232],[232],,,,ppb, .0072,.0063,87.21, .0071, .0148, .0121, .0011, .0009,,,
Elem4=Pa[231],[231],,,,ppb, .0071,.0021,29.25, .0043, .0082, .0098, .0062, .0068,,,
Elem5=U_[233],[233],,,,ppb, .0017,.0067,395.1, .0025, .0032, .0072, .0053, -.0098,,,
Elem6=U_[234],[234],,,,ppb, .0050,.0071,140.2, -.0001, .0110, .0082, -.0047, .0107,,,
Elem7=U_[235],[235],,,,ppb, .0102,.0031,30.74, .0062, .0128, .0115, .0076, .0130,,,
Elem8=U_[236],[236],,,,ppb, .0017,.0068,408.6, .0114, -.0047, .0056, -.0001, -.0038,,,
Elem9=U_[238],[238],,,,ppb, 1.454,.0464,3.191, 1.454, 1.476, 1.521, 1.412, 1.410,,,
Elem10=Np[237],[237],,,,ppb, .0402,.0050,12.56, .0432, .0403, .0316, .0444, .0414,,,
Elem11=Pu[239],[239],,,,ppb, .0143,.0026,18.38, .0144, .0180, .0147, .0137, .0106,,,
Elem12=Pu[240],[240],,,,ppb, .0046,.0023,50.92, .0008, .0046, .0049, .0071, .0055,,,
Elem13=Pu[242],[242],,,,ppb, .0057,.0051,88.82, .0089, .0005, .0049, .0126, .0016,,,
Elem14=Pu[244],[244],,,,ppb, .0011,.0025,229.1, -.0007, .0024, .0037, .0022, -.0023,,,
Elem15=Am[241],[241],,,,ppb, .0034,.0027,79.15, .0039, .0032, .0038, .0070, -.0006,,,
Elem16=Am[243],[243],,,,ppb, -.0012,.0012,98.09, -.0015, -.0003, -.0010, -.0002, -.0031,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 10.159,.25760,2.5357,10.248,9.9792,9.9507,10.046,10.570

```

[Sample Header]

```
Method=ACT_MS
SampleName=s00t000784
Operator=kjt
Comment=1206 df

```

CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 14:38
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0038,.0073,188.8, -.0133, -.0025, .0054, -.0004, -.0085,,,
Elem1=Th[229],[229],,,,ppb, -.0076,.0061,79.84, -.0132, -.0113, -.0086, -.0073, .0025,,,
Elem2=Th[230],[230],,,,ppb, .0069,.0069,99.94, -.0015, .0103, .0166, .0037, .0052,,,
Elem3=Th[232],[232],,,,ppb, .0025,.0082,332.2, .0151, .0018, .0049, -.0054, -.0040,,,
Elem4=Pa[231],[231],,,,ppb, .0042,.0093,221.3, -.0023, .0023, .0198, -.0036, .0050,,,
Elem5=U [233],[233],,,,ppb, -.0021,.0020,97.37, -.0022, .0014, -.0034, -.0025, -.0037,,,
Elem6=U [234],[234],,,,ppb, .0033,.0062,188.0, -.0024, .0010, .0107, .0090, -.0018,,,
Elem7=U [235],[235],,,,ppb, .0064,.0050,77.62, .0113, .0086, .0045, .0092, -.0013,,,
Elem8=U [236],[236],,,,ppb, .0047,.0075,158.2, .0103, -.0042, .0120, .0078, -.0023,,,
Elem9=U [238],[238],,,,ppb, .7951,.0186,2.337, .7957, .8181, .7849, .8066, .7703,,,
Elem10=Np[237],[237],,,,ppb, .0321,.0057,17.87, .0257, .0321, .0401, .0347, .0277,,,
Elem11=Pu[239],[239],,,,ppb, .0090,.0029,32.35, .0073, .0111, .0103, .0047, .0114,,,
Elem12=Pu[240],[240],,,,ppb, .0018,.0024,130.5, .0041, .0037, -.0018, .0009, .0021,,,
Elem13=Pu[242],[242],,,,ppb, .0028,.0024,86.29, .0039, .0015, -.0007, .0037, .0056,,,
Elem14=Pu[244],[244],,,,ppb, .0004,.0040,964.5, .0031, -.0029, .0055, -.0042, .0005,,,
Elem15=Am[241],[241],,,,ppb, -.0001,.0034,3090., -.0024, .0030, .0038, -.0041, -.0009,,,
Elem16=Am[243],[243],,,,ppb, -.0018,.0011,59.90, -.0025, -.0018, -.0022, .0001, -.0023,,,

[Internal Standards]

HNF-1701 REV. 0

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 11.370,.13347,1.1738,11.414,11.142,11.
404,11.397,11.494
```

```
[Sample Header]
Method=ACT_MS
SampleName=ccv
Operator=kjt
Comment=msact lcs
CustID=
CustSmpl=22b59
LabID=
Run Time=04/27/2000 14:45
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

```
[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, .0019,.0036,186.9, -.0001, .0011, .0064
, .0046, -.0024,,,
Elem1=Th[229],[229],,,ppb, -.0091,.0064,70.18, -.0096, .0017, -.01
03, -.0146, -.0125,,,
Elem2=Th[230],[230],,,ppb, .0063,.0049,78.42, -.0011, .0055, .0055
, .0098, .0118,,,
Elem3=Th[232],[232],,,ppb, 10.16,.3588,3.533, 10.74, 10.02, 9.763,
10.16, 10.10,,,
Elem4=Pa[231],[231],,,ppb, -.0015,.0055,363.6, .0001, -.0050, -.00
51, -.0050, .0074,,,
Elem5=U_[233],[233],,,ppb, .0040,.0026,63.80, .0046, .0015, .0065,
.0063, .0012,,,
Elem6=U_[234],[234],,,ppb, .0014,.0019,137.1, .0019, .0042, .0006,
.0010, -.0009,,,
Elem7=U_[235],[235],,,ppb, .0450,.0057,12.61, .0511, .0509, .0394,
.0407, .0426,,,
Elem8=U_[236],[236],,,ppb, .0314,.0064,20.28, .0311, .0217, .0370,
.0297, .0373,,,
Elem9=U_[238],[238],,,ppb, 5.264,.0980,1.862, 5.388, 5.251, 5.279,
5.115, 5.288,,,
Elem10=Np[237],[237],,,ppb, 10.95,.1977,1.805, 11.29, 10.78, 10.95
, 10.84, 10.91,,,
Elem11=Pu[239],[239],,,ppb, 11.27,.2962,2.627, 11.64, 11.23, 11.17
, 10.86, 11.46,,,
Elem12=Pu[240],[240],,,ppb, .3306,.0162,4.901, .3483, .3249, .3217
, .3115, .3468,,,
Elem13=Pu[242],[242],,,ppb, .0039,.0026,65.97, .0068, .0005, .0020
```

```
, .0056, .0046,,,
Elem14=Pu[244],[244],,,ppb, -.0004,.0020,558.3, .0005, .0018, .000
8, -.0025, -.0024,,,
Elem15=Am[241],[241],,,ppb, 11.46,.3479,3.036, 11.93, 11.24, 11.60
, 11.02, 11.51,,,
Elem16=Am[243],[243],,,ppb, -.0017,.0019,111.5, -.0013, -.0031, -.
0019, -.0033, .0013,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 12.122,.23286,1.9210,11.753,12.312,12.
326,12.070,12.148

```

[Sample Header]

```
Method=ACT_MS
SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=04/27/2000 14:52
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0002,.0037,1791., -.0065, .0028, -.00
01, .0025, .0003,,,
Elem1=Th[229],[229],,,ppb, -.0140,.0048,34.54, -.0142, -.0205, -.0
120, -.0157, -.0074,,,
Elem2=Th[230],[230],,,ppb, -.0027,.0065,236.7, -.0021, -.0005, -.0
134, -.0018, .0042,,,
Elem3=Th[232],[232],,,ppb, -.0092,.0047,51.26, -.0023, -.0132, -.0
136, -.0068, -.0103,,,
Elem4=Pa[231],[231],,,ppb, -.0051,.0077,151.0, -.0066, .0053, -.01
50, -.0081, -.0010,,,
Elem5=U [233],[233],,,ppb, -.0059,.0025,42.74, -.0090, -.0077, -.0
049, -.0027, -.0050,,,
Elem6=U [234],[234],,,ppb, -.0031,.0045,144.2, -.0067, .0006, -.00
33, -.0084, .0021,,,
Elem7=U [235],[235],,,ppb, -.0052,.0031,60.08, -.0074, -.0079, -.0
067, -.0007, -.0032,,,
Elem8=U [236],[236],,,ppb, -.0031,.0026,82.69, -.0045, -.0007, -.0
015, -.0070, -.0020,,,

```

Elem9=U_[238],[238],,,ppb, -.0055,.0039,69.94, -.0012, -.0081, -.0
050, -.0106, -.0026,,,
Elem10=Np[237],[237],,,ppb, -.0037,.0021,57.93, -.0020, -.0009, -.
0045, -.0058, -.0053,,,
Elem11=Pu[239],[239],,,ppb, -.0026,.0017,66.29, -.0038, -.0041, -.
0001, -.0015, -.0037,,,
Elem12=Pu[240],[240],,,ppb, -.0031,.0013,42.21, -.0039, -.0047, -.
0032, -.0016, -.0020,,,
Elem13=Pu[242],[242],,,ppb, -.0007,.0026,388.0, -.0014, -.0023, -.
0019, -.0018, .0040,,,
Elem14=Pu[244],[244],,,ppb, -.0011,.0032,291.8, -.0024, -.0042, -.
0009, -.0023, .0043,,,
Elem15=Am[241],[241],,,ppb, -.0001,.0018,1342., -.0012, -.0017, .0
010, .0024, -.0011,,,
Elem16=Am[243],[243],,,ppb, -.0040,.0018,46.50, -.0053, -.0025, -.
0046, -.0058, -.0016,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 12.420,.20827,1.6768,12.576,12.190,12.
453,12.658,12.224

[Sample Header]

Method=MS_TUNE

SampleName=Sample-0

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/01/2000 09:37

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 69590.,1541.,2.215, 71350., 71160., 6
7830., 68520., 67030., 70470., 70240., 71340., 69150., 68820.,,,

Elem1=Ir[193],[193],,,Cts/S, 30820.,1016.,3.298, 31770., 32080., 3
0320., 30250., 28680., 31190., 31260., 31720., 30120., 30810.,,,

Elem2=Sc[45],[45],,,Cts/S, 36390.,362.2,.9954, 37050., 36790., 362
00., 35860., 36080., 36080., 36520., 36360., 36620., 36360.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

LABCORE Completed Worklist Report for Worklist# 33310

Analyst: kjt

Instrument: ICPMS1

Book#: 62B57

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPR-A1

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV		0	EMSPR-QC TC99	QC	0.020	1.97e-02	98.500 % Recovery	
1 ICV		0	EMSPR-QC SN117	QC	0.020	2.05e-02	102.500 % Recovery	
1 ICV		0	EMSPR-QC CS133	QC	0.020	1.84e-02	92.000 % Recovery	
2 ICB		0	EMSPR-QC TC99	QC	1	2.70e-06	0.000 ug/mL	
2 ICB		0	EMSPR-QC SN117	QC	1	<1.50e-4	ug/mL	
2 ICB		0	EMSPR-QC SN126	QC	1	<1.50e-4	ug/mL	
2 ICB		0	EMSPR-QC CS133	QC	1	6.50e-06	0.000 ug/mL	
2 ICB		0	EMSPR-QC CS135	QC	1	<2.00e-6	ug/mL	
2 ICB		0	EMSPR-QC CS137	QC	1	<2.00e-6	ug/mL	
3 BLNK-PREP		0	EMSPR-A1 TC99-A1	SOLID	1	2.03e-03	0.002 ug/g	
3 BLNK-PREP		0	EMSPR-A1 SN117-A1	SOLID	1	<6.76e-2	ug/g	
3 BLNK-PREP		0	EMSPR-A1 SN126-A1	SOLID	1	<6.76e-2	ug/g	
3 BLNK-PREP		0	EMSPR-A1 CS133-A1	SOLID	1	2.44e-03	0.002 ug/g	
3 BLNK-PREP		0	EMSPR-A1 CS135-A1	SOLID	1	<9.02e-4	ug/g	
3 BLNK-PREP		0	EMSPR-A1 CS137-A1	SOLID	1	<9.02e-4	ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 TC99-A1	SOLID	N/A	8.891e+00	9.92e-002 ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 SN117-A1	SOLID	N/A	2.009e+01	7.426 ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 SN126-A1	SOLID	N/A	< 7.426e+00	7.426 ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 CS133-A1	SOLID	N/A	1.411e+01	9.92e-002 ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 CS135-A1	SOLID	N/A	5.654e+00	9.92e-002 ug/g	
4 SAMPLE	S00T000804	0 A	EMSPR-A1 CS137-A1	SOLID	N/A	1.443e+02	9.92e-002 ug/g	
5 SPK-POST	S00T000804	0 A	EMSPR-A1 TC99-A1	SOLID	0.020	2.20e-02	110.000 % Recovery	
5 SPK-POST	S00T000804	0 A	EMSPR-A1 SN117-A1	SOLID	0.020	1.96e-02	98.000 % Recovery	
5 SPK-POST	S00T000804	0 A	EMSPR-A1 CS133-A1	SOLID	0.020	2.07e-02	103.500 % Recovery	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 TC99-A1	SOLID	N/A	1.006e+01	9.61e-002 ug/g	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 SN117-A1	SOLID	N/A	2.099e+01	7.212 ug/g	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 SN126-A1	SOLID	N/A	< 7.212e+00	7.212 ug/g	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 CS133-A1	SOLID	N/A	1.519e+01	9.61e-002 ug/g	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 CS135-A1	SOLID	N/A	5.726e+00	9.61e-002 ug/g	
6 SAMPLE	S00T000803	0 A	EMSPR-A1 CS137-A1	SOLID	N/A	1.117e+02	9.61e-002 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 TC99-A1	SOLID	N/A	1.033e+01	0.102 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 SN117-A1	SOLID	N/A	1.524e+01	7.635 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 SN126-A1	SOLID	N/A	< 7.635e+00	7.635 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 CS133-A1	SOLID	N/A	1.592e+01	0.102 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 CS135-A1	SOLID	N/A	6.337e+00	0.102 ug/g	
7 SAMPLE	S00T000805	0 A	EMSPR-A1 CS137-A1	SOLID	N/A	1.218e+02	0.102 ug/g	
8 CCV		0	EMSPR-QC TC99	QC	0.020	2.04e-02	102.000 % Recovery	
8 CCV		0	EMSPR-QC SN117	QC	0.020	1.99e-02	99.500 % Recovery	
8 CCV		0	EMSPR-QC CS133	QC	0.020	1.85e-02	92.500 % Recovery	
9 CCB		0	EMSPR-QC TC99	QC	1	1.50e-05	0.000 ug/mL	
9 CCB		0	EMSPR-QC SN117	QC	1	<1.50e-4	ug/mL	

LABCORE Completed Worklist Report for Worklist# 33310

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
9	CCB	0		EMSPR-QC SN126	QC	1	<1.50e-4		ug/mL
9	CCB	0		EMSPR-QC C8133	QC	1	1.82e-05	0.000	ug/mL
9	CCB	0		EMSPR-QC C8135	QC	1	<2.00e-6		ug/mL
9	CCB	0		EMSPR-QC C8137	QC	1	<2.00e-6		ug/mL

Final page for worklist# 33310

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sail A. Pang 05/15/2000
Reviewer Signature Date

5 4 5/10/00

HNF-1701 REV. 0

04/21/00 12:55

ws2

Page: 1

file pr 0809a.txt

LABCORE Data Entry Template for Worklist# 33310

Analyst: KST Instrument: ICPMS1 Book# 62B57Method: LA-506-101 Rev/Mod 62 5-9-00 A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPR-A1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@MSPR-QC QC			
2 ICB			@MSPR-QC QC			
3 STD-PREP			@MSPR-A1 SOLID			5/11/00
4 BLNK-PREP			@MSPR-A1 SOLID			
5 SAMPLE	S00T000804 0 A		@MSPR-A1 SOLID		99000433	AZ-101 (2)
Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
6 SPK-PREDIG	S00T000804 0 A		@MSPR-A1 SOLID			5/11/00
7 SPK-POST	S00T000804 0 A		@MSPR-A1 SOLID			
8 SAMPLE	S00T000803 0 A		@MSPR-A1 SOLID		99000433	AZ-101 (2)
Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
9 SAMPLE	S00T000805 0 A		@MSPR-A1 SOLID		99000433	AZ-101 (2)
Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
10 CCV			@MSPR-QC QC			
11 CCB			@MSPR-QC QC			

Final page for worklist # 33310

5 4 5/10/00

Signature KS Phamdelia

Date

8-9-00
 STD-PREP
 BLNK-PREP
 S00T000804
 S00T000804-5
 S00T000804-a
 S00T000804-a
 S00T000803
 S00T000805

Signature

Date

451 df

1-10-25-10

Data Entry Comments:

Spike 1ml MPRV SPIKE 74B57, 26ml of .00316-1 Su 10ppm
 Scan pr 33310 pr 00T804, pr 00T803, pr 00T805

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report

05/09/00 13:01:10

page 1

Method: MS_TUNE

Sample Name: Sample-0

Operator:

Comment:

Run Time: 05/09/00

12:59 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	118400.	64590.	66010.
Stddev	1740.	981.	5110.
%RSD	1.470	1.518	7.741
#1	121100.	65430.	72010.
#2	117600.	65140.	66990.
#3	116700.	64470.	69090.
#4	120400.	65360.	57970.
#5	120400.	65340.	69170.
#6	118100.	65960.	71740.
#7	117800.	63920.	62780.
#8	117400.	63110.	57790.
#9	115800.	63760.	67500.
#10	118500.	63460.	65010.

file pro809a.txt
 X5 Phenol 05-09-00

STD-PREP

451 df

1-10-250-10

BLNK-PREP

S00T000804 ¹⁻¹⁰⁻⁰⁰
 S00T000804 ¹⁻¹⁰⁻⁰⁰
 S00T000804-a
 S00T000804-a
 S00T000803
 S00T000805

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1042 TO 1071.

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 13:04
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 115700.,3278.,2.833, 121800., 119100., 110800., 116800., 117000., 112200., 113900., 116900., 113600., 115000.,,,
Elem1=Ir[193],[193],,,Cts/S, 63700.,1504.,2.361, 66280., 64750., 65320., 64160., 64250., 61970., 61850., 62920., 63380., 62160.,,,
Elem2=Sc[45],[45],,,Cts/S, 61980.,4404.,7.106, 66300., 67060., 59640., 64050., 65450., 57950., 61990., 58950., 65040., 53400.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 13:06
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 115600.,1186.,1.027, 117500., 115800., 116500., 116300., 115200., 114600., 113600., 115400., 114200., 1

16400.,,,
Elem1=Ir[193],[193],,,Cts/S, 63480.,461.1,.7263, 64010., 63420., 6
3620., 63640., 63160., 62720., 63510., 62960., 64270., 63570.,,,
Elem2=Sc[45],[45],,,Cts/S, 62090.,3110.,5.009, 62560., 63640., 683
30., 60060., 64220., 63760., 57300., 60670., 61040., 59280.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 13:08

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 115400.,2247.,1.947, 117900., 119500.
, 114700., 114900., 113700., 114100., 116300., 114500., 116700., 1
11700.,,,

Elem1=Ir[193],[193],,,Cts/S, 63340.,669.8,1.057, 64450., 63950., 6
3560., 63520., 63790., 63290., 62930., 63140., 62110., 62690.,,,

Elem2=Sc[45],[45],,,Cts/S, 60080.,3229.,5.375, 65180., 62120., 621
40., 59460., 60490., 59000., 63210., 57580., 57420., 54200.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 13:11

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 113100.,1855.,1.639, 113900., 110400., 112800., 115800., 112000., 112100., 114500., 111300., 115900., 112800.,,,

Elem1=Ir[193],[193],,,Cts/S, 62560.,615.1,.9832, 62070., 61320., 62710., 62390., 62860., 63040., 63410., 62160., 63170., 62500.,,,

Elem2=Sc[45],[45],,,Cts/S, 59000.,2340.,3.965, 59760., 58840., 58350., 59860., 59580., 63740., 57430., 57740., 54600., 60100.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=PRV

SampleName=Blank

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 13:13

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,Cts/S, 1.423,.1729,12.15, 1.628, 1.345, 1.257, 1.591, 1.296.,,,

Elem1=Ru[102],[102],,,Cts/S, 26.00,2.716,10.44, 30.00, 24.00, 26.50, 26.50, 23.00.,,,

Elem2=Te[125],[125],,,Cts/S, 1.551,.1952,12.59, 1.447, 1.345, 1.448, 1.716, 1.798.,,,

Elem3=Sn[117],[117],,,Cts/S, 25.39,1.176,4.631, 24.91, 26.68, 23.66, 26.16, 25.55.,,,

Elem4=Sn[126],[126],,,Cts/S, 2.092,.5983,28.60, 2.984, 1.345, 1.905, 1.967, 2.258.,,,

Elem5=Cs[133],[133],,,Cts/S, 5.298,.5856,11.05, 5.425, 5.380, 4.304, 5.525, 5.855.,,,

Elem6=Cs[135],[135],,,Cts/S, 5.427,.4428,8.160, 5.561, 4.773, 5.295, 5.986, 5.520.,,,

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Elem7=Cs[137],[137],,,Cts/S, 8.042,.7293,9.069, 8.048, 8.374, 6.97
1, 8.957, 7.862,,,
Elem8=Ba[138],[138],,,Cts/S, 37.86,1.970,5.203, 39.06, 37.44, 34.6
6, 39.68, 38.47,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 11.922,.76717,6.4348,11.059,11.524,13.
126,11.945,11.956

[Sample Header]
Method=PRV
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 13:17
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,Cts/S, 1.451,.2285,15.75, 1.449, 1.514, 1.077,
1.696, 1.517,,,
Elem1=Ru[102],[102],,,Cts/S, 23.70,3.439,14.51, 18.50, 26.50, 22.5
0, 27.00, 24.00,,,
Elem2=Te[125],[125],,,Cts/S, 1.601,.3522,22.00, 1.945, 1.472, 1.85
2, 1.060, 1.677,,,
Elem3=Sn[117],[117],,,Cts/S, 25.69,.9060,3.526, 26.53, 24.35, 25.2
4, 26.42, 25.92,,,
Elem4=Sn[126],[126],,,Cts/S, 1.902,.3298,17.34, 2.028, 2.103, 1.98
1, 2.078, 1.318,,,
Elem5=Cs[133],[133],,,Cts/S, 5.401,.4832,8.946, 5.339, 5.847, 5.94
3, 5.004, 4.872,,,
Elem6=Cs[135],[135],,,Cts/S, 5.815,.2796,4.808, 5.546, 6.141, 5.77
1, 6.065, 5.551,,,
Elem7=Cs[137],[137],,,Cts/S, 8.111,.5085,6.269, 7.782, 8.791, 7.75
2, 8.524, 7.707,,,
Elem8=Ba[138],[138],,,Cts/S, 39.82,3.188,8.006, 42.26, 40.17, 41.6
4, 40.71, 34.30,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 11.978,.34799,2.9053,12.080,11.887,11.610,11.790,12.521

[Sample Header]

Method=PRV
SampleName=PRV CAL
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 13:20
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,Cts/S, 19530.,702.1,3.595, 20560., 19040., 19590., 18740., 19720.,,
Elem1=Cs[133],[133],,Cts/S, 19150.,594.3,3.104, 19410., 19180., 19530., 19500., 18110.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.557,.27570,2.3856,11.253,11.545,11.367,11.655,11.964

[Sample Header]

Method=PRV
SampleName=PRV1 CAL
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 13:22
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Ru[102],[102],,Cts/S, 376800.,19650.,5.214, 359000., 367700

```
., 391000., 404000., 362500.,,,  
Elem1=Te[125],[125],,,Cts/S, 1871.,34.88,1.864, 1891., 1834., 1832  
., 1897., 1900.,,,  
Elem2=Cs[135],[135],,,Cts/S, 6452.,341.7,5.296, 6504., 6010., 6671  
., 6858., 6215.,,,  
Elem3=Cs[137],[137],,,Cts/S, 11240.,380.4,3.385, 11020., 11060., 1  
1340., 11860., 10910.,,,  
Elem4=Ba[138],[138],,,Cts/S, 72650.,1608.,2.213, 72030., 73500., 7  
4770., 72450., 70490.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=In[115],[115],,Cts/S, 11.426,.07223,.63217,11.440,11.320,11.  
439,11.521,11.410
```

[Sample Header]

```
Method=PRV  
SampleName=PRV-SN CAL  
Operator=  
Comment=  
CustID=  
CustSmpl=  
LabID=  
Run Time=05/09/2000 13:29  
Sample Type=Std  
Mode=IR  
CorrFactor=1.000000  
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa  
ss/fail,chklo,chkhi  
Elem0=Sn[117],[117],,,Cts/S, 17240.,675.5,3.919, 16940., 17920., 1  
7460., 17640., 16210.,,,  
Elem1=Sn[126],[126],,,Cts/S, 17240.,675.5,3.919, 16940., 17920., 1  
7460., 17640., 16210.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=In[115],[115],,Cts/S, 11.855,.12751,1.0756,11.934,11.911,11.  
942,11.636,11.852
```

[Sample Header]

```
Method=PRV  
SampleName=icv  
Operator=kjy  
Comment=msprv lcs  
CustID=
```

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CustSmpl=62b57
LabID=
Run Time=05/09/2000 13:38
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

✓ 5/11/00
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, 20.26,.9832,4.852, 20.49, 20.26, 21.75, 19.14, 19.68,,,
Elem1=Ru[102],[102],,,ppb, .0013,.0009,72.30, .0002, .0023, .0005, .0021, .0014,,,
Elem2=Te[125],[125],,,ppb, .0089,.0120,135.4, .0199, .0069, .0121, .0163, -.0108,,,
Elem3=Sn[117],[117],,,ppb, 2.135,.0459,2.150, 2.097, 2.186, 2.122, 2.088, 2.180,,,
Elem4=Sn[126],[126],,,ppb, 2.158,.0458,2.124, 2.121, 2.209, 2.146, 2.112, 2.204,,,
Elem5=Cs[133],[133],,,ppb, 18.10,.8858,4.893, 18.01, 17.79, 19.62, 17.79, 17.30,,,
Elem6=Cs[135],[135],,,ppb, .0079,.0005,6.953, .0077, .0075, .0077, .0077, .0089,,,
Elem7=Cs[137],[137],,,ppb, .0144,.0012,8.431, .0145, .0146, .0162, .0130, .0136,,,
Elem8=Ba[138],[138],,,ppb, .1196,.0058,4.821, .1199, .1213, .1270, .1110, .1188,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.948,.43691,3.6569,11.906,12.134,11.215,12.333,12.150

[Sample Header]

✓ Method=PRV
SampleName=icv
Operator=kjy
Comment=msprv lcs
CustID=
CustSmpl=62b57
LabID=
Run Time=05/09/2000 13:41
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

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[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

✓ Elem0=Tc[99],[99],,,ppb, 19.72,.3815,1.935, 19.98, 19.19, 19.69, 20.18, 19.55,,,
 Elem1=Ru[102],[102],,,ppb, .0006,.0011,188.7, -.0005, .0018, -.0006, .0013, .0007,,,
 Elem2=Te[125],[125],,,ppb, .0058,.0145,250.7, .0134, -.0073, .0191, -.0123, .0159,,,
 Elem3=Sn[117],[117],,,ppb, 2.250,.0370,1.646, 2.254, 2.227, 2.272, 2.201, 2.295,,,
 Elem4=Sn[126],[126],,,ppb, 2.273,.0370,1.627, 2.277, 2.250, 2.296, 2.224, 2.318,,,
 ✓ Elem5=Cs[133],[133],,,ppb, 18.41,.3529,1.917, 18.37, 18.23, 17.96, 18.61, 18.88,,,
 Elem6=Cs[135],[135],,,ppb, .0081,.0008,9.525, .0087, .0088, .0072, .0083, .0073,,,
 Elem7=Cs[137],[137],,,ppb, .0134,.0016,11.88, .0109, .0153, .0139, .0137, .0133,,,
 Elem8=Ba[138],[138],,,ppb, .1160,.0047,4.081, .1086, .1167, .1203, .1146, .1198,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 11.994,.10957,.91348,12.145,11.940,11.995,12.039,11.852

[Sample Header]

Method=PRV

✓ SampleName=icv

Operator=kjy

Comment=20.5 ppb Sn

CustID=

CustSmpl=000509-2

LabID=

Run Time=05/09/2000 13:48

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, .0076,.0009,11.27, .0087, .0071, .0080, .0076, .0065,,,
 Elem1=Ru[102],[102],,,ppb, .0041,.0008,18.89, .0047, .0051, .0033,

```

.0037, .0038,,,
Elem2=Te[125],[125],,,,ppb, .0109,.0172,157.6, .0060, .0204, .0072,
-.0124, .0334,,,
Elem3=Sn[117],[117],,,,ppb, 20.47,.5246,2.563, 20.88, 20.43, 21.11,
19.99, 19.92,,,
Elem4=Sn[126],[126],,,,ppb, .0001,.0003,319.6, -.0002, .0000, .0001
, .0000, .0006,,,
Elem5=Cs[133],[133],,,,ppb, .0124,.0013,10.75, .0119, .0130, .0144,
.0115, .0111,,,
Elem6=Cs[135],[135],,,,ppb, .0020,.0007,34.27, .0011, .0020, .0026,
.0027, .0015,,,
Elem7=Cs[137],[137],,,,ppb, -.0006,.0009,165.9, -.0012, .0010, -.00
13, -.0008, -.0006,,,
Elem8=Ba[138],[138],,,,ppb, -.0280,.0010,3.667, -.0278, -.0292, -.0
278, -.0264, -.0285,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.686,.27710,2.3711,11.965,11.857,11.
239,11.690,11.681

```

[Sample Header]

```

Method=PRV
SampleName=icb
Operator=kjy
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 14:05
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .0027,.0007,23.81, .0038, .0029, .0026, .
0024, .0021,,,
Elem1=Ru[102],[102],,,,ppb, .0003,.0008,232.4, .0003, -.0006, -.000
3, .0011, .0011,,,
Elem2=Te[125],[125],,,,ppb, -.0080,.0128,160.2, -.0016, -.0177, -.0
139, -.0184, .0116,,,
Elem3=Sn[117],[117],,,,ppb, -.0066,.0015,22.53, -.0045, -.0078, -.0
059, -.0067, -.0081,,,
Elem4=Sn[126],[126],,,,ppb, -.0001,.0003,608.7, -.0002, .0005, -.00
01, -.0002, -.0002,,,

```

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```

Elem5=Cs[133],[133],,,,ppb, .0065,.0009,13.48, .0061, .0075, .0074,
      .0057, .0059,,,
Elem6=Cs[135],[135],,,,ppb, -.0021,.0003,13.85, -.0021, -.0020, -.0
020, -.0025, -.0018,,,
Elem7=Cs[137],[137],,,,ppb, -.0029,.0005,16.83, -.0029, -.0024, -.0
025, -.0036, -.0032,,,
Elem8=Ba[138],[138],,,,ppb, -.0285,.0017,6.089, -.0295, -.0270, -.0
263, -.0296, -.0302,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=In[115],[115],,Cts/S, 11.405,.31484,2.7606,11.460,11.022,11.
182,11.528,11.831

```

[Sample Header]

Method=PRV

SampleName=prep-std

Operator=kjy

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:10

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa

ss/fail,chklo,chkhi

```

Elem0=Tc[99],[99],,,,ppb, .0068,.0005,7.111, .0065, .0064, .0074, .
0065, .0074,,,

```

```

Elem1=Ru[102],[102],,,,ppb, .1040,.0042,4.052, .1020, .1053, .0979,
      .1060, .1089,,,

```

```

Elem2=Te[125],[125],,,,ppb, .0073,.0149,206.0, .0088, -.0180, .0094
      , .0210, .0152,,,

```

```

Elem3=Sn[117],[117],,,,ppb, -.0003,.0017,650.6, .0013, -.0002, -.00
03, .0010, -.0031,,,

```

```

Elem4=Sn[126],[126],,,,ppb, .0009,.0005,50.74, .0012, .0007, .0002,
      .0011, .0014,,,

```

```

Elem5=Cs[133],[133],,,,ppb, .0074,.0011,14.13, .0092, .0077, .0072,
      .0067, .0066,,,

```

```

Elem6=Cs[135],[135],,,,ppb, .6899,.0302,4.371, .7176, .6547, .7246,
      .6709, .6819,,,

```

```

Elem7=Cs[137],[137],,,,ppb, 1.187,.0503,4.235, 1.215, 1.172, 1.258,
      1.162, 1.128,,,

```

```

Elem8=Ba[138],[138],,,,ppb, 10.48,.3881,3.703, 10.65, 10.39, 10.77,

```

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10.75, 9.840,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.345,.23381,2.0609,11.046,11.460,11.
260,11.290,11.670

[Sample Header]

Method=PRV
SampleName=bnlk-prep
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 14:17
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,ppb, .0045,.0004,9.095, .0048, .0043, .0050, .
.0043, .0040,,,
Elem1=Ru[102],[102],,ppb, .0063,.0012,19.25, .0055, .0046, .0070,
.0075, .0070,,,
Elem2=Te[125],[125],,ppb, -.0041,.0103,253.1, -.0065, .0023, -.01
48, .0102, -.0116,,,
Elem3=Sn[117],[117],,ppb, -.0029,.0009,33.20, -.0040, -.0022, -.0
023, -.0037, -.0020,,,
Elem4=Sn[126],[126],,ppb, .0001,.0004,285.6, .0003, .0002, .0006,
-.0004, -.0001,,,
Elem5=Cs[133],[133],,ppb, .0054,.0003,6.430, .0052, .0056, .0057,
.0049, .0054,,,
Elem6=Cs[135],[135],,ppb, -.0015,.0005,29.53, -.0015, -.0012, -.0
011, -.0016, -.0023,,,
Elem7=Cs[137],[137],,ppb, -.0027,.0003,9.357, -.0029, -.0024, -.0
025, -.0027, -.0030,,,
Elem8=Ba[138],[138],,ppb, -.0254,.0019,7.615, -.0245, -.0256, -.0
233, -.0250, -.0285,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.862,.30011,2.5301,11.483,11.859,11.
696,11.993,12.277

[Sample Header]

Method=PRV

SampleName=s00t000804

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:21

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, .1796,.0048,2.652, .1794, .1842, .1841, .1728, .1777,,,

Elem1=Ru[102],[102],,,ppb, 11.73,.7100,6.055, 12.76, 11.43, 11.25, 11.05, 12.14,,,

Elem2=Te[125],[125],,,ppb, .6992,.0678,9.695, .6167, .7812, .7518, .6920, .6541,,,

Elem3=Sn[117],[117],,,ppb, .4059,.0155,3.808, .3985, .4125, .3874, .4284, .4029,,,

Elem4=Sn[126],[126],,,ppb, .0332,.0015,4.598, .0322, .0336, .0339, .0352, .0313,,,

Elem5=Cs[133],[133],,,ppb, .2850,.0150,5.256, .2671, .2936, .2748, .3050, .2846,,,

Elem6=Cs[135],[135],,,ppb, .1142,.0065,5.687, .1079, .1237, .1114, .1180, .1102,,,

Elem7=Cs[137],[137],,,ppb, 2.915,.0993,3.406, 2.796, 2.997, 2.961, 3.000, 2.818,,,

Elem8=Ba[138],[138],,,ppb, 10.17,.4669,4.593, 9.777, 10.37, 10.58, 10.54, 9.560,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 11.653,.33143,2.8441,12.186,11.478,11.499,11.351,11.752

[Sample Header]

Method=PRV

SampleName=s00t000804_s

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=
Run Time=05/09/2000 14:24
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

50 5/11/00
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .1856, .0114,6.123, .1883, .1879, .1679, .1843, .1994,,,
Elem1=Ru[102],[102],,,ppb, 10.11,.6284,6.214, 10.59, 10.49, 10.59, 9.222, 9.677,,,
Elem2=Te[125],[125],,,ppb, .6567,.0468,7.131, .6846, .6884, .6662, .6695, .5746,,,
Elem3=Sn[117],[117],,,ppb, .5034,.0231,4.586, .5397, .4969, .4771, .5076, .4957,,,
Elem4=Sn[126],[126],,,ppb, .0381,.0015,3.984, .0361, .0400, .0391, .0377, .0376,,,
Elem5=Cs[133],[133],,,ppb, .2824,.0212,7.520, .2615, .3173, .2789, .2837, .2707,,,
Elem6=Cs[135],[135],,,ppb, .8374,.0367,4.380, .8486, .8883, .7913, .8152, .8438,,,
Elem7=Cs[137],[137],,,ppb, 3.750,.0930,2.481, 3.773, 3.862, 3.689, 3.626, 3.801,,,
Elem8=Ba[138],[138],,,ppb, 20.16,.6738,3.342, 20.35, 20.32, 19.15, 21.00, 19.97,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.443,.38111,3.3306,11.494,11.231,12.060,11.370,11.059

[Sample Header]

Method=PRV
SampleName=s00t000804_s
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 14:26
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .1755,.0125,7.100, .1554, .1762, .1797, .1895, .1767,,,
Elem1=Ru[102],[102],,,ppb, 9.539,.3082,3.231, 9.628, 9.209, 9.479, 10.02, 9.361,,,
Elem2=Te[125],[125],,,ppb, .6960,.1053,15.13, .5915, .7384, .5841, .7384, .8276,,,
Elem3=Sn[117],[117],,,ppb, .4857,.0162,3.340, .5027, .4956, .4703, .4933, .4664,,,
Elem4=Sn[126],[126],,,ppb, .0384,.0018,4.798, .0388, .0407, .0358, .0375, .0391,,,
Elem5=Cs[133],[133],,,ppb, .2942,.0045,1.530, .2991, .2951, .2965, .2931, .2872,,,
Elem6=Cs[135],[135],,,ppb, .8221,.0303,3.685, .8507, .8424, .8282, .7734, .8159,,,
Elem7=Cs[137],[137],,,ppb, 3.744,.1584,4.232, 3.579, 3.776, 3.724, 3.647, 3.994,,,
Elem8=Ba[138],[138],,,ppb, 19.40,.8690,4.480, 18.93, 19.86, 20.08, 18.09, 20.03,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.224,.21676,1.9312,11.415,11.296,11.422,11.003,10.983

[Sample Header]

Method=PRV
SampleName=s00t000804_a
Operator=kjt
Comment=msprv spike 451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 14:35
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, 21.12,.8708,4.123, 21.46, 21.76, 20.06, 20.33, 21.99,,,
Elem1=Ru[102],[102],,,ppb, 11.05,.8506,7.700, 11.29, 11.42, 9.774, 12.03, 10.72,,,

sp 3/11/00

8/11/00

Elem2=Te[125],[125],,,ppb, .7161,.0547,7.637, .7274, .6788, .7569,
.6428, .7744,,,
Elem3=Sn[117],[117],,,ppb, 1.534,.0690,4.500, 1.553, 1.519, 1.644,
1.471, 1.484,,,
Elem4=Sn[126],[126],,,ppb, .0316,.0031,9.879, .0291, .0298, .0338,
.0293, .0360,,,
Elem5=Cs[133],[133],,,ppb, 20.12,2.645,13.15, 18.19, 18.47, 22.72,
17.93, 23.28,,,
Elem6=Cs[135],[135],,,ppb, .1120,.0142,12.68, .1042, .0985, .1260,
.1025, .1287,,,
Elem7=Cs[137],[137],,,ppb, 2.807,.2499,8.902, 2.668, 2.650, 3.101,
2.564, 3.053,,,
Elem8=Ba[138],[138],,,ppb, 9.838,.6737,6.848, 9.309, 9.301, 10.36,
9.467, 10.75,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 11.155,.63212,5.6669,11.514,11.512,10.
603,11.787,10.357

[Sample Header]

Method=PRV

SampleName=s00t000804_a

Operator=kjt

Comment=msprv spike 451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:37

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

8/11/00

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, 21.79,.9339,4.287, 22.31, 22.24, 21.62, 2
0.23, 22.54,,,

Elem1=Ru[102],[102],,,ppb, 10.97,.6359,5.797, 10.08, 11.61, 11.56,
10.83, 10.77,,,

Elem2=Te[125],[125],,,ppb, .7039,.0304,4.319, .6671, .6764, .7188,
.7205, .7370,,,

Elem3=Sn[117],[117],,,ppb, 1.538,.0454,2.955, 1.605, 1.548, 1.480,
1.537, 1.518,,,

Elem4=Sn[126],[126],,,ppb, .0325,.0009,2.695, .0324, .0329, .0320,
.0315, .0338,,,

Elem5=Cs[133],[133],,,ppb, 19.75,1.111,5.627, 21.43, 20.00, 18.38,

19.44, 19.48,,, *5/11/0*
Elem6=Cs[135],[135],,,ppb, .1130,.0049,4.339, .1209, .1114, .1088,
.1097, .1144,,,
Elem7=Cs[137],[137],,,ppb, 2.821,.1148,4.069, 2.980, 2.682, 2.865,
2.836, 2.744,,,
Elem8=Ba[138],[138],,,ppb, 9.948,.3577,3.596, 10.34, 9.384, 9.874,
10.13, 10.02,,, *5/11/0*

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 10.943,.36599,3.3445,10.340,11.127,11.
139,11.248,10.860

[Sample Header]

Method=PRV

SampleName=s00t000804_a

Operator=kjt

Comment=msprv spike 451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:44

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000 *5/11/0*

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhiElem0=Tc[99],[99],,,ppb, 22.06,.8134,3.687, 21.07, 21.48, 23.08, 2
2.05, 22.61,,, *5/11/0*Elem1=Ru[102],[102],,,ppb, 11.09,.1497,1.350, 11.13, 11.00, 11.15,
11.29, 10.90,,, *5/11/0*Elem2=Te[125],[125],,,ppb, .6749,.0636,9.431, .6004, .7176, .7458,
.6944, .6163,,, *5/11/0*Elem3=Sn[117],[117],,,ppb, 1.518,.0819,5.396, 1.477, 1.417, 1.609,
1.595, 1.493,,, *5/11/0*Elem4=Sn[126],[126],,,ppb, .0331,.0010,3.017, .0316, .0326, .0336,
.0342, .0333,,, *5/11/0*Elem5=Cs[133],[133],,,ppb, 19.90,.6193,3.113, 18.96, 19.99, 20.54,
20.33, 19.66,,, *5/11/0*Elem6=Cs[135],[135],,,ppb, .1063,.0064,6.007, .1031, .0966, .1121,
.1092, .1102,,, *5/11/0*Elem7=Cs[137],[137],,,ppb, 2.735,.0639,2.336, 2.694, 2.679, 2.709,
2.752, 2.838,,, *5/11/0*Elem8=Ba[138],[138],,,ppb, 9.563,.6532,6.830, 8.439, 10.07, 9.627,
9.721, 9.964,,, *5/11/0*

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.133,.47841,4.2971,11.813,10.823,11.
228,11.248,10.555

[Sample Header]

Method=PRV

✓ SampleName=s00t000804_a

Operator=kjt

Comment=msprv spike 451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:46

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

✓ Elem0=Tc[99],[99],,,ppb, 22.17,1.137,5.127, 23.18, 21.84, 21.26, 2
1.04, 23.56,,,Elem1=Ru[102],[102],,,ppb, 10.88,.5179,4.762, 10.87, 11.60, 10.96,
10.80, 10.15,,,Elem2=Te[125],[125],,,ppb, .6998,.0581,8.298, .7293, .6970, .6312,
.6616, .7800,,,✓ Elem3=Sn[117],[117],,,ppb, 1.568,.0652,4.160, 1.564, 1.650, 1.543,
1.478, 1.606,,,Elem4=Sn[126],[126],,,ppb, .0335,.0026,7.884, .0342, .0341, .0341,
.0290, .0361,,,✓ Elem5=Cs[133],[133],,,ppb, 20.95,.8233,3.931, 20.41, 21.01, 21.94,
19.88, 21.49,,,Elem6=Cs[135],[135],,,ppb, .1133,.0055,4.841, .1185, .1072, .1187,
.1082, .1140,,,Elem7=Cs[137],[137],,,ppb, 2.906,.1148,3.952, 2.972, 2.913, 3.057,
2.782, 2.805,,,Elem8=Ba[138],[138],,,ppb, 10.19,.3151,3.091, 10.24, 10.52, 10.19,
9.678, 10.34,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 11.015,.35239,3.1993,10.765,10.834,10.
933,11.634,10.907

[Sample Header]

Method=PRV

SampleName=s00t000804_a

Operator=kjt

Comment=sn spike 451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 14:54

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, .1733,.0117,6.776, .1795, .1854, .1689, .1552, .1776,,,

Elem1=Ru[102],[102],,,ppb, 10.56,.4215,3.990, 10.64, 10.62, 9.985, 10.42, 11.15,,,

Elem2=Te[125],[125],,,ppb, .6995,.0369,5.275, .6964, .6470, .6867, .7247, .7428,,,

Elem3=Sn[117],[117],,,ppb, 19.97,.8288,4.150, 19.87, 21.41, 19.49, 19.35, 19.74,,,

Elem4=Sn[126],[126],,,ppb, .0306,.0021,6.844, .0313, .0303, .0272, .0318, .0326,,,

Elem5=Cs[133],[133],,,ppb, .2737,.0111,4.068, .2748, .2826, .2578, .2682, .2852,,,

Elem6=Cs[135],[135],,,ppb, .1090,.0038,3.527, .1118, .1103, .1053, .1131, .1046,,,

Elem7=Cs[137],[137],,,ppb, 2.653,.2384,8.985, 2.649, 2.872, 2.760, 2.734, 2.251,,,

Elem8=Ba[138],[138],,,ppb, 9.486,.4974,5.244, 9.318, 10.13, 9.765, 9.419, 8.801,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 10.897,.18042,1.6556,11.116,10.697,10.736,11.024,10.913

[Sample Header]

Method=PRV

SampleName=s00t000803

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 15:06
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

88 5/11/00

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .1979,.0089,4.480, .2029, .1873, .2103, .1955, .1937,,,
Elem1=Ru[102],[102],,,ppb, 10.81,.5362,4.960, 11.43, 10.09, 11.22, 10.53, 10.77,,,
Elem2=Te[125],[125],,,ppb, .7858,.0736,9.616, .7732, .7044, .7635, .8842, .7038,,,
Elem3=Sn[117],[117],,,ppb, .4309,.0159,3.700, .4369, .4302, .4500, .4061, .4312,,,
Elem4=Sn[126],[126],,,ppb, .0355,.0024,6.874, .0320, .0351, .0382, .0375, .0349,,,
Elem5=Cs[133],[133],,,ppb, .3183,.0194,6.100, .2911, .3099, .3205, .3433, .3266,,,
Elem6=Cs[135],[135],,,ppb, .1156,.0068,5.904, .1213, .1048, .1210, .1173, .1134,,,
Elem7=Cs[137],[137],,,ppb, 2.345,.1306,5.571, 2.221, 2.258, 2.556, 2.362, 2.324,,,
Elem8=Ba[138],[138],,,ppb, 10.39,.4562,4.393, 9.771, 10.28, 11.04, 10.34, 10.49,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.638,.40557,3.8124,11.180,10.631,10.112,10.425,10.841

[Sample Header]

Method=PRV
SampleName=s00t000803
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 15:09
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
/ Elem0=Tc[99],[99],,,,ppb, .2092,.0097,4.614, .2121, .2020, .2248, .
2017, .2055,,,
Elem1=Ru[102],[102],,,,ppb, 10.62,.6111,5.755, 11.01, 10.75, 10.68,
11.09, 9.568,,,
Elem2=Te[125],[125],,,,ppb, .7864,.0568,7.227, .7426, .7635, .8594,
.7327, .8339,,,
/ Elem3=Sn[117],[117],,,,ppb, .4366,.0115,2.644, .4253, .4478, .4491,
.4355, .4256,,,
Elem4=Sn[126],[126],,,,ppb, .0347,.0034,9.661, .0360, .0342, .0350,
.0296, .0388,,,
/ Elem5=Cs[133],[133],,,,ppb, .3159,.0118,3.747, .3191, .2977, .3287,
.3119, .3222,,,
Elem6=Cs[135],[135],,,,ppb, .1191,.0095,8.007, .1138, .1070, .1255,
.1180, .1313,,,
Elem7=Cs[137],[137],,,,ppb, 2.323,.2694,11.60, 2.145, 2.051, 2.520,
2.209, 2.688,,,
Elem8=Ba[138],[138],,,,ppb, 10.33,.5666,5.486, 9.855, 10.37, 10.23,
9.917, 11.27,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.182,.35261,3.4630,10.334,10.363,9.8
210,10.591,9.8024

```

[Sample Header]

```
Method=PRV
SampleName=s00t000805
Operator=kjt
Comment=451 df
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 15:14
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

sp 5/11/0

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .2137,.0136,6.350, .2116, .2185, .2344, .
2010, .2028,,,
Elem1=Ru[102],[102],,,,ppb, 8.823,.8763,9.931, 9.478, 8.317, 8.808,
7.666, 9.847,,,
Elem2=Te[125],[125],,,,ppb, .7485,.0610,8.156, .7664, .6904, .8069,

```

.8010, .6775,,,
 Elem3=Sn[117],[117],,,,ppb, .3026,.0358,11.82, .2869, .2832, .2952,
 .3659, .2820,,,
 Elem4=Sn[126],[126],,,,ppb, .0298,.0034,11.46, .0287, .0304, .0316,
 .0337, .0246,,,
 Elem5=Cs[133],[133],,,,ppb, .3501,.0197,5.637, .3453, .3564, .3629,
 .3678, .3182,,,
 Elem6=Cs[135],[135],,,,ppb, .1385,.0119,8.583, .1363, .1451, .1496,
 .1422, .1190,,,
 Elem7=Cs[137],[137],,,,ppb, 2.616,.2651,10.13, 2.488, 2.807, 2.779,
 2.801, 2.206,,,
 Elem8=Ba[138],[138],,,,ppb, 11.44,1.162,10.16, 10.86, 12.39, 11.72,
 12.49, 9.712,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 9.5256,.79957,8.3939,9.7635,8.9958,9.0
 799,8.9593,10.830

[Sample Header]

Method=PRV

SampleName=s00t000805

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 15:18

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,,ppb, .2054,.0169,8.206, .2042, .1936, .2036, .
 1918, .2338,,,
 Elem1=Ru[102],[102],,,,ppb, 9.308,.3525,3.787, 9.610, 9.053, 8.817,
 9.546, 9.515,,,
 Elem2=Te[125],[125],,,,ppb, .7793,.0670,8.598, .8007, .6650, .7985,
 .8422, .7902,,,
 Elem3=Sn[117],[117],,,,ppb, .2879,.0208,7.238, .2986, .2746, .3169,
 .2634, .2860,,,
 Elem4=Sn[126],[126],,,,ppb, .0277,.0041,14.70, .0268, .0236, .0345,
 .0264, .0272,,,
 Elem5=Cs[133],[133],,,,ppb, .3264,.0302,9.265, .3256, .3014, .3570,
 .2918, .3564,,,

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Elem6=Cs[135],[135],,,ppb, .1233,.0133,10.75, .1123, .1235, .1449,
.1127, .1231,,,
Elem7=Cs[137],[137],,,ppb, 2.342,.1635,6.982, 2.326, 2.337, 2.386,
2.103, 2.560,,,
Elem8=Ba[138],[138],,,ppb, 10.69,.5988,5.600, 10.66, 10.31, 11.08,
9.951, 11.46,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 10.251,.42730,4.1683,10.381,10.547,9.8
021,10.724,9.8028

[Sample Header]

Method=PRV

SampleName=s00t000805

Operator=kjt

Comment=451 df

CustID=

CustSmpl=

LabID=

Run Time=05/09/2000 15:21

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, .2029,.0071,3.475, .2075, .2004, .2127, .
1981, .1957,,,

Elem1=Ru[102],[102],,,ppb, 9.255,.5795,6.262, 8.715, 9.315, 10.18,
8.814, 9.251,,,

Elem2=Te[125],[125],,,ppb, .7890,.0833,10.56, .8668, .7670, .7847,
.6635, .8628,,,

Elem3=Sn[117],[117],,,ppb, .2993,.0104,3.460, .3083, .2872, .3118,
.2950, .2944,,,

Elem4=Sn[126],[126],,,ppb, .0282,.0022,7.778, .0306, .0292, .0267,
.0252, .0291,,,

Elem5=Cs[133],[133],,,ppb, .3127,.0203,6.506, .3462, .3018, .2947,
.3041, .3168,,,

Elem6=Cs[135],[135],,,ppb, .1245,.0134,10.76, .1440, .1316, .1118,
.1139, .1211,,,

Elem7=Cs[137],[137],,,ppb, 2.393,.1561,6.525, 2.637, 2.395, 2.229,
2.290, 2.412,,,

Elem8=Ba[138],[138],,,ppb, 11.38,.4932,4.335, 12.11, 11.57, 11.16,
11.25, 10.80,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.058,.29938,2.9766,9.7171,10.101,10.
295,10.390,9.7862

[Sample Header]

Method=PRV *C*
SampleName=*icv* *8/5/11/2000*
Operator=kjt
Comment=msprv lcs
CustID=
CustSmpl=62b57
LabID=
Run Time=05/09/2000 15:35
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,ppb, 19.87,.5075,2.554, 19.75, 20.41, 19.75, 2
0.31, 19.15,,
Elem1=Ru[102],[102],,ppb, -.0002,.0010,466.5, -.0008, -.0012, -.0
005, .0002, .0013,,
Elem2=Te[125],[125],,ppb, .0182,.0231,127.3, .0471, .0061, .0383,
-.0062, .0057,,
Elem3=Sn[117],[117],,ppb, 2.207,.0929,4.209, 2.132, 2.107, 2.191,
2.315, 2.290,,
Elem4=Sn[126],[126],,ppb, .0002,.0002,114.0, .0002, .0001, .0000,
.0005, .0000,,
Elem5=Cs[133],[133],,ppb, 17.90,.6222,3.476, 18.31, 18.14, 17.72,
18.44, 16.90,,
Elem6=Cs[135],[135],,ppb, .0075,.0008,10.73, .0085, .0065, .0080,
.0076, .0069,,
Elem7=Cs[137],[137],,ppb, .0138,.0014,9.882, .0158, .0127, .0136,
.0144, .0124,,
Elem8=Ba[138],[138],,ppb, .1187,.0079,6.686, .1325, .1184, .1151,
.1135, .1141,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.479,.44594,4.2557,10.074,9.9149,10.
789,10.777,10.837

[Sample Header]

Method=PRV

SampleName=~~LCV~~ ^{CCV} 8/5/11/0
 Operator=kjt
 Comment=msprv lcs
 CustID=
 CustSmpl=62b57
 LabID=
 Run Time=05/09/2000 15:37
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

8/5/11/0

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
 ss/fail,chklo,chkhi
 Elem0=Tc[99],[99],,,ppb, 21.19,.8619,4.068, 20.35, 22.04, 22.20, 2
 0.66, 20.70,,,
 Elem1=Ru[102],[102],,,ppb, .0002,.0013,834.6, -.0008, .0002, .0001
 , -.0010, .0023,,,
 Elem2=Te[125],[125],,,ppb, .0145,.0105,72.13, .0222, .0151, .0241,
 .0136, -.0024,,,
 Elem3=Sn[117],[117],,,ppb, 2.215,.1396,6.304, 2.443, 2.147, 2.235,
 2.175, 2.076,,,
 Elem4=Sn[126],[126],,,ppb, .0000,.0002,2433., -.0002, -.0001, .000
 2, -.0001, .0001,,,
 Elem5=Cs[133],[133],,,ppb, 18.50,.8860,4.788, 19.06, 19.44, 18.71,
 18.16, 17.16,,,
 Elem6=Cs[135],[135],,,ppb, .0077,.0015,18.93, .0091, .0081, .0072,
 .0089, .0055,,,
 Elem7=Cs[137],[137],,,ppb, .0138,.0017,12.47, .0142, .0134, .0165,
 .0118, .0132,,,
 Elem8=Ba[138],[138],,,ppb, .1205,.0042,3.488, .1226, .1256, .1172,
 .1152, .1219,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
 Elem0=In[115],[115],,Cts/S, 10.487,.36602,3.4902,10.170,10.088,10.
 475,10.783,10.921

[Sample Header]

Method=PRV ^c 8/5/11/0
 SampleName=~~LCV~~
 Operator=kjt
 Comment=msprv lcs
 CustID=
 CustSmpl=62b57
 LabID=
 Run Time=05/09/2000 15:41

Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

8/5/11/0

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, 20.14,.7493,3.721, 20.34, 20.60, 19.15, 20.99, 19.60,,,
Elem1=Ru[102],[102],,,ppb, .0011,.0009,79.59, .0001, .0005, .0015, .0023, .0011,,,
Elem2=Te[125],[125],,,ppb, .0097,.0156,161.4, .0008, .0361, -.0033, .0041, .0107,,,
Elem3=Sn[117],[117],,,ppb, 2.243,.1285,5.730, 2.366, 2.344, 2.172, 2.275, 2.057,,,
Elem4=Sn[126],[126],,,ppb, .0003,.0002,81.53, .0002, .0003, .0007, .0000, .0003,,,
Elem5=Cs[133],[133],,,ppb, 18.41,.8337,4.529, 19.22, 19.25, 17.31, 18.31, 17.95,,,
Elem6=Cs[135],[135],,,ppb, .0085,.0012,14.48, .0089, .0083, .0096, .0091, .0064,,,
Elem7=Cs[137],[137],,,ppb, .0133,.0016,12.15, .0153, .0128, .0132, .0142, .0110,,,
Elem8=Ba[138],[138],,,ppb, .1142,.0078,6.813, .1222, .1149, .1034, .1208, .1099,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.641,.56075,5.2695,10.209,10.103,11.364,10.427,11.104

[Sample Header]
Method=PRV *c* *8/5/11/0*
✓ SampleName=*xcv*
Operator=kjt
Comment=msprv lcs
CustID=
CustSmpl=62b57
LabID=
Run Time=05/09/2000 15:45
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa

```

ss/fail,chklo,chkhi
/ Elem0=Tc[99],[99],,,ppb, 20.35,1.107,5.438, 18.83, 21.43, 19.76, 2
0.36, 21.38,,,
Elem1=Ru[102],[102],,,ppb, .0009,.0008,89.56, .0011, .0015, .0003,
.0018, -.0002,,,
Elem2=Te[125],[125],,,ppb, .0163,.0159,97.50, .0333, .0113, .0166,
-.0075, .0279,,,
Elem3=Sn[117],[117],,,ppb, 2.290,.0732,3.199, 2.177, 2.345, 2.305,
2.263, 2.358,,,
Elem4=Sn[126],[126],,,ppb, .0002,.0004,185.9, .0004, .0005, -.0005
, .0006, .0002,,,
/ Elem5=Cs[133],[133],,,ppb, 18.51,.6702,3.621, 17.88, 19.02, 17.92,
18.33, 19.39,,,
Elem6=Cs[135],[135],,,ppb, .0081,.0013,16.42, .0060, .0091, .0085,
.0077, .0092,,,
Elem7=Cs[137],[137],,,ppb, .0131,.0004,3.024, .0130, .0129, .0127,
.0131, .0137,,,
Elem8=Ba[138],[138],,,ppb, .1178,.0069,5.873, .1191, .1170, .1116,
.1123, .1288,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 10.755,.44436,4.1316,11.238,10.479,10.
981,10.949,10.129

```

[Sample Header]

```

/ Method=PRV g 90 g/l
SampleName=zcv
Operator=kjt
Comment=20.5 ppb Sn
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 15:51
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0360,.0035,9.828, .0386, .0396, .0349, .
0361, .0306,,,
Elem1=Ru[102],[102],,,ppb, .0009,.0010,104.8, -.0001, .0013, .0023
, .0010, .0001,,,
Elem2=Te[125],[125],,,ppb, .0302,.0247,81.74, .0503, .0535, .0358,
.0173, -.0058,,,

```

```

Elem3=Sn[117],[117],,,,ppb, 19.92,.6738,3.383, 20.81, 19.56, 19.65,
19.16, 20.42,,,
Elem4=Sn[126],[126],,,,ppb, .0000,.0004,1001., .0003, -.0002, -.000
5, -.0002, .0003,,,
Elem5=Cs[133],[133],,,,ppb, .0224,.0023,10.38, .0252, .0235, .0224,
.0189, .0221,,,
Elem6=Cs[135],[135],,,,ppb, .0013,.0006,42.92, .0020, .0012, .0006,
.0017, .0010,,,
Elem7=Cs[137],[137],,,,ppb, -.0023,.0003,14.84, -.0017, -.0023, -.0
026, -.0023, -.0025,,,
Elem8=Ba[138],[138],,,,ppb, -.0417,.0006,1.439, -.0410, -.0412, -.0
423, -.0422, -.0419,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=In[115],[115],,Cts/S, 10.495,.29641,2.8244,10.032,10.761,10.
574,10.391,10.716

```

[Sample Header]

```

Method=PRV c 8/5/11
SampleName=Acb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 16:02
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa

```

ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .0181,.0013,6.987, .0169, .0195, .0169, .
0180, .0193,,,
Elem1=Ru[102],[102],,,,ppb, -.0011,.0009,84.23, .0003, -.0020, -.00
08, -.0012, -.0016,,,
Elem2=Te[125],[125],,,,ppb, -.0187,.0180,96.04, .0430, .0330, .0058,
.0079, .0040,,,
Elem3=Sn[117],[117],,,,ppb, .0143,.0041,28.82, .0183, .0165, .0106,
.0092, .0169,,,
Elem4=Sn[126],[126],,,,ppb, .0003,.0004,102.2, .0003, .0008, .0006,
.0000, .0000,,,
Elem5=Cs[133],[133],,,,ppb, .0186,.0016,8.375, .0187, .0163, .0196,
.0181, .0204,,,
Elem6=Cs[135],[135],,,,ppb, -.0015,.0004,29.47, -.0013, -.0014, -.0

```

SP 5/11/00

023, -.0013, -.0012,,,
Elem7=Cs[137],[137],,,,ppb, -.0017,.0011,62.08, -.0018, -.0017, -.0
026, -.0025, .0000,,,
Elem8=Ba[138],[138],,,,ppb, -.0151,.0027,17.60, -.0147, -.0131, -.0
190, -.0164, -.0124,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 9.2817,.42077,4.5333,9.5648,9.6900,9.0
702,9.4299,8.6535

[Sample Header]

Method=PRV
SampleName=cb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 16:06
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .0150,.0010,6.554, .0139, .0142, .0153, .
0163, .0154,,,
Elem1=Ru[102],[102],,,,ppb, -.0012,.0006,46.98, -.0005, -.0019, -.0
008, -.0015, -.0015,,,
Elem2=Te[125],[125],,,,ppb, .0032,.0051,159.5, -.0048, .0050, .0088
, .0018, .0050,,,
Elem3=Sn[117],[117],,,,ppb, .0108,.0034,31.16, .0125, .0109, .0133,
.0050, .0121,,,
Elem4=Sn[126],[126],,,,ppb, .0001,.0003,396.6, -.0004, .0003, .0001
, .0004, -.0001,,,
Elem5=Cs[133],[133],,,,ppb, .0182,.0008,4.127, .0184, .0174, .0178,
.0179, .0194,,,
Elem6=Cs[135],[135],,,,ppb, -.0010,.0004,43.48, -.0014, -.0016, -.0
006, -.0008, -.0007,,,
Elem7=Cs[137],[137],,,,ppb, -.0017,.0011,64.07, -.0032, -.0026, -.0
013, -.0008, -.0008,,,
Elem8=Ba[138],[138],,,,ppb, -.0134,.0038,28.67, -.0130, -.0200, -.0
126, -.0115, -.0101,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 9.3962,.54776,5.8295,9.9174,9.7310,9.6
290,8.5607,9.1430

[Sample Header]

Method=PRV *C*
SampleName=*X*cb *SP 5/11/00*
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/09/2000 16:09
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,ppb, .0160,.0015,9.247, .0172, .0145, .0144, .
.0162, .0175,,,
Elem1=Ru[102],[102],,ppb, -.0012,.0011,87.77, -.0024, -.0003, -.0
001, -.0022, -.0011,,,
Elem2=Te[125],[125],,ppb, .0025,.0246,993.7, .0164, -.0130, .0099
, -.0313, .0304,,,
Elem3=Sn[117],[117],,ppb, .0108,.0035,32.08, .0136, .0062, .0092,
.0101, .0148,,,
Elem4=Sn[126],[126],,ppb, .0004,.0003,86.75, -.0001, .0008, .0006
, .0004, .0003,,,
Elem5=Cs[133],[133],,ppb, .0183,.0012,6.392, .0183, .0177, .0169,
.0183, .0201,,,
Elem6=Cs[135],[135],,ppb, -.0016,.0001,4.744, -.0015, -.0017, -.0
017, -.0016, -.0015,,,
Elem7=Cs[137],[137],,ppb, -.0013,.0005,36.44, -.0009, -.0007, -.0
016, -.0018, -.0013,,,
Elem8=Ba[138],[138],,ppb, -.0122,.0053,43.62, -.0110, -.0137, -.0
108, -.0200, -.0054,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 9.0835,.82958,9.1328,8.6484,9.5693,9.5
175,9.8466,7.8357

LABCORE Completed Worklist Report for Worklist# 33311

Analyst: bjg

Instrument: ICPMS1

Book#: 62B57
00050-1

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSPR-D1

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	0	QMSPR-QC TC99	QC	0.020	2.06e-02	103.000 % Recovery	
1 ICV	0	0	QMSPR-QC SN117	QC	0.020	1.93e-02	96.500 % Recovery	
1 ICV	0	0	QMSPR-QC CS133	QC	0.020	1.89e-02	94.500 % Recovery	
2 ICB	0	0	QMSPR-QC TC99	QC	1	<2.00e-6		ug/mL
2 ICB	0	0	QMSPR-QC SN117	QC	1	<1.50e-4		ug/mL
2 ICB	0	0	QMSPR-QC SN126	QC	1	<1.50e-4		ug/mL
2 ICB	0	0	QMSPR-QC CS133	QC	1	<2.00e-6		ug/mL
2 ICB	0	0	QMSPR-QC CS135	QC	1	<2.00e-6		ug/mL
2 ICB	0	0	QMSPR-QC CS137	QC	1	<2.00e-6		ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 TC99-D1	LIQUID	N/A	2.568e+01	2.41e-003	ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 SN117-D1	LIQUID	N/A	4.191e+00	0.181	ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 SN126-D1	LIQUID	N/A	2.285e-01	0.181	ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 CS133-D1	LIQUID	N/A	4.012e+01	2.41e-003	ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 CS135-D1	LIQUID	N/A	1.418e+01	2.41e-003	ug/mL
3 SAMPLE	S00T000778	0 D	QMSPR-D1 CS137-D1	LIQUID	N/A	2.700e+01	2.41e-003	ug/mL
4 SPK-POST	S00T000778	0 D	QMSPR-D1 TC99-D1	LIQUID	0.020	2.06e-02	103.000 % Recovery	
4 SPK-POST	S00T000778	0 D	QMSPR-D1 SN117-D1	LIQUID	0.020	1.82e-02	91.000 % Recovery	
4 SPK-POST	S00T000778	0 D	QMSPR-D1 CS133-D1	LIQUID	0.020	1.98e-02	99.000 % Recovery	
5 SAMPLE	S00T000781	0 D	QMSPR-D1 TC99-D1	LIQUID	N/A	2.589e+01	2.41e-003	ug/mL
5 SAMPLE	S00T000781	0 D	QMSPR-D1 SN117-D1	LIQUID	N/A	4.307e+00	0.181	ug/mL
5 SAMPLE	S00T000781	0 D	QMSPR-D1 SN126-D1	LIQUID	N/A	2.340e-01	0.181	ug/mL
5 SAMPLE	S00T000781	0 D	QMSPR-D1 CS133-D1	LIQUID	N/A	4.111e+01	2.41e-003	ug/mL
5 SAMPLE	S00T000781	0 D	QMSPR-D1 CS135-D1	LIQUID	N/A	1.445e+01	2.41e-003	ug/mL
5 SAMPLE	S00T000781	0 D	QMSPR-D1 CS137-D1	LIQUID	N/A	2.721e+01	2.41e-003	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 TC99-D1	LIQUID	N/A	2.592e+01	2.41e-003	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 SN117-D1	LIQUID	N/A	4.275e+00	0.181	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 SN126-D1	LIQUID	N/A	2.262e-01	0.181	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 CS133-D1	LIQUID	N/A	4.004e+01	2.41e-003	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 CS135-D1	LIQUID	N/A	1.425e+01	2.41e-003	ug/mL
6 SAMPLE	S00T000784	0 D	QMSPR-D1 CS137-D1	LIQUID	N/A	2.695e+01	2.41e-003	ug/mL
7 CCV	0	0	QMSPR-QC TC99	QC	0.020	2.06e-02	103.000 % Recovery	
7 CCV	0	0	QMSPR-QC SN117	QC	0.020	1.92e-02	96.000 % Recovery	
7 CCV	0	0	QMSPR-QC CS133	QC	0.020	1.89e-02	94.500 % Recovery	
8 CCB	0	0	QMSPR-QC TC99	QC	1	<2.00e-6		ug/mL
8 CCB	0	0	QMSPR-QC SN117	QC	1	<1.50e-4		ug/mL
8 CCB	0	0	QMSPR-QC SN126	QC	1	<1.50e-4		ug/mL
8 CCB	0	0	QMSPR-QC CS133	QC	1	2.10e-06	0.000	ug/mL
8 CCB	0	0	QMSPR-QC CS135	QC	1	<2.00e-6		ug/mL
8 CCB	0	0	QMSPR-QC CS137	QC	1	<2.00e-6		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

worklistdata2 Version 3.0 01/04/99
05/02/00 16:05

Page: 2

LABCORE Completed Worklist Report for Worklist# 33311

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	---	---	------	--------	--------	-------	-------------	------

Final page for worklist# 33311

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sal M. Page 05/02/00
Reviewer Signature Date

04/21/00 12:59
ws2

FILE# 0501A-TT

Page: 1

LABCORE Data Entry Template for Worklist# 33311

Analyst: BYC Instrument: ICPMS1 Book# 62857,000501-1Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSPR-D1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV ICV-SN			@MSPR-QC QC			
2 ICB			@MSPR-QC QC			
3 SAMPLE	S00T000778	0 D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
4 SPK-POST-A SPK-POST-ASN	S00T000778	0 D	@MSPR-D1 LIQUID			
5 SAMPLE	S00T000781	0 D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
6 SAMPLE	S00T000784	0 D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
7 CCV CCV-SN			@MSPR-QC QC			
8 CCB			@MSPR-QC QC			

Final page for worklist # 33311

Signature [Signature] Date 5-1-00

Signature _____ Date _____

S00T000 778
778-A
778-ASN
781
784

.05 ml - 10 ml - 2 ml - 10 ml

1206

Data Entry Comments:

POST SPKs = -A - .1 ml of MSPR spk # 44 857

-ASN - .260 ml of 10 ppm SN # 000316-1

SCANS = 778 pr, 781 pr, 784 pr

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

1074

04/21/00 12:59
ws2

FILE# 0501A-TR

Page: 1

LABCORE Data Entry Template for Worklist# 33311

Analyst: B/K Instrument: ICPMS1 Book# 62857,000501-1Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSPR-D1

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@MSPR-QC QC			
	ICV-SN							
2	ICB				@MSPR-QC QC			
3	SAMPLE	S00T000778	0	D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
		Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
4	SPK-POST-A	S00T000778	0	D	@MSPR-D1 LIQUID			
	SPK-POST-ASN							
5	SAMPLE	S00T000781	0	D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
		Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
6	SAMPLE	S00T000784	0	D	@MSPR-D1 LIQUID		99000438	AZ-101 (2)
		Analytes Requested: CS133-D1, CS135-D1, CS137-D1, SN117-D1, SN126-D1, TC99-D1						
7	CCV				@MSPR-QC QC			
	CCV-SN							
8	CCB				@MSPR-QC QC			

Final page for worklist # 33311

Signature [Signature] Date 5-1-00

Signature _____ Date _____

S00T000 778
778-A
778-ASN
781
784

.05 ml - 10 ml - 2 ml - 10 ml

1206
1206

Data Entry Comments:

POST SPK'S = -A - .1 ml of MSPR spk # 44 857

-ASN - .260 ml of 10 ppm SN # 000316-1

SCANS = 778 pr, 781 pr, 784 pr

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

1075

Analysis Report

05/01/00 13:37:05

page 1

Method: PRV

Sample Name: ccb

Operator: bjg

Comment: 2% hno3

Run Time: 05/01/00 13:35 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0003	.0003	-.0023	.0074	-.0009	.0021
Stddev	.0011	.0016	.0208	.0041	.0006	.0007
%RSD	328.2	543.3	913.3	55.06	61.29	34.88

#1	.0004	.0023	.0266	.0011	-.0010	.0013
#2	-.0008	-.0017	.0056	.0074	-.0012	.0016
#3	.0002	.0013	.0014	.0099	-.0004	.0027
#4	.0021	.0005	-.0204	.0119	-.0003	.0020
#5	-.0002	-.0009	-.0246	.0065	-.0016	.0031

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0005	.0010	-.0021
Stddev	.0009	.0014	.0038
%RSD	170.4	133.2	179.9

#1	.0010	.0021	-.0016
#2	.0017	.0022	.0004
#3	.0006	.0007	-.0025
#4	-.0006	-.0012	.0014
#5	.0000	.0015	-.0082

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	6.4347
Stddev	.1968
%RSD	3.0581

#1	6.6648
#2	6.4919
#3	6.3585
#4	6.1414
#5	6.5171

[Signature]
5-1-00

Uploaded + Validated by:
Sam M. Long
05/02/00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1076 TO 1095.

Analysis Report

05/01/00 12:11:08

page 1

Method: MS_TUNE

Sample Name: ms-tune

Operator: bjg

Comment:

Run Time: 05/01/00 12:09 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	52980.	22370.	30810.
Stddev	402.	318.	524.
%RSD	.7583	1.424	1.703
#1	53170.	22820.	31610.
#2	53010.	22240.	31280.
#3	52910.	22860.	30270.
#4	53050.	21930.	31250.
#5	52570.	22490.	30400.
#6	52290.	22100.	30580.
#7	53220.	22300.	30890.
#8	52860.	22480.	30010.
#9	52930.	22470.	31240.
#10	53810.	21980.	30550.

Ejboech

5-1-00

A2-101

File #0501A.TRT

W.L. # 33311

Analysis Report

05/01/00 12:14:10

page 1

Method: PRV

Sample Name: Blank

Operator:

Comment:

Run Time: 05/01/00 12:12 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.487	17.90	3.273	27.96	3.903
Stddev	.385	1.64	.400	1.16	.369
%RSD	15.49	9.137	12.20	4.130	9.467

#1	1.817	15.50	3.270	28.79	4.360
#2	2.641	19.50	2.641	26.22	4.056
#3	2.665	18.50	3.492	27.39	3.860
#4	2.782	17.00	3.709	28.37	3.895
#5	2.531	19.00	3.254	29.01	3.344

Elem	Cs[133]	Cs[135]	Cs[137]	Ba[138]
Line	133/pulse	135/pulse	137/pulse	138/pulse
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.368	5.208	7.114	24.72
Stddev	1.070	.877	.880	1.95
%RSD	16.80	16.84	12.36	7.871

#1	4.996	4.087	5.904	23.53
#2	6.791	4.716	8.017	24.05
#3	7.352	6.433	7.444	24.81
#4	5.471	5.378	7.696	23.18
#5	7.231	5.423	6.508	28.02

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.4341
Stddev	.0921
%RSD	1.6950

#1	5.5048
#2	5.3014
#3	5.4404
#4	5.3922
#5	5.5318

1078

Analysis Report

05/01/00 12:17:23

page 1

Method: PRV

Sample Name: PRV CAL

Operator:

Comment:

Run Time: 05/01/00 12:16 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Tc[99]	Cs[133]
Line	99/pulse	133/pulse
Units	Cts/S	Cts/S
Avg	16120.	16320.
Stddev	454.	414.
%RSD	2.817	2.535

#1	16300.	16890.
#2	15910.	16590.
#3	15660.	15930.
#4	15890.	15970.
#5	16820.	16220.

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.3869
Stddev	.1555
%RSD	2.8860

#1	5.1857
#2	5.3915
#3	5.5798
#4	5.4860
#5	5.2913

Analysis Report

05/01/00 12:20:05

page 1

Method: PRV

Sample Name: PRV1 CAL

Operator:

Comment:

Run Time: 05/01/00 12:18 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Ru[102]	Te[125]	Cs[135]	Cs[137]
Line	102/pulse	125/pulse	135/pulse	137/pulse
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	202000.	2080.	4965.	8614.
Stddev	3232.	27.	155.	233.
%RSD	1.600	1.292	3.126	2.704

#1	205600.	2127.	5157.	8903.
#2	200200.	2074.	5018.	8594.
#3	203300.	2065.	4767.	8257.
#4	197300.	2069.	4851.	8623.
#5	203300.	2064.	5034.	8691.

Elem	Ba[138]
Line	138/pulse
Units	Cts/S
Avg	55150.
Stddev	1073.
%RSD	1.946

#1	56860.
#2	55250.
#3	54340.
#4	54140.
#5	55140.

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.7894
Stddev	.0917
%RSD	1.5842

#1	5.6585
#2	5.7787
#3	5.9170
#4	5.7925
#5	5.8002

1080

Method : PRV

Standardzn Report

05/01/00 12:20:27

page 1

El Name	Slope	Y-int	Correlation	Date Stdized
Tc[99]	793.8790	2.4871	1.0000000	05/01/00 12:17:23
Ru[102]	2019.3428	17.9000	1.0000000	05/01/00 12:20:05
Te[125]	20.7660	3.2732	1.0000000	05/01/00 12:20:05
Sn[117]	678.7170	27.9578	1.0000000	05/01/00 12:14:10
Sn[126]	679.9667	3.9028	1.0000000	05/01/00 12:14:10
Cs[133]	815.6872	6.3681	1.0000000	05/01/00 12:17:23
Cs[135]	751.5098	5.2076	1.0000000	05/01/00 12:20:05
Cs[137]	768.4490	7.1138	1.0000000	05/01/00 12:20:05
Ba[138]	551.2301	24.7182	1.0000000	05/01/00 12:20:05

Analysis Report

05/01/00 12:22:02

page 1

Method: PRV

Sample Name: PRV-SN CAL

Operator:

Comment:

Run Time: 05/01/00 12:21 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Sn[117]	Sn[126]
Line	117/pulse	126/pulse
Units	Cts/S	Cts/S
Avg	14370.	14370.
Stddev	314.	314.
%RSD	2.188	2.188

#1	14010.	14010.
#2	14050.	14050.
#3	14610.	14610.
#4	14650.	14650.
#5	14550.	14550.

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.8305
Stddev	.1326
%RSD	2.2750

#1	6.0029
#2	5.9081
#3	5.6614
#4	5.7531
#5	5.8270

1082

Method : PRV

Standardzn Report

05/01/00 12:22:10

page 1

El Name	Slope	Y-int	Correlation	Date Stdized
Tc[99]	793.8790	2.4871	1.0000000	05/01/00 12:17:23
Ru[102]	2019.3428	17.9000	1.0000000	05/01/00 12:20:05
Te[125]	20.7660	3.2732	1.0000000	05/01/00 12:20:05
Sn[117]	745.2971	27.9578	1.0000000	05/01/00 12:22:02
Sn[126]	746.5467	3.9028	1.0000000	05/01/00 12:22:02
Cs[133]	815.6872	6.3681	1.0000000	05/01/00 12:17:23
Cs[135]	751.5098	5.2076	1.0000000	05/01/00 12:20:05
Cs[137]	768.4490	7.1138	1.0000000	05/01/00 12:20:05
Ba[138]	551.2301	24.7182	1.0000000	05/01/00 12:20:05

Analysis Report

05/01/00 12:27:30

page 1

Method: PRV Sample Name: icv
 Comment: ms prv lcs
 Run Time: 05/01/00 12:25 Type: Unk

Operator: bjg

Mode: CONC Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	20.64	.0013	.0067	1.967	.0012	18.85
Stddev	.44	.0017	.0235	.151	.0014	.42
%RSD	2.136	135.3	352.5	7.691	123.1	2.231

#1	20.13	.0013	-.0038	1.743	.0033	18.58
#2	21.16	.0020	-.0231	1.895	.0011	19.49
#3	20.34	.0028	.0259	1.997	.0013	18.65
#4	20.57	-.0017	-.0005	2.089	-.0007	18.48
#5	21.02	.0020	.0348	2.109	.0009	19.05

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0123	.0160	.1273
Stddev	.0009	.0030	.0054
%RSD	7.557	18.93	4.254

#1	.0113	.0185	.1334
#2	.0134	.0136	.1281
#3	.0128	.0122	.1309
#4	.0113	.0190	.1248
#5	.0126	.0170	.1195

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.8053
Stddev	.0879
%RSD	1.5138

#1	5.9491
#2	5.7260
#3	5.7718
#4	5.8239
#5	5.7558

Analysis Report

05/01/00 12:33:04

page 1

Method: PRV Sample Name: icv

Operator: bjg

Comment: 20.5 ppb Sn

Run Time: 05/01/00 12:31 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0012	.0025	.0348	19.34	.0006	.0142
Stddev	.0007	.0021	.0311	.31	.0003	.0026
%RSD	58.19	84.38	89.22	1.606	44.45	17.97

#1	.0020	.0055	.0085	18.97	.0006	.0106
#2	.0009	.0030	.0811	19.82	.0005	.0178
#3	.0018	.0010	.0356	19.28	.0008	.0141
#4	.0004	.0028	.0445	19.42	.0007	.0148
#5	.0009	.0000	.0044	19.24	.0002	.0138

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0211	.0120	.0198
Stddev	.0031	.0022	.0017
%RSD	14.93	18.43	8.751

#1	.0177	.0109	.0213
#2	.0220	.0126	.0217
#3	.0181	.0098	.0199
#4	.0226	.0155	.0185
#5	.0251	.0112	.0177

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.9440
Stddev	.1228
%RSD	2.0654

#1	6.0884
#2	5.7493
#3	5.9815
#4	5.9550
#5	5.9460

Analysis Report

05/01/00 12:38:32

page 1

Method: PRV

Sample Name: icb

Operator: bjg

Comment: 2% hno3

Run Time: 05/01/00 12:36 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0004	.0036	-.0312	.0097	-.0002	.0012
Stddev	.0005	.0010	.0410	.0017	.0004	.0008
%RSD	120.8	27.07	131.4	17.79	247.3	70.86

#1	.0011	.0033	.0252	.0121	-.0005	.0002
#2	.0005	.0040	-.0865	.0099	.0005	.0005
#3	.0003	.0030	-.0471	.0074	-.0003	.0013
#4	-.0002	.0025	-.0158	.0088	.0000	.0019
#5	.0004	.0050	-.0317	.0104	-.0006	.0021

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0007	.0006	.0004
Stddev	.0013	.0007	.0046
%RSD	185.5	110.4	1282.

#1	.0012	.0007	.0023
#2	.0024	.0009	-.0012
#3	.0009	.0005	.0073
#4	.0001	-.0004	-.0020
#5	-.0011	.0015	-.0046

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.9887
Stddev	.1071
%RSD	1.7879

#1	5.9278
#2	6.0941
#3	5.8797
#4	6.1134
#5	5.9286

Analysis Report

05/01/00 12:41:52

page 1

Method: PRV

Sample Name: s00t000778

Operator: bjg

Comment: 1206 df

Run Time: 05/01/00 12:39 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.29	.1841	.0491	3.475	.1895	33.27
Stddev	.75	.0065	.0228	.069	.0040	.80
%RSD	3.517	3.525	46.54	1.973	2.103	2.418
#1	21.03	.1793	.0216	3.564	.1867	32.96
#2	20.75	.1890	.0518	3.403	.1857	33.02
#3	21.14	.1838	.0523	3.409	.1875	32.67
#4	20.92	.1763	.0366	3.501	.1943	33.01
#5	22.60	.1919	.0831	3.499	.1934	34.69

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.76	22.39	.0730
Stddev	.23	.34	.0071
%RSD	1.964	1.514	9.776
#1	11.63	21.90	.0758
#2	11.67	22.48	.0705
#3	11.63	22.23	.0642
#4	11.68	22.52	.0710
#5	12.17	22.81	.0834

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.1796
Stddev	.1065
%RSD	2.0563
#1	5.2405
#2	5.1733
#3	5.2754
#4	5.2070
#5	5.0016

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Analysis Report

05/01/00 12:47:09

page 1

Method: PRV Sample Name: s00t000778_a Operator: bjg
 Comment: 1206 df
 Run Time: 05/01/00 12:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	41.90	.1833	.0154	4.424	.1854	53.06
Stddev	.43	.0071	.0495	.064	.0041	.92
%RSD	1.033	3.866	321.9	1.443	2.196	1.738

#1	42.46	.1778	-.0045	4.470	.1869	53.59
#2	41.56	.1897	.0411	4.388	.1831	54.07
#3	42.05	.1798	-.0432	4.341	.1795	52.17
#4	41.38	.1922	-.0025	4.422	.1899	51.99
#5	42.06	.1771	.0859	4.501	.1875	53.49

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.72	22.14	.0942
Stddev	.09	.36	.0096
%RSD	.7945	1.634	10.16

#1	11.80	22.37	.0992
#2	11.80	22.23	.1058
#3	11.61	21.90	.0836
#4	11.64	21.66	.0849
#5	11.76	22.55	.0974

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.2354
Stddev	.0353
%RSD	.67476

#1	5.1906
#2	5.2098
#3	5.2599
#4	5.2767
#5	5.2401

Analysis Report

05/01/00 12:53:11

page 1

Method: PRV

Sample Name: s00t000778_asn

Operator: bjg

Comment: 1206 df

Run Time: 05/01/00 12:51 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.23	.1914	.0474	21.70	.1846	32.59
Stddev	.77	.0075	.0248	.44	.0040	.97
%RSD	3.629	3.893	52.32	2.012	2.144	2.983
#1	21.38	.2006	.0711	21.49	.1799	31.74
#2	20.85	.1905	.0471	22.06	.1827	32.82
#3	21.12	.1949	.0315	21.19	.1902	33.92
#4	20.37	.1803	.0152	21.52	.1865	32.95
#5	22.44	.1905	.0721	22.25	.1834	31.53

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.62	21.57	.0970
Stddev	.45	1.08	.0054
%RSD	3.840	5.017	5.596

#1	11.35	20.83	.0932
#2	11.37	21.38	.0982
#3	12.23	22.31	.0980
#4	11.20	20.33	.0907
#5	11.95	22.98	.1048

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.3322
Stddev	.1994
%RSD	3.7394

#1	5.5792
#2	5.4097
#3	5.3457
#4	5.2948
#5	5.0315

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Analysis Report

05/01/00 12:58:03

page 1

Method: PRV

Sample Name: s00t000778_asn

Operator: bjg

Comment: 1206 df

Run Time: 05/01/00 12:56 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.57	.1847	.0499	21.50	.1822	32.93
Stddev	.71	.0059	.0074	.76	.0067	.95
%RSD	3.276	3.175	14.83	3.533	3.658	2.895

#1	20.91	.1791	.0582	21.75	.1795	32.52
#2	21.58	.1870	.0573	20.41	.1857	31.91
#3	21.19	.1917	.0423	21.22	.1862	33.88
#4	21.42	.1875	.0477	21.66	.1717	32.35
#5	22.75	.1781	.0442	22.47	.1878	34.02

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.82	22.50	.1059
Stddev	.45	.75	.0106
%RSD	3.805	3.315	10.01

#1	11.51	21.58	.0946
#2	11.48	22.44	.0957
#3	12.03	23.03	.1110
#4	11.56	22.02	.1088
#5	12.51	23.43	.1194

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.1465
Stddev	.1805
%RSD	3.5069

#1	5.3553
#2	5.2557
#3	5.0587
#4	5.1502
#5	4.8924

1090

Analysis Report

05/01/00 13:04:08

page 1

Method: PRV

Sample Name: s00t000781

Operator: bjg

Comment: 1206 df

Run Time: 05/01/00 13:02 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.47	.1909	.0032	3.571	.1940	34.09
Stddev	.66	.0066	.0242	.063	.0027	.47
%RSD	3.089	3.441	761.0	1.763	1.401	1.378

#1	22.51	.1905	.0155	3.603	.1965	34.06
#2	20.80	.1890	-.0025	3.511	.1937	33.67
#3	21.51	.1887	.0216	3.567	.1967	33.81
#4	21.00	.2018	.0182	3.515	.1928	34.01
#5	21.56	.1843	-.0368	3.661	.1902	34.88

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.98	22.56	.0933
Stddev	.24	.36	.0059
%RSD	2.017	1.584	6.296

#1	11.93	22.97	.0955
#2	11.90	22.23	.0875
#3	11.69	22.32	.0992
#4	12.07	22.36	.0978
#5	12.34	22.93	.0866

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.2375
Stddev	.0770
%RSD	1.4704

#1	5.1462
#2	5.2782
#3	5.2406
#4	5.3406
#5	5.1820

Analysis Report

05/01/00 13:09:47

page 1

Method: PRV

Sample Name: s00t000784

Operator: bjg

Comment: 1206 df

Run Time: 05/01/00 13:07 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	21.49	.1810	.0424	3.545	.1876	33.20
Stddev	.60	.0042	.0340	.106	.0084	.92
%RSD	2.798	2.297	80.23	2.983	4.502	2.783

#1	21.78	.1808	.0338	3.548	.1878	33.54
#2	20.85	.1806	-.0122	3.516	.1804	32.52
#3	20.97	.1744	.0539	3.401	.1909	33.80
#4	21.53	.1848	.0753	3.565	.1791	31.96
#5	22.31	.1843	.0611	3.695	.1999	34.17

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	11.82	22.35	.0618
Stddev	.30	.58	.0069
%RSD	2.562	2.586	11.14

#1	11.53	22.65	.0683
#2	12.10	22.36	.0522
#3	11.91	22.45	.0593
#4	11.48	21.39	.0605
#5	12.10	22.92	.0687

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	5.2058
Stddev	.0954
%RSD	1.8321

#1	5.1572
#2	5.2996
#3	5.2356
#4	5.2722
#5	5.0647

1092

Analysis Report

05/01/00 13:17:56

page 1

Method: PRV

Sample Name: ccv

Operator: bjg

Comment: msprv lcs

Run Time: 05/01/00 13:15 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	20.61	.0015	-.0214	2.141	-.0012	18.85
Stddev	.38	.0010	.0248	.052	.0008	.19
%RSD	1.852	67.47	115.7	2.435	62.08	1.024

#1	20.40	.0020	-.0210	2.107	-.0005	18.75
#2	20.44	.0025	-.0137	2.083	-.0004	18.81
#3	21.28	.0003	-.0105	2.218	-.0017	18.83
#4	20.39	.0023	-.0634	2.163	-.0022	18.67
#5	20.52	.0005	.0014	2.137	-.0014	19.18

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0122	.0172	.1327
Stddev	.0018	.0022	.0019
%RSD	14.37	12.66	1.444

#1	.0105	.0202	.1312
#2	.0126	.0141	.1347
#3	.0150	.0173	.1346
#4	.0109	.0173	.1306
#5	.0122	.0168	.1324

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	6.4656
Stddev	.0727
%RSD	1.1236

#1	6.5186
#2	6.5261
#3	6.3828
#4	6.3898
#5	6.5107

Analysis Report

05/01/00 13:21:59

page 1

Method: PRV Sample Name: ccv

Operator: bjg

Comment: 20.5 ppb Sn

Run Time: 05/01/00 13:19 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0014	-.0004	.0026	19.15	-.0010	.0159
Stddev	.0003	.0003	.0233	.37	.0005	.0015
%RSD	24.60	68.47	891.3	1.926	52.85	9.521

#1	.0017	.0000	-.0141	19.62	-.0016	.0165
#2	.0013	-.0004	.0317	18.69	-.0012	.0162
#3	.0013	-.0004	.0185	18.95	-.0006	.0135
#4	.0017	-.0004	.0027	19.09	-.0015	.0175
#5	.0009	-.0007	-.0257	19.41	-.0003	.0156

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0194	.0117	.0204
Stddev	.0024	.0016	.0043
%RSD	12.54	13.65	21.22

#1	.0227	.0117	.0202
#2	.0205	.0107	.0259
#3	.0172	.0105	.0147
#4	.0198	.0114	.0181
#5	.0168	.0145	.0230

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	6.4265
Stddev	.0471
%RSD	.73299

#1	6.3758
#2	6.4871
#3	6.4249
#4	6.4583
#5	6.3863

Analysis Report

05/01/00 13:37:05

page 1

Method: PRV

Sample Name: ccb

Operator: bjg

Comment: 2% hno3

Run Time: 05/01/00 13:35 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Tc[99]	Ru[102]	Te[125]	Sn[117]	Sn[126]	Cs[133]
Line	99/pulse	102/pulse	125/pulse	117/pulse	126/pulse	133/pulse
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0003	.0003	-.0023	.0074	-.0009	.0021
Stddev	.0011	.0016	.0208	.0041	.0006	.0007
%RSD	328.2	543.3	913.3	55.06	61.29	34.88

#1	.0004	.0023	.0266	.0011	-.0010	.0013
#2	-.0008	-.0017	.0056	.0074	-.0012	.0016
#3	.0002	.0013	.0014	.0099	-.0004	.0027
#4	.0021	.0005	-.0204	.0119	-.0003	.0020
#5	-.0002	-.0009	-.0246	.0065	-.0016	.0031

Elem	Cs[135]	Cs[137]	Ba[138]
Line	135/pulse	137/pulse	138/pulse
Units	ppb	ppb	ppb
Avg	.0005	.0010	-.0021
Stddev	.0009	.0014	.0038
%RSD	170.4	133.2	179.9

#1	.0010	.0021	-.0016
#2	.0017	.0022	.0004
#3	.0006	.0007	-.0025
#4	-.0006	-.0012	.0014
#5	.0000	.0015	-.0082

Int. Std.	In[115]
Line	115/pulse
Units	Cts/S
Avg	6.4347
Stddev	.1968
%RSD	3.0581

#1	6.6648
#2	6.4919
#3	6.3585
#4	6.1414
#5	6.5171

bjg
5-1-00

1095

LABCORE Completed Worklist Report for Worklist# 33428

Analyst: kjt

Instrument: ICPMS1

Book#: 22B59

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST)

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	QMSAC-QC TH232	QC	1.00e-2	1.05e-02	105.000 % Recovery	
1 ICV	0	QMSAC-QC U235	QC	3.60e-5	4.80e-05	133.333 % Recovery	
1 ICV	0	QMSAC-QC U238	QC	4.96e-3	5.21e-03	105.040 % Recovery	
1 ICV	0	QMSAC-QC NP237	QC	9.88e-3	1.04e-02	105.263 % Recovery	
1 ICV	0	QMSAC-QC PU239	QC	1.00e-2	1.05e-02	105.000 % Recovery	
1 ICV	0	QMSAC-QC 241	QC	1.03e-2	1.09e-02	105.825 % Recovery	
2 ICB	0	QMSAC-QC PA231	QC	1	<1.50e-5		ug/mL
2 ICB	0	QMSAC-QC TH229	QC	1	<1.50e-5		ug/mL
2 ICB	0	QMSAC-QC TH230	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC TH232	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC U233	QC	1	<1.20e-5		ug/mL
2 ICB	0	QMSAC-QC U234	QC	1	<1.20e-5		ug/mL
2 ICB	0	QMSAC-QC U235	QC	1	<1.20e-5		ug/mL
2 ICB	0	QMSAC-QC U236	QC	1	<1.60e-5		ug/mL
2 ICB	0	QMSAC-QC U238	QC	1	<1.20e-5		ug/mL
2 ICB	0	QMSAC-QC NP237	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC PU239	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC PU240	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC 241	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC 243	QC	1	<5.00e-5		ug/mL
2 ICB	0	QMSAC-QC 244	QC	1	<5.00e-5		ug/mL
3 STD-PREP	0	QMSAC-A1 TH232-A1	SOLID	5.0	4.79e+00	95.800 % Recovery	
3 STD-PREP	0	QMSAC-A1 U235-A1	SOLID	0.025	2.52e-02	100.800 % Recovery	
3 STD-PREP	0	QMSAC-A1 U238-A1	SOLID	10.0	9.59e+00	95.900 % Recovery	
3 STD-PREP	0	QMSAC-A1 NP237-A1	SOLID	N/A	<1.01e-2	% Recovery	
3 STD-PREP	0	QMSAC-A1 PU239-A1	SOLID	N/A	<1.01e-2	% Recovery	
3 STD-PREP	0	QMSAC-A1 241-A1	SOLID	N/A	<1.01e-2	% Recovery	
4 BLNK-PREP	0	QMSAC-A1 PA231-A1	SOLID	1	<3.02e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 TH229-A1	SOLID	1	<3.02e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 TH230-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 TH232-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 U233-A1	SOLID	1	<2.41e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 U234-A1	SOLID	1	<2.41e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 U235-A1	SOLID	1	<2.41e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 U236-A1	SOLID	1	<3.22e-3		ug/g
4 BLNK-PREP	0	QMSAC-A1 U238-A1	SOLID	1	1.39e-02	0.014	ug/g
4 BLNK-PREP	0	QMSAC-A1 NP237-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 PU239-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 PU240-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 PU242-A1	SOLID	1	<1.01e-2		ug/g
4 BLNK-PREP	0	QMSAC-A1 241-A1	SOLID	1	<1.01e-2		ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33428

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	BLNK-PREP		0	QMSAC-A1 243-A1	SOLID	1	<1.01e-2		ug/g
4	BLNK-PREP		0	QMSAC-A1 244-A1	SOLID	1	<1.01e-2		ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 PA231-A1	SOLID	N/A	< 7.653e-01	0.765	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 TH229-A1	SOLID	N/A	< 7.653e-01	0.765	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 TH230-A1	SOLID	N/A	< 2.551e+00	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 TH232-A1	SOLID	N/A	2.681e+02	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 U233-A1	SOLID	N/A	< 6.122e-01	0.612	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 U234-A1	SOLID	N/A	< 6.122e-01	0.612	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 U235-A1	SOLID	N/A	5.255e+01	0.612	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 U236-A1	SOLID	N/A	5.255e+00	0.816	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 U238-A1	SOLID	N/A	5.979e+03	0.612	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 NP237-A1	SOLID	N/A	6.908e+01	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 PU239-A1	SOLID	N/A	5.729e+01	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 PU240-A1	SOLID	N/A	4.612e+00	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 PU242-A1	SOLID	N/A	< 2.551e+00	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 241-A1	SOLID	N/A	3.039e+01	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 243-A1	SOLID	N/A	< 2.551e+00	2.551	ug/g
5	SAMPLE	S00T000809	0 A	QMSAC-A1 244-A1	SOLID	N/A	< 2.551e+00	2.551	ug/g
6	SPK-POST	S00T000809	0 A	QMSAC-A1 TH232-A1	SOLID	0.020	1.73e-02	86.500	% Recovery
6	SPK-POST	S00T000809	0 A	QMSAC-A1 U235-A1	SOLID	0.000288	3.42e-04	118.750	% Recovery
6	SPK-POST	S00T000809	0 A	QMSAC-A1 U238-A1	SOLID	0.040	4.51e-02	112.750	% Recovery
6	SPK-POST	S00T000809	0 A	QMSAC-A1 NP237-A1	SOLID	0.01968	1.76e-02	89.431	% Recovery
6	SPK-POST	S00T000809	0 A	QMSAC-A1 PU239-A1	SOLID	0.02008	1.75e-02	87.151	% Recovery
6	SPK-POST	S00T000809	0 A	QMSAC-A1 241-A1	SOLID	0.02052	1.81e-02	88.207	% Recovery
7	SAMPLE	S00T000810	0 A	QMSAC-A1 PA231-A1	SOLID	N/A	< 6.812e-01	0.681	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 TH229-A1	SOLID	N/A	< 6.812e-01	0.681	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 TH230-A1	SOLID	N/A	< 2.271e+00	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 TH232-A1	SOLID	N/A	2.402e+02	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 U233-A1	SOLID	N/A	< 5.450e-01	0.545	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 U234-A1	SOLID	N/A	< 5.450e-01	0.545	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 U235-A1	SOLID	N/A	4.791e+01	0.545	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 U236-A1	SOLID	N/A	4.678e+00	0.727	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 U238-A1	SOLID	N/A	5.354e+03	0.545	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 NP237-A1	SOLID	N/A	6.176e+01	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 PU239-A1	SOLID	N/A	5.118e+01	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 PU240-A1	SOLID	N/A	4.264e+00	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 PU242-A1	SOLID	N/A	< 2.271e+00	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 241-A1	SOLID	N/A	2.738e+01	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 243-A1	SOLID	N/A	< 2.271e+00	2.271	ug/g
7	SAMPLE	S00T000810	0 A	QMSAC-A1 244-A1	SOLID	N/A	< 2.271e+00	2.271	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 PA231-A1	SOLID	N/A	< 6.510e-01	0.651	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 TH229-A1	SOLID	N/A	< 6.510e-01	0.651	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 TH230-A1	SOLID	N/A	< 2.170e+00	2.170	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 TH232-A1	SOLID	N/A	2.537e+02	2.170	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 U233-A1	SOLID	N/A	< 5.208e-01	0.521	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 U234-A1	SOLID	N/A	5.512e-01	0.521	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 U235-A1	SOLID	N/A	4.874e+01	0.521	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 U236-A1	SOLID	N/A	4.822e+00	0.695	ug/g
8	SAMPLE	S00T000811	0 A	QMSAC-A1 U238-A1	SOLID	N/A	5.520e+03	0.521	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33428

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
8 SAMPLE	800T000811	0 A	QMSAC-A1 NP237-A1	SOLID	N/A	6.492e+01	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 PU239-A1	SOLID	N/A	5.446e+01	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 PU240-A1	SOLID	N/A	4.440e+00	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 PU242-A1	SOLID	N/A	2.170e+00	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 241-A1	SOLID	N/A	2.887e+01	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 243-A1	SOLID	N/A	2.170e+00	2.170	ug/g
8 SAMPLE	800T000811	0 A	QMSAC-A1 244-A1	SOLID	N/A	2.170e+00	2.170	ug/g
9 CCV		0	QMSAC-QC TH232	QC	1.00e-2	1.07e-02	107.000	% Recovery
9 CCV		0	QMSAC-QC U235	QC	3.60e-5	4.86e-05	135.000	% Recovery
9 CCV		0	QMSAC-QC U238	QC	4.96e-3	5.37e-03	108.266	% Recovery
9 CCV		0	QMSAC-QC NP237	QC	9.88e-3	1.06e-02	107.287	% Recovery
9 CCV		0	QMSAC-QC PU239	QC	1.00e-2	1.08e-02	108.000	% Recovery
9 CCV		0	QMSAC-QC 241	QC	1.03e-2	1.12e-02	108.738	% Recovery
10 CCB		0	QMSAC-QC PA231	QC	1	<1.50e-5		ug/mL
10 CCB		0	QMSAC-QC TH229	QC	1	<1.50e-5		ug/mL
10 CCB		0	QMSAC-QC TH230	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC TH232	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC U233	QC	1	<1.20e-5		ug/mL
10 CCB		0	QMSAC-QC U234	QC	1	<1.20e-5		ug/mL
10 CCB		0	QMSAC-QC U235	QC	1	<1.20e-5		ug/mL
10 CCB		0	QMSAC-QC U236	QC	1	<1.60e-5		ug/mL
10 CCB		0	QMSAC-QC U238	QC	1	<1.20e-5		ug/mL
10 CCB		0	QMSAC-QC NP237	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC PU239	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC PU240	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC 241	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC 243	QC	1	<5.00e-5		ug/mL
10 CCB		0	QMSAC-QC 244	QC	1	<5.00e-5		ug/mL

Final page for worklist# 33428

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sal M. Ray 5/9/2000
Reviewer Signature _____ Date _____

05/02/00 16:13

ac0508a.txt

HNF-1701 REV. 0

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 33428

Analyst: KSP Instrument: ICPMS1 Book# 22B59Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSAC-A1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@MSAC-QC	QC		
2	ICB		@MSAC-QC	QC		
3	STD-PREP		@MSAC-A1	SOLID		
4	BLNK-PREP		@MSAC-A1	SOLID		
5	SAMPLE	S00T000809 0 A	@MSAC-A1	SOLID	99000438	AZ-101 (2)
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
6	DUP	S00T000809 0 A	@MSAC-A1	SOLID		SO 5/2/00
7	SPK-PREDIG	S00T000809 0 A	@MSAC-A1	SOLID		KSP 5/8/00
8	SPK-POST	S00T000809 0 A	@MSAC-A1	SOLID		
9	SAMPLE	S00T000810 0 A	@MSAC-A1	SOLID	99000438	AZ-101 (2)
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
10	SAMPLE	S00T000811 0 A	@MSAC-A1	SOLID	99000438	AZ-101 (2)
Analytes Requested: 241-A1 , 243-A1 , 244-A1 , NP237-A1, PA231-A1, PU239-A1, PU240-A1, PU242-A1, TH229-A1, TH230-A1, TH232-A1, U233-A1 , U234-A1 , U235-A1 , U236-A1 , U238-A1						
11	CCV		@MSAC-QC	QC		
12	CCB		@MSAC-QC	QC		

Data Entry Comments:

Spike 0.4ml 10ppm Uranium High Purity #917410
 0.4ml MSAC Spike 8B59

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

05/02/00 16:13

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ws2

LABCORE Data Entry Template for Worklist# 33428

S Type	Sample#	R A Test	Matrix	Group#	Project
--------	---------	----------	--------	--------	---------

Final page for worklist # 33428

K. S. Romo 5-9-00
Signature Date

Signature Date

Std Prep	201	.05-10
Blnk-Prep	↓	↓
S007000809	401	.025-10
S007000809-a	↓	↓
S007000810	↓	↓
S007000811		

Data Entry Comments:

Uploaded & Validated by:

Sal M. Pang

05/11/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report

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05/08/00 09:48:46

page 1

Method: MS_TUNE

Sample Name: ms-tune

Operator: kjt

Comment:

Run Time: 05/08/00 09:47 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	144600.	79380.	77310.
Stddev	2327.	1257.	4234.
%RSD	1.609	1.583	5.477
#1	147500.	79400.	82170.
#2	141900.	79590.	79070.
#3	144900.	78250.	78890.
#4	144200.	80060.	82180.
#5	143100.	80150.	71220.
#6	146900.	80330.	73410.
#7	145200.	76830.	80020.
#8	145000.	81360.	79390.
#9	147200.	79090.	76040.
#10	140400.	78750.	70760.

file ac0508a.txt

Std-Prep

.05-10

201

Blk-Prep

"

"

S00T000809

.025-10

401

S00T000809-a

↓

↓

S00T000810

S00T000811

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1101 TO 1122

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[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 09:44
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 146600.,1325.,.9041, 145200., 145500., 149000., 147100., 146800., 147200., 145800., 147100., 147500., 144500.,,,
Elem1=Ir[193],[193],,,Cts/S, 80050.,2227.,2.782, 82910., 81080., 78410., 75180., 80080., 80300., 79950., 81440., 82380., 78810.,,,
Elem2=Sc[45],[45],,,Cts/S, 82800.,4832.,5.836, 78220., 73330., 87380., 87450., 83530., 86340., 82950., 84030., 86960., 77790.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 09:45
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 145300.,1851.,1.274, 144000., 142900., 143500., 148100., 147200., 145300., 145000., 144500., 144900., 1

48200.,,,
Elem1=Ir[193],[193],,,Cts/S, 79610.,974.7,1.224, 80450., 78930., 8
0630., 78630., 79310., 79220., 78720., 78860., 79830., 81540.,,
Elem2=Sc[45],[45],,,Cts/S, 82160.,4270.,5.197, 83470., 77090., 774
70., 80200., 83400., 78190., 89070., 87440., 79700., 85590.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 09:47

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 144600.,2327.,1.609, 147500., 141900.
, 144900., 144200., 143100., 146900., 145200., 145000., 147200., 1
40400.,,,

Elem1=Ir[193],[193],,,Cts/S, 79380.,1257.,1.583, 79400., 79590., 7
8250., 80060., 80150., 80330., 76830., 81360., 79090., 78750.,,,

Elem2=Sc[45],[45],,,Cts/S, 77310.,4234.,5.477, 82170., 79070., 788
90., 82180., 71220., 73410., 80020., 79390., 76040., 70760.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=ACT_MS

SampleName=Blank

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 09:49

Sample Type=Std

Mode=IR

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CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Th[228],[228],,,Cts/S, 1.614,.1589,9.847, 1.867, 1.508, 1.676, 1.501, 1.517,,,

Elem1=Th[229],[229],,,Cts/S, 1.631,.2496,15.30, 1.827, 1.649, 1.776, 1.704, 1.202,,,

Elem2=Th[230],[230],,,Cts/S, 1.611,.1193,7.405, 1.410, 1.669, 1.676, 1.704, 1.596,,,

Elem3=Th[232],[232],,,Cts/S, 1.607,.1022,6.358, 1.529, 1.588, 1.556, 1.785, 1.576,,,

Elem4=Pa[231],[231],,,Cts/S, 1.687,.0919,5.447, 1.628, 1.749, 1.676, 1.806, 1.576,,,

Elem5=U [233],[233],,,Cts/S, 1.726,.1115,6.458, 1.608, 1.649, 1.856, 1.684, 1.832,,,

Elem6=U [234],[234],,,Cts/S, 1.690,.1245,7.367, 1.589, 1.709, 1.876, 1.562, 1.714,,,

Elem7=U [235],[235],,,Cts/S, 1.683,.1473,8.755, 1.747, 1.709, 1.856, 1.643, 1.458,,,

Elem8=U [236],[236],,,Cts/S, 1.660,.2346,14.13, 1.847, 1.729, 1.656, 1.806, 1.261,,,

Elem9=U [238],[238],,,Cts/S, 1.921,.0943,4.909, 1.946, 1.910, 1.915, 1.785, 2.049,,,

Elem10=Np[237],[237],,,Cts/S, 1.843,.2535,13.76, 1.787, 1.910, 2.235, 1.724, 1.557,,,

Elem11=Pu[239],[239],,,Cts/S, 1.608,.2506,15.58, 1.311, 1.830, 1.676, 1.846, 1.379,,,

Elem12=Pu[240],[240],,,Cts/S, 1.836,.2671,14.55, 1.549, 1.970, 1.596, 2.191, 1.872,,,

Elem13=Pu[242],[242],,,Cts/S, 1.874,.2208,11.78, 1.589, 2.151, 2.015, 1.745, 1.872,,,

Elem14=Pu[244],[244],,,Cts/S, 1.811,.1058,5.841, 1.708, 1.809, 1.776, 1.988, 1.773,,,

Elem15=Am[241],[241],,,Cts/S, 1.583,.2332,14.73, 1.291, 1.468, 1.796, 1.846, 1.517,,,

Elem16=Am[243],[243],,,Cts/S, 1.871,.1641,8.770, 1.827, 1.769, 1.955, 2.110, 1.694,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 25.026,.28182,1.1261,25.180,24.870,25.060,24.645,25.377

[Sample Header]

Method=ACT_MS

SampleName=ACT Cal
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 09:54
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Np[237],[237],,,Cts/S, 1522.,23.03,1.513, 1513., 1518., 1491.
., 1549., 1541.,,
Elem1=Pu[239],[239],,,Cts/S, 1780.,36.23,2.035, 1721., 1772., 1794.
., 1816., 1796.,,
Elem2=Pu[240],[240],,,Cts/S, 1780.,36.23,2.035, 1721., 1772., 1794.
., 1816., 1796.,,
Elem3=Pu[242],[242],,,Cts/S, 1780.,36.23,2.035, 1721., 1772., 1794.
., 1816., 1796.,,
Elem4=Pu[244],[244],,,Cts/S, 1780.,36.23,2.035, 1721., 1772., 1794.
., 1816., 1796.,,
Elem5=Am[241],[241],,,Cts/S, 1395.,16.41,1.177, 1375., 1381., 1399.
., 1403., 1415.,,
Elem6=Am[243],[243],,,Cts/S, 1395.,16.41,1.177, 1375., 1381., 1399.
., 1403., 1415.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 26.134,.06527,.24976,26.086,26.076,26.
102,26.182,26.224

[Sample Header]

Method=ACT MS
SampleName=U/Th Cal
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 10:01
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,Cts/S, 19640.,1316.,6.700, 21410., 19580., 1
9410., 17750., 20050.,,
Elem1=Th[229],[229],,,Cts/S, 19640.,1316.,6.700, 21410., 19580., 1
9410., 17750., 20050.,,
Elem2=Th[230],[230],,,Cts/S, 19640.,1316.,6.700, 21410., 19580., 1
9410., 17750., 20050.,,
Elem3=Th[232],[232],,,Cts/S, 19640.,1316.,6.700, 21410., 19580., 1
9410., 17750., 20050.,,
Elem4=Pa[231],[231],,,Cts/S, 19640.,1316.,6.700, 21410., 19580., 1
9410., 17750., 20050.,,
Elem5=U [233],[233],,,Cts/S, 200.2,2.191,1.094, 198.8, 201.0, 203.
6, 198.2, 199.3,,
Elem6=U [234],[234],,,Cts/S, 200.2,2.191,1.094, 198.8, 201.0, 203.
6, 198.2, 199.3,,
Elem7=U [235],[235],,,Cts/S, 200.2,2.191,1.094, 198.8, 201.0, 203.
6, 198.2, 199.3,,
Elem8=U [236],[236],,,Cts/S, 200.2,2.191,1.094, 198.8, 201.0, 203.
6, 198.2, 199.3,,
Elem9=U [238],[238],,,Cts/S, 25460.,371.0,1.457, 25940., 24950., 2
5650., 25430., 25320.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 25.805,.49244,1.9083,25.012,26.212,25.
755,26.220,25.828

[Sample Header]

Method=ACT_MS
SampleName=QCStd
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 10:04
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, .0002,.0006,316.4, .0012, .0001, -.0004

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```
, .0003, -.0002, None, 0.0, 0.0
Elem1=Th[229],[229],,,ppb, .0016,.0010,62.16, .0013, .0020, .0003,
.0030, .0015, None, 0.0, 0.0
Elem2=Th[230],[230],,,ppb, .0165,.0019,11.82, .0196, .0151, .0171,
.0149, .0157, None, 0.0, 0.0
Elem3=Th[232],[232],,,ppb, 98.13,.9620,.9803, 96.66, 97.65, 98.64,
98.77, 98.93, None, 0.0, 0.0
Elem4=Pa[231],[231],,,ppb,Q .0264,.0072,27.42, .0205, .0239, .0267
, .0221, .0386, QC Fail, n.0100%, .0000
Elem5=U [233],[233],,,ppb, .0187,.0020,10.90, .0204, .0169, .0209,
.0164, .0187, None, 0.0, 0.0
Elem6=U [234],[234],,,ppb, .0076,.0008,10.46, .0066, .0069, .0084,
.0079, .0081, None, 0.0, 0.0
Elem7=U [235],[235],,,ppb, .7082,.0204,2.876, .6846, .6956, .7021,
.7320, .7266, None, 0.0, 0.0
Elem8=U [236],[236],,,ppb, .0196,.0009,4.638, .0190, .0184, .0204,
.0198, .0206, None, 0.0, 0.0
Elem9=U [238],[238],,,ppb, 100.5,2.633,2.619, 102.8, 99.33, 103.8,
98.18, 98.43, None, 0.0, 0.0
Elem10=Np[237],[237],,,ppb, .0378,.0043,11.29, .0404, .0416, .0379
, .0384, .0306, None, 0.0, 0.0
Elem11=Pu[239],[239],,,ppb, -.0068,.0016,23.71, -.0083, -.0087, -.
0063, -.0055, -.0053, None, 0.0, 0.0
Elem12=Pu[240],[240],,,ppb, -.0004,.0004,111.5, -.0008, -.0007, .0
003, -.0003, -.0005, None, 0.0, 0.0
Elem13=Pu[242],[242],,,ppb, -.0008,.0005,60.68, -.0007, -.0008, .0
000, -.0011, -.0011, None, 0.0, 0.0
Elem14=Pu[244],[244],,,ppb, -.0006,.0006,102.2, -.0006, -.0016, -.
0006, -.0003, .0000, None, 0.0, 0.0
Elem15=Am[241],[241],,,ppb, .0002,.0009,557.5, .0011, .0008, -.000
8, -.0007, .0004, None, 0.0, 0.0
Elem16=Am[243],[243],,,ppb, -.0012,.0002,19.56, -.0011, -.0012, -.
0013, -.0015, -.0009, None, 0.0, 0.0
```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```
Elem0=Ir[193],[193],,Cts/S, 26.678,.31534,1.1821,26.723,27.013,26.
369,26.945,26.337
```

[Sample Header]

Method=ACT_MS

SampleName=QCStd

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 10:08

Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, .0003,.0006,183.4, .0005, .0002, -.0005,
.0012, .0004,None,0.0,0.0
Elem1=Th[229],[229],,,ppb, .0016,.0008,49.86, .0009, .0023, .0025,
.0017, .0007,None,0.0,0.0
Elem2=Th[230],[230],,,ppb, .0187,.0014,7.507, .0173, .0182, .0194,
.0177, .0207,None,0.0,0.0
Elem3=Th[232],[232],,,ppb, 101.5,1.594,1.571, 99.47, 102.3, 103.7,
100.7, 101.4,None,0.0,0.0
Elem4=Pa[231],[231],,,ppb, -.0070,.0088,124.8, -.0080, -.0189, -.0069,
.0058, -.0071,None,0.0,0.0
Elem5=U [233],[233],,,ppb, .0183,.0026,14.23, .0211, .0155, .0158,
.0206, .0183,None,0.0,0.0
Elem6=U [234],[234],,,ppb, .0070,.0006,8.597, .0062, .0071, .0067,
.0077, .0074,None,0.0,0.0
Elem7=U [235],[235],,,ppb, .7212,.0242,3.355, .7003, .7374, .7111,
.7018, .7553,None,0.0,0.0
Elem8=U [236],[236],,,ppb, .0191,.0015,7.809, .0198, .0194, .0164,
.0199, .0199,None,0.0,0.0
Elem9=U [238],[238],,,ppb, 98.25,1.833,1.866, 98.37, 99.17, 97.86,
95.46, 100.4,None,0.0,0.0
Elem10=Np[237],[237],,,ppb,Q .0418,.0043,10.21, .0370, .0400, .0439,
.0481, .0400,QC Fail,ñ.0100%,.0000
Elem11=Pu[239],[239],,,ppb, -.0057,.0010,18.04, -.0046, -.0062, -.0055,
-.0051, -.0073,QC Pass,ñ.0100%,.0000
Elem12=Pu[240],[240],,,ppb, -.0006,.0006,97.08, .0002, -.0006, -.0014,
-.0006, -.0007,QC Pass,ñ.0100%,.0000
Elem13=Pu[242],[242],,,ppb, -.0006,.0004,70.04, -.0011, -.0005, -.0002,
-.0011, -.0003,QC Pass,ñ.0100%,.0000
Elem14=Pu[244],[244],,,ppb, -.0007,.0002,33.95, -.0003, -.0009, -.0006,
-.0009, -.0008,QC Pass,ñ.0100%,.0000
Elem15=Am[241],[241],,,ppb, -.0005,.0004,70.09, -.0005, -.0007, .0000,
-.0011, -.0004,None,0.0,0.0
Elem16=Am[243],[243],,,ppb, -.0004,.0006,131.2, -.0005, -.0010, -.0008,
-.0005, .0005,None,0.0,0.0
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 26.938,.09503,.35278,26.914,27.045,26.798,
26.931,27.005
```

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[Sample Header]
 Method=ACT_MS
 SampleName=icv
 Operator=kjt
 Comment=msact lcs
 CustID=
 CustSmpl=22b59
 LabID=
 Run Time=05/08/2000 10:18
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]
 ;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
 Elem0=Th[228],[228],,,,ppb, .0002,.0012,474.1, -.0014, .0013, .0003
 , .0013, -.0003,,,
 Elem1=Th[229],[229],,,,ppb, .0005,.0004,96.43, .0008, .0000, .0011,
 .0002, .0002,,,
 Elem2=Th[230],[230],,,,ppb, .0026,.0008,30.18, .0021, .0029, .0039,
 .0021, .0020,,,
 Elem3=Th[232],[232],,,,ppb, 10.54,.3128,2.968, 10.14, 10.44, 10.89,
 10.83, 10.41,,,
 Elem4=Pa[231],[231],,,,ppb, -.0014,.0014,97.03, -.0012, -.0013, .00
 03, -.0014, -.0036,,,
 Elem5=U_[233],[233],,,,ppb, .0014,.0004,28.76, .0010, .0018, .0019,
 .0014, .0011,,,
 Elem6=U_[234],[234],,,,ppb, .0007,.0006,86.08, .0013, .0001, .0012,
 .0011, .0000,,,
 Elem7=U_[235],[235],,,,ppb, .0481,.0031,6.515, .0464, .0496, .0483,
 .0439, .0522,,,
 Elem8=U_[236],[236],,,,ppb, .0306,.0024,7.962, .0325, .0294, .0309,
 .0270, .0330,,,
 Elem9=U_[238],[238],,,,ppb, 5.212,.1962,3.764, 4.934, 5.075, 5.325,
 5.350, 5.373,,,
 Elem10=Np[237],[237],,,,ppb, 10.44,.1465,1.403, 10.35, 10.36, 10.66
 , 10.31, 10.51,,,
 Elem11=Pu[239],[239],,,,ppb, 10.53,.2455,2.331, 10.30, 10.57, 10.93
 , 10.36, 10.52,,,
 Elem12=Pu[240],[240],,,,ppb, .3017,.0091,3.004, .3105, .2937, .2988
 , .2935, .3122,,,
 Elem13=Pu[242],[242],,,,ppb, .0016,.0004,27.00, .0016, .0020, .0018
 , .0009, .0017,,,
 Elem14=Pu[244],[244],,,,ppb, -.0001,.0008,1146., .0000, .0003, .001
 1, -.0009, -.0007,,,
 Elem15=Am[241],[241],,,,ppb, 10.93,.2559,2.342, 10.60, 10.98, 10.77

, 11.01, 11.27,,,
Elem16=Am[243],[243],,,ppb, -.0008,.0003,29.64, -.0010, -.0004, -.
0010, -.0010, -.0009,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,,Cts/S, 26.729,.35307,1.3209,26.904,26.907,26.
359,26.352,27.125

[Sample Header]
Method=ACT_MS
SampleName=icv
Operator=kjt
Comment=msact lcs
CustID=
CustSmpl=23b59
LabID=
Run Time=05/08/2000 10:22
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0004,.0011,247.5, .0002, .0000, -.001
1, -.0020, .0007,,,
Elem1=Th[229],[229],,,ppb, -.0007,.0010,144.6, .0003, -.0013, -.00
18, .0004, -.0011,,,
Elem2=Th[230],[230],,,ppb, .0013,.0014,102.5, .0017, .0023, .0024,
.0013, -.0010,,,
Elem3=Th[232],[232],,,ppb, 10.36,.2565,2.476, 10.60, 10.06, 10.13,
10.61, 10.40,,,
Elem4=Pa[231],[231],,,ppb, -.0010,.0021,218.3, .0004, .0018, -.003
0, -.0028, -.0011,,,
Elem5=U [233],[233],,,ppb, .0006,.0006,94.04, .0009, .0011, .0005,
-.0003, .0009,,,
Elem6=U [234],[234],,,ppb, .0012,.0006,48.27, .0011, .0019, .0014,
.0003, .0014,,,
Elem7=U [235],[235],,,ppb, .0809,.0047,5.793, .0843, .0731, .0825,
.0801, .0844,,,
Elem8=U [236],[236],,,ppb, .0317,.0018,5.680, .0341, .0293, .0307,
.0323, .0321,,,
Elem9=U [238],[238],,,ppb, 9.995,.1537,1.538, 10.17, 10.08, 9.993,
9.758, 9.971,,,
Elem10=Np[237],[237],,,ppb, 10.20,.1814,1.779, 10.39, 10.04, 9.982
, 10.34, 10.24,,,

HNF-1701 REV.0

```

Elem11=Pu[239],[239],,,,ppb, 10.61,.2578,2.429, 11.01, 10.60, 10.69
, 10.37, 10.41,,,
Elem12=Pu[240],[240],,,,ppb, .3065,.0062,2.034, .3175, .3025, .3040
, .3051, .3033,,,
Elem13=Pu[242],[242],,,,ppb, .0016,.0004,21.60, .0020, .0013, .0020
, .0015, .0014,,,
Elem14=Pu[244],[244],,,,ppb, -.0006,.0006,91.72, .0002, -.0006, -.0
014, -.0009, -.0004,,,
Elem15=Am[241],[241],,,,ppb, 10.92,.2458,2.250, 10.82, 11.31, 10.66
, 10.84, 10.99,,,
Elem16=Am[243],[243],,,,ppb, -.0004,.0006,143.0, .0005, -.0006, -.0
003, -.0009, -.0006,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 27.028,.41694,1.5426,26.469,26.779,27.
093,27.257,27.542

```

[Sample Header]

```

Method=ACT_MS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 10:35
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0006,.0005,84.63, -.0008, -.0014, .00
01, -.0005, -.0006,,,
Elem1=Th[229],[229],,,,ppb, -.0005,.0003,68.77, -.0001, -.0003, -.0
010, -.0005, -.0004,,,
Elem2=Th[230],[230],,,,ppb, -.0001,.0005,332.1, .0000, .0003, -.000
1, .0000, -.0010,,,
Elem3=Th[232],[232],,,,ppb, .0014,.0005,37.00, .0009, .0021, .0011,
.0010, .0019,,,
Elem4=Pa[231],[231],,,,ppb, -.0007,.0003,49.95, -.0011, -.0009, -.0
003, -.0007, -.0004,,,
Elem5=U [233],[233],,,,ppb, -.0003,.0003,87.37, -.0003, .0000, -.00
07, -.0001, -.0004,,,
Elem6=U [234],[234],,,,ppb, -.0001,.0011,824.0, -.0006, -.0009, -.0

```

HNF-1701 REV. 0

```

006, -.0003, .0017,,,
Elem7=U [235],[235],,,ppb, -.0003,.0005,161.6, .0001, .0002, -.001
1, -.0003, -.0006,,,
Elem8=U [236],[236],,,ppb, -.0004,.0013,361.2, -.0019, .0014, .000
4, -.0008, -.0008,,,
Elem9=U [238],[238],,,ppb, -.0005,.0010,202.0, .0002, .0008, -.001
1, -.0016, -.0007,,,
Elem10=Np[237],[237],,,ppb, -.0010,.0008,87.90, -.0005, -.0024, -.
0005, -.0004, -.0010,,,
Elem11=Pu[239],[239],,,ppb, .0013,.0008,62.28, .0007, .0011, .0004
, .0022, .0020,,,
Elem12=Pu[240],[240],,,ppb, .0000,.0005,3486., -.0003, -.0005, .00
09, -.0002, .0001,,,
Elem13=Pu[242],[242],,,ppb, -.0007,.0007,103.0, -.0007, -.0007, -.
0006, -.0016, .0003,,,
Elem14=Pu[244],[244],,,ppb, -.0007,.0006,83.41, -.0010, .0001, -.0
007, -.0005, -.0013,,,
Elem15=Am[241],[241],,,ppb, .0005,.0003,50.97, .0008, .0003, .0002
, .0008, .0004,,,
Elem16=Am[243],[243],,,ppb, -.0003,.0005,146.4, -.0002, -.0010, .0
002, -.0006, .0000,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 27.297,.38750,1.4196,27.320,27.741,27.
019,27.596,26.811

```

[Sample Header]

```

Method=ACT_MS
SampleName=std-prep
Operator=kjt
Comment=201 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 10:56
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, .0005,.0009,184.6, .0015, .0006, -.0010
, .0003, .0010,LC Pass,.0000,.0150
Elem1=Th[229],[229],,,ppb,L -.0009,.0012,133.7, -.0013, -.0010, -.
0016, -.0018, .0012,LC Fail,.0000,.0150

```

HNF-1701 REV. 0

```

Elem2=Th[230],[230],,,,ppb, .0027,.0006,21.64, .0017, .0028, .0033,
.0027, .0030,LC Pass,.0000,.0150
Elem3=Th[232],[232],,,,ppb,H 23.81,.6125,2.572, 24.89, 23.36, 23.52
, 23.67, 23.64,LC Fail,.0000,.0150
Elem4=Pa[231],[231],,,,ppb,L -.0028,.0023,80.44, -.0059, -.0024, -.
0006, -.0045, -.0008,LC Fail,.0000,.0150
Elem5=U_[233],[233],,,,ppb, .0043,.0005,12.00, .0043, .0036, .0042,
.0050, .0046,LC Pass,.0000,.0150
Elem6=U_[234],[234],,,,ppb, .0012,.0010,83.32, .0023, .0017, .0000,
.0003, .0019,LC Pass,.0000,.0150
Elem7=U_[235],[235],,,,ppb,H .1254,.0043,3.448, .1305, .1268, .1212
, .1206, .1279,LC Fail,.0000,.0150
Elem8=U_[236],[236],,,,ppb, .0090,.0012,13.00, .0085, .0083, .0078,
.0100, .0106,LC Pass,.0000,.0150
Elem9=U_[238],[238],,,,ppb,H 47.77,.6064,1.270, 48.62, 47.00, 47.52
, 48.05, 47.66,LC Fail,.0000,.0150
Elem10=Np[237],[237],,,,ppb,L -.0076,.0029,37.36, -.0069, -.0067, -
.0045, -.0078, -.0122,LC Fail,.0000,.0150
Elem11=Pu[239],[239],,,,ppb,L -.0026,.0015,57.23, -.0042, -.0008, -
.0036, -.0013, -.0029,LC Fail,.0000,.0150
Elem12=Pu[240],[240],,,,ppb,L -.0004,.0009,233.2, -.0004, -.0019, .
0007, -.0004, .0000,LC Fail,.0000,.0150
Elem13=Pu[242],[242],,,,ppb,L -.0007,.0008,112.9, -.0004, -.0011, -
.0013, .0005, -.0012,LC Fail,.0000,.0150
Elem14=Pu[244],[244],,,,ppb,L -.0004,.0005,142.4, -.0007, -.0011, .
0001, .0002, -.0005,LC Fail,.0000,.0150
Elem15=Am[241],[241],,,,ppb, .0005,.0002,36.26, .0003, .0004, .0006
, .0008, .0005,LC Pass,.0000,.0150
Elem16=Am[243],[243],,,,ppb,L -.0004,.0007,209.3, -.0004, .0009, -.
0005, -.0011, -.0007,LC Fail,.0000,.0150

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=Ir[193],[193],,Cts/S, 28.270,.24879,.88003,27.933,28.271,28.
384,28.601,28.161

```

[Sample Header]

Method=ACT_MS

SampleName=blk-prep

Operator=kjt

Comment=201 df

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 11:09

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

HNF-1701 REV. 0

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,ppb, -.0002,.0011,613.2, -.0007, .0008, -.0001, .0009, -.0018,,,
Elem1=Th[229],[229],,,ppb, -.0001,.0007,1203., .0002, .0011, -.0007, -.0002, -.0007,,,
Elem2=Th[230],[230],,,ppb, .0002,.0012,734.7, -.0003, .0015, .0000, .0011, -.0014,,,
Elem3=Th[232],[232],,,ppb, .0159,.0013,7.946, .0152, .0162, .0146, .0179, .0158,,,
Elem4=Pa[231],[231],,,ppb, .0001,.0007,693.4, .0000, .0003, -.0001, .0011, -.0008,,,
Elem5=U [233],[233],,,ppb, -.0005,.0004,84.73, -.0005, -.0003, -.0007, .0001, -.0010,,,
Elem6=U [234],[234],,,ppb, -.0004,.0006,154.4, .0005, -.0004, -.0007, -.0002, -.0010,,,
Elem7=U [235],[235],,,ppb, .0004,.0009,238.8, .0007, .0003, .0017, -.0004, -.0004,,,
Elem8=U [236],[236],,,ppb, .0003,.0009,289.8, -.0003, -.0003, .0019, .0001, .0002,,,
Elem9=U [238],[238],,,ppb, .0690,.0052,7.516, .0666, .0615, .0748, .0698, .0724,,,
Elem10=Np[237],[237],,,ppb, .0004,.0004,117.2, .0006, .0000, .0010, .0001, .0001,,,
Elem11=Pu[239],[239],,,ppb, .0010,.0003,27.82, .0009, .0013, .0006, .0012, .0011,,,
Elem12=Pu[240],[240],,,ppb, .0000,.0005,997.1, .0002, -.0005, -.0004, .0003, .0006,,,
Elem13=Pu[242],[242],,,ppb, -.0006,.0004,70.04, -.0005, -.0005, .0001, -.0007, -.0010,,,
Elem14=Pu[244],[244],,,ppb, -.0006,.0005,87.78, -.0008, .0002, -.0010, -.0011, -.0003,,,
Elem15=Am[241],[241],,,ppb, .0007,.0008,118.5, .0012, .0001, -.0003, .0016, .0007,,,
Elem16=Am[243],[243],,,ppb, -.0003,.0002,89.22, .0000, -.0005, -.0004, -.0005, .0000,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 28.021,.59617,2.1276,27.804,28.720,28.305,27.132,28.143

```

[Sample Header]

```
Method=ACT_MS
SampleName=s00t000809

```

Operator=kjt
Comment=401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 11:30
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0010,.0007,70.79, -.0002, -.0014, -.0014, -.0003, -.0019,,,
Elem1=Th[229],[229],,,,ppb, -.0007,.0008,111.6, -.0009, .0003, -.0001, -.0015, -.0013,,,
Elem2=Th[230],[230],,,,ppb, .0002,.0004,233.3, -.0003, .0006, .0005, .0000, -.0001,,,
Elem3=Th[232],[232],,,,ppb, 5.255,.1847,3.515, 5.216, 5.024, 5.161, 5.380, 5.494,,,
Elem4=Pa[231],[231],,,,ppb, -.0021,.0008,39.26, -.0028, -.0023, -.0009, -.0029, -.0017,,,
Elem5=U_[233],[233],,,,ppb, .0043,.0004,9.679, .0038, .0039, .0047, .0047, .0045,,,
Elem6=U_[234],[234],,,,ppb, .0110,.0005,4.363, .0113, .0111, .0108, .0116, .0103,,,
Elem7=U_[235],[235],,,,ppb, 1.030,.0293,2.842, .9939, 1.006, 1.057, 1.058, 1.037,,,
Elem8=U_[236],[236],,,,ppb, .1030,.0020,1.913, .1000, .1038, .1025, .1033, .1054,,,
Elem9=U_[238],[238],,,,ppb, 117.2,4.264,3.637, 114.1, 118.0, 119.7, 122.5, 111.9,,,
Elem10=Np[237],[237],,,,ppb, 1.354,.0270,1.990, 1.340, 1.318, 1.350, 1.384, 1.377,,,
Elem11=Pu[239],[239],,,,ppb, 1.123,.0239,2.131, 1.092, 1.115, 1.114, 1.148, 1.147,,,
Elem12=Pu[240],[240],,,,ppb, .0904,.0025,2.720, .0873, .0939, .0891, .0905, .0913,,,
Elem13=Pu[242],[242],,,,ppb, .0005,.0007,137.4, .0007, .0012, .0011, .0000, -.0004,,,
Elem14=Pu[244],[244],,,,ppb, -.0012,.0005,40.93, -.0017, -.0012, -.0004, -.0014, -.0013,,,
Elem15=Am[241],[241],,,,ppb, .5956,.0115,1.925, .5799, .5909, .5941, .6042, .6091,,,
Elem16=Am[243],[243],,,,ppb, .0035,.0003,8.394, .0036, .0035, .0034, .0040, .0032,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 29.447,.42698,1.4500,29.282,30.154,29.406,29.003,29.388

[Sample Header]

Method=ACT_MS

SampleName=S00T000809_a

Operator=kjt

Comment=401 df

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 11:34

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Th[228],[228],,ppb, -.0003,.0007,268.1, -.0008, -.0010, .0002, -.0006, .0008,,,

Elem1=Th[229],[229],,ppb, -.0005,.0008,165.3, .0001, -.0006, -.0017, .0004, -.0008,,,

Elem2=Th[230],[230],,ppb, .0033,.0008,24.49, .0045, .0037, .0030, .0025, .0029,,,

Elem3=Th[232],[232],,ppb, 22.58,1.047,4.637, 23.82, 21.40, 22.56, 23.42, 21.71,,,

Elem4=Pa[231],[231],,ppb, -.0070,.0014,20.22, -.0083, -.0067, -.0050, -.0066, -.0085,,,

Elem5=U_[233],[233],,ppb, .0079,.0009,11.93, .0077, .0074, .0094, .0069, .0079,,,

Elem6=U_[234],[234],,ppb, .0158,.0012,7.349, .0152, .0140, .0163, .0167, .0166,,,

Elem7=U_[235],[235],,ppb, 1.372,.0639,4.658, 1.432, 1.282, 1.354, 1.436, 1.358,,,

Elem8=U_[236],[236],,ppb, .1617,.0112,6.900, .1799, .1526, .1644, .1545, .1569,,,

Elem9=U_[238],[238],,ppb, 162.3,4.385,2.702, 167.1, 155.2, 162.9, 164.2, 162.0,,,

Elem10=Np[237],[237],,ppb, 18.99,.7711,4.060, 20.04, 18.50, 18.99, 19.39, 18.05,,,

Elem11=Pu[239],[239],,ppb, 18.63,.5442,2.921, 18.88, 17.79, 18.78, 19.24, 18.48,,,

Elem12=Pu[240],[240],,ppb, .5964,.0129,2.158, .6028, .5740, .5985

```
, .6007, .6063,,,
Elem13=Pu[242],[242],,,,ppb, .0035,.0005,15.17, .0042, .0031, .0032
, .0040, .0031,,,
Elem14=Pu[244],[244],,,,ppb, -.0008,.0005,60.29, -.0005, -.0015, -.
0009, -.0003, -.0006,,,
Elem15=Am[241],[241],,,,ppb, 18.72,.3835,2.049, 19.38, 18.61, 18.62
, 18.58, 18.40,,,
Elem16=Am[243],[243],,,,ppb, .0041,.0003,8.340, .0036, .0041, .0044
, .0043, .0038,,,
```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```
Elem0=Ir[193],[193],,Cts/S, 29.089,.55482,1.9073,28.417,29.566,29.
171,28.625,29.663
```

[Sample Header]

Method=ACT_MS

SampleName=S00T000810

Operator=kjt

Comment=401 df

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 11:48

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

```
Elem0=Th[228],[228],,,,ppb, -.0014,.0004,31.20, -.0017, -.0011, -.0
010, -.0011, -.0019,,,
```

```
Elem1=Th[229],[229],,,,ppb, -.0005,.0011,206.4, -.0005, .0013, -.00
08, -.0011, -.0014,,,
```

```
Elem2=Th[230],[230],,,,ppb, .0013,.0013,98.25, -.0001, .0023, .0000
, .0018, .0025,,,
```

```
Elem3=Th[232],[232],,,,ppb, 5.289,.1831,3.461, 5.003, 5.482, 5.274,
5.278, 5.409,,,
```

```
Elem4=Pa[231],[231],,,,ppb, -.0012,.0014,122.3, -.0028, .0003, -.00
24, -.0008, .0000,,,
```

```
Elem5=U_[233],[233],,,,ppb, .0044,.0008,18.61, .0032, .0043, .0042,
.0055, .0046,,,
```

```
Elem6=U_[234],[234],,,,ppb, .0108,.0012,10.77, .0113, .0111, .0098,
.0123, .0094,,,
```

```
Elem7=U_[235],[235],,,,ppb, 1.055,.0371,3.521, 1.017, 1.094, 1.016,
1.060, 1.086,,,
```

```

Elem8=U_[236],[236],,,,ppb, .1030,.0032,3.074, .1000, .1070, .1035,
.0996, .1049,,,
Elem9=U_[238],[238],,,,ppb, 117.9,5.640,4.784, 111.2, 126.0, 117.7,
120.1, 114.4,,,
Elem10=Np[237],[237],,,,ppb, 1.360,.0521,3.832, 1.275, 1.413, 1.356
, 1.371, 1.386,,,
Elem11=Pu[239],[239],,,,ppb, 1.127,.0458,4.068, 1.084, 1.155, 1.129
, 1.186, 1.079,,,
Elem12=Pu[240],[240],,,,ppb, .0939,.0035,3.759, .0893, .0956, .0917
, .0985, .0944,,,
Elem13=Pu[242],[242],,,,ppb, .0005,.0007,138.4, -.0001, .0011, .000
6, .0012, -.0003,,,
Elem14=Pu[244],[244],,,,ppb, -.0006,.0009,144.8, -.0008, .0002, -.0
004, -.0001, -.0021,,,
Elem15=Am[241],[241],,,,ppb, .6029,.0193,3.200, .5841, .6338, .5899
, .6011, .6054,,,
Elem16=Am[243],[243],,,,ppb, .0038,.0009,24.86, .0036, .0033, .0052
, .0042, .0028,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 28.161,.93061,3.3046,29.596,27.379,28.
604,27.613,27.614

```

[Sample Header]

```

Method=ACT_MS
SampleName=S00T000811
Operator=kjt
Comment=401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 11:54
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0012,.0010,85.77, -.0005, -.0007, -.0
006, -.0013, -.0030,,,
Elem1=Th[229],[229],,,,ppb, -.0007,.0013,192.8, .0007, .0007, -.001
0, -.0018, -.0020,,,
Elem2=Th[230],[230],,,,ppb, .0009,.0008,84.50, .0001, .0017, .0014,
.0012, .0001,,,
Elem3=Th[232],[232],,,,ppb, 5.845,.1394,2.385, 5.849, 6.042, 5.798,

```

5.657, 5.880,,,
Elem4=Pa[231],[231],,,,ppb, -.0019,.0011,58.77, -.0008, -.0007, -.0
023, -.0032, -.0024,,,
Elem5=U_[233],[233],,,,ppb, .0042,.0005,12.58, .0040, .0051, .0043,
.0040, .0038,,,
Elem6=U_[234],[234],,,,ppb, .0127,.0015,11.64, .0131, .0118, .0148,
.0109, .0126,,,
Elem7=U_[235],[235],,,,ppb, 1.123,.0366,3.261, 1.152, 1.074, 1.165,
1.120, 1.106,,,
Elem8=U_[236],[236],,,,ppb, .1111,.0069,6.225, .1046, .1170, .1198,
.1086, .1054,,,
Elem9=U_[238],[238],,,,ppb, 127.2,5.094,4.004, 125.0, 126.5, 135.4,
121.6, 127.7,,,
Elem10=Np[237],[237],,,,ppb, 1.496,.0623,4.166, 1.457, 1.493, 1.598
, 1.436, 1.497,,,
Elem11=Pu[239],[239],,,,ppb, 1.255,.0155,1.239, 1.264, 1.255, 1.266
, 1.228, 1.263,,,
Elem12=Pu[240],[240],,,,ppb, .1023,.0028,2.777, .1057, .0990, .1047
, .1003, .1020,,,
Elem13=Pu[242],[242],,,,ppb, .0003,.0011,362.7, .0017, .0008, .0002
, -.0014, .0003,,,
Elem14=Pu[244],[244],,,,ppb, -.0005,.0004,89.72, -.0003, -.0009, .0
000, -.0002, -.0010,,,
Elem15=Am[241],[241],,,,ppb, .6652,.0118,1.768, .6560, .6617, .6848
, .6664, .6569,,,
Elem16=Am[243],[243],,,,ppb, .0041,.0007,17.09, .0052, .0039, .0043
, .0034, .0036,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,Cts/S, 28.350,.71619,2.5262,27.831,28.163,27.
576,28.929,29.252

[Sample Header]

Method=ACT_MS

SampleName=ccv

Operator=kjt

Comment=msact lcs

CustID=

CustSmpl=22b59

LabID=

Run Time=05/08/2000 12:01

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0003,.0013,432.7, .0000, -.0018, .000
3, .0014, -.0014,,,
Elem1=Th[229],[229],,,,ppb, .0002,.0007,305.2, .0004, -.0006, -.000
3, .0004, .0013,,,
Elem2=Th[230],[230],,,,ppb, .0017,.0011,63.12, .0010, .0008, .0013,
.0021, .0035,,,
Elem3=Th[232],[232],,,,ppb, 10.72,.4571,4.264, 10.72, 10.24, 10.46,
10.73, 11.45,,,
Elem4=Pa[231],[231],,,,ppb, -.0025,.0016,65.81, .0003, -.0036, -.00
22, -.0033, -.0036,,,
Elem5=U_[233],[233],,,,ppb, .0019,.0007,39.55, .0019, .0012, .0016,
.0031, .0016,,,
Elem6=U_[234],[234],,,,ppb, .0005,.0005,108.1, .0005, -.0001, .0001
, .0013, .0006,,,
Elem7=U_[235],[235],,,,ppb, .0486,.0028,5.749, .0457, .0493, .0473,
.0475, .0530,,,
Elem8=U_[236],[236],,,,ppb, .0295,.0027,8.996, .0275, .0287, .0290,
.0283, .0342,,,
Elem9=U_[238],[238],,,,ppb, 5.365,.1370,2.554, 5.459, 5.289, 5.160,
5.437, 5.480,,,
Elem10=Np[237],[237],,,,ppb, 10.59,.3615,3.414, 10.39, 10.55, 10.40
, 10.38, 11.22,,,
Elem11=Pu[239],[239],,,,ppb, 10.79,.2549,2.363, 10.90, 10.90, 10.49
, 10.55, 11.08,,,
Elem12=Pu[240],[240],,,,ppb, .3026,.0030,.9774, .3058, .3054, .2995
, .3026, .2999,,,
Elem13=Pu[242],[242],,,,ppb, .0016,.0009,56.94, .0010, .0003, .0021
, .0025, .0023,,,
Elem14=Pu[244],[244],,,,ppb, -.0004,.0004,91.82, .0001, -.0004, -.0
008, -.0002, -.0007,,,
Elem15=Am[241],[241],,,,ppb, 11.20,.2756,2.460, 11.37, 11.22, 10.81
, 11.08, 11.53,,,
Elem16=Am[243],[243],,,,ppb, -.0005,.0005,90.33, -.0012, -.0006, -.
0007, .0001, -.0002,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=Ir[193],[193],,Cts/S, 27.208,.86757,3.1886,27.914,28.069,27.
361,26.716,25.981

```

[Sample Header]

```
Method=ACT_MS
SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=

```

CustSmpl=
 LabID=
 Run Time=05/08/2000 12:09
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Th[228],[228],,,,ppb, -.0009,.0010,120.6, .0000, .0001, -.001
9, -.0004, -.0020,QC Pass,n.0150,.0000
Elem1=Th[229],[229],,,,ppb, -.0011,.0007,61.28, -.0013, -.0008, -.0
022, -.0009, -.0004,QC Pass,n.0150,.0000
Elem2=Th[230],[230],,,,ppb, -.0014,.0008,54.64, -.0017, -.0007, -.0
022, -.0004, -.0019,QC Pass,n.0150,.0000
Elem3=Th[232],[232],,,,ppb, -.0003,.0006,174.3, -.0009, -.0006, -.0
002, -.0005, .0006,QC Pass,n.0150,.0000
Elem4=Pa[231],[231],,,,ppb, -.0015,.0013,90.75, .0006, -.0025, -.00
28, -.0013, -.0014,QC Pass,n.0150,.0000
Elem5=U [233],[233],,,,ppb, -.0010,.0010,106.2, -.0011, -.0022, -.0
010, .0007, -.0012,QC Pass,n.0150,.0000
Elem6=U [234],[234],,,,ppb, -.0007,.0009,138.9, -.0011, -.0010, -.0
007, .0009, -.0015,QC Pass,n.0150,.0000
Elem7=U [235],[235],,,,ppb, -.0010,.0004,36.58, -.0014, -.0013, -.0
006, -.0010, -.0007,QC Pass,n.0150,.0000
Elem8=U [236],[236],,,,ppb, -.0008,.0011,129.7, -.0016, -.0022, -.0
006, .0005, -.0003,QC Pass,n.0150,.0000
Elem9=U [238],[238],,,,ppb, -.0013,.0006,46.97, -.0018, -.0009, -.0
019, -.0013, -.0005,QC Pass,n.0150,.0000
Elem10=Np[237],[237],,,,ppb, -.0008,.0003,37.85, -.0007, -.0012, -.
0007, -.0010, -.0004,QC Pass,n.0150,.0000
Elem11=Pu[239],[239],,,,ppb, -.0002,.0009,473.3, .0005, -.0011, -.0
006, .0010, -.0006,QC Pass,n.0150,.0000
Elem12=Pu[240],[240],,,,ppb, -.0010,.0005,48.09, -.0005, -.0010, -.
0011, -.0017, -.0006,QC Pass,n.0150,.0000
Elem13=Pu[242],[242],,,,ppb, -.0013,.0008,62.67, -.0005, -.0005, -.
0023, -.0012, -.0018,QC Pass,n.0150,.0000
Elem14=Pu[244],[244],,,,ppb, -.0010,.0006,61.47, -.0006, -.0006, -.
0015, -.0004, -.0018,QC Pass,n.0150,.0000
Elem15=Am[241],[241],,,,ppb, -.0002,.0005,272.1, .0000, -.0004, -.0
006, -.0006, .0006,QC Pass,n.0150,.0000
Elem16=Am[243],[243],,,,ppb, -.0008,.0002,20.16, -.0006, -.0009, -.
0008, -.0010, -.0008,QC Pass,n.0150,.0000
  
```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
  
```


Elem0=Ir[193],[193],,Cts/S, 28.795,.31610,1.0978,28.274,29.020,28.
772,28.838,29.070

LABCORE Completed Worklist Report for Worklist# 33429

Analyst: kjt

Instrument: ICPMS1

Book#: 62857

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST)

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0		QMSPR-QC TC99	QC	0.020	2.03e-02	101.500 % Recovery	
1 ICV	0		QMSPR-QC SN117	QC	0.020	2.03e-02	101.500 % Recovery	
1 ICV	0		QMSPR-QC CS133	QC	0.020	1.88e-02	94.000 % Recovery	
2 ICB	0		QMSPR-QC TC99	QC	1	<2.00e-6		ug/mL
2 ICB	0		QMSPR-QC SN117	QC	1	<1.50e-4		ug/mL
2 ICB	0		QMSPR-QC SN126	QC	1	<1.50e-4		ug/mL
2 ICB	0		QMSPR-QC CS133	QC	1	5.40e-06	0.000	ug/mL
2 ICB	0		QMSPR-QC CS135	QC	1	<2.00e-6		ug/mL
2 ICB	0		QMSPR-QC CS137	QC	1	<2.00e-6		ug/mL
3 BLNK-PREP	0		QMSPR-A1 TC99-A1	SOLID	1	<8.02e-4		ug/g
3 BLNK-PREP	0		QMSPR-A1 SN117-A1	SOLID	1	<6.02e-2		ug/g
3 BLNK-PREP	0		QMSPR-A1 SN126-A1	SOLID	1	<6.02e-2		ug/g
3 BLNK-PREP	0		QMSPR-A1 CS133-A1	SOLID	1	1.76e-03	0.002	ug/g
3 BLNK-PREP	0		QMSPR-A1 CS135-A1	SOLID	1	<8.02e-4		ug/g
3 BLNK-PREP	0		QMSPR-A1 CS137-A1	SOLID	1	<8.02e-4		ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 TC99-A1	SOLID	N/A	1.455e+01	0.102	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 SN117-A1	SOLID	N/A	2.612e+01	7.653	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 SN126-A1	SOLID	N/A	< 7.653e+00	7.653	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 I129-A1	SOLID	N/A	?	1.91e-002	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 CS133-A1	SOLID	N/A	2.473e+01	0.102	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 CS135-A1	SOLID	N/A	9.035e+00	0.102	ug/g
4 SAMPLE	S00T000809	0 A	QMSPR-A1 CS137-A1	SOLID	N/A	1.908e+02	0.102	ug/g
5 SPK-POST	S00T000809	0 A	QMSPR-A1 TC99-A1	SOLID	0.020	2.19e-02	109.500 % Recovery	
5 SPK-POST	S00T000809	0 A	QMSPR-A1 SN117-A1	SOLID	0.020	1.96e-02	98.000 % Recovery	
5 SPK-POST	S00T000809	0 A	QMSPR-A1 CS133-A1	SOLID	0.020	2.14e-02	107.000 % Recovery	
6 SAMPLE	S00T000810	0 A	QMSPR-A1 TC99-A1	SOLID	N/A	1.299e+01	9.10e-002	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 SN117-A1	SOLID	N/A	1.751e+01	6.812	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 SN126-A1	SOLID	N/A	< 6.812e+00	6.812	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 I129-A1	SOLID	N/A	?	1.70e-002	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 CS133-A1	SOLID	N/A	2.237e+01	9.10e-002	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 CS135-A1	SOLID	N/A	8.152e+00	9.10e-002	ug/g
6 SAMPLE	S00T000810	0 A	QMSPR-A1 CS137-A1	SOLID	N/A	1.642e+02	9.10e-002	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 TC99-A1	SOLID	N/A	1.141e+01	8.66e-002	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 SN117-A1	SOLID	N/A	2.415e+01	6.510	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 SN126-A1	SOLID	N/A	< 6.510e+00	6.510	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 I129-A1	SOLID	N/A	?	1.62e-002	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 CS133-A1	SOLID	N/A	2.009e+01	8.66e-002	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 CS135-A1	SOLID	N/A	7.803e+00	8.66e-002	ug/g
7 SAMPLE	S00T000811	0 A	QMSPR-A1 CS137-A1	SOLID	N/A	1.803e+02	8.66e-002	ug/g
8 CCV	0		QMSPR-QC TC99	QC	0.020	1.99e-02	99.500 % Recovery	
8 CCV	0		QMSPR-QC SN117	QC	0.020	1.96e-02	98.000 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33429

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
8	CCV	0			QMSPR-QC CS133	QC	0.020	1.87e-02	93.500 % Recovery	
9	CCB	0			QMSPR-QC TC99	QC	1	<2.00e-6		ug/mL
9	CCB	0			QMSPR-QC SN117	QC	1	<1.50e-4		ug/mL
9	CCB	0			QMSPR-QC SN126	QC	1	<1.50e-4		ug/mL
9	CCB	0			QMSPR-QC CS133	QC	1	6.20e-06	0.000	ug/mL
9	CCB	0			QMSPR-QC CS135	QC	1	<2.00e-6		ug/mL
9	CCB	0			QMSPR-QC CS137	QC	1	<2.00e-6		ug/mL

Final page for worklist# 33429

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sa M. Pang 05/9/2000

Reviewer Signature Date

file PRO508a.txt

HNF-1701 REV. 0

05/02/00 16:17

ws2

Page: 1

LABCORE Data Entry Template for Worklist# 33429

Analyst:

KST

Instrument: ICPMS1

Book# 62B57

Method: LA-506-101

Rev/Mod A-3

000316-1

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@MSPR-QC QC			
2	ICB				@MSPR-QC QC			
3	STD-PREP				@MSPR-A1 SOLID			
4	BLNK-PREP				@MSPR-A1 SOLID			
5	SAMPLE	S00T000809 0 A			@MSPR-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
6	SPK-PREP	S00T000809 0 A			@MSPR-A1 SOLID			
								KST 5-8-00
7	SPK-POST	S00T000809 0 A			@MSPR-A1 SOLID			
8	SAMPLE	S00T000810 0 A			@MSPR-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
9	SAMPLE	S00T000811 0 A			@MSPR-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: CS133-A1, CS135-A1, CS137-A1, I129-A1, SN117-A1, SN126-A1, TC99-A1						
10	CCV				@MSPR-QC QC			
11	CCB				@MSPR-QC QC			

Final page for worklist # 33429

KST

05-08-00

Signature

Date

STD-PREP
 BINK PREP
 S00T000309
 S00T000309-a
 S00T000309-a
 S00T000310

05-10

Signature

Date

401 df

S00T000311 401 df

Data Entry Comments:

Spikes .1ml msprv spike 44B57, .28ml
 6 KST 5-8-00

In 000316-1

Scan PR1ST0508, PR33429, PROOT309, PROOT310, PROOT311

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Method: MS_TUNE

Sample Name: ms-tune

Operator: kjt

Comment:

Run Time: 05/08/00 13:32 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	136200.	79970.	70550.
Stddev	2450.	920.	1733.
%RSD	1.800	1.151	2.457
#1	138300.	81090.	71640.
#2	133100.	79810.	71580.
#3	133600.	79710.	68680.
#4	137700.	78970.	70830.
#5	138700.	80760.	73420.
#6	134200.	78700.	70840.
#7	139900.	79910.	72090.
#8	134000.	80860.	69790.
#9	135000.	78910.	68550.
#10	137100.	81010.	68120.

STD-PREP
BLNK-PREP
SOOT000309
SOOT000309-a
SOOT000309-a
SOOT000310
SOOT000311

401 dF

.025-10

file prGS08a.txt
KS Prometheus 05-08-00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1126 TO 1145

uploaded
Validated by:
Jal M. Pang
05/11/2000

Spikes .1ml msPRV SPIKE 44857
28% Sn 000316-1
Ker 5-8-00

Scan PRST 0508, pr33429, pr00T309, pr00T310
pr00T311

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 13:29
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 136300.,3957.,2.903, 142300., 138700., 135500., 135400., 138500., 137800., 139200., 135300., 132300., 128200.,,,
Elem1=Ir[193],[193],,,Cts/S, 78880.,1334.,1.691, 80410., 79370., 81300., 78060., 78360., 79710., 78210., 78180., 76670., 78500.,,,
Elem2=Sc[45],[45],,,Cts/S, 73760.,4499.,6.099, 70660., 80350., 74440., 71940., 75590., 77330., 76450., 75270., 71570., 64010.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 13:32
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 136200.,2450.,1.800, 138300., 133100., 133600., 137700., 138700., 134200., 139900., 134000., 135000., 1

37100.,,
Elem1=Ir[193],[193],,,Cts/S, 79970.,920.2,1.151, 81090., 79810., 7
9710., 78970., 80760., 78700., 79910., 80860., 78910., 81010.,,
Elem2=Sc[45],[45],,,Cts/S, 70550.,1733.,2.457, 71640., 71580., 686
80., 70830., 73420., 70840., 72090., 69790., 68550., 68120.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 13:33

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 135500.,2943.,2.173, 134200., 138700.
, 131300., 139100., 131100., 135400., 133100., 138100., 137000., 1
36600.,,,

Elem1=Ir[193],[193],,,Cts/S, 80350.,1099.,1.368, 80180., 81810., 8
0950., 82290., 80460., 79960., 80330., 78860., 79390., 79230.,,,

Elem2=Sc[45],[45],,,Cts/S, 71750.,4110.,5.728, 72140., 74040., 649
00., 79840., 72770., 70030., 69200., 68430., 75220., 70910.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=PRV

SampleName=Blank

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 13:36

Sample Type=Std

Mode=IR

HNF-1701 REV. 0

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,Cts/S, 1.423,.2171,15.25, 1.306, 1.590, 1.097, 1.525, 1.597,,,

Elem1=Ru[102],[102],,,Cts/S, 20.50,2.000,9.756, 21.00, 20.00, 18.00, 20.00, 23.50,,,

Elem2=Te[125],[125],,,Cts/S, 1.445,.2911,20.15, 1.415, 1.952, 1.244, 1.343, 1.271,,,

Elem3=Sn[117],[117],,,Cts/S, 27.40,.7595,2.772, 27.64, 26.31, 27.03, 27.70, 28.32,,,

Elem4=Sn[126],[126],,,Cts/S, 2.042,.1774,8.690, 1.850, 1.916, 2.305, 2.106, 2.033,,,

Elem5=Cs[133],[133],,,Cts/S, 4.415,.3940,8.923, 4.425, 4.988, 3.878, 4.429, 4.357,,,

Elem6=Cs[135],[135],,,Cts/S, 6.233,.5282,8.475, 6.674, 6.434, 6.511, 6.208, 5.337,,,

Elem7=Cs[137],[137],,,Cts/S, 8.470,.2233,2.636, 8.597, 8.096, 8.487, 8.495, 8.677,,,

Elem8=Ba[138],[138],,,Cts/S, 42.53,1.336,3.141, 42.59, 41.46, 44.77, 42.22, 41.61,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 13.766,.06012,.43671,13.784,13.834,13.669,13.772,13.772

[Sample Header]

Method=PRV

SampleName=PRV CAL

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 13:39

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Tc[99],[99],,,Cts/S, 19060.,273.4,1.434, 19190., 18600., 192

90., 19030., 19200.,,
Elem1=Cs[133],[133],,,Cts/S, 18970.,361.3,1.904, 19250., 18480., 1
8890., 19400., 18850.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 13.736,.28595,2.0818,13.654,14.122,13.
916,13.391,13.595

[Sample Header]

Method=PRV

SampleName=PRV1 CAL

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 13:44

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Ru[102],[102],,,Cts/S, 440400.,21040.,4.777, 423600., 460400
., 459100., 413700., 445400.,,,

Elem1=Te[125],[125],,,Cts/S, 1837.,46.17,2.513, 1770., 1870., 1887
., 1841., 1818.,,,

Elem2=Cs[135],[135],,,Cts/S, 6908.,86.61,1.254, 6841., 6951., 6838
., 7040., 6871.,,,

Elem3=Cs[137],[137],,,Cts/S, 11930.,324.1,2.716, 11380., 12160., 1
1950., 12190., 11970.,,,

Elem4=Ba[138],[138],,,Cts/S, 74590.,1292.,1.733, 73220., 73850., 7
5070., 76560., 74240.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 13.288,.08683,.65348,13.193,13.258,13.
314,13.250,13.423

[Sample Header]

Method=PRV

SampleName=PRV-SN CAL

Operator=

Comment=

CustID=

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CustSmpl=
LabID=
Run Time=05/08/2000 13:46
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Sn[117],[117],,,Cts/S, 17710.,188.6,1.065, 17970., 17610., 17830., 17480., 17670.,,
Elem1=Sn[126],[126],,,Cts/S, 17710.,188.6,1.065, 17970., 17610., 17830., 17480., 17670.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 14.002,.33125,2.3657,13.487,14.090,13.880,14.280,14.274

[Sample Header]

Method=PRV
SampleName=icv
Operator=kjt
Comment=msprv lcs
CustID=
CustSmpl=62b57
LabID=
Run Time=05/08/2000 13:53
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, 20.34,1.015,4.991, 21.29, 21.25, 18.94, 20.53, 19.70,,
Elem1=Ru[102],[102],,,ppb, .0024,.0006,27.28, .0028, .0026, .0024, .0027, .0012,,
Elem2=Te[125],[125],,,ppb, .0042,.0082,196.9, .0171, .0056, -.0051, .0006, .0027,,
Elem3=Sn[117],[117],,,ppb, 1.835,.1320,7.192, 1.659, 1.765, 1.886, 1.853, 2.010,,
Elem4=Sn[126],[126],,,ppb, 1.860,.1318,7.085, 1.684, 1.790, 1.911, 1.878, 2.035,,

```

Elem5=Cs[133],[133],,,,ppb, 18.78,.0498,.2651, 18.79, 18.71, 18.83,
  18.82, 18.75,,,
Elem6=Cs[135],[135],,,,ppb, .0073,.0003,4.625, .0073, .0074, .0078,
  .0070, .0069,,,
Elem7=Cs[137],[137],,,,ppb, .0120,.0008,7.040, .0120, .0106, .0128,
  .0125, .0123,,,
Elem8=Ba[138],[138],,,,ppb, .1143,.0042,3.663, .1195, .1079, .1139,
  .1148, .1153,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 14.333,.19706,1.3749,14.209,14.547,14.
429,14.424,14.056

```

[Sample Header]

```

Method=PRV
SampleName=icv
Operator=kjt
Comment=sn lcs
CustID=
CustSmpl=000508-2
LabID=
Run Time=05/08/2000 13:59
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .0014,.0004,29.74, .0020, .0013, .0012, .
0014, .0009,,,
Elem1=Ru[102],[102],,,,ppb, .0029,.0004,14.89, .0033, .0033, .0024,
  .0025, .0030,,,
Elem2=Te[125],[125],,,,ppb, .0214,.0076,35.54, .0334, .0161, .0155,
  .0246, .0176,,,
Elem3=Sn[117],[117],,,,ppb, 20.34,.5719,2.812, 21.00, 19.70, 20.88,
  20.02, 20.08,,,
Elem4=Sn[126],[126],,,,ppb, .0002,.0003,164.8, .0005, -.0003, .0003
  , .0005, .0000,,,
Elem5=Cs[133],[133],,,,ppb, .0096,.0006,6.340, .0101, .0100, .0100,
  .0092, .0088,,,
Elem6=Cs[135],[135],,,,ppb, .0017,.0009,50.57, .0027, .0017, .0010,
  .0007, .0023,,,
Elem7=Cs[137],[137],,,,ppb, .0000,.0008,4226., .0012, .0000, -.0002
  , -.0010, .0000,,,
Elem8=Ba[138],[138],,,,ppb, -.0135,.0024,17.37, -.0106, -.0122, -.0

```

152, -.0133, -.0165,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.940,.43923,3.1509,13.361,14.371,13.
591,14.240,14.137

[Sample Header]

Method=PRV
SampleName=icv
Operator=kjt
Comment=sn lcs
CustID=
CustSmpl=000508-2
LabID=
Run Time=05/08/2000 14:01
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0010,.0004,38.55, .0010, .0007, .0016, .
.0008, .0007,,,
Elem1=Ru[102],[102],,,ppb, .0029,.0008,26.15, .0035, .0033, .0031,
.0016, .0031,,,
Elem2=Te[125],[125],,,ppb, .0178,.0148,82.96, .0314, .0219, .0099,
.0296, -.0039,,,
Elem3=Sn[117],[117],,,ppb, 19.50,.2893,1.483, 19.45, 19.36, 19.13,
19.69, 19.87,,,
Elem4=Sn[126],[126],,,ppb, -.0001,.0002,126.7, -.0003, .0001, -.00
02, -.0001, -.0003,,,
Elem5=Cs[133],[133],,,ppb, .0084,.0005,5.512, .0079, .0085, .0083,
.0091, .0081,,,
Elem6=Cs[135],[135],,,ppb, .0019,.0009,48.37, .0025, .0005, .0016,
.0028, .0021,,,
Elem7=Cs[137],[137],,,ppb, .0000,.0003,989.2, -.0004, .0003, .0000
, .0002, .0000,,,
Elem8=Ba[138],[138],,,ppb, -.0146,.0016,11.27, -.0155, -.0132, -.0
165, -.0152, -.0126,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 14.110,.38379,2.7199,14.351,14.354,14.
440,13.578,13.828

[Sample Header]
Method=PRV
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 14:11
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0003,.0001,40.23, .0005, .0003, .0002, .0004, .0002,,,
Elem1=Ru[102],[102],,,ppb, .0021,.0015,74.37, .0019, .0042, .0019, .0024, -.0001,,,
Elem2=Te[125],[125],,,ppb, .0021,.0041,197.7, -.0003, .0009, -.0015, .0089, .0024,,,
Elem3=Sn[117],[117],,,ppb, .0040,.0003,7.331, .0038, .0037, .0044, .0038, .0042,,,
Elem4=Sn[126],[126],,,ppb, -.0002,.0004,175.4, -.0002, .0001, -.0001, .0000, -.0009,,,
Elem5=Cs[133],[133],,,ppb, .0054,.0004,7.742, .0049, .0059, .0053, .0050, .0057,,,
Elem6=Cs[135],[135],,,ppb, -.0005,.0005,97.79, -.0014, .0001, -.0005, -.0005, -.0004,,,
Elem7=Cs[137],[137],,,ppb, .0001,.0004,312.0, -.0002, -.0002, .0006, .0004, .0000,,,
Elem8=Ba[138],[138],,,ppb, .0037,.0018,48.92, .0007, .0036, .0045, .0042, .0056,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.759,.09336,.67852,13.904,13.679,13.764,13.674,13.773

[Sample Header]
Method=PRV
SampleName=std-prep
Operator=kjt
Comment=401 df
CustID=
CustSmpl=

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LabID=
Run Time=05/08/2000 14:16
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0018,.0003,15.63, .0015, .0016, .0019, .0019, .0022,,,
Elem1=Ru[102],[102],,,ppb, .1461,.0081,5.569, .1495, .1334, .1437, .1488, .1550,,,
Elem2=Te[125],[125],,,ppb, -.0059,.0178,302.5, .0045, -.0334, .0003, -.0127, .0119,,,
Elem3=Sn[117],[117],,,ppb, -.0006,.0027,472.8, .0035, .0003, -.0024, -.0033, -.0009,,,
Elem4=Sn[126],[126],,,ppb, -.0001,.0002,249.1, -.0002, -.0003, .0003, -.0001, -.0001,,,
Elem5=Cs[133],[133],,,ppb, .0054,.0008,14.86, .0052, .0045, .0064, .0049, .0061,,,
Elem6=Cs[135],[135],,,ppb, .7696,.0309,4.013, .7261, .7801, .8090, .7555, .7774,,,
Elem7=Cs[137],[137],,,ppb, 1.323,.0720,5.439, 1.216, 1.332, 1.418, 1.316, 1.336,,,
Elem8=Ba[138],[138],,,ppb, 11.75,.7771,6.614, 10.71, 11.47, 12.79, 11.65, 12.14,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.855,.49095,3.5436,14.073,13.821,13.105,14.448,13.827

[Sample Header]

Method=PRV
SampleName=blnk-prep
Operator=kjt
Comment=401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 14:23
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

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[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0004,.0002,45.97, .0004, .0003, .0006, .
0007, .0002,,,
Elem1=Ru[102],[102],,,ppb, .0265,.0026,9.732, .0303, .0247, .0274,
.0236, .0267,,,
Elem2=Te[125],[125],,,ppb, -.0039,.0191,484.5, -.0247, .0255, -.00
99, -.0130, .0024,,,
Elem3=Sn[117],[117],,,ppb, -.0069,.0012,17.00, -.0073, -.0066, -.0
053, -.0085, -.0067,,,
Elem4=Sn[126],[126],,,ppb, -.0001,.0002,163.2, -.0005, .0001, -.00
03, -.0001, .0000,,,
Elem5=Cs[133],[133],,,ppb, .0044,.0007,15.32, .0046, .0054, .0044,
.0036, .0042,,,
Elem6=Cs[135],[135],,,ppb, -.0001,.0004,676.5, -.0003, .0005, .000
1, -.0006, -.0001,,,
Elem7=Cs[137],[137],,,ppb, .0012,.0006,47.86, .0012, .0005, .0013,
.0021, .0009,,,
Elem8=Ba[138],[138],,,ppb, .0129,.0023,17.49, .0130, .0168, .0109,
.0122, .0119,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.833,.31747,2.2951,14.114,13.330,13.
858,14.091,13.769

```

[Sample Header]

```
Method=PRV 8 5/1/2000
SampleName=s00t00309
Operator=kjt
Comment=401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 14:27
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .2852,.0140,4.899, .2854, .2830, .2632, .
2952, .2991,,,
Elem1=Ru[102],[102],,,ppb, 14.80,.4277,2.890, 14.91, 15.38, 14.46,
14.94, 14.30,,,

```

```

Elem2=Te[125],[125],,,,ppb, .9041,.0789,8.729, 1.028, .9039, .8230,
.9160, .8500,,,
Elem3=Sn[117],[117],,,,ppb, .5120,.0104,2.028, .5053, .5232, .5149,
.5191, .4978,,,
Elem4=Sn[126],[126],,,,ppb, .0391,.0012,3.178, .0393, .0402, .0369,
.0395, .0393,,,
Elem5=Cs[133],[133],,,,ppb, .4847,.0141,2.919, .5071, .4888, .4737,
.4812, .4725,,,
Elem6=Cs[135],[135],,,,ppb, .1771,.0059,3.328, .1798, .1757, .1690,
.1850, .1760,,,
Elem7=Cs[137],[137],,,,ppb, 3.740,.1562,4.178, 3.697, 3.661, 3.545,
3.868, 3.927,,,
Elem8=Ba[138],[138],,,,ppb, 13.34,.3221,2.415, 13.11, 13.36, 12.97,
13.48, 13.79,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.685,.39362,2.8762,13.885,13.693,14.
106,13.692,13.051

```

[Sample Header]

```

Method=PRV 8 5/11/2000
SampleName=s00t000009_a
Operator=kjt
Comment=msprv spk 401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 14:32
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, 22.21,.5523,2.487, 22.45, 21.23, 22.54, 2
2.39, 22.44,,,
Elem1=Ru[102],[102],,,,ppb, 14.84,.5542,3.736, 14.36, 14.95, 15.42,
14.17, 15.29,,,
Elem2=Te[125],[125],,,,ppb, .8730,.0552,6.319, .8742, .9516, .7958,
.8755, .8678,,,
Elem3=Sn[117],[117],,,,ppb, 1.588,.0604,3.807, 1.633, 1.534, 1.603,
1.652, 1.515,,,
Elem4=Sn[126],[126],,,,ppb, .0384,.0015,3.855, .0387, .0404, .0363,
.0386, .0379,,,
Elem5=Cs[133],[133],,,,ppb, 21.90,.3468,1.584, 22.42, 21.93, 21.71,

```


21.93, 21.49,,,
Elem6=Cs[135],[135],,,ppb, .1778,.0056,3.146, .1862, .1784, .1785,
.1744, .1713,,,
Elem7=Cs[137],[137],,,ppb, 3.861,.1151,2.980, 3.958, 3.944, 3.778,
3.925, 3.701,,,
Elem8=Ba[138],[138],,,ppb, 13.44,.3042,2.264, 13.67, 13.64, 13.25,
13.63, 12.99,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 13.763,.32227,2.3416,13.406,13.774,14.
234,13.530,13.871

[Sample Header]

Method=PRV

SampleName=s00t00~~0~~09_a

Operator=kjt

Comment=sn spk 401 df

CustID=

CustSmpl=

LabID=

Run Time=05/08/2000 14:42

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Tc[99],[99],,,ppb, .2726,.0199,7.315, .2622, .2788, .2516, .
2669, .3037,,,

Elem1=Ru[102],[102],,,ppb, 13.97,.6784,4.855, 14.76, 13.96, 14.37,
12.95, 13.83,,,

Elem2=Te[125],[125],,,ppb, .9055,.0667,7.366, .8777, .8725, .8553,
.9005, 1.021,,,

Elem3=Sn[117],[117],,,ppb, 19.26,.6821,3.541, 18.65, 18.41, 19.90,
19.62, 19.73,,,

Elem4=Sn[126],[126],,,ppb, .0376,.0034,9.138, .0362, .0368, .0335,
.0387, .0428,,,

Elem5=Cs[133],[133],,,ppb, .4719,.0262,5.554, .4451, .4685, .4509,
.4861, .5090,,,

Elem6=Cs[135],[135],,,ppb, .1847,.0101,5.464, .1787, .1811, .1736,
.1920, .1982,,,

Elem7=Cs[137],[137],,,ppb, 3.785,.2012,5.315, 3.715, 3.615, 3.609,
3.921, 4.065,,,

Elem8=Ba[138],[138],,,ppb, 13.32,.7022,5.270, 12.96, 13.10, 12.76,
13.27, 14.53,,,

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```
[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.888,.58022,4.5020,13.385,13.086,13.
327,12.657,11.985
```

```
[Sample Header]
Method=PRV
SampleName=s00t00809_a 5/11/00
Operator=kjt
Comment=sn spk 401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 14:48
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

```
[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .2880,.0287,9.957, .3144, .2444, .2753, .
2969, .3092,,,
Elem1=Ru[102],[102],,,ppb, 13.23,.8714,6.585, 13.30, 11.94, 13.76,
14.24, 12.93,,,
Elem2=Te[125],[125],,,ppb, 1.040,.0764,7.350, 1.055, 1.024, .9651,
.9931, 1.163,,,
Elem3=Sn[117],[117],,,ppb, 21.76,.5018,2.306, 21.36, 21.29, 22.21,
21.57, 22.38,,,
Elem4=Sn[126],[126],,,ppb, .0414,.0044,10.74, .0371, .0386, .0435,
.0396, .0481,,,
Elem5=Cs[133],[133],,,ppb, .4996,.0300,6.006, .5096, .4592, .4959,
.4914, .5419,,,
Elem6=Cs[135],[135],,,ppb, .1931,.0151,7.832, .1962, .1754, .1847,
.1931, .2159,,,
Elem7=Cs[137],[137],,,ppb, 4.127,.2451,5.939, 4.226, 3.847, 4.042,
4.028, 4.494,,,
Elem8=Ba[138],[138],,,ppb, 14.74,.5833,3.958, 15.22, 14.24, 14.46,
14.27, 15.50,,,

```

```
[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 11.981,.69417,5.7938,11.584,12.577,12.
395,12.402,10.948
```

```
[Sample Header]
```

Method=PRV *8 80 5/11/00*
 SampleName=s00t00~~0~~09_a
 Operator=kjt
 Comment=sn spk 401 df
 CustID=
 CustSmpl=
 LabID=
 Run Time=05/08/2000 14:51
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
 Elem0=Tc[99],[99],,,ppb, .2642,.0145,5.478, .2510, .2755, .2746, .2740, .2460,,,
 Elem1=Ru[102],[102],,,ppb, 13.44,.6435,4.788, 13.47, 13.05, 14.51, 12.86, 13.31,,,
 Elem2=Te[125],[125],,,ppb, .9083,.0369,4.062, .8574, .9044, .9583, .9235, .8981,,,
 Elem3=Sn[117],[117],,,ppb, 20.13,.6977,3.466, 20.67, 19.84, 19.17, 20.93, 20.03,,,
 Elem4=Sn[126],[126],,,ppb, .0402,.0013,3.200, .0384, .0394, .0413, .0408, .0413,,,
 Elem5=Cs[133],[133],,,ppb, .4820,.0181,3.764, .4771, .4659, .4756, .5133, .4783,,,
 Elem6=Cs[135],[135],,,ppb, .1843,.0043,2.351, .1876, .1803, .1859, .1884, .1790,,,
 Elem7=Cs[137],[137],,,ppb, 3.900,.1103,2.828, 3.960, 4.049, 3.757, 3.856, 3.879,,,
 Elem8=Ba[138],[138],,,ppb, 13.77,.5049,3.668, 14.11, 14.47, 13.57, 13.25, 13.43,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
 Elem0=In[115],[115],,Cts/S, 12.730,.16351,1.2845,12.861,12.717,12.660,12.502,12.911

[Sample Header]

Method=PRV *8 80 5/11/00*
 SampleName=s00t00~~0~~10
 Operator=kjt
 Comment=401 df
 CustID=
 CustSmpl=
 LabID=

Run Time=05/08/2000 15:01
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .2860,.0082,2.856, .2839, .2842, .2838, .2783, .3000,,
Elem1=Ru[102],[102],,,ppb, 11.39,.4471,3.926, 11.48, 11.95, 11.47, 10.71, 11.33,,
Elem2=Te[125],[125],,,ppb, .9505,.0442,4.648, .8888, .9578, .9300, .9689, 1.007,,
Elem3=Sn[117],[117],,,ppb, .3856,.0078,2.010, .3885, .3825, .3974, .3825, .3771,,
Elem4=Sn[126],[126],,,ppb, .0338,.0020,5.818, .0322, .0371, .0325, .0340, .0332,,
Elem5=Cs[133],[133],,,ppb, .4925,.0227,4.605, .4983, .4909, .4564, .5187, .4982,,
Elem6=Cs[135],[135],,,ppb, .1795,.0075,4.201, .1770, .1796, .1682, .1857, .1869,,
Elem7=Cs[137],[137],,,ppb, 3.616,.1882,5.203, 3.457, 3.813, 3.395, 3.785, 3.632,,
Elem8=Ba[138],[138],,,ppb, 13.46,.2776,2.063, 13.46, 13.67, 12.98, 13.59, 13.58,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.883,.36528,2.8354,12.866,12.876,13.448,12.429,12.796

[Sample Header]

Method=PRV
SampleName=s00t00811
Operator=kjt
Comment=401 df
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 15:04
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .2629,.0100,3.791, .2746, .2578, .2725, .
2522, .2574,,,
Elem1=Ru[102],[102],,,ppb, 14.08,.5895,4.186, 13.29, 14.02, 14.41,
13.83, 14.85,,,
Elem2=Te[125],[125],,,ppb, .9883,.0593,5.999, 1.057, 1.032, .9950,
.9147, .9434,,,
Elem3=Sn[117],[117],,,ppb, .5565,.0224,4.019, .5797, .5432, .5420,
.5818, .5357,,,
Elem4=Sn[126],[126],,,ppb, .0428,.0025,5.842, .0415, .0421, .0397,
.0460, .0445,,,
Elem5=Cs[133],[133],,,ppb, .4629,.0150,3.238, .4885, .4516, .4629,
.4582, .4534,,,
Elem6=Cs[135],[135],,,ppb, .1798,.0075,4.187, .1909, .1745, .1788,
.1719, .1830,,,
Elem7=Cs[137],[137],,,ppb, 4.155,.1697,4.085, 4.321, 4.141, 4.149,
4.277, 3.886,,,
Elem8=Ba[138],[138],,,ppb, 14.81,.8113,5.479, 14.95, 15.05, 14.77,
15.75, 13.52,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.741,.37691,2.9584,12.306,12.925,12.
887,12.393,13.192

```

[Sample Header]

```
Method=PRV
SampleName=ccv
Operator=kjt
Comment=msprv lcs
CustID=
CustSmpl=62b57
LabID=
Run Time=05/08/2000 15:13
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, 19.91,.8095,4.066, 20.38, 18.92, 19.22, 2
0.85, 20.17,,,
Elem1=Ru[102],[102],,,ppb, .0009,.0005,59.29, .0009, .0001, .0011,
.0016, .0008,,,
Elem2=Te[125],[125],,,ppb, .0424,.0076,17.88, .0533, .0406, .0392,

```

```
.0331, .0458,,,
Elem3=Sn[117],[117],,,,ppb, 2.011,.0913,4.541, 1.865, 2.010, 2.041,
2.022, 2.116,,,
Elem4=Sn[126],[126],,,,ppb, -.0002,.0002,111.9, .0000, -.0004, -.00
02, -.0001, -.0001,,,
Elem5=Cs[133],[133],,,,ppb, 18.71,.3516,1.880, 18.52, 18.41, 18.72,
19.30, 18.57,,,
Elem6=Cs[135],[135],,,,ppb, .0071,.0008,11.07, .0071, .0068, .0075,
.0080, .0059,,,
Elem7=Cs[137],[137],,,,ppb, .0122,.0010,8.104, .0115, .0113, .0127,
.0137, .0120,,,
Elem8=Ba[138],[138],,,,ppb, .1165,.0045,3.883, .1132, .1107, .1206,
.1210, .1170,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 13.269,.13524,1.0192,13.209,13.470,13.
165,13.158,13.345
```

[Sample Header]

```
Method=PRV
SampleName=ccv
Operator=kjt
Comment=sn cs
CustID=
CustSmpl=000508-2
LabID=
Run Time=05/08/2000 15:23
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,,ppb, .0012,.0002,14.60, .0012, .0009, .0014, .
0011, .0013,,,
Elem1=Ru[102],[102],,,,ppb, .0011,.0008,74.16, .0008, .0012, .0017,
.0020, -.0001,,,
Elem2=Te[125],[125],,,,ppb, .0551,.0166,30.13, .0404, .0528, .0463,
.0527, .0834,,,
Elem3=Sn[117],[117],,,,ppb, 19.88,.3911,1.967, 19.93, 19.56, 19.76,
20.54, 19.63,,,
Elem4=Sn[126],[126],,,,ppb, -.0002,.0003,154.4, -.0006, -.0006, -.0
002, -.0001, .0002,,,
Elem5=Cs[133],[133],,,,ppb, .0100,.0011,10.88, .0092, .0092, .0104,
.0096, .0118,,,
```

Elem6=Cs[135],[135],,,ppb, .0014,.0008,58.69, .0007, .0005, .0018,
.0015, .0025,,,
Elem7=Cs[137],[137],,,ppb, .0003,.0011,386.5, .0007, -.0008, -.000
6, .0002, .0020,,,
Elem8=Ba[138],[138],,,ppb, -.0137,.0020,14.59, -.0138, -.0163, -.0
124, -.0148, -.0113,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.706,.55777,4.3897,13.030,13.045,12.
635,13.061,11.761

[Sample Header]

Method=PRV
SampleName=ccv
Operator=kjt
Comment=sn lcs
CustID=
CustSmpl=000508-2
LabID=
Run Time=05/08/2000 15:31
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, .0008,.0004,50.73, .0006, .0015, .0004, .
0008, .0008,,,
Elem1=Ru[102],[102],,,ppb, -.0002,.0007,290.0, .0006, -.0012, -.00
01, .0002, -.0007,,,
Elem2=Te[125],[125],,,ppb, .0503,.0209,41.56, .0546, .0661, .0596,
.0137, .0577,,,
Elem3=Sn[117],[117],,,ppb, 19.59,.5159,2.634, 19.38, 19.72, 20.09,
18.80, 19.96,,,
Elem4=Sn[126],[126],,,ppb, .0000,.0005,2035., .0002, -.0008, .0001
, .0007, .0000,,,
Elem5=Cs[133],[133],,,ppb, .0096,.0012,12.03, .0088, .0109, .0105,
.0093, .0082,,,
Elem6=Cs[135],[135],,,ppb, .0015,.0005,33.74, .0014, .0019, .0021,
.0008, .0015,,,
Elem7=Cs[137],[137],,,ppb, .0000,.0002,1483., .0000, .0002, -.0001
, -.0004, .0001,,,
Elem8=Ba[138],[138],,,ppb, -.0158,.0019,12.01, -.0162, -.0153, -.0
173, -.0128, -.0174,,,

```
[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.790,.37640,2.9429,13.073,12.230,13.
191,12.678,12.779
```

```
[Sample Header]
Method=PRV
SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/08/2000 15:54
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

```
[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Tc[99],[99],,,ppb, -.0001,.0003,423.1, -.0001, -.0002, .0000
, -.0004, .0004,,,
Elem1=Ru[102],[102],,,ppb, .0000,.0011,2408., -.0009, -.0007, .000
0, -.0005, .0018,,,
Elem2=Te[125],[125],,,ppb, .0215,.0174,80.77, .0076, .0049, .0149,
.0390, .0413,,,
Elem3=Sn[117],[117],,,ppb, .0012,.0012,101.7, .0015, -.0002, .0030
, .0008, .0008,,,
Elem4=Sn[126],[126],,,ppb, .0001,.0001,79.63, .0000, .0000, .0001,
.0001, .0002,,,
Elem5=Cs[133],[133],,,ppb, .0062,.0008,13.47, .0057, .0067, .0052,
.0061, .0074,,,
Elem6=Cs[135],[135],,,ppb, -.0002,.0009,429.0, -.0015, .0009, -.00
04, -.0006, .0005,,,
Elem7=Cs[137],[137],,,ppb, .0002,.0015,766.3, -.0004, -.0003, -.00
02, -.0009, .0027,,,
Elem8=Ba[138],[138],,,ppb, .0018,.0036,197.3, .0026, .0038, .0005,
-.0036, .0060,,,

```

```
[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 12.395,.28779,2.3219,12.629,12.375,12.
218,12.726,12.027
```


LABCORE Completed Worklist Report for Worklist# 33430

Analyst: kjt

Instrument: ICPMS1

Book#: 000 524- 3
000 524 -5

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPT-A1

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	QMSPT-QC ASTOT	QC	0.015	1.41e-02	94.000 % Recovery	
1 ICV	0	QMSPT-QC BATOT	QC	0.015	1.56e-02	104.000 % Recovery	
1 ICV	0	QMSPT-QC PDTOT	QC	0.015	1.65e-02	110.000 % Recovery	
1 ICV	0	QMSPT-QC RBTOT	QC	0.015	1.46e-02	97.333 % Recovery	
1 ICV	0	QMSPT-QC RHTOT	QC	0.015	1.50e-02	100.000 % Recovery	
1 ICV	0	QMSPT-QC RUTOT	QC	0.015	1.71e-02	114.000 % Recovery	
1 ICV	0	QMSPT-QC SBTOT	QC	0.015	1.54e-02	102.667 % Recovery	
1 ICV	0	QMSPT-QC SETOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	QMSPT-QC TATOT	QC	0.015	1.42e-02	94.667 % Recovery	
1 ICV	0	QMSPT-QC THTOT	QC	0.015	1.43e-02	95.333 % Recovery	
1 ICV	0	QMSPT-QC TLTOT	QC	0.015	1.53e-02	102.000 % Recovery	
1 ICV	0	QMSPT-QC V-TOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	QMSPT-QC W-TOT	QC	0.015	1.39e-02	92.667 % Recovery	
1 ICV	0	QMSPT-QC Y-TOT	QC	0.015	1.52e-02	101.333 % Recovery	
1 ICV	0	QMSPT-QC 90	QC	0.015	1.55e-02	103.333 % Recovery	
1 ICV	0	QMSPT-QC 93	QC	0.015	2.16e-02	144.000 % Recovery	
1 ICV	0	QMSPT-QC 151	QC	0.015	1.56e-02	104.000 % Recovery	
2 ICB	0	QMSPT-QC ASTOT	QC	1	<3.00e-4	ug/mL	
2 ICB	0	QMSPT-QC BATOT	QC	1	3.00e-06	0.000	ug/mL
2 ICB	0	QMSPT-QC PDTOT	QC	1	<4.00e-5	ug/mL	
2 ICB	0	QMSPT-QC RBTOT	QC	1	3.35e-05	0.000	ug/mL
2 ICB	0	QMSPT-QC RHTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC RUTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC SBTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC SETOT	QC	1	<1.00e-4	ug/mL	
2 ICB	0	QMSPT-QC TATOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC THTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC TLTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC V-TOT	QC	1	<1.50e-3	ug/mL	
2 ICB	0	QMSPT-QC W-TOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC Y-TOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 90	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 93	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 151	QC	1	<3.00e-5	ug/mL	
3 STD-PREP	0	QMSPT-A1 ASTOT-A1	SOLID	5.0	4.33e+00	86.600 % Recovery	
3 STD-PREP	0	QMSPT-A1 BATOT-A1	SOLID	5.0	4.74e+00	94.800 % Recovery	
3 STD-PREP	0	QMSPT-A1 PDTOT-A1	SOLID	n/a	5.12e-01	% Recovery	
3 STD-PREP	0	QMSPT-A1 RBTOT-A1	SOLID	n/a	<6.36e-2	% Recovery	
3 STD-PREP	0	QMSPT-A1 RHTOT-A1	SOLID	n/a	<6.36e-2	% Recovery	
3 STD-PREP	0	QMSPT-A1 RUTOT-A1	SOLID	n/a	1.14e-01	% Recovery	
3 STD-PREP	0	QMSPT-A1 SBTOT-A1	SOLID	5.0	4.89e+00	97.800 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33430

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
3	STD-PREP		0		QMSPT-A1 SETOT-A1	SOLID	5.0	4.79e+00	95.800	% Recovery
3	STD-PREP		0		QMSPT-A1 TATOT-A1	SOLID	n/a	<6.36e-2		% Recovery
3	STD-PREP		0		QMSPT-A1 TETOT-A1	SOLID	n/a	<6.36e-2		% Recovery
3	STD-PREP		0		QMSPT-A1 TLTOT-A1	SOLID	5.0	4.63e+00	92.600	% Recovery
3	STD-PREP		0		QMSPT-A1 V-TOT-A1	SOLID	5.0	4.53e+00	90.600	% Recovery
3	STD-PREP		0		QMSPT-A1 W-TOT-A1	SOLID	n/a	<6.36e-2		% Recovery
3	STD-PREP		0		QMSPT-A1 Y-TOT-A1	SOLID	5.0	4.62e+00	92.400	% Recovery
3	STD-PREP		0		QMSPT-A1 90-A1	SOLID	5.0	4.99e+00	99.800	% Recovery
3	STD-PREP		0		QMSPT-A1 93-A1	SOLID	n/a	<6.36e-2		% Recovery
3	STD-PREP		0		QMSPT-A1 151-A1	SOLID	5.0	4.84e+00	96.800	% Recovery
4	BLNK-PREP		0		QMSPT-A1 ASTOT-A1	SOLID	1	<6.36e-1		ug/g
4	BLNK-PREP		0		QMSPT-A1 BATOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 PDTOT-A1	SOLID	1	<8.48e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 RBTOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 RHTOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 RUTOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 SBTOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 SETOT-A1	SOLID	1	<2.12e-1		ug/g
4	BLNK-PREP		0		QMSPT-A1 TATOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 TETOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 TLTOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 V-TOT-A1	SOLID	1	<3.18e0		ug/g
4	BLNK-PREP		0		QMSPT-A1 W-TOT-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 Y-TOT-A1	SOLID	1	<2.12e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 90-A1	SOLID	1	6.55e-02	0.066	ug/g
4	BLNK-PREP		0		QMSPT-A1 93-A1	SOLID	1	<6.36e-2		ug/g
4	BLNK-PREP		0		QMSPT-A1 151-A1	SOLID	1	<6.36e-2		ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 ASTOT-A1	SOLID	N/A	< 8.095e+01	80.950	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 BATOT-A1	SOLID	N/A	7.19e+02	8.100	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 EUTOT-A1	SOLID	N/A	?	0.191	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 PDTOT-A1	SOLID	N/A	2.507e+03	10.790	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 PRTOT-A1	SOLID	N/A	?	0.191	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 RBTOT-A1	SOLID	N/A	< 8.095e+00	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 RHTOT-A1	SOLID	N/A	1.721e+02	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 RUTOT-A1	SOLID	N/A	1.537e+03	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 SBTOT-A1	SOLID	N/A	< 8.095e+00	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 SETOT-A1	SOLID	N/A	< 2.698e+01	26.990	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 TATOT-A1	SOLID	N/A	< 8.095e+00	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 TETOT-A1	SOLID	N/A	8.848e+01	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 TLTOT-A1	SOLID	N/A	< 8.095e+00	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 V-TOT-A1	SOLID	N/A	< 4.048e+02	404.800	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 W-TOT-A1	SOLID	N/A	8.878e+00	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 Y-TOT-A1	SOLID	N/A	2.349e+02	2.698	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 90-A1	SOLID	N/A	3.001e+04	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 93-A1	SOLID	N/A	3.565e+02	8.096	ug/g
5	SAMPLE	S00T000809	0	A	QMSPT-A1 151-A1	SOLID	N/A	3.843e+01	8.096	ug/g
6	SPK-POST	S00T000809	0	A	QMSPT-A1 ASTOT-A1	SOLID	0.0250	2.15e-02	86.000	% Recovery
6	SPK-POST	S00T000809	0	A	QMSPT-A1 BATOT-A1	SOLID	0.0250	2.50e-02	100.000	% Recovery
6	SPK-POST	S00T000809	0	A	QMSPT-A1 PDTOT-A1	SOLID	0.0250	2.84e-02	113.600	% Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33430

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK-POST	S00T000809	0 A	QMSPT-A1 RBTOT-A1	SOLID	0.0250	2.29e-02	91.600 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 RHTOT-A1	SOLID	0.0250	2.36e-02	94.400 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 RUTOT-A1	SOLID	0.0250	2.66e-02	106.400 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 SBTOT-A1	SOLID	0.0250	2.45e-02	98.000 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 SETOT-A1	SOLID	0.0250	2.43e-02	97.200 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 TATOT-A1	SOLID	0.0250	2.36e-02	94.400 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 TETOT-A1	SOLID	0.0250	2.40e-02	96.000 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 TLTOT-A1	SOLID	0.0250	2.46e-02	98.400 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 V-TOT-A1	SOLID	0.0250	2.38e-02	95.200 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 W-TOT-A1	SOLID	0.0250	2.32e-02	92.800 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 Y-TOT-A1	SOLID	0.0250	2.31e-02	92.400 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 90-A1	SOLID	0.0250	1.90e-02	76.000 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 93-A1	SOLID	0.0250	3.55e-02	142.000 % Recovery	
6 SPK-POST	S00T000809	0 A	QMSPT-A1 151-A1	SOLID	0.0250	2.46e-02	98.400 % Recovery	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 ASTOT-A1	SOLID	N/A	< 7.206e+01	72.060 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 BATOT-A1	SOLID	N/A	6.24e+02	7.210 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 EUTOT-A1	SOLID	N/A	?	0.170 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 PDTOT-A1	SOLID	N/A	2.271e+03	9.608 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 PRTOT-A1	SOLID	N/A	?	0.170 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 RBTOT-A1	SOLID	N/A	1.679e+01	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 RHTOT-A1	SOLID	N/A	1.529e+02	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 RUTOT-A1	SOLID	N/A	1.079e+03	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 SBTOT-A1	SOLID	N/A	< 7.206e+00	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 SETOT-A1	SOLID	N/A	< 2.402e+01	24.020 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 TATOT-A1	SOLID	N/A	< 7.206e+00	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 TETOT-A1	SOLID	N/A	7.835e+01	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 TLTOT-A1	SOLID	N/A	< 7.206e+00	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 V-TOT-A1	SOLID	N/A	< 3.603e+02	360.300 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 W-TOT-A1	SOLID	N/A	7.278e+00	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 Y-TOT-A1	SOLID	N/A	2.009e+02	2.403 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 90-A1	SOLID	N/A	2.565e+04	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 93-A1	SOLID	N/A	3.108e+02	7.207 ug/g	
7 SAMPLE	S00T000810	0 A	QMSPT-A1 151-A1	SOLID	N/A	3.272e+01	7.207 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 ASTOT-A1	SOLID	N/A	< 6.886e+01	68.860 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 BATOT-A1	SOLID	N/A	6.59e+02	6.890 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 EUTOT-A1	SOLID	N/A	?	0.162 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 PDTOT-A1	SOLID	N/A	2.346e+03	9.182 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 PRTOT-A1	SOLID	N/A	?	0.162 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 RBTOT-A1	SOLID	N/A	1.370e+01	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 RHTOT-A1	SOLID	N/A	1.601e+02	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 RUTOT-A1	SOLID	N/A	1.296e+03	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 SBTOT-A1	SOLID	N/A	< 6.886e+00	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 SETOT-A1	SOLID	N/A	< 2.295e+01	22.960 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 TATOT-A1	SOLID	N/A	< 6.886e+00	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 TETOT-A1	SOLID	N/A	7.724e+01	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 TLTOT-A1	SOLID	N/A	< 6.886e+00	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 V-TOT-A1	SOLID	N/A	< 3.443e+02	344.300 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 W-TOT-A1	SOLID	N/A	< 6.886e+00	6.887 ug/g	
8 SAMPLE	S00T000811	0 A	QMSPT-A1 Y-TOT-A1	SOLID	N/A	2.069e+02	2.295 ug/g	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33430

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
8	SAMPLE	800T000811	0	A	EMSPT-A1 90-A1	SOLID	N/A	2.647e+04	6.887	ug/g
8	SAMPLE	800T000811	0	A	EMSPT-A1 93-A1	SOLID	N/A	3.227e+02	6.887	ug/g
8	SAMPLE	800T000811	0	A	EMSPT-A1 151-A1	SOLID	N/A	3.480e+01	6.887	ug/g
9	CCV		0		EMSPT-QC ASTOT	QC	0.015	1.43e-02	95.333	% Recovery
9	CCV		0		EMSPT-QC BATOT	QC	0.015	1.56e-02	104.000	% Recovery
9	CCV		0		EMSPT-QC PDTOT	QC	0.015	1.68e-02	112.000	% Recovery
9	CCV		0		EMSPT-QC RBTOT	QC	0.015	1.47e-02	98.000	% Recovery
9	CCV		0		EMSPT-QC RHTOT	QC	0.015	1.50e-02	100.000	% Recovery
9	CCV		0		EMSPT-QC RUTOT	QC	0.015	1.71e-02	114.000	% Recovery
9	CCV		0		EMSPT-QC SBTOT	QC	0.015	1.55e-02	103.333	% Recovery
9	CCV		0		EMSPT-QC SHTOT	QC	0.015	1.54e-02	102.667	% Recovery
9	CCV		0		EMSPT-QC TATOT	QC	0.015	1.43e-02	95.333	% Recovery
9	CCV		0		EMSPT-QC TETOT	QC	0.015	1.43e-02	95.333	% Recovery
9	CCV		0		EMSPT-QC TLTOT	QC	0.015	1.51e-02	100.667	% Recovery
9	CCV		0		EMSPT-QC V-TOT	QC	0.015	1.49e-02	99.333	% Recovery
9	CCV		0		EMSPT-QC W-TOT	QC	0.015	1.39e-02	92.667	% Recovery
9	CCV		0		EMSPT-QC Y-TOT	QC	0.015	1.52e-02	101.333	% Recovery
9	CCV		0		EMSPT-QC 90	QC	0.015	1.57e-02	104.667	% Recovery
9	CCV		0		EMSPT-QC 93	QC	0.015	2.20e-02	146.667	% Recovery
9	CCV		0		EMSPT-QC 151	QC	0.015	1.57e-02	104.667	% Recovery
10	CCB		0		EMSPT-QC ASTOT	QC	1	<3.00e-4		ug/mL
10	CCB		0		EMSPT-QC BATOT	QC	1	3.50e-06	0.000	ug/mL
10	CCB		0		EMSPT-QC PDTOT	QC	1	<4.00e-5		ug/mL
10	CCB		0		EMSPT-QC RBTOT	QC	1	5.08e-05	0.000	ug/mL
10	CCB		0		EMSPT-QC RHTOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC RUTOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC SBTOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC SHTOT	QC	1	<1.00e-4		ug/mL
10	CCB		0		EMSPT-QC TATOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC TETOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC TLTOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC V-TOT	QC	1	<1.50e-3		ug/mL
10	CCB		0		EMSPT-QC W-TOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC Y-TOT	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC 90	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC 93	QC	1	<3.00e-5		ug/mL
10	CCB		0		EMSPT-QC 151	QC	1	<3.00e-5		ug/mL

Final page for worklist# 33430

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sally M. Pang 05/30/2000
Reviewer Signature _____ Date _____

05/02/00 16:21

ws2

File #: Pt 0524A.TXT

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33430

Analyst: KST Instrument: ICPMS1 Book# 000524-3
000524-5

Method: LA-506-101 Rev/Mod A-3Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPT-A1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@MSPT-QC QC			
2 ICB			@MSPT-QC QC			
3 STD-PREP			@MSPT-A1 SOLID			
4 BLNK-PREP			@MSPT-A1 SOLID			
5 SAMPLE	S00T000809 0 A		@MSPT-A1 SOLID		99000438	AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
6 SPK-PREDIG	S00T000809 0 A		@MSPT-A1 SOLID			
7 SPK-POST	S00T000809 0 A		@MSPT-A1 SOLID			
8 SAMPLE	S00T000810 0 A		@MSPT-A1 SOLID		99000438	AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
9 SAMPLE	S00T000811 0 A		@MSPT-A1 SOLID		99000438	AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
10 CCV			@MSPT-QC QC			

Data Entry Comments:

Uploaded + Validated by.

Sal M. P.

05/30/2010

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

12/28/15 08:02 FAX

HNF-1701 REV. 0

05/02/00 16:21

Page: 2

ws2

LABCORE Data Entry Template for Worklist# 33430

S Type	Sample#	R A Test	Matrix	Group#	Project
11 CCB		@MSPT-QC QC			

Final page for worklist # 33430

K5 Phomelike 05-24-00
 Signature Date

 Signature Date

file pt0524b.txt
 K5 Phomelike 05-24-00

Sk-Prep

.1-10-120

2121d9

Blwk-Prep

S00T000809

800T000809-a

S00T000810

S00T000811

Data Entry Comments:

Spike 1ml of 85B4FA, 1ml each of 000513-1
 and 000513-2

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

05/24/00 13:41:25

page 1

Method: MS_TUNE

Sample Name: ms-tune

Operator: kjt

Comment:

Run Time: 05/24/00 13:39 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	94230.	40050.	106800.
Stddev	1251.	690.	1190.
%RSD	1.327	1.724	1.114
#1	96040.	40350.	106300.
#2	93480.	39280.	107000.
#3	96030.	40850.	108700.
#4	93990.	39290.	106800.
#5	94640.	39750.	107100.
#6	94300.	40170.	108200.
#7	93840.	40050.	104700.
#8	92810.	40570.	105400.
#9	92190.	39080.	106900.
#10	94920.	41080.	107300.

~~File~~ 05-24-00 K5 thomlike
File ptosayb.txt

Std-Prep 2121df 01-10-1-20
BLNK-Prep
S00T000809
S00T000809_a
S00T000810
S00T000811

↓ ↓

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1252 TO 1180.

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 13:39
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 94230.,1251.,1.327, 96040., 93480., 96030., 93990., 94640., 94300., 93840., 92810., 92190., 94920.,,,
Elem1=Ir[193],[193],,,Cts/S, 40050.,690.4,1.724, 40350., 39280., 40850., 39290., 39750., 40170., 40050., 40570., 39080., 41080.,,,
Elem2=Sc[45],[45],,,Cts/S, 106800.,1190.,1.114, 106300., 107000., 108700., 106800., 107100., 108200., 104700., 105400., 106900., 107300.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=PERTABS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 13:42
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,Cts/S, 5.594,.9209,16.46, 6.690, 6.353, 5.159, 4.428, 5.340,,,


```

Elem1=Ba[138],[138],,,Cts/S, 5.975,.1512,2.530, 6.222, 5.826, 6.00
1, 5.907, 5.919,,,
Elem2=Cd[111],[111],,,Cts/S, 3.217,.2745,8.532, 2.930, 3.526, 3.41
9, 2.936, 3.275,,,
Elem3=Eu[151],[151],,,Cts/S, 1.886,.1007,5.339, 2.034, 1.891, 1.91
9, 1.793, 1.791,,,
Elem4=Eu[153],[153],,,Cts/S, 2.000,.1020,5.101, 2.137, 1.908, 1.97
1, 2.074, 1.910,,,
Elem5=AMU[93],[93],,,Cts/S, 1.459,.1746,11.97, 1.310, 1.244, 1.570
, 1.653, 1.518,,,
Elem6=Pd[108],[108],,,Cts/S, 2.191,.2279,10.40, 1.879, 2.095, 2.49
4, 2.285, 2.200,,,
Elem7=Pd[110],[110],,,Cts/S, 3.745,.4352,11.62, 3.223, 3.867, 3.55
9, 3.674, 4.401,,,
Elem8=Rb[85],[85],,,Cts/S, 15.34,.9107,5.937, 13.75, 15.42, 16.00,
15.79, 15.74,,,
Elem9=Rh[103],[103],,,Cts/S, 1.981,.3804,19.20, 1.723, 2.470, 1.50
0, 2.180, 2.030,,,
Elem10=Ru[101],[101],,,Cts/S, 1.291,.1405,10.89, 1.258, 1.227, 1.4
13, 1.108, 1.450,,,
Elem11=Ru[102],[102],,,Cts/S, 1.609,.1395,8.667, 1.689, 1.772, 1.6
05, 1.582, 1.399,,,
Elem12=Sb[121],[121],,,Cts/S, 2.692,.2127,7.900, 2.447, 2.504, 2.9
13, 2.883, 2.712,,,
Elem13=Sb[123],[123],,,Cts/S, 2.515,.1775,7.057, 2.499, 2.453, 2.3
37, 2.813, 2.473,,,
Elem14=Se[82],[82],,,Cts/S, 4.658,.2304,4.947, 4.429, 4.992, 4.797
, 4.536, 4.537,,,
Elem15=Ta[181],[181],,,Cts/S, 4.798,.4310,8.983, 5.280, 4.201, 5.0
36, 4.524, 4.947,,,
Elem16=Te[128],[128],,,Cts/S, 4.249,.1883,4.431, 4.136, 3.986, 4.3
43, 4.465, 4.316,,,
Elem17=Tl[205],[205],,,Cts/S, 6.259,.5774,9.226, 5.987, 5.832, 5.8
07, 6.508, 7.159,,,
Elem18=V_[51],[51],,,Cts/S, 58.53,6.172,10.54, 52.29, 66.16, 56.37
, 53.91, 63.93,,,
Elem19=W_[182],[182],,,Cts/S, 5.375,.5444,10.13, 5.821, 5.424, 5.0
36, 4.643, 5.953,,,
Elem20=Y_[89],[89],,,Cts/S, 2.463,.1387,5.630, 2.361, 2.589, 2.442
, 2.619, 2.303,,,
Elem21=AMU[90],[90],,,Cts/S, 4.325,.1489,3.442, 4.360, 4.174, 4.32
6, 4.553, 4.213,,,

```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
```

```
Elem0=In[115],[115],,,Cts/S, 28.956,.39846,1.3761,29.011,29.350,28.
664,28.442,29.312
```

```
Elem1=Ir[193],[193],,,Cts/S, 12.326,.21211,1.7209,12.026,12.260,12.
```

312,12.599,12.431

Elem2=Sc[45],[45],,Cts/S, 32.554,.57063,1.7529,32.368,32.377,31.99
6,32.515,33.515

[Sample Header]

Method=PERTABS

SampleName=STD-A

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 13:48

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Eu[151],[151],,Cts/S, 3139.,75.36,2.401, 3059., 3253., 3101
., 3171., 3110.,,

Elem1=Eu[153],[153],,Cts/S, 3453.,119.6,3.464, 3344., 3590., 3392
., 3574., 3363.,,

Elem2=Pd[108],[108],,Cts/S, 1472.,31.34,2.129, 1434., 1483., 1449
., 1514., 1480.,,

Elem3=Pd[110],[110],,Cts/S, 671.4,8.781,1.308, 663.9, 674.5, 677.
4, 680.6, 660.3.,,

Elem4=Rb[85],[85],,Cts/S, 4734.,105.8,2.235, 4697., 4663., 4634.,
4897., 4777.,,

Elem5=Rh[103],[103],,Cts/S, 7039.,137.6,1.955, 6889., 7020., 7025
., 7265., 6998.,,

Elem6=Ru[101],[101],,Cts/S, 1365.,15.11,1.107, 1361., 1348., 1356
., 1384., 1378.,,

Elem7=Ru[102],[102],,Cts/S, 2615.,46.95,1.796, 2566., 2608., 2580
., 2684., 2635.,,

Elem8=Te[128],[128],,Cts/S, 514.1,17.94,3.490, 486.2, 528.7, 515.
4, 530.6, 509.3.,,

Elem9=Y [89],[89],,Cts/S, 5537.,167.4,3.023, 5560., 5371., 5374.,
5763., 5615.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 29.191,.39421,1.3505,29.198,29.429,29.
698,28.706,28.922

[Sample Header]

Method=PERTABS
SampleName=Std-B
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 13:51
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=AMU[93],[93],,,Cts/S, 3398.,43.90,1.292, 3410., 3447., 3427., 3352., 3351.,,
Elem1=Ta[181],[181],,,Cts/S, 9042.,127.0,1.404, 9203., 8950., 9157., 8961., 8941.,,
Elem2=W[182],[182],,,Cts/S, 2582.,44.31,1.716, 2613., 2544., 2624., 2604., 2526.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.340,.33532,1.1832,28.887,28.175,28.037,28.181,28.419
Elem1=Ir[193],[193],,Cts/S, 12.268,.25278,2.0605,12.243,12.373,11.888,12.583,12.253

[Sample Header]

Method=PERTABS
SampleName=Std-C
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 13:53
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Sb[121],[121],,,Cts/S, 1248.,13.87,1.112, 1242., 1232., 1267

```
., 1240., 1257.,,,  
Elem1=Sb[123],[123],,,Cts/S, 946.6,15.47,1.634, 950.8, 925.8, 955.  
3, 936.4, 964.6,,,  
Elem2=AMU[90],[90],,,Cts/S, 2467.,30.68,1.244, 2434., 2433., 2490.  
, 2487., 2491.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=In[115],[115],,,Cts/S, 28.565,.30954,1.0837,28.808,28.746,28.  
257,28.815,28.198
```

[Sample Header]

```
Method=PERTABS  
SampleName=Std-D  
Operator=  
Comment=  
CustID=  
CustSmpl=  
LabID=  
Run Time=05/24/2000 13:55  
Sample Type=Std  
Mode=IR  
CorrFactor=1.000000  
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa  
ss/fail,chklo,chkhi  
Elem0=As[75],[75],,,Cts/S, 743.6,11.46,1.541, 736.4, 750.5, 728.3,  
745.7, 757.3,,,  
Elem1=Ba[138],[138],,,Cts/S, 4103.,29.32,.7147, 4105., 4072., 4076  
., 4140., 4122.,,,  
Elem2=Cd[111],[111],,,Cts/S, 504.2,3.908,.7750, 508.6, 507.3, 501.  
2, 504.5, 499.4,,,  
Elem3=Se[82],[82],,,Cts/S, 82.46,1.357,1.645, 82.41, 81.57, 83.44,  
80.75, 84.10,,,  
Elem4=Tl[205],[205],,,Cts/S, 6778.,130.8,1.930, 6694., 6998., 6786  
., 6745., 6669.,,,  
Elem5=V_[51],[51],,,Cts/S, 5662.,96.68,1.707, 5510., 5777., 5685.,  
5658., 5680.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=In[115],[115],,,Cts/S, 28.905,.21452,.74216,28.893,29.061,29.  
039,28.992,28.539  
Elem1=Ir[193],[193],,,Cts/S, 12.446,.25356,2.0373,12.878,12.387,12.  
264,12.436,12.264  
Elem2=Sc[45],[45],,,Cts/S, 32.450,.33997,1.0477,32.915,31.984,32.59
```

1, 32.390, 32.371

[Sample Header]

Method=PERTABS

SampleName=iec-a

Operator=kjt

Comment=

CustID=

CustSmpl=000524-4

LabID=

Run Time=05/24/2000 14:04

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, 19.15,.3317,1.732, 18.82, 19.65, 18.95, 19.29, 19.02, QC Pass, 15.00%, 20.00

Elem1=Ba[138],[138],,,ppb, .0058,.0016,27.56, .0060, .0076, .0037, .0071, .0048, None, 0.0, 0.0

Elem2=Cd[111],[111],,,ppb, -.0688,.0119,17.26, -.0790, -.0643, -.0621, -.0552, -.0832, None, 0.0, 0.0

Elem3=Eu[151],[151],,,ppb, .0000,.0012,6851., -.0005, -.0008, -.0013, .0007, .0017, None, 0.0, 0.0

Elem4=Eu[153],[153],,,ppb, .0013,.0006,47.57, .0022, .0014, .0006, .0012, .0010, None, 0.0, 0.0

Elem5=AMU[93],[93],,,ppb, .0005,.0008,148.3, .0012, .0000, .0010, .0009, -.0006, None, 0.0, 0.0

Elem6=Pd[108],[108],,,ppb, .0168,.0006,3.586, .0169, .0166, .0163, .0164, .0178, None, 0.0, 0.0

Elem7=Pd[110],[110],,,ppb, -.0339,.0076,22.35, -.0380, -.0244, -.0320, -.0308, -.0443, None, 0.0, 0.0

Elem8=Rb[85],[85],,,ppb, .0167,.0045,26.69, .0188, .0144, .0124, .0236, .0146, None, 0.0, 0.0

Elem9=Rh[103],[103],,,ppb, .0003,.0004,142.8, .0006, .0009, .0000, .0000, .0000, None, 0.0, 0.0

Elem10=Ru[101],[101],,,ppb, .0011,.0017,151.3, -.0003, .0018, .0024, .0027, -.0011, None, 0.0, 0.0

Elem11=Ru[102],[102],,,ppb, .0019,.0034,178.7, -.0008, .0075, -.0008, .0021, .0015, None, 0.0, 0.0

Elem12=Sb[121],[121],,,ppb, -.0098,.0019,19.80, -.0113, -.0084, -.0098, -.0120, -.0074, None, 0.0, 0.0

Elem13=Sb[123],[123],,,ppb, -.0139,.0029,21.08, -.0097, -.0136, -.0177, -.0133, -.0153, None, 0.0, 0.0

Elem14=Se[82],[82],,,ppb, .0702,.1172,166.9, .0704, .0190, .2725,

-.0044, -.0064, None, 0.0, 0.0
Elem15=Ta[181],[181],,,ppb, -.0007,.0009,132.6, -.0003, -.0010, -.
0013, -.0014, .0007, None, 0.0, 0.0
Elem16=Te[128],[128],,,ppb, .0098,.0094,95.70, .0083, .0065, .0062
, .0020, .0260, None, 0.0, 0.0
Elem17=Tl[205],[205],,,ppb, .0151,.0019,12.71, .0172, .0169, .0148
, .0136, .0130, None, 0.0, 0.0
Elem18=V [51],[51],,,ppb, 19.40,.2644,1.363, 19.24, 19.66, 19.57,
19.49, 19.01, QC Pass, 15.00%, 20.00
Elem19=W [182],[182],,,ppb, -.0037,.0020,53.03, -.0024, -.0054, -.
0064, -.0022, -.0024, None, 0.0, 0.0
Elem20=Y [89],[89],,,ppb, .0013,.0008,65.82, .0005, .0006, .0008,
.0022, .0021, None, 0.0, 0.0
Elem21=AMU[90],[90],,,ppb, -.0019,.0026,141.9, .0008, -.0021, -.00
09, -.0062, -.0009, None, 0.0, 0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 28.420,.38174,1.3432,28.689,28.318,28.
593,27.796,28.704Elem1=Ir[193],[193],,Cts/S, 12.319,.35347,2.8694,12.732,11.973,12.
292,11.976,12.621Elem2=Sc[45],[45],,Cts/S, 33.316,.54961,1.6497,34.207,33.001,33.45
6,33.092,32.821

[Sample Header]

Method=PERTABS

SampleName=icv1

Operator=kjt

Comment=mspt lcs

CustID=

CustSmpl=000524-3

LabID=

Run Time=05/24/2000 14:10

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhiElem0=As[75],[75],,,ppb, 14.13,.3258,2.305, 13.55, 14.29, 14.28, 1
4.22, 14.32, QC Pass, 15.00%, 15.00Elem1=Ba[138],[138],,,ppb, 15.55,.2610,1.678, 15.29, 15.35, 15.72,
15.91, 15.49, QC Pass, 10.00%, 15.00Elem2=Cd[111],[111],,,ppb, 15.24,.1919,1.259, 15.26, 14.95, 15.18,
15.41, 15.42, None, 0.0, 0.0

```

Elem3=Eu[151],[151],,,ppb, .0420,.0017,4.110, .0422, .0432, .0441,
.0409, .0398,None,0.0,0.0
Elem4=Eu[153],[153],,,ppb, .0464,.0024,5.120, .0466, .0446, .0459,
.0504, .0446,None,0.0,0.0
Elem5=AMU[93],[93],,,ppb, .0165,.0022,13.04, .0169, .0133, .0192,
.0172, .0160,None,0.0,0.0
Elem6=Pd[108],[108],,,ppb, 1.687,.0600,3.558, 1.646, 1.618, 1.704,
1.775, 1.691,None,0.0,0.0
Elem7=Pd[110],[110],,,ppb, 13.81,.3336,2.416, 13.68, 13.29, 13.94,
14.02, 14.12,None,0.0,0.0
Elem8=Rb[85],[85],,,ppb, .0149,.0050,33.49, .0225, .0118, .0112, .
0173, .0115,None,0.0,0.0
Elem9=Rh[103],[103],,,ppb, .0022,.0004,20.18, .0021, .0022, .0027,
.0025, .0015,None,0.0,0.0
Elem10=Ru[101],[101],,,ppb, .0015,.0014,91.09, .0017, .0027, .0004
, -.0001, .0030,None,0.0,0.0
Elem11=Ru[102],[102],,,ppb, .0058,.0029,49.09, .0055, .0060, .0020
, .0100, .0056,None,0.0,0.0
Elem12=Sb[121],[121],,,ppb, 15.36,.2582,1.681, 15.07, 15.31, 15.72
, 15.19, 15.51,QC Pass,10.00%,15.00
Elem13=Sb[123],[123],,,ppb, 15.18,.2097,1.381, 15.29, 15.16, 15.01
, 15.49, 14.98,QC Pass,10.00%,15.00
Elem14=Se[82],[82],,,ppb, 15.14,.6095,4.025, 14.27, 14.77, 15.68,
15.66, 15.33,QC Pass,10.00%,15.00
Elem15=Ta[181],[181],,,ppb, -.0004,.0009,216.5, -.0012, -.0006, .0
001, -.0014, .0009,None,0.0,0.0
Elem16=Te[128],[128],,,ppb, .0125,.0225,179.8, -.0114, .0031, .047
5, .0198, .0035,None,0.0,0.0
Elem17=Tl[205],[205],,,ppb, 15.34,.2179,1.421, 15.15, 15.12, 15.65
, 15.37, 15.41,QC Pass,10.00%,15.00
Elem18=V [51],[51],,,ppb, 15.07,.1978,1.312, 15.08, 15.08, 14.80,
15.35, 15.03,QC Pass,15.00%,15.00
Elem19=W [182],[182],,,ppb, -.0064,.0008,13.04, -.0070, -.0071, -.
0054, -.0071, -.0056,None,0.0,0.0
Elem20=Y [89],[89],,,ppb, .0182,.0024,13.46, .0178, .0174, .0167,
.0224, .0165,None,0.0,0.0
Elem21=AMU[90],[90],,,ppb, 15.53,.4192,2.699, 15.57, 14.84, 15.67,
15.98, 15.59,QC Pass,15.00%,15.00

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.491,.44943,1.5775,28.790,29.115,28.
109,28.087,28.352
Elem1=Ir[193],[193],,Cts/S, 12.411,.37485,3.0202,12.847,12.557,12.
408,12.426,11.819
Elem2=Sc[45],[45],,Cts/S, 32.862,.30965,.94226,33.293,32.784,32.82
9,32.438,32.967

```

[Sample Header]
Method=PERTABS
SampleName=icv2
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000524-5
LabID=
Run Time=05/24/2000 14:17
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, -1.051,.0625,5.951, -.9659, -1.005, -1.077, -1.093, -1.113,None,0.0,0.0
Elem1=Ba[138],[138],,,ppb, .0367,.0013,3.556, .0356, .0367, .0370, .0386, .0353,None,0.0,0.0
Elem2=Cd[111],[111],,,ppb, -.0580,.0051,8.703, -.0603, -.0550, -.0535, -.0555, -.0658,None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, 15.55,.2979,1.916, 15.36, 15.29, 15.66, 16.02, 15.42, QC Pass,10.00%,15.00
Elem4=Eu[153],[153],,,ppb, 15.43,.2420,1.568, 15.37, 15.29, 15.23, 15.84, 15.42, QC Pass,10.00%,15.00
Elem5=AMU[93],[93],,,ppb,Q 21.63,.4036,1.866, 20.96, 21.72, 21.58, 21.96, 21.91, QC Fail,15.00%,15.00
Elem6=Pd[108],[108],,,ppb, 16.47,.3562,2.164, 16.07, 16.42, 16.18, 16.84, 16.82, QC Pass,10.00%,15.00
Elem7=Pd[110],[110],,,ppb,Q 16.52,.4765,2.885, 16.11, 16.24, 16.21, 17.20, 16.84, QC Fail,10.00%,15.00
Elem8=Rb[85],[85],,,ppb, 14.59,.1666,1.141, 14.31, 14.63, 14.65, 14.74, 14.64, QC Pass,10.00%,15.00
Elem9=Rh[103],[103],,,ppb, 14.97,.1203,.8039, 14.98, 15.14, 14.81, 14.91, 15.01, QC Pass,10.00%,15.00
Elem10=Ru[101],[101],,,ppb,Q 17.05,.2354,1.381, 16.68, 17.18, 17.15, 16.97, 17.28, QC Fail,10.00%,15.00
Elem11=Ru[102],[102],,,ppb,Q 17.03,.1172,.6884, 17.00, 17.06, 17.21, 16.98, 16.90, QC Fail,10.00%,15.00
Elem12=Sb[121],[121],,,ppb, -.0005,.0021,414.9, .0015, -.0015, -.0023, .0021, -.0024,None,0.0,0.0
Elem13=Sb[123],[123],,,ppb, .2192,.0104,4.746, .2006, .2253, .2234, .2229, .2236,None,0.0,0.0
Elem14=Se[82],[82],,,ppb, .0413,.0789,191.1, .0385, -.0479, .1507, -.0165, .0815,None,0.0,0.0
Elem15=Ta[181],[181],,,ppb, 14.24,.1761,1.237, 13.99, 14.46, 14.19


```
, 14.35, 14.21, QC Pass, 10.00%, 15.00
Elem16=Te[128],[128],,,ppb, 14.33,.2411,1.682, 13.99, 14.21, 14.35
, 14.53, 14.58, QC Pass, 10.00%, 15.00
Elem17=Tl[205],[205],,,ppb, .0042,.0018,42.77, .0048, .0058, .0049
, .0045, .0011, None, 0.0, 0.0
Elem18=V [51],[51],,,ppb, .0164,.0154,93.71, .0294, -.0080, .0247,
.0107, .0253, None, 0.0, 0.0
Elem19=W [182],[182],,,ppb, 13.86,.2942,2.123, 13.78, 14.37, 13.66
, 13.78, 13.69, QC Pass, 10.00%, 15.00
Elem20=Y [89],[89],,,ppb, 15.24,.3724,2.443, 14.78, 15.12, 15.81,
15.30, 15.19, QC Pass, 10.00%, 15.00
Elem21=AMU[90],[90],,,ppb, .0155,.0053,34.29, .0239, .0157, .0160,
.0110, .0108, None, 0.0, 0.0
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.227,.34317,1.2157,28.702,28.287,28.
220,28.190,27.737
Elem1=Ir[193],[193],,Cts/S, 12.348,.22758,1.8430,12.387,12.105,12.
251,12.713,12.285
Elem2=Sc[45],[45],,Cts/S, 32.446,.33478,1.0318,32.270,32.707,32.87
4,32.059,32.319
```

[Sample Header]

```
Method=PERTABS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 14:27
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .0346,.0421,121.8, -.0323, .0243, .0784,
.0475, .0549, QC Pass, n.5000, .0000
Elem1=Ba[138],[138],,,ppb, .0030,.0022,73.37, .0049, .0015, .0007,
.0056, .0021, QC Pass, n.0300, .0000
Elem2=Cd[111],[111],,,ppb, .0034,.0105,305.2, -.0079, .0068, .0183
, -.0053, .0053, None, 0.0, 0.0
Elem3=Eu[151],[151],,,ppb, .0003,.0014,422.2, -.0009, .0022, -.000
7, -.0004, .0016, QC Pass, n.0300%, .0000
```

```

Elem4=Eu[153],[153],,,ppb, .0008,.0019,232.7, .0017, -.0005, -.000
6, .0037, -.0003,QC Pass,ñ.0300%,.0000
Elem5=AMU[93],[93],,,ppb, .0016,.0014,90.27, .0015, .0035, .0003,
.0024, .0001,QC Pass,ñ.0300%,.0000
Elem6=Pd[108],[108],,,ppb, .0276,.0148,53.41, .0493, .0346, .0223,
.0212, .0108,QC Pass,ñ.0300%,.0000
Elem7=Pd[110],[110],,,ppb, .0223,.0185,82.87, .0465, .0318, .0122,
.0227, -.0019,QC Pass,ñ.0300%,.0000
Elem8=Rb[85],[85],,,ppb,Q .0335,.0046,13.61, .0388, .0331, .0373,
.0287, .0294,QC Fail,ñ.0300%,.0000
Elem9=Rh[103],[103],,,ppb, .0011,.0003,25.28, .0010, .0011, .0014,
.0006, .0011,QC Pass,ñ.0300%,.0000
Elem10=Ru[101],[101],,,ppb, .0067,.0026,38.27, .0102, .0087, .0045
, .0052, .0049,QC Pass,ñ.0300%,.0000
Elem11=Ru[102],[102],,,ppb, .0093,.0042,44.51, .0129, .0135, .0072
, .0097, .0034,QC Pass,ñ.0300%,.0000
Elem12=Sb[121],[121],,,ppb, -.0036,.0045,122.2, -.0039, -.0035, .0
035, -.0058, -.0085,QC Pass,ñ.0300%,.0000
Elem13=Sb[123],[123],,,ppb, .0019,.0044,230.0, -.0003, .0038, .006
2, -.0047, .0044,QC Pass,ñ.0300%,.0000
Elem14=Se[82],[82],,,ppb, .0095,.1036,1088., -.1108, -.0379, .1281
, -.0399, .1080,QC Pass,ñ.0800%,.0000
Elem15=Ta[181],[181],,,ppb, .0006,.0013,204.3, .0005, .0016, -.000
6, .0023, -.0006,QC Pass,ñ.0300%,.0000
Elem16=Te[128],[128],,,ppb, .0059,.0113,192.4, .0215, -.0060, -.00
18, .0024, .0133,QC Pass,ñ.0300%,.0000
Elem17=Tl[205],[205],,,ppb, .0010,.0014,141.2, .0023, .0024, .0001
, .0010, -.0008,QC Pass,ñ.0300%,.0000
Elem18=V [51],[51],,,ppb, .0203,.0115,56.74, .0267, .0249, .0307,
.0173, .0016,QC Pass,ñ.5000%,.0000
Elem19=W [182],[182],,,ppb, -.0020,.0033,166.5, -.0012, -.0037, -.
0067, .0001, .0016,QC Pass,ñ.0300%,.0000
Elem20=Y [89],[89],,,ppb, .0017,.0010,55.05, .0005, .0025, .0023,
.0010, .0025,QC Pass,ñ.0300%,.0000
Elem21=AMU[90],[90],,,ppb, -.0007,.0019,265.0, -.0026, .0025, -.00
15, -.0010, -.0010,QC Pass,ñ.0300%,.0000

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=In[115],[115],,Cts/S, 28.895,.32804,1.1353,28.978,28.930,29.
380,28.537,28.652

```

```

Elem1=Ir[193],[193],,Cts/S, 12.591,.40328,3.2029,12.444,11.946,12.
865,12.805,12.895

```

```

Elem2=Sc[45],[45],,Cts/S, 33.723,.46871,1.3899,34.271,33.852,33.52
0,33.034,33.937

```

[Sample Header]

Method=PERTABS

SampleName=std-prep
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 14:33
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 2.028,.1014,5.001, 1.880, 1.979, 2.044, 2.133, 2.102,,,
Elem1=Ba[138],[138],,,ppb, 2.272,.0718,3.158, 2.351, 2.262, 2.255, 2.326, 2.167,,,
Elem2=Cd[111],[111],,,ppb, 2.190,.0399,1.822, 2.188, 2.249, 2.137, 2.194, 2.183,,,
Elem3=Eu[151],[151],,,ppb, 2.333,.0610,2.613, 2.409, 2.374, 2.280, 2.335, 2.266,,,
Elem4=Eu[153],[153],,,ppb, 2.349,.0570,2.427, 2.427, 2.309, 2.317, 2.393, 2.301,,,
Elem5=AMU[93],[93],,,ppb, .0041,.0012,28.86, .0061, .0037, .0043, .0034, .0031,,,
Elem6=Pd[108],[108],,,ppb, .2593,.0098,3.796, .2631, .2743, .2531, .2490, .2570,,,
Elem7=Pd[110],[110],,,ppb, 1.994,.0558,2.797, 2.013, 2.060, 1.908, 2.005, 1.981,,,
Elem8=Rb[85],[85],,,ppb, .0240,.0020,8.230, .0263, .0235, .0214, .0232, .0256,,,
Elem9=Rh[103],[103],,,ppb, .0010,.0006,63.30, .0006, .0002, .0018, .0015, .0010,,,
Elem10=Ru[101],[101],,,ppb, .0545,.0046,8.525, .0502, .0616, .0557, .0546, .0505,,,
Elem11=Ru[102],[102],,,ppb, .0321,.0043,13.24, .0374, .0349, .0300, .0318, .0264,,,
Elem12=Sb[121],[121],,,ppb, 2.267,.0341,1.503, 2.300, 2.283, 2.285, 2.257, 2.213,,,
Elem13=Sb[123],[123],,,ppb, 2.291,.0382,1.670, 2.308, 2.317, 2.319, 2.281, 2.228,,,
Elem14=Se[82],[82],,,ppb, 2.201,.1863,8.465, 1.967, 2.117, 2.326, 2.444, 2.149,,,
Elem15=Ta[181],[181],,,ppb, .0010,.0005,44.63, .0010, .0008, .0005, .0016, .0014,,,
Elem16=Te[128],[128],,,ppb, .0070,.0091,129.3, .0099, .0068, -.007

```
8, .0092, .0171,,,
Elem17=Tl[205],[205],,,,ppb, 2.203,.0577,2.621, 2.236, 2.242, 2.133
, 2.256, 2.148,,,
Elem18=V [51],[51],,,,ppb, 2.172,.0547,2.520, 2.241, 2.175, 2.144,
2.098, 2.201,,,
Elem19=W [182],[182],,,,ppb, -.0041,.0045,109.8, -.0060, .0031, -.0
085, -.0028, -.0062,,,
Elem20=Y [89],[89],,,,ppb, 2.195,.0361,1.644, 2.258, 2.177, 2.169,
2.179, 2.191,,,
Elem21=AMU[90],[90],,,,ppb, 2.354,.0322,1.370, 2.407, 2.341, 2.319,
2.354, 2.350,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.476,.49789,1.7485,28.105,28.035,29.
000,28.206,29.034
Elem1=Ir[193],[193],,Cts/S, 12.489,.35879,2.8728,12.699,12.125,12.
980,12.178,12.464
Elem2=Sc[45],[45],,Cts/S, 33.023,.54740,1.6576,33.943,32.874,32.47
5,32.961,32.864
```

[Sample Header]

```
Method=PERTABS
SampleName=std-prep
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 14:39
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, 2.043,.0759,3.717, 2.100, 1.951, 1.976, 2
.124, 2.061,,,
Elem1=Ba[138],[138],,,,ppb, 2.233,.0620,2.777, 2.299, 2.178, 2.234,
2.289, 2.164,,,
Elem2=Cd[111],[111],,,,ppb, 2.183,.0206,.9415, 2.212, 2.161, 2.194,
2.182, 2.167,,,
Elem3=Eu[151],[151],,,,ppb, 2.280,.0368,1.612, 2.322, 2.278, 2.266,
2.306, 2.227,,,
Elem4=Eu[153],[153],,,,ppb, 2.278,.0262,1.151, 2.304, 2.298, 2.280,
2.272, 2.237,,,
```

```

Elem5=AMU[93],[93],,,,ppb, .0036,.0013,36.40, .0040, .0055, .0020,
.0034, .0030,,,
Elem6=Pd[108],[108],,,,ppb, .2414,.0093,3.868, .2451, .2520, .2444,
.2383, .2271,,,
Elem7=Pd[110],[110],,,,ppb, 1.963,.0414,2.111, 2.015, 1.992, 1.952,
1.910, 1.944,,,
Elem8=Rb[85],[85],,,,ppb, .0216,.0040,18.51, .0201, .0234, .0260, .
0155, .0232,,,
Elem9=Rh[103],[103],,,,ppb, .0014,.0010,69.33, .0022, .0025, .0016,
.0002, .0006,,,
Elem10=Ru[101],[101],,,,ppb, .0536,.0057,10.69, .0574, .0555, .0599
, .0468, .0483,,,
Elem11=Ru[102],[102],,,,ppb, .0274,.0033,11.91, .0286, .0292, .0311
, .0234, .0245,,,
Elem12=Sb[121],[121],,,,ppb, 2.306,.0447,1.940, 2.299, 2.280, 2.381
, 2.266, 2.305,,,
Elem13=Sb[123],[123],,,,ppb, 2.282,.0453,1.986, 2.303, 2.279, 2.289
, 2.209, 2.331,,,
Elem14=Se[82],[82],,,,ppb, 2.258,.0723,3.202, 2.369, 2.196, 2.275,
2.261, 2.190,,,
Elem15=Ta[181],[181],,,,ppb, -.0002,.0008,468.9, -.0016, .0002, -.0
002, .0005, .0002,,,
Elem16=Te[128],[128],,,,ppb, .0136,.0091,66.81, .0271, .0069, .0178
, .0045, .0118,,,
Elem17=Tl[205],[205],,,,ppb, 2.183,.0294,1.345, 2.180, 2.159, 2.159
, 2.231, 2.184,,,
Elem18=V[51],[51],,,,ppb, 2.136,.0469,2.193, 2.069, 2.180, 2.149,
2.174, 2.108,,,
Elem19=W[182],[182],,,,ppb, -.0036,.0018,48.94, -.0064, -.0017, -.
0035, -.0038, -.0026,,,
Elem20=Y[89],[89],,,,ppb, 2.180,.0478,2.193, 2.199, 2.216, 2.221,
2.107, 2.159,,,
Elem21=AMU[90],[90],,,,ppb, 2.353,.0462,1.965, 2.394, 2.358, 2.357,
2.275, 2.380,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 28.574,.37156,1.3003,28.439,28.367,28.
281,29.211,28.571

Elem1=Ir[193],[193],,Cts/S, 12.199,.20402,1.6725,12.414,12.423,12.
076,12.090,11.992

Elem2=Sc[45],[45],,Cts/S, 32.849,.49492,1.5066,33.651,32.872,32.43
8,32.845,32.440

[Sample Header]

Method=PERTABS

SampleName=blnk-prep

Operator=kjt

Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 14:49
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .0126,.0915,725.2, .0218, -.0372, .1464, -.0999, .0320,,
Elem1=Ba[138],[138],,,ppb, .0083,.0011,12.64, .0087, .0095, .0086, .0067, .0081,,
Elem2=Cd[111],[111],,,ppb, -.0558,.0024,4.313, -.0582, -.0578, -.0527, -.0565, -.0539,,
Elem3=Eu[151],[151],,,ppb, .0016,.0016,100.8, .0003, -.0004, .0032, .0019, .0030,,
Elem4=Eu[153],[153],,,ppb, .0018,.0011,62.18, .0007, .0035, .0009, .0020, .0020,,
Elem5=AMU[93],[93],,,ppb, .0012,.0011,91.34, .0002, .0011, .0000, .0023, .0022,,
Elem6=Pd[108],[108],,,ppb, .0083,.0016,19.68, .0107, .0062, .0083, .0083, .0078,,
Elem7=Pd[110],[110],,,ppb, -.0381,.0043,11.34, -.0449, -.0387, -.0375, -.0362, -.0332,,
Elem8=Rb[85],[85],,,ppb, .0161,.0064,39.40, .0229, .0102, .0215, .0090, .0171,,
Elem9=Rh[103],[103],,,ppb, -.0002,.0005,324.2, -.0007, .0006, -.0001, -.0004, -.0002,,
Elem10=Ru[101],[101],,,ppb, .0114,.0033,28.75, .0063, .0137, .0128, .0143, .0100,,
Elem11=Ru[102],[102],,,ppb, .0064,.0017,27.04, .0082, .0052, .0047, .0083, .0055,,
Elem12=Sb[121],[121],,,ppb, -.0113,.0013,11.84, -.0100, -.0106, -.0108, -.0134, -.0115,,
Elem13=Sb[123],[123],,,ppb, -.0138,.0041,29.35, -.0201, -.0151, -.0097, -.0132, -.0111,,
Elem14=Se[82],[82],,,ppb, .0263,.0912,346.6, .0289, -.1035, .1440, -.0043, .0663,,
Elem15=Ta[181],[181],,,ppb, .0006,.0005,75.75, .0005, .0004, .0001, .0013, .0008,,
Elem16=Te[128],[128],,,ppb, .0080,.0113,141.3, .0054, .0236, -.0080, .0091, .0100,,
Elem17=Tl[205],[205],,,ppb, .0080,.0023,28.84, .0060, .0069, .0067

```
, .0117, .0087,,,  
Elem18=V [51],[51],,,ppb, .0163,.0216,132.1, .0217, -.0125, .0027,  
.0269, .0428,,,  
Elem19=W [182],[182],,,ppb, -.0044,.0041,92.55, -.0085, .0024, -.0  
062, -.0048, -.0051,,,  
Elem20=Y [89],[89],,,ppb, .0023,.0009,38.25, .0020, .0017, .0014,  
.0029, .0035,,,  
Elem21=AMU[90],[90],,,ppb, .0309,.0054,17.54, .0376, .0263, .0360,  
.0265, .0283,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn  
Elem0=In[115],[115],,Cts/S, 28.167,.44497,1.5798,28.717,28.550,27.  
690,28.008,27.868  
Elem1=Ir[193],[193],,Cts/S, 12.204,.30941,2.5352,12.491,11.688,12.  
355,12.309,12.178  
Elem2=Sc[45],[45],,Cts/S, 32.636,.36784,1.1271,32.847,33.116,32.58  
8,32.146,32.484
```

[Sample Header]

```
Method=PERTABS  
SampleName=s00t000809  
Operator=kjt  
Comment=2121 df  
CustID=  
CustSmpl=  
LabID=  
Run Time=05/24/2000 14:55  
Sample Type=Unk  
Mode=CONC  
CorrFactor=1.000000  
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa  
ss/fail,chklo,chkhi  
Elem0=As[75],[75],,,ppb, .1278,.0438,34.29, .1551, .1726, .0583, .  
1200, .1329,,,  
Elem1=Ba[138],[138],,,ppb, 2.666,.0649,2.436, 2.631, 2.697, 2.731,  
2.701, 2.570,,,  
Elem2=Cd[111],[111],,,ppb, 27.49,.2501,.9095, 27.20, 27.51, 27.67,  
27.80, 27.29,,,  
Elem3=Eu[151],[151],,,ppb, .1424,.0067,4.716, .1333, .1455, .1499,  
.1455, .1377,,,  
Elem4=Eu[153],[153],,,ppb, .1580,.0041,2.610, .1602, .1571, .1629,  
.1579, .1518,,,  
Elem5=AMU[93],[93],,,ppb, 1.321,.0553,4.185, 1.325, 1.304, 1.386,  
1.353, 1.240,,,
```

Elem6=Pd[108],[108],,,,ppb, 9.291,.3277,3.527, 8.753, 9.504, 9.385,
9.236, 9.578,,,
Elem7=Pd[110],[110],,,,ppb, 39.55,.5905,1.493, 38.56, 39.97, 40.03,
39.69, 39.50,,,
Elem8=Rb[85],[85],,,,ppb, .0298,.0029,9.587, .0282, .0292, .0319, .
0334, .0262,,,
Elem9=Rh[103],[103],,,,ppb, .6378,.0193,3.025, .6151, .6303, .6633,
.6514, .6287,,,
Elem10=Ru[101],[101],,,,ppb, 5.697,.1283,2.252, 5.663, 5.587, 5.867
, 5.792, 5.575,,,
Elem11=Ru[102],[102],,,,ppb, 2.679,.0554,2.067, 2.642, 2.643, 2.762
, 2.710, 2.637,,,
Elem12=Sb[121],[121],,,,ppb, .0058,.0030,51.00, .0040, .0102, .0030
, .0075, .0044,,,
Elem13=Sb[123],[123],,,,ppb, .0373,.0052,14.03, .0393, .0326, .0442
, .0391, .0316,,,
Elem14=Se[82],[82],,,,ppb, .0578,.0571,98.71, .0941, .0489, -.0384,
.0937, .0907,,,
Elem15=Ta[181],[181],,,,ppb, .0013,.0003,26.98, .0016, .0011, .0011
, .0009, .0017,,,
Elem16=Te[128],[128],,,,ppb, .3279,.0195,5.959, .3506, .3178, .3431
, .3259, .3019,,,
Elem17=Tl[205],[205],,,,ppb, .0115,.0030,26.23, .0122, .0142, .0109
, .0138, .0067,,,
Elem18=V[51],[51],,,,ppb, -.0133,.0413,311.7, .0106, -.0343, .0144
, -.0763, .0194,,,
Elem19=W[182],[182],,,,ppb, .0329,.0047,14.35, .0376, .0290, .0364
, .0347, .0269,,,
Elem20=Y[89],[89],,,,ppb, .8705,.0143,1.643, .8780, .8498, .8704,
.8882, .8660,,,
Elem21=AMU[90],[90],,,,ppb, 111.2,3.453,3.106, 110.3, 109.6, 113.3,
115.8, 106.9,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 28.022,.45890,1.6376,28.362,28.256,27.
280,27.873,28.338Elem1=Ir[193],[193],,Cts/S, 12.345,.22946,1.8588,12.186,12.021,12.
471,12.541,12.507Elem2=Sc[45],[45],,Cts/S, 32.869,.36171,1.1005,33.041,32.535,32.54
0,33.392,32.837

[Sample Header]

Method=PERTABS

SampleName=s00t000809_a

Operator=kjt

Comment=2121 df

CustID=

CustSmpl=
LabID=
Run Time=05/24/2000 15:01
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, 21.45,.3490,1.627, 21.84, 21.32, 21.64, 21.52, 20.92,,,
Elem1=Ba[138],[138],,,,ppb, 27.68,.3778,1.365, 27.87, 27.96, 27.32, 28.03, 27.22,,,
Elem2=Cd[111],[111],,,,ppb, 51.59,.2009,.3894, 51.41, 51.45, 51.47, 51.79, 51.83,,,
Elem3=Eu[151],[151],,,,ppb, 24.74,.4410,1.782, 25.26, 24.85, 24.27, 25.03, 24.30,,,
Elem4=Eu[153],[153],,,,ppb, 24.65,.3634,1.474, 24.53, 24.59, 24.53, 25.27, 24.32,,,
Elem5=AMU[93],[93],,,,ppb, 36.81,.3521,.9565, 37.44, 36.63, 36.61, 36.68, 36.70,,,
Elem6=Pd[108],[108],,,,ppb, 37.73,.6514,1.726, 36.92, 37.62, 37.53, 38.72, 37.85,,,
Elem7=Pd[110],[110],,,,ppb, 86.90,1.441,1.658, 85.46, 86.56, 86.48, 89.33, 86.67,,,
Elem8=Rb[85],[85],,,,ppb, 22.89,.2446,1.068, 23.28, 22.94, 22.81, 22.78, 22.63,,,
Elem9=Rh[103],[103],,,,ppb, 24.21,.3309,1.367, 23.95, 24.41, 24.63, 24.23, 23.81,,,
Elem10=Ru[101],[101],,,,ppb, 32.30,.2828,.8757, 32.17, 32.44, 32.06, 32.72, 32.09,,,
Elem11=Ru[102],[102],,,,ppb, 29.18,.2459,.8429, 29.55, 28.92, 29.21, 29.22, 28.99,,,
Elem12=Sb[121],[121],,,,ppb, 24.45,.0965,.3948, 24.51, 24.43, 24.30, 24.44, 24.56,,,
Elem13=Sb[123],[123],,,,ppb, 24.92,.2047,.8213, 24.85, 24.81, 24.74, 24.96, 25.26,,,
Elem14=Se[82],[82],,,,ppb, 24.30,.4142,1.705, 24.69, 24.38, 23.59, 24.34, 24.47,,,
Elem15=Ta[181],[181],,,,ppb, 23.63,.4008,1.696, 23.67, 23.13, 23.94, 24.08, 23.32,,,
Elem16=Te[128],[128],,,,ppb, 24.28,.1339,.5515, 24.28, 24.23, 24.09, 24.36, 24.45,,,
Elem17=Tl[205],[205],,,,ppb, 24.55,.2645,1.077, 24.14, 24.83, 24.45, 24.62, 24.70,,,
Elem18=V[51],[51],,,,ppb, 23.83,.2256,.9465, 24.10, 23.64, 23.56,

23.97, 23.88,,,
Elem19=W[182],[182],,,ppb, 23.23,.3055,1.315, 23.04, 22.94, 23.73
, 23.27, 23.17,,,
Elem20=Y[89],[89],,,ppb, 23.94,.3845,1.606, 24.14, 23.59, 23.53,
23.96, 24.45,,,
Elem21=AMU[90],[90],,,ppb, 130.2,.7701,.5914, 131.2, 129.4, 130.5,
130.6, 129.4,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.027,.10836,.38663,27.971,28.049,28.
191,27.899,28.027
Elem1=Ir[193],[193],,Cts/S, 12.240,.13468,1.1004,12.242,12.361,12.
046,12.369,12.180
Elem2=Sc[45],[45],,Cts/S, 31.733,.33802,1.0652,32.173,31.471,31.33
5,31.767,31.920

[Sample Header]

Method=PERTABS
SampleName=s00t000810
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 15:13
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .1043,.0414,39.68, .0945, .0817, .0529, .
1528, .1396,,,
Elem1=Ba[138],[138],,,ppb, 2.599,.0476,1.832, 2.540, 2.665, 2.574,
2.624, 2.591,,,
Elem2=Cd[111],[111],,,ppb, 26.60,.2040,.7669, 26.60, 26.86, 26.30,
26.56, 26.67,,,
Elem3=Eu[151],[151],,,ppb, .1362,.0030,2.217, .1357, .1383, .1315,
.1364, .1393,,,
Elem4=Eu[153],[153],,,ppb, .1534,.0030,1.982, .1541, .1502, .1508,
.1542, .1577,,,
Elem5=AMU[93],[93],,,ppb, 1.294,.0316,2.439, 1.276, 1.349, 1.270,
1.287, 1.288,,,
Elem6=Pd[108],[108],,,ppb, 9.455,.2457,2.598, 9.583, 9.628, 9.040,
9.602, 9.421,,,

```

Elem7=Pd[110],[110],,,,ppb, 39.41,.5437,1.380, 40.07, 39.93, 38.95,
  39.09, 39.01,,,
Elem8=Rb[85],[85],,,,ppb, .0699,.0054,7.792, .0709, .0669, .0692, .
0785, .0640,,,
Elem9=Rh[103],[103],,,,ppb, .6366,.0118,1.850, .6362, .6522, .6319,
  .6422, .6205,,,
Elem10=Ru[101],[101],,,,ppb, 4.494,.0999,2.224, 4.562, 4.627, 4.477
  , 4.422, 4.383,,,
Elem11=Ru[102],[102],,,,ppb, 2.133,.0381,1.787, 2.151, 2.185, 2.094
  , 2.136, 2.097,,,
Elem12=Sb[121],[121],,,,ppb, .0055,.0038,68.34, .0089, .0048, .0099
  , .0030, .0011,,,
Elem13=Sb[123],[123],,,,ppb, .0373,.0087,23.26, .0403, .0491, .0395
  , .0295, .0280,,,
Elem14=Se[82],[82],,,,ppb, .0446,.0866,194.0, .0502, .0595, -.0570,
  .1750, -.0046,,,
Elem15=Ta[181],[181],,,,ppb, .0016,.0016,100.7, .0042, .0013, .0010
  , -.0001, .0014,,,
Elem16=Te[128],[128],,,,ppb, .3262,.0259,7.947, .3315, .3579, .3198
  , .3350, .2870,,,
Elem17=Tl[205],[205],,,,ppb, .0113,.0013,11.21, .0118, .0102, .0113
  , .0100, .0131,,,
Elem18=V [51],[51],,,,ppb, -.0617,.0426,69.14, -.0154, -.1030, -.05
22, -.1090, -.0286,,,
Elem19=W [182],[182],,,,ppb, .0303,.0072,23.78, .0204, .0330, .0365
  , .0363, .0250,,,
Elem20=Y [89],[89],,,,ppb, .8364,.0158,1.884, .8268, .8251, .8275,
  .8625, .8403,,,
Elem21=AMU[90],[90],,,,ppb, 106.8,2.069,1.937, 104.3, 108.1, 104.9,
  109.1, 107.6,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 27.222,.36618,1.3451,27.403,26.586,27.499,27.253,27.369

Elem1=Ir[193],[193],,Cts/S, 12.376,.33796,2.7307,12.735,12.253,12.453,12.579,11.861

Elem2=Sc[45],[45],,Cts/S, 31.500,.61182,1.9423,31.657,30.600,32.018,32.043,31.183

[Sample Header]

Method=PERTABS

SampleName=s00t000811

Operator=kjt

Comment=2121 df

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 15:20
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .1499,.0362,24.16, .1228, .1358, .1428, .2134, .1348,,,
Elem1=Ba[138],[138],,,ppb, 2.872,.0674,2.348, 2.951, 2.889, 2.882, 2.875, 2.765,,,
Elem2=Cd[111],[111],,,ppb, 29.68,.6216,2.095, 29.92, 30.16, 30.25, 29.17, 28.87,,,
Elem3=Eu[151],[151],,,ppb, .1516,.0074,4.912, .1631, .1546, .1495, .1452, .1456,,,
Elem4=Eu[153],[153],,,ppb, .1643,.0033,1.986, .1661, .1656, .1620, .1678, .1598,,,
Elem5=AMU[93],[93],,,ppb, 1.406,.0419,2.983, 1.401, 1.414, 1.365, 1.472, 1.377,,,
Elem6=Pd[108],[108],,,ppb, 10.22,.3678,3.598, 10.66, 9.788, 10.15, 10.53, 9.983,,,
Elem7=Pd[110],[110],,,ppb, 43.43,1.401,3.227, 45.40, 42.27, 43.46, 44.06, 41.94,,,
Elem8=Rb[85],[85],,,ppb, .0597,.0053,8.893, .0659, .0610, .0528, .0629, .0558,,,
Elem9=Rh[103],[103],,,ppb, .6976,.0110,1.580, .7108, .6928, .7055, .6961, .6826,,,
Elem10=Ru[101],[101],,,ppb, 5.648,.1063,1.882, 5.647, 5.633, 5.611, 5.818, 5.527,,,
Elem11=Ru[102],[102],,,ppb, 2.638,.0537,2.036, 2.695, 2.618, 2.614, 2.692, 2.572,,,
Elem12=Sb[121],[121],,,ppb, .0022,.0028,127.4, .0016, .0011, -.0004, .0016, .0069,,,
Elem13=Sb[123],[123],,,ppb, .0427,.0108,25.27, .0582, .0351, .0357, .0500, .0346,,,
Elem14=Se[82],[82],,,ppb, .0045,.0617,1369., .0151, .0125, .0164, .0742, -.0956,,,
Elem15=Ta[181],[181],,,ppb, .0012,.0010,82.76, .0020, .0015, .0021, .0006, -.0002,,,
Elem16=Te[128],[128],,,ppb, .3365,.0270,8.012, .3785, .3285, .3179, .3464, .3112,,,
Elem17=Tl[205],[205],,,ppb, .0060,.0018,29.91, .0050, .0077, .0041, .0052, .0081,,,
Elem18=V[51],[51],,,ppb, -.0391,.0254,64.99, .0019, -.0325, -.0526, -.0492, -.0629,,,
Elem19=W[182],[182],,,ppb, .0285,.0058,20.30, .0301, .0323, .0313

```
, .0183, .0307,,,
Elem20=Y [89],[89],,,ppb, .9015,.0118,1.307, .8989, .9064, .8893,
.9193, .8938,,,
Elem21=AMU[90],[90],,,ppb, 115.3,1.296,1.124, 115.9, 116.8, 114.2,
115.9, 113.7,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.243,.51380,1.8192,27.561,28.045,28.
696,28.099,28.814
Elem1=Ir[193],[193],,Cts/S, 12.490,.16713,1.3380,12.535,12.221,12.
484,12.678,12.534
Elem2=Sc[45],[45],,Cts/S, 32.232,.31289,.97076,31.807,31.991,32.51
1,32.443,32.407
```

[Sample Header]

```
Method=PERTABS
SampleName=ccv1
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000524-3
LabID=
Run Time=05/24/2000 15:30
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=4
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 14.33,.1182,.8252, 14.15, 14.40, 14.38, 1
4.38, QC Pass,15.00%,15.00
Elem1=Ba[138],[138],,,ppb, 15.58,.1147,.7366, 15.44, 15.71, 15.61,
15.54, QC Pass,10.00%,15.00
Elem2=Cd[111],[111],,,ppb, 15.39,.2168,1.409, 15.32, 15.36, 15.69,
15.18, None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, .0434,.0019,4.477, .0449, .0446, .0407,
.0434, None,0.0,0.0
Elem4=Eu[153],[153],,,ppb, .0496,.0037,7.431, .0548, .0494, .0464,
.0478, None,0.0,0.0
Elem5=AMU[93],[93],,,ppb, .0177,.0026,14.71, .0195, .0168, .0145,
.0202, None,0.0,0.0
Elem6=Pd[108],[108],,,ppb, 1.724,.0394,2.287, 1.684, 1.777, 1.708,
1.728, None,0.0,0.0
Elem7=Pd[110],[110],,,ppb, 13.97,.3760,2.692, 13.48, 14.37, 14.11,
13.91, None,0.0,0.0
```

Elem8=Rb[85],[85],,,ppb, .0507,.0026,5.159, .0515, .0479, .0495, .
0540,None,0.0,0.0
Elem9=Rh[103],[103],,,ppb, .0022,.0002,7.118, .0021, .0024, .0022,
.0021,None,0.0,0.0
Elem10=Ru[101],[101],,,ppb, .0058,.0019,32.40, .0060, .0033, .0058
, .0079,None,0.0,0.0
Elem11=Ru[102],[102],,,ppb, .0075,.0025,32.70, .0045, .0105, .0071
, .0080,None,0.0,0.0
Elem12=Sb[121],[121],,,ppb, 15.51,.0966,.6229, 15.37, 15.56, 15.60
, 15.50,QC Pass,10.00%,15.00
Elem13=Sb[123],[123],,,ppb, 15.56,.2803,1.801, 15.34, 15.74, 15.30
, 15.86,QC Pass,10.00%,15.00
Elem14=Se[82],[82],,,ppb, 15.44,.2559,1.658, 15.58, 15.47, 15.63,
15.07,QC Pass,10.00%,15.00
Elem15=Ta[181],[181],,,ppb, .0001,.0012,825.3, .0019, -.0004, -.00
07, -.0002,None,0.0,0.0
Elem16=Te[128],[128],,,ppb, .0100,.0106,106.0, .0124, .0227, .0074
, -.0027,None,0.0,0.0
Elem17=Tl[205],[205],,,ppb, 15.09,.4375,2.899, 15.44, 15.10, 15.35
, 14.47,QC Pass,10.00%,15.00
Elem18=V[51],[51],,,ppb, 14.92,.2078,1.393, 15.19, 14.92, 14.90,
14.68,QC Pass,15.00%,15.00
Elem19=W[182],[182],,,ppb, -.0033,.0076,234.2, -.0031, -.0044, .0
066, -.0121,None,0.0,0.0
Elem20=Y[89],[89],,,ppb, .0192,.0012,6.016, .0202, .0202, .0180,
.0184,None,0.0,0.0
Elem21=AMU[90],[90],,,ppb, 15.69,.1497,.9544, 15.73, 15.80, 15.47,
15.76,QC Pass,15.00%,15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 27.678,.25859,.93427,27.925,27.339,27.
825,27.624Elem1=Ir[193],[193],,Cts/S, 12.642,.42000,3.3223,12.676,12.370,12.
300,13.223Elem2=Sc[45],[45],,Cts/S, 32.034,.20038,.62552,32.262,31.883,31.84
9,32.142

[Sample Header]

Method=PERTABS

SampleName=ccv2

Operator=kjt

Comment=mspt lcs

CustID=

CustSmpl=000524-5

LabID=

Run Time=05/24/2000 15:36

Sample Type=QC

Mode=CONC
 CorrFactor=1.000000
 Repeats=4

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb,Q -1.026,.0768,7.490, -.9480, -.9747, -1.110, -1.070,QC Fail,15.00%,15.00
Elem1=Ba[138],[138],,,,ppb,Q .0374,.0014,3.775, .0377, .0386, .0378, .0354,QC Fail,10.00%,15.00
Elem2=Cd[111],[111],,,,ppb, -.0482,.0148,30.60, -.0402, -.0703, -.0429, -.0395,None,0.0,0.0
Elem3=Eu[151],[151],,,,ppb, 15.71,.4674,2.976, 16.09, 15.56, 15.11, 16.07,None,0.0,0.0
Elem4=Eu[153],[153],,,,ppb, 15.42,.2823,1.831, 15.54, 15.21, 15.16, 15.76,None,0.0,0.0
Elem5=AMU[93],[93],,,,ppb, 22.04,.7543,3.422, 23.17, 21.57, 21.64, 21.80,None,0.0,0.0
Elem6=Pd[108],[108],,,,ppb, 16.76,.5380,3.210, 17.18, 16.01, 16.73, 17.12,None,0.0,0.0
Elem7=Pd[110],[110],,,,ppb, 16.73,.6714,4.013, 17.37, 15.99, 16.34, 17.21,None,0.0,0.0
Elem8=Rb[85],[85],,,,ppb, 14.72,.3688,2.505, 15.24, 14.50, 14.42, 14.72,None,0.0,0.0
Elem9=Rh[103],[103],,,,ppb, 14.95,.3328,2.226, 15.18, 14.62, 14.71, 15.28,None,0.0,0.0
Elem10=Ru[101],[101],,,,ppb, 17.10,.6875,4.021, 17.99, 16.42, 16.72, 17.27,None,0.0,0.0
Elem11=Ru[102],[102],,,,ppb, 16.90,.6821,4.036, 17.73, 16.07, 16.78, 17.03,None,0.0,0.0
Elem12=Sb[121],[121],,,,ppb,Q .0025,.0035,141.3, .0063, .0030, -.0021, .0027,QC Fail,10.00%,15.00
Elem13=Sb[123],[123],,,,ppb,Q .2041,.0085,4.171, .2106, .1922, .2039, .2098,QC Fail,10.00%,15.00
Elem14=Se[82],[82],,,,ppb,Q .0697,.0590,84.60, .1541, .0190, .0435, .0624,QC Fail,10.00%,15.00
Elem15=Ta[181],[181],,,,ppb, 14.33,.3098,2.163, 14.13, 14.73, 14.41, 14.04,None,0.0,0.0
Elem16=Te[128],[128],,,,ppb, 14.26,.1419,.9956, 14.38, 14.07, 14.23, 14.34,None,0.0,0.0
Elem17=Tl[205],[205],,,,ppb,Q .0054,.0018,33.61, .0078, .0049, .0052, .0035,QC Fail,10.00%,15.00
Elem18=V[51],[51],,,,ppb,Q .0299,.0256,85.56, .0029, .0479, .0552, .0135,QC Fail,15.00%,15.00
Elem19=W[182],[182],,,,ppb, 13.88,.2098,1.512, 13.88, 13.77, 14.17, 13.69,None,0.0,0.0
Elem20=Y[89],[89],,,,ppb, 15.23,.4326,2.840, 15.51, 15.10, 14.68,
```

HNF-1701 REV. 0

15.64,None,0.0,0.0
 Elem21=AMU[90],[90],,,ppb,Q .0500,.0194,38.83, .0791, .0414, .0392
 , .0403,QC Fail,15.00%,15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 27.131,.69051,2.5451,26.247,27.790,27.
 551,26.935

Elem1=Ir[193],[193],,Cts/S, 11.874,.21334,1.7967,11.689,11.863,11.
 768,12.175

Elem2=Sc[45],[45],,Cts/S, 31.578,.35575,1.1266,31.851,31.151,31.42
 0,31.891

[Sample Header]

Method=PERTABS

SampleName=ccb

Operator=kjt

Comment=2% nitric

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 15:43

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
 ss/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, -.0205,.0376,183.3, -.0600, -.0194, .0060
 , -.0554, .0261,QC Pass,n.5000,.0000

Elem1=Ba[138],[138],,,ppb, .0059,.0034,56.94, .0097, .0065, .0016,
 .0034, .0085,QC Pass,n.0300,.0000

Elem2=Cd[111],[111],,,ppb, -.0339,.0077,22.67, -.0318, -.0431, -.0
 264, -.0410, -.0274,None,0.0,0.0

Elem3=Eu[151],[151],,,ppb, .0011,.0019,183.8, .0000, .0044, .0007,
 .0009, -.0007,QC Pass,n.0300%,.0000

Elem4=Eu[153],[153],,,ppb, .0017,.0010,59.46, .0034, .0007, .0018,
 .0018, .0010,QC Pass,n.0300%,.0000

Elem5=AMU[93],[93],,,ppb, .0033,.0011,32.63, .0050, .0029, .0021,
 .0032, .0031,QC Pass,n.0300%,.0000

Elem6=Pd[108],[108],,,ppb,Q .0538,.0159,29.60, .0768, .0607, .0479
 , .0494, .0342,QC Fail,n.0300%,.0000

Elem7=Pd[110],[110],,,ppb, .0283,.0241,84.96, .0382, .0655, .0132,
 .0196, .0052,QC Pass,n.0300%,.0000

Elem8=Rb[85],[85],,,ppb,Q .0617,.0053,8.537, .0672, .0630, .0535,
 .0646, .0600,QC Fail,n.0300%,.0000


```

Elem9=Rh[103],[103],,,ppb, .0012,.0006,51.54, .0017, .0006, .0017,
.0015, .0005, QC Pass,ñ.0300%,.0000
Elem10=Ru[101],[101],,,ppb, .0070,.0036,51.75, .0084, .0108, .0093
, .0033, .0030, QC Pass,ñ.0300%,.0000
Elem11=Ru[102],[102],,,ppb, .0069,.0037,53.08, .0091, .0116, .0020
, .0065, .0053, QC Pass,ñ.0300%,.0000
Elem12=Sb[121],[121],,,ppb, -.0065,.0034,51.94, -.0087, -.0100, -.
0050, -.0015, -.0072, QC Pass,ñ.0300%,.0000
Elem13=Sb[123],[123],,,ppb, -.0056,.0050,89.46, -.0066, -.0019, -.
0117, -.0084, .0007, QC Pass,ñ.0300%,.0000
Elem14=Se[82],[82],,,ppb, .0235,.0720,306.0, -.0042, .0223, .0450,
-.0715, .1260, QC Pass,ñ.0800%,.0000
Elem15=Ta[181],[181],,,ppb, .0027,.0012,43.38, .0041, .0036, .0012
, .0019, .0026, QC Pass,ñ.0300%,.0000
Elem16=Te[128],[128],,,ppb, .0202,.0135,67.23, .0281, -.0017, .025
7, .0324, .0164, QC Pass,ñ.0300%,.0000
Elem17=Tl[205],[205],,,ppb, .0040,.0023,57.93, .0030, .0007, .0058
, .0039, .0066, QC Pass,ñ.0300%,.0000
Elem18=V [51],[51],,,ppb, .0372,.0259,69.68, .0622, .0616, .0016,
.0233, .0371, QC Pass,ñ.5000%,.0000
Elem19=W [182],[182],,,ppb, -.0030,.0032,104.2, -.0030, -.0022, .0
014, -.0040, -.0074, QC Pass,ñ.0300%,.0000
Elem20=Y [89],[89],,,ppb, .0019,.0006,32.42, .0013, .0023, .0016,
.0029, .0017, QC Pass,ñ.0300%,.0000
Elem21=AMU[90],[90],,,ppb, .0059,.0018,31.14, .0032, .0050, .0067,
.0078, .0068, QC Pass,ñ.0300%,.0000

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 28.083,.28440,1.0127,27.898,27.819,28.
552,28.081,28.067
Elem1=Ir[193],[193],,Cts/S, 12.319,.23347,1.8952,12.523,12.290,12.
420,11.929,12.433
Elem2=Sc[45],[45],,Cts/S, 32.327,.55409,1.7140,32.309,31.964,31.75
3,32.412,33.198

```

[Sample Header]

```

Method=PERTABS
SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 15:48
Sample Type=QC
Mode=CONC
CorrFactor=1.000000

```

Repeats=5

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .0089,.0448,503.2, -.0509, .0492, .0155,
-.0214, .0522,QC Pass,ñ.5000,.0000
Elem1=Ba[138],[138],,,ppb, .0035,.0024,66.62, .0049, .0037, .0066,
.0014, .0010,QC Pass,ñ.0300,.0000
Elem2=Cd[111],[111],,,ppb, -.0395,.0071,18.01, -.0407, -.0374, -.0
284, -.0457, -.0453,None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, .0006,.0009,155.9, .0008, .0020, .0002,
-.0001, -.0001,QC Pass,ñ.0300%,.0000
Elem4=Eu[153],[153],,,ppb, .0014,.0009,68.49, .0006, .0020, .0025,
.0013, .0003,QC Pass,ñ.0300%,.0000
Elem5=AMU[93],[93],,,ppb, .0013,.0011,90.82, .0026, .0020, .0003,
-.0001, .0015,QC Pass,ñ.0300%,.0000
Elem6=Pd[108],[108],,,ppb, .0176,.0084,47.80, .0191, .0254, .0259,
.0102, .0077,QC Pass,ñ.0300%,.0000
Elem7=Pd[110],[110],,,ppb, -.0039,.0047,119.6, -.0085, -.0001, -.0
048, .0019, -.0080,QC Pass,ñ.0300%,.0000
Elem8=Rb[85],[85],,,ppb,Q .0508,.0061,11.93, .0545, .0537, .0555,
.0498, .0407,QC Fail,ñ.0300%,.0000
Elem9=Rh[103],[103],,,ppb, .0005,.0011,230.9, .0002, .0015, .0005,
.0013, -.0012,QC Pass,ñ.0300%,.0000
Elem10=Ru[101],[101],,,ppb, .0015,.0028,180.2, -.0012, .0035, .000
7, .0052, -.0007,QC Pass,ñ.0300%,.0000
Elem11=Ru[102],[102],,,ppb, .0029,.0006,20.99, .0028, .0039, .0029
, .0029, .0022,QC Pass,ñ.0300%,.0000
Elem12=Sb[121],[121],,,ppb, -.0081,.0019,23.04, -.0080, -.0094, -.
0100, -.0051, -.0082,QC Pass,ñ.0300%,.0000
Elem13=Sb[123],[123],,,ppb, -.0079,.0054,68.05, -.0155, -.0031, -.
0035, -.0060, -.0113,QC Pass,ñ.0300%,.0000
Elem14=Se[82],[82],,,ppb, .0082,.0736,896.1, .0833, .0331, -.0205,
-.1050, .0502,QC Pass,ñ.0800%,.0000
Elem15=Ta[181],[181],,,ppb, .0006,.0006,99.99, .0005, .0015, .0005
, -.0001, .0006,QC Pass,ñ.0300%,.0000
Elem16=Te[128],[128],,,ppb, .0078,.0144,185.3, .0111, .0122, .0184
, .0146, -.0175,QC Pass,ñ.0300%,.0000
Elem17=Tl[205],[205],,,ppb, .0024,.0008,34.51, .0032, .0034, .0017
, .0023, .0016,QC Pass,ñ.0300%,.0000
Elem18=V [51],[51],,,ppb, .0184,.0087,47.04, .0138, .0270, .0204,
.0059, .0251,QC Pass,ñ.5000%,.0000
Elem19=W [182],[182],,,ppb, -.0030,.0022,72.83, -.0013, -.0043, -.
0059, -.0006, -.0030,QC Pass,ñ.0300%,.0000
Elem20=Y [89],[89],,,ppb, .0020,.0009,44.29, .0019, .0011, .0035,
.0020, .0016,QC Pass,ñ.0300%,.0000
Elem21=AMU[90],[90],,,ppb, .0047,.0027,56.96, .0055, .0081, .0043,

```

.0048, .0007, QC Pass, ñ.0300%, .0000

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 29.016,.86202,2.9708,28.904,28.724,28.722,28.238,30.493

Elem1=Ir[193],[193],,Cts/S, 12.605,.36803,2.9198,12.660,12.333,12.459,12.352,13.221

Elem2=Sc[45],[45],,Cts/S, 33.565,.24193,.72078,33.514,33.569,33.245,33.924,33.572

LABCORE Completed Worklist Report for Worklist# 33454

Analyst: kjt

Instrument: ICPMS1

Book#: 000523

Method: LA-506-101 Rev/Mod A-3

000524-1
000524-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPT

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	QMSPT-QC ASTOT	QC	0.015	1.39e-02	92.667 % Recovery	
1 ICV	0	QMSPT-QC BATOT	QC	0.015	1.52e-02	101.333 % Recovery	
1 ICV	0	QMSPT-QC PDTOT	QC	0.015	1.56e-02	104.000 % Recovery	
1 ICV	0	QMSPT-QC RBTOT	QC	0.015	1.48e-02	98.667 % Recovery	
1 ICV	0	QMSPT-QC RHTOT	QC	0.015	1.50e-02	100.000 % Recovery	
1 ICV	0	QMSPT-QC RUTOT	QC	0.015	1.69e-02	112.667 % Recovery	
1 ICV	0	QMSPT-QC SBTOT	QC	0.015	1.54e-02	102.667 % Recovery	
1 ICV	0	QMSPT-QC SHTOT	QC	0.015	1.53e-02	102.000 % Recovery	
1 ICV	0	QMSPT-QC TATOT	QC	0.015	1.53e-02	102.000 % Recovery	
1 ICV	0	QMSPT-QC THTOT	QC	0.015	1.45e-02	96.667 % Recovery	
1 ICV	0	QMSPT-QC TLTOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	QMSPT-QC V-TOT	QC	0.015	1.52e-02	101.333 % Recovery	
1 ICV	0	QMSPT-QC W-TOT	QC	0.015	1.50e-02	100.000 % Recovery	
1 ICV	0	QMSPT-QC Y-TOT	QC	0.015	1.54e-02	102.667 % Recovery	
1 ICV	0	QMSPT-QC 90	QC	0.015	1.62e-02	108.000 % Recovery	
1 ICV	0	QMSPT-QC 93	QC	0.015	2.30e-02	153.333 % Recovery	
1 ICV	0	QMSPT-QC 151	QC	0.015	1.51e-02	100.667 % Recovery	
2 ICB	0	QMSPT-QC ASTOT	QC	1	<3.00e-4	ug/mL	
2 ICB	0	QMSPT-QC BATOT	QC	1	4.30e-06	0.000 ug/mL	
2 ICB	0	QMSPT-QC PDTOT	QC	1	<4.00e-5	ug/mL	
2 ICB	0	QMSPT-QC RBTOT	QC	1	3.08e-05	0.000 ug/mL	
2 ICB	0	QMSPT-QC RHTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC RUTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC SBTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC SHTOT	QC	1	1.48e-04	0.000 ug/mL	
2 ICB	0	QMSPT-QC TATOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC THTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC TLTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC V-TOT	QC	1	<1.50e-3	ug/mL	
2 ICB	0	QMSPT-QC W-TOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC Y-TOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 90	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 93	QC	1	<3.00e-5	ug/mL	
2 ICB	0	QMSPT-QC 151	QC	1	<3.00e-5	ug/mL	
3 STD-PREP	0	QMSPT-A1 ASTOT-A1	SOLID	5.0	4.53e+00	90.600 % Recovery	
3 STD-PREP	0	QMSPT-A1 BATOT-A1	SOLID	5.0	4.80e+00	96.000 % Recovery	
3 STD-PREP	0	QMSPT-A1 PDTOT-A1	SOLID	N/A	5.34e-01	% Recovery	
3 STD-PREP	0	QMSPT-A1 RBTOT-A1	SOLID	N/A	<6.63e-2	% Recovery	
3 STD-PREP	0	QMSPT-A1 RHTOT-A1	SOLID	N/A	<6.63e-2	% Recovery	
3 STD-PREP	0	QMSPT-A1 RUTOT-A1	SOLID	N/A	9.15e-02	% Recovery	
3 STD-PREP	0	QMSPT-A1 SBTOT-A1	SOLID	5.0	5.07e+00	101.400 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33454

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
3	STD-PREP		0		EMSPT-A1 SETOT-A1	SOLID	5.0	5.11e+00	102.200	% Recovery
3	STD-PREP		0		EMSPT-A1 TATOT-A1	SOLID	N/A	<6.63e-2		% Recovery
3	STD-PREP		0		EMSPT-A1 TETOT-A1	SOLID	N/A	<6.63e-2		% Recovery
3	STD-PREP		0		EMSPT-A1 TLTOT-A1	SOLID	5.0	4.83e+00	96.600	% Recovery
3	STD-PREP		0		EMSPT-A1 V-TOT-A1	SOLID	5.0	4.85e+00	97.000	% Recovery
3	STD-PREP		0		EMSPT-A1 W-TOT-A1	SOLID	N/A	<6.63e-2		% Recovery
3	STD-PREP		0		EMSPT-A1 Y-TOT-A1	SOLID	5.0	4.74e+00	94.800	% Recovery
3	STD-PREP		0		EMSPT-A1 90-A1	SOLID	5.0	5.38e+00	107.600	% Recovery
3	STD-PREP		0		EMSPT-A1 93-A1	SOLID	N/A	<6.63e-2		% Recovery
3	STD-PREP		0		EMSPT-A1 151-A1	SOLID	5.0	4.78e+00	95.600	% Recovery
4	BLNK-PREP		0		EMSPT-A1 ASTOT-A1	SOLID	1	<6.63e-1		ug/g
4	BLNK-PREP		0		EMSPT-A1 BATOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 PDTOT-A1	SOLID	1	<8.84e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 RBTOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 RHTOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 RUTOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 SBTOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 SETOT-A1	SOLID	1	4.19e-01	0.419	ug/g
4	BLNK-PREP		0		EMSPT-A1 TATOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 TETOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 TLTOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 V-TOT-A1	SOLID	1	<3.32e0		ug/g
4	BLNK-PREP		0		EMSPT-A1 W-TOT-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 Y-TOT-A1	SOLID	1	<2.21e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 90-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 93-A1	SOLID	1	<6.63e-2		ug/g
4	BLNK-PREP		0		EMSPT-A1 151-A1	SOLID	1	<6.63e-2		ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 ASTOT-A1	SOLID	N/A	< 7.281e+01	72.810	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 BATOT-A1	SOLID	N/A	4.71e+02	7.280	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 RUTOT-A1	SOLID	N/A	?	0.165	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 PDTOT-A1	SOLID	N/A	1.740e+03	9.709	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 RBTOT-A1	SOLID	N/A	?	0.165	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 RHTOT-A1	SOLID	N/A	< 7.281e+00	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 RUTOT-A1	SOLID	N/A	1.159e+02	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 SBTOT-A1	SOLID	N/A	1.041e+03	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 SETOT-A1	SOLID	N/A	< 7.281e+00	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 TATOT-A1	SOLID	N/A	< 7.281e+00	24.270	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 TETOT-A1	SOLID	N/A	< 7.281e+00	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 TLTOT-A1	SOLID	N/A	< 7.281e+00	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 V-TOT-A1	SOLID	N/A	< 3.641e+02	364.000	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 W-TOT-A1	SOLID	N/A	2.810e+01	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 Y-TOT-A1	SOLID	N/A	1.624e+02	2.428	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 90-A1	SOLID	N/A	2.254e+04	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 93-A1	SOLID	N/A	2.590e+02	7.281	ug/g
5	SAMPLE	S00T000804	0	A	EMSPT-A1 151-A1	SOLID	N/A	2.223e+01	7.281	ug/g
6	SPK-PREDIGS	S00T000804	0	A	EMSPT-A1 ASTOT-A1	SOLID	556.174	4.90e+02	88.102	% Recovery
6	SPK-PREDIGS	S00T000804	0	A	EMSPT-A1 BATOT-A1	SOLID	556.174	5.21e+02	93.676	% Recovery
6	SPK-PREDIGS	S00T000804	0	A	EMSPT-A1 PDTOT-A1	SOLID	N/A	2.47e+02		% Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33454

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	RBTOT-A1	SOLID	N/A	7.23e+00		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	RHTOT-A1	SOLID	N/A	-7.04e0		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	RUTOT-A1	SOLID	N/A	-4.66e1		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	SBTOT-A1	SOLID	556.174	5.54e+02	99.609	% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	SETOT-A1	SOLID	556.174	5.45e+02	97.991	% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	TATOT-A1	SOLID	N/A	1.16e+00		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	TETOT-A1	SOLID	N/A	1.37e+00		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	TLTOT-A1	SOLID	556.174	5.27e+02	94.755	% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	V-TOT-A1	SOLID	556.174	5.11e+02	91.878	% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	W-TOT-A1	SOLID	N/A	5.15e+00		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	Y-TOT-A1	SOLID	556.174	5.40e+02	97.092	% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	90-A1	SOLID	N/A	1.77e+03		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	93-A1	SOLID	N/A	2.12e+01		% Recovery
6	SPK-PREDIGS00T000804	0 A	QMSPT-A1	151-A1	SOLID	556.174	5.39e+02	96.912	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	ASTOT-A1	0.0250	2.18e-02	87.200	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	BATOT-A1	0.0250	2.46e-02	98.400	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	PDTOT-A1	0.0250	3.07e-02	122.800	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	RBTOT-A1	0.0250	2.54e-02	101.600	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	RHTOT-A1	0.0250	2.55e-02	102.000	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	RUTOT-A1	0.0250	2.78e-02	111.200	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	SBTOT-A1	0.0250	2.50e-02	100.000	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	SETOT-A1	0.0250	2.46e-02	98.400	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	TATOT-A1	0.0250	2.47e-02	98.800	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	TETOT-A1	0.0250	2.35e-02	94.000	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	TLTOT-A1	0.0250	2.50e-02	100.000	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	V-TOT-A1	0.0250	2.51e-02	100.400	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	W-TOT-A1	0.0250	2.44e-02	97.600	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	Y-TOT-A1	0.0250	2.52e-02	100.800	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	90-A1	0.0250	2.51e-02	100.400	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	93-A1	0.0250	3.83e-02	153.200	% Recovery
7	SPK-POST	S00T000804	0 A	QMSPT-A1	151-A1	0.0250	2.36e-02	94.400	% Recovery
8	SAMPLE	S00T000803	0 A	QMSPT-A1	ASTOT-A1	N/A	< 7.071e+01	70.710	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	BATOT-A1	N/A	5.12e+02	7.070	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	EUTOT-A1	N/A	?	0.160	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	PDTOT-A1	N/A	1.976e+03	9.428	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	PRTOT-A1	N/A	?	0.160	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	RBTOT-A1	N/A	1.700e+01	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	RHTOT-A1	N/A	1.233e+02	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	RUTOT-A1	N/A	1.149e+03	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	SBTOT-A1	N/A	< 7.071e+00	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	SETOT-A1	N/A	6.230e+01	23.570	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	TATOT-A1	N/A	< 7.071e+00	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	TETOT-A1	N/A	5.860e+01	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	TLTOT-A1	N/A	< 7.071e+00	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	V-TOT-A1	N/A	< 3.536e+02	353.600	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	W-TOT-A1	N/A	3.628e+01	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	Y-TOT-A1	N/A	1.794e+02	2.357	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	90-A1	N/A	2.562e+04	7.071	ug/g
8	SAMPLE	S00T000803	0 A	QMSPT-A1	93-A1	N/A	3.017e+02	7.071	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33454

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
8	SAMPLE	S00T000803	0	A	QMSPT-A1 151-A1	SOLID	N/A	2.289e+01	7.071	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 ASTOT-A1	SOLID	N/A	7.486e+01	74.860	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 BATOT-A1	SOLID	N/A	5.60e+02	7.490	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 EUTOT-A1	SOLID	N/A	?	0.169	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 PDTOT-A1	SOLID	N/A	2.171e+03	9.983	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 PRTOT-A1	SOLID	N/A	?	0.169	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 RBTOT-A1	SOLID	N/A	1.924e+01	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 RHTOT-A1	SOLID	N/A	1.335e+02	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 RUTOT-A1	SOLID	N/A	1.049e+03	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 SBTOT-A1	SOLID	N/A	7.486e+00	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 SETOT-A1	SOLID	N/A	5.023e+01	24.960	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 TATOT-A1	SOLID	N/A	7.486e+00	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 TETOT-A1	SOLID	N/A	6.039e+01	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 TLTOT-A1	SOLID	N/A	7.486e+00	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 V-TOT-A1	SOLID	N/A	3.743e+02	374.300	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 W-TOT-A1	SOLID	N/A	3.277e+01	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 Y-TOT-A1	SOLID	N/A	1.910e+02	2.496	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 90-A1	SOLID	N/A	2.655e+04	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 93-A1	SOLID	N/A	3.134e+02	7.486	ug/g
9	SAMPLE	S00T000805	0	A	QMSPT-A1 151-A1	SOLID	N/A	2.471e+01	7.486	ug/g
10	CCV		0		QMSPT-QC ASTOT	QC	0.015	1.41e-02	94.000	% Recovery
10	CCV		0		QMSPT-QC BATOT	QC	0.015	1.46e-02	97.333	% Recovery
10	CCV		0		QMSPT-QC PDTOT	QC	0.015	1.58e-02	105.333	% Recovery
10	CCV		0		QMSPT-QC RBTOT	QC	0.015	1.51e-02	100.667	% Recovery
10	CCV		0		QMSPT-QC RHTOT	QC	0.015	1.52e-02	101.333	% Recovery
10	CCV		0		QMSPT-QC RUTOT	QC	0.015	1.68e-02	112.000	% Recovery
10	CCV		0		QMSPT-QC SBTOT	QC	0.015	1.52e-02	101.333	% Recovery
10	CCV		0		QMSPT-QC SETOT	QC	0.015	1.60e-02	106.667	% Recovery
10	CCV		0		QMSPT-QC TATOT	QC	0.015	1.57e-02	104.667	% Recovery
10	CCV		0		QMSPT-QC TETOT	QC	0.015	1.42e-02	94.667	% Recovery
10	CCV		0		QMSPT-QC TLTOT	QC	0.015	1.50e-02	100.000	% Recovery
10	CCV		0		QMSPT-QC V-TOT	QC	0.015	1.56e-02	104.000	% Recovery
10	CCV		0		QMSPT-QC W-TOT	QC	0.015	1.52e-02	101.333	% Recovery
10	CCV		0		QMSPT-QC Y-TOT	QC	0.015	1.59e-02	106.000	% Recovery
10	CCV		0		QMSPT-QC 90	QC	0.015	1.71e-02	114.000	% Recovery
10	CCV		0		QMSPT-QC 93	QC	0.015	2.35e-02	156.667	% Recovery
10	CCV		0		QMSPT-QC 151	QC	0.015	1.42e-02	94.667	% Recovery
11	CCB		0		QMSPT-QC ASTOT	QC	1	<3.00e-4		ug/mL
11	CCB		0		QMSPT-QC BATOT	QC	1	8.10e-06	0.000	ug/mL
11	CCB		0		QMSPT-QC PDTOT	QC	1	6.99e-05	0.000	ug/mL
11	CCB		0		QMSPT-QC RBTOT	QC	1	9.31e-05	0.000	ug/mL
11	CCB		0		QMSPT-QC RHTOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC RUTOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC SBTOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC SETOT	QC	1	2.45e-04	0.000	ug/mL
11	CCB		0		QMSPT-QC TATOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC TETOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC TLTOT	QC	1	<3.00e-5		ug/mL
11	CCB		0		QMSPT-QC V-TOT	QC	1	<1.50e-3		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33454

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
11 CCB	0	QMSPT-QC W-TOT	QC	1	<3.00e-5		ug/mL
11 CCB	0	QMSPT-QC Y-TOT	QC	1	<3.00e-5		ug/mL
11 CCB	0	QMSPT-QC 90	QC	1	<3.00e-5		ug/mL
11 CCB	0	QMSPT-QC 93	QC	1	<3.00e-5		ug/mL
11 CCB	0	QMSPT-QC 151	QC	1	<3.00e-5		ug/mL

Final page for worklist# 33454

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

05/30/2000
Reviewer Signature _____ Date _____

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LABCORE Data Entry Template for Worklist# 33454

Analyst: KST Instrument: ICPMS1 Book# 000523 -
 Method: LA-506-101 Rev/Mod A-3 000524-1
000524-3
 Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) MSPT-A1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@MSPT-QC	QC		
2	ICB		@MSPT-QC	QC		
3	STD-PREP		@MSPT-A1	SOLID		
4	BLNK-PREP		@MSPT-A1	SOLID		
5	SAMPLE	S00T000804	0 A	@MSPT-A1	SOLID	99000433 AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
6	SPK-PREDIG	S00T000804	0 A	@MSPT-A1	SOLID	
7	SPK-POST	S00T000804	0 A	@MSPT-A1	SOLID	
8	SAMPLE	S00T000803	0 A	@MSPT-A1	SOLID	99000433 AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
9	SAMPLE	S00T000805	0 A	@MSPT-A1	SOLID	99000433 AZ-101 (2)
Analytes Requested: 151-A1 , 90-A1 , 93-A1 , AGTOT-A1, ASTOT-A1, B-TOT-A1, BATOT-A1, BETOT-A1, CETOT-A1, COTOT-A1, EUTOT-A1, K-TOT-A1, LATOT-A1, LITOT-A1, MOTOT-A1, NATOT-A1, NDTOT-A1, NI63-A1 , PDTOT-A1, PRTOT-A1, RBTOT-A1, RHTOT-A1, RUTOT-A1, S-TOT-A1, SBTOT-A1, SETOT-A1, TATOT-A1, TETOT-A1, TLTOT-A1, V-TOT-A1, W-TOT-A1, Y-TOT-A1, ZNTOT-A1						
10	CCV		@MSPT-QC	QC		

Data Entry Comments:

Validated by:
Shel M. Lang
 05/30/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1186

05/05/00 09:41

ws2

Page: 2

LABCORE Data Entry Template for Worklist# 33454

S Type	Sample#	R A Test	Matrix	Group#	Project
11 CCB		@MSPT-QC QC			

Final page for worklist # 33454

K. J. Phomdike 5-24-00
 Signature Date

Signature Date

S00T000804 451 df K31 05-24-00
 S00T000804_S 1-10-05-20
~~S00T000804_S~~
 S00T000804-a

1cc has only 4 runs - the std emptied during 5th run and was deleted. *Phomdike*
 5-24-00

Prep-Std
 Prep-Blank
 S00T000804
 S00T000804_S
 S00T000804-a
 S00T000803
 S00T000805
 S00T000803_M

2211df

1-10-01-20

Data Entry Comments:

Spikes 1ml (into 20ml) of (5ppm)
 of 000518-2 and 1ml of 85B48A
 (5ppm)

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1187

$$Ba = \frac{(1.941 \times 2211) \frac{\mu g}{L}}{9.11 \frac{g}{L}} = 4.71 \times 10^2 \frac{\mu g}{g}$$

SpK Predig:

$$Ba = \frac{\left(\frac{(4.035 \times 2211) \frac{\mu g}{L}}{8.99 \frac{\mu g}{L}} \right) - \left(\frac{(1.941 \times 2211) \frac{\mu g}{L}}{9.11 \frac{g}{L}} \right)}{5.0 \frac{\mu g}{ML} + \frac{1}{8.99 \frac{\mu g}{L} \times \frac{1L}{1000ml}}} \times 100 =$$

$$= 93.7\%$$

Post SpK:

$$Ba = \frac{26.55 - 1.941}{25} \times 100 = 98.4\%$$

SP
3/30/2000

Analysis Report

05/24/00 08:50:09 HNF-1701 REV. 0

page 1

Method: MS_TUNE

Sample Name: Sample-0

Operator:

Comment:

Run Time: 05/24/00 08:48 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	114800.	51610.	124300.
Stddev	1737.	1055.	1738.
%RSD	1.512	2.044	1.399
#1	114900.	50350.	124800.
#2	114900.	52040.	126300.
#3	114100.	52080.	125600.
#4	114300.	53270.	124400.
#5	115400.	50810.	124000.
#6	117900.	52530.	125500.
#7	115200.	52310.	120700.
#8	113800.	51010.	121800.
#9	116400.	51780.	125100.
#10	111300.	49910.	124500.

file ~~05-24~~ ¹⁵⁻²⁴⁻⁰⁰ pt0501a.txt
 K5 Romelike 5-24-00

Prep-Std
 Bluk-Prep
 S00T000804
 S00T000804-S
 S00T000804-a
 S00T000803
 S00T000805
 S00T000803-rr

2211df 1-10-1-20

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1189 TO 1220.

[Sample Header]
Method=MS_TUNE
SampleName=Sample-0
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 08:48
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 114800.,1737.,1.512, 114900., 114900., 114100., 114300., 115400., 117900., 115200., 113800., 116400., 111300.,,
Elem1=Ir[193],[193],,,Cts/S, 51610.,1055.,2.044, 50350., 52040., 52080., 53270., 50810., 52530., 52310., 51010., 51780., 49910.,,
Elem2=Sc[45],[45],,,Cts/S, 124300.,1738.,1.399, 124800., 126300., 125600., 124400., 124000., 125500., 120700., 121800., 125100., 124500.,,
500.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=PERTABS
SampleName=iec
Operator=kjt
Comment=
CustID=
CustSmpl=000518-4
LabID=
Run Time=05/24/2000 09:23
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb,Q 15.74,8.681,55.16, 19.90, 19.40, 19.23,

```

19.94, .2189, QC Fail, 15.00%, 20.00
Elem1=Ba[138],[138],,,ppb, .0962,.2057,213.7, .0064, .0029, .0022,
.0056, .4641, None, 0.0, 0.0
Elem2=Cd[111],[111],,,ppb, .5841,1.446,247.6, -.0675, -.0644, -.06
26, -.0565, 3.172, None, 0.0, 0.0
Elem3=Eu[151],[151],,,ppb, .0607,.1330,219.3, .0009, .0009, .0015,
.0014, .2986, None, 0.0, 0.0
Elem4=Eu[153],[153],,,ppb, .0571,.1269,222.2, -.0005, .0011, .0017
, -.0009, .2841, None, 0.0, 0.0
Elem5=AMU[93],[93],,,ppb, .1018,.2261,222.2, .0015, -.0011, -.0001
, .0022, .5063, None, 0.0, 0.0
Elem6=Pd[108],[108],,,ppb, .3655,.7996,218.8, .0097, .0059, .0074,
.0087, 1.796, None, 0.0, 0.0
Elem7=Pd[110],[110],,,ppb, .3726,.9058,243.1, -.0322, -.0363, -.03
15, -.0300, 1.993, None, 0.0, 0.0
Elem8=Rb[85],[85],,,ppb, .6995,1.536,219.5, .0135, .0126, .0141, .
0108, 3.447, None, 0.0, 0.0
Elem9=Rh[103],[103],,,ppb, .0148,.0318,214.8, .0011, .0005, .0008,
-.0001, .0716, None, 0.0, 0.0
Elem10=Ru[101],[101],,,ppb, .0911,.2039,223.8, .0003, .0029, -.003
7, .0002, .4559, None, 0.0, 0.0
Elem11=Ru[102],[102],,,ppb, .2426,.5369,221.3, .0015, .0024, .0046
, .0014, 1.203, None, 0.0, 0.0
Elem12=Sb[121],[121],,,ppb, .0297,.0947,318.5, -.0102, -.0124, -.0
139, -.0139, .1990, None, 0.0, 0.0
Elem13=Sb[123],[123],,,ppb, .0324,.0948,292.7, -.0104, -.0050, -.0
093, -.0153, .2019, None, 0.0, 0.0
Elem14=Se[82],[82],,,ppb, 6.031,13.10,217.2, .0668, .1772, .1254,
.3192, 29.47, None, 0.0, 0.0
Elem15=Ta[181],[181],,,ppb, .0473,.1007,213.1, .0026, .0026, .0031
, .0007, .2275, None, 0.0, 0.0
Elem16=Te[128],[128],,,ppb, 4.164,9.310,223.6, .0187, -.0138, -.01
04, .0064, 20.82, None, 0.0, 0.0
Elem17=Tl[205],[205],,,ppb, .3517,.7589,215.8, .0107, .0116, .0149
, .0119, 1.709, None, 0.0, 0.0
Elem18=V[51],[51],,,ppb, 19.67,.4106,2.087, 19.56, 19.63, 19.39,
19.41, 20.39, QC Pass, 15.00%, 20.00
Elem19=W[182],[182],,,ppb, .3268,.7299,223.4, .0019, .0018, -.004
0, .0015, 1.633, None, 0.0, 0.0
Elem20=Y[89],[89],,,ppb, .1523,.3372,221.4, .0014, .0007, .0012,
.0028, .7555, None, 0.0, 0.0
Elem21=AMU[90],[90],,,ppb, .5488,1.218,221.9, .0047, .0044, .0021,
.0054, 2.727, None, 0.0, 0.0

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=In[115],[115],,Cts/S, 27.277,15.176,55.636,35.282,34.321,33.
493,33.119,.17070

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HNF-1701 REV. 0

Elem1=Ir[193],[193],,Cts/S, 11.793,6.5990,55.957,14.702,14.162,14.679,15.406,.01485
 Elem2=Sc[45],[45],,Cts/S, 38.353,.30615,.79826,38.682,38.479,38.275,37.870,38.457

[Sample Header]
 Method=PERTABS
 SampleName=iec
 Operator=kjt
 Comment=
 CustID=
 CustSmpl=000518-4
 LabID=
 Run Time=05/24/2000 09:23
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=4

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
 Elem0=As[75],[75],,,ppb, 19.62,.3574,1.822, 19.90, 19.40, 19.23, 19.94, QC Pass,15.00%,20.00
 Elem1=Ba[138],[138],,,ppb, .0043,.0021,48.29, .0064, .0029, .0022, .0056, None,0.0,0.0
 Elem2=Cd[111],[111],,,ppb, -.0628,.0046,7.371, -.0675, -.0644, -.0626, -.0565, None,0.0,0.0
 Elem3=Eu[151],[151],,,ppb, .0012,.0003,27.28, .0009, .0009, .0015, .0014, None,0.0,0.0
 Elem4=Eu[153],[153],,,ppb, .0004,.0012,347.2, -.0005, .0011, .0017, -.0009, None,0.0,0.0
 Elem5=AMU[93],[93],,,ppb, .0007,.0015,231.1, .0015, -.0011, -.0001, .0022, None,0.0,0.0
 Elem6=Pd[108],[108],,,ppb, .0079,.0017,21.03, .0097, .0059, .0074, .0087, None,0.0,0.0
 Elem7=Pd[110],[110],,,ppb, -.0325,.0027,8.261, -.0322, -.0363, -.0315, -.0300, None,0.0,0.0
 Elem8=Rb[85],[85],,,ppb, .0127,.0014,11.04, .0135, .0126, .0141, .0108, None,0.0,0.0
 Elem9=Rh[103],[103],,,ppb, .0006,.0005,87.50, .0011, .0005, .0008, -.0001, None,0.0,0.0
 Elem10=Ru[101],[101],,,ppb, -.0001,.0027,3801., .0003, .0029, -.0037, .0002, None,0.0,0.0
 Elem11=Ru[102],[102],,,ppb, .0025,.0015,59.59, .0015, .0024, .0046, .0014, None,0.0,0.0
 Elem12=Sb[121],[121],,,ppb, -.0126,.0018,13.99, -.0102, -.0124, -.0139, -.0139, None,0.0,0.0

Elem13=Sb[123],[123],,,ppb, -.0100,.0043,42.60, -.0104, -.0050, -.0093, -.0153, None, 0.0, 0.0
Elem14=Se[82],[82],,,ppb, .1721,.1079,62.68, .0668, .1772, .1254, .3192, None, 0.0, 0.0
Elem15=Ta[181],[181],,,ppb, .0022,.0011,47.45, .0026, .0026, .0031, .0007, None, 0.0, 0.0
Elem16=Te[128],[128],,,ppb, .0002,.0151,6327., .0187, -.0138, -.0104, .0064, None, 0.0, 0.0
Elem17=Tl[205],[205],,,ppb, .0123,.0018,14.86, .0107, .0116, .0149, .0119, None, 0.0, 0.0
Elem18=V[51],[51],,,ppb, 19.50,.1195,.6127, 19.56, 19.63, 19.39, 19.41, QC Pass, 15.00%, 20.00
Elem19=W[182],[182],,,ppb, .0003,.0029,865.8, .0019, .0018, -.0040, .0015, None, 0.0, 0.0
Elem20=Y[89],[89],,,ppb, .0015,.0009,59.18, .0014, .0007, .0012, .0028, None, 0.0, 0.0
Elem21=AMU[90],[90],,,ppb, .0042,.0014,34.02, .0047, .0044, .0021, .0054, None, 0.0, 0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 34.054,.96084,2.8216,35.282,34.321,33.493,33.119
Elem1=Ir[193],[193],,Cts/S, 14.737,.51116,3.4685,14.702,14.162,14.679,15.406
Elem2=Sc[45],[45],,Cts/S, 38.327,.34700,.90537,38.682,38.479,38.275,37.870

[Sample Header]

Method=PERTABS
SampleName=icv1
Operator=kjt
Comment=
CustID=
CustSmpl=000523-3
LabID=
Run Time=05/24/2000 09:31
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 13.91,.0863,.6199, 13.96, 13.87, 14.01, 13.79, 13.95, QC Pass, 15.00%, 15.00
Elem1=Ba[138],[138],,,ppb, 15.15,.6134,4.050, 14.47, 16.07, 15.33,


```

15.10, 14.76, QC Pass, 10.00%, 15.00
Elem2=Cd[111],[111],,,ppb, 15.26,.2768,1.814, 15.25, 15.34, 14.79,
15.43, 15.49, None, 0.0, 0.0
Elem3=Eu[151],[151],,,ppb, .0401,.0046,11.40, .0378, .0472, .0384,
.0417, .0354, None, 0.0, 0.0
Elem4=Eu[153],[153],,,ppb, .0486,.0025,5.195, .0456, .0502, .0463,
.0513, .0498, None, 0.0, 0.0
Elem5=AMU[93],[93],,,ppb, .0177,.0005,3.072, .0176, .0172, .0171,
.0183, .0182, None, 0.0, 0.0
Elem6=Pd[108],[108],,,ppb, 1.660,.0659,3.970, 1.738, 1.565, 1.661,
1.634, 1.700, None, 0.0, 0.0
Elem7=Pd[110],[110],,,ppb, 13.72,.2617,1.908, 13.70, 13.73, 13.58,
14.14, 13.44, None, 0.0, 0.0
Elem8=Rb[85],[85],,,ppb, .0176,.0014,7.747, .0159, .0181, .0181, .
0194, .0166, None, 0.0, 0.0
Elem9=Rh[103],[103],,,ppb, .0032,.0005,16.62, .0041, .0030, .0034,
.0027, .0030, None, 0.0, 0.0
Elem10=Ru[101],[101],,,ppb, .0059,.0018,29.90, .0067, .0069, .0029
, .0072, .0058, None, 0.0, 0.0
Elem11=Ru[102],[102],,,ppb, .0067,.0004,5.591, .0063, .0065, .0066
, .0072, .0070, None, 0.0, 0.0
Elem12=Sb[121],[121],,,ppb, 15.35,.4375,2.851, 15.03, 15.99, 14.90
, 15.27, 15.55, QC Pass, 10.00%, 15.00
Elem13=Sb[123],[123],,,ppb, 15.13,.4612,3.048, 14.41, 15.59, 14.96
, 15.40, 15.27, QC Pass, 10.00%, 15.00
Elem14=Se[82],[82],,,ppb, 15.27,.5284,3.461, 15.22, 15.90, 15.54,
14.47, 15.19, QC Pass, 10.00%, 15.00
Elem15=Ta[181],[181],,,ppb, .0019,.0009,49.55, .0025, .0022, .0023
, .0002, .0021, None, 0.0, 0.0
Elem16=Te[128],[128],,,ppb, .0068,.0156,229.6, .0329, .0092, -.003
1, -.0040, -.0013, None, 0.0, 0.0
Elem17=Tl[205],[205],,,ppb, 15.13,.4260,2.816, 15.01, 15.88, 14.90
, 14.93, 14.92, QC Pass, 10.00%, 15.00
Elem18=V[51],[51],,,ppb, 15.22,.1748,1.148, 15.03, 15.24, 15.07,
15.33, 15.45, QC Pass, 15.00%, 15.00
Elem19=W[182],[182],,,ppb, .0018,.0026,144.5, .0050, .0001, .0014
, -.0013, .0038, None, 0.0, 0.0
Elem20=Y[89],[89],,,ppb, .0187,.0016,8.719, .0188, .0213, .0186,
.0180, .0168, None, 0.0, 0.0
Elem21=AMU[90],[90],,,ppb, 16.22,.5987,3.692, 15.68, 16.21, 16.79,
16.84, 15.56, QC Pass, 15.00%, 15.00

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 33.243,.79820,2.4011,33.706,32.645,32.
620,32.817,34.429
Elem1=Ir[193],[193],,Cts/S, 13.941,.58791,4.2170,13.860,14.037,13.
095,14.747,13.968

```

Elem2=Sc[45],[45],,Cts/S, 37.570,.49717,1.3233,37.310,38.385,37.60
3,37.073,37.477

[Sample Header]
Method=PERTABS
SampleName=icv2
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000524-1
LabID=
Run Time=05/24/2000 09:39
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, -.9582,.0663,6.916, -.8569, -1.018, -1.00
4, -.9277, -.9839,None,0.0,0.0
Elem1=Ba[138],[138],,,ppb, .0335,.0011,3.272, .0324, .0353, .0336,
.0335, .0329,None,0.0,0.0
Elem2=Cd[111],[111],,,ppb, -.0485,.0070,14.47, -.0448, -.0459, -.0
403, -.0555, -.0562,None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, 15.10,.2670,1.769, 15.26, 15.12, 14.80,
15.44, 14.86,QC Pass,10.00%,15.00
Elem4=Eu[153],[153],,,ppb, 14.76,.2314,1.568, 15.08, 14.72, 14.88,
14.61, 14.49,QC Pass,10.00%,15.00
Elem5=AMU[93],[93],,,ppb,Q 23.02,.2679,1.164, 23.30, 23.03, 22.65,
23.24, 22.88,QC Fail,15.00%,15.00
Elem6=Pd[108],[108],,,ppb, 15.60,.2986,1.914, 15.74, 15.57, 15.21,
16.02, 15.48,QC Pass,10.00%,15.00
Elem7=Pd[110],[110],,,ppb, 15.57,.2256,1.448, 15.67, 15.23, 15.48,
15.80, 15.69,QC Pass,10.00%,15.00
Elem8=Rb[85],[85],,,ppb, 14.81,.3028,2.045, 15.15, 14.72, 14.35, 1
4.84, 14.98,QC Pass,10.00%,15.00
Elem9=Rh[103],[103],,,ppb, 14.96,.2504,1.674, 15.01, 15.03, 14.96,
15.24, 14.55,QC Pass,10.00%,15.00
Elem10=Ru[101],[101],,,ppb,Q 16.85,.2248,1.335, 16.99, 17.14, 16.6
9, 16.84, 16.58,QC Fail,10.00%,15.00
Elem11=Ru[102],[102],,,ppb,Q 16.51,.2766,1.675, 16.83, 16.52, 16.5
3, 16.61, 16.07,QC Fail,10.00%,15.00
Elem12=Sb[121],[121],,,ppb, .0051,.0021,41.15, .0073, .0070, .0022
, .0052, .0040,None,0.0,0.0
Elem13=Sb[123],[123],,,ppb, .2150,.0097,4.517, .2035, .2072, .2272
, .2164, .2207,None,0.0,0.0

Elem14=Se[82],[82],,,,ppb, .1813,.1127,62.15, .3442, .1463, .0440,
.2316, .1405,None,0.0,0.0
Elem15=Ta[181],[181],,,,ppb, 15.29,.5264,3.443, 15.31, 16.15, 14.88
, 14.85, 15.27, QC Pass,10.00%,15.00
Elem16=Te[128],[128],,,,ppb, 14.53,.4528,3.116, 14.53, 14.05, 15.10
, 14.84, 14.13, QC Pass,10.00%,15.00
Elem17=Tl[205],[205],,,,ppb, .0068,.0014,21.35, .0069, .0087, .0056
, .0052, .0076,None,0.0,0.0
Elem18=V[51],[51],,,,ppb, .0104,.0110,106.3, .0160, -.0013, -.0017
, .0216, .0172,None,0.0,0.0
Elem19=W[182],[182],,,,ppb, 15.03,.3314,2.205, 15.26, 15.15, 14.51
, 14.90, 15.32, QC Pass,10.00%,15.00
Elem20=Y[89],[89],,,,ppb, 15.35,.1472,.9591, 15.27, 15.57, 15.23,
15.25, 15.44, QC Pass,10.00%,15.00
Elem21=AMU[90],[90],,,,ppb, .0240,.0100,41.55, .0408, .0236, .0224,
.0171, .0159,None,0.0,0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 33.410,.59741,1.7881,32.989,32.675,34.
213,33.560,33.614
Elem1=Ir[193],[193],,Cts/S, 13.889,.64734,4.6607,13.932,13.120,14.
841,14.052,13.502
Elem2=Sc[45],[45],,Cts/S, 38.433,.48103,1.2516,38.967,37.857,38.08
8,38.866,38.390

[Sample Header]

Method=PERTABS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 09:51
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, .0452,.0181,40.07, .0439, .0488, .0370, .
0235, .0728, QC Pass,ñ.5000,.0000
Elem1=Ba[138],[138],,,,ppb, .0043,.0010,23.66, .0038, .0039, .0039,
.0061, .0036, QC Pass,ñ.0300,.0000
Elem2=Cd[111],[111],,,,ppb, .0151,.0129,85.32, .0281, .0079, -.0010

```
, .0282, .0122, None, 0.0, 0.0
Elem3=Eu[151],[151],,,ppb, .0006,.0004,58.70, .0011, .0005, .0006,
.0001, .0007, QC Pass, ñ.0300%, .0000
Elem4=Eu[153],[153],,,ppb, .0013,.0009,70.22, .0023, .0023, .0003,
.0007, .0011, QC Pass, ñ.0300%, .0000
Elem5=AMU[93],[93],,,ppb, .0026,.0009,32.57, .0021, .0029, .0033,
.0014, .0035, QC Pass, ñ.0300%, .0000
Elem6=Pd[108],[108],,,ppb, .0248,.0072,28.87, .0358, .0235, .0273,
.0204, .0173, QC Pass, ñ.0300%, .0000
Elem7=Pd[110],[110],,,ppb, Q .0312,.0114,36.56, .0440, .0334, .0386
, .0247, .0153, QC Fail, ñ.0300%, .0000
Elem8=Rb[85],[85],,,ppb, Q .0308,.0048,15.44, .0386, .0317, .0276,
.0294, .0267, QC Fail, ñ.0300%, .0000
Elem9=Rh[103],[103],,,ppb, .0016,.0004,24.72, .0022, .0016, .0017,
.0012, .0014, QC Pass, ñ.0300%, .0000
Elem10=Ru[101],[101],,,ppb, .0054,.0024,43.89, .0071, .0056, .0066
, .0065, .0013, QC Pass, ñ.0300%, .0000
Elem11=Ru[102],[102],,,ppb, .0058,.0020,33.95, .0085, .0067, .0061
, .0044, .0034, QC Pass, ñ.0300%, .0000
Elem12=Sb[121],[121],,,ppb, -.0021,.0034,161.3, -.0012, -.0045, -.
0052, .0033, -.0029, QC Pass, ñ.0300%, .0000
Elem13=Sb[123],[123],,,ppb, .0029,.0024,83.83, .0070, .0015, .0028
, .0011, .0019, QC Pass, ñ.0300%, .0000
Elem14=Se[82],[82],,,ppb, Q .1484,.0498,33.54, .1677, .0836, .1167,
.1613, .2130, QC Fail, ñ.0800%, .0000
Elem15=Ta[181],[181],,,ppb, .0037,.0011,28.81, .0043, .0050, .0030
, .0037, .0023, QC Pass, ñ.0300%, .0000
Elem16=Te[128],[128],,,ppb, .0020,.0106,521.8, .0079, -.0148, -.00
18, .0075, .0114, QC Pass, ñ.0300%, .0000
Elem17=Tl[205],[205],,,ppb, .0045,.0009,20.47, .0036, .0039, .0049
, .0044, .0059, QC Pass, ñ.0300%, .0000
Elem18=V_[51],[51],,,ppb, .0135,.0173,128.3, .0408, .0041, .0134,
-.0056, .0148, QC Pass, ñ.5000%, .0000
Elem19=W_[182],[182],,,ppb, .0067,.0047,71.19, -.0003, .0121, .005
2, .0098, .0066, QC Pass, ñ.0300%, .0000
Elem20=Y_[89],[89],,,ppb, .0026,.0003,10.97, .0026, .0027, .0023,
.0029, .0023, QC Pass, ñ.0300%, .0000
Elem21=AMU[90],[90],,,ppb, .0045,.0021,45.64, .0072, .0032, .0044,
.0057, .0020, QC Pass, ñ.0300%, .0000
```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 32.727,.95770,2.9263,31.328,32.878,33.520,32.263,33.645

Elem1=Ir[193],[193],,Cts/S, 13.501,.59752,4.4259,13.261,12.564,13.784,13.860,14.033

Elem2=Sc[45],[45],,Cts/S, 37.827,.53518,1.4148,38.178,37.224,37.774,37.426,38.531

[Sample Header]
Method=PERTABS
SampleName=prep std
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 09:58
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 2.049,.0907,4.426, 2.129, 2.112, 1.918, 2.095, 1.991,,,
Elem1=Ba[138],[138],,,ppb, 2.170,.0654,3.015, 2.101, 2.136, 2.259, 2.138, 2.218,,,
Elem2=Cd[111],[111],,,ppb, 2.137,.0481,2.253, 2.079, 2.120, 2.187, 2.110, 2.186,,,
Elem3=Eu[151],[151],,,ppb, 2.164,.1083,5.006, 2.058, 2.175, 2.289, 2.049, 2.246,,,
Elem4=Eu[153],[153],,,ppb, 2.135,.0905,4.239, 2.041, 2.123, 2.210, 2.057, 2.245,,,
Elem5=AMU[93],[93],,,ppb, .0046,.0012,27.03, .0054, .0030, .0036, .0056, .0056,,,
Elem6=Pd[108],[108],,,ppb, .2415,.0149,6.166, .2213, .2611, .2349, .2485, .2417,,,
Elem7=Pd[110],[110],,,ppb, 1.928,.0389,2.019, 1.871, 1.916, 1.973, 1.927, 1.952,,,
Elem8=Rb[85],[85],,,ppb, .0216,.0026,12.11, .0177, .0213, .0220, .0222, .0250,,,
Elem9=Rh[103],[103],,,ppb, .0016,.0004,23.67, .0011, .0016, .0019, .0020, .0014,,,
Elem10=Ru[101],[101],,,ppb, .0414,.0048,11.50, .0404, .0373, .0402, .0396, .0497,,,
Elem11=Ru[102],[102],,,ppb, .0221,.0020,9.027, .0250, .0194, .0220, .0218, .0225,,,
Elem12=Sb[121],[121],,,ppb, 2.293,.0646,2.816, 2.286, 2.302, 2.341, 2.187, 2.347,,,
Elem13=Sb[123],[123],,,ppb, 2.234,.0523,2.342, 2.218, 2.284, 2.294, 2.176, 2.199,,,
Elem14=Se[82],[82],,,ppb, 2.309,.1363,5.902, 2.456, 2.177, 2.364, 2.153, 2.396,,,

```

Elem15=Ta[181],[181],,,,ppb, .0025,.0010,41.69, .0028, .0017, .0033
, .0034, .0011,,,
Elem16=Te[128],[128],,,,ppb, -.0046,.0098,214.0, -.0041, -.0199, .0
039, .0039, -.0068,,,
Elem17=Tl[205],[205],,,,ppb, 2.186,.0718,3.286, 2.241, 2.155, 2.237
, 2.224, 2.073,,,
Elem18=V [51],[51],,,,ppb, 2.194,.0358,1.634, 2.194, 2.198, 2.195,
2.242, 2.141,,,
Elem19=W [182],[182],,,,ppb, -.0006,.0045,750.3, -.0001, .0019, -.0
084, .0028, .0009,,,
Elem20=Y [89],[89],,,,ppb, 2.142,.0594,2.774, 2.130, 2.093, 2.203,
2.079, 2.204,,,
Elem21=AMU[90],[90],,,,ppb, 2.432,.0472,1.941, 2.438, 2.356, 2.437,
2.440, 2.487,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 34.299,.72203,2.1051,34.173,35.203,34.
023,34.773,33.324
Elem1=Ir[193],[193],,Cts/S, 14.378,.35720,2.4844,14.487,14.373,14.
786,13.805,14.437
Elem2=Sc[45],[45],,Cts/S, 38.542,.40960,1.0627,38.693,38.149,38.63
5,38.129,39.103

```

[Sample Header]

```

Method=PERTABS
SampleName=prep blk
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 10:10
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, .0591,.0458,77.48, .1130, -.0041, .0916,
.0387, .0562,,,
Elem1=Ba[138],[138],,,,ppb, .0011,.0009,84.31, .0007, .0008, .0002,
.0026, .0012,,,
Elem2=Cd[111],[111],,,,ppb, -.0614,.0026,4.232, -.0643, -.0599, -.0
604, -.0586, -.0641,,,
Elem3=Eu[151],[151],,,,ppb, .0011,.0006,53.82, .0020, .0009, .0015,

```

```
.0005, .0007,,,
Elem4=Eu[153],[153],,,ppb, .0018,.0009,50.81, .0017, .0023, .0020,
.0029, .0003,,,
Elem5=AMU[93],[93],,,ppb, .0016,.0006,38.08, .0022, .0015, .0007,
.0022, .0015,,,
Elem6=Pd[108],[108],,,ppb, .0042,.0021,50.94, .0025, .0079, .0033,
.0042, .0031,,,
Elem7=Pd[110],[110],,,ppb, -.0353,.0070,19.78, -.0303, -.0405, -.0
311, -.0296, -.0449,,,
Elem8=Rb[85],[85],,,ppb, .0190,.0027,14.36, .0210, .0188, .0146, .
0215, .0192,,,
Elem9=Rh[103],[103],,,ppb, .0012,.0003,22.32, .0012, .0009, .0016,
.0012, .0010,,,
Elem10=Ru[101],[101],,,ppb, .0044,.0010,23.55, .0044, .0054, .0041
, .0029, .0054,,,
Elem11=Ru[102],[102],,,ppb, .0027,.0013,49.42, .0018, .0049, .0016
, .0023, .0028,,,
Elem12=Sb[121],[121],,,ppb, -.0137,.0017,12.25, -.0152, -.0157, -.
0120, -.0123, -.0133,,,
Elem13=Sb[123],[123],,,ppb, -.0104,.0014,13.61, -.0122, -.0109, -.
0090, -.0089, -.0110,,,
Elem14=Se[82],[82],,,ppb, .1896,.0518,27.33, .2632, .1291, .1578,
.2144, .1835,,,
Elem15=Ta[181],[181],,,ppb, .0030,.0013,42.05, .0040, .0013, .0029
, .0024, .0045,,,
Elem16=Te[128],[128],,,ppb, -.0033,.0091,271.2, -.0084, -.0104, -.
0029, .0121, -.0072,,,
Elem17=Tl[205],[205],,,ppb, .0086,.0022,25.68, .0075, .0093, .0113
, .0054, .0094,,,
Elem18=V [51],[51],,,ppb, .0564,.0188,33.36, .0650, .0441, .0296,
.0700, .0734,,,
Elem19=W [182],[182],,,ppb, .0067,.0046,69.21, .0030, .0051, .0046
, .0059, .0148,,,
Elem20=Y [89],[89],,,ppb, .0027,.0005,19.44, .0023, .0033, .0028,
.0032, .0021,,,
Elem21=AMU[90],[90],,,ppb, .0081,.0017,21.32, .0101, .0092, .0084,
.0070, .0058,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 33.026,.74702,2.2619,33.848,32.935,33.234,31.827,33.283

Elem1=Ir[193],[193],,Cts/S, 13.562,.33583,2.4763,13.835,13.815,13.259,13.763,13.137

Elem2=Sc[45],[45],,Cts/S, 38.539,1.0565,2.7414,38.377,38.072,38.629,37.383,40.235

[Sample Header]

Method=PERTABS
SampleName=s00t000804
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 10:17
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, .1370,.0345,25.22, .1837, .1553, .1380, .0985, .1093,,,

Elem1=Ba[138],[138],,,ppb, 1.941,.0583,3.005, 1.922, 2.010, 1.993, 1.908, 1.872,,,

Elem2=Cd[111],[111],,,ppb, 19.94,.3112,1.560, 20.26, 19.58, 20.22, 19.66, 19.99,,,

Elem3=Eu[151],[151],,,ppb, .0916,.0064,7.027, .0856, .0861, .0999, .0969, .0897,,,

Elem4=Eu[153],[153],,,ppb, .0978,.0050,5.079, .1022, .0961, .0996, .1013, .0900,,,

Elem5=AMU[93],[93],,,ppb, 1.067,.0090,.8399, 1.064, 1.057, 1.066, 1.067, 1.082,,,

Elem6=Pd[108],[108],,,ppb, 7.171,.6420,8.953, 7.970, 6.405, 7.119, 6.721, 7.637,,,

Elem7=Pd[110],[110],,,ppb, 28.42,.8996,3.165, 29.24, 27.46, 29.30, 27.51, 28.60,,,

Elem8=Rb[85],[85],,,ppb, .0256,.0024,9.330, .0238, .0271, .0292, .0241, .0240,,,

Elem9=Rh[103],[103],,,ppb, .4776,.0229,4.803, .4995, .4484, .4909, .4577, .4917,,,

Elem10=Ru[101],[101],,,ppb, 4.291,.1280,2.983, 4.504, 4.169, 4.299, 4.246, 4.237,,,

Elem11=Ru[102],[102],,,ppb, 2.037,.0558,2.738, 2.115, 1.988, 1.994, 2.012, 2.077,,,

Elem12=Sb[121],[121],,,ppb, .0021,.0040,192.7, -.0010, -.0016, .0004, .0055, .0071,,,

Elem13=Sb[123],[123],,,ppb, .0248,.0036,14.33, .0209, .0304, .0240, .0254, .0233,,,

Elem14=Se[82],[82],,,ppb, .1149,.0766,66.70, .2305, .1481, .0879, .0332, .0747,,,

Elem15=Ta[181],[181],,,ppb, .0042,.0012,27.80, .0056, .0044, .0024, .0047, .0039,,,

Elem16=Te[128],[128],,,ppb, .2178,.0142,6.543, .2334, .2200, .1980
, .2279, .2095,,,
Elem17=Tl[205],[205],,,ppb, .0095,.0016,17.15, .0079, .0089, .0120
, .0101, .0084,,,
Elem18=V [51],[51],,,ppb, .0475,.0783,164.9, -.0524, .1508, .0915,
.0036, .0439,,,
Elem19=W [182],[182],,,ppb, .1158,.0140,12.12, .1176, .1119, .0938
, .1278, .1277,,,
Elem20=Y [89],[89],,,ppb, .6691,.0090,1.349, .6703, .6812, .6567,
.6651, .6720,,,
Elem21=AMU[90],[90],,,ppb, 92.86,.9438,1.016, 93.18, 92.16, 92.15,
94.37, 92.41,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 33.497,.19229,.57406,33.693,33.399,33.
567,33.212,33.616

Elem1=Ir[193],[193],,Cts/S, 13.268,.49024,3.6948,12.642,13.942,13.
116,13.113,13.529

Elem2=Sc[45],[45],,Cts/S, 38.225,.73068,1.9115,39.131,37.243,38.00
0,38.018,38.732

[Sample Header]

Method=PERTABS

SampleName=s00t000804_s

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 10:23

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, 1.992,.0797,4.000, 1.906, 1.957, 1.947, 2
.095, 2.057,,,

Elem1=Ba[138],[138],,,ppb, 4.035,.1656,4.105, 3.811, 4.252, 3.946,
4.084, 4.082,,,

Elem2=Cd[111],[111],,,ppb, 21.97,.2919,1.328, 21.65, 22.31, 22.25,
21.86, 21.79,,,

Elem3=Eu[151],[151],,,ppb, 2.284,.1075,4.708, 2.174, 2.427, 2.179,
2.304, 2.333,,,

Elem4=Eu[153],[153],,,ppb, 2.263,.1202,5.311, 2.153, 2.421, 2.169,

```

2.215, 2.359,,,
Elem5=AMU[93],[93],,,ppb, 1.139,.0268,2.352, 1.122, 1.167, 1.125,
1.113, 1.169,,,
Elem6=Pd[108],[108],,,ppb, 8.080,.2059,2.548, 8.227, 7.856, 8.333,
7.896, 8.089,,,
Elem7=Pd[110],[110],,,ppb, 32.82,.6910,2.106, 31.93, 33.18, 33.76,
32.59, 32.62,,,
Elem8=Rb[85],[85],,,ppb, .0294,.0010,3.275, .0297, .0303, .0279, .
0299, .0290,,,
Elem9=Rh[103],[103],,,ppb, .4427,.0144,3.257, .4309, .4601, .4566,
.4313, .4344,,,
Elem10=Ru[101],[101],,,ppb, 4.045,.0206,.5105, 4.044, 4.010, 4.057
, 4.049, 4.063,,,
Elem11=Ru[102],[102],,,ppb, 1.887,.0426,2.259, 1.896, 1.957, 1.854
, 1.855, 1.872,,,
Elem12=Sb[121],[121],,,ppb, 2.252,.0594,2.639, 2.241, 2.318, 2.158
, 2.274, 2.271,,,
Elem13=Sb[123],[123],,,ppb, 2.269,.0508,2.241, 2.224, 2.354, 2.251
, 2.241, 2.272,,,
Elem14=Se[82],[82],,,ppb, 2.329,.1925,8.267, 2.024, 2.428, 2.325,
2.325, 2.542,,,
Elem15=Ta[181],[181],,,ppb, .0047,.0010,20.61, .0050, .0031, .0053
, .0049, .0055,,,
Elem16=Te[128],[128],,,ppb, .2205,.0184,8.355, .1963, .2405, .2371
, .2109, .2179,,,
Elem17=Tl[205],[205],,,ppb, 2.143,.0464,2.166, 2.155, 2.195, 2.108
, 2.172, 2.082,,,
Elem18=V[51],[51],,,ppb, 2.078,.0867,4.171, 1.979, 2.069, 2.179,
2.011, 2.151,,,
Elem19=W[182],[182],,,ppb, .1352,.0090,6.692, .1291, .1339, .1511
, .1307, .1311,,,
Elem20=Y[89],[89],,,ppb, 2.854,.1203,4.216, 2.704, 2.990, 2.791,
2.822, 2.963,,,
Elem21=AMU[90],[90],,,ppb, 98.84,3.903,3.949, 93.72, 104.4, 98.65,
97.35, 100.1,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 32.772,1.1499,3.5089,33.893,31.251,33.374,33.490,31.855

Elem1=Ir[193],[193],,Cts/S, 13.422,.40106,2.9882,12.886,13.326,13.317,13.610,13.970

Elem2=Sc[45],[45],,Cts/S, 38.907,.59318,1.5246,38.917,38.303,39.630,38.337,39.350

[Sample Header]

Method=PERTABS

SampleName=s00t000804_a

Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 10:29
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 21.79,.4563,2.094, 21.38, 22.30, 22.23, 21.67, 21.35,,
Elem1=Ba[138],[138],,,ppb, 26.84,1.075,4.006, 25.21, 27.29, 28.11, 26.52, 27.09,,
Elem2=Cd[111],[111],,,ppb, 44.85,.6520,1.454, 44.08, 44.42, 44.73, 45.66, 45.34,,
Elem3=Eu[151],[151],,,ppb, 24.44,.9356,3.829, 23.20, 25.16, 25.13, 23.66, 25.03,,
Elem4=Eu[153],[153],,,ppb, 24.49,.9574,3.910, 23.27, 25.30, 25.46, 23.75, 24.65,,
Elem5=AMU[93],[93],,,ppb, 39.67,1.547,3.900, 38.90, 40.77, 41.79, 38.10, 38.78,,
Elem6=Pd[108],[108],,,ppb, 34.72,.7164,2.064, 34.71, 33.65, 34.59, 35.02, 35.61,,
Elem7=Pd[110],[110],,,ppb, 77.19,1.901,2.462, 75.50, 76.98, 75.30, 79.71, 78.47,,
Elem8=Rb[85],[85],,,ppb, 24.72,1.075,4.346, 24.64, 25.61, 26.01, 23.74, 23.62,,
Elem9=Rh[103],[103],,,ppb, 25.36,.6466,2.550, 25.67, 25.33, 26.20, 24.46, 25.12,,
Elem10=Ru[101],[101],,,ppb, 32.48,1.203,3.705, 32.16, 32.61, 34.34, 31.01, 32.26,,
Elem11=Ru[102],[102],,,ppb, 29.80,.8352,2.802, 29.61, 30.03, 30.97, 28.64, 29.77,,
Elem12=Sb[121],[121],,,ppb, 25.12,.4972,1.979, 24.57, 25.72, 25.53, 24.72, 25.05,,
Elem13=Sb[123],[123],,,ppb, 25.25,1.153,4.566, 23.94, 25.54, 26.52, 24.15, 26.09,,
Elem14=Se[82],[82],,,ppb, 25.52,1.157,4.535, 24.62, 27.15, 26.31, 24.54, 24.98,,
Elem15=Ta[181],[181],,,ppb, 25.62,.6478,2.528, 25.31, 25.53, 26.49, 24.79, 25.99,,
Elem16=Te[128],[128],,,ppb, 24.21,1.132,4.677, 22.73, 24.12, 25.81, 23.75, 24.62,,

Elem17=Tl[205],[205],,,,ppb, 25.01,1.392,5.566, 26.87, 24.38, 25.75
 , 23.19, 24.83,,,
Elem18=V [51],[51],,,,ppb, 24.91,.5117,2.054, 24.44, 25.19, 25.43,
24.28, 25.20,,,
Elem19=W [182],[182],,,,ppb, 25.69,.6094,2.372, 25.13, 25.20, 25.96
 , 25.56, 26.60,,,
Elem20=Y [89],[89],,,,ppb, 25.85,1.273,4.926, 24.74, 25.97, 27.86,
24.77, 25.89,,,
Elem21=AMU[90],[90],,,,ppb, 119.3,3.681,3.086, 117.9, 120.6, 124.5,
114.4, 119.0,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 32.176,1.3108,4.0739,34.098,31.731,30.
549,32.654,31.849
Elem1=Ir[193],[193],,Cts/S, 13.027,.75516,5.7969,13.007,14.290,12.
317,12.620,12.901
Elem2=Sc[45],[45],,Cts/S, 37.172,.88708,2.3864,37.584,38.071,37.70
2,36.561,35.941

[Sample Header]

Method=PERTABS
SampleName=s00t000804_a
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 10:34
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, 21.79,.9826,4.509, 22.28, 22.12, 20.04, 2
2.16, 22.36,,,
Elem1=Ba[138],[138],,,,ppb, 26.55,.8329,3.137, 26.70, 27.77, 26.41,
25.44, 26.46,,,
Elem2=Cd[111],[111],,,,ppb, 45.55,.8870,1.947, 45.80, 46.00, 44.02,
45.64, 46.29,,,
Elem3=Eu[151],[151],,,,ppb, 23.69,.8560,3.614, 23.77, 25.11, 23.13,
22.96, 23.45,,,
Elem4=Eu[153],[153],,,,ppb, 23.48,.4046,1.723, 22.91, 23.44, 23.84,
23.89, 23.32,,,
Elem5=AMU[93],[93],,,,ppb, 39.32,.7629,1.940, 40.41, 38.33, 39.51,

```

39.37, 39.00,,,
Elem6=Pd[108],[108],,,,ppb, 37.84,.9907,2.618, 36.34, 38.75, 37.71,
 38.74, 37.69,,,
Elem7=Pd[110],[110],,,,ppb, 81.05,2.868,3.539, 78.03, 84.65, 78.83,
 80.37, 83.37,,,
Elem8=Rb[85],[85],,,,ppb, 25.44,.5514,2.167, 25.26, 24.73, 26.15, 2
 5.81, 25.25,,,
Elem9=Rh[103],[103],,,,ppb, 25.95,.5410,2.084, 25.31, 25.96, 25.84,
 26.81, 25.86,,,
Elem10=Ru[101],[101],,,,ppb, 32.05,.4485,1.400, 31.73, 31.72, 32.79
 , 32.15, 31.84,,,
Elem11=Ru[102],[102],,,,ppb, 30.00,.8039,2.680, 29.45, 29.44, 29.58
 , 31.32, 30.20,,,
Elem12=Sb[121],[121],,,,ppb, 24.97,.5296,2.121, 24.99, 25.48, 24.08
 , 25.15, 25.16,,,
Elem13=Sb[123],[123],,,,ppb, 25.06,.4447,1.775, 25.15, 25.42, 24.28
 , 25.19, 25.24,,,
Elem14=Se[82],[82],,,,ppb, 24.71,.7025,2.843, 24.07, 24.17, 24.46,
 25.16, 25.71,,,
Elem15=Ta[181],[181],,,,ppb, 24.68,1.320,5.348, 24.47, 25.25, 22.89
 , 26.49, 24.31,,,
Elem16=Te[128],[128],,,,ppb, 23.76,.5046,2.124, 23.65, 24.62, 23.50
 , 23.73, 23.31,,,
Elem17=Tl[205],[205],,,,ppb, 24.96,.8444,3.383, 26.15, 25.31, 24.06
 , 24.26, 25.05,,,
Elem18=V[51],[51],,,,ppb, 25.10,.5107,2.034, 24.60, 25.41, 24.49,
 25.49, 25.52,,,
Elem19=W[182],[182],,,,ppb, 24.53,.4099,1.671, 24.37, 24.73, 23.98
 , 25.08, 24.51,,,
Elem20=Y[89],[89],,,,ppb, 25.83,.3570,1.382, 25.71, 25.34, 26.19,
 26.18, 25.76,,,
Elem21=AMU[90],[90],,,,ppb, 118.0,1.539,1.304, 118.3, 116.3, 116.8,
 120.2, 118.6,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 31.732,.47278,1.4899,31.184,32.341,31.
 444,31.607,32.086
Elem1=Ir[193],[193],,Cts/S, 12.974,.45771,3.5279,12.410,13.273,13.
 489,12.590,13.108
Elem2=Sc[45],[45],,Cts/S, 36.507,.70724,1.9373,36.168,36.392,37.73
 0,35.922,36.322

```

[Sample Header]

```

Method=PERTABS
SampleName=s00t000803
Operator=kjt
Comment=2211 df

```

CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 10:44
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .1181,.0462,39.16, .1846, .0812, .0781, .0997, .1469,,,
Elem1=Ba[138],[138],,,ppb, 1.093,.1158,10.59, 1.290, 1.070, .9966, 1.023, 1.086,,,
Elem2=Cd[111],[111],,,ppb, 11.15,1.819,16.31, 13.98, 11.91, 10.12, 9.480, 10.27,,,
Elem3=Eu[151],[151],,,ppb, .0491,.0069,14.11, .0570, .0535, .0417, .0421, .0514,,,
Elem4=Eu[153],[153],,,ppb, .0501,.0080,15.95, .0611, .0479, .0458, .0408, .0550,,,
Elem5=AMU[93],[93],,,ppb, .7318,.3003,41.03, 1.263, .6727, .5893, .5880, .5462,,,
Elem6=Pd[108],[108],,,ppb, 4.213,.9739,23.11, 5.907, 4.120, 3.776, 3.472, 3.792,,,
Elem7=Pd[110],[110],,,ppb, 16.71,3.566,21.34, 22.80, 16.87, 14.47, 14.09, 15.33,,,
Elem8=Rb[85],[85],,,ppb, .1057,.0104,9.871, .1229, .0994, .1003, .1083, .0977,,,
Elem9=Rh[103],[103],,,ppb, .2782,.0706,25.37, .4018, .2698, .2446, .2300, .2447,,,
Elem10=Ru[101],[101],,,ppb, 2.741,.9839,35.90, 4.472, 2.614, 2.232, 2.196, 2.191,,,
Elem11=Ru[102],[102],,,ppb, 1.261,.3721,29.51, 1.920, 1.186, 1.069, 1.053, 1.077,,,
Elem12=Sb[121],[121],,,ppb, -.0038,.0031,82.34, -.0032, -.0048, -.0025, -.0086, -.0001,,,
Elem13=Sb[123],[123],,,ppb, .0089,.0081,90.99, .0120, .0085, .0116, .0167, -.0046,,,
Elem14=Se[82],[82],,,ppb, .1777,.1201,67.58, .3685, .0629, .1374, .2141, .1058,,,
Elem15=Ta[181],[181],,,ppb, .0070,.0021,29.49, .0098, .0058, .0087, .0051, .0057,,,
Elem16=Te[128],[128],,,ppb, .1249,.0149,11.90, .1468, .1275, .1114, .1283, .1106,,,
Elem17=Tl[205],[205],,,ppb, .0127,.0017,13.44, .0134, .0102, .0124, .0149, .0127,,,

Elem18=V [51],[51],,,ppb, .0807,.1402,173.8, .3258, .0323, -.0227,
.0582, .0098,,,
Elem19=W [182],[182],,,ppb, .0784,.0080,10.17, .0897, .0770, .0793
, .0673, .0784,,,
Elem20=Y [89],[89],,,ppb, .4668,.2386,51.11, .8893, .4128, .3638,
.3453, .3225,,,
Elem21=AMU[90],[90],,,ppb, 63.71,28.33,44.47, 113.8, 57.81, 50.36,
50.94, 45.66,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 30.607,1.4424,4.7127,29.061,32.190,31.
586,29.111,31.089

Elem1=Ir[193],[193],,Cts/S, 11.947,.79413,6.6471,12.189,12.761,12.
146,10.621,12.018

Elem2=Sc[45],[45],,Cts/S, 36.531,1.6531,4.5252,39.262,36.354,35.04
9,36.572,35.416

[Sample Header]

Method=PERTABS

SampleName=s00t000803

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 10:49

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, .1227,.0378,30.78, .0743, .1403, .0958, .
1337, .1697,,,

Elem1=Ba[138],[138],,,ppb, 2.180,.7976,36.59, 1.121, 1.728, 2.319,
2.504, 3.226,,,

Elem2=Cd[111],[111],,,ppb, 20.95,7.872,37.58, 11.10, 15.08, 22.06,
26.19, 30.32,,,

Elem3=Eu[151],[151],,,ppb, .0989,.0388,39.29, .0449, .0770, .1100,
.1165, .1459,,,

Elem4=Eu[153],[153],,,ppb, .1037,.0386,37.20, .0500, .0826, .1121,
.1236, .1502,,,

Elem5=AMU[93],[93],,,ppb, 1.159,.4995,43.09, .6116, .7503, 1.226,
1.349, 1.860,,,

Elem6=Pd[108],[108],,,ppb, 8.315,3.516,42.29, 3.970, 5.523, 9.025,

```

10.62, 12.43,,,
Elem7=Pd[110],[110],,,,ppb, 32.23,12.83,39.80, 16.23, 22.40, 34.46,
40.67, 47.39,,,
Elem8=Rb[85],[85],,,,ppb, .0877,.0031,3.576, .0875, .0910, .0901, .
0830, .0871,,,
Elem9=Rh[103],[103],,,,ppb, .5025,.2061,41.03, .2572, .3359, .5476,
.6057, .7659,,,
Elem10=Ru[101],[101],,,,ppb, 4.562,1.799,39.45, 2.461, 3.111, 4.923
, 5.379, 6.936,,,
Elem11=Ru[102],[102],,,,ppb, 2.162,.8523,39.42, 1.188, 1.457, 2.324
, 2.549, 3.295,,,
Elem12=Sb[121],[121],,,,ppb, .0040,.0088,219.0, -.0025, -.0068, .00
41, .0123, .0131,,,
Elem13=Sb[123],[123],,,,ppb, .0292,.0211,72.14, .0005, .0167, .0341
, .0399, .0550,,,
Elem14=Se[82],[82],,,,ppb, .1528,.0990,64.78, .0234, .2272, .1753,
.0798, .2580,,,
Elem15=Ta[181],[181],,,,ppb, .0066,.0015,23.05, .0068, .0083, .0042
, .0074, .0065,,,
Elem16=Te[128],[128],,,,ppb, .2355,.0854,36.27, .1105, .1878, .2762
, .2798, .3231,,,
Elem17=Tl[205],[205],,,,ppb, .0128,.0015,11.87, .0114, .0137, .0109
, .0138, .0142,,,
Elem18=V [51],[51],,,,ppb, -.0442,.0682,154.2, .0559, -.0697, -.066
3, -.1255, -.0156,,,
Elem19=W [182],[182],,,,ppb, .1581,.0532,33.68, .0789, .1400, .1625
, .2189, .1901,,,
Elem20=Y [89],[89],,,,ppb, .6745,.2828,41.93, .3607, .4425, .7247,
.7769, 1.068,,,
Elem21=AMU[90],[90],,,,ppb, 96.13,40.75,42.39, 50.62, 62.79, 101.7,
113.4, 152.1,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 32.377,1.3484,4.1648,32.655,32.227,31.131,34.516,31.354

Elem1=Ir[193],[193],,Cts/S, 13.056,.67237,5.1498,12.658,12.576,13.985,12.505,13.558

Elem2=Sc[45],[45],,Cts/S, 37.563,.64085,1.7061,36.547,37.766,37.404,38.239,37.856

[Sample Header]

Method=PERTABS

SampleName=s00t000805

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=
Run Time=05/24/2000 10:55
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, .1523,.0231,15.18, .1383, .1914, .1536, .1335, .1447,,,
Elem1=Ba[138],[138],,,,ppb, 2.216,.0126,.5707, 2.234, 2.216, 2.205, 2.204, 2.223,,,
Elem2=Cd[111],[111],,,,ppb, 21.24,.5759,2.711, 21.08, 21.93, 20.50, 21.71, 20.98,,,
Elem3=Eu[151],[151],,,,ppb, .0996,.0030,3.007, .0975, .1037, .1015, .0963, .0991,,,
Elem4=Eu[153],[153],,,,ppb, .1015,.0059,5.816, .0918, .1010, .1040, .1075, .1034,,,
Elem5=AMU[93],[93],,,,ppb, 1.217,.0227,1.862, 1.236, 1.206, 1.221, 1.238, 1.184,,,
Elem6=Pd[108],[108],,,,ppb, 8.534,.4146,4.858, 8.772, 8.412, 7.862, 8.739, 8.884,,,
Elem7=Pd[110],[110],,,,ppb, 32.66,1.103,3.377, 32.25, 32.86, 31.12, 34.14, 32.94,,,
Elem8=Rb[85],[85],,,,ppb, .0798,.0028,3.556, .0815, .0759, .0829, .0779, .0808,,,
Elem9=Rh[103],[103],,,,ppb, .5215,.0095,1.824, .5051, .5289, .5260, .5256, .5218,,,
Elem10=Ru[101],[101],,,,ppb, 4.073,.0946,2.323, 4.126, 4.193, 4.092, 3.972, 3.984,,,
Elem11=Ru[102],[102],,,,ppb, 1.924,.0080,.4137, 1.911, 1.933, 1.926, 1.925, 1.927,,,
Elem12=Sb[121],[121],,,,ppb, .0025,.0026,104.6, -.0017, .0048, .0037, .0040, .0017,,,
Elem13=Sb[123],[123],,,,ppb, .0279,.0057,20.43, .0276, .0318, .0350, .0243, .0208,,,
Elem14=Se[82],[82],,,,ppb, .1503,.0330,21.99, .2003, .1270, .1370, .1664, .1206,,,
Elem15=Ta[181],[181],,,,ppb, .0063,.0011,17.27, .0063, .0074, .0046, .0070, .0063,,,
Elem16=Te[128],[128],,,,ppb, .2392,.0129,5.405, .2439, .2209, .2443, .2323, .2546,,,
Elem17=Tl[205],[205],,,,ppb, .0101,.0013,13.23, .0093, .0098, .0091, .0097, .0124,,,
Elem18=V[51],[51],,,,ppb, -.0303,.0602,198.3, -.0432, .0262, -.1205, -.0378, .0237,,,

Elem19=W_[182],[182],,,ppb, .1397,.0124,8.864, .1249, .1587, .1339
 , .1407, .1402,,,
Elem20=Y_[89],[89],,,ppb, .7430,.0153,2.056, .7423, .7382, .7450,
 .7660, .7236,,,
Elem21=AMU[90],[90],,,ppb, 103.4,2.461,2.380, 104.4, 101.8, 102.3,
 107.3, 101.3,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 32.126,.48195,1.5002,32.403,32.431,31.
931,31.364,32.501
Elem1=Ir[193],[193],,Cts/S, 12.920,.65514,5.0707,12.500,12.219,13.
940,12.928,13.014
Elem2=Sc[45],[45],,Cts/S, 36.841,.81107,2.2016,36.322,37.651,36.46
4,35.999,37.766

[Sample Header]

Method=PERTABS
SampleName=s00t000805
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 11:00
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .1573,.0209,13.28, .1250, .1831, .1609, .
1557, .1620,,,
Elem1=Ba[138],[138],,,ppb, 2.243,.0871,3.882, 2.386, 2.193, 2.202,
 2.262, 2.170,,,
Elem2=Cd[111],[111],,,ppb, 21.50,.3272,1.522, 21.49, 21.90, 21.03,
 21.69, 21.40,,,
Elem3=Eu[151],[151],,,ppb, .0990,.0036,3.644, .1007, .1010, .0987,
 .1016, .0928,,,
Elem4=Eu[153],[153],,,ppb, .1053,.0031,2.922, .1039, .1103, .1022,
 .1042, .1059,,,
Elem5=AMU[93],[93],,,ppb, 1.256,.0167,1.332, 1.252, 1.284, 1.254,
 1.251, 1.239,,,
Elem6=Pd[108],[108],,,ppb, 8.698,.6910,7.945, 7.831, 8.791, 8.553,
 9.751, 8.562,,,
Elem7=Pd[110],[110],,,ppb, 33.70,1.095,3.248, 31.91, 34.45, 33.84,

```

34.70, 33.60,,,
Elem8=Rb[85],[85],,,ppb, .0771,.0009,1.177, .0783, .0763, .0779, .
0770, .0763,,,
Elem9=Rh[103],[103],,,ppb, .5349,.0329,6.152, .5006, .5847, .5269,
.5481, .5141,,,
Elem10=Ru[101],[101],,,ppb, 4.205,.0989,2.351, 4.201, 4.335, 4.087
, 4.136, 4.264,,,
Elem11=Ru[102],[102],,,ppb, 1.971,.0481,2.441, 1.922, 2.028, 1.930
, 1.963, 2.014,,,
Elem12=Sb[121],[121],,,ppb, -.0002,.0053,2421., .0051, -.0086, -.0
004, .0034, -.0007,,,
Elem13=Sb[123],[123],,,ppb, .0375,.0064,17.01, .0356, .0316, .0457
, .0428, .0320,,,
Elem14=Se[82],[82],,,ppb, .2013,.0827,41.09, .1616, .2638, .0828,
.2895, .2089,,,
Elem15=Ta[181],[181],,,ppb, .0054,.0015,28.37, .0057, .0041, .0043
, .0079, .0052,,,
Elem16=Te[128],[128],,,ppb, .2420,.0159,6.560, .2464, .2372, .2486
, .2176, .2601,,,
Elem17=Tl[205],[205],,,ppb, .0097,.0010,10.31, .0102, .0095, .0107
, .0081, .0098,,,
Elem18=V [51],[51],,,ppb, .0093,.0718,767.5, .0639, .0942, .0038,
-.0845, -.0306,,,
Elem19=W [182],[182],,,ppb, .1313,.0123,9.363, .1352, .1229, .1509
, .1207, .1267,,,
Elem20=Y [89],[89],,,ppb, .7653,.0135,1.758, .7580, .7526, .7687,
.7601, .7870,,,
Elem21=AMU[90],[90],,,ppb, 106.4,1.099,1.032, 105.5, 107.3, 106.0,
105.5, 107.9,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 31.336,.36632,1.1690,31.709,30.913,31.
732,31.198,31.128
Elem1=Ir[193],[193],,Cts/S, 13.407,.39460,2.9432,13.926,13.575,12.
951,13.506,13.079
Elem2=Sc[45],[45],,Cts/S, 37.021,.70933,1.9160,37.968,36.612,36.14
4,37.438,36.941

```

[Sample Header]

```

Method=PERTABS
SampleName=s00t000803_rr
Operator=kjt
Comment=2211 df new dilution
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 11:12

```

HNF-1701 REV. 0

Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, .1650,.0401,24.31, .1039, .2153, .1767, .1688, .1601,,,
Elem1=Ba[138],[138],,,,ppb, 2.172,.0772,3.553, 2.207, 2.138, 2.287, 2.140, 2.087,,,
Elem2=Cd[111],[111],,,,ppb, 21.21,.4346,2.049, 20.95, 21.26, 21.84, 20.69, 21.33,,,
Elem3=Eu[151],[151],,,,ppb, .0971,.0053,5.418, .1015, .0882, .0998, .0965, .0994,,,
Elem4=Eu[153],[153],,,,ppb, .1012,.0079,7.775, .1035, .0885, .1088, .1057, .0994,,,
Elem5=AMU[93],[93],,,,ppb, 1.280,.0450,3.519, 1.270, 1.280, 1.328, 1.210, 1.309,,,
Elem6=Pd[108],[108],,,,ppb, 8.385,.2922,3.485, 8.077, 8.059, 8.527, 8.618, 8.642,,,
Elem7=Pd[110],[110],,,,ppb, 32.82,1.020,3.107, 31.61, 32.10, 33.61, 34.07, 32.70,,,
Elem8=Rb[85],[85],,,,ppb, .0721,.0028,3.939, .0735, .0747, .0741, .0682, .0700,,,
Elem9=Rh[103],[103],,,,ppb, .5233,.0164,3.129, .5498, .5158, .5233, .5056, .5223,,,
Elem10=Ru[101],[101],,,,ppb, 4.873,.2188,4.489, 5.081, 4.815, 5.080, 4.556, 4.832,,,
Elem11=Ru[102],[102],,,,ppb, 2.261,.0856,3.785, 2.282, 2.247, 2.371, 2.133, 2.270,,,
Elem12=Sb[121],[121],,,,ppb, .0032,.0047,148.9, .0011, .0041, .0110, -.0006, .0003,,,
Elem13=Sb[123],[123],,,,ppb, .0331,.0034,10.24, .0383, .0307, .0297, .0341, .0327,,,
Elem14=Se[82],[82],,,,ppb, .2643,.0875,33.10, .2431, .2486, .4157, .2219, .1922,,,
Elem15=Ta[181],[181],,,,ppb, .0054,.0014,26.37, .0047, .0072, .0062, .0054, .0035,,,
Elem16=Te[128],[128],,,,ppb, .2486,.0244,9.832, .2678, .2687, .2602, .2328, .2135,,,
Elem17=Tl[205],[205],,,,ppb, .0111,.0020,17.92, .0094, .0093, .0104, .0135, .0129,,,
Elem18=V [51],[51],,,,ppb, -.0257,.0113,43.93, -.0086, -.0214, -.0376, -.0330, -.0279,,,
Elem19=W [182],[182],,,,ppb, .1539,.0141,9.142, .1384, .1702, .1673, .1481, .1454,,,

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Elem20=Y [89],[89],,,ppb, .7610,.0195,2.562, .7842, .7465, .7519,
 .7427, .7798,,,
 Elem21=AMU[90],[90],,,ppb, 108.7,2.844,2.616, 111.1, 105.5, 109.4,
 105.9, 111.5,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
 Elem0=In[115],[115],,Cts/S, 29.935,1.0679,3.5674,30.596,30.159,28.
 382,31.117,29.420
 Elem1=Ir[193],[193],,Cts/S, 12.212,.36471,2.9865,12.838,12.174,11.
 920,11.996,12.130
 Elem2=Sc[45],[45],,Cts/S, 36.141,.79460,2.1986,36.507,36.684,35.25
 1,36.938,35.323

[Sample Header]

Method=PERTABS
 SampleName=ccv1
 Operator=kjt
 Comment=mspt lcs
 CustID=
 CustSmpl=000524-3
 LabID=
 Run Time=05/24/2000 11:25
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
 ss/fail,chklo,chkhi
 Elem0=As[75],[75],,,ppb, 14.05,.5733,4.080, 13.31, 14.37, 14.18, 1
 3.65, 14.75, QC Pass,15.00%,15.00
 Elem1=Ba[138],[138],,,ppb, 14.62,.5776,3.951, 14.79, 14.84, 15.20,
 13.66, 14.59, QC Pass,10.00%,15.00
 Elem2=Cd[111],[111],,,ppb, 15.28,.5034,3.295, 15.39, 15.98, 15.23,
 15.24, 14.56, None,0.0,0.0
 Elem3=Eu[151],[151],,,ppb, .0403,.0054,13.38, .0396, .0447, .0469,
 .0354, .0350, None,0.0,0.0
 Elem4=Eu[153],[153],,,ppb, .0449,.0029,6.559, .0443, .0496, .0455,
 .0420, .0430, None,0.0,0.0
 Elem5=AMU[93],[93],,,ppb, .0189,.0024,12.48, .0177, .0225, .0194,
 .0189, .0161, None,0.0,0.0
 Elem6=Pd[108],[108],,,ppb, 1.638,.1614,9.852, 1.729, 1.814, 1.713,
 1.450, 1.483, None,0.0,0.0
 Elem7=Pd[110],[110],,,ppb, 13.35,.5926,4.439, 13.64, 13.94, 13.73,
 12.85, 12.60, None,0.0,0.0
 Elem8=Rb[85],[85],,,ppb, .0616,.0057,9.187, .0634, .0700, .0595, .

```

0546, .0607, None, 0.0, 0.0
Elem9=Rh[103],[103],,,ppb, .0034,.0005,15.93, .0042, .0030, .0030,
.0035, .0031, None, 0.0, 0.0
Elem10=Ru[101],[101],,,ppb, .0040,.0035,87.12, .0026, .0095, .0008
, .0019, .0051, None, 0.0, 0.0
Elem11=Ru[102],[102],,,ppb, .0075,.0018,23.35, .0084, .0091, .0062
, .0051, .0089, None, 0.0, 0.0
Elem12=Sb[121],[121],,,ppb, 15.22,.7269,4.775, 15.13, 15.81, 15.33
, 14.04, 15.82, QC Pass, 10.00%, 15.00
Elem13=Sb[123],[123],,,ppb, 15.05,.4238,2.816, 15.07, 15.48, 15.39
, 14.43, 14.87, QC Pass, 10.00%, 15.00
Elem14=Se[82],[82],,,ppb, 15.95,.5370,3.368, 15.70, 16.85, 15.91,
15.83, 15.44, QC Pass, 10.00%, 15.00
Elem15=Ta[181],[181],,,ppb, .0037,.0008,22.37, .0026, .0045, .0042
, .0031, .0042, None, 0.0, 0.0
Elem16=Te[128],[128],,,ppb, .0233,.0102,43.96, .0124, .0228, .0234
, .0180, .0398, None, 0.0, 0.0
Elem17=Tl[205],[205],,,ppb, 15.01,.3824,2.548, 14.98, 14.62, 15.33
, 14.65, 15.46, QC Pass, 10.00%, 15.00
Elem18=V [51],[51],,,ppb, 15.58,.2055,1.319, 15.41, 15.88, 15.67,
15.37, 15.57, QC Pass, 15.00%, 15.00
Elem19=W [182],[182],,,ppb, .0120,.0026,21.53, .0088, .0102, .0153
, .0122, .0137, None, 0.0, 0.0
Elem20=Y [89],[89],,,ppb, .0197,.0015,7.427, .0202, .0213, .0179,
.0208, .0185, None, 0.0, 0.0
Elem21=AMU[90],[90],,,ppb, 17.10,.8316,4.864, 16.80, 18.49, 16.30,
16.80, 17.10, QC Pass, 15.00%, 15.00

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

```

Elem0=In[115],[115],,Cts/S, 30.633,1.3840,4.5180,30.710,28.297,31.
435,31.859,30.864
Elem1=Ir[193],[193],,Cts/S, 11.652,.33119,2.8422,11.423,11.255,12.
089,11.846,11.649
Elem2=Sc[45],[45],,Cts/S, 35.429,1.4929,4.2137,36.423,35.088,35.69
5,36.882,33.057

```

[Sample Header]

```

Method=PERTABS
SampleName=ccv2
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000524-1
LabID=
Run Time=05/24/2000 11:31
Sample Type=QC
Mode=CONC

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CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, -.9759,.0834,8.546, -.9861, -.9439, -.9689, -1.105, -.8756, None, 0.0, 0.0

Elem1=Ba[138],[138],,,ppb, .0363,.0016,4.307, .0340, .0356, .0382, .0366, .0371, None, 0.0, 0.0

Elem2=Cd[111],[111],,,ppb, -.0451,.0090,19.82, -.0492, -.0543, -.0319, -.0499, -.0405, None, 0.0, 0.0

Elem3=Eu[151],[151],,,ppb, 14.50,.9958,6.868, 13.48, 14.30, 15.77, 13.67, 15.28, QC Pass, 10.00%, 15.00

Elem4=Eu[153],[153],,,ppb, 14.69,.8556,5.826, 13.75, 14.10, 15.95, 14.60, 15.02, QC Pass, 10.00%, 15.00

Elem5=AMU[93],[93],,,ppb, Q 23.54,1.095,4.650, 23.45, 22.32, 25.08, 24.10, 22.76, QC Fail, 15.00%, 15.00

✓ Elem6=Pd[108],[108],,,ppb, 15.76,.5014,3.181, 15.39, 15.69, 16.63, 15.46, 15.65, QC Pass, 10.00%, 15.00

Elem7=Pd[110],[110],,,ppb, 15.76,.4424,2.807, 15.32, 15.78, 16.47, 15.47, 15.75, QC Pass, 10.00%, 15.00

Elem8=Rb[85],[85],,,ppb, 15.30,1.003,6.553, 15.48, 14.35, 16.78, 15.52, 14.39, QC Pass, 10.00%, 15.00

Elem9=Rh[103],[103],,,ppb, 15.26,.5322,3.486, 15.24, 14.89, 16.16, 15.21, 14.83, QC Pass, 10.00%, 15.00

Elem10=Ru[101],[101],,,ppb, Q 17.03,.6890,4.046, 16.79, 16.26, 18.09, 17.25, 16.75, QC Fail, 10.00%, 15.00

Elem11=Ru[102],[102],,,ppb, Q 16.91,.5836,3.451, 16.42, 16.55, 17.90, 16.92, 16.77, QC Fail, 10.00%, 15.00

Elem12=Sb[121],[121],,,ppb, .0035,.0035,100.4, .0057, .0052, -.0026, .0051, .0040, None, 0.0, 0.0

Elem13=Sb[123],[123],,,ppb, .2219,.0061,2.759, .2117, .2215, .2259, .2274, .2229, None, 0.0, 0.0

Elem14=Se[82],[82],,,ppb, .1930,.0607,31.45, .2227, .1786, .2330, .0928, .2377, None, 0.0, 0.0

Elem15=Ta[181],[181],,,ppb, 15.86,.9582,6.042, 14.45, 15.48, 16.83, 16.63, 15.92, QC Pass, 10.00%, 15.00

Elem16=Te[128],[128],,,ppb, 13.87,.2276,1.642, 13.93, 13.55, 13.79, 14.17, 13.89, QC Pass, 10.00%, 15.00

Elem17=Tl[205],[205],,,ppb, .0115,.0010,8.622, .0119, .0107, .0120, .0126, .0102, None, 0.0, 0.0

Elem18=V[51],[51],,,ppb, .0303,.0216,71.09, .0562, .0086, .0142, .0224, .0503, None, 0.0, 0.0

Elem19=W[182],[182],,,ppb, 15.29,.5417,3.542, 14.77, 14.85, 15.23, 16.09, 15.54, QC Pass, 10.00%, 15.00

Elem20=Y[89],[89],,,ppb, 15.95,.9321,5.845, 16.15, 14.68, 17.18, 16.25, 15.47, QC Pass, 10.00%, 15.00

Elem21=AMU[90],[90],,,ppb, .0458,.0125,27.36, .0659, .0445, .0474,
.0332, .0380,None,0.0,0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 30.831,1.5229,4.9393,30.054,33.200,29.
089,30.984,30.829
Elem1=Ir[193],[193],,Cts/S, 12.106,.71272,5.8874,12.867,12.505,12.
000,10.976,12.182
Elem2=Sc[45],[45],,Cts/S, 36.042,1.3840,3.8400,35.550,37.563,37.45
5,34.571,35.070

[Sample Header]

Method=PERTABS
SampleName=ccv2
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000524-1
LabID=
Run Time=05/24/2000 11:37
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, -1.021,.0481,4.708, -1.053, -.9949, -.948
9, -1.065, -1.041,None,0.0,0.0
Elem1=Ba[138],[138],,,ppb, .0365,.0017,4.720, .0342, .0352, .0382,
.0371, .0378,None,0.0,0.0
Elem2=Cd[111],[111],,,ppb, -.0482,.0063,13.07, -.0387, -.0520, -.0
555, -.0472, -.0477,None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, 14.15,.5347,3.778, 14.23, 13.90, 13.38,
14.73, 14.54, QC Pass,10.00%,15.00
Elem4=Eu[153],[153],,,ppb, 13.87,.6283,4.531, 14.26, 14.14, 12.76,
13.98, 14.19, QC Pass,10.00%,15.00
Elem5=AMU[93],[93],,,ppb,Q 23.50,.8387,3.569, 23.77, 22.22, 23.12,
24.19, 24.19, QC Fail,15.00%,15.00
/ Elem6=Pd[108],[108],,,ppb,Q 16.70,.8572,5.133, 17.07, 16.98, 15.17
, 17.22, 17.05, QC Fail,10.00%,15.00
Elem7=Pd[110],[110],,,ppb,Q 16.68,1.024,6.137, 16.99, 16.83, 14.90
, 17.24, 17.46, QC Fail,10.00%,15.00
Elem8=Rb[85],[85],,,ppb, 15.06,.5513,3.661, 15.86, 14.56, 14.52, 1
5.10, 15.24, QC Pass,10.00%,15.00
Elem9=Rh[103],[103],,,ppb, 15.24,.8172,5.363, 15.50, 15.85, 13.84,

15.25, 15.76, QC Pass, 10.00%, 15.00
Elem10=Ru[101],[101],,,ppb,Q 16.84,.6046,3.591, 16.78, 16.85, 15.8
9, 17.50, 17.17, QC Fail, 10.00%, 15.00
Elem11=Ru[102],[102],,,ppb,Q 16.75,.7460,4.454, 16.40, 17.03, 15.6
2, 17.50, 17.19, QC Fail, 10.00%, 15.00
Elem12=Sb[121],[121],,,ppb, .0005,.0045,977.5, -.0041, -.0017, -.0
015, .0075, .0021, None, 0.0, 0.0
Elem13=Sb[123],[123],,,ppb, .2134,.0085,3.972, .2067, .2135, .2054
, .2267, .2148, None, 0.0, 0.0
Elem14=Se[82],[82],,,ppb, .1410,.1033,73.29, .1201, .0605, .1840,
.2971, .0432, None, 0.0, 0.0
Elem15=Ta[181],[181],,,ppb, 15.67,.8046,5.136, 15.93, 16.04, 16.27
, 14.26, 15.84, QC Pass, 10.00%, 15.00
Elem16=Te[128],[128],,,ppb, 14.24,.3917,2.751, 13.98, 14.01, 14.24
, 14.91, 14.03, QC Pass, 10.00%, 15.00
Elem17=Tl[205],[205],,,ppb, .0090,.0021,23.54, .0107, .0067, .0118
, .0079, .0081, None, 0.0, 0.0
Elem18=V_[51],[51],,,ppb, .0238,.0279,117.3, -.0128, .0528, .0502,
.0084, .0206, None, 0.0, 0.0
Elem19=W_[182],[182],,,ppb, 15.21,.3429,2.254, 15.55, 15.46, 15.32
, 14.72, 15.00, QC Pass, 10.00%, 15.00
Elem20=Y_[89],[89],,,ppb, 15.87,.3705,2.334, 16.16, 15.35, 15.64,
15.98, 16.23, QC Pass, 10.00%, 15.00
Elem21=AMU[90],[90],,,ppb, .0285,.0049,17.25, .0358, .0271, .0223,
.0299, .0273, None, 0.0, 0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,repl..repn
Elem0=In[115],[115],,Cts/S, 31.431,1.1093,3.5293,31.155,32.619,32.
195,29.742,31.446
Elem1=Ir[193],[193],,Cts/S, 12.038,.86624,7.1957,11.823,12.871,10.
813,12.879,11.805
Elem2=Sc[45],[45],,Cts/S, 36.456,.78338,2.1488,37.475,35.713,36.61
8,35.629,36.847

[Sample Header]

Method=PERTABS
SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/24/2000 11:47
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 30.844,.69361,2.2488,31.338,30.659,31.485,29.743,30.995

Elem1=Ir[193],[193],,,Cts/S, 11.881,.30498,2.5670,11.878,11.591,11.599,12.316,12.020

Elem2=Sc[45],[45],,,Cts/S, 37.120,1.3261,3.5726,38.665,35.181,36.978,36.785,37.990

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/24/2000 13:37

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=In[115],[115],,,Cts/S, 94360.,1022.,1.083, 94270., 94210., 94860., 93470., 95160., 94830., 94300., 94360., 95980., 92160.,,,

Elem1=Ir[193],[193],,,Cts/S, 40960.,571.8,1.396, 40510., 40530., 42310., 40600., 41020., 40660., 41210., 41150., 41210., 40360.,,,

Elem2=Sc[45],[45],,,Cts/S, 107200.,1816.,1.695, 108700., 106700., 108600., 105400., 105700., 107000., 106400., 106000., 111200., 106000.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

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[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .0612,.0494,80.70, .0167, .0102, .0577, .
1220, .0993,QC Pass,ñ.5000,.0000
Elem1=Ba[138],[138],,,ppb, .0081,.0024,30.19, .0064, .0116, .0076,
.0094, .0056,QC Pass,ñ.0300,.0000
Elem2=Cd[111],[111],,,ppb, .0143,.0123,85.89, -.0040, .0201, .0203
, .0081, .0270,None,0.0,0.0
Elem3=Eu[151],[151],,,ppb, .0023,.0007,31.39, .0015, .0023, .0025,
.0020, .0035,QC Pass,ñ.0300%,.0000
Elem4=Eu[153],[153],,,ppb, .0020,.0008,42.02, .0030, .0026, .0015,
.0020, .0009,QC Pass,ñ.0300%,.0000
Elem5=AMU[93],[93],,,ppb, .0046,.0009,20.45, .0048, .0043, .0043,
.0061, .0035,QC Pass,ñ.0300%,.0000
Elem6=Pd[108],[108],,,ppb,Q .0699,.0249,35.62, .1053, .0828, .0636
, .0573, .0406,QC Fail,ñ.0300%,.0000
Elem7=Pd[110],[110],,,ppb,Q .0760,.0243,31.95, .1049, .0999, .0617
, .0540, .0597,QC Fail,ñ.0300%,.0000
Elem8=Rb[85],[85],,,ppb,Q .0931,.0025,2.668, .0967, .0942, .0903,
.0925, .0916,QC Fail,ñ.0300%,.0000
Elem9=Rh[103],[103],,,ppb, .0019,.0003,16.20, .0016, .0022, .0016,
.0021, .0023,QC Pass,ñ.0300%,.0000
Elem10=Ru[101],[101],,,ppb, .0076,.0018,23.15, .0078, .0081, .0047
, .0078, .0095,QC Pass,ñ.0300%,.0000
Elem11=Ru[102],[102],,,ppb, .0075,.0017,23.09, .0093, .0092, .0071
, .0068, .0052,QC Pass,ñ.0300%,.0000
Elem12=Sb[121],[121],,,ppb, .0019,.0041,213.2, -.0014, .0029, .003
0, .0078, -.0026,QC Pass,ñ.0300%,.0000
Elem13=Sb[123],[123],,,ppb, .0034,.0045,131.7, .0094, .0030, .0006
, .0060, -.0020,QC Pass,ñ.0300%,.0000
Elem14=Se[82],[82],,,ppb,Q .2452,.0878,35.83, .1632, .2193, .3519,
.3234, .1680,QC Fail,ñ.0800%,.0000
Elem15=Ta[181],[181],,,ppb, .0051,.0011,20.43, .0059, .0058, .0053
, .0054, .0033,QC Pass,ñ.0300%,.0000
Elem16=Te[128],[128],,,ppb, .0064,.0116,181.2, -.0026, .0057, .019
4, -.0071, .0165,QC Pass,ñ.0300%,.0000
Elem17=Tl[205],[205],,,ppb, .0067,.0018,26.93, .0052, .0088, .0051
, .0058, .0084,QC Pass,ñ.0300%,.0000
Elem18=V_[51],[51],,,ppb, .0481,.0283,58.76, .0167, .0395, .0848,
.0300, .0694,QC Pass,ñ.5000%,.0000
Elem19=W_[182],[182],,,ppb, .0113,.0024,21.49, .0079, .0107, .0146
, .0114, .0122,QC Pass,ñ.0300%,.0000
Elem20=Y_[89],[89],,,ppb, .0037,.0014,37.37, .0049, .0033, .0050,
.0017, .0033,QC Pass,ñ.0300%,.0000
Elem21=AMU[90],[90],,,ppb, .0115,.0020,17.01, .0106, .0125, .0090,
.0143, .0113,QC Pass,ñ.0300%,.0000
```

**This document was too large to scan
as a single document. It has
been divided into smaller sections.**

Section 4 of 5

Document Information			
Document #	HNF-1701	Revision	0
Title	TANK 241AZ101, CORES 266, 269 ANALYTICAL RESULTS FOR THE FINAL REPORT		
Date			
Originator	STEEN FH	Originator Co.	FH
Recipient		Recipient Co.	
References			
Keywords			
Projects			
Other Information			

LABCORE Completed Worklist Report for Worklist# 33455

Analyst: kjt Instrument: ICPMS1

Book#: 000531-1

Method: LA-506-101 Rev/Mod A-3

000531-2

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSPT-D1

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	EMSPT-QC ASTOT	QC	0.015	1.56e-02	104.000 % Recovery	
1 ICV	0	EMSPT-QC B-TOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC BATOT	QC	0.015	1.54e-02	102.667 % Recovery	
1 ICV	0	EMSPT-QC BETOT	QC	0.015	1.50e-02	100.000 % Recovery	
1 ICV	0	EMSPT-QC CETOT	QC	0.015	1.48e-02	98.667 % Recovery	
1 ICV	0	EMSPT-QC COTOT	QC	0.015	1.53e-02	102.000 % Recovery	
1 ICV	0	EMSPT-QC EUTOT	QC	0.015	1.49e-02	99.333 % Recovery	
1 ICV	0	EMSPT-QC LATOT	QC	0.015	1.52e-02	101.333 % Recovery	
1 ICV	0	EMSPT-QC LITOT	QC	0.015	1.49e-02	99.333 % Recovery	
1 ICV	0	EMSPT-QC PDTOT	QC	0.015	1.64e-02	109.333 % Recovery	
1 ICV	0	EMSPT-QC PRTOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC RBTOT	QC	0.015	1.44e-02	96.000 % Recovery	
1 ICV	0	EMSPT-QC RHTOT	QC	0.015	1.49e-02	99.333 % Recovery	
1 ICV	0	EMSPT-QC RUTOT	QC	0.015	1.65e-02	110.000 % Recovery	
1 ICV	0	EMSPT-QC SBTOT	QC	0.015	1.53e-02	102.000 % Recovery	
1 ICV	0	EMSPT-QC SETOT	QC	0.015	1.52e-02	101.333 % Recovery	
1 ICV	0	EMSPT-QC TATOT	QC	0.015	1.58e-02	105.333 % Recovery	
1 ICV	0	EMSPT-QC TETOT	QC	0.015	1.43e-02	95.333 % Recovery	
1 ICV	0	EMSPT-QC TLTOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC V-TOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC W-TOT	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC Y-TOT	QC	0.015	1.49e-02	99.333 % Recovery	
1 ICV	0	EMSPT-QC 90	QC	0.015	1.51e-02	100.667 % Recovery	
1 ICV	0	EMSPT-QC 151	QC	0.015	1.49e-02	99.333 % Recovery	
2 ICB	0	EMSPT-QC ASTOT	QC	1	<3.00e-4	ug/mL	
2 ICB	0	EMSPT-QC B-TOT	QC	1	<4.00e-4	ug/mL	
2 ICB	0	EMSPT-QC BATOT	QC	1	<3.00e-6	ug/mL	
2 ICB	0	EMSPT-QC BETOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC CETOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC COTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC EUTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC LATOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC LITOT	QC	1	<2.00e-4	ug/mL	
2 ICB	0	EMSPT-QC PDTOT	QC	1	<4.00e-5	ug/mL	
2 ICB	0	EMSPT-QC PRTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC RBTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC RHTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC RUTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC SBTOT	QC	1	<3.00e-5	ug/mL	
2 ICB	0	EMSPT-QC SETOT	QC	1	<1.00e-4	ug/mL	
2 ICB	0	EMSPT-QC TATOT	QC	1	<3.00e-5	ug/mL	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33455

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
2	ICB		0		QMSPT-QC TETOT	QC	1	<3.00e-5		ug/mL
2	ICB		0		QMSPT-QC TLTOT	QC	1	<3.00e-5		ug/mL
2	ICB		0		QMSPT-QC V-TOT	QC	1	<1.50e-3		ug/mL
2	ICB		0		QMSPT-QC W-TOT	QC	1	<3.00e-5		ug/mL
2	ICB		0		QMSPT-QC Y-TOT	QC	1	<3.00e-5		ug/mL
2	ICB		0		QMSPT-QC 90	QC	1	<3.00e-5		ug/mL
2	ICB		0		QMSPT-QC 151	QC	1	<3.00e-5		ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 ASTOT-D1	LIQUID	N/A	8.469e+00	8.48e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 B-TOT-D1	LIQUID	N/A	2.132e+01	0.848	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 BATOT-D1	LIQUID	N/A	8.378e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 BETOT-D1	LIQUID	N/A	3.025e-01	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 CETOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 COTOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 EUTOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 LATOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 LITOT-D1	LIQUID	N/A	5.952e-01	0.424	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 PDTOT-D1	LIQUID	N/A	5.067e+00	8.48e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 PRTOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 RBTOT-D1	LIQUID	N/A	4.953e+00	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 RHTOT-D1	LIQUID	N/A	2.346e+00	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 RUTOT-D1	LIQUID	N/A	4.766e-01	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 SBTOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 SETOT-D1	LIQUID	N/A	2.471e+01	0.212	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 TATOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 TETOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 TLTOT-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 V-TOT-D1	LIQUID	N/A	< 3.182e+00	3.182	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 W-TOT-D1	LIQUID	N/A	1.950e+01	6.36e-002	ug/mL
3	SAMPLE	S00T000850	0		QMSPT-D1 90-D1	LIQUID	N/A	< 6.363e-02	6.36e-002	ug/mL
4	SPK-POST	S00T000850	0		QMSPT-D1 ASTOT-D1	LIQUID	0.0250	2.69e-02	107.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 B-TOT-D1	LIQUID	0.0250	2.57e-02	102.800	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 BATOT-D1	LIQUID	0.0250	2.52e-02	100.800	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 BETOT-D1	LIQUID	0.0250	2.47e-02	98.800	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 CETOT-D1	LIQUID	0.0250	5.33e-02	213.200	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 COTOT-D1	LIQUID	0.0250	2.48e-02	99.200	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 EUTOT-D1	LIQUID	0.0250	2.29e-02	91.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 LATOT-D1	LIQUID	0.0250	2.64e-02	105.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 LITOT-D1	LIQUID	0.0250	2.58e-02	103.200	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 PDTOT-D1	LIQUID	0.0250	2.64e-02	105.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 PRTOT-D1	LIQUID	0.0250	2.47e-02	98.800	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 RBTOT-D1	LIQUID	0.0250	2.45e-02	98.000	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 RHTOT-D1	LIQUID	0.0250	2.29e-02	91.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 RUTOT-D1	LIQUID	0.0250	2.64e-02	105.600	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 SBTOT-D1	LIQUID	0.0250	2.46e-02	98.400	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 SETOT-D1	LIQUID	0.0250	2.51e-02	100.400	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 TATOT-D1	LIQUID	0.0250	2.31e-02	92.400	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 TETOT-D1	LIQUID	0.0250	2.25e-02	90.000	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 TLTOT-D1	LIQUID	0.0250	2.26e-02	90.400	% Recovery
4	SPK-POST	S00T000850	0		QMSPT-D1 V-TOT-D1	LIQUID	0.0250	2.70e-02	108.000	% Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-1701 REV. 0

LABCORE Completed Worklist Report for Worklist# 33455

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	SPK-POST	S00T000850	0		EMSPT-D1 W-TOT-D1	LIQUID	0.0250	2.31e-02	92.400	% Recovery
4	SPK-POST	S00T000850	0		EMSPT-D1 90-D1	LIQUID	0.0250	2.29e-02	91.600	% Recovery
5	SAMPLE	S00T000852	0		EMSPT-D1 ASTOT-D1	LIQUID	N/A	8.369e+00	8.48e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 B-TOT-D1	LIQUID	N/A	2.105e+01	0.848	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 BATOT-D1	LIQUID	N/A	9.269e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 BETOT-D1	LIQUID	N/A	3.364e-01	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 CETOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 COTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 EUTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 LATOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 LITOT-D1	LIQUID	N/A	5.468e-01	0.424	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 PDTOT-D1	LIQUID	N/A	5.703e-01	8.48e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 PRTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 RBTOT-D1	LIQUID	N/A	5.177e+00	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 RHTOT-D1	LIQUID	N/A	2.225e+00	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 RUTOT-D1	LIQUID	N/A	5.131e-01	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 SBTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 SETOT-D1	LIQUID	N/A	2.532e+01	0.212	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 TATOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 TETOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 TLTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 V-TOT-D1	LIQUID	N/A	3.182e+00	3.182	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 W-TOT-D1	LIQUID	N/A	1.917e+01	6.36e-002	ug/mL
5	SAMPLE	S00T000852	0		EMSPT-D1 90-D1	LIQUID	N/A	6.872e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 ASTOT-D1	LIQUID	N/A	8.217e+00	8.48e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 B-TOT-D1	LIQUID	N/A	1.826e+01	0.848	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 BATOT-D1	LIQUID	N/A	7.530e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 BETOT-D1	LIQUID	N/A	3.135e-01	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 CETOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 COTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 EUTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 LATOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 LITOT-D1	LIQUID	N/A	5.241e-01	0.424	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 PDTOT-D1	LIQUID	N/A	6.560e-01	8.48e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 PRTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 RBTOT-D1	LIQUID	N/A	4.936e+00	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 RHTOT-D1	LIQUID	N/A	2.212e+00	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 RUTOT-D1	LIQUID	N/A	5.262e-01	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 SBTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 SETOT-D1	LIQUID	N/A	2.414e+01	0.212	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 TATOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 TETOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 TLTOT-D1	LIQUID	N/A	6.363e-02	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 V-TOT-D1	LIQUID	N/A	3.182e+00	3.182	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 W-TOT-D1	LIQUID	N/A	1.895e+01	6.36e-002	ug/mL
6	SAMPLE	S00T000854	0		EMSPT-D1 90-D1	LIQUID	N/A	8.484e-02	6.36e-002	ug/mL
7	CCV		0		EMSPT-QC ASTOT	QC	0.015	1.50e-02	100.000	% Recovery
7	CCV		0		EMSPT-QC B-TOT	QC	0.015	1.44e-02	96.000	% Recovery
7	CCV		0		EMSPT-QC BATOT	QC	0.015	1.57e-02	104.667	% Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33455

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
7 CCV	0	EMSPT-QC BETOT	QC	0.015	1.41e-02	94.000 % Recovery	
7 CCV	0	EMSPT-QC CETOT	QC	0.015	1.58e-02	105.333 % Recovery	
7 CCV	0	EMSPT-QC COTOT	QC	0.015	1.50e-02	100.000 % Recovery	
7 CCV	0	EMSPT-QC EUTOT	QC	0.015	1.49e-02	99.333 % Recovery	
7 CCV	0	EMSPT-QC LATOT	QC	0.015	1.62e-02	108.000 % Recovery	
7 CCV	0	EMSPT-QC LITOT	QC	0.015	1.45e-02	96.667 % Recovery	
7 CCV	0	EMSPT-QC PDTOT	QC	0.015	1.61e-02	107.333 % Recovery	
7 CCV	0	EMSPT-QC PRTOT	QC	0.015	1.51e-02	100.667 % Recovery	
7 CCV	0	EMSPT-QC RBTOT	QC	0.015	1.43e-02	95.333 % Recovery	
7 CCV	0	EMSPT-QC RHTOT	QC	0.015	1.47e-02	98.000 % Recovery	
7 CCV	0	EMSPT-QC RUTOT	QC	0.015	1.63e-02	108.667 % Recovery	
7 CCV	0	EMSPT-QC SBTOT	QC	0.015	1.52e-02	101.333 % Recovery	
7 CCV	0	EMSPT-QC SETOT	QC	0.015	1.43e-02	95.333 % Recovery	
7 CCV	0	EMSPT-QC TATOT	QC	0.015	1.58e-02	105.333 % Recovery	
7 CCV	0	EMSPT-QC TETOT	QC	0.015	1.39e-02	92.667 % Recovery	
7 CCV	0	EMSPT-QC TLTOT	QC	0.015	1.53e-02	102.000 % Recovery	
7 CCV	0	EMSPT-QC V-TOT	QC	0.015	1.48e-02	98.667 % Recovery	
7 CCV	0	EMSPT-QC W-TOT	QC	0.015	1.51e-02	100.667 % Recovery	
7 CCV	0	EMSPT-QC Y-TOT	QC	0.015	1.48e-02	98.667 % Recovery	
7 CCV	0	EMSPT-QC 90	QC	0.015	1.54e-02	102.667 % Recovery	
7 CCV	0	EMSPT-QC 151	QC	0.015	1.49e-02	99.333 % Recovery	
8 CCB	0	EMSPT-QC ASTOT	QC	1	<3.00e-4		ug/mL
8 CCB	0	EMSPT-QC B-TOT	QC	1	<4.00e-4		ug/mL
8 CCB	0	EMSPT-QC BATOT	QC	1	<3.00e-6		ug/mL
8 CCB	0	EMSPT-QC BETOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC CETOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC COTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC EUTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC LATOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC LITOT	QC	1	<2.00e-4		ug/mL
8 CCB	0	EMSPT-QC PDTOT	QC	1	<4.00e-5		ug/mL
8 CCB	0	EMSPT-QC PRTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC RBTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC RHTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC RUTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC SBTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC SETOT	QC	1	<1.00e-4		ug/mL
8 CCB	0	EMSPT-QC TATOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC TETOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC TLTOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC V-TOT	QC	1	<1.50e-3		ug/mL
8 CCB	0	EMSPT-QC W-TOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC Y-TOT	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC 90	QC	1	<3.00e-5		ug/mL
8 CCB	0	EMSPT-QC 151	QC	1	<3.00e-5		ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33455

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	-----	------	--------	--------	-------	-------------	------

Final page for worklist# 33455

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sal M. Paj 05/31/2000
Reviewer Signature Date

05/05/00 09:47

ws2

file Pt0531a.txt

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33455

Analyst: KST Instrument: ICPMS1 Book# 000531-1Method: LA-506-101 Rev/Mod A3 000531-2

Worklist Comment: ICP/MS AZ-101 (DIRECT) MSPT-D1

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 ICV			@MSPT-QC QC			
2 ICB			@MSPT-QC QC			
3 SAMPLE	S00T000850 0		@MSPT-D1 LIQUID		99000438 AZ-101 (2)	
Analytes Requested: 151-D1 , 90-D1 , 93-D1 , AGTOT-D1, ASTOT-D1, B-TOT-D1, BATOT-D1, BETOT-D1, CETOT-D1, COTOT-D1, EUTOT-D1, K-TOT-D1, LATOT-D1, LITOT-D1, MOTOT-D1, NATOT-D1, NDTOT-D1, NI63-D1 , PDTOT-D1, PRTOT-D1, RBTOT-D1, RHTOT-D1, RUTOT-D1, S-TOT-D1, SBTOT-D1, SETOT-D1, TATOT-D1, TETOT-D1, TLTOT-D1, V-TOT-D1, W-TOT-D1, Y-TOT-D1, ZNTOT-D1						
4 SPK-POST	S00T000850 0		@MSPT-D1 LIQUID			
5 SAMPLE	S00T000852 0		@MSPT-D1 LIQUID		99000438 AZ-101 (2)	
Analytes Requested: 151-D1 , 90-D1 , 93-D1 , AGTOT-D1, ASTOT-D1, B-TOT-D1, BATOT-D1, BETOT-D1, CETOT-D1, COTOT-D1, EUTOT-D1, K-TOT-D1, LATOT-D1, LITOT-D1, MOTOT-D1, NATOT-D1, NDTOT-D1, NI63-D1 , PDTOT-D1, PRTOT-D1, RBTOT-D1, RHTOT-D1, RUTOT-D1, S-TOT-D1, SBTOT-D1, SETOT-D1, TATOT-D1, TETOT-D1, TLTOT-D1, V-TOT-D1, W-TOT-D1, Y-TOT-D1, ZNTOT-D1						
6 SAMPLE	S00T000854 0		@MSPT-D1 LIQUID		99000438 AZ-101 (2)	
Analytes Requested: 151-D1 , 90-D1 , 93-D1 , AGTOT-D1, ASTOT-D1, B-TOT-D1, BATOT-D1, BETOT-D1, CETOT-D1, COTOT-D1, EUTOT-D1, K-TOT-D1, LATOT-D1, LITOT-D1, MOTOT-D1, NATOT-D1, NDTOT-D1, NI63-D1 , PDTOT-D1, PRTOT-D1, RBTOT-D1, RHTOT-D1, RUTOT-D1, S-TOT-D1, SBTOT-D1, SETOT-D1, TATOT-D1, TETOT-D1, TLTOT-D1, V-TOT-D1, W-TOT-D1, Y-TOT-D1, ZNTOT-D1						
7 CCV			@MSPT-QC QC			
8 CCB			@MSPT-QC QC			

Data Entry Comments:

Uploaded & Validated by:

Sail M. Peng

05/31/2000

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 33455

S Type Sample# R A Test Matrix Group# Project

Final page for worklist # 33455

KS Hornlike
Signature Date

Signature Date

S00T000850
S00T000850-a
S00T000852
S00T000854

aiaidf .1-10-1-20
↓ ↓

ata Entry Comments:

Spike .1ml each of 000513-1, 000513-2 and
85B48B into 20ml

Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

*Tested by for
K Thorndike 6/21/00*

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 08:59
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 66150.,992.6,1.501, 68390., 66680., 65450., 66170., 65180., 65460., 65300., 65580., 66900., 66340.,,
Elem1=Ir[193],[193],,,Cts/S, 24520.,431.7,1.761, 24630., 24780., 24800., 24030., 24220., 24710., 23620., 25040., 24570., 24800.,,
Elem2=Sc[45],[45],,,Cts/S, 63500.,1202.,1.893, 64620., 64250., 61490., 63070., 62080., 62850., 63630., 63470., 65570., 63930.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 09:02
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 68480.,1387.,2.025, 70280., 69050., 9330., 69460., 68050., 67020., 69330., 68850., 67840., 65570.,,
Elem1=Ir[193],[193],,,Cts/S, 25500.,726.4,2.849, 26510., 26080., 2

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1228 TO 1258.

6200., 25820., 25400., 25850., 25260., 24880., 24210., 24750.,,
Elem2=Sc[45],[45],,,Cts/S, 64770.,1846.,2.850, 67950., 67640., 655
80., 63890., 64640., 62940., 64870., 64440., 63260., 62510.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 09:29

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhiElem0=In[115],[115],,,Cts/S, 66370.,1222.,1.842, 64700., 67040., 6
5920., 68210., 67960., 65940., 64760., 66240., 65640., 67240.,,,Elem1=Ir[193],[193],,,Cts/S, 26370.,628.5,2.384, 26010., 26500., 2
6140., 27640., 25970., 25690., 25650., 26290., 27040., 26750.,,,Elem2=Sc[45],[45],,,Cts/S, 61270.,1283.,2.093, 58560., 62830., 627
30., 61300., 62150., 61100., 61620., 60080., 60670., 61700.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE

SampleName=ms-tune

Operator=kjt

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 09:34

Sample Type=Unk

Mode=INT

CorrFactor=1.000000

Repeats=10

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[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 66110.,1289.,1.950, 66450., 65400., 6
4140., 64400., 65170., 66760., 67060., 66760., 68220., 66790.,,,
Elem1=Ir[193],[193],,,Cts/S, 25910.,638.2,2.463, 25580., 26580., 2
6330., 25100., 25220., 25550., 25960., 26100., 27120., 25520.,,,
Elem2=Sc[45],[45],,,Cts/S, 59500.,1405.,2.361, 59490., 59420., 590
90., 56330., 58740., 59330., 60540., 61650., 60540., 59900.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
```

[Sample Header]

```
Method=MS_TUNE
SampleName=ms-tune
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 09:47
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 67930.,1452.,2.137, 69480., 69330., 6
8520., 69550., 65230., 67160., 67000., 67070., 69010., 66950.,,,
Elem1=Ir[193],[193],,,Cts/S, 26340.,694.6,2.638, 26720., 26800., 2
6710., 26560., 25630., 26600., 26060., 25860., 27410., 25000.,,,
Elem2=Sc[45],[45],,,Cts/S, 61790.,1301.,2.106, 62700., 62760., 610
90., 63710., 59730., 60790., 60680., 60930., 63060., 62460.,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
```

[Sample Header]

```
Method=PERTABL
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
```

Run Time=05/31/2000 09:54
 Sample Type=Std
 Mode=IR
 CorrFactor=1.000000
 Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,Cts/S, 18.48,1.000,5.413, 19.53, 17.16, 19.10, 17.71, 18.90,,,
Elem1=B[11],[11],,,Cts/S, 435.1,12.19,2.801, 453.9, 439.8, 431.7, 427.3, 423.0,,,
Elem2=Ba[138],[138],,,Cts/S, 3.934,.3828,9.730, 3.717, 3.655, 4.420, 4.275, 3.603,,,
Elem3=Be[9],[9],,,Cts/S, 6.826,.5329,7.807, 6.707, 6.011, 7.431, 6.851, 7.128,,,
Elem4=Cd[111],[111],,,Cts/S, 1.195,.1352,11.32, 1.225, 1.254, 1.145, 1.357, .9948,,,
Elem5=Ce[140],[140],,,Cts/S, 1.268,.1468,11.58, 1.268, 1.509, 1.260, 1.176, 1.127,,,
Elem6=Co[59],[59],,,Cts/S, 10.83,.5776,5.334, 10.99, 9.962, 11.37, 10.55, 11.26,,,
Elem7=Eu[151],[151],,,Cts/S, 1.044,.1579,15.13, 1.246, .9988, 1.053, .8142, 1.105,,,
Elem8=EuTot,[152],,,Cts/S, 1.055,.1109,10.52, 1.203, 1.041, 1.088, .8934, 1.050,,,
Elem9=Eu[153],[153],,,Cts/S, 1.066,.0805,7.548, 1.159, 1.084, 1.122, .9725, .9948,,,
Elem10=La[139],[139],,,Cts/S, 1.157,.2502,21.62, .7216, 1.254, 1.328, 1.176, 1.304,,,
Elem11=Li[7],[7],,,Cts/S, 37.25,2.570,6.900, 37.44, 33.64, 39.68, 35.87, 39.61,,,
Elem12=Pd[108],[108],,,Cts/S, 1.109,.1382,12.47, 1.225, .9563, 1.282, 1.040, 1.039,,,
Elem13=Pd[110],[110],,,Cts/S, 1.296,.1059,8.170, 1.421, 1.318, 1.237, 1.357, 1.150,,,
Elem14=Pr[141],[141],,,Cts/S, 1.147,.0428,3.733, 1.181, 1.084, 1.191, 1.131, 1.150,,,
Elem15=Rb[85],[85],,,Cts/S, 2.908,.2164,7.443, 2.930, 2.678, 3.092, 3.144, 2.697,,,
Elem16=Rh[103],[103],,,Cts/S, 1.232,.1397,11.33, 1.246, 1.126, 1.443, 1.086, 1.260,,,
Elem17=Ru[101],[101],,,Cts/S, .7706,.1113,14.44, .8310, .7863, .8244, .8368, .5748,,,
Elem18=Ru[102],[102],,,Cts/S, 1.438,.0918,6.384, 1.421, 1.551, 1.489, 1.425, 1.304,,,
Elem19=Sb[121],[121],,,Cts/S, 1.349,.0911,6.753, 1.312, 1.509, 1.3
```

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28, 1.312, 1.282,,,
Elem20=Sb[123],[123],,,Cts/S, 1.166,.1564,13.42, 1.115, 1.126, 1.4
20, .9951, 1.172,,,
Elem21=Se[82],[82],,,Cts/S, 4.445,.5168,11.63, 3.892, 3.953, 5.015
, 4.478, 4.886,,,
Elem22=Ta[181],[181],,,Cts/S, 2.343,.3284,14.01, 2.100, 2.332, 1.9
49, 2.615, 2.721,,,
Elem23=Te[128],[128],,,Cts/S, 3.677,.1507,4.098, 3.564, 3.506, 3.6
87, 3.890, 3.736,,,
Elem24=Tl[205],[205],,,Cts/S, 3.469,.3538,10.20, 3.582, 3.010, 3.5
17, 3.279, 3.958,,,
Elem25=V [51],[51],,,Cts/S, 198.2,11.76,5.932, 187.8, 195.4, 218.5
, 194.6, 194.7,,,
Elem26=W [182],[182],,,Cts/S, 2.839,.2152,7.582, 2.882, 2.671, 3.1
78, 2.822, 2.639,,,
Elem27=Y [89],[89],,,Cts/S, 1.963,.1026,5.227, 2.056, 1.828, 2.038
, 2.013, 1.879,,,
Elem28=AMU[90],[90],,,Cts/S, 3.179,.2281,7.177, 3.040, 2.869, 3.45
8, 3.257, 3.272,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 22.591,.66404,2.9394,22.865,23.529,21.
833,22.108,22.618
Elem1=Ir[193],[193],,,Cts/S, 11.982,.17326,1.4460,12.143,11.792,11.
800,12.046,12.127
Elem2=Sc[45],[45],,,Cts/S, 18.992,1.1981,6.3083,18.562,20.629,18.03
3,19.851,17.888

[Sample Header]

Method=PERTABL
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:01
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,Cts/S, 17.19,.5030,2.926, 17.58, 17.02, 17.83,
16.93, 16.60,,,

Elem1=B₁₁, [11],,,,Cts/S, 419.9,10.63,2.533, 410.7, 430.3, 422.1,
429.4, 407.0,,,
Elem2=Ba₁₃₈, [138],,,,Cts/S, 3.800,.3050,8.025, 3.714, 3.373, 3.89
3, 4.217, 3.805,,,
Elem3=Be₉, [9],,,,Cts/S, 6.762,.3324,4.915, 6.390, 6.640, 7.164, 7
.057, 6.561,,,
Elem4=Cd₁₁₁, [111],,,,Cts/S, 1.176,.2342,19.92, .7989, 1.139, 1.21
7, 1.313, 1.411,,,
Elem5=Ce₁₄₀, [140],,,,Cts/S, 1.289,.2466,19.13, 1.317, 1.162, 1.26
1, 1.682, 1.023,,,
Elem6=Co₅₉, [59],,,,Cts/S, 11.20,.9672,8.636, 10.88, 10.61, 12.51,
11.86, 10.14,,,
Elem7=Eu₁₅₁, [151],,,,Cts/S, 1.112,.1600,14.39, 1.015, .9605, 1.28
3, 1.014, 1.289,,,
Elem8=EuTot, [152],,,,Cts/S, 1.091,.1192,10.92, 1.015, .9605, 1.194,
1.048, 1.238,,,
Elem9=Eu₁₅₃, [153],,,,Cts/S, 1.070,.0866,8.097, 1.015, .9605, 1.10
6, 1.083, 1.186,,,
Elem10=La₁₃₉, [139],,,,Cts/S, 1.024,.0362,3.538, .9933, 1.028, .99
54, 1.083, 1.023,,,
Elem11=Li₇, [7],,,,Cts/S, 36.87,1.715,4.652, 34.15, 37.04, 36.96,
37.28, 38.90,,,
Elem12=Pd₁₀₈, [108],,,,Cts/S, 1.271,.1765,13.89, 1.490, 1.095, 1.0
84, 1.336, 1.350,,,
Elem13=Pd₁₁₀, [110],,,,Cts/S, 1.227,.2280,18.58, 1.058, 1.519, .95
11, 1.359, 1.248,,,
Elem14=Pr₁₄₁, [141],,,,Cts/S, 1.187,.0817,6.883, 1.123, 1.229, 1.3
05, 1.175, 1.105,,,
Elem15=Rb₈₅, [85],,,,Cts/S, 3.150,.4137,13.13, 3.217, 3.753, 3.141
, 3.042, 2.598,,,
Elem16=Rh₁₀₃, [103],,,,Cts/S, 1.345,.1013,7.532, 1.360, 1.452, 1.2
17, 1.429, 1.268,,,
Elem17=Ru₁₀₁, [101],,,,Cts/S, .7995,.1527,19.10, .9717, .8265, .84
05, .8065, .5523,,,
Elem18=Ru₁₀₂, [102],,,,Cts/S, 1.381,.1428,10.34, 1.447, 1.586, 1.2
83, 1.221, 1.370,,,
Elem19=Sb₁₂₁, [121],,,,Cts/S, 1.231,.1715,13.94, .9933, 1.474, 1.2
61, 1.198, 1.227,,,
Elem20=Sb₁₂₃, [123],,,,Cts/S, 1.188,.1311,11.04, 1.317, 1.139, 1.1
06, 1.336, 1.043,,,
Elem21=Se₈₂, [82],,,,Cts/S, 4.238,.4420,10.43, 3.671, 3.909, 4.380
, 4.770, 4.459,,,
Elem22=Ta₁₈₁, [181],,,,Cts/S, 2.744,.1585,5.775, 2.905, 2.565, 2.7
12, 2.627, 2.911,,,
Elem23=Te₁₂₈, [128],,,,Cts/S, 3.709,.2624,7.076, 3.606, 3.864, 3.3
40, 4.032, 3.702,,,
Elem24=Tl₂₀₅, [205],,,,Cts/S, 3.733,.3750,10.04, 3.113, 4.019, 3.6
90, 3.817, 4.028,,,

Elem25=V_[51],[51],,,Cts/S, 193.4,5.005,2.588, 189.9, 201.2, 188.9
, 195.4, 191.5,,,
Elem26=W_[182],[182],,,Cts/S, 2.901,.3221,11.10, 3.030, 3.164, 2.9
79, 2.340, 2.991,,,
Elem27=Y_[89],[89],,,Cts/S, 2.011,.3924,19.52, 1.965, 2.256, 2.522
, 1.797, 1.514,,,
Elem28=AMU[90],[90],,,Cts/S, 3.528,.2790,7.907, 3.692, 3.708, 3.71
6, 3.456, 3.068,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 22.858,1.0289,4.5015,23.156,22.384,22.
605,21.700,24.444
Elem1=Ir[193],[193],,,Cts/S, 11.941,.49262,4.1253,12.048,11.694,11.
246,12.181,12.538
Elem2=Sc[45],[45],,,Cts/S, 19.803,.59358,2.9974,20.735,20.031,19.26
4,19.554,19.432

[Sample Header]

Method=MS_TUNE
SampleName=Sample-0
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:17
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 78150.,1729.,2.213, 77560., 77240., 7
9610., 78750., 79130., 77570., 77680., 78650., 74400., 80880.,,
Elem1=Ir[193],[193],,,Cts/S, 40180.,1331.,3.311, 39310., 40370., 3
9980., 39740., 41710., 39320., 39440., 40270., 38540., 43110.,,
Elem2=Sc[45],[45],,,Cts/S, 67640.,1150.,1.699, 68330., 67450., 681
20., 67820., 68110., 66990., 66170., 68450., 65540., 69450.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=MS_TUNE
SampleName=Sample-0

Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:18
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=In[115],[115],,,Cts/S, 77920.,972.2,1.248, 79210., 78680., 77280., 77110., 79270., 77670., 77230., 76290., 78200., 78230.,,
Elem1=Ir[193],[193],,,Cts/S, 40480.,455.6,1.126, 40120., 41460., 40460., 40340., 40600., 40170., 39790., 40360., 40830., 40660.,,
Elem2=Sc[45],[45],,,Cts/S, 67710.,799.4,1.181, 68330., 66650., 67470., 67530., 68230., 66820., 67560., 67260., 67860., 69400.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=PERTABL
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:21
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,Cts/S, 15.25,1.118,7.330, 14.05, 16.74, 15.91, 14.30, 15.23,,
Elem1=B[11],[11],,,Cts/S, 451.0,20.73,4.596, 477.2, 465.3, 445.5, 423.9, 443.2,,
Elem2=Ba[138],[138],,,Cts/S, 3.888,.2441,6.278, 3.614, 3.761, 3.831, 3.977, 4.257,,
Elem3=Be[9],[9],,,Cts/S, 6.491,.5461,8.413, 5.923, 6.602, 5.924, 6

```

.928, 7.079,,,
Elem4=Cd[111],[111],,,Cts/S, 1.127,.2029,18.01, 1.048, 1.090, .963
2, 1.480, 1.053,,,
Elem5=Ce[140],[140],,,Cts/S, 1.422,.0820,5.766, 1.518, 1.346, 1.32
7, 1.458, 1.462,,,
Elem6=Co[59],[59],,,Cts/S, 10.71,.7363,6.871, 11.17, 10.12, 11.78,
10.08, 10.43,,,
Elem7=Eu[151],[151],,,Cts/S, 1.238,.1513,12.23, .9836, 1.261, 1.24
1, 1.370, 1.333,,,
Elem8=EuTot,[152],,,Cts/S, 1.248,.0536,4.297, 1.219, 1.186, 1.274,
1.326, 1.236,,,
Elem9=Eu[153],[153],,,Cts/S, 1.258,.1386,11.02, 1.454, 1.111, 1.30
6, 1.281, 1.139,,,
Elem10=La[139],[139],,,Cts/S, 1.100,.2093,19.02, 1.005, 1.261, .85
61, 1.370, 1.010,,,
Elem11=Li[7],[7],,,Cts/S, 33.65,1.912,5.683, 31.52, 32.64, 33.20,
34.35, 36.55,,,
Elem12=Pd[108],[108],,,Cts/S, 1.298,.3117,24.01, .7698, 1.346, 1.3
48, 1.436, 1.591,,,
Elem13=Pd[110],[110],,,Cts/S, 1.379,.2217,16.08, 1.732, 1.218, 1.1
77, 1.436, 1.333,,,
Elem14=Pr[141],[141],,,Cts/S, 1.259,.1316,10.46, 1.326, 1.133, 1.1
13, 1.304, 1.419,,,
Elem15=Rb[85],[85],,,Cts/S, 2.863,.2652,9.263, 2.566, 2.735, 3.104
, 3.181, 2.730,,,
Elem16=Rh[103],[103],,,Cts/S, 1.366,.1197,8.762, 1.347, 1.368, 1.5
41, 1.370, 1.204,,,
Elem17=Ru[101],[101],,,Cts/S, .8782,.1750,19.92, .7270, .9830, 1.1
34, .7512, .7954,,,
Elem18=Ru[102],[102],,,Cts/S, 1.185,.1622,13.68, 1.433, 1.026, 1.1
13, 1.259, 1.096,,,
Elem19=Sb[121],[121],,,Cts/S, 1.355,.1729,12.77, 1.155, 1.239, 1.4
55, 1.591, 1.333,,,
Elem20=Sb[123],[123],,,Cts/S, 1.248,.1633,13.08, 1.133, 1.325, 1.4
77, 1.060, 1.247,,,
Elem21=Se[82],[82],,,Cts/S, 4.187,.5117,12.22, 4.127, 4.359, 4.923
, 3.999, 3.526,,,
Elem22=Ta[181],[181],,,Cts/S, 2.904,.4283,14.75, 2.370, 2.903, 2.9
59, 3.550, 2.737,,,
Elem23=Te[128],[128],,,Cts/S, 3.901,.4008,10.28, 3.913, 3.953, 3.9
81, 3.270, 4.386,,,
Elem24=Tl[205],[205],,,Cts/S, 3.731,.3714,9.955, 3.397, 4.088, 4.1
68, 3.592, 3.410,,,
Elem25=V_[51],[51],,,Cts/S, 224.9,7.178,3.192, 236.4, 218.1, 219.8
, 224.7, 225.5,,,
Elem26=W_[182],[182],,,Cts/S, 2.994,.2248,7.510, 3.200, 2.739, 3.2
09, 3.043, 2.779,,,
Elem27=Y_[89],[89],,,Cts/S, 2.014,.3621,17.98, 1.561, 1.710, 2.419

```

, 2.209, 2.171,,,
Elem28=AMU[90],[90],,,Cts/S, 3.339,.2801,8.389, 3.229, 3.825, 3.10
4, 3.270, 3.268,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 23.206,.32582,1.4040,23.383,23.397,23.
360,22.631,23.258
Elem1=Ir[193],[193],,,Cts/S, 12.118,.33918,2.7989,12.658,12.230,11.
997,11.831,11.876
Elem2=Sc[45],[45],,,Cts/S, 20.136,.20925,1.0392,19.922,20.069,20.42
4,20.279,19.988

[Sample Header]

Method=PERTABL
SampleName=STD-A
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:28
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Ce[140],[140],,,Cts/S, 2228.,50.33,2.259, 2199., 2211., 2189
., 2228., 2314.,,,
Elem1=Eu[151],[151],,,Cts/S, 3490.,59.76,1.712, 3459., 3516., 3402
., 3522., 3552.,,,
Elem2=EuTot,[152],,,Cts/S, 3686.,63.10,1.712, 3713., 3666., 3586.,
3743., 3725.,,,
Elem3=Eu[153],[153],,,Cts/S, 3882.,87.99,2.266, 3966., 3815., 3770
., 3963., 3898.,,,
Elem4=Pd[108],[108],,,Cts/S, 1527.,22.06,1.445, 1527., 1503., 1515
., 1528., 1562.,,,
Elem5=Pd[110],[110],,,Cts/S, 700.9,12.55,1.790, 691.5, 702.8, 685.
6, 707.3, 717.1,,,
Elem6=Pr[141],[141],,,Cts/S, 3650.,60.64,1.661, 3688., 3649., 3550
., 3658., 3707.,,,
Elem7=Rb[85],[85],,,Cts/S, 4221.,92.83,2.199, 4254., 4138., 4112.,
4264., 4334.,,,
Elem8=Rh[103],[103],,,Cts/S, 6832.,104.4,1.528, 6970., 6888., 6725
., 6733., 6845.,,,

Elem9=Ru[101],[101],,,Cts/S, 1323.,39.48,2.984, 1336., 1349., 1289
., 1274., 1367.,,
Elem10=Ru[102],[102],,,Cts/S, 2516.,58.85,2.339, 2585., 2521., 244
8., 2467., 2561.,,
Elem11=Te[128],[128],,,Cts/S, 528.9,9.022,1.706, 523.3, 532.1, 515
.9, 536.7, 536.3.,,
Elem12=Y_[89],[89],,,Cts/S, 4623.,72.32,1.564, 4628., 4588., 4528.
, 4648., 4723.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 23.513,.35368,1.5042,23.444,23.434,24.
111,23.413,23.164

[Sample Header]

Method=PERTABL

SampleName=Std-B

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 10:33

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=Ta[181],[181],,,Cts/S, 8004.,288.7,3.607, 7721., 8371., 7867
., 7807., 8252.,,,

Elem1=W_[182],[182],,,Cts/S, 2255.,36.24,1.607, 2252., 2262., 2201
., 2258., 2303.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=Ir[193],[193],,,Cts/S, 12.579,.25647,2.0389,12.932,12.619,12.
660,12.434,12.249

[Sample Header]

Method=PERTABL

SampleName=Std-C

Operator=

Comment=

CustID=

CustSmpl=

LabID=
Run Time=05/31/2000 10:35
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=B[11],[11],,,Cts/S, 3456.,66.22,1.916, 3376., 3477., 3469.,
3411., 3548.,,,
Elem1=Sb[121],[121],,,Cts/S, 1236.,10.12,.8193, 1224., 1244., 1236
., 1227., 1247.,,,
Elem2=Sb[123],[123],,,Cts/S, 945.9,14.43,1.526, 954.3, 948.2, 939.
7, 924.7, 962.4,,,
Elem3=AMU[90],[90],,,Cts/S, 1914.,43.96,2.297, 1887., 1867., 1953.
, 1968., 1896.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 24.231,.39754,1.6406,24.386,24.674,24.
378,24.094,23.622
Elem1=Sc[45],[45],,,Cts/S, 21.233,.29709,1.3992,21.707,21.248,20.89
1,21.165,21.154

[Sample Header]

Method=PERTABL
SampleName=Std-D
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 10:37
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,Cts/S, 844.1,7.755,.9188, 835.5, 845.7, 849.4,
853.1, 836.7,,,
Elem1=Ba[138],[138],,,Cts/S, 4030.,55.75,1.383, 4089., 4085., 3994
., 3963., 4018.,,,
Elem2=Be[9],[9],,,Cts/S, 2813.,52.45,1.864, 2724., 2836., 2855., 2

841., 2810.,,
Elem3=Cd[111],[111],,,Cts/S, 514.1,8.683,1.689, 527.9, 511.4, 515.
7, 504.5, 510.9,,
Elem4=Co[59],[59],,,Cts/S, 8139.,77.95,.9577, 8040., 8202., 8096.,
8231., 8129.,,
Elem5=La[139],[139],,,Cts/S, 2103.,75.05,3.569, 2214., 2093., 2060
., 2017., 2130.,,
Elem6=Li[7],[7],,,Cts/S, 10540.,150.2,1.425, 10280., 10680., 10560
., 10560., 10610.,,
Elem7=Se[82],[82],,,Cts/S, 72.91,.6455,.8853, 72.84, 73.74, 72.64,
72.04, 73.29,,
Elem8=Tl[205],[205],,,Cts/S, 6568.,109.9,1.674, 6471., 6753., 6505
., 6540., 6572.,,
Elem9=V[51],[51],,,Cts/S, 6006.,52.53,.8745, 5983., 6075., 5955.,
6049., 5970.,,
[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,,Cts/S, 23.647,.30066,1.2715,23.799,23.516,23.
873,23.870,23.177
Elem1=Ir[193],[193],,,Cts/S, 11.665,.33792,2.8969,12.188,11.661,11.
360,11.741,11.374
Elem2=Sc[45],[45],,,Cts/S, 20.079,.41844,2.0840,20.774,19.858,20.16
8,19.779,19.815

[Sample Header]
Method=PERTABL
SampleName=icv1
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000531-1
LabID=
Run Time=05/31/2000 10:46
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 15.60,.2663,1.707, 15.62, 15.20, 15.93, 1
5.51, 15.71, QC Pass,15.00%,15.00
Elem1=B[11],[11],,,ppb, 15.05,.3410,2.266, 14.97, 14.99, 15.55, 1
4.60, 15.11, QC Pass,10.00%,15.00
Elem2=Ba[138],[138],,,ppb, 15.36,.2016,1.313, 15.14, 15.15, 15.51,
15.56, 15.44, QC Pass,10.00%,15.00

Elem3=Be[9],[9],,,,ppb, 14.95,.3332,2.228, 15.05, 14.88, 15.47, 14.59, 14.78, QC Pass, 10.00%, 15.00
 Elem4=Cd[111],[111],,,,ppb, 15.54,.1639,1.055, 15.40, 15.44, 15.49, 15.81, 15.58, None, 0.0, 0.0
 Elem5=Ce[140],[140],,,,ppb, 14.77,.3804,2.575, 14.62, 14.56, 15.44, 14.68, 14.55, None, 0.0, 0.0
 Elem6=Co[59],[59],,,,ppb, 15.27,.1740,1.139, 15.09, 15.19, 15.56, 15.24, 15.29, QC Pass, 10.00%, 15.00
 Elem7=Eu[151],[151],,,,ppb, .0208,.0014,6.715, .0197, .0211, .0197, .0203, .0231, None, 0.0, 0.0
 Elem8=EuTot,[152],,,,ppb, .0253,.0008,3.119, .0251, .0256, .0249, .0265, .0245, None, 0.0, 0.0
 Elem9=Eu[153],[153],,,,ppb, .0294,.0023,7.783, .0299, .0297, .0295, .0321, .0257, None, 0.0, 0.0
 Elem10=La[139],[139],,,,ppb, 15.20,.2663,1.752, 14.91, 14.99, 15.58, 15.32, 15.21, QC Pass, 10.00%, 15.00
 Elem11=Li[7],[7],,,,ppb, 14.93,.3809,2.551, 14.77, 15.06, 15.54, 14.58, 14.71, QC Pass, 10.00%, 15.00
 Elem12=Pd[108],[108],,,,ppb, 1.490,.0178,1.196, 1.513, 1.472, 1.500, 1.473, 1.491, None, 0.0, 0.0
 Elem13=Pd[110],[110],,,,ppb, 13.30,.1852,1.392, 13.14, 13.19, 13.36, 13.22, 13.60, None, 0.0, 0.0
 Elem14=Pr[141],[141],,,,ppb, .0075,.0009,11.73, .0079, .0062, .0075, .0087, .0074, None, 0.0, 0.0
 Elem15=Rb[85],[85],,,,ppb, .0051,.0018,34.64, .0045, .0056, .0077, .0046, .0029, None, 0.0, 0.0
 Elem16=Rh[103],[103],,,,ppb, .0019,.0006,31.62, .0030, .0015, .0016, .0017, .0017, None, 0.0, 0.0
 Elem17=Ru[101],[101],,,,ppb, .0021,.0019,88.54, .0029, -.0009, .0028, .0040, .0017, None, 0.0, 0.0
 Elem18=Ru[102],[102],,,,ppb, .0070,.0015,21.15, .0076, .0047, .0069, .0088, .0071, None, 0.0, 0.0
 Elem19=Sb[121],[121],,,,ppb, 15.26,.1735,1.137, 15.02, 15.20, 15.36, 15.22, 15.48, QC Pass, 10.00%, 15.00
 Elem20=Sb[123],[123],,,,ppb, 15.10,.2046,1.356, 14.77, 15.02, 15.25, 15.17, 15.26, QC Pass, 10.00%, 15.00
 Elem21=Se[82],[82],,,,ppb, 15.17,.5326,3.511, 14.58, 14.64, 15.37, 15.49, 15.78, QC Pass, 10.00%, 15.00
 Elem22=Ta[181],[181],,,,ppb, -.0011,.0010,96.07, -.0020, -.0014, -.0005, .0004, -.0019, None, 0.0, 0.0
 Elem23=Te[128],[128],,,,ppb, -.0020,.0036,179.0, .0002, -.0063, -.0003, -.0053, .0017, None, 0.0, 0.0
 Elem24=Tl[205],[205],,,,ppb, 15.09,.0997,.6609, 15.24, 15.08, 15.10, 14.95, 15.10, QC Pass, 10.00%, 15.00
 Elem25=V[51],[51],,,,ppb, 15.06,.0715,.4750, 15.03, 15.14, 15.12, 15.02, 14.97, QC Pass, 15.00%, 15.00
 Elem26=W[182],[182],,,,ppb, -.0003,.0031,1077., .0006, -.0041, .0017, -.0028, .0032, None, 0.0, 0.0

Elem27=Y [89],[89],,,ppb, .0057,.0007,11.53, .0061, .0057, .0046,
.0062, .0057,None,0.0,0.0
Elem28=AMU[90],[90],,,ppb, 15.13,.2112,1.396, 14.91, 15.19, 14.92,
15.22, 15.40,QC Pass,15.00%,15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 24.766,.35192,1.4210,25.210,25.037,24.
405,24.464,24.713

Elem1=Ir[193],[193],,Cts/S, 12.589,.15271,1.2130,12.729,12.656,12.
578,12.333,12.649

Elem2=Sc[45],[45],,Cts/S, 21.172,.30180,1.4255,21.489,21.285,20.68
9,21.289,21.107

[Sample Header]

Method=PERTABL

SampleName=icv2

Operator=kjt

Comment=mspt lcs

CustID=

CustSmpl=000531-2

LabID=

Run Time=05/31/2000 10:55

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi

Elem0=As[75],[75],,,ppb, .3527,.0126,3.579, .3669, .3355, .3585, .
3585, .3442,None,0.0,0.0

Elem1=B [11],[11],,,ppb, .0077,.0922,1203., -.0967, .1201, .0886,
-.0350, -.0386,None,0.0,0.0

Elem2=Ba[138],[138],,,ppb, .0239,.0017,7.144, .0257, .0234, .0222,
.0225, .0258,None,0.0,0.0

Elem3=Be[9],[9],,,ppb, .0217,.0071,32.58, .0309, .0259, .0218, .01
67, .0132,None,0.0,0.0

Elem4=Cd[111],[111],,,ppb, .0158,.0077,48.85, .0196, .0130, .0075,
.0116, .0272,None,0.0,0.0

Elem5=Ce[140],[140],,,ppb, 15.14,.1610,1.064, 15.36, 15.17, 15.15,
15.09, 14.91,QC Pass,10.00%,15.00

Elem6=Co[59],[59],,,ppb, .0009,.0012,132.1, .0011, .0012, -.0005,
.0001, .0026,None,0.0,0.0

Elem7=Eu[151],[151],,,ppb, 14.88,.3128,2.102, 15.32, 14.64, 14.87,
14.54, 15.03,QC Pass,10.00%,15.00

Elem8=EuTot,[152],,,ppb, 14.88,.2731,1.835, 15.21, 14.67, 14.75, 1

4.64, 15.14, QC Pass, 10.00%, 15.00
 Elem9=Eu[153], [153], , , ppb, 14.88, .2744, 1.844, 15.11, 14.69, 14.64,
 14.73, 15.24, QC Pass, 10.00%, 15.00
 Elem10=La[139], [139], , , ppb, .0190, .0016, 8.465, .0166, .0193, .0210
 , .0195, .0185, None, 0.0, 0.0
 Elem11=Li[7], [7], , , ppb, .0630, .0113, 17.97, .0810, .0661, .0590, .0
 571, .0517, None, 0.0, 0.0
 Elem12=Pd[108], [108], , , ppb, 16.40, .5304, 3.235, 16.72, 16.43, 16.86
 , 15.50, 16.46, QC Pass, 10.00%, 15.00
 Elem13=Pd[110], [110], , , ppb, Q 16.53, .5782, 3.498, 16.82, 16.53, 17.0
 2, 15.54, 16.73, QC Fail, 10.00%, 15.00
 Elem14=Pr[141], [141], , , ppb, 15.11, .1898, 1.256, 15.34, 14.98, 15.15
 , 14.87, 15.22, QC Pass, 10.00%, 15.00
 Elem15=Rb[85], [85], , , ppb, 14.39, .3860, 2.683, 14.67, 14.35, 14.81,
 13.81, 14.30, QC Pass, 10.00%, 15.00
 Elem16=Rh[103], [103], , , ppb, 14.92, .5335, 3.577, 15.34, 14.80, 15.34
 , 14.05, 15.05, QC Pass, 10.00%, 15.00
 Elem17=Ru[101], [101], , , ppb, Q 16.50, .3735, 2.263, 16.83, 16.44, 16.8
 0, 15.90, 16.54, QC Fail, 10.00%, 15.00
 Elem18=Ru[102], [102], , , ppb, Q 16.57, .5647, 3.408, 16.71, 16.54, 17.1
 9, 15.66, 16.77, QC Fail, 10.00%, 15.00
 Elem19=Sb[121], [121], , , ppb, .0042, .0026, 62.66, .0021, .0014, .0038
 , .0077, .0059, None, 0.0, 0.0
 Elem20=Sb[123], [123], , , ppb, .2152, .0135, 6.250, .2173, .2245, .2313
 , .2027, .2004, None, 0.0, 0.0
 Elem21=Se[82], [82], , , ppb, .0567, .0504, 88.89, .0126, .0569, .1411,
 .0249, .0479, None, 0.0, 0.0
 Elem22=Ta[181], [181], , , ppb, 15.83, .2029, 1.282, 15.80, 16.14, 15.89
 , 15.61, 15.69, QC Pass, 10.00%, 15.00
 Elem23=Te[128], [128], , , ppb, 14.28, .4114, 2.882, 14.25, 13.91, 14.86
 , 13.87, 14.47, QC Pass, 10.00%, 15.00
 Elem24=Tl[205], [205], , , ppb, .0003, .0007, 248.9, .0010, .0001, .0006
 , -.0008, .0005, None, 0.0, 0.0
 Elem25=V [51], [51], , , ppb, .0507, .0218, 42.99, .0513, .0552, .0740,
 .0149, .0582, None, 0.0, 0.0
 Elem26=W [182], [182], , , ppb, 15.13, .1447, .9565, 14.99, 15.25, 15.31
 , 15.11, 15.00, QC Pass, 10.00%, 15.00
 Elem27=Y [89], [89], , , ppb, 14.85, .2363, 1.592, 14.81, 14.64, 14.97,
 14.64, 15.19, QC Pass, 10.00%, 15.00
 Elem28=AMU[90], [90], , , ppb, .0072, .0035, 48.39, .0117, .0070, .0091,
 .0023, .0060, None, 0.0, 0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115], [115], , Cts/S, 24.222, .25793, 1.0649, 24.232, 24.302, 23.
 868, 24.577, 24.130

Elem1=Ir[193], [193], , Cts/S, 12.034, .12342, 1.0256, 12.026, 11.976, 11.
 867, 12.115, 12.186

HNF-1701 REV. 0

Elem2=Sc[45],[45],,Cts/S, 20.804,.43715,2.1013,20.819,20.497,20.26
3,21.093,21.347

[Sample Header]
Method=PERTABL
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 11:08
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,ppb, .0351,.0174,49.50, .0407, .0260, .0410, .
0109, .0569, QC Pass,ñ.5000,.0000
Elem1=B[11],[11],,ppb, -.0063,.0279,442.0, -.0265, -.0336, .0352
, .0072, -.0139, QC Pass,ñ.3000,.0000
Elem2=Ba[138],[138],,ppb, -.0006,.0012,211.2, -.0007, .0010, -.00
15, -.0020, .0002, QC Pass,ñ.0300,.0000
Elem3=Be[9],[9],,ppb, .0098,.0031,31.34, .0144, .0087, .0059, .00
97, .0103, QC Pass,ñ.0300,.0000
Elem4=Cd[111],[111],,ppb, .0030,.0066,216.3, -.0054, -.0002, .004
5, .0039, .0124, None,0.0,0.0
Elem5=Ce[140],[140],,ppb, -.0003,.0014,406.5, -.0008, .0011, -.00
14, -.0018, .0011, QC Pass,ñ.0300%,.0000
Elem6=Co[59],[59],,ppb, .0014,.0003,19.83, .0012, .0014, .0010, .
0016, .0016, QC Pass,ñ.0300%,.0000
Elem7=Eu[151],[151],,ppb, -.0012,.0011,91.39, -.0013, .0007, -.00
19, -.0017, -.0020, QC Pass,ñ.0300%,.0000
Elem8=EuTot,[152],,ppb, -.0011,.0006,48.92, -.0016, -.0002, -.001
2, -.0014, -.0013, QC Pass,ñ.0300%,.0000
Elem9=Eu[153],[153],,ppb, -.0011,.0005,51.25, -.0019, -.0010, -.0
005, -.0012, -.0007, QC Pass,ñ.0300%,.0000
Elem10=La[139],[139],,ppb, -.0003,.0015,517.1, .0019, .0002, -.00
22, -.0012, -.0002, QC Pass,ñ.0300%,.0000
Elem11=Li[7],[7],,ppb, .0449,.0027,6.056, .0428, .0454, .0456, .0
418, .0488, QC Pass,ñ.0500%,.0000
Elem12=Pd[108],[108],,ppb, .0025,.0025,99.48, .0038, .0038, .0016
, -.0014, .0046, QC Pass,ñ.0300%,.0000
Elem13=Pd[110],[110],,ppb, -.0022,.0017,76.81, -.0034, -.0010, -.
0017, -.0004, -.0044, QC Pass,ñ.0300%,.0000

Elem14=Pr[141],[141],,,ppb, .0001,.0011,851.1, .0002, .0013, -.0008, .0012, -.0012,QC Pass,ñ.0300%,.0000
Elem15=Rb[85],[85],,,ppb, .0081,.0009,11.50, .0078, .0093, .0077, .0069, .0087,QC Pass,ñ.0300%,.0000
Elem16=Rh[103],[103],,,ppb, .0003,.0005,163.8, .0003, .0009, .0002, -.0004, .0004,QC Pass,ñ.0300%,.0000
Elem17=Ru[101],[101],,,ppb, -.0021,.0021,101.4, -.0016, -.0037, .0013, -.0039, -.0027,QC Pass,ñ.0300%,.0000
Elem18=Ru[102],[102],,,ppb, .0030,.0009,29.95, .0034, .0042, .0026, .0031, .0018,QC Pass,ñ.0300%,.0000
Elem19=Sb[121],[121],,,ppb, .0026,.0026,99.09, .0069, .0015, .0026, .0001, .0018,QC Pass,ñ.0300%,.0000
Elem20=Sb[123],[123],,,ppb, .0004,.0042,1099., .0019, -.0023, .0065, -.0046, .0004,QC Pass,ñ.0300%,.0000
Elem21=Se[82],[82],,,ppb, Q -.0964,.1292,134.1, -.0116, .0692, -.2663, -.1300, -.1432,QC Fail,ñ.0800%,.0000
Elem22=Ta[181],[181],,,ppb, .0003,.0003,133.7, .0009, .0001, .0002, .0000, .0001,QC Pass,ñ.0300%,.0000
Elem23=Te[128],[128],,,ppb, -.0229,.0171,74.96, -.0054, -.0057, -.0247, -.0432, -.0354,QC Pass,ñ.0300%,.0000
Elem24=Tl[205],[205],,,ppb, .0001,.0015,1154., -.0022, .0003, .0008, .0019, -.0001,QC Pass,ñ.0300%,.0000
Elem25=V [51],[51],,,ppb, -.0519,.0143,27.59, -.0502, -.0323, -.0633, -.0458, -.0682,QC Pass,ñ.5000%,.0000
Elem26=W [182],[182],,,ppb, -.0007,.0023,322.7, .0019, .0006, .0000, -.0022, -.0039,QC Pass,ñ.0300%,.0000
Elem27=Y [89],[89],,,ppb, .0002,.0013,712.5, -.0011, .0022, .0005, -.0004, -.0004,QC Pass,ñ.0300%,.0000
Elem28=AMU[90],[90],,,ppb, .0014,.0031,213.1, .0001, .0067, .0016, -.0003, -.0009,QC Pass,ñ.0300%,.0000

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 25.252,.53530,2.1198,25.802,24.522,25.369,25.669,24.900

Elem1=Ir[193],[193],,Cts/S, 12.827,.32981,2.5712,13.405,12.580,12.676,12.752,12.722

Elem2=Sc[45],[45],,Cts/S, 21.582,.64992,3.0115,22.262,22.294,21.243,21.208,20.900

[Sample Header]

Method=PERTABL

SampleName=s00t000850

Operator=kjt

Comment=2121 df

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 11:16
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 3.993,.1264,3.165, 3.889, 3.920, 3.940, 4.204, 4.013,,,
Elem1=B[11],[11],,,ppb, 10.05,.1396,1.389, 9.866, 9.951, 10.22, 10.11, 10.11,,,
Elem2=Ba[138],[138],,,ppb, .0395,.0037,9.489, .0411, .0396, .0354, .0448, .0365,,,
Elem3=Be[9],[9],,,ppb, .1426,.0078,5.456, .1437, .1433, .1297, .1508, .1454,,,
Elem4=Cd[111],[111],,,ppb, .4919,.0319,6.494, .4686, .4884, .4552, .5327, .5144,,,
Elem5=Ce[140],[140],,,ppb, -.0016,.0013,79.38, -.0037, -.0011, -.0005, -.0017, -.0009,,,
Elem6=Co[59],[59],,,ppb, .0014,.0016,117.6, .0036, .0025, .0002, -.0003, .0009,,,
Elem7=Eu[151],[151],,,ppb, .0000,.0010,1957., -.0009, -.0003, .0006, -.0006, .0014,,,
Elem8=EuTot,[152],,,ppb, .0005,.0006,139.3, .0000, .0000, .0014, .0000, .0009,,,
Elem9=Eu[153],[153],,,ppb, .0008,.0007,83.39, .0009, .0003, .0020, .0005, .0004,,,
Elem10=La[139],[139],,,ppb, .0008,.0021,263.3, .0004, .0043, -.0006, .0011, -.0011,,,
Elem11=Li[7],[7],,,ppb, .2806,.0174,6.203, .3098, .2817, .2696, .2660, .2760,,,
Elem12=Pd[108],[108],,,ppb, 2.389,.0600,2.512, 2.375, 2.487, 2.323, 2.380, 2.380,,,
Elem13=Pd[110],[110],,,ppb, 1.613,.0364,2.255, 1.569, 1.644, 1.615, 1.653, 1.585,,,
Elem14=Pr[141],[141],,,ppb, -.0006,.0010,168.6, -.0012, -.0004, -.0014, .0010, -.0009,,,
Elem15=Rb[85],[85],,,ppb, 2.335,.0653,2.796, 2.237, 2.402, 2.349, 2.378, 2.307,,,
Elem16=Rh[103],[103],,,ppb, 1.106,.0208,1.879, 1.076, 1.133, 1.106, 1.101, 1.114,,,
Elem17=Ru[101],[101],,,ppb, .2247,.0136,6.045, .2042, .2204, .2250, .2365, .2373,,,
Elem18=Ru[102],[102],,,ppb, .1026,.0034,3.278, .1056, .1031, .0989, .0994, .1061,,,
Elem19=Sb[121],[121],,,ppb, .0189,.0035,18.75, .0165, .0211, .0221

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```
, .0139, .0209,,,
Elem20=Sb[123],[123],,,ppb, .0109,.0034,31.08, .0083, .0138, .0071
, .0105, .0149,,,
Elem21=Se[82],[82],,,ppb, 11.65,.2189,1.879, 11.34, 11.66, 11.57,
11.94, 11.73,,,
Elem22=Ta[181],[181],,,ppb, .0028,.0007,25.23, .0020, .0034, .0021
, .0028, .0035,,,
Elem23=Te[128],[128],,,ppb, -.0220,.0072,32.91, -.0195, -.0210, -.
0120, -.0264, -.0312,,,
Elem24=Tl[205],[205],,,ppb, .0017,.0011,67.09, .0015, .0036, .0014
, .0006, .0012,,,
Elem25=V [51],[51],,,ppb, .8109,.0591,7.293, .9120, .7773, .8083,
.7943, .7624,,,
Elem26=W [182],[182],,,ppb, 9.193,.2940,3.198, 8.849, 8.964, 9.568
, 9.206, 9.379,,,
Elem27=Y [89],[89],,,ppb, -.0013,.0014,111.1, -.0004, -.0008, .000
3, -.0029, -.0025,,,
Elem28=AMU[90],[90],,,ppb, .0278,.0041,14.71, .0265, .0236, .0269,
.0273, .0346,,,
```

[Internal Standards]

```
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
```

```
Elem0=In[115],[115],,Cts/S, 23.479,.31655,1.3482,23.166,23.145,23.
709,23.529,23.848
```

```
Elem1=Ir[193],[193],,Cts/S, 11.741,.48311,4.1147,12.324,11.624,11.
054,12.056,11.647
```

```
Elem2=Sc[45],[45],,Cts/S, 18.599,.41945,2.2553,18.680,19.250,18.46
1,18.495,18.105
```

[Sample Header]

```
Method=PERTABL
```

```
SampleName=s00t000850_a
```

```
Operator=kjt
```

```
Comment=2121 df
```

```
CustID=
```

```
CustSmpl=
```

```
LabID=
```

```
Run Time=05/31/2000 11:26
```

```
Sample Type=Unk
```

```
Mode=CONC
```

```
CorrFactor=1.000000
```

```
Repeats=5
```

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
```

```
Elem0=As[75],[75],,,ppb, 30.86,.6652,2.155, 30.11, 31.48, 30.78, 3
1.60, 30.35,,,
```

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Elem1=B [11],[11],,,ppb, 35.70,.2805,.7855, 35.84, 35.30, 35.95, 3
 5.53, 35.90,,,
 Elem2=Ba[138],[138],,,ppb, 25.26,.5762,2.281, 25.66, 24.89, 25.74,
 25.59, 24.43,,,
 Elem3=Be[9],[9],,,ppb, 24.89,.5083,2.042, 25.08, 24.37, 24.42, 25.
 59, 25.01,,,
 Elem4=Cd[111],[111],,,ppb, 24.53,.4970,2.026, 24.19, 23.89, 24.94,
 24.56, 25.07,,,
 Elem5=Ce[140],[140],,,ppb, 53.34,.7974,1.495, 53.02, 52.13, 53.92,
 53.51, 54.12,,,
 Elem6=Co[59],[59],,,ppb, 24.79,.8231,3.320, 24.83, 25.64, 23.44, 2
 4.89, 25.17,,,
 Elem7=Eu[151],[151],,,ppb, 22.88,.7029,3.072, 23.62, 22.61, 23.64,
 22.44, 22.11,,,
 Elem8=EuTot,[152],,,ppb, 22.93,.2789,1.217, 23.02, 22.78, 23.37, 2
 2.68, 22.79,,,
 Elem9=Eu[153],[153],,,ppb, 22.97,.3373,1.468, 22.49, 22.94, 23.14,
 22.89, 23.40,,,
 Elem10=La[139],[139],,,ppb, 26.42,.3044,1.152, 26.08, 26.39, 26.18
 , 26.68, 26.78,,,
 Elem11=Li[7],[7],,,ppb, 26.06,.5079,1.949, 26.31, 25.20, 26.16, 26
 .53, 26.09,,,
 Elem12=Pd[108],[108],,,ppb, 28.79,1.699,5.901, 27.93, 26.93, 27.91
 , 30.64, 30.57,,,
 Elem13=Pd[110],[110],,,ppb, 46.20,1.252,2.711, 44.71, 45.19, 46.26
 , 47.58, 47.25,,,
 Elem14=Pr[141],[141],,,ppb, 24.68,.2445,.9906, 24.81, 24.40, 24.85
 , 24.44, 24.92,,,
 Elem15=Rb[85],[85],,,ppb, 26.88,.5149,1.915, 27.55, 26.24, 26.50,
 27.09, 27.03,,,
 Elem16=Rh[103],[103],,,ppb, 23.96,.7224,3.014, 23.95, 23.02, 23.60
 , 24.93, 24.33,,,
 Elem17=Ru[101],[101],,,ppb, 26.58,.6504,2.448, 27.16, 25.53, 26.46
 , 27.07, 26.66,,,
 Elem18=Ru[102],[102],,,ppb, 26.56,.6825,2.570, 26.86, 25.67, 26.55
 , 27.48, 26.21,,,
 Elem19=Sb[121],[121],,,ppb, 24.59,.5507,2.240, 24.11, 24.47, 24.18
 , 24.71, 25.47,,,
 Elem20=Sb[123],[123],,,ppb, 24.94,.4069,1.631, 24.77, 24.61, 24.59
 , 25.24, 25.50,,,
 Elem21=Se[82],[82],,,ppb, 36.72,1.017,2.769, 37.25, 36.27, 35.36,
 38.06, 36.68,,,
 Elem22=Ta[181],[181],,,ppb, 23.06,.5189,2.250, 23.06, 22.59, 23.83
 , 22.58, 23.24,,,
 Elem23=Te[128],[128],,,ppb, 22.46,.3399,1.513, 22.83, 22.26, 22.74
 , 22.48, 22.00,,,
 Elem24=Tl[205],[205],,,ppb, 22.57,.4302,1.906, 22.01, 22.35, 22.57
 , 22.73, 23.17,,,

HNF-1701 REV. 0

```

Elem25=V [51],[51],,,,ppb, 26.97,.4648,1.723, 26.23, 26.96, 27.44,
26.95, 27.27,,,
Elem26=W [182],[182],,,,ppb, 32.28,.3321,1.029, 32.10, 32.13, 32.87
, 32.17, 32.11,,,
Elem27=Y [89],[89],,,,ppb, 21.27,.6009,2.825, 21.94, 20.49, 20.80,
21.53, 21.58,,,
Elem28=AMU[90],[90],,,,ppb, 22.91,.3356,1.465, 23.06, 22.32, 23.06,
23.14, 22.97,,,

```

[Internal Standards]

```

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 23.120,.49770,2.1527,23.472,23.808,22.
897,22.770,22.650
Elem1=Ir[193],[193],,Cts/S, 11.674,.18308,1.5682,11.825,11.911,11.
547,11.598,11.491
Elem2=Sc[45],[45],,Cts/S, 19.548,.69708,3.5660,20.714,19.009,19.01
1,19.518,19.489

```

[Sample Header]

```

Method=PERTABL
SampleName=s00t000852
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 11:37
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

```

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, 3.946,.0833,2.110, 3.985, 4.010, 3.803, 3
.987, 3.945,,,
Elem1=B [11],[11],,,,ppb, 9.926,.1859,1.873, 10.10, 10.07, 9.714, 1
0.02, 9.736,,,
Elem2=Ba[138],[138],,,,ppb, .0437,.0022,5.044, .0401, .0434, .0440,
.0459, .0449,,,
Elem3=Be[9],[9],,,,ppb, .1586,.0088,5.564, .1706, .1489, .1519, .16
38, .1579,,,
Elem4=Cd[111],[111],,,,ppb, .4721,.0208,4.410, .4939, .4600, .4916,
.4450, .4702,,,
Elem5=Ce[140],[140],,,,ppb, -.0006,.0012,204.0, .0003, -.0011, -.00
19, -.0011, .0010,,,
Elem6=Co[59],[59],,,,ppb, .0001,.0015,1338., .0002, -.0021, .0018,

```

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```

-.0003, .0009,,,
Elem7=Eu[151],[151],,,,ppb, .0002,.0011,582.9, .0006, .0016, .0005,
-.0009, -.0008,,,
Elem8=EuTot,[152],,,,ppb, .0004,.0004,105.0, .0004, .0009, .0005, .
0000, .0000,,,
Elem9=Eu[153],[153],,,,ppb, .0005,.0002,44.89, .0002, .0003, .0006,
.0008, .0008,,,
Elem10=La[139],[139],,,,ppb, .0034,.0014,41.34, .0041, .0031, .0052
, .0030, .0015,,,
Elem11=Li[7],[7],,,,ppb, .2578,.0109,4.236, .2745, .2532, .2452, .2
611, .2550,,,
Elem12=Pd[108],[108],,,,ppb, .2689,.0583,21.69, .3166, .2994, .1984
, .3170, .2131,,,
Elem13=Pd[110],[110],,,,ppb, .2562,.0214,8.357, .2517, .2305, .2881
, .2637, .2471,,,
Elem14=Pr[141],[141],,,,ppb, .0007,.0004,59.21, .0013, .0006, .0009
, .0001, .0008,,,
Elem15=Rb[85],[85],,,,ppb, 2.441,.0600,2.459, 2.393, 2.461, 2.415,
2.538, 2.400,,,
Elem16=Rh[103],[103],,,,ppb, 1.049,.0283,2.696, 1.013, 1.083, 1.047
, 1.031, 1.069,,,
Elem17=Ru[101],[101],,,,ppb, .2419,.0142,5.869, .2333, .2441, .2324
, .2338, .2658,,,
Elem18=Ru[102],[102],,,,ppb, .1079,.0047,4.311, .1075, .1109, .1000
, .1110, .1101,,,
Elem19=Sb[121],[121],,,,ppb, .0160,.0030,18.75, .0143, .0209, .0153
, .0130, .0164,,,
Elem20=Sb[123],[123],,,,ppb, .0099,.0019,18.78, .0091, .0104, .0094
, .0076, .0126,,,
Elem21=Se[82],[82],,,,ppb, 11.94,.2302,1.928, 12.24, 12.01, 11.70,
12.05, 11.72,,,
Elem22=Ta[181],[181],,,,ppb, .0068,.0010,15.27, .0068, .0072, .0050
, .0077, .0070,,,
Elem23=Te[128],[128],,,,ppb, -.0245,.0100,41.01, -.0151, -.0359, -.
0284, -.0302, -.0128,,,
Elem24=Tl[205],[205],,,,ppb, .0004,.0018,501.7, -.0013, .0020, .002
2, -.0017, .0006,,,
Elem25=V [51],[51],,,,ppb, .7623,.0440,5.770, .7614, .7401, .7132,
.7651, .8318,,,
Elem26=W [182],[182],,,,ppb, 9.039,.0939,1.039, 8.930, 9.052, 8.984
, 9.051, 9.180,,,
Elem27=Y [89],[89],,,,ppb, -.0013,.0017,125.1, .0012, -.0030, -.002
5, -.0018, -.0007,,,
Elem28=AMU[90],[90],,,,ppb, .0324,.0041,12.66, .0280, .0301, .0331,
.0389, .0320,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 23.678,.56490,2.3857,24.107,23.829,23.
919,22.687,23.849
Elem1=Ir[193],[193],,Cts/S, 11.923,.12799,1.0734,12.107,11.836,12.
011,11.830,11.834
Elem2=Sc[45],[45],,Cts/S, 19.187,.34932,1.8206,19.009,19.612,19.50
6,18.824,18.983

[Sample Header]

Method=PERTABL
SampleName=s00t000854
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 11:45
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,ppb, 3.874,.1041,2.686, 3.924, 3.914, 3.931, 3
.689, 3.915,,,
Elem1=B[11],[11],,ppb, 8.609,.3126,3.631, 8.850, 8.513, 8.812, 8
.102, 8.768,,,
Elem2=Ba[138],[138],,ppb, .0355,.0038,10.65, .0381, .0396, .0301,
.0335, .0364,,,
Elem3=Be[9],[9],,ppb, .1478,.0072,4.865, .1578, .1382, .1450, .14
78, .1501,,,
Elem4=Cd[111],[111],,ppb, .4887,.0233,4.760, .5276, .4934, .4741,
.4755, .4731,,,
Elem5=Ce[140],[140],,ppb, -.0014,.0022,159.2, -.0040, -.0013, .00
19, -.0011, -.0023,,,
Elem6=Co[59],[59],,ppb, -.0024,.0012,47.03, -.0035, -.0014, -.003
1, -.0032, -.0010,,,
Elem7=Eu[151],[151],,ppb, .0004,.0017,461.8, .0004, -.0012, .0014
, -.0014, .0026,,,
Elem8=EuTot,[152],,ppb, .0003,.0013,469.4, .0006, -.0007, .0006,
-.0012, .0022,,,
Elem9=Eu[153],[153],,ppb, .0002,.0011,543.7, .0007, -.0002, -.000
2, -.0011, .0018,,,
Elem10=La[139],[139],,ppb, .0072,.0016,22.35, .0083, .0065, .0047
, .0086, .0078,,,
Elem11=Li[7],[7],,ppb, .2471,.0054,2.180, .2549, .2438, .2506, .2
434, .2428,,,

```

Elem12=Pd[108],[108],,,ppb, .3093,.0666,21.53, .3633, .3205, .3818
, .2404, .2406,,,
Elem13=Pd[110],[110],,,ppb, .2555,.0185,7.240, .2608, .2289, .2487
, .2598, .2793,,,
Elem14=Pr[141],[141],,,ppb, .0002,.0008,349.8, -.0003, .0001, .000
6, .0013, -.0006,,,
Elem15=Rb[85],[85],,,ppb, 2.327,.0556,2.390, 2.321, 2.282, 2.298,
2.311, 2.423,,,
Elem16=Rh[103],[103],,,ppb, 1.043,.0197,1.885, 1.053, 1.010, 1.055
, 1.038, 1.057,,,
Elem17=Ru[101],[101],,,ppb, .2481,.0139,5.619, .2364, .2487, .2318
, .2593, .2640,,,
Elem18=Ru[102],[102],,,ppb, .1083,.0080,7.346, .1047, .1108, .1108
, .0970, .1183,,,
Elem19=Sb[121],[121],,,ppb, .0131,.0023,17.67, .0124, .0130, .0107
, .0125, .0170,,,
Elem20=Sb[123],[123],,,ppb, .0085,.0052,61.07, .0039, .0055, .0073
, .0173, .0085,,,
Elem21=Se[82],[82],,,ppb, 11.38,.4745,4.170, 10.58, 11.73, 11.40,
11.73, 11.46,,,
Elem22=Ta[181],[181],,,ppb, .0042,.0015,34.93, .0029, .0048, .0064
, .0029, .0038,,,
Elem23=Te[128],[128],,,ppb, -.0305,.0069,22.80, -.0369, -.0361, -.
0271, -.0321, -.0202,,,
Elem24=Tl[205],[205],,,ppb, .0007,.0017,234.2, -.0014, .0025, .001
3, .0019, -.0007,,,
Elem25=V [51],[51],,,ppb, .7253,.0425,5.858, .6717, .7417, .7474,
.6913, .7747,,,
Elem26=W [182],[182],,,ppb, 8.933,.1271,1.423, 8.784, 8.850, 9.116
, 8.940, 8.976,,,
Elem27=Y [89],[89],,,ppb, -.0012,.0007,58.81, -.0012, -.0007, -.00
14, -.0021, -.0003,,,
Elem28=AMU[90],[90],,,ppb, .0400,.0107,26.63, .0286, .0457, .0371,
.0333, .0554,,,

```

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 23.827,.72190,3.0298,24.048,23.872,23.820,24.698,22.697

Elem1=Ir[193],[193],,Cts/S, 12.255,.16619,1.3561,12.422,12.159,12.022,12.280,12.391

Elem2=Sc[45],[45],,Cts/S, 19.269,.41537,2.1556,19.413,18.701,19.189,19.848,19.196

[Sample Header]

Method=PERTABL

SampleName=icv1

Operator=kjt

Comment=mspt lcs
 CustID=
 CustSmpl=000531-1
 LabID=
 Run Time=05/31/2000 11:56
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000000
 Repeats=5

[Results]

```

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, 14.97,.5296,3.537, 15.60, 14.59, 14.66, 1
4.52, 15.51, QC Pass,15.00%,15.00
Elem1=B[11],[11],,,ppb, 14.43,.3330,2.307, 14.08, 14.62, 14.20, 1
4.91, 14.36, QC Pass,10.00%,15.00
Elem2=Ba[138],[138],,,ppb, 15.65,.4001,2.556, 15.04, 15.80, 16.08,
15.84, 15.50, QC Pass,10.00%,15.00
Elem3=Be[9],[9],,,ppb, 14.13,.4206,2.976, 13.90, 14.33, 13.92, 14.
78, 13.74, QC Pass,10.00%,15.00
Elem4=Cd[111],[111],,,ppb, 15.07,.3050,2.024, 14.72, 15.41, 14.84,
15.35, 15.03, None,0.0,0.0
Elem5=Ce[140],[140],,,ppb, 15.80,.4235,2.681, 15.63, 16.22, 16.24,
15.65, 15.25, None,0.0,0.0
Elem6=Co[59],[59],,,ppb, 15.01,.4234,2.820, 15.71, 14.96, 14.56, 1
4.90, 14.93, QC Pass,10.00%,15.00
Elem7=Eu[151],[151],,,ppb, .0191,.0030,15.71, .0187, .0142, .0203,
.0200, .0222, None,0.0,0.0
Elem8=EuTot,[152],,,ppb, .0219,.0025,11.34, .0212, .0185, .0220, .
0225, .0254, None,0.0,0.0
Elem9=Eu[153],[153],,,ppb, .0245,.0023,9.400, .0234, .0224, .0235,
.0248, .0283, None,0.0,0.0
Elem10=La[139],[139],,,ppb, 16.19,.4942,3.053, 15.75, 16.69, 16.44
, 16.48, 15.57, QC Pass,10.00%,15.00
Elem11=Li[7],[7],,,ppb, 14.49,.1887,1.302, 14.41, 14.71, 14.24, 14
.64, 14.44, QC Pass,10.00%,15.00
Elem12=Pd[108],[108],,,ppb, 1.406,.0426,3.030, 1.358, 1.414, 1.365
, 1.447, 1.444, None,0.0,0.0
Elem13=Pd[110],[110],,,ppb, 12.78,.3983,3.116, 12.32, 12.99, 12.43
, 12.91, 13.27, None,0.0,0.0
Elem14=Pr[141],[141],,,ppb, .0074,.0013,17.67, .0056, .0076, .0087
, .0085, .0066, None,0.0,0.0
Elem15=Rb[85],[85],,,ppb, .0034,.0012,35.93, .0025, .0040, .0030,
.0053, .0023, None,0.0,0.0
Elem16=Rh[103],[103],,,ppb, .0025,.0006,24.16, .0028, .0025, .0015
, .0029, .0029, None,0.0,0.0
Elem17=Ru[101],[101],,,ppb, .0002,.0009,586.4, .0003, -.0007, -.00

```

07, .0004, .0014, None, 0.0, 0.0
Elem18=Ru[102],[102],,,ppb, .0056,.0011,20.14, .0041, .0064, .0047
, .0063, .0066, None, 0.0, 0.0
Elem19=Sb[121],[121],,,ppb, 15.15,.2866,1.892, 14.78, 15.36, 14.91
, 15.43, 15.26, QC Pass, 10.00%, 15.00
Elem20=Sb[123],[123],,,ppb, 15.13,.2335,1.543, 14.73, 15.35, 15.17
, 15.17, 15.22, QC Pass, 10.00%, 15.00
Elem21=Se[82],[82],,,ppb, 14.31,.3516,2.458, 14.01, 13.95, 14.41,
14.82, 14.33, QC Pass, 10.00%, 15.00
Elem22=Ta[181],[181],,,ppb, -.0010,.0014,137.7, -.0006, -.0014, -.
0019, .0012, -.0023, None, 0.0, 0.0
Elem23=Te[128],[128],,,ppb, -.0294,.0103,34.94, -.0346, -.0174, -.
0292, -.0435, -.0222, None, 0.0, 0.0
Elem24=Tl[205],[205],,,ppb, 15.29,.4390,2.871, 14.73, 15.32, 14.97
, 15.77, 15.66, QC Pass, 10.00%, 15.00
Elem25=V[51],[51],,,ppb, 14.82,.2351,1.587, 14.58, 15.18, 14.70,
14.72, 14.92, QC Pass, 15.00%, 15.00
Elem26=W[182],[182],,,ppb, .0212,.0078,37.04, .0322, .0118, .0157
, .0230, .0232, None, 0.0, 0.0
Elem27=Y[89],[89],,,ppb, .0050,.0005,9.975, .0051, .0056, .0042,
.0051, .0051, None, 0.0, 0.0
Elem28=AMU[90],[90],,,ppb, 15.35,.3197,2.083, 14.85, 15.45, 15.26,
15.49, 15.70, QC Pass, 15.00%, 15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 27.352,.71566,2.6165,28.408,27.582,26.
484,27.004,27.282Elem1=Ir[193],[193],,Cts/S, 13.531,.29684,2.1938,13.828,13.541,13.
741,13.065,13.479Elem2=Sc[45],[45],,Cts/S, 23.057,.28670,1.2435,23.198,23.083,23.36
2,23.049,22.593

[Sample Header]

Method=PERTABL

SampleName=icv2

Operator=kjt

Comment=mspt lcs

CustID=

CustSmpl=000531-2

LabID=

Run Time=05/31/2000 12:04

Sample Type=QC

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

```
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=As[75],[75],,,ppb, .3095,.0159,5.150, .3370, .2962, .3022, .3042, .3081, None, 0.0, 0.0
Elem1=B [11],[11],,,ppb, -.0642,.0669,104.3, .0346, -.1346, -.1002, -.0910, -.0296, None, 0.0, 0.0
Elem2=Ba[138],[138],,,ppb, .0236,.0019,8.273, .0252, .0220, .0218, .0261, .0228, None, 0.0, 0.0
Elem3=Be[9],[9],,,ppb, .0159,.0087,54.71, .0304, .0157, .0145, .0118, .0072, None, 0.0, 0.0
Elem4=Cd[111],[111],,,ppb, .0060,.0107,178.9, .0192, .0035, -.0083, .0135, .0020, None, 0.0, 0.0
Elem5=Ce[140],[140],,,ppb, 15.09,.4781,3.168, 15.77, 14.59, 14.71, 15.06, 15.34, QC Pass, 10.00%, 15.00
Elem6=Co[59],[59],,,ppb, -.0036,.0016,45.98, -.0025, -.0031, -.0019, -.0059, -.0045, None, 0.0, 0.0
Elem7=Eu[151],[151],,,ppb, 14.90,.2433,1.633, 15.29, 14.78, 14.75, 15.00, 14.70, QC Pass, 10.00%, 15.00
Elem8=EuTot,[152],,,ppb, 14.89,.2377,1.596, 15.26, 14.76, 14.64, 14.98, 14.82, QC Pass, 10.00%, 15.00
Elem9=Eu[153],[153],,,ppb, 14.88,.2552,1.715, 15.23, 14.73, 14.55, 14.97, 14.93, QC Pass, 10.00%, 15.00
Elem10=La[139],[139],,,ppb, .0188,.0012,6.548, .0187, .0190, .0177, .0208, .0180, None, 0.0, 0.0
Elem11=Li[7],[7],,,ppb, -.0036,.0132,367.0, .0191, -.0036, -.0121, -.0086, -.0128, None, 0.0, 0.0
Elem12=Pd[108],[108],,,ppb, 16.08,.3479,2.164, 16.07, 15.50, 16.14, 16.38, 16.30, QC Pass, 10.00%, 15.00
Elem13=Pd[110],[110],,,ppb, 16.09,.2521,1.566, 15.75, 16.19, 16.30, 16.31, 15.91, QC Pass, 10.00%, 15.00
Elem14=Pr[141],[141],,,ppb, 15.07,.3769,2.501, 15.66, 14.68, 14.89, 14.93, 15.18, QC Pass, 10.00%, 15.00
Elem15=Rb[85],[85],,,ppb, 14.33,.3410,2.380, 14.45, 13.99, 13.98, 14.77, 14.45, QC Pass, 10.00%, 15.00
Elem16=Rh[103],[103],,,ppb, 14.71,.3318,2.256, 14.63, 14.22, 14.72, 15.13, 14.83, QC Pass, 10.00%, 15.00
Elem17=Ru[101],[101],,,ppb, 16.33,.3201,1.960, 15.99, 16.00, 16.63, 16.63, 16.40, QC Pass, 10.00%, 15.00
Elem18=Ru[102],[102],,,ppb, 16.40,.1256,.7658, 16.31, 16.28, 16.34, 16.57, 16.49, QC Pass, 10.00%, 15.00
Elem19=Sb[121],[121],,,ppb, .0008,.0031,417.9, -.0009, .0043, .0013, -.0037, .0027, None, 0.0, 0.0
Elem20=Sb[123],[123],,,ppb, .2019,.0105,5.200, .2182, .1904, .2007, .2040, .1960, None, 0.0, 0.0
Elem21=Se[82],[82],,,ppb, -.2163,.0824,38.09, -.2702, -.1874, -.3308, -.1290, -.1643, None, 0.0, 0.0
Elem22=Ta[181],[181],,,ppb, 15.75,.3797,2.411, 15.42, 16.15, 15.79, 15.30, 16.09, QC Pass, 10.00%, 15.00
```

Elem23=Te[128],[128],,,,ppb, 13.88,.2616,1.885, 13.86, 13.77, 13.59
, 14.30, 13.86, QC Pass, 10.00%, 15.00
Elem24=Tl[205],[205],,,,ppb, .0003,.0009,306.4, .0018, -.0001, .000
2, -.0005, .0000, None, 0.0, 0.0
Elem25=V [51],[51],,,,ppb, -.1346,.0297,22.05, -.1788, -.1344, -.14
21, -.1192, -.0988, None, 0.0, 0.0
Elem26=W [182],[182],,,,ppb, 15.09,.3151,2.088, 14.78, 14.98, 15.26
, 14.87, 15.56, QC Pass, 10.00%, 15.00
Elem27=Y [89],[89],,,,ppb, 14.77,.2992,2.025, 15.14, 14.75, 14.31,
14.88, 14.78, QC Pass, 10.00%, 15.00
Elem28=AMU[90],[90],,,,ppb, .0020,.0083,410.7, .0161, .0019, -.0004
, -.0041, -.0035, None, 0.0, 0.0

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 27.888,.34848,1.2496,28.080,28.368,27.
867,27.515,27.608
Elem1=Ir[193],[193],,Cts/S, 13.522,.50370,3.7250,14.235,13.577,13.
151,13.703,12.945
Elem2=Sc[45],[45],,Cts/S, 23.887,.37979,1.5899,24.321,23.563,23.99
8,23.426,24.129

[Sample Header]

Method=PERTABL
SampleName=icb
Operator=kjt
Comment=mspt
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 12:20
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=As[75],[75],,,,ppb, .0230,.0129,56.19, .0185, .0035, .0301, .
0254, .0375, QC Pass, ñ.5000,.0000
Elem1=B [11],[11],,,,ppb, -.2363,.1317,55.74, -.3856, -.2681, -.023
5, -.2403, -.2639, QC Pass, ñ.3000,.0000
Elem2=Ba[138],[138],,,,ppb, -.0023,.0007,29.84, -.0022, -.0032, -.0
013, -.0025, -.0020, QC Pass, ñ.0300,.0000
Elem3=Be[9],[9],,,,ppb, .0026,.0028,107.6, .0002, .0015, .0074, .00
31, .0011, QC Pass, ñ.0300,.0000
Elem4=Cd[111],[111],,,,ppb, -.0057,.0047,82.45, -.0116, -.0091, -.0


```

034, .0001, -.0043, None, 0.0, 0.0
Elem5=Ce[140],[140],,,ppb, -.0034,.0011,32.05, -.0024, -.0049, -.0
038, -.0023, -.0038, QC Pass, ñ.0300%, .0000
Elem6=Co[59],[59],,,ppb, -.0057,.0010,17.48, -.0058, -.0063, -.004
2, -.0054, -.0069, QC Pass, ñ.0300%, .0000
Elem7=Eu[151],[151],,,ppb, -.0018,.0009,47.70, -.0014, -.0030, -.0
007, -.0017, -.0023, QC Pass, ñ.0300%, .0000
Elem8=EuTot,[152],,,ppb, -.0017,.0005,29.29, -.0019, -.0024, -.001
2, -.0012, -.0019, QC Pass, ñ.0300%, .0000
Elem9=Eu[153],[153],,,ppb, -.0016,.0006,35.85, -.0024, -.0018, -.0
017, -.0008, -.0015, QC Pass, ñ.0300%, .0000
Elem10=La[139],[139],,,ppb, -.0008,.0014,165.7, -.0029, -.0011, .0
003, .0004, -.0008, QC Pass, ñ.0300%, .0000
Elem11=Li[7],[7],,,ppb, -.0089,.0021,23.29, -.0072, -.0111, -.0063
, -.0104, -.0096, QC Pass, ñ.0500%, .0000
Elem12=Pd[108],[108],,,ppb, .0056,.0016,29.25, .0079, .0033, .0056
, .0052, .0060, QC Pass, ñ.0300%, .0000
Elem13=Pd[110],[110],,,ppb, -.0043,.0031,72.34, -.0024, -.0083, -.
0071, -.0014, -.0024, QC Pass, ñ.0300%, .0000
Elem14=Pr[141],[141],,,ppb, -.0014,.0008,53.52, -.0007, -.0007, -.
0012, -.0024, -.0020, QC Pass, ñ.0300%, .0000
Elem15=Rb[85],[85],,,ppb, .0002,.0006,316.1, .0013, .0003, -.0001,
-.0004, -.0001, QC Pass, ñ.0300%, .0000
Elem16=Rh[103],[103],,,ppb, .0002,.0005,244.4, .0006, .0007, -.000
5, .0002, .0000, QC Pass, ñ.0300%, .0000
Elem17=Ru[101],[101],,,ppb, -.0007,.0007,95.00, -.0018, -.0003, -.
0004, -.0009, -.0001, QC Pass, ñ.0300%, .0000
Elem18=Ru[102],[102],,,ppb, .0003,.0010,286.4, -.0001, .0008, -.00
12, .0013, .0009, QC Pass, ñ.0300%, .0000
Elem19=Sb[121],[121],,,ppb, -.0031,.0024,79.75, -.0040, -.0063, -.
0036, -.0013, -.0001, QC Pass, ñ.0300%, .0000
Elem20=Sb[123],[123],,,ppb, -.0009,.0037,392.5, -.0005, -.0034, .0
011, -.0056, .0037, QC Pass, ñ.0300%, .0000
Elem21=Se[82],[82],,,ppb, Q -.1873,.0770,41.08, -.2228, -.0500, -.2
134, -.2274, -.2231, QC Fail, ñ.0800%, .0000
Elem22=Ta[181],[181],,,ppb, -.0011,.0005,46.84, -.0011, -.0014, -.
0018, -.0007, -.0005, QC Pass, ñ.0300%, .0000
Elem23=Te[128],[128],,,ppb, Q -.0306,.0098,32.19, -.0406, -.0412, -
.0276, -.0237, -.0197, QC Fail, ñ.0300%, .0000
Elem24=Tl[205],[205],,,ppb, -.0023,.0007,32.22, -.0030, -.0014, -.
0031, -.0018, -.0022, QC Pass, ñ.0300%, .0000
Elem25=V_[51],[51],,,ppb, -.2135,.0180,8.445, -.2292, -.2140, -.20
10, -.1906, -.2328, QC Pass, ñ.5000%, .0000
Elem26=W_[182],[182],,,ppb, .0081,.0046,56.87, .0080, .0021, .0053
, .0120, .0133, QC Pass, ñ.0300%, .0000
Elem27=Y_[89],[89],,,ppb, -.0014,.0005,38.54, -.0012, -.0006, -.00
20, -.0014, -.0017, QC Pass, ñ.0300%, .0000
Elem28=AMU[90],[90],,,ppb, -.0074,.0025,33.16, -.0071, -.0110, -.0

```

042, -.0079, -.0067, QC Pass, ñ.0300%, .0000

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 27.677,.82327,2.9745,28.937,28.019,26.930,27.456,27.045

Elem1=Ir[193],[193],,Cts/S, 14.252,.44529,3.1244,14.776,14.544,14.322,13.940,13.677

Elem2=Sc[45],[45],,Cts/S, 23.779,.66104,2.7799,24.104,24.555,22.854,23.400,23.982

LABCORE Completed Worklist Report for Worklist# 33776

Analyst: kjt

Instrument: ICPMS1

Book#: 000531-2
000530-1

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) @MSPT-A1

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	@MSPT-QC PRTOT	QC	0.015	1.42e-02	94.667 % Recovery	
2 ICB	0	@MSPT-QC PRTOT	QC	1	<3.00e-5		ug/mL
3 BLNK-PREP	0	@MSPT-A1 PRTOT-A1	SOLID	1	<6.63e-2		ug/g
4 SAMPLE	800T000804	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	2.723e+02	7.281	ug/g
5 SPK-POST	800T000804	0 A @MSPT-A1 PRTOT-A1	SOLID	0.0250	1.93e-02	77.200 % Recovery	
6 SAMPLE	800T000803	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	2.583e+02	7.071	ug/g
7 SAMPLE	800T000805	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	2.970e+02	7.486	ug/g
8 CCV	0	@MSPT-QC PRTOT	QC	0.015	1.50e-02	100.000 % Recovery	
9 CCB	0	@MSPT-QC PRTOT	QC	1	<3.00e-5		ug/mL

Final page for worklist# 33776

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Sal M. Pang 06/01/2000
Reviewer Signature _____ Date _____

05/31/00 12:56

ws2

file pt 0531b.txt

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33776

Analyst: KST Instrument: ICPMS1 Book# 00053-2
000530-1

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ-101 (SOLID ACID DIGEST) @MSPT-A1

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@MSPT-QC QC			
2	ICB				@MSPT-QC QC			
3	BLNK-PREP				@MSPT-A1 SOLID			
4	SAMPLE	S00T000804	0	A	@MSPT-A1 SOLID		99000433	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
5	SPK-POST	S00T000804	0	A	@MSPT-A1 SOLID			
6	SAMPLE	S00T000803	0	A	@MSPT-A1 SOLID		99000433	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
7	SAMPLE	S00T000805	0	A	@MSPT-A1 SOLID		99000433	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
8	CCV				@MSPT-QC QC			
9	CCB				@MSPT-QC QC			

Final page for worklist # 33776

KS Hernandez 5-31-00
 Signature Date

 Signature Date

Blnk-Prep
 S00T000 804
 S00T000 804-a
 S00T000 803
 S00T000 805

2211
 ↓

1-10-.05-10
 ↓

Data Entry Comments: Spike .025ml of 10ppm Pr High Purity

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Uploaded + Validated by:
Sam M. Long
 06/01/2000

Analysis Report

HNF-1701 REV. 0

05/31/00 13:43:17

page 1

Method: MS_TUNE

Sample Name: Sample-0

Operator: kjt

Comment:

Run Time: 05/31/00 13:41 Type: Unk

Mode: INT

Corr.Fact: 1.000000

Elem	In[115]	Ir[193]	Sc[45]
Line	115/pulse	193/pulse	45/pulse
Units	Cts/S	Cts/S	Cts/S
Avg	84550.	40130.	74090.
Stddev	1480.	1073.	1517.
%RSD	1.750	2.674	2.048
#1	84950.	40070.	75490.
#2	85420.	40050.	74200.
#3	85030.	40370.	72880.
#4	85770.	41430.	72690.
#5	83880.	40280.	75280.
#6	84930.	40820.	75520.
#7	81440.	38370.	71920.
#8	82740.	38240.	72200.
#9	86390.	41310.	74940.
#10	84950.	40330.	75780.

File pt0531b.txt

Blk-Prep

SOOT000804
 SOOT000804.a
 SOOT000803
 SOOT000805

2211df

105-31-00

1-10-.05-10

Blk-Prep

SOOT000809
 SOOT000809.a
 SOOT000810
 SOOT000811

2121df

1-10-.5-10

K3 Phosphate 5-31-00

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1261 TO 1272.

[Sample Header]

Method=PRMS

SampleName=Blank

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 12:16

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,Cts/S, .0003,.0000,7.757, .0004, .0003, .0003, .0004, .0003,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,,Cts/S, 97504.,1698.3,1.7418,98554.,99647.,97714.,95726.,95880.

[Sample Header]

Method=PRMS

SampleName=Blank

Operator=

Comment=

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 12:18

Sample Type=Std

Mode=IR

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,Cts/S, 3.373,.3945,11.70, 2.767, 3.433, 3.665, 3.759, 3.239,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 9.7179,.09782,1.0066,9.5760,9.7571,9.6
874,9.8428,9.7261

[Sample Header]

Method=MS_TUNE
SampleName=Sample-0
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:41
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,Cts/S, 84550.,1480.,1.750, 84950., 85420., 8
5030., 85770., 83880., 84930., 81440., 82740., 86390., 84950.,,
Elem1=Ir[193],[193],,Cts/S, 40130.,1073.,2.674, 40070., 40050., 4
0370., 41430., 40280., 40820., 38370., 38240., 41310., 40330.,,
Elem2=Sc[45],[45],,Cts/S, 74090.,1517.,2.048, 75490., 74200., 728
80., 72690., 75280., 75520., 71920., 72200., 74940., 75780.,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]

Method=PRMS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:43
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,Cts/S, 3.316,.4997,15.07, 2.946, 3.619, 4.00

9, 2.787, 3.219,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.7662,.10681,1.2184,8.8254,8.8414,8.8
545,8.6108,8.6990

[Sample Header]

Method=PRMS
SampleName=MSPT-A
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:45
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,,Cts/S, 10330.,338.7,3.278, 9850., 10230., 10
300., 10540., 10740.,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.8004,.13715,1.5584,9.0197,8.6765,8.8
306,8.6990,8.7762

[Sample Header]

Method=PRMS
SampleName=cal check
Operator=
Comment=20 ppb cal std
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:47
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa

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ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 20.40,.1887,.9250, 20.43, 20.10, 20.35,
20.59, 20.52,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.8257,.16888,1.9135,8.8748,8.7851,8.5
870,8.8257,9.0560

[Sample Header]
Method=PRMS
SampleName=icv
Operator=kjt
Comment=mspt - pr
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:49
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 14.19,.2799,1.972, 13.84, 14.59, 14.06,
14.31, 14.16,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4849,.10082,1.1883,8.6581,8.4380,8.4
761,8.3988,8.4535

[Sample Header]
Method=PRMS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:52
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

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[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0013,.0007,55.37, .0015, .0017, .0003,
.0008, .0019,QC Pass,ñ.0300,.0000

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.6297,.16879,1.9559,8.8755,8.6730,8.6591,8.4744,8.4663

[Sample Header]
Method=PRMS
SampleName=blk-prep
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:08
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0003,.0009,269.0, .0012, -.0011, .0007,
.0000, .0008,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.5577,.06920,.80866,8.5398,8.6546,8.5372,8.5889,8.4679

[Sample Header]
Method=PRMS
SampleName=s00t000804
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:10
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000

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Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,ppb, 1.122,.0255,2.273, 1.121, 1.152, 1.106, 1.143, 1.090,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 8.3054,.21334,2.5687,8.4470,8.0820,8.2941,8.1198,8.5838

[Sample Header]

Method=PRMS

SampleName=s00t000804_a

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 14:12

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,ppb, 20.39,.6421,3.149, 20.03, 20.28, 21.08, 19.57, 20.99,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 8.3617,.13232,1.5825,8.5869,8.3083,8.3707,8.2749,8.2677

[Sample Header]

Method=PRMS

SampleName=s00t000803

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 14:17

Sample Type=Unk

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Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.096,.0228,2.079, 1.128, 1.080, 1.097,
1.070, 1.107,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3422,.08058,.96591,8.4275,8.3542,8.2467,8.2727,8.4099

[Sample Header]

Method=PRMS
SampleName=s00t000805
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:19
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.190,.0286,2.408, 1.143, 1.191, 1.191,
1.219, 1.205,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3337,.14921,1.7904,8.5884,8.3301,8.2960,8.2239,8.2303

[Sample Header]

Method=PRMS
SampleName=blk-prep
Operator=kjt
Comment=2121 df #33777
CustID=
CustSmpl=
LabID=

Run Time=05/31/2000 14:23
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, -.0003,.0007,258.5, -.0014, .0000, .0002, -.0005, .0003,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4680,.20805,2.4569,8.6135,8.7096,8.4968,8.2039,8.3162

[Sample Header]

Method=PRMS
SampleName=s00t000809
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:25
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.752,.0427,2.436, 1.743, 1.682, 1.767, 1.777, 1.791,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3826,.04157,.49597,8.3824,8.3256,8.3600,8.4218,8.4229

[Sample Header]

Method=PRMS
SampleName=s00t000809_a
Operator=kjt
Comment=2121 df
CustID=

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CustSmpl=
LabID=
Run Time=05/31/2000 14:27
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 25.09,.4298,1.713, 24.85, 24.95, 25.48, 25.58, 24.57,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3677,.27337,3.2670,8.8494,8.2654,8.2907,8.1677,8.2651

[Sample Header]
Method=PRMS
SampleName=s00t000810
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:30
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.729,.0386,2.235, 1.791, 1.687, 1.733, 1.716, 1.719,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3485,.10652,1.2759,8.3818,8.4547,8.2405,8.2306,8.4347

[Sample Header]
Method=PRMS
SampleName=s00t000811
Operator=kjt

Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:32
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.881,.0187,.9948, 1.907, 1.855, 1.888,
1.880, 1.877,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4180,.10808,1.2839,8.5607,8.2733,8.4
556,8.3592,8.4413

[Sample Header]

Method=PRMS
SampleName=icv
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000530-1
LabID=
Run Time=05/31/2000 14:35
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 14.99,.3313,2.210, 15.30, 15.30, 14.81,
14.53, 15.02,QC Pass,10.00%,15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4320,.11815,1.4012,8.6129,8.3421,8.4
718,8.4158,8.3172

[Sample Header]

Method=PRMS

SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:38
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0006,.0011,167.0, .0016, -.0007, .0018
, -.0001, .0007, QC Pass,ñ.0300,.0000

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.5387,.11967,1.4016,8.6152,8.6828,8.3766,8.5460,8.4729

LABCORE Completed Worklist Report for Worklist# 33777

Analyst: kjt

Instrument: ICPMS1

Book#: 000531-2

Method: LA-506-101 Rev/Mod A-3

000530-1

Worklist Comment: ICP/MS AZ101 (SOLID ACID DIGEST) @MSPT-A1

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 ICV	0	@MSPT-QC PRTOT	QC	0.015	1.42e-02	94.667 % Recovery	
2 ICB	0	@MSPT-QC PRTOT	QC	1	<3.00e-5		ug/mL
3 BLNK-PREP	0	@MSPT-A1 PRTOT-A1	SOLID	1	<6.36e-2		ug/g
4 SAMPLE	S00T000809	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	4.728e+02	8.096	ug/g
5 SPK-POST	S00T000809	0 A @MSPT-A1 PRTOT-A1	SOLID	0.0250	2.33e-02	93.200 % Recovery	
6 SAMPLE	S00T000810	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	4.153e+02	7.207	ug/g
7 SAMPLE	S00T000811	0 A @MSPT-A1 PRTOT-A1	SOLID	N/A	4.318e+02	6.887	ug/g
8 CCV	0	@MSPT-QC PRTOT	QC	0.015	1.50e-02	100.000 % Recovery	
9 CCB	0	@MSPT-QC PRTOT	QC	1	<3.00e-5		ug/mL

Final page for worklist# 33777

Analyst Signature

Date

Analyst Signature

Date

La M. Paz 06/01/2000
 Reviewer Signature Date

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05/31/00 12:51

ws2

file pt0531b.txt

Page: 1

LABCORE Data Entry Template for Worklist# 33777

Analyst: KST Instrument: ICPMS1 Book# 000531-2
000530-1

Method: LA-506-101 Rev/Mod A-3

Worklist Comment: ICP/MS AZ101 (SOLID ACID DIGEST) @MSPT-A1

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@MSPT-QC QC			
2	ICB				@MSPT-QC QC			
3	BLNK-PREP				@MSPT-A1 SOLID			
4	SAMPLE	S00T000809	0	A	@MSPT-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
5	SPK-POST	S00T000809	0	A	@MSPT-A1 SOLID			
6	SAMPLE	S00T000810	0	A	@MSPT-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
7	SAMPLE	S00T000811	0	A	@MSPT-A1 SOLID		99000438	AZ-101 (2)
		Analytes Requested: PRTOT-A1						
8	CCV				@MSPT-QC QC			
9	CCB				@MSPT-QC QC			

Final page for worklist # 33777

KS Rasmussen 5-31-00
 Signature Date

Signature Date

BLNK-Prep
 S00T000809
 S00T000809-a
 S00T000810
 S00T000811

2121 df
 ↓

01-10-05-10
 ↓

Data Entry Comments: Spike .025 ml of 10ppm Pr High Purity

Uploaded + Validated by:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

Handwritten signature for K. Thordike 6/21/00

[Sample Header]
Method=PRMS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 12:16
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,Cts/S, .0003,.0000,7.757, .0004, .0003, .0003, .0004, .0003,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 97504.,1698.3,1.7418,98554.,99647.,97714.,95726.,95880.

[Sample Header]
Method=PRMS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 12:18
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,Cts/S, 3.373,.3945,11.70, 2.767, 3.433, 3.665, 3.759, 3.239,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1275 TO 1285

Elem0=In[115],[115],,Cts/S, 9.7179,.09782,1.0066,9.5760,9.7571,9.6
874,9.8428,9.7261

[Sample Header]
Method=MS_TUNE
SampleName=Sample-0
Operator=kjt
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:41
Sample Type=Unk
Mode=INT
CorrFactor=1.000000
Repeats=10

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=In[115],[115],,Cts/S, 84550.,1480.,1.750, 84950., 85420., 8
5030., 85770., 83880., 84930., 81440., 82740., 86390., 84950.,,
Elem1=Ir[193],[193],,Cts/S, 40130.,1073.,2.674, 40070., 40050., 4
0370., 41430., 40280., 40820., 38370., 38240., 41310., 40330.,,
Elem2=Sc[45],[45],,Cts/S, 74090.,1517.,2.048, 75490., 74200., 728
80., 72690., 75280., 75520., 71920., 72200., 74940., 75780.,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

[Sample Header]
Method=PRMS
SampleName=Blank
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:43
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,Cts/S, 3.316,.4997,15.07, 2.946, 3.619, 4.00

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9, 2.787, 3.219,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.7662,.10681,1.2184,8.8254,8.8414,8.8
545,8.6108,8.6990

[Sample Header]
Method=PRMS
SampleName=MSPT-A
Operator=
Comment=
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:45
Sample Type=Std
Mode=IR
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,Cts/S, 10330.,338.7,3.278, 9850., 10230., 10
300., 10540., 10740.,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.8004,.13715,1.5584,9.0197,8.6765,8.8
306,8.6990,8.7762

[Sample Header]
Method=PRMS
SampleName=cal check
Operator=
Comment=20 ppb cal std
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:47
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa

ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 20.40,.1887,.9250, 20.43, 20.10, 20.35,
20.59, 20.52,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.8257,.16888,1.9135,8.8748,8.7851,8.5
870,8.8257,9.0560

[Sample Header]
Method=PRMS
SampleName=icv
Operator=kjt
Comment=mspt - pr
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:49
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pa
ss/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 14.19,.2799,1.972, 13.84, 14.59, 14.06,
14.31, 14.16,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4849,.10082,1.1883,8.6581,8.4380,8.4
761,8.3988,8.4535

[Sample Header]
Method=PRMS
SampleName=icb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 13:52
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0013,.0007,55.37, .0015, .0017, .0003,
.0008, .0019,QC Pass,ñ.0300,.0000

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.6297,.16879,1.9559,8.8755,8.6730,8.6
591,8.4744,8.4663

[Sample Header]
Method=PRMS
SampleName=blk-prep
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:08
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0003,.0009,269.0, .0012, -.0011, .0007
, .0000, .0008,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.5577,.06920,.80866,8.5398,8.6546,8.5
372,8.5889,8.4679

[Sample Header]
Method=PRMS
SampleName=s00t000804
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:10
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,ppb, 1.122,.0255,2.273, 1.121, 1.152, 1.106, 1.143, 1.090,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 8.3054,.21334,2.5687,8.4470,8.0820,8.2941,8.1198,8.5838

[Sample Header]

Method=PRMS

SampleName=s00t000804_a

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 14:12

Sample Type=Unk

Mode=CONC

CorrFactor=1.000000

Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi

Elem0=Pr[141],[141],,,ppb, 20.39,.6421,3.149, 20.03, 20.28, 21.08, 19.57, 20.99,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn

Elem0=In[115],[115],,Cts/S, 8.3617,.13232,1.5825,8.5869,8.3083,8.3707,8.2749,8.2677

[Sample Header]

Method=PRMS

SampleName=s00t000803

Operator=kjt

Comment=2211 df

CustID=

CustSmpl=

LabID=

Run Time=05/31/2000 14:17

Sample Type=Unk

Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.096,.0228,2.079, 1.128, 1.080, 1.097,
1.070, 1.107,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3422,.08058,.96591,8.4275,8.3542,8.2
467,8.2727,8.4099

[Sample Header]

Method=PRMS
SampleName=s00t000805
Operator=kjt
Comment=2211 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:19
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.190,.0286,2.408, 1.143, 1.191, 1.191,
1.219, 1.205,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3337,.14921,1.7904,8.5884,8.3301,8.2
960,8.2239,8.2303

[Sample Header]

Method=PRMS
SampleName=blk-prep
Operator=kjt
Comment=2121 df #33777
CustID=
CustSmpl=
LabID=

Run Time=05/31/2000 14:23
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, -.0003,.0007,258.5, -.0014, .0000, .0002, -.0005, .0003,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4680,.20805,2.4569,8.6135,8.7096,8.4968,8.2039,8.3162

[Sample Header]
Method=PRMS
SampleName=s00t000809
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:25
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]
;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.752,.0427,2.436, 1.743, 1.682, 1.767, 1.777, 1.791,,,

[Internal Standards]
;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3826,.04157,.49597,8.3824,8.3256,8.3600,8.4218,8.4229

[Sample Header]
Method=PRMS
SampleName=s00t000809_a
Operator=kjt
Comment=2121 df
CustID=

CustSmpl=
LabID=
Run Time=05/31/2000 14:27
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 25.09,.4298,1.713, 24.85, 24.95, 25.48, 25.58, 24.57,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3677,.27337,3.2670,8.8494,8.2654,8.2907,8.1677,8.2651

[Sample Header]

Method=PRMS
SampleName=s00t000810
Operator=kjt
Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:30
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.729,.0386,2.235, 1.791, 1.687, 1.733, 1.716, 1.719,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.3485,.10652,1.2759,8.3818,8.4547,8.2405,8.2306,8.4347

[Sample Header]

Method=PRMS
SampleName=s00t000811
Operator=kjt

Comment=2121 df
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:32
Sample Type=Unk
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 1.881,.0187,.9948, 1.907, 1.855, 1.888,
1.880, 1.877,,,

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4180,.10808,1.2839,8.5607,8.2733,8.4
556,8.3592,8.4413

[Sample Header]

Method=PRMS
SampleName=icv
Operator=kjt
Comment=mspt lcs
CustID=
CustSmpl=000530-1
LabID=
Run Time=05/31/2000 14:35
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, 14.99,.3313,2.210, 15.30, 15.30, 14.81,
14.53, 15.02,QC Pass,10.00%,15.00

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.4320,.11815,1.4012,8.6129,8.3421,8.4
718,8.4158,8.3172

[Sample Header]

Method=PRMS

SampleName=ccb
Operator=kjt
Comment=2% nitric
CustID=
CustSmpl=
LabID=
Run Time=05/31/2000 14:38
Sample Type=QC
Mode=CONC
CorrFactor=1.000000
Repeats=5

[Results]

;Format=elem,wl,ISRef,inst,units,avg,stddev,%rsd,rep1..repn,chk pass/fail,chklo,chkhi
Elem0=Pr[141],[141],,,ppb, .0006,.0011,167.0, .0016, -.0007, .0018
, -.0001, .0007, QC Pass, n.0300, .0000

[Internal Standards]

;Format=elem,wl,inst,units,avg,stddev,%rsd,rep1..repn
Elem0=In[115],[115],,Cts/S, 8.5387,.11967,1.4016,8.6152,8.6828,8.3766,8.5460,8.4729

LABCORE Completed Worklist Report for Worklist# 33240

Analyst: jds

Instrument: CARB2

Book#: 34N12D

Method: LA-342-100 Rev/Mod F-4

Worklist Comment: AZ-101 (2), @TICTOC1 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		@TICTOC1 TIC-02	SOLID	1	<5.20e1		ug/g
1 BLNK-PREP	0		@TICTOC1 TOC-02	SOLID	1	<4.16e2		ug/g
2 STD	0		@TICTOC1 TIC-02	SOLID	6.05e2	6.00e2	99.174 % Recovery	
2 STD	0		@TICTOC1 TOC-02	SOLID	3000	2.81e3	93.667 % Recovery	
3 SAMPLE	S00T000806	0 W	@TICTOC1 TIC-02	SOLID	N/A	5.72e3	52.000	ug/g
3 SAMPLE	S00T000806	0 W	@TICTOC1 TOC-02	SOLID	N/A	9.85e3	416.000	ug/g
4 SPK	S00T000806	0 W	@TICTOC1 TIC-02	SOLID	100	100.2	100.200 % Recovery	
4 SPK	S00T000806	0 W	@TICTOC1 TOC-02	SOLID	100	85.2	85.200 % Recovery	
5 SAMPLE	S00T000807	0 W	@TICTOC1 TIC-02	SOLID	N/A	5.22e3	52.000	ug/g
5 SAMPLE	S00T000807	0 W	@TICTOC1 TOC-02	SOLID	N/A	7.00e2	416.000	ug/g
6 SAMPLE	S00T000808	0 W	@TICTOC1 TIC-02	SOLID	N/A	4.66e3	52.000	ug/g
6 SAMPLE	S00T000808	0 W	@TICTOC1 TOC-02	SOLID	N/A	6.15e3	416.000	ug/g

Final page for worklist# 33240

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

04/17/00 10:34

Page: 1

WS2

LABCORE Data Entry Template for Worklist# 33240

Analyst: Jds Instrument: CARB2 Book# 25N12F
34N12D

Method: LA-342-100 Rev/Mod _____

Worklist Comment: AZ-101 (2), @TICTOC1 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK-PREP			@TICTOC1	SOLID		
2 STD			@TICTOC1	SOLID		
3 SAMPLE	S00T000806 0 W		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						
4 SPK	S00T000806 0 W		@TICTOC1	SOLID		
5 SAMPLE	S00T000807 0 W		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						
6 SAMPLE	S00T000808 0 W		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						

Final page for worklist # 33240

Signature Jds Date 4/18/00Signature Mary Fran Date 4/19/00

Data Entry Comments:

Add sample 812 from WL # 33241 to
this WL. Thanks Jane Karen whole WL # 33241 @ 4/18/00
#33241

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1287

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE

Date: 04/17/00

Time: 18:27:14

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASE
Blank Value = N/A

Analyst : JD SPELLMAN
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.20	100.00
3	1.01	0.40	50.00
4	1.51	0.60	33.33
5	2.00	0.70	14.29
6	2.50	0.90	22.22
7	3.00	1.00	10.00
8	3.50	1.00	0.00
9	4.00	1.10	9.09
10	4.50	1.20	8.33
11	5.00	1.20	0.00
12	5.50	1.30	7.69
13	6.00	1.40	7.14
14	6.50	1.40	0.00
15	7.00	1.50	6.67
16	7.50	1.50	0.00
17	8.00	1.50	0.00
18	8.50	1.60	6.25
19	9.00	1.70	5.88
20	9.50	1.70	0.00
21	10.00	1.80	5.56
22	10.50	1.80	0.00

BLANK VALUE = 1.8 micrograms carbon
BLANK FACTOR = 1.8 / 10.49744 =

+1.7E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1288 TO 1307

Sample Run By:

JD Spellman
JD SPELLMAN OU812

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TIC/TOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE

Date: 04/17/00

Time: 19:02:52

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE
 Blank Value = N/A

Analyst : JD SPELLMAN
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	1.00	100.00
3	1.01	2.00	50.00
4	1.50	3.10	35.48
5	2.00	4.80	35.42
6	2.50	9.30	48.39
7	3.00	13.50	31.11
8	3.50	16.80	19.64
9	4.00	19.30	12.95
10	4.50	21.70	11.06
11	5.00	23.50	7.66
12	5.50	24.90	5.62
13	6.00	25.40	1.97
14	6.50	26.40	3.79
15	7.00	27.30	3.30
16	7.50	28.40	3.87
17	8.00	29.10	2.41
18	8.50	30.20	3.64
19	9.00	30.90	2.27
20	9.50	31.80	2.83
21	10.00	32.80	3.05
22	10.50	33.50	2.09

BLANK VALUE = 33.5 micrograms carbon

BLANK FACTOR = 33.5 / 10.49817 = +3.19E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1289

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 04/17/00

Time: 19:15:17

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	3.20	100.00
3	1.01	45.90	93.03
4	1.51	197.50	76.76
5	2.00	350.90	43.72
6	2.50	466.90	24.84
7	3.00	533.40	12.47
8	3.50	568.10	6.11
9	4.00	583.30	2.61
10	4.50	589.90	1.12
11	5.00	592.10	0.37
12	5.50	593.20	0.19
13	6.00	594.10	0.15
14	6.50	594.90	0.13
15	7.00	595.90	0.17
16	7.50	596.60	0.12
17	8.00	597.20	0.10
18	8.50	598.30	0.18
19	9.00	598.80	0.08
20	9.50	599.60	0.13
21	10.00	600.40	0.13
22	10.50	601.40	0.17

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = 1.70 +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(601.4 - 17.84855) (1)/(1) = +5.836E+02 g/L Carbon
 (601.4 - 17.84855) (1)/(1) (12) = +4.863E+01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1290

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 04/17/00

Time: 19:28:21

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	1.50	100.00
3	1.01	3.40	55.88
4	1.51	5.60	39.29
5	2.00	21.10	73.46
6	2.50	79.30	73.39
7	3.00	190.90	58.46
8	3.50	329.60	42.08
9	4.00	449.90	26.74
10	4.50	526.10	14.48
11	5.00	563.10	6.57
12	5.50	573.50	1.81
13	6.00	576.50	0.52
14	6.50	580.00	0.60
15	7.00	583.10	0.53
16	7.50	585.60	0.43
17	8.00	587.90	0.39
18	8.50	589.50	0.27
19	9.00	591.40	0.32
20	9.50	593.20	0.30
21	10.00	594.70	0.25
22	10.50	596.40	0.29

USER INPUT BLANK VALUE :

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

(596.4 - 33.48838) (1)/(1) = +5.629E+02 g/L Carbon
 (596.4 - 33.48838) (1)/(1) (12) = +4.691E+01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1291

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK-PREP

Date: 04/17/00

Time: 19:43:52

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	1.20	100.00
3	1.01	2.40	50.00
4	1.50	4.10	41.46
5	2.00	4.60	10.87
6	2.50	5.50	16.36
7	3.00	7.00	21.43
8	3.50	8.00	12.50
9	4.00	8.60	6.98
10	4.50	9.40	8.51
11	5.00	10.30	8.74
12	5.50	11.00	6.36
13	6.00	11.70	5.98
14	6.50	12.40	5.65
15	7.00	13.10	5.34
16	7.50	13.80	5.07
17	8.00	14.60	5.48
18	8.50	15.40	5.19
19	9.00	16.00	3.75
20	9.50	16.70	4.19
21	10.00	17.50	4.57
22	10.50	18.30	4.37

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(18.3 - 17.84647) (1)/(1) = +4.54E-01 g/L Carbon
 (18.3 - 17.84647) (1)/(1) (12) = +3.78E-02 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK-180

Date: 04/17/00

Time: 22:08:47

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.08	0.00	0.00
2	0.50	1.50	100.00
3	1.01	2.40	37.50
4	1.50	2.90	17.24
5	2.00	3.90	25.64
6	2.50	4.80	18.75
7	3.00	5.70	15.79
8	3.50	6.70	14.93
9	4.00	7.70	12.99
10	4.50	9.00	14.44
11	5.00	10.40	13.46
12	5.50	11.60	10.34
13	6.00	12.90	10.08
14	6.50	14.10	8.51
15	7.00	15.20	7.24
16	7.50	16.20	6.17
17	8.00	17.00	4.71
18	8.50	18.00	5.56
19	9.00	18.90	4.76
20	9.50	19.70	4.06
21	10.00	20.50	3.90
22	10.50	21.20	3.30

USER INPUT BLANK VALUE

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

(21.2 - 33.48643) (1)/(1) = < 5.00 E-3 g/L Carbon
 (21.2 - 33.48643) (1)/(1) (12) = < 4.17 E-4 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000806

Date: 04/17/00

Time: 22:52:57

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.08	0.00	0.00
2	0.51	0.30	100.00
3	1.01	1.20	75.00
4	1.51	8.80	86.36
5	2.00	23.10	61.90
6	2.50	35.80	35.47
7	3.00	45.50	21.32
8	3.50	50.10	9.18
9	4.00	52.20	4.02
10	4.50	53.30	2.06
11	5.00	53.80	0.93
12	5.50	54.20	0.74
13	6.00	54.50	0.55
14	6.50	54.90	0.73
15	7.00	55.20	0.54
16	7.50	55.50	0.54
17	8.00	55.90	0.72
18	8.50	56.10	0.36
19	9.00	56.40	0.53
20	9.50	56.70	0.53
21	10.00	57.00	0.53
22	10.50	57.30	0.52

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(57.3 - 17.85) (1)/(1) = +3.94E+01 g/L Carbon
 (57.3 - 17.85) (1)/(1)(12) = +3.29E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1294

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000806

Date: 04/17/00

Time: 23:08:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	== Analysis Time ==	== Coulometer ==	== % Difference ==
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.30	66.67
4	1.50	0.70	57.14
5	2.00	2.10	66.67
6	2.50	16.90	87.57
7	3.00	62.60	73.00
8	3.50	92.40	32.25
9	4.00	106.90	13.56
10	4.50	112.60	5.06
11	5.00	115.60	2.60
12	5.50	117.20	1.37
13	6.00	118.70	1.26
14	6.50	120.10	1.17
15	7.00	121.10	0.83
16	7.50	122.10	0.82
17	8.00	123.00	0.73
18	8.50	124.90	1.52
19	9.00	126.30	1.11
20	9.50	127.20	0.71
21	10.00	128.10	0.70
22	10.50	129.10	0.77

USER INPUT BLANK VALUE

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

(129.1 - 33.48605) (1)/(1) = +9.561E+01 g/L Carbon
 (129.1 - 33.48605) (1)/(1) (12) = +7.968E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1295

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000806SPK

Date: 04/17/00

Time: 23:21:55

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.60	100.00
3	1.01	12.60	95.24
4	1.51	94.90	86.72
5	2.00	203.20	53.30
6	2.50	284.70	28.63
7	3.00	325.60	12.56
8	3.50	343.50	5.21
9	4.00	350.70	2.05
10	4.50	353.50	0.79
11	5.00	354.80	0.37
12	5.50	355.50	0.20
13	6.00	356.20	0.20
14	6.50	356.70	0.14
15	7.00	357.50	0.22
16	7.50	357.80	0.08
17	8.00	358.20	0.11
18	8.50	358.70	0.14
19	9.00	359.20	0.14
20	9.50	359.60	0.11
21	10.00	360.00	0.11
22	10.50	360.50	0.14

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(360.5 - 17.84668) (1)/(1) = +3.427E+02 g/L Carbon
 (360.5 - 17.84668) (1)/(1) (12) = +2.855E+01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000806SPK

Date: 04/17/00

Time: 23:35:23

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	1.80	100.00
3	1.01	34.70	94.81
4	1.51	97.00	64.23
5	2.00	185.80	47.79
6	2.50	269.50	31.06
7	3.00	322.00	16.30
8	3.50	349.70	7.92
9	4.00	362.30	3.48
10	4.50	367.80	1.50
11	5.00	370.40	0.70
12	5.50	372.30	0.51
13	6.00	373.40	0.29
14	6.50	374.60	0.32
15	7.00	375.50	0.24
16	7.50	376.40	0.24
17	8.00	377.30	0.24
18	8.50	378.50	0.32
19	9.00	380.90	0.63
20	9.50	382.70	0.47
21	10.00	384.00	0.34
22	10.50	384.70	0.18

USER INPUT BLANK VALUE

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

(384.7 - 33.48955) (1)/(1) = +3.512E+02 g/L Carbon
 (384.7 - 33.48955) (1)/(1) (12) = +2.927E+01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1297

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000807

Date: 04/17/00

Time: 23:50:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	== Analysis Time ==	== Coulometer ==	== % Difference ==
1	0.08	0.00	0.00
2	0.51	0.70	100.00
3	1.01	2.80	75.00
4	1.50	13.70	79.56
5	2.00	27.60	50.36
6	2.50	38.60	28.50
7	3.00	43.80	11.87
8	3.50	46.60	6.01
9	4.00	47.90	2.71
10	4.50	48.80	1.84
11	5.00	49.40	1.21
12	5.50	49.90	1.00
13	6.00	50.50	1.19
14	6.50	50.80	0.59
15	7.00	51.30	0.97
16	7.50	51.80	0.97
17	8.00	52.40	1.15
18	8.50	52.70	0.57
19	9.00	53.30	1.13
20	9.50	53.70	0.74
21	10.00	54.20	0.92
22	10.50	54.60	0.73

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(54.6 - 17.84688) (1)/(1) = +3.68E+01 g/L Carbon
 (54.6 - 17.84688) (1)/(1) (12) = +3.06E+00 Molar Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1298

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000807

Date: 04/18/00

Time: 00:03:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	1.90	100.00
3	1.00	22.00	91.36
4	1.51	58.40	62.33
5	2.00	77.90	25.03
6	2.50	86.50	9.94
7	3.00	90.10	4.00
8	3.50	92.20	2.28
9	4.00	93.70	1.60
10	4.50	94.90	1.26
11	5.00	96.00	1.15
12	5.50	97.00	1.03
13	6.00	97.90	0.92
14	6.50	98.80	0.91
15	7.00	99.60	0.80
16	7.50	100.40	0.80
17	8.00	101.20	0.79
18	%-1431.50	101.70	0.49
19	%-1431.00	102.20	0.49
20	%-1430.50	103.10	0.87
21	%-1430.00	103.60	0.48
22	%-1429.50	104.30	0.67

USER INPUT BLANK VALUE

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

(104.3 --4560.108) (1)/(1) = +4.664E+03 g/L Carbon
 (104.3 --4560.108) (1)/(1) (12) = +3.887E+02 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OU812

1299

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000808

Date: 04/18/00

Time: 00:14:24

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.7 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.08	0.00	0.00
2	0.54	0.80	100.00
3	1.04	5.50	85.45
4	1.54	19.40	71.65
5	2.04	32.40	40.12
6	2.54	40.50	20.00
7	3.04	45.30	10.60
8	3.54	47.40	4.43
9	4.04	48.50	2.27
10	4.54	49.30	1.62
11	5.04	49.90	1.20
12	5.54	50.50	1.19
13	6.04	51.00	0.98
14	6.54	51.50	0.97
15	7.04	51.90	0.77
16	7.53	52.40	0.95
17	8.03	52.90	0.95
18	8.53	53.50	1.12
19	9.03	53.80	0.56
20	9.53	54.20	0.74
21	10.03	54.80	1.09
22	10.53	55.30	0.90

USER INPUT BLANK VALUE

BLANK VALUE = 17.84689 micrograms carbon

BLANK FACTOR = 17.84689 / 10.49817 = +1.7E+00 ug/min Carbon

SAMPLE RESULTS:

(55.3 - 17.9061) (1)/(1) = +3.74E+01 g/L Carbon
 (55.3 - 17.9061) (1)/(1) (12) = +3.12E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

OUB12

1300

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000808

Date: 04/18/00

Time: 00:29:56

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 3.19 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
  1          0.08          0.00          0.00
  2          0.51          0.40         100.00
  3          1.01          0.80          50.00
  4          1.51          1.50          46.67
  5          2.00          19.00          92.11
  6          2.50          41.40          54.11
  7          3.00          57.10          27.50
  8          3.50          69.00          17.25
  9          4.00          77.50          10.97
 10          4.50          83.00           6.63
 11          5.00          86.30           3.82
 12          5.50          88.60           2.60
 13          6.00          90.60           2.21
 14          6.50          92.60           2.16
 15          7.00          94.00           1.49
 16          7.50          95.40           1.47
 17          8.00          97.10           1.75
 18          8.50          98.90           1.82
 19          9.00         100.60           1.69
 20          9.50         101.80           1.18
 21         10.00         103.20           1.36
 22         10.50         104.00           0.77

```

USER INPUT BLANK VALUE

BLANK VALUE = 33.48916 micrograms carbon

BLANK FACTOR = 33.48916 / 10.49817 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 104 - 33.48595 ) (1)/(1) = +7.051E+01 g/L Carbon
( 104 - 33.48595 ) (1)/(1) (12) = +5.876E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

JD SPELLMAN

OU812

1301

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
BLNK-PREP	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	18.3	21.2
33240	µg of Carbon from Baseline (C2)	1.8	33.5
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001339			
Rerun	µg of Carbon = C1-C2		
0			
Sample Prep			
N/A			
Sample #			
BLNK-PREP			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
04:30 AM		5	40
Sample Point	µg of Carbon	1.65E+01	1.23E+01
AZ-102(2)			

$$< \frac{5 \mu\text{g}}{\text{ml}} \cdot \frac{1\text{L}}{9.71\text{g}} \cdot \frac{1000 \text{ ml}}{1} = < 5.20\text{E1 TIC}$$

$$< \frac{40 \mu\text{g}}{\text{ml}} \cdot \frac{1\text{L}}{9.71\text{g}} \cdot \frac{1000 \text{ ml}}{1} = < 4.16\text{E2 TOC}$$
 Enter these results

JF 4/18/00

Data Entered By:	MF	Date:	04/18/2000
Signature of Chemist:		Date:	4/18/00

BLANK.WB1 REV 1.0

342100ML

1302

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	1.0000	0.2000
STD	Dilution Factor (DF)	1	1
Work List	Final Coulometer Reading in µg (C1)	601.4	596.4
33240	µg of Carbon from Baseline (C2)	1.8	33.5
Test Code	Standard Book Number	25N12F	34N12D
@TICTOC1	Standard Value (µg/ml)	605	3000
Matrix	QC Actual in µg/mL = Standard Value (µg/mL) QC Found in µg/mL = (C1 - C2) * DF / SS QC Found in µg/mL for TIC = 5 if C1 < C2 QC Found in µg/mL for TOC = 40 if C1 < C2 % Recovery = QC Found / QC Actual * 100		
LIQUID			
Batch Number			
20001339			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
STD			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in µg/mL	5	40
04:30 AM	QC Actual in µg/mL	6.05E+02	3.00E+03
Sample Point	QC Found in µg/mL	6.00E+02	2.81E+03
AZ-102(2)	Percent Standard Recovery	99.1	93.8

Data Entered By:	MF	Date: 04/18/2000
Signature of Chemist:		Date:

STANDARD.WB1 REV 1.0

342100ML

1303

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	57.3	129.1
33240	µg of Carbon from Baseline (C2)	1.8	33.5
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001339			
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #			
S00T000806			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in ug/g		
04:30 AM			
Sample Point	µg of Carbon/g		
AZ-102(2)			

$$\frac{5.55 \text{ E } 1 \text{ mg}}{\text{mL}} \cdot \frac{1 \text{ L}}{9.71 \text{ g}} \cdot \frac{1000 \text{ mL}}{\text{L}} = 5.72 \text{ E } 3 \text{ TIC}$$

$$\frac{9.56 \text{ E } 1 \text{ µg}}{\text{mL}} \cdot \frac{1 \text{ L}}{9.71 \text{ g}} \cdot \frac{1000 \text{ mL}}{\text{L}} = 9.85 \text{ E } 3 \text{ TOC}$$
 Enter these results

Enter these Detection Limits

TIC	TOC
5.20E+1	4.16E+2
5.55E+01	9.56E+01

JE 4/18/00

Data Entered By:	MF	Date: 04/18/2000
Signature of Chemist:		Date:

SAMPLE.WB1 REV 1.0

342100ML

1304

WORKBOOK PAGE: SPIKE4

TIC/TOC : LA-342-100 (F-4)

SOLIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	1.0000	1.0000
Work List	Final Coulometer Reading in µg (C1)	57.3	129.1
33240	Spiked Vial Data		
Test Code	Sample Size in g (SPK SS)	1.0000	1.0000
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg (C2)	360.5	384.7
SOLID	Spike Book Number	25N12F	34N12B
Batch Number	Spike Standard Value in µg/ml (SPK CONC)	605	3000
20001339	µg C in baseline (BL)	1.8	33.5
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #	Percent Spike Recovery = ((C2-BL) - (C1-BL) * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100		
S00T000806			
Instrument Code	QC Actual in µg/mL = Spike Value (µg/mL)		
CARB2	QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time			
04:30 AM	QC Actual in µg/mL	6.05E+02	3.00E+03
Sample Point	QC Found in µg/mL	6.06E+02	2.56E+03
AZ-102(2)	Percent Spike Recovery	100.2	85.2

Data Entered By:	MF	Date:	04/18/2000
Signature of Chemist:		Date:	

SPIKE.WB1 REV 1.3

342100ML

WORKBOOK PAGE: SAM5

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	54.6	104.3
33240	µg of Carbon from Baseline (C2)	1.8	33.5
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001339			
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #			
S00T000807			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
04:30 AM		5.20E+1	4.16E+2
Sample Point	µg of Carbon/g	5.28E+01	7.08E+01
AZ-102(2)			

$$\frac{5.28E+1 \mu g}{mL} \cdot \frac{1 L}{10.12 g} \cdot \frac{1000 mL}{L} = 5.22E+3 \text{ TIC}$$

$$\frac{7.08E+1 \mu g}{mL} \cdot \frac{1 L}{10.12 g} \cdot \frac{1000 mL}{L} = 7.00E+2 \text{ TOC}$$

Enter these results

Enter these Detection Limits

8/4/18/00

Data Entered By:	MF	Date: 04/18/2000
Signature of Chemist:		Date:

SAMPLE.WB1 REV 1.0

342100ML

1306

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	55.3	104
33240	µg of Carbon from Baseline (C2)	1.8	33.5
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001339			
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #			
S00T000808			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
JDS			
Date Complete			
04/18/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in ug/g	5.20E+1	4.16E+2
04:30 AM			
Sample Point	µg of Carbon/g	5.35E+01	7.05E+01
AZ-102(2)			

$$\frac{5.35E+01 \mu g}{mL} \cdot \frac{1L}{11.47g} \cdot \frac{1000mL}{L} = 4.66E+3 \text{ TIC}$$

$$\frac{7.05E+01 \mu g}{mL} \cdot \frac{1L}{11.47g} \cdot \frac{1000mL}{L} = 6.15E+3 \text{ TOC}$$

Enter these results

Enter these detection limits

Data Entered By:	MF	Date:	04/18/2000
Signature of Chemist:	<i>NA</i>	Date:	

SAMPLE.WB1 REV 1.0

342100ML

1307

LABCORE Completed Worklist Report for Worklist# 33241

Analyst: pjm

Instrument: CARB2

Book#: 34N12D

Method: LA-342-100 Rev/Mod _____

Worklist Comment: AZ-101 (2), @TICTOC1 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		@TICTOC1 TIC-02	SOLID	1	<4.75e2		ug/g
1 BLNK-PREP	0		@TICTOC1 TOC-02	SOLID	1	<3.80e3		ug/g
2 STD	0		@TICTOC1 TIC-02	SOLID	6.05e2	6.08e2	100.496 % Recovery	
2 STD	0		@TICTOC1 TOC-02	SOLID	3000	2.84e3	94.667 % Recovery	
3 SAMPLE	S00T000812	0 W	@TICTOC1 TIC-02	SOLID	N/A	4.65e3	475.000	ug/g
3 SAMPLE	S00T000812	0 W	@TICTOC1 TOC-02	SOLID	N/A	< 3.80e3	3800.000	ug/g
4 SPK	S00T000812	0 W	@TICTOC1 TIC-02	SOLID	100	100.3	100.300 % Recovery	
4 SPK	S00T000812	0 W	@TICTOC1 TOC-02	SOLID	100	96.6	96.600 % Recovery	
5 SAMPLE	S00T000813	0 W	@TICTOC1 TIC-02	SOLID	N/A	4.91e3	472.000	ug/g
5 SAMPLE	S00T000813	0 W	@TICTOC1 TOC-02	SOLID	N/A	< 3.77e3	3770.000	ug/g
6 SAMPLE	S00T000814	0 W	@TICTOC1 TIC-02	SOLID	N/A	5.67e3	374.000	ug/g
6 SAMPLE	S00T000814	0 W	@TICTOC1 TOC-02	SOLID	N/A	< 2.99e3	2990.000	ug/g

Final page for worklist# 33241

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 33241

Analyst: RJM Instrument: CARB2 Book# TIC 25N12F

Method: LA-342-100 Rev/Mod F-4 TOC 34N12D

Worklist Comment: AZ-101 (2), @TICTOC1 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK-PREP			@TICTOC1	SOLID		
2 STD			@TICTOC1	SOLID		
3 SAMPLE	S00T000812 0 W		@TICTOC1	SOLID	99000438	AZ-101 (2)
	Analytes Requested: TIC-02 , TOC-02					
4 SPK	S00T000812 0 W		@TICTOC1	SOLID		
5 SAMPLE	S00T000813 0 W		@TICTOC1	SOLID	99000438	AZ-101 (2)
	Analytes Requested: TIC-02 , TOC-02					
6 SAMPLE	S00T000814 0 W		@TICTOC1	SOLID	99000438	AZ-101 (2)
	Analytes Requested: TIC-02 , TOC-02					

Final page for worklist # 33241

RJM 04/18/00
Signature Date

Mary Irene 4/24/00
Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1309

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE

Date: 04/18/00

Time: 11:09:06

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASE
Blank Value = N/A

Analyst : PJ MCCOWN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading ==	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.60	100.00
3	1.01	1.30	53.85
4	1.51	1.80	27.78
5	2.00	2.10	14.29
6	2.50	2.50	16.00
7	3.00	2.90	13.79
8	3.50	3.10	6.45
9	4.00	3.60	13.89
10	4.50	3.90	7.69
11	5.00	4.30	9.30
12	5.50	4.60	6.52
13	6.00	5.00	8.00
14	6.50	5.30	5.66
15	7.00	5.80	8.62
16	7.50	5.90	1.69
17	8.00	6.20	4.84
18	8.50	6.70	7.46
19	9.00	7.00	4.29
20	9.50	7.20	2.78
21	10.00	7.80	7.69
22	10.50	7.80	0.00

BLANK VALUE = 7.8 micrograms carbon
BLANK FACTOR = 7.8 / 10.49817 =

+7.4E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1310 TO 1329.

Sample Run By:

PJ McCown 04/18/00
PJ MCCOWN 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE

Date: 04/18/00

Time: 11:21:11

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE
 Blank Value = N/A

Analyst : PJ MCCOWN
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

== Reading ==	Analysis Time	Coulometer	% Difference ==
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.60	83.33
4	1.51	0.80	25.00
5	2.00	1.20	33.33
6	2.50	1.60	25.00
7	3.00	1.80	11.11
8	3.50	2.60	30.77
9	4.00	3.80	31.58
10	4.50	6.10	37.70
11	5.00	9.50	35.79
12	5.50	12.60	24.60
13	6.00	15.80	20.25
14	6.50	17.60	10.23
15	7.00	19.00	7.37
16	7.50	20.50	7.32
17	8.00	21.30	3.76
18	8.50	22.60	5.75
19	9.00	23.20	2.59
20	9.50	23.80	2.52
21	10.00	24.60	3.25
22	10.50	25.30	2.77

BLANK VALUE = 25.3 micrograms carbon

BLANK FACTOR = 25.3 / 10.49902 = +2.41E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

1311

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 04/18/00

Time: 11:37:20

Sample Size = 1000 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ---- Analysis Time ---- Coulometer ---- % Difference ==

1	0.08	0.00	0.00
2	0.51	0.70	100.00
3	1.01	8.10	91.36
4	1.50	98.50	91.78
5	2.00	270.10	63.53
6	2.50	421.40	35.90
7	3.00	522.60	19.36
8	3.50	569.90	8.30
9	4.00	594.30	4.11
10	4.50	604.60	1.70
11	5.00	607.80	0.53
12	5.50	609.80	0.33
13	6.00	610.80	0.16
14	6.50	611.60	0.13
15	7.00	612.30	0.11
16	7.50	612.80	0.08
17	8.03	613.30	0.08
18	8.53	613.90	0.10
19	9.03	614.60	0.11
20	9.53	614.80	0.03
21	10.03	615.20	0.07
22	10.53	615.70	0.08

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(615.7 - 7.7943) (1)/(1000) =

+6.079E-01 g/L Carbon

(615.7 - 7.7943) (1)/(1000) (12) =

+5.066E-02 Molar Carbon

Sample Run By:

PJ MCCOWN

00000

1.0mL 25N12 F

1312

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 04/18/00

Time: 13:09:53

Sample Size = 200 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.30	100.00
3	1.01	0.60	50.00
4	1.51	0.90	33.33
5	2.00	1.40	35.71
6	2.50	2.10	33.33
7	3.00	6.90	69.57
8	3.50	29.60	76.69
9	4.01	95.30	68.94
10	4.50	214.10	55.49
11	5.00	331.80	35.47
12	5.50	432.40	23.27
13	6.00	500.60	13.62
14	6.50	541.60	7.57
15	7.00	563.70	3.92
16	7.50	575.90	2.12
17	8.00	582.10	1.07
18	8.50	586.70	0.78
19	9.00	589.50	0.47
20	9.50	590.90	0.24
21	10.00	592.40	0.25
22	10.50	593.70	0.22

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(593.7 - 25.30441) (1) / (200) = +2.842E+00 g/L Carbon
 (593.7 - 25.30441) (1) / (200) (12) = +2.368E-01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

200uL 34N/2D

1313

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLNK PREP

Date: 04/18/00

Time: 13:23:17

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.00	0.00
3	1.01	0.00	0.00
4	1.51	0.20	100.00
5	2.00	0.40	50.00
6	2.50	0.70	42.86
7	3.00	1.50	53.33
8	3.50	2.20	31.82
9	4.00	2.80	21.43
10	4.50	3.50	20.00
11	5.00	3.90	10.26
12	5.50	4.30	9.30
13	6.00	4.60	6.52
14	6.50	4.80	4.17
15	7.00	5.20	7.69
16	7.50	5.20	0.00
17	8.00	5.40	3.70
18	8.50	5.60	3.57
19	9.00	5.80	3.45
20	9.50	5.90	1.69
21	10.00	6.00	1.67
22	10.50	6.30	4.76

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(6.3 - 7.769232) (1) / (1) =

< 5.00 E-3 g/L Carbon

(6.3 - 7.769232) (1) / (1) (12) =

< 4.17 E-4 Molar Carbon

Sample Run By:

PJ MCCOWN
PJ MCCOWN

00000

1.0mL

1314

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLNK PREP

Date: 04/18/00

Time: 13:40:25

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.40	75.00
4	1.50	0.60	33.33
5	2.00	1.20	50.00
6	2.50	2.70	55.56
7	3.00	5.80	53.45
8	3.50	9.50	38.95
9	4.00	12.60	24.60
10	4.50	15.50	18.71
11	5.00	17.40	10.92
12	5.50	18.20	4.40
13	6.00	19.00	4.21
14	6.50	19.40	2.06
15	7.00	19.90	2.51
16	7.50	20.60	3.40
17	8.00	20.70	0.48
18	8.50	21.00	1.43
19	9.00	21.30	1.41
20	9.50	21.60	1.39
21	10.00	21.90	1.37
22	10.50	22.10	0.90

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(22.1 - 25.30471) (1)/(1) = < 5.00 E-3 g/L Carbon
 (22.1 - 25.30471) (1)/(1) (12) = < 4.17 E-4 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By: PJ MCCOWN
 PJ MCCOWN

00000

1.0mc

1315

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000812

Date: 04/18/00

Time: 13:53:25

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.40	75.00
4	1.51	0.80	50.00
5	2.01	2.30	65.22
6	2.50	9.20	75.00
7	3.00	20.40	54.90
8	3.50	31.50	35.24
9	4.00	40.70	22.60
10	4.50	47.20	13.77
11	5.00	51.20	7.81
12	5.50	53.60	4.48
13	6.00	54.20	1.11
14	6.50	54.90	1.28
15	7.00	55.50	1.08
16	7.50	55.50	0.00
17	8.00	55.80	0.54
18	8.50	56.00	0.36
19	9.00	56.20	0.36
20	9.50	56.30	0.18
21	10.00	56.60	0.53
22	10.50	56.70	0.18

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(56.7 - 7.77) (1) / (1) =

+4.89E+01 g/L Carbon

(56.7 - 7.77) (1) / (1) (12) =

+4.08E+00 Molar Carbon

Sample Run By:

PJ MCCOWN

00000

1.0 mL

1316

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000812

Date: 04/18/00

Time: 14:06:01

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	0.20	100.00
3	1.01	0.40	50.00
4	1.50	1.00	60.00
5	2.00	4.10	75.61
6	2.50	10.10	59.41
7	3.00	16.20	37.65
8	3.50	22.50	28.00
9	4.00	26.60	15.41
10	4.50	29.90	11.04
11	5.00	31.00	3.55
12	5.50	32.20	3.73
13	6.00	33.20	3.01
14	6.50	33.40	0.60
15	7.00	33.80	1.18
16	7.50	34.20	1.17
17	8.00	34.60	1.16
18	8.50	34.90	0.86
19	9.00	35.10	0.57
20	9.50	35.70	1.68
21	10.00	35.70	0.00
22	10.50	36.00	0.83

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(36 - 25.30015) (1)/(1) = +1.07E+01 g/L Carbon
 (36 - 25.30015) (1)/(1)(12) = +8.92E-01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

1.0 mL

1317

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 812 SPK

Date: 04/18/00

Time: 14:18:52

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	0.50	100.00
3	1.01	0.80	37.50
4	1.51	1.60	50.00
5	2.00	16.20	90.12
6	2.50	72.40	77.62
7	3.00	155.50	53.44
8	3.50	235.30	33.91
9	4.00	290.80	19.09
10	4.50	324.00	10.25
11	5.00	342.10	5.29
12	5.50	351.10	2.56
13	6.00	354.60	0.99
14	6.50	356.50	0.53
15	7.00	357.60	0.31
16	7.50	358.20	0.17
17	8.00	358.60	0.11
18	8.50	358.90	0.08
19	9.00	359.30	0.11
20	9.50	359.70	0.11
21	10.00	359.80	0.03
22	10.50	360.10	0.08

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(360.1 - 7.769278) (1)/(1) = +3.523E+02 g/L Carbon
 (360.1 - 7.769278) (1)/(1) (12) = +2.936E+01 Molar Carbon

Sample Run By:

PJ MCCOWN

00000

1.0mL + .500mL 25N/2F

1318

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 812 SPK

Date: 04/18/00

Time: 14:31:35.

Sample Size = 1 uL

Dil Factor = 1

Blank ID. # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	==== Analysis Time	==== Coulometer	==== % Difference
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.30	66.67
4	1.51	1.30	76.92
5	2.00	7.30	82.19
6	2.50	34.10	78.59
7	3.00	96.10	64.52
8	3.50	175.10	45.12
9	4.00	244.70	28.44
10	4.50	285.00	14.14
11	5.00	305.40	6.68
12	5.50	313.90	2.71
13	6.00	317.80	1.23
14	6.50	320.10	0.72
15	7.00	321.00	0.28
16	7.50	322.20	0.37
17	8.00	322.90	0.22
18	8.50	323.60	0.22
19	9.00	324.40	0.25
20	9.50	325.00	0.18
21	10.00	325.40	0.12
22	10.50	325.80	0.12

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(325.8 - 25.30059) (1) / (1) = +3.005E+02 g/L Carbon
 (325.8 - 25.30059) (1) / (1) (12) = +2.504E+01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

1.0 mL
 +.100 34 N12 D
 1319

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000813 Date: 04/18/00 Time: 14:44:03

Sample Size = 1 uL	Analyst : PJ MCCOWN
Dil Factor = 1	Min Readings = 22
Blank ID # =	Max Readings = 22
Blank Value = .74 ug/minute C	% Difference = 10

-- Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.08	0.00	0.00
2	0.51	0.10	100.00
3	1.01	0.60	83.33
4	1.50	1.60	62.50
5	2.00	6.90	76.81
6	2.50	17.20	59.88
7	3.00	29.00	40.69
8	3.50	39.80	27.14
9	4.00	47.20	15.68
10	4.50	52.30	9.75
11	5.00	54.40	3.86
12	5.50	55.80	2.51
13	6.00	56.60	1.41
14	6.50	57.00	0.70
15	7.00	57.50	0.87
16	7.50	57.70	0.35
17	8.00	58.10	0.69
18	8.50	58.50	0.68
19	9.00	58.60	0.17
20	9.50	59.00	0.68
21	10.00	59.30	0.51
22	10.50	59.80	0.84

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(59.8 - 7.767877) (1)/(1) =	+5.20E+01	g/L Carbon
(59.8 - 7.767877) (1)/(1) (12) =	+4.34E+00	Molar Carbon

Sample Run By: PJ McC

PJ MCCOWN

00000

1.0 mL

1320

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000813

Date: 04/18/00

Time: 14:55:51

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading == Analysis Time == Coulometer == % Difference ==

1	0.08	0.00	0.00
2	0.51	0.40	100.00
3	1.01	0.60	33.33
4	1.51	1.10	45.45
5	2.00	4.30	74.42
6	2.50	10.00	57.00
7	3.00	17.10	41.52
8	3.50	24.40	29.92
9	4.00	29.80	18.12
10	4.50	32.70	8.87
11	5.00	34.60	5.49
12	5.50	36.10	4.16
13	6.00	37.10	2.70
14	6.50	37.70	1.59
15	7.00	38.40	1.82
16	7.50	39.00	1.54
17	8.00	39.50	1.27
18	8.50	40.20	1.74
19	9.00	40.70	1.23
20	9.50	41.10	0.97
21	10.00	41.60	1.20
22	10.50	41.80	0.48

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(41.8 - 25.30294) (1)/(1) = +1.65E+01 g/L Carbon
 (41.8 - 25.30294) (1)/(1) (12) = +1.37E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

1.0ML

1321

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000814

Date: 04/18/00

Time: 15:08:08

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.08	0.00	0.00
2	0.51	0.40	100.00
3	1.01	0.60	33.33
4	1.51	1.40	57.14
5	2.00	7.90	82.28
6	2.50	23.90	66.95
7	3.00	42.10	43.23
8	3.50	58.00	27.41
9	4.00	69.10	16.06
10	4.50	75.30	8.23
11	5.00	78.90	4.56
12	5.50	80.40	1.87
13	6.00	81.00	0.74
14	6.50	81.60	0.74
15	7.00	81.80	0.24
16	7.50	82.20	0.49
17	8.00	82.40	0.24
18	8.50	82.60	0.24
19	9.00	82.80	0.24
20	9.50	83.10	0.36
21	10.00	83.30	0.24
22	10.50	83.60	0.36

USER INPUT BLANK VALUE

BLANK VALUE = 7.769278 micrograms carbon

BLANK FACTOR = 7.769278 / 10.49902 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(83.6 - 7.769278) (1) / (1) = +7.58E+01 g/L Carbon
 (83.6 - 7.769278) (1) / (1) (12) = +6.32E+00 Molar Carbon

Sample Run By:

PJ MCCOWN

00000

1.0 mL

1322

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000814

Date: 04/18/00

Time: 15:21:04

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.41 ug/minute C

Analyst : PJ MCCOWN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	Analysis Time ==	Coulometer ==	% Difference ==
1	0.08	0.00	0.00
2	0.50	0.30	100.00
3	1.01	0.30	0.00
4	1.51	1.80	83.33
5	2.00	6.70	73.13
6	2.50	14.60	54.11
7	3.00	22.40	34.82
8	3.50	29.20	23.29
9	4.00	34.10	14.37
10	4.50	37.00	7.84
11	5.00	38.40	3.65
12	5.50	39.70	3.27
13	6.00	40.50	1.98
14	6.50	41.10	1.46
15	7.00	41.80	1.67
16	7.50	42.10	0.71
17	8.00	42.40	0.71
18	8.50	42.80	0.93
19	9.00	43.10	0.70
20	9.50	43.40	0.69
21	10.00	43.80	0.91
22	10.50	44.00	0.45

USER INPUT BLANK VALUE

BLANK VALUE = 25.30265 micrograms carbon

BLANK FACTOR = 25.30265 / 10.49902 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:

(44 - 25.29823) (1)/(1) = +1.87E+01 g/L Carbon
 (44 - 25.29823) (1)/(1)(12) = +1.56E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

PJ MCCOWN

00000

1323

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (F-4)

SOLIDS

Type	Sample Size in g (SS)	TIC	TOC
BLNK-PREP	Dilution Factor (DF)	1.0000	1.0000
Work List	µg of Carbon in Sample (C1)	6.3	22.1
33241	µg of Carbon from Baseline (C2)	7.8	25.3
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001340			
Rerun	µg of Carbon = C1-C2		
0			
Sample Prep			
N/A			
Sample #			
BLNK-PREP			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
PJM			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
04:00 PM		5	40
Sample Point	µg of Carbon	1.50E+00	3.20E+00
AZ-102(2)			

$$< \frac{5 \mu\text{g}}{\text{mL}} \cdot \frac{1 \text{ L}}{10.52 \text{ g}} \cdot \frac{1000 \text{ mL}}{\text{L}} = < 4.75 \times 10^2 \mu\text{g/g TIC}$$

$$< \frac{40 \mu\text{g}}{\text{mL}} \cdot \frac{1 \text{ L}}{10.52 \text{ g}} \cdot \frac{1000 \text{ mL}}{\text{L}} = < 3.80 \times 10^3 \mu\text{g/g TOC}$$

Enter these results

JG 4/24/00

Data Entered By:	MF	Date:	04/19/2000
Signature of Chemist:	<i>James Givels</i>	Date:	4/24/2000

BLANK.WB1 REV 1.0

342100ML

1324

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	1.0000	0.2000
STD	Dilution Factor (DF)	1	1
Work List	Final Coulometer Reading in µg (C1)	615.7	593.7
33241	µg of Carbon from Baseline (C2)	7.8	25.3
Test Code	Standard Book Number	25N12F	34N12D
@TICTOC1	Standard Value (µg/ml)	605	3000
Matrix	QC Actual in µg/mL = Standard Value (µg/mL) QC Found in µg/mL = (C1 - C2) * DF / SS QC Found in µg/mL for TIC = 5 if C1 < C2 QC Found in µg/mL for TOC = 40 if C1 < C2 % Recovery = QC Found / QC Actual * 100		
LIQUID			
Batch Number			
20001340			
Rerun			
0			
Sample Prep			
1			
Sample #			
STD			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
PJM			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time	Method Detection Limit in µg/mL	5	40
04:00 PM	QC Actual in µg/mL	6.05E+02	3.00E+03
Sample Point	QC Found in µg/mL	6.08E+02	2.84E+03
AZ-102(2)	Percent Standard Recovery	100.5	94.7

Data Entered By:	MF	Date: 04/19/2000
Signature of Chemist:		Date:

STANDARD.WB1 REV 1.0

342100ML

1325

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	56.7	36
33241	µg of Carbon from Baseline (C2)	7.8	25.3
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001340			
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #			
S00T000812			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
PJM			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time			
04:00 PM			
Sample Point			
AZ-102(2)			

µg of Carbon/g = (C1-C2) * DF / SS
 µg of Carbon/g for TIC = 5 if C1 < C2
 µg of Carbon/g for TOC = 40 if C1 < C2

$$\left(\frac{4.89 \text{ E} 1 \mu\text{g}}{\text{mL}} \right) \left(\frac{1 \text{ L}}{10.52 \text{ g}} \right) \left(\frac{1000 \text{ mL}}{\text{L}} \right) = 4.65 \text{ E} 3 \mu\text{g/g TIC}$$

$$\left(\frac{< 40 \mu\text{g}}{\text{mL}} \right) \left(\frac{1 \text{ L}}{10.52 \text{ g}} \right) \left(\frac{1000 \text{ mL}}{\text{L}} \right) = < 3.80 \text{ E} 3 \text{ TOC}$$

Enter these results

NOTE: FOR TOC: The Reported Result is < 40.

Enter these Detection Limits

	TIC	TOC
Method Detection Limit in ug/g	4.75 E 2	3.80 E 3
µg of Carbon/g	4.89 E +01	1.07 E +01

4/24/00

Data Entered By:

MF

Date: 04/19/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 1.0

342100ML

1326

I:\342100\OUT\33241.WB1

04/19/2000

08:45:33

WORKBOOK PAGE: SPIKE4

TIC/TOC : LA-342-100 (F-4)

SOLIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	1.0000	1.0000
Work List	Final Coulometer Reading in μg (C1)	56.7	36
33241	Spike Vial Data		
Test Code	Sample Size in g (SPK SS)	1.0000	1.0000
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in μg (C2)	360.1	325.8
SOLID	Spike Book Number	25N12F	34N12D
Batch Number	Spike Standard Value in $\mu\text{g}/\text{mL}$ (SPK CONC)	605	3000
20001340	μg C in baseline (BL)	7.8	25.3
Rerun			
0			
Sample Prep			
H2ODIGHC			
Sample #	Percent Spike Recovery = $((C2-BL) - (C1-BL) * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100$		
S00T000812			
Instrument Code	QC Actual in $\mu\text{g}/\text{mL}$ = Spike Value ($\mu\text{g}/\text{mL}$)		
CARB2	QC Found in $\mu\text{g}/\text{mL}$ = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
MF			
Chemist			
JFG			
Analyst			
PJM			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time			
04:00 PM	QC Actual in $\mu\text{g}/\text{mL}$	6.05E+02	3.00E+03
Sample Point	QC Found in $\mu\text{g}/\text{mL}$	6.07E+02	2.90E+03
AZ-102(2)	Percent Spike Recovery	100.3	96.6

Data Entered By:	MF	Date:	04/19/2000
Signature of Chemist:		Date:	

SPIKE.WB1 REV 1.3

342100ML

1327

WORKBOOK PAGE: SAM5

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	59.8	41.8
33241	µg of Carbon from Baseline (C2)	7.8	25.3
Test Code			
@TICTOC1			

Matrix
SOLID

Batch Number
20001340

Rerun
0

Sample Prep
H2ODIGHC

Sample #
S00T000813

Instrument Code
CARB2

Prepared By
MF

Chemist
JFG

Analyst
PJM

Date Complete
04/19/2000

Analysis Date
04/18/2000

Analysis Time
04:00 PM

Sample Point
AZ-102(2)

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

$$\left(\frac{5.20E1 \mu g}{mL} \right) \left(\frac{1000 mL}{L} \right) \left(\frac{1 L}{10.6 g} \right) = 4.91E3 \mu g/g \text{ TIC}$$

$$\left(\frac{< 40 \mu g}{mL} \right) \left(\frac{1000 mL}{L} \right) \left(\frac{1 L}{10.6 g} \right) = < 3.77E3 \text{ TOC}$$

Enter these results

NOTE: FOR TOC: The Reported Result is < 40.

Enter these detection limits

		TIC	TOC
Analysis Time	Method Detection Limit in ug/g	4.91E3	3.77E3
Sample Point	µg of Carbon/g Note: <	5.20E+01	1.65E+01

JFG 4/24/00

Data Entered By: MF Date: 04/19/2000
Signature of Chemist: Date:

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	83.6	44
33241	µg of Carbon from Baseline (C2)	7.8	25.3
Test Code			
@TICTOC1			

Matrix
SOLID

Batch Number
20001340

Rerun
0

Sample Prep
H2ODIGHC

Sample #
S00T000814

Instrument Code
CARB2

Prepared By
MF

Chemist
JFG

Analyst
PJM

Date Complete
04/19/2000

Analysis Date
04/18/2000

Analysis Time
04:00 PM

Sample Point
AZ-102(2)

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

$$\left(\frac{7.58E1 \mu\text{g}}{\text{mL}} \right) \left(\frac{1 \text{ L}}{13.37 \text{ g}} \right) \left(\frac{1000 \text{ mL}}{\text{L}} \right) = 5.67E3 \mu\text{g/g TIC}$$

$$\left(\frac{< 40 \mu\text{g}}{\text{mL}} \right) \left(\frac{1 \text{ L}}{13.37 \text{ g}} \right) \left(\frac{1000 \text{ mL}}{\text{L}} \right) = < 2.99E3 \mu\text{g/g TOC}$$

Enter these results

NOTE: FOR TOC: The Reported Result is < 40.

Enter please
Detection Limits

		TIC	TOC
Method Detection Limit in ug/g		3.74E2	2.79E3
µg of Carbon/g	Note: <	7.58E+01	1.87E+01

JFG 4/24/00

Data Entered By:

MF

Date: 04/19/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 1.0

342100ML

1329

LABCORE Completed Worklist Report for Worklist# 33286

Analyst: slh

Instrument: CARB2

Book#: 25N12-F
34N12-D

Method: LA-342-100 Rev/Mod F-4

Worklist Comment: AZ-101 (2), @TICTOC1 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		@TICTOC1 TIC-02	LIQUID	1	2.10E+0	2.100	ug/mL
1 BLNK	0		@TICTOC1 TOC-02	LIQUID	1	2.90E+0	2.900	ug/mL
2 STD	0		@TICTOC1 TIC-02	LIQUID	6.05E+02	5.85E+2	96.694	% Recovery
2 STD	0		@TICTOC1 TOC-02	LIQUID	3.00E+03	2.85E+3	95.000	% Recovery
3 SAMPLE	S00T000779	0	@TICTOC1 TIC-02	LIQUID	N/A	6.75E+03	5.000	ug/mL
3 SAMPLE	S00T000779	0	@TICTOC1 TOC-02	LIQUID	N/A	3.81E+02	40.000	ug/mL
4 SPK	S00T000779	0	@TICTOC1 TIC-02	LIQUID	1.00E+02	1.03E+02	103.000	% Recovery
4 SPK	S00T000779	0	@TICTOC1 TOC-02	LIQUID	1.00E+02	9.37E+01	93.700	% Recovery
5 SAMPLE	S00T000782	0	@TICTOC1 TIC-02	LIQUID	N/A	6.84E+03	5.000	ug/mL
5 SAMPLE	S00T000782	0	@TICTOC1 TOC-02	LIQUID	N/A	3.14E+02	40.000	ug/mL
6 SAMPLE	S00T000785	0	@TICTOC1 TIC-02	LIQUID	N/A	6.93E+03	5.000	ug/mL
6 SAMPLE	S00T000785	0	@TICTOC1 TOC-02	LIQUID	N/A	3.91E+02	40.000	ug/mL

Final page for worklist# 33286

Analyst Signature _____ Date _____

Mary Innes 4/20/00
Analyst Signature Date

James Krebs 4/21/00
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 33286

Analyst: SLH Instrument: CARB2 Book# TIC 25N12-FMethod: LA-342-100 Rev/Mod F-4

TOC 34N12-D

Worklist Comment: AZ-101 (2), @TICTOC1 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				@TICTOC1	LIQUID		
2	STD				@TICTOC1	LIQUID		
3	SAMPLE	S00T000779 0			@TICTOC1	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								
4	SPK	S00T000779 0			@TICTOC1	LIQUID		
5	SAMPLE	S00T000782 0			@TICTOC1	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								
6	SAMPLE	S00T000785 0			@TICTOC1	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								

Final page for worklist # 33286

Jandra L. Ford Ben Truitt
Signature Date
4-19-2000

Mary Franz 4/20/00
Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1331

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE 1

Date: 04/19/00

Time: 09:44:03

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASE 1
Blank Value = N/A

Analyst : SL HOOD
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.30	0.00
2	1.00	0.70	57.14
3	1.50	1.50	53.33
4	2.00	2.40	37.50
5	2.50	3.30	27.27
6	3.00	4.10	19.51
7	3.50	4.50	8.89
8	4.00	5.00	10.00
9	4.50	5.30	5.66
10	5.00	5.60	5.36
11	5.50	6.00	6.67
12	6.00	6.20	3.23
13	6.50	6.60	6.06
14	7.00	6.70	1.49
15	7.50	6.90	2.90
16	8.00	7.20	4.17
17	8.50	7.30	1.37
18	9.00	7.60	3.95
19	9.50	7.70	1.30
20	10.00	7.90	2.53
21	10.50	8.00	1.25
22	11.00	8.10	1.23

BLANK VALUE = 8.1 micrograms carbon
BLANK FACTOR = 8.1 / 10.99701 =

+7.4E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1332 TO 1357.

Sample Run By:

SL Hood Boatright
SL HOOD

00001

1332

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE 1

Date: 04/19/00

Time: 09:59:00

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE 1
 Blank Value = N/A

Analyst : SL HOOD
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.10	0.00
2	1.01	0.30	66.67
3	1.51	0.40	25.00
4	2.00	0.60	33.33
5	2.50	0.80	25.00
6	3.00	1.40	42.86
7	3.50	2.40	41.67
8	4.00	4.10	41.46
9	4.50	5.50	25.45
10	5.00	6.90	20.29
11	5.50	8.20	15.85
12	6.00	8.90	7.87
13	6.50	9.60	7.29
14	7.00	10.10	4.95
15	7.50	10.60	4.72
16	8.00	11.00	3.64
17	8.50	11.20	1.79
18	9.00	11.60	3.45
19	9.50	11.90	2.52
20	10.00	12.00	0.83
21	10.50	12.20	1.64
22	11.00	12.40	1.61

BLANK VALUE = 12.4 micrograms carbon
 BLANK FACTOR = 12.4 / 10.9989 =

+1.13E+00 ug/min Carbon

Sample Run By:

SL HOOD

100001

1333

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 1

Date: 04/19/00

Time: 10:12:23

Sample Size = 1000 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading ---- Analysis Time ---- Coulometer ---- % Difference ==

1	0.51	0.20	0.00
2	1.01	0.30	33.33
3	1.51	0.50	40.00
4	2.00	0.70	28.57
5	2.50	2.50	72.00
6	3.00	17.00	85.29
7	3.50	55.40	69.31
8	4.00	9113.20	51.06
9	4.50	188.10	39.82
10	5.00	266.90	29.52
11	5.50	343.10	22.21
12	6.00	411.10	16.54
13	6.50	464.10	11.42
14	7.00	506.00	8.28
15	7.50	535.60	5.53
16	8.00	555.90	3.65
17	8.50	569.50	2.39
18	9.00	578.40	1.54
19	9.50	584.50	1.04
20	10.00	587.90	0.58
21	10.50	590.80	0.49
22	11.00	592.60	0.30

USER INPUT BLANK VALUE

BLANK VALUE = 8.139187 micrograms carbon

BLANK FACTOR = 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(592.6 - 8.138419) (1) / (1000) = +5.845E-01 g/L Carbon
 (592.6 - 8.138419) (1) / (1000) (12) = +4.871E-02 Molar Carbon

Sample Run By:

SL HOOD

00001

35 = 1ml

25 N12-F

1334

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 1

Date: 04/19/00

Time: 10:25:20

Sample Size = 200 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	Analysis Time ==	Coulometer ==	% Difference ==
1	0.51	0.60	0.00
2	1.01	1.20	50.00
3	1.51	1.80	33.33
4	2.00	2.20	18.18
5	2.50	3.20	31.25
6	3.00	11.20	71.43
7	3.50	44.00	74.55
8	4.00	121.90	63.90
9	4.50	229.50	46.88
10	5.00	336.90	31.88
11	5.50	422.60	20.28
12	6.00	482.50	12.41
13	6.50	520.50	7.30
14	7.00	544.20	4.36
15	7.50	558.00	2.47
16	8.00	566.20	1.45
17	8.50	571.90	1.00
18	9.00	575.40	0.61
19	9.50	577.60	0.38
20	10.00	579.50	0.33
21	10.50	580.90	0.24
22	11.00	581.90	0.17

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 = +1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(581.9 - 12.42662) (1)/(200) = +2.847E+00 g/L Carbon
 (581.9 - 12.42662) (1)/(200)(12) = +2.373E-01 Molar Carbon

Sample Run By:

SL HOOD

00001

1335

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK 1

Date: 04/19/00

Time: 10:47:34

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.60	0.00
2	1.01	1.20	50.00
3	1.51	1.80	33.33
4	2.00	2.20	18.18
5	2.50	2.70	18.52
6	3.00	3.60	25.00
7	3.50	4.50	20.00
8	4.00	5.60	19.64
9	4.50	6.30	11.11
10	5.00	6.90	8.70
11	5.50	7.40	6.76
12	6.00	7.90	6.33
13	6.50	8.20	3.66
14	7.00	8.50	3.53
15	7.50	8.70	2.30
16	8.00	9.00	3.33
17	8.50	9.20	2.17
18	9.00	9.40	2.13
19	9.50	9.60	2.08
20	10.00	9.80	2.04
21	10.50	10.00	2.00
22	11.00	10.20	1.96

USER INPUT BLANK VALUE

BLANK VALUE = 8.139187 micrograms carbon

BLANK FACTOR = 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(10.2 - 8.138374) (1)/(1) = +2.06E+00 g/L Carbon
 (10.2 - 8.138374) (1)/(1) (12) = +1.72E-01 Molar Carbon

Sample Run By:

SL HOOD

00001

TCC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK 1

Date: 04/19/00

Time: 11:01:15

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	----	Analysis Time	----	Coulometer	----	% Difference	==
1		0.51		0.10		0.00	
2		1.01		0.30		66.67	
3		1.50		0.40		25.00	
4		2.00		0.60		33.33	
5		2.50		0.90		33.33	
6		3.00		1.70		47.06	
7		3.50		3.30		48.48	
8		4.00		5.30		37.74	
9		4.50		7.50		29.33	
10		5.00		9.30		19.35	
11		5.50		10.50		11.43	
12		6.00		11.60		9.48	
13		6.50		12.30		5.69	
14		7.00		12.80		3.91	
15		7.50		13.30		3.76	
16		8.00		13.60		2.21	
17		8.50		14.00		2.86	
18		9.00		14.30		2.10	
19		9.50		14.60		2.05	
20		10.00		14.80		1.35	
21		10.50		15.10		1.99	
22		11.00		15.30		1.31	

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 = +1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(15.3 - 12.42869) (1)/(1) = +2.87E+00 g/L Carbon
 (15.3 - 12.42869) (1)/(1) (12) = +2.39E-01 Molar Carbon

Sample Run By:

SL HOOD

00001

1337

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000779

Date: 04/19/00

Time: 13:46:26

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.50	0.10	0.00
2	1.01	0.20	50.00
3	1.50	0.40	50.00
4	2.00	5.70	92.98
5	2.50	61.60	90.75
6	3.00	184.90	66.68
7	3.50	332.80	44.44
8	4.00	466.80	28.71
9	4.50	562.20	16.97
10	5.00	618.90	9.16
11	5.50	649.30	4.68
12	6.00	665.30	2.40
13	6.50	672.70	1.10
14	7.00	676.30	0.53
15	7.50	678.40	0.31
16	8.00	679.50	0.16
17	8.50	680.30	0.12
18	9.00	680.80	0.07
19	9.50	681.40	0.09
20	10.00	681.80	0.06
21	10.50	682.30	0.07
22	11.00	682.90	0.09

USER INPUT BLANK VALUE

BLANK VALUE = 8.139187 micrograms carbon

BLANK FACTOR = 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(682.9 - 8.138374) (1)/(1) = +6.748E+02 g/L Carbon
 (682.9 - 8.138374) (1)/(1) (12) = +5.623E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

SS = .100ml

1338

TCC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000779

Date: 04/19/00

Time: 14:00:07

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.30	0.00
2	1.01	0.50	40.00
3	1.50	0.90	44.44
4	2.00	2.60	65.38
5	2.50	8.90	70.79
6	3.00	18.00	50.56
7	3.50	26.80	32.84
8	4.00	33.90	20.94
9	4.50	39.00	13.08
10	5.00	42.10	7.36
11	5.50	44.30	4.97
12	6.00	45.50	2.64
13	6.50	46.70	2.57
14	7.00	47.30	1.27
15	7.50	47.80	1.05
16	8.00	48.40	1.24
17	8.50	48.80	0.82
18	9.00	49.20	0.81
19	9.50	49.60	0.81
20	10.00	49.90	0.60
21	10.50	50.20	0.60
22	11.00	50.50	0.59

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 = +1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(50.5 - 12.42959) (1)/(1) =

+3.81E+01 g/L Carbon

(50.5 - 12.42959) (1)/(1) (12) =

+3.17E+00 Molar Carbon

Sample Run By:

SL HOOD

00001

SS = .100 ml

1339

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T00779 SPK

Date: 04/19/00

Time: 14:49:50

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	----	Analysis Time	====	Coulometer	----	% Difference	--
1		0.51		0.80		0.00	
2		1.01		1.60		50.00	
3		1.51		2.30		30.43	
4		2.01		2.90		20.69	
5		2.51		4.80		39.58	
6		3.01		27.60		82.61	
7		3.51		107.80		74.40	
8		4.01		243.10		55.66	
9		4.50		410.70		40.81	
10		5.00		579.80		29.17	
11		5.50		715.10		18.92	
12		6.00		811.60		11.89	
13		6.50		878.80		7.65	
14		7.00		926.00		5.10	
15		7.50		955.70		3.11	
16		8.00		972.20		1.70	
17		8.50		981.70		0.97	
18		9.00		987.40		0.58	
19		9.50		990.40		0.30	
20		10.00		992.20		0.18	
21		10.50		993.70		0.15	
22		11.00		994.50		0.08	

USER INPUT BLANK VALUE

BLANK VALUE = 8.139187 micrograms carbon

BLANK FACTOR = 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(994.5 - 8.140451) (1)/(1) =

+9.864E+02 g/L Carbon

(994.5 - 8.140451) (1)/(1)(12) =

+8.220E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

SS = .100ml + .500ml spk 25N12-F

1340

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T00779 SPK

Date: 04/19/00

Time: 15:08:39

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.60	0.00
2	1.01	0.70	14.29
3	1.51	1.10	36.36
4	2.00	1.60	31.25
5	2.50	4.00	60.00
6	3.00	17.20	76.74
7	3.50	56.00	69.29
8	4.01	117.90	52.50
9	4.50	186.50	36.78
10	5.00	239.90	22.26
11	5.50	277.10	13.42
12	6.00	300.70	7.85
13	6.50	313.30	4.02
14	7.00	320.40	2.22
15	7.50	324.40	1.23
16	8.00	326.90	0.76
17	8.50	328.20	0.40
18	9.00	329.10	0.27
19	9.50	329.90	0.24
20	10.00	330.60	0.21
21	10.50	331.10	0.15
22	11.00	331.50	0.12

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 = +1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(331.5 - 12.42662) (1)/(1) = +3.191E+02 g/L Carbon
 (331.5 - 12.42662) (1)/(1) (12) = +2.659E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

SS = .100ml + .100ml spk 34N12-D
1341

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000782

Date: 04/19/00

Time: 15:22:08

Sample Size - 1 uL

Dil Factor - 1

Blank ID # -

Blank Value - .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	----	Analysis Time	====	Coulometer	====	% Difference	--
1		0.51		0.20		0.00	
2		1.01		0.40		50.00	
3		1.50		0.70		42.86	
4		2.00		0.90		22.22	
5		2.50		9.60		90.63	
6		3.00		65.10		85.25	
7		3.50		167.10		61.04	
8		4.00		286.50		41.68	
9		4.50		398.00		28.02	
10		5.00		491.70		19.06	
11		5.50		563.20		12.70	
12		6.00		613.70		8.23	
13		6.50		647.30		5.19	
14		7.00		666.60		2.90	
15		7.50		678.10		1.70	
16		8.00		683.40		0.78	
17		8.50		686.60		0.47	
18		9.00		688.30		0.25	
19		9.50		689.50		0.17	
20		10.00		690.40		0.13	
21		10.50		691.10		0.10	
22		11.00		691.80		0.10	

USER INPUT BLANK VALUE

BLANK VALUE - 8.139187 micrograms carbon

BLANK FACTOR - 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(691.8 - 8.13851) (1)/(1) = +6.837E+02 g/L Carbon
 (691.8 - 8.13851) (1)/(1) (12) = +5.697E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

SS - .100 uL

1342

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000782

Date: 04/19/00

Time: 15:37:35

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.50	0.00
2	1.00	0.90	44.44
3	1.50	1.20	25.00
4	2.00	1.80	33.33
5	2.50	3.90	53.85
6	3.00	9.90	60.61
7	3.50	17.20	42.44
8	4.00	24.50	29.80
9	4.50	30.00	18.33
10	5.00	33.90	11.50
11	5.50	36.70	7.63
12	6.00	38.60	4.92
13	6.50	39.70	2.77
14	7.00	40.60	2.22
15	7.50	41.30	1.69
16	8.00	41.70	0.96
17	8.50	42.30	1.42
18	9.00	42.60	0.70
19	9.50	43.00	0.93
20	10.00	43.30	0.69
21	10.50	43.50	0.46
22	11.00	43.80	0.68

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 = +1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(43.8 - 12.42552) (1) / (1) = +3.14E+01 g/L Carbon
 (43.8 - 12.42552) (1) / (1) (12) = +2.61E+00 Molar Carbon

Sample Run By:

SL HOOD

00001

SS = .100ml

1343

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000785

Date: 04/19/00

Time: 15:53:50

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .74 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

-- Reading	==== Analysis Time	==== Coulometer	==== % Difference
1	0.51	0.20	0.00
2	1.01	0.40	50.00
3	1.50	0.70	42.86
4	2.00	0.90	22.22
5	2.50	4.30	79.07
6	3.00	34.90	87.68
7	3.50	106.80	67.32
8	4.00	208.60	48.80
9	4.50	323.80	35.58
10	5.00	433.30	25.27
11	5.50	524.20	17.34
12	6.00	589.90	11.14
13	6.50	634.40	7.01
14	7.00	663.10	4.33
15	7.50	679.80	2.46
16	8.00	688.70	1.29
17	8.50	693.70	0.72
18	9.00	696.40	0.39
19	9.50	698.00	0.23
20	10.00	699.10	0.16
21	10.50	700.00	0.13
22	11.00	700.60	0.09

USER INPUT BLANK VALUE

BLANK VALUE = 8.139187 micrograms carbon

BLANK FACTOR = 8.139187 / 10.9989 = +7.4E-01 ug/min Carbon

SAMPLE RESULTS:

(700.6 - 8.139142) (1)/(1) = +6.925E+02 g/L Carbon
 (700.6 - 8.139142) (1)/(1) (12) = +5.771E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

1344

SS = .100 ml

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000785

Date: 04/19/00

Time: 16:16:43

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 1.13 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.00	0.80	50.00
3	1.50	1.00	20.00
4	2.00	2.80	64.29
5	2.50	11.50	75.65
6	3.00	23.00	50.00
7	3.50	32.90	30.09
8	4.00	39.20	16.07
9	4.50	43.00	8.84
10	5.00	45.30	5.08
11	5.50	46.70	3.00
12	6.00	47.50	1.68
13	6.50	48.30	1.66
14	7.00	48.80	1.02
15	7.50	49.30	1.01
16	8.00	49.70	0.80
17	8.50	50.10	0.80
18	9.00	50.40	0.60
19	9.50	50.80	0.79
20	10.00	51.00	0.39
21	10.50	51.30	0.58
22	11.00	51.50	0.39

USER INPUT BLANK VALUE

BLANK VALUE = 12.42876 micrograms carbon

BLANK FACTOR = 12.42876 / 10.9989 =

+1.1E+00 ug/min Carbon

SAMPLE RESULTS:

(51.5 - 12.42455) (1)/(1) =

+3.91E+01 g/L Carbon

(51.5 - 12.42455) (1)/(1) (12) =

+3.26E+00 Molar Carbon

Sample Run By:

SL HOOD

00001

1345

SS = 100 ml

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	0.0000	0.0000
BLNK	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	10.2	15.3
33286	µg of Carbon from Baseline (C2)	8.1	12.4
Test Code			
@TICTOC1			
Matrix			
LIQUID			
Batch Number			
20001384			
Rerun	µg of Carbon = C1-C2		
0			
Sample Prep			
N/A			
Sample #			
BLNK			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time	Method Detection Limit in µg/mL	5	40
04:16 PM			
Sample Point	µg of Carbon	2.10E+00	2.90E+00
AZ-101(2)			

Data Entered By:	MF	Date:	04/20/2000
Signature of Chemist:	<i>James Smith</i>	Date:	4/21/00

BLANK.WB1 REV 1.0

342100.ML

1346

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	1.0000	0.2000
STD	Dilution Factor (DF)	1	1
Work List	Final Coulometer Reading in µg (C1)	592.6	581.9
33286	µg of Carbon from Baseline (C2)	8.1	12.4
Test Code	Standard Book Number	25N12F	34N12D
@TICTOC1	Standard Value (µg/ml)	605	3000
Matrix			
LIQUID			
Batch Number			
20001384			
Rerun			
0	QC Actual in µg/mL = Standard Value (µg/mL)		
Sample Prep	QC Found in µg/mL = (C1 - C2) * DF / SS		
N/A	QC Found in µg/mL for TIC = 5 if C1 < C2		
Sample #	QC Found in µg/mL for TOC = 40 if C1 < C2		
STD			
Instrument Code	% Recovery = QC Found / QC Actual * 100		
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time	Method Detection Limit in µg/mL	5	40
04:16 PM	QC Actual in µg/mL	6.05E+02	3.00E+03
Sample Point	QC Found in µg/mL	5.85E+02	2.85E+03
AZ-101(2)	Percent Standard Recovery	96.6	94.9

Data Entered By:	MF	Date: 04/20/2000
Signature of Chemist:		Date:

STANDARD WB1 REV 1.0

342100ML

1347

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	0.1000	0.1000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	682.9	50.5
33286	µg of Carbon from Baseline (C2)	8.1	12.4
Test Code			
@TICTOC1			
Matrix			
LIQUID			
Batch Number			
20001384			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T000779			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time	Method Detection Limit in µg/mL	5	40
04:16 PM			
Sample Point	µg of Carbon/mL	6.75E+03	3.81E+02
AZ-101(2)			

$\mu\text{g of Carbon/mL} = (C1 - C2) * DF / SS$
 $\mu\text{g of Carbon/mL for TIC} = 5 \text{ if } C1 < C2$
 $\mu\text{g of Carbon/mL for TOC} = 40 \text{ if } C1 < C2$

Data Entered By:	MF	Date: 04/20/2000
Signature of Chemist:		Date:

SAMPLE.WB1 REV 1.0

342100ML

1348

WORKBOOK PAGE: SPIKE4

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Volume in mL (SS)	0.1000	0.1000
Work List	Final Coulometer Reading in µg (C1)	682.9	50.5
33286	Spiked Vial Data		
Test Code	Sample Volume in mL (SPK SS)	0.1000	0.1000
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg (C2)	994.5	331.5
LIQUID	Spike Book Number	25N12F	34N12D
Batch Number	Spike Standard Value in µg/ml (SPK CONC)	605	3000
20001384	µg C in baseline (BL)	8.1	12.4
Rerun			
0			
Sample Prep			
N/A			
Sample #	Percent Spike Recovery = ((C2-BL) - (C1-BL) * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100		
S00T000779			
Instrument Code	QC Actual in µg/mL = Spike Value (µg/mL)		
CARB2	QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time			
04:16 PM	QC Actual in µg/mL	6.05E+02	3.00E+03
Sample Point	QC Found in µg/mL	6.23E+02	2.81E+03
AZ-101(2)	Percent Spike Recovery	103.0	93.7

Data Entered By:	MF	Date:	04/20/2000
Signature of Chemist:		Date:	

SPIKE.WB1 REV 1.3

342100ML

WORKBOOK PAGE: SAM5

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	0.1000	0.1000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	691.8	43.8
33286	µg of Carbon from Baseline (C2)	8.1	12.4
Test Code			
@TICTOC1			
Matrix			
LIQUID			
Batch Number			
20001384			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T000782			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time	Method Detection Limit in µg/mL	TIC	TOC
04:16 PM		5	40
Sample Point	µg of Carbon/mL	6.84E+03	3.14E+02
AZ-101(2)			

Data Entered By:

MF

Date: 04/20/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 1.0

342100ML

1350

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC
Type	Sample Size in mL (SS)	0.1000	0.1000
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	700.6	51.5
33286	µg of Carbon from Baseline (C2)	8.1	12.4
Test Code			
@TICTOC1			
Matrix			
LIQUID			
Batch Number			
20001384			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T000785			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time	Method Detection Limit in µg/mL	TIC	TOC
04:16 PM		5	40
Sample Point	µg of Carbon/mL	6.93E+03	3.91E+02
AZ-101(2)			

$\mu\text{g of Carbon/mL} = (C1 - C2) * DF / SS$
 $\mu\text{g of Carbon/mL for TIC} = 5 \text{ if } C1 < C2$
 $\mu\text{g of Carbon/mL for TOC} = 40 \text{ if } C1 < C2$

Data Entered By:

MF

Date: 04/20/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 1.0

342100ML

1351

LABCORE Completed Worklist Report for Worklist# 33537

Analyst: slh

Instrument: CARB2

Book#: ^{25 N12-G}
~~34 N12-D~~

Method: LA-342-100 Rev/Mod F-4

Worklist Comment: AZ-101 (2), @TICTOC1 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		@TICTOC1 TIC-02	SOLID	1	4.00E+0	4.000	ug/g
1 BLNK	0		@TICTOC1 TOC-02	SOLID	1	3.80E+0	3.800	ug/g
2 STD	0		@TICTOC1 TIC-02	SOLID	6.02E+02	5.67E+2	94.186 % Recovery	
2 STD	0		@TICTOC1 TOC-02	SOLID	3.00E+03	2.72E+3	90.667 % Recovery	
3 SAMPLE	S00T001163	0	@TICTOC1 TIC-02	SOLID	N/A	5.41E+03	5.000	ug/g
3 SAMPLE	S00T001163	0	@TICTOC1 TOC-02	SOLID	N/A	7.56E+02	40.000	ug/g
4 SPK	S00T001163	0	@TICTOC1 TIC-02	SOLID	1.00E+02	9.58E+01	95.800 % Recovery	
4 SPK	S00T001163	0	@TICTOC1 TOC-02	SOLID	1.00E+02	9.93E+01	99.300 % Recovery	
5 SAMPLE	S00T001164	0	@TICTOC1 TIC-02	SOLID	N/A	5.71E+03	5.000	ug/g
5 SAMPLE	S00T001164	0	@TICTOC1 TOC-02	SOLID	N/A	1.57E+03	40.000	ug/g
6 SAMPLE	S00T001165	0	@TICTOC1 TIC-02	SOLID	N/A	4.60E+03	5.000	ug/g
6 SAMPLE	S00T001165	0	@TICTOC1 TOC-02	SOLID	N/A	1.38E+03	40.000	ug/g

Final page for worklist# 33537

Analyst Signature _____ Date _____

Mary Franz 5/15/00
Analyst Signature Date

James Frahn 5/15/00
Reviewer Signature Date

This worklist run at the same time as 33540 and shares the baseline, blank and standard with 33540

05/11/00 10:33
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 33537

Analyst: JH Instrument: CARB2 Book# TIC 25N12-GMethod: LA-342-100 Rev/Mod F-4 TOC 34N12-D

Worklist Comment: AZ-101 (2), @TICTOC1 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK			@TICTOC1	SOLID		
2 STD			@TICTOC1	SOLID		
3 SAMPLE	S00T001163 0		@TICTOC1	SOLID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						
4 SPK	S00T001163 0		@TICTOC1	SOLID		
5 SAMPLE	S00T001164 0		@TICTOC1	SOLID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						
6 SAMPLE	S00T001165 0		@TICTOC1	SOLID	99000438	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02						

Final page for worklist # 33537

James H. Hines
Signature Date
5-12-00

Wm. J. Hines
Signature Date
5/15/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1353

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE 1

Date: 05/11/00

Time: 21:52:27

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE 1
 Blank Value = N/A

Analyst : SL HOOD
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.40	0.00
2	1.00	0.80	50.00
3	1.50	1.20	33.33
4	2.00	1.50	20.00
5	2.50	2.00	25.00
6	3.00	2.30	13.04
7	3.50	2.80	17.86
8	4.00	3.40	17.65
9	4.50	3.70	8.11
10	5.00	4.20	11.90
11	5.50	4.80	12.50
12	6.00	5.40	11.11
13	6.50	5.80	6.90
14	7.00	6.30	7.94
15	7.50	6.80	7.35
16	8.00	7.20	5.56
17	8.50	7.70	6.49
18	9.00	8.30	7.23
19	9.50	8.50	2.35
20	10.00	8.90	4.49
21	10.50	9.40	5.32
22	11.00	9.80	4.08

BLANK VALUE = 9.8 micrograms carbon

BLANK FACTOR = 9.8 / 10.99707 =

+8.9E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1354 TO 1373.

Sample Run By:

SL HOOD

00001

1354

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE 1

Date: 05/11/00

Time: 22:05:48

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE 1
 Blank Value = N/A

Analyst : SL HOOD
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.40	0.00
2	1.01	0.80	50.00
3	1.51	1.20	33.33
4	2.00	1.50	20.00
5	2.50	1.90	21.05
6	3.00	2.50	24.00
7	3.50	2.70	7.41
8	4.00	3.20	15.63
9	4.50	4.40	27.27
10	5.00	6.30	30.16
11	5.50	8.20	23.17
12	6.00	10.30	20.39
13	6.50	13.00	20.77
14	7.00	15.30	15.03
15	7.50	18.00	15.00
16	8.00	20.90	13.88
17	8.50	23.30	10.30
18	9.00	25.80	9.69
19	9.50	27.90	7.53
20	10.00	29.50	5.42
21	10.50	31.20	5.45
22	11.00	32.60	4.29

BLANK VALUE = 32.6 micrograms carbon

BLANK FACTOR = 32.6 / 10.99609 = +2.96E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 05/11/00

Time: 23:42:23

Sample Size = 1000 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	6.00	0.00
2	1.01	10.30	41.75
3	1.51	13.80	25.36
4	2.01	16.50	16.36
5	2.50	18.70	11.76
6	3.00	20.60	9.22
7	3.50	23.30	11.59
8	4.00	29.60	21.28
9	4.50	42.90	31.00
10	5.00	61.90	30.69
11	5.50	99.40	37.73
12	6.00	152.20	34.69
13	6.50	212.90	28.51
14	7.00	275.40	22.69
15	7.50	336.70	18.21
16	8.00	392.60	14.24
17	8.50	441.70	11.12
18	9.00	483.10	8.57
19	9.50	516.20	6.41
20	10.00	542.40	4.83
21	10.50	562.70	3.61
22	11.00	577.00	2.48

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(577 - 9.789131) (1) / (1000) = +5.672E-01 g/L Carbon

(577 - 9.789131) (1) / (1000) (12) = +4.727E-02 Molar Carbon

Sample Run By:

SL HOOD

00001

55 / ml = 25 N12-G

1356

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 1

Date: 05/11/00

Time: 23:54:39

Sample Size = 200 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.96 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	7.40	0.00
2	1.01	12.00	38.33
3	1.51	16.30	26.38
4	2.00	19.00	14.21
5	2.50	21.20	10.38
6	3.00	23.00	7.83
7	3.50	24.60	6.50
8	4.00	28.10	12.46
9	4.50	38.70	27.39
10	5.00	64.00	39.53
11	5.50	110.40	42.03
12	6.00	174.60	36.77
13	6.50	243.80	28.38
14	7.00	313.40	22.21
15	7.50	376.60	16.78
16	8.00	430.50	12.52
17	8.50	474.00	9.18
18	9.00	508.80	6.84
19	9.50	534.10	4.74
20	10.00	553.70	3.54
21	10.50	567.50	2.43
22	11.00	577.20	1.68

USER INPUT BLANK VALUE

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

(577.2 - 32.55892) (1)/(200) = +2.723E+00 g/L Carbon
 (577.2 - 32.55892) (1)/(200)(12) = +2.269E-01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

SS .200ml

34 N12-D

1357

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK

Date: 05/12/00

Time: 00:14:25

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
  1          0.51          0.60          0.00
  2          1.01          1.30          53.85
  3          1.50          1.90          31.58
  4          2.00          2.50          24.00
  5          2.50          3.10          19.35
  6          3.00          3.70          16.22
  7          3.50          4.20          11.90
  8          4.00          4.80          12.50
  9          4.50          5.50          12.73
 10          5.00          6.30          12.70
 11          5.50          7.20          12.50
 12          6.00          8.00          10.00
 13          6.50          8.80          9.09
 14          7.00          9.50          7.37
 15          7.50          10.20          6.86
 16          8.00          10.90          6.42
 17          8.50          11.30          3.54
 18          9.00          11.90          5.04
 19          9.50          12.40          4.03
 20          10.00          13.00          4.62
 21          10.50          13.40          2.99
 22          11.00          13.80          2.90

```

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

```

( 13.8 - 9.787331 ) (1)/(1) = +4.01E+00 g/L Carbon
( 13.8 - 9.787331 ) (1)/(1) (12) = +3.34E-01 Molar Carbon

```

Sample Run By:

SL HOOD

00001

1358

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK 1

Date: 05/12/00

Time: 00:26:37

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.96 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
 1          0.51          0.50          0.00
 2          1.01          0.80          37.50
 3          1.50          1.20          33.33
 4          2.00          1.70          29.41
 5          2.50          2.00          15.00
 6          3.00          2.60          23.08
 7          3.50          3.10          16.13
 8          4.00          4.50          31.11
 9          4.50          6.10          26.23
10          5.00          8.20          25.61
11          5.50          10.90         24.77
12          6.00          14.10         22.70
13          6.50          17.60         19.89
14          7.00          20.70         14.98
15          7.50          24.00         13.75
16          8.00          26.60          9.77
17          8.50          29.00          8.28
18          9.00          31.20          7.05
19          9.50          32.90          5.17
20          10.00         34.30          4.08
21          10.50         35.30          2.83
22          11.00         36.40          3.02

```

USER INPUT BLANK VALUE

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 36.4 - 32.55403 ) (1)/(1) = +3.85E+00 g/L Carbon
( 36.4 - 32.55403 ) (1)/(1) (12) = +3.20E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

SL HOOD

00001

1359

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001163

Date: 05/12/00

Time: 00:39:21

Sample Size = 1 uL

Analyst : SL HOOD

Dil Factor = 1

Min Readings = 22

Blank ID # =

Max Readings = 22

Blank Value = .89 ug/minute C

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.70	0.00
2	1.01	1.40	50.00
3	1.50	1.80	22.22
4	2.00	2.40	25.00
5	2.50	2.90	17.24
6	3.01	3.40	14.71
7	3.50	3.70	8.11
8	4.00	4.60	19.57
9	4.50	5.90	22.03
10	5.00	9.00	34.44
11	5.50	15.80	43.04
12	6.00	26.90	41.26
13	6.50	40.80	34.07
14	7.00	59.10	30.96
15	7.50	77.80	24.04
16	8.00	96.20	19.13
17	8.50	113.80	15.47
18	9.00	128.90	11.71
19	9.50	142.10	9.29
20	10.00	152.90	7.06
21	10.50	160.80	4.91
22	11.00	167.10	3.77

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(167.1 - 9.788961) (1)/(1) = +1.573E+02 g/L Carbon
 (167.1 - 9.788961) (1)/(1) (12) = +1.311E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

1360

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001163

Date: 05/12/00

Time: 00:51:30

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.96 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	2.30	0.00
2	1.01	4.20	45.24
3	1.50	5.80	27.59
4	2.00	6.90	15.94
5	2.50	8.00	13.75
6	3.00	8.90	10.11
7	3.50	9.50	6.32
8	4.00	10.40	8.65
9	4.50	11.30	7.96
10	5.00	13.10	13.74
11	5.50	15.70	16.56
12	6.00	19.20	18.23
13	6.50	23.70	18.99
14	7.00	28.30	16.25
15	7.50	33.00	14.24
16	8.00	37.80	12.70
17	8.50	41.70	9.35
18	9.00	45.50	8.35
19	9.50	48.40	5.99
20	10.00	51.00	5.10
21	10.50	52.90	3.59
22	11.00	54.60	3.11

USER INPUT BLANK VALUE

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

(54.6 - 32.55656) (1)/(1) = +2.20E+01 g/L Carbon
 (54.6 - 32.55656) (1)/(1) (12) = +1.84E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T01163 SPK

Date: 05/12/00

Time: 01:03:30

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	1.20	0.00
2	1.01	2.30	47.83
3	1.51	3.00	23.33
4	2.00	3.70	18.92
5	2.50	4.40	15.91
6	3.00	5.00	12.00
7	3.50	5.90	15.25
8	4.00	7.70	23.38
9	4.50	13.50	42.96
10	5.00	27.10	50.18
11	5.50	53.60	49.44
12	6.00	93.30	42.55
13	6.50	143.30	34.89
14	7.00	197.50	27.44
15	7.50	251.90	21.60
16	8.00	300.30	16.12
17	8.50	344.80	12.91
18	9.00	381.60	9.64
19	9.50	411.30	7.22
20	10.00	434.20	5.27
21	10.50	451.50	3.83
22	11.00	464.20	2.74

Re: 05/12

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(464.2 - 9.788961) (1)/(1) = +4.544E+02 g/L Carbon
 (464.2 - 9.788961) (1)/(1) (12) = +3.787E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

1362

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T01163 SPK Date: 05/12/00 Time: 01:15:46

Sample Size = 1 uL Analyst : SL HOOD
Dil Factor = 1 Min Readings = 22
Blank ID # = Max Readings = 22
Blank Value = 2.96 ug/minute C % Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	6.20	0.00
2	1.00	10.20	39.22
3	1.50	13.40	23.88
4	2.01	15.90	15.72
5	2.50	17.60	9.66
6	3.00	19.10	7.85
7	3.50	20.80	8.17
8	4.00	25.00	16.80
9	4.50	35.70	29.97
10	5.00	55.70	35.91
11	5.50	88.10	36.78
12	6.00	127.50	30.90
13	6.50	168.10	24.15
14	7.00	208.20	19.26
15	7.50	244.30	14.78
16	8.00	273.70	10.74
17	8.50	296.80	7.78
18	9.00	315.60	5.96
19	9.50	329.20	4.13
20	10.00	339.60	3.06
21	10.50	347.80	2.36
22	11.00	353.60	1.64

USER INPUT BLANK VALUE :

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

(353.6 - 32.5511) (1)/(1) = +3.210E+02 g/L Carbon
(353.6 - 32.5511) (1)/(1)(12) = +2.675E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

1363

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001164

Date: 05/12/00

Time: 01:27:48

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	3.20	0.00
2	1.00	5.10	37.25
3	1.50	6.90	26.09
4	2.00	8.20	15.85
5	2.50	9.50	13.68
6	3.00	10.60	10.38
7	3.50	11.50	7.83
8	4.00	12.90	10.85
9	4.50	16.80	23.21
10	5.00	26.30	36.12
11	5.50	41.90	37.23
12	6.00	66.40	36.90
13	6.50	97.40	31.83
14	7.00	129.90	25.02
15	7.50	162.80	20.21
16	8.00	192.90	15.60
17	8.50	218.90	11.88
18	9.00	240.30	8.91
19	9.50	257.60	6.72
20	10.00	270.60	4.80
21	10.50	280.30	3.46
22	11.00	287.70	2.57

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(287.7 - 9.786523) (1)/(1) = +2.779E+02 g/L Carbon
 (287.7 - 9.786523) (1)/(1) (12) = +2.316E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

1364

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001164

Date: 05/12/00

Time: 01:40:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.96 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	2.90	0.00
2	1.00	5.20	44.23
3	1.50	6.80	23.53
4	2.00	8.20	17.07
5	2.50	9.40	12.77
6	3.00	10.30	8.74
7	3.50	11.50	10.43
8	4.00	14.30	19.58
9	4.50	20.20	29.21
10	5.00	29.50	31.53
11	5.50	40.10	26.43
12	6.00	51.50	22.14
13	6.50	62.30	17.34
14	7.00	72.90	14.54
15	7.50	81.70	10.77
16	8.00	88.90	8.10
17	8.50	94.30	5.73
18	9.00	98.90	4.65
19	9.50	102.20	3.23
20	10.00	105.00	2.67
21	10.50	107.10	1.96
22	11.00	108.90	1.65

USER INPUT BLANK VALUE

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

(108.9 - 32.5511) (1)/(1) = +7.635E+01 g/L Carbon
 (108.9 - 32.5511) (1)/(1) (12) = +6.362E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

1365

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001165

Date: 05/12/00

Time: 01:52:13

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.90	0.00
2	1.01	1.90	52.63
3	1.50	2.80	32.14
4	2.00	3.50	20.00
5	2.50	4.10	14.63
6	3.00	4.80	14.58
7	3.50	5.20	7.69
8	4.00	6.60	21.21
9	4.50	9.00	26.67
10	5.00	14.20	36.62
11	5.50	24.70	42.51
12	6.00	39.00	36.67
13	6.50	57.20	31.82
14	7.00	77.90	26.57
15	7.50	98.50	20.91
16	8.00	118.10	16.60
17	8.50	135.60	12.91
18	9.00	150.30	9.78
19	9.50	161.80	7.11
20	10.00	170.90	5.32
21	10.50	177.60	3.77
22	11.00	182.40	2.63

USER INPUT BLANK VALUE

BLANK VALUE = 9.786523 micrograms carbon

BLANK FACTOR = 9.786523 / 10.99609 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(182.4 - 9.78822) (1)/(1) = +1.726E+02 g/L Carbon
 (182.4 - 9.78822) (1)/(1) (12) = +1.438E+01 Molar Carbon

Sample Run By:

SL HOOD

00001

1366

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T001165

Date: 05/12/00

Time: 02:04:21

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.96 ug/minute C

Analyst : SL HOOD

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.30	0.00
2	1.01	4.50	48.89
3	1.51	5.90	23.73
4	2.00	7.00	15.71
5	2.50	7.90	11.39
6	3.00	8.70	9.20
7	3.50	10.00	13.00
8	4.00	12.70	21.26
9	4.50	17.80	28.65
10	5.00	25.00	28.80
11	5.50	33.40	25.15
12	6.00	42.30	21.04
13	6.50	51.10	17.22
14	7.00	58.20	12.20
15	7.50	64.30	9.49
16	8.00	69.80	7.88
17	8.50	74.00	5.68
18	9.00	76.90	3.77
19	9.50	79.30	3.03
20	10.00	81.30	2.46
21	10.50	83.00	2.05
22	11.00	84.30	1.54

USER INPUT BLANK VALUE

BLANK VALUE = 32.54844 micrograms carbon

BLANK FACTOR = 32.54844 / 10.99609 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:

(84.3 - 32.56197) (1)/(1) = +5.17E+01 g/L Carbon
 (84.3 - 32.56197) (1)/(1) (12) = +4.31E+00 Molar Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

SL HOOD

00001

1367

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0000	0.0000
BLNK	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	13.8	36.4
33537	µg of Carbon from Baseline (C2)	9.8	32.6
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001641			
Rerun	µg of Carbon = C1-C2		
0			
Sample Prep			
N/A			
Sample #			
BLNK			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
05/15/2000			
Analysis Date			
05/12/2000			
Analysis Time	Method Detection Limit in ug/g	5	40
02:27 AM			
Sample Point	µg of Carbon	4.00E+00	3.80E+00
AZ-101 (2)			

Data Entered By:	MF	Date: 05/15/2000
Signature of Chemist:		Date: 5/15/00

BLANK WB1 REV 1.0

342100ML

1368

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (F-4)

LIQUIDS

		TIC	TOC										
Type	Sample Size in mL (SS)	1.0000	0.2000										
STD	Dilution Factor (DF)	1	1										
Work List	Final Coulometer Reading in µg (C1)	577	577.2										
33537	µg of Carbon from Baseline (C2)	9.8	32.6										
Test Code	Standard Book Number	25N12G	34N12D										
@TICTOC1	Standard Value (µg/ml)	602	3000										
Matrix	QC Actual in µg/mL = Standard Value (µg/mL) QC Found in µg/mL = (C1 - C2) * DF / SS QC Found in µg/mL for TIC = 5 if C1 < C2 QC Found in µg/mL for TOC = 40 if C1 < C2 % Recovery = QC Found / QC Actual * 100												
LIQUID													
Batch Number													
20001641													
Rerun													
0													
Sample Prep													
N/A													
Sample #													
STD													
Instrument Code	<table border="1"> <thead> <tr> <th>TIC</th> <th>TOC</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>40</td> </tr> <tr> <td>6.02E+02</td> <td>3.00E+03</td> </tr> <tr> <td>5.67E+02</td> <td>2.72E+03</td> </tr> <tr> <td>94.2</td> <td>90.8</td> </tr> </tbody> </table>			TIC	TOC	5	40	6.02E+02	3.00E+03	5.67E+02	2.72E+03	94.2	90.8
TIC	TOC												
5	40												
6.02E+02	3.00E+03												
5.67E+02	2.72E+03												
94.2	90.8												
CARB2													
Prepared By													
MF													
Chemist													
JFG													
Analyst													
SLH													
Date Complete													
05/15/2000													
Analysis Date													
05/12/2000													
Analysis Time	Method Detection Limit in µg/mL	5	40										
02:27 AM	QC Actual in µg/mL	6.02E+02	3.00E+03										
Sample Point	QC Found in µg/mL	5.67E+02	2.72E+03										
AZ-101 (2)	Percent Standard Recovery	94.2	90.8										

Data Entered By:	MF	Date: 05/15/2000
Signature of Chemist:		Date:

STANDARD.WB1 REV 1.0

342100ML

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0291	0.0291
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	167.1	54.6
33537	µg of Carbon from Baseline (C2)	9.8	32.6
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001641			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T001163			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
05/15/2000			
Analysis Date			
05/12/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
02:27 AM		5	40
Sample Point	µg of Carbon/g	5.41E+03	7.56E+02
AZ-101 (2)			

Data Entered By:

Signature of Chemist:

Date: 05/15/2000

Date:

TIC/TOC : LA-342-100 (F-4)

SOLIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	0.0291	0.0291
Work List	Final Coulometer Reading in µg (C1)	167.1	54.6
33537	Spiked Vial Data		
Test Code	Sample Size in g (SPK SS)	0.0307	0.0307
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg (C2)	464.2	353.6
SOLID	Spike Book Number	25N12G	34N12D
Batch Number	Spike Standard Value in µg/ml (SPK CONC)	602	3000
20001641	µg C in baseline (BL)	9.8	32.6
Rerun	$\text{Percent Spike Recovery} = ((C2-BL) - (C1-BL) * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100$ $\text{QC Actual in } \mu\text{g/mL} = \text{Spike Value } (\mu\text{g/mL})$ $\text{QC Found in } \mu\text{g/mL} = (\text{Percent Spike Recovery}) * (\text{QC Actual}) / 100$		
0			
Sample Prep			
N/A			
Sample #			
S00T001163			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
05/15/2000			
Analysis Date			
05/12/2000			
Analysis Time			
02:27 AM	QC Actual in µg/mL	6.02E+02	3.00E+03
Sample Point	QC Found in µg/mL	5.77E+02	2.98E+03
AZ-101 (2)	Percent Spike Recovery	95.8	99.3

Data Entered By:	MF	Date:	05/15/2000
Signature of Chemist:		Date:	

WORKBOOK PAGE: SAM5

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0487	0.0487
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	287.7	108.9
33537	µg of Carbon from Baseline (C2)	9.8	32.6
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001641			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T001164			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
05/15/2000			
Analysis Date			
05/12/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
02:27 AM		5	40
Sample Point	µg of Carbon/g	5.71E+03	1.57E+03
AZ-101 (2)			

Data Entered By:	MF	Date: 05/15/2000
Signature of Chemist:		Date:

SAMPLE.WB1 REV 1.0

342100ML

1372

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (F-4)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0375	0.0375
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	182.4	84.3
33537	µg of Carbon from Baseline (C2)	9.8	32.6
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
20001641			
Rerun			
0			
Sample Prep			
N/A			
Sample #			
S00T001165			
Instrument Code			
CARB2			
Prepared By			
MF			
Chemist			
JFG			
Analyst			
SLH			
Date Complete			
05/15/2000			
Analysis Date			
05/12/2000			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
02:27 AM		5	40
Sample Point	µg of Carbon/g	4.60E+03	1.38E+03
AZ-101 (2)			

$\mu\text{g of Carbon/g} = (C1 - C2) * DF / SS$
 $\mu\text{g of Carbon/g for TIC} = 5 \text{ if } C1 < C2$
 $\mu\text{g of Carbon/g for TOC} = 40 \text{ if } C1 < C2$

Data Entered By:	MF	Date: 05/15/2000
Signature of Chemist:		Date:

SAMPLE.WB1 REV 1.0

342100ML

1373

I:\342100\OUT\33537.WB1

05/15/2000

13:30:56

LABCORE Data Entry Template for Worklist# 33566

Analyst: _____ Instrument: CARB2 _____ Book# _____

Method: LA-342-100 Rev/Mod _____

Worklist Comment:

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	SAMPLE	S00T001160	0		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								
2	SAMPLE	S00T001161	0		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								
3	SAMPLE	S00T001162	0		@TICTOC1	SOLID	99000433	AZ-101 (2)
Analytes Requested: TIC-02 , TOC-02								

Final page for worklist # 33566

Signature _____ Date _____

Signature _____ Date _____

INS

There was insufficient sample material available
to perform this analysis. ~~See~~ 7/11/00

Data Entry Comments:

Validated 5/16/00 *James H. Harker*

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 33287

Analyst: slh

Instrument: TOC01

Book#: 34012-D

Method: LA-344-105 Rev/Mod F-3

Worklist Comment: AZ-101 (2), TOC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		TOC-01	LIQUID	1	6.00E-1	0.600	ug/mL
2 STD	0		TOC-01	LIQUID	3.00E+03	2.95E+3	98.333 % Recovery	
3 SAMPLE	S00T000779	0	TOC-01	LIQUID	N/A	3.30E+02	55.000	ug/mL
4 SPK	S00T000779	0	TOC-01	LIQUID	1.00E+02	8.35E+01	83.500 % Recovery	
5 SAMPLE	S00T000782	0	TOC-01	LIQUID	N/A	3.14E+02	55.000	ug/mL
6 SAMPLE	S00T000785	0	TOC-01	LIQUID	N/A	3.69E+02	55.000	ug/mL

Final page for worklist# 33287

Analyst Signature _____ Date _____

Mary Jones 4/20/00
Analyst Signature Date

James Lewis 4/21/00
Reviewer Signature Date

worklistrpt Version 2.1 05/15/95
04/18/00 14:26

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 33287Analyst: SCH

Instrument: TOC01

Book # TOC 34N12D @ 4/20/00Method: LA-344-105 Rev/Mod F-3

Worklist Comment: AZ-101 (2), TOC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			TOC-01	LIQUID			N/A	ug/ml
		2 STD			TOC-01	LIQUID			N/A	ug/ml
99000438	AZ-101 (2)	3 SAMPLE	S00T000779	0	TOC-01	LIQUID	N/A			ug/ml
99000438	AZ-101 (2)	4 SPK	S00T000779	0	TOC-01	LIQUID			N/A	ug/ml
99000438	AZ-101 (2)	5 SAMPLE	S00T000782	0	TOC-01	LIQUID	N/A			ug/ml
99000438	AZ-101 (2)	6 SAMPLE	S00T000785	0	TOC-01	LIQUID	N/A			ug/ml

Final page for worklist # 33287

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE

Date: 04/19/00

Time: 13:32:10

Sample Size = 1 uL

Dil Factor = 1

Blank ID # = BASE

Blank Value = N/A

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

-- Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.00	0.00
3	1.51	0.60	100.00
4	2.00	1.10	45.45
5	2.50	1.40	21.43
6	3.00	1.70	17.65
7	3.50	1.90	10.53
8	4.00	2.10	9.52
9	4.50	2.30	8.70
10	5.00	2.40	4.17
11	5.50	2.60	7.69
12	6.00	2.60	0.00
13	6.50	2.70	3.70
14	7.00	2.80	3.57

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01

ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1377 TO 1389

Sample Run By:

SL HOOD

00000

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 04/19/00

Time: 13:41:18

Sample Size = 200 uL

Dil Factor = 11

Blank ID # = BASE

Blank Value = .3998257 ug/minute C

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.10	0.00
2	1.01	3.10	96.77
3	1.51	29.40	89.46
4	2.01	44.80	34.38
5	2.51	51.20	12.50
6	3.01	53.40	4.12
7	3.51	54.60	2.20
8	4.01	55.20	1.09
9	4.50	55.50	0.54
10	5.00	55.70	0.36
11	5.50	56.00	0.54
12	6.00	56.10	0.18
13	6.50	56.20	0.18
14	7.00	56.40	0.35

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01

ug/min Carbon

SAMPLE RESULTS:

(56.4 - 2.799976) (11)/(200) =

+2.95E+00

g/L Carbon

(56.4 - 2.799976) (11)/(200) (12) =

+2.46E-01

Molar Carbon

Sample Run By:

SL HOOD

00000

SB = .200 ml 34N/19-D

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK

Date: 04/19/00

Time: 13:53:24

Sample Size = 1 uL

Dil Factor = 1

Blank ID # = BASE

Blank Value = .3998257 ug/minute C

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

-- Reading	----	Analysis Time	----	Coulometer	----	% Difference	--
1		0.51		0.10		0.00	
2		1.01		0.10		0.00	
3		1.51		0.50		80.00	
4		2.00		0.80		37.50	
5		2.50		1.10		37.27	
6		3.00		1.20		8.33	
7		3.50		1.40		14.29	
8		4.00		1.50		6.67	
9		4.50		1.60		6.25	
10		5.00		1.70		5.88	
11		5.50		1.90		10.53	
12		6.00		2.00		5.00	
13		6.50		2.10		4.76	
14		7.00		2.20		4.55	

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01 ug/min Carbon

SAMPLE RESULTS:

(2.2 - 2.799634) (1)/(1) =

< 5.00 E-3 g/L Carbon

(2.2 - 2.799634) (1)/(1) (12) =

< 4.17 E-4 Molar Carbon

Sample Run By:

SL HOOD

00000

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000779

Date: 04/19/00

Time: 14:17:11

Sample Size = 200 uL

Dil Factor = 11

Blank ID # = BASE

Blank Value = .3998257 ug/minute C

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.10	0.00
2	1.01	0.50	80.00
3	1.51	4.00	87.50
4	2.00	5.80	31.03
5	2.50	6.70	13.43
6	3.00	7.20	6.94
7	3.50	7.60	5.26
8	4.00	7.90	3.80
9	4.50	8.00	1.25
10	5.00	8.20	2.44
11	5.50	8.40	2.38
12	6.00	8.60	2.33
13	6.50	8.70	1.15
14	7.00	8.80	1.14

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01 ug/min Carbon

SAMPLE RESULTS:

(8.8 - 2.799976) (11) / (200) =

+3.3E-01 g/L Carbon

(8.8 - 2.799976) (11) / (200) (12) =

+2.8E-02 Molar Carbon

Sample Run By:

SL HOOD

00000

88 = 200 uL

1380

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T00779 SPK Date: 04/19/00 Time: 15:17:46

Sample Size = 200 uL
Dil Factor = 22
Blank ID # = BASE
Blank Value = .3998257 ug/minute C

Analyst : SL HOOD
Min Readings = 14
Max Readings = 14
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.00	0.00
2	1.01	36.40	100.00
3	1.51	180.80	79.87
4	2.00	226.00	20.00
5	2.50	248.20	8.94
6	3.00	262.10	5.30
7	3.50	270.80	3.21
8	4.00	276.60	2.10
9	4.50	280.00	1.21
10	5.00	282.40	0.85
11	5.50	283.80	0.49
12	6.00	284.90	0.39
13	6.50	285.60	0.25
14	7.00	286.20	0.21

BLANK VALUE = 2.8 micrograms carbon
BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01 ug/min Carbon

SAMPLE RESULTS:

(286.2 - 2.799561) (22)/(200) = +3.117E+01 g/L Carbon
(286.2 - 2.799561) (22)/(200) (12) = +2.598E+00 Molar Carbon

Sample Run By:

SL HOOD

00000

.400
original
mode

+ .400
spk

34N19-D

1381

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000782

Date: 04/19/00

Time: 14:28:56

Sample Size = 200 uL

Dil Factor = 11

Blank ID # = BASE

Blank Value = .3998257 ug/minute C

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

-- Reading	----	Analysis Time	----	Coulometer	----	% Difference	--
1		0.51		0.10		0.00	
2		1.00		1.50		93.33	
3		1.50		4.70		68.09	
4		2.00		5.70		17.54	
5		2.50		6.40		10.94	
6		3.00		6.90		7.25	
7		3.50		7.30		5.48	
8		4.00		7.60		3.95	
9		4.50		7.80		2.56	
10		5.00		7.90		1.27	
11		5.50		8.10		2.47	
12		6.00		8.20		1.22	
13		6.50		8.40		2.38	
14		7.00		8.50		1.18	

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01 ug/min Carbon

SAMPLE RESULTS:

(8.5 - 2.800268) (11)/(200) =

+3.1E-01 g/L Carbon

(8.5 - 2.800268) (11)/(200).(12) =

+2.6E-02 Molar Carbon

Sample Run By:

SL HOOD

00000

83 = 200 uL

1382

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000785

Date: 04/19/00

Time: 14:59:10

Sample Size = 200 uL

Dil Factor = 11

Blank ID # = BASE

Blank Value = .3998257 ug/minute C

Analyst : SL HOOD

Min Readings = 14

Max Readings = 14

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.00	0.00
2	1.00	1.70	100.00
3	1.50	5.30	67.92
4	2.00	6.50	18.46
5	2.50	7.20	9.72
6	3.00	7.80	7.69
7	3.50	8.00	2.50
8	4.00	8.40	4.76
9	4.50	8.60	2.33
10	5.00	8.80	2.27
11	5.50	9.00	2.22
12	6.00	9.20	2.17
13	6.50	9.30	1.08
14	7.00	9.50	2.11

BLANK VALUE = 2.8 micrograms carbon

BLANK FACTOR = 2.8 / 7.003052 =

+4.0E-01 ug/min Carbon

SAMPLE RESULTS:

(9.5 - 2.799658) (11)/(200) =

+3.7E-01 g/L Carbon

(9.5 - 2.799658) (11)/(200) (12) =

+3.1E-02 Molar Carbon

Sample Run By:

SL HOOD

00000

83- 200we

1383

WORKBOOK PAGE: BLANK1

TOC : LA-344-105 (F-3)

LIQUIDS

		BLNK
Type	Sample Volume in mL (SS)	0.000
BLNK	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
33287	Dilution Factor (calculated) (DF)	
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon in Blank (C1)	2.2
Matrix	µg of Carbon from Baseline (C2)	2.8
LIQUID		
Batch Number		
20001385	µg of Carbon = C1-C2	
Rerun		
0	Method Detection Limit (µg/mL) = 1 µg C * DF * DDF / VI	
Sample Prep		
N/A		
Sample #		
BLNK		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	0.00E+00
04:00 PM		
Sample Point	µg of Carbon	6.00E-01
AZ-101(2)		

Data Entered By:	MF	Date:	04/20/2000
Signature of Chemist:		Date:	4/21/00

BLANK.WB1 REV 2.0

344105ML

1384

WORKBOOK PAGE: STD2

TOC : LA-344-105 (F-3)

LIQUIDS

		STD
Type	Sample Volume in mL (SS)	0.200
STD	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
33287	Dilution Factor (calculated) (DF)	11.000
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon Found (C1)	56.4
Matrix	µg of Carbon from Baseline (C2)	2.8
LIQUID	Standard Book Number	34N12D
Batch Number	Standard Value (µg/ml)	3000
20001385		
Rerun		
0	µg of Carbon/mL = (C1-C2) * DF * DDF / VI	
Sample Prep		
N/A	Method Detection Limit (µg/mL) = 1 µg C * DF * DDF / VI	
Sample #		
STD		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E+01
04:00 PM	QC Actual in µg/mL	3.00E+03
Sample Point	QC Found in µg/mL	2.95E+03
AZ-101(2)	Percent Standard Recovery	98.3

Data Entered By:

MF

Date:

04/20/2000

Signature of Chemist:

Date:

STANDARD.WB1 REV 2.0

344105ML

1385

WORKBOOK PAGE: SAM3

TOC : LA-344-105 (F-3)

LIQUIDS

		SAMPLE
Type	Sample Volume in mL (SS)	0.200
SAMPLE	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
33287	Dilution Factor (calculated) (DF)	11.000
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon in Sample (C1)	8.8
Matrix	µg of Carbon from Baseline (C2)	2.8
LIQUID		
Batch Number		
20001385		
Rerun	µg of Carbon/mL = (C1-C2) * DF * DDF / VI	
0		
Sample Prep	Method Detection Limit = 1 µg C * DF * DDF / VI	
N/A		
Sample #		
S00T000779		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E+01
04:00 PM		
Sample Point	µg of Carbon/mL	3.30E+02
AZ-101(2)		

Data Entered By:

MF

Date: 04/20/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 2.0

344105ML

1386

TOC : LA-344-105 (F-3)

LIQUIDS

SPIKE

Type	Sample Vial Data		Spiked Vial Data	
SPK	Sample Volume in mL (SS)	0.200	Was the sample dilution used? (yes/no)	NO
Work List	H2SO4 Volume in mL (VR)	2.000	Sample Volume in mL (SPK SS)	0.400
33287	Volume Injected in mL (VI)	0.200	H2SO4 Volume in mL (SPK VR)	0.000
Test Code	µg of Carbon in Sample (C1)	8.8	Amount of Spike Std. in mL (SPK VOL)	0.400
TOC-01	µg of Carbon from Baseline (C2)	2.8	Volume Injected in mL (SPK VI)	0.200
Matrix			µg C in Sample + Spike (C3)	286.2
LIQUID			Pre-Spike Dilution Factor (PDF)	1.00
Batch Number			Spike Book Number	34N12D
20001385			Spike Value in µg/ml	3000
Rerun	Spike Correction Factor (SPK CF) = (SPK SS + SPK VOL + SPK VR) / SPK VI			
0	Sample Correction Factor (SAM CF) = (SS + VR) / (VI)			
Sample Prep	Sample Size Correction Factor (SS CF) = (SPK SS) / (SS)			
N/A				
Sample #	QC Actual in µg/mL = Spike Value (µg/mL)			
S00T000779	QC Found in µg/mL = [(C3 - C2)(SPK CF) - (C1 - C2)(SAM CF)(SS CF)/(PDF)] / (SPK VOL)			
Instrument Code	Percent Spike Recovery = (QC Found) / (QC Actual) * 100			
TOC01				
Prepared By				
MF				
Chemist				
JFG				
Analyst				
SLH				
Date Complete				
04/20/2000				
Analysis Date				
04/19/2000				
Analysis Time				
04:00 PM	QC Actual in µg/mL			3.00E+03
Sample Point	QC Found in µg/mL			2.50E+03
AZ-101(2)	Percent Spike Recovery			83.5

Data Entered By:

MF

Date: 04/20/2000

Signature of Chemist:

Date:

WORKBOOK PAGE: SAM5

TOC : LA-344-105 (F-3)

LIQUIDS

		SAMPLE
Type	Sample Volume in mL (SS)	0.200
SAMPLE	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
33287	Dilution Factor (calculated) (DF)	11.000
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon in Sample (C1)	8.5
Matrix	µg of Carbon from Baseline (C2)	2.8
LIQUID		
Batch Number		
20001385		
Rerun	µg of Carbon/mL = (C1-C2) * DF * DDF / VI	
0		
Sample Prep	Method Detection Limit = 1 µg C * DF * DDF / VI	
N/A		
Sample #		
S00T000782		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E+01
04:00 PM		
Sample Point	µg of Carbon/mL	3.14E+02
AZ-101(2)		

Data Entered By:	MF	Date:	04/20/2000
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 2.0

344105ML

1388

WORKBOOK PAGE: SAM6

TOC : LA-344-105 (F-3)

LIQUIDS

LIQUIDS		SAMPLE
Type	Sample Volume in mL (SS)	0.200
SAMPLE	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
33287	Dilution Factor (calculated) (DF)	11.000
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon in Sample (C1)	9.5
Matrix	µg of Carbon from Baseline (C2)	2.8
LIQUID		
Batch Number		
20001385		
Rerun	µg of Carbon/mL = (C1-C2) * DF * DDF / VI	
0		
Sample Prep	Method Detection Limit = 1 µg C * DF * DDF / VI	
N/A		
Sample #		
S00T000785		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
SLH		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E+01
04:00 PM		
Sample Point	µg of Carbon/mL	3.69E+02
AZ-101(2)		

Data Entered By:

MF

Date:

04/20/2000

Signature of Chemist:

Date:

SAMPLE WB1 REV 2.0

344105ML

1389

HNF-1701 REV. 0

LABCORE Completed Worklist Report for Worklist# 34086

Analyst: rwk

Instrument: TOC01

Book#: 34N12-D

Method: LA-344-105 Rev/Mod F-4

Worklist Comment: AZ-101 TOC lad

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		TOC-01	SOLID	1	9.00E-1	0.900	ug/g
2 STD	0		TOC-01	SOLID	3.00E+03	3.10E+3	103.333	% Recovery
3 SAMPLE	S00T000806	0 W	TOC-01	SOLID	N/A	7.53E+03	566.000	ug/g
4 SPK	S00T000806	0 W	TOC-01	SOLID	1.00E+02	9.64E+01	96.400	% Recovery
5 SAMPLE	S00T000807	0 W	TOC-01	SOLID	N/A	7.28E+03	543.000	ug/g
6 SAMPLE	S00T000808	0 W	TOC-01	SOLID	N/A	4.89E+03	480.000	ug/g
7 SAMPLE	S00T000812	0 W	TOC-01	SOLID	N/A	3.03E+03	523.000	ug/g
8 SAMPLE	S00T000813	0 W	TOC-01	SOLID	N/A	3.11E+03	519.000	ug/g
9 SAMPLE	S00T000814	0 W	TOC-01	SOLID	N/A	3.13E+03	411.000	ug/g

Final page for worklist# 34086

Analyst Signature _____ Date _____

Mary Frank 7/12/00
Analyst Signature Date

James Rohlf 7/12/00
Reviewer Signature Date

worklistrpt Version 2.1 05/15/95
07/11/00 10:31

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 34086

Analyst: NA Instrument: TOC01 Book # 34012-0Method: LA-344-105 Rev/Mod F-4

Worklist Comment: AZ-101 TOC lad

SUPER RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			TOC-01	SOLID			N/A	ug/g
		2 STD			TOC-01	SOLID			N/A	ug/g
99000433	AZ-101 (2)	3 SAMPLE	S00T000806	0 W	TOC-01	SOLID	N/A			ug/g
99000433	AZ-101 (2)	4 SPK	S00T000806	0 W	TOC-01	SOLID			N/A	ug/g
99000433	AZ-101 (2)	5 SAMPLE	S00T000807	0 W	TOC-01	SOLID	N/A			ug/g
99000433	AZ-101 (2)	6 SAMPLE	S00T000808	0 W	TOC-01	SOLID	N/A			ug/g
99000438	AZ-101 (2)	7 SAMPLE	S00T000812	0 W	TOC-01	SOLID	N/A			ug/g
99000438	AZ-101 (2)	8 SAMPLE	S00T000813	0 W	TOC-01	SOLID	N/A			ug/g
99000438	AZ-101 (2)	9 SAMPLE	S00T000814	0 W	TOC-01	SOLID	N/A			ug/g

Final page for worklist # 34086

Not King 7/11/00
Analyst Signature Date

Mary Frank 7/12/00
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0
 <<< BLANK ANALYSIS >>>

Sample: BASE

Date: 07/06/00

Time: 20:34:09

Sample Size = 200 uL
 Dil Factor = 1
 Blank ID # = BASE
 Blank Value = N/A

Analyst : RW KING
 Min Readings = 14
 Max Readings = 14
 % Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.10	100.00
3	1.51	0.80	87.50
4	2.01	1.20	33.33
5	2.51	1.40	14.29
6	3.01	1.50	6.67
7	3.51	1.60	6.25
8	4.01	1.60	0.00
9	4.50	1.70	5.88
10	5.00	1.70	0.00
11	5.50	1.80	5.56
12	6.00	1.80	0.00
13	6.50	1.80	0.00
14	7.00	1.90	5.26

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1392 TO 1412

Sample Run By:

RW KING

00000

1392

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD34N12D

Date: 07/06/00

Time: 20:57:07

Sample Size = 200 uL

Dil Factor = 11

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.10	0.00
2	1.00	17.10	99.42
3	1.50	44.50	61.57
4	2.00	53.80	17.29
5	2.50	56.20	4.27
6	3.00	57.10	1.58
7	3.50	57.40	0.52
8	4.00	57.60	0.35
9	4.50	57.70	0.17
10	5.00	57.80	0.17
11	5.50	58.00	0.34
12	6.00	58.00	0.00
13	6.50	58.20	0.34
14	7.00	58.30	0.17

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(58.3 - 1.9) (11) / (200) =

+3.10E+00 g/L Carbon

(58.3 - 1.9) (11) / (200) (12) =

+2.59E-01 Molar Carbon

Sample Run By:

RW KING

00000

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: PREP BLK

Date: 07/06/00

Time: 21:27:58

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.00	0.00
2	1.01	0.50	100.00
3	1.50	0.90	44.44
4	2.00	1.10	18.18
5	2.50	1.30	15.38
6	3.00	1.40	7.14
7	3.50	1.60	12.50
8	4.00	1.70	5.88
9	4.50	2.00	15.00
10	5.00	2.10	4.76
11	5.50	2.30	8.70
12	6.00	2.50	8.00
13	6.50	2.70	7.41
14	7.00	2.80	3.57

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(2.8 - 1.89957) (1.1)/(200) =

< 5.00 E-3 g/L Carbon

(2.8 - 1.89957) (1.1)/(200) (12) =

< 4.17 E-4 Molar Carbon

Sample Run By:

RW KING

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

HNF-1701 REV.0

Sample: S00T000806

Date: 07/06/00

Time: 22:00:16

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==	Analysis Time ==	Coulometer ==	% Difference ==
1	0.51	0.50	0.00
2	1.01	9.30	94.62
3	1.51	11.70	20.51
4	2.00	12.60	7.14
5	2.50	13.10	3.82
6	3.01	13.50	2.96
7	3.51	13.70	1.46
8	4.01	13.90	1.44
9	4.50	14.20	2.11
10	5.00	14.40	1.39
11	5.50	14.60	1.37
12	6.00	14.90	2.01
13	6.50	15.00	0.67
14	7.00	15.20	1.32

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(15.2 - 1.899801) (1.1) / (200) =

+7.32E-02 g/L Carbon

(15.2 - 1.899801) (1.1) / (200) (12) =

+6.10E-03 Molar Carbon

Sample Run By:

RW KING

00000

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000806SPK

Date: 07/06/00

Time: 22:12:39

Sample Size = 200 uL

Dil Factor = 2.5

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	6.00	0.00
2	1.01	167.10	96.41
3	1.51	218.20	23.42
4	2.01	231.00	5.54
5	2.51	234.90	1.66
6	3.01	236.30	0.59
7	3.51	236.90	0.25
8	4.01	237.40	0.21
9	4.51	237.80	0.17
10	5.01	238.00	0.08
11	5.51	238.30	0.13
12	6.01	238.60	0.13
13	6.51	238.90	0.13
14	7.00	239.10	0.08

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 = +2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(239.1 - 1.900298) (2.5)/(200) = +2.965E+00 g/L Carbon
 (239.1 - 1.900298) (2.5)/(200) (12) = +2.471E-01 Molar Carbon

Sample Run By:

RW KING

00000

HNF-1701 REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000807

Date: 07/06/00

Time: 22:20:37

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==	Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.10	0.00
2	1.01	9.90	88.89
3	1.50	11.70	15.38
4	2.00	12.60	7.14
5	2.50	13.00	3.08
6	3.00	13.40	2.99
7	3.50	13.70	2.19
8	4.00	13.90	1.44
9	4.50	14.10	1.42
10	5.00	14.40	2.08
11	5.50	14.60	1.37
12	6.00	14.90	2.01
13	6.50	15.10	1.32
14	7.00	15.30	1.31

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01

ug/min Carbon

SAMPLE RESULTS:

(15.3 - 1.899536) (1.1)/(200) =

+7.37E-02

g/L Carbon

(15.3 - 1.899536) (1.1)/(200) (12) =

+6.14E-03

Molar Carbon

Sample Run By:

RW KING

00000

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000808

Date: 07/06/00

Time: 22:31:36

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.50	0.00
2	1.01	6.60	92.42
3	1.50	8.50	22.35
4	2.00	9.20	7.61
5	2.50	9.80	6.12
6	3.00	10.10	2.97
7	3.50	10.40	2.88
8	4.00	10.60	1.89
9	4.50	10.80	1.85
10	5.00	11.10	2.70
11	5.50	11.40	2.63
12	6.00	11.60	1.72
13	6.50	11.90	2.52
14	7.00	12.10	1.65

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(12.1 - 1.899801) (1.1) / (200) =

+5.61E-02 g/L Carbon

(12.1 - 1.899801) (1.1) / (200) (12) =

+4.68E-03 Molar Carbon

Sample Run By:

RW KING

00000

HNF-1701 REV.0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S00T000812

Date: 07/06/00

Time: 22:41:39

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==	Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	3.30	90.91
3	1.50	4.30	23.26
4	2.00	4.90	12.24
5	2.50	5.20	5.77
6	3.00	5.50	5.45
7	3.50	5.80	5.17
8	4.01	6.10	4.92
9	4.50	6.40	4.69
10	5.00	6.60	3.03
11	5.50	6.90	4.35
12	6.00	7.10	2.82
13	6.50	7.30	2.74
14	7.00	7.70	5.19

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(7.7 - 1.899801) (1.1) / (200) =

+3.2E-02 g/L Carbon

(7.7 - 1.899801) (1.1) / (200) (12) =

+2.7E-03 Molar Carbon

Sample Run By:

RW KING

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT HNF-1701 REV.0
TICTOC REV 2.0

Sample: S00T000813

Date: 07/06/00

Time: 22:50:00

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference
1	0.51	0.30	0.00
2	1.01	3.40	91.18
3	1.51	4.30	20.93
4	2.00	4.90	12.24
5	2.51	5.30	7.55
6	3.01	5.70	7.02
7	3.51	6.00	5.00
8	4.01	6.30	4.76
9	4.50	6.50	3.08
10	5.00	6.80	4.41
11	5.50	7.00	2.86
12	6.00	7.30	4.11
13	6.50	7.60	3.95
14	7.00	7.90	3.80

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(7.9 - 1.899801) (1.1) / (200) =

+3.3E-02 g/L Carbon

(7.9 - 1.899801) (1.1) / (200) (12) =

+2.8E-03 Molar Carbon

Sample Run By:

RW KING

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

HNF-1701 REV. 0

Sample: S00T000814

Date: 07/06/00

Time: 23:01:47

Sample Size = 200 uL

Dil Factor = 1.1

Blank ID # = BASE

Blank Value = .2712819 ug/minute C

Analyst : RW KING

Min Readings = 14

Max Readings = 14

% Difference = 10

== Reading ==	Analysis Time ==	Coulometer ==	% Difference ==
1	0.51	0.30	0.00
2	1.01	4.20	92.86
3	1.51	5.70	26.32
4	2.00	6.30	9.52
5	2.50	6.70	5.97
6	3.00	7.00	4.29
7	3.50	7.40	5.41
8	4.00	7.70	3.90
9	4.50	8.00	3.75
10	5.00	8.30	3.61
11	5.50	8.60	3.49
12	6.00	8.80	2.27
13	6.50	9.20	4.35
14	7.00	9.50	3.16

BLANK VALUE = 1.9 micrograms carbon

BLANK FACTOR = 1.9 / 7.003784 =

+2.7E-01 ug/min Carbon

SAMPLE RESULTS:

(9.5 - 1.899271) (1.1) / (200) =

+4.2E-02 g/L Carbon

(9.5 - 1.899271) (1.1) / (200) (12) =

+3.5E-03 Molar Carbon

Sample Run By:

RW KING

00000

WORKBOOK PAGE: BLANK1

TOC : LA-344-105 (F-4)

SOLIDS

BLNK-PREP

Type	Sample Volume in mL (SS)	2.000
BLNK-PREP	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	1
TOC-01	µg of Carbon in Blank (C1)	2.8
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219	µg of Carbon = C1-C2	
Rerun		
0	Method Detection Limit (µg/g) = $1 \mu\text{g C} * \text{DF} * 1000 / (\text{VI} * \text{D g/L})$	
Sample Prep		
N/A		
Sample #		
BLNK-PREP		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	5.50E+03
11:22 PM		
Sample Point	µg of Carbon	9.00E-01
AZ-101		

Data Entered By:

MF

Date:

07/12/2000

Signature of Chemist:

NA

Date:

WORKBOOK PAGE: STD2

TOC : LA-344-105 (F-4)

LIQUIDS

		STD
Type	Sample Volume in mL (SS)	0.200
STD	H2SO4 Volume in mL (VR)	2.000
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	11.000
Test Code	Digest Dilution Factor (DDF)	1
TOC-01	µg of Carbon Found (C1)	58.3
Matrix	µg of Carbon from Baseline (C2)	1.9
LIQUID	Standard Book Number	34N12D
Batch Number	Standard Value (µg/ml)	3000
20002219		
Rerun		
0	µg of Carbon/mL = (C1-C2) * DF * DDF / VI	
Sample Prep		
N/A	Method Detection Limit (µg/mL) = 1 µg C * DF * DDF / VI	
Sample #		
STD		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in µg/mL	5.50E+01
11:22 PM	QC Actual in µg/mL	3.00E+03
Sample Point	QC Found in µg/mL	3.10E+03
AZ-101	Percent Standard Recovery	103.4

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:		Date:	

STANDARD.WB1 REV 2.0

344105ML

1403

WORKBOOK PAGE: SAM3

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	9.71
TOC-01	µg of Carbon in Sample (C1)	15.2
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000806		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	5.66E+02
11:22 PM		
Sample Point	µg of Carbon/g	7.53E+03
AZ-101		

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 2.0

344105ML

1404

WORKBOOK PAGE: SPIKE4

TOC : LA-344-105 (F-4)

SOLIDS

SPIKE

Type	Sample Vial Data	Spiked Vial Data
SPK	Sample Volume in mL (SS) 2.000	Was the sample dilution used? (yes/no) NO
Work List	H2SO4 Volume in mL (VR) 0.200	Sample Volume in mL (SPK SS) 0.400
34086	Volume Injected in mL (VI) 0.200	H2SO4 Volume in mL (SPK VR) 0.200
Test Code	µg of Carbon in Sample (C1) 15.2	Amount of Spike Std. in mL (SPK VOL) 0.400
TOC-01	µg of Carbon from Baseline (C2) 1.9	Volume Injected in mL (SPK VI) 0.200
Matrix		µg C in Sample + Spike (C3) 239.1
SOLID		Pre-Spike Dilution Factor (PDF) 1.00
Batch Number		Spike Book Number 34N12D
20002219		Spike Value in µg/ml 3000
Rerun		
0	Spike Correction Factor (SPK CF) = (SPK SS + SPK VOL + SPK VR) / SPK VI	
Sample Prep	Sample Correction Factor (SAM CF) = (SS + VR) / (VI)	
H2ODIGHC	Sample Size Correction Factor (SS CF) = (SPK SS) / (SS)	
Sample #	QC Actual in µg/mL = Spike Value (µg/mL)	
S00T000806	QC Found in µg/mL = [(C3 - C2)(SPK CF) - (C1-C2)(SAM CF)(SS CF)/(PDF)] / (SPK VOL)	
Instrument Code	Percent Spike Recovery = (QC Found) / (QC Actual) * 100	
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time		
11:22 PM	QC Actual in µg/mL	3.00E+03
Sample Point	QC Found in µg/mL	2.89E+03
AZ-101	Percent Spike Recovery	96.4

Data Entered By:	MF	Date: 07/12/2000
Signature of Chemist:		Date:

SPIKE.WB1 REV 2.0

344105ML

1405

WORKBOOK PAGE: SAM5

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	10.12
TOC-01	µg of Carbon in Sample (C1)	15.3
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000807		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	5.43E+02
11:22 PM		
Sample Point	µg of Carbon/g	7.28E+03
AZ-101		

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:	<i>NA</i>	Date:	

SAMPLE WB1 REV 2.0

344105ML

1406

WORKBOOK PAGE: SAM6

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	11.47
TOC-01	µg of Carbon in Sample (C1)	12.1
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000808		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	4.80E+02
11:22 PM		
Sample Point	µg of Carbon/g	4.89E+03
AZ-101		

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 2.0

344105ML

1407

WORKBOOK PAGE: SAM7

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	10.52
TOC-01	µg of Carbon in Sample (C1)	7.7
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000812		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	5.23E+02
11:22 PM		
Sample Point	µg of Carbon/g	3.03E+03
AZ-101		

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 2.0

344105ML

1408

WORKBOOK PAGE: SAM8

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	10.6
TOC-01	µg of Carbon in Sample (C1)	7.9
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000813		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	5.19E+02
11:22 PM		
Sample Point	µg of Carbon/g	3.11E+03
AZ-101		

Data Entered By:	MF	Date:	07/12/2000
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 2.0

344105ML

1409

WORKBOOK PAGE: SAM9

TOC : LA-344-105 (F-4)

SOLIDS

		SAMPLE
Type	Sample Volume in mL (SS)	2.000
SAMPLE	H2SO4 Volume in mL (VR)	0.200
Work List	Volume Injected in mL (VI)	0.200
34086	Dilution Factor (calculated) (DF)	1.100
Test Code	Digest grams of Solids / L (D g/L)	13.37
TOC-01	µg of Carbon in Sample (C1)	9.5
Matrix	µg of Carbon from Baseline (C2)	1.9
SOLID		
Batch Number		
20002219		
Rerun	µg of Carbon/g = (C1-C2) * DF * 1000 / (VI * D g/L)	
0		
Sample Prep	Method Detection Limit (µg/g) = 1 µg C * DF * 1000 / (VI * D g/L)	
H2ODIGHC		
Sample #		
S00T000814		
Instrument Code		
TOC01		
Prepared By		
MF		
Chemist		
JFG		
Analyst		
RWK		
Date Complete		
07/12/2000		
Analysis Date		
07/11/2000		
Analysis Time	Method Detection Limit in ug/g	4.11E+02
11:22 PM		
Sample Point	µg of Carbon/g	3.13E+03
AZ-101		

Data Entered By:

MF

Date:

07/12/2000

Signature of Chemist:

Date:

SAMPLE.WB1 REV 2.0

344105ML

1410

HNF-1701 REV. 0

RADIOCHEMICAL ANALYSIS

HNF-1701 REV. 0

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LABCORE Completed Worklist Report for Worklist# 31886

Analyst: ak1 Instrument: LSC02 Book#: _____

Method: LA-218-114 Rev/Mod _____

Worklist Comment: AZ101 FOR @H3-01, RLC

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0H3-01	H3-01	LIQUID	2.56E-03	2.55E-3	99.609 % Recovery	
1 STD	0	0H3-01	H3-01E	LIQUID	1	5.80E-01	0.580 % Ct. Error	
2 BLNK	0	0H3-01	H3-01	LIQUID	1	<3.32E-6		uCi/mL
2 BLNK	0	0H3-01	H3-01E	LIQUID	1	6.14E+00	6.140	uCi/mL
3 SAMPLE	899T001892	0	0H3-01	H3-01	N/A	< 3.30E-06	3.30e-006	uCi/mL
3 SAMPLE	899T001892	0	0H3-01	H3-01E	N/A	6.48E+00	1.00e-004	% Ct. Error
4 DUP	899T001892	0	0H3-01	H3-01	<3.30E-6	<3.29E-6		RPD
4 DUP	899T001892	0	0H3-01	H3-01E	1	6.18E+00	6.180	% Ct. Error

Final page for worklist# 31886

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

9/2/99
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 31886

Analyst: AVL Instrument: LSC00 6600 Book# 57657

Method: LA-218-114 Rev/Mod B5

Worklist Comment: AZ101 FOR @H3-01, RLC

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@H3-01	LIQUID		
2 BLNK			@H3-01	LIQUID		
3 SAMPLE	S99T001892 0		@H3-01	LIQUID	99000438	AZ-101 (2)
	Analytes Requested: H3-01			, H3-01E		
4 DUP	S99T001892 0		@H3-01	LIQUID		

Final page for worklist # 31886

Alita Hinson 12/8/99
Signature Date

Shirley Gibson 12/9/99
Signature Date
MCB 12/9/99

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

H3 : LA-218-114 (B-3), LA-218-115(B-0) TRITIUM LIQUIDS

		STANDARD
Type	Disintegrations per minute from Counter (dpm)	5665.75
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
31886	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.36
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4126
LIQUID	% Counting Error	0.58
Batch Number	Detection Limit (Ld)	7.34
99004375	Critical Level (Lc)	1.49
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	2.55E+00
0	Standard Book No.	57B57
Sample Prep	Standard Value in $\mu\text{Ci/mL}$	2.5623E-03
N/A		
Sample #	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
WL31886	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Instrument Code	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WC16085	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Prepared By	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS}) (2220000 \text{ dpm}/\mu\text{Ci})]$	
SZC		
Chemist		
JFR		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	2.55E+00
AKL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	2.55E-03
12/09/99	Detection Limit in $\mu\text{Ci/mL}$	3.31E-06
Analysis Date	% Counting Error	0.58
12/08/99		
Analysis Time		
03:10 PM		
Sample Point		
AZ-101 (2)		

Analyst:	AKL	Date:	12/09/99
Signature of Chemist:	JFR	Date:	9 Dec 99

STANDARD.WB1 REV 2.0

21811NML

1415

WORKBOOK PAGE: BLANK2

H3 : LA-218-114 (B-3), LA-218-115(B-0) TRITIUM LIQUIDS/ SOLIDS

BLANK

Type	Disintegrations per minute from Counter (dpm)	2.1
BLNK	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
31886	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.36
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4109
LIQUID	% Counting Error	6.14
Batch Number	Detection Limit (Ld)	7.37
99004375	Critical Level (Lc)	1.49
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	< 3.32E-03
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WL31886	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
SZC		
Chemist		
JFR		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	< 3.32E-03
AKL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	< 3.32E-06
12/09/99	Detection Limit in $\mu\text{Ci/mL}$	3.32E-06
Analysis Date	% Counting Error	6.14
12/08/99		
Analysis Time		
03:10 PM		
Sample Point		
AZ-101 (2)		

Analyst:	AKL	Date:	12/09/99
Signature of Chemist:	<i>JFR</i>	Date:	9 Dec 99

BLANK.WB1 REV 2.0

21811NML

1416

-3.29

H3 : LA-218-114 (B-3), LA-218-115(B-0) TRITIUM LIQUIDS/ SOLIDS

SAMPLE

Type	Disintegrations per minute from Counter (dpm)	-3.29
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
31886	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.36
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.413
LIQUID	% Counting Error	6.48
Batch Number	Detection Limit (Ld)	7.33
99004375	Critical Level (Lc)	1.49
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	< 3.30E-03
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $(2.72 / \text{BKG Time}) + (2 * Lc) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
S99T001892	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
SZC		
Chemist		
JFR		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	< 3.30E-03
AKL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	< 3.30E-06
12/09/99	Detection Limit in $\mu\text{Ci/mL}$	3.30E-06
Analysis Date	% Counting Error	6.48
12/08/99		
Analysis Time		
03:10 PM		
Sample Point		
AZ-101 (2)		

Analyst:	AKL	Date:	12/09/99
Signature of Chemist:	JFR	Date:	9 Dec 99

SAMPLE.WB1 REV 2.0

21811NML

1417

H3 : LA-218-114 (B-8), LA-218-115(B-0) TRITIUM LIQUIDS/ SOLIDS

DUPLICATE

Type	Disintegrations per minute from Counter	(dpm)	1
DUP	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	1
31886	Digest Dilution Factor	(DDF)	1
Test Code	Background Count Rate in Counts per Minute	(BKG cpm)	20.36
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.4143
LIQUID	% Counting Error		6.18
Batch Number	Detection Limit	(Ld)	7.31
99004375	Critical Level	(Lc)	1.49
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	<	3.29E-03
0			
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$		
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * Lc)) / \text{EFF}$		
Sample #	H3 $\mu\text{Ci/L}$	= $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
S99T001892	H3 $\mu\text{Ci/mL}$	= $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$		
WC16085			
Prepared By	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).		
SZC			
Chemist			
JFR			
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	<	3.29E-03
AKL			
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	<	3.29E-06
12/09/99	Detection Limit in $\mu\text{Ci/mL}$		3.29E-06
Analysis Date	% Counting Error		6.18
12/08/99			
Analysis Time			
03:10 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date:	12/09/99
Signature of Chemist:	JFR	Date:	9 Dec 99

SAMPLE.WB1 REV 2.0

21811NML

1418

LABCORE Completed Worklist Report for Worklist# 33253

Analyst: gll

Instrument: LSC02

Book#: _____

Method: LA-218-114 Rev/Mod _____

Worklist Comment: AZ-101 (2), @H3-01 skm

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0			H3-01	SOLID	2.41E-03	2.27E-3	94.191 % Recovery	
1 STD	0			H3-01E	SOLID	1	6.10E-01	0.610 % Ct. Error	
2 BLNK-PREP	0			H3-01	SOLID	1	6.72E-3	0.007 uCi/g	
2 BLNK-PREP	0			H3-01E	SOLID	1	5.97E+00	5.970 uCi/g	
3 SAMPLE	S00T000806	0	W	H3-01	SOLID	N/A	1.47E-02	3.59E-003 uCi/g	
3 SAMPLE	S00T000806	0	W	H3-01E	SOLID	N/A	5.21E+00	1.00E-004 % Ct. Error	
4 SPK	S00T000806	0	W	H3-01	SOLID	2.41E-03	2.26E-03	93.776 % Recovery	
5 SAMPLE	S00T000807	0	W	H3-01	SOLID	N/A	1.59E-02	3.54E-003 uCi/g	
5 SAMPLE	S00T000807	0	W	H3-01E	SOLID	N/A	5.14E+00	1.00E-004 % Ct. Error	
6 SAMPLE	S00T000808	0	W	H3-01	SOLID	N/A	1.30E-02	3.11E-003 uCi/g	
6 SAMPLE	S00T000808	0	W	H3-01E	SOLID	N/A	5.22E+00	1.00E-004 % Ct. Error	

Final page for worklist# 33253

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33253

Analyst: gll Instrument: LSC00 6000 Book# 61857
Method: LA-218-114 Rev/Mod B-6
Worklist Comment: AZ-101 (2), @H3-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@H3-01	SOLID		
2	BLNK-PREP				@H3-01	SOLID		
3	SAMPLE	S00T000806 0 W			@H3-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
4	SPK	S00T000806 0 W			@H3-01	SOLID		
5	SAMPLE	S00T000807 0 W			@H3-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
6	SAMPLE	S00T000808 0 W			@H3-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		

Final page for worklist # 33253

gll 4-19-00
Signature Date

Sybil Z. Cochran 4/20/00
Signature Date
Heathlight 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS

		STANDARD
Type	Disintegrations per minute from Counter (dpm)	5040.01
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33253	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.14
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4214
LIQUID	% Counting Error	0.61
Batch Number	Detection Limit (Ld)	7.15
20001355	Critical Level (Lc)	1.48
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	2.27E+00
0	Standard Book No.	61B57
Sample Prep	Standard Value in $\mu\text{Ci/mL}$	2.4111E-03
N/A		
Sample #	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
WL33253	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Instrument Code	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WC16085	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Prepared By	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS}) (2220000 \text{ dpm}/\mu\text{Ci})]$	
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	2.27E+00
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	2.27E-03
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	3.22E-06
Analysis Date	% Counting Error	0.61
04/19/2000		
Analysis Time		
10:15 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 4/2/00

STANDARD.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: BLANK2

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

BLANK

Type	Disintegrations per minute from Counter (dpm)	13.16
BLNK-PREP	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33253	Digest Grams of Solids / Liter (D g/L)	9.71
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.14
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4221
SOLID	% Counting Error	5.97
Batch Number	Detection Limit (Ld)	7.14
20001355	Critical Level (Lc)	1.48
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	6.72E-03
0		
Sample Prep	Critical Level (Lc) = $2.33 \cdot \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 \cdot \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/g}$ = $(\text{dpm} \cdot (1000\text{mL/L}) \cdot \text{DF}) / (\text{SS} \cdot (\text{D g/L}) \cdot (2220000\text{dpm}/\mu\text{Ci}))$	
WL33253		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	6.72E-03
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.64E-03
Analysis Date	% Counting Error	5.97
04/19/2000		
Analysis Time		
10:15 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 11/21/00

BLANK.WB1 REV 2.0

21811NML

1422

WORKBOOK PAGE: SAM3

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	28.72
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33253	Digest Grams of Solids / Liter (D g/L)	9.71
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.14
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4284
SOLID	% Counting Error	5.21
Batch Number	Detection Limit (Ld)	7.03
20001355	Critical Level (Lc)	1.48
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.47E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	$\text{H3 } \mu\text{Ci/g} = (\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000806		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date complete	Tritium Concentration in $\mu\text{Ci/g}$	1.47E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.59E-03
Analysis Date	% Counting Error	5.21
04/19/2000		
Analysis Time		
10:15 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 4/14/00

SAMPLE.WB1 REV 2.0

21811NML

1423

WORKBOOK PAGE: SPIKE4

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SPIKE
Type	dpm of Sample from Counter (dpm1)	28.72
SPK	dpm of Sample + Spike from Counter (dpm2)	2524.18
Work List	Volume of Sample in Distillation Vial in mL (Svol)	1.5
33253	Volume of Spike in Distillation Vial in mL (SPK vol)	1.5
Test Code	Volume Transferred to Scintillation Vial in mL (TR vol)	1
@H3-01	Spike Book Number (Spk BN)	61B57
Matrix	Spike Value in $\mu\text{Ci/mL}$ (SPK val)	2.4111E-03
SOLID	Background Count Rate in cpm (BKG cpm)	20.14
Batch Number	Background Count Time in Minutes (BKG Time)	50
20001355	Instrument Fractional Efficiency of Sample (EFF)	0.4284
Rerun	Detection Limit (Ld)	7.03
0	Critical Level (Lc)	1.48
Sample Prep	H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam)	1.29E-05
H2ODIGHC	H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s)	1.14E-03
Sample #	Vol. Ratio Sample Vol. to Total Vol. (VRsam)	5.00E-01
S00T000806	Vol. Ratio Spike Vol. to Total Vol. (VRspike)	5.00E-01
Instrument Code	Spk val = value taken from RCTABLE and then decayed using a $\frac{1}{2}$ life of 29.1 years Detection Limit (Ld) = $((2.72 / \text{BKG time}) + (2 * \text{Lc})) / \text{EFF}$ Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG time)}$ H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam) = $\text{dpm1} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s) = $\text{dpm2} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ Volume Ratio of Sample Volume to Total Volume (VRsam) = $\text{Svol} / (\text{Svol} + \text{SPK vol})$ Volume Ratio of Spike Volume to Total Volume (VRspike) = $\text{SPK vol} / (\text{Svol} + \text{SPK vol})$ QC Actual in $\mu\text{Ci/mL}$ = SPK val QC Found in $\mu\text{Ci/mL}$ = $((\text{Rs+s}) - (\text{Rsam} * \text{VRsam})) / (\text{VRspike})$ Percent Spike Recovery = $\text{QC Found} / \text{QC Actual} * 100$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time		
10:15 AM	QC Actual in $\mu\text{Ci/mL}$	= 2.41E-03
Sample Point	QC Found in $\mu\text{Ci/mL}$	= 2.26E-03
AZ-101	Percent Spike Recovery	= 93.8%

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SA	Date: 4/21/00

SPIKE.WB1 REV 2.0

21811NML

1424

WORKBOOK PAGE: SAM5

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	32.48
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33253	Digest Grams of Solids / Liter (D g/L)	10.12
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.14
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.417
SOLID	% Counting Error	5.14
Batch Number	Detection Limit (Ld)	7.22
20001355	Critical Level (Lc)	1.48
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.59E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	$\text{H3 } \mu\text{Ci/g} = (\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000807		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	1.59E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.54E-03
Analysis Date	% Counting Error	5.14
04/19/2000		
Analysis Time		
10:15 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 4/21/00

SAMPLE.WB1 REV 2.0

21811NML

1425

WORKBOOK PAGE: SAM6

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	30.01
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33253	Digest Grams of Solids / Liter (D g/L)	11.47
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	20.14
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4183
SOLID	% Counting Error	5.22
Batch Number	Detection Limit (Ld)	7.20
20001355	Critical Level (Lc)	1.48
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.30E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	$\text{H3 } \mu\text{Ci/g} = (\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000808		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	1.30E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.11E-03
Analysis Date	% Counting Error	5.22
04/19/2000		
Analysis Time		
10:15 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 7/21/00

SAMPLE.WB1 REV 2.0

21811NML

1426

LABCORE Completed Worklist Report for Worklist# 33254

Analyst: gll

Instrument: LSC02

Book#: _____

Method: LA-218-114 Rev/Mod _____

Worklist Comment: AZ-101 (2), @H3-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	H3-01	H3-01	SOLID	2.41E-03	2.29E-3	95.021 % Recovery
1 STD		0	H3-01	H3-01E	SOLID	1	6.10E-01	0.610 % Ct. Error
2 BLNK-PREP		0	H3-01	H3-01	SOLID	1	7.30E-3	0.007 uCi/g
2 BLNK-PREP		0	H3-01	H3-01E	SOLID	1	5.64E+00	5.640 uCi/g
3 SAMPLE	S00T000812	0 W	H3-01	H3-01	SOLID	N/A	1.68E-02	3.55E-003 uCi/g
3 SAMPLE	S00T000812	0 W	H3-01	H3-01E	SOLID	N/A	4.92E+00	1.00E-004 % Ct. Error
4 SPK	S00T000812	0 W	H3-01	H3-01	SOLID	2.41E-03	2.28E-03	94.606 % Recovery
5 SAMPLE	S00T000813	0 W	H3-01	H3-01	SOLID	N/A	1.42E-02	3.50E-003 uCi/g
5 SAMPLE	S00T000813	0 W	H3-01	H3-01E	SOLID	N/A	5.07E+00	1.00E-004 % Ct. Error
6 SAMPLE	S00T000814	0 W	H3-01	H3-01	SOLID	N/A	1.25E-02	2.77E-003 uCi/g
6 SAMPLE	S00T000814	0 W	H3-01	H3-01E	SOLID	N/A	4.96E+00	1.00E-004 % Ct. Error

Final page for worklist# 33254

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

2/1/00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33254

Analyst: gyl Instrument: LSC00 6000 Book# 61B57

Method: LA-218-114 Rev/Mod B-6

Worklist Comment: AZ-101 (2), @H3-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@H3-01	SOLID		
2	BLNK-PREP				@H3-01	SOLID		
3	SAMPLE	S00T000812	0	W	@H3-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
4	SPK	S00T000812	0	W	@H3-01	SOLID		
5	SAMPLE	S00T000813	0	W	@H3-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
6	SAMPLE	S00T000814	0	W	@H3-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		

Final page for worklist # 33254

gyl 4-19-00
Signature Date

Sylvia Z Chon 4/21/00
Signature Date
Newright 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS

		STANDARD
Type	Disintegrations per minute from Counter (dpm)	5074.86
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33254	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	21.94
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4176
LIQUID	% Counting Error	0.61
Batch Number	Detection Limit (Ld)	7.52
20001356	Critical Level (Lc)	1.54
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	2.29E+00
0	Standard Book No.	61B57
Sample Prep	Standard Value in $\mu\text{Ci/mL}$	2.4107E-03
N/A		
Sample #	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
WL33254	Detection Limit (Ld) = $(2.72 / \text{BKG Time}) + (2 * \text{Lc}) / \text{EFF}$	
Instrument Code	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WC16085	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Prepared By	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS}) (2220000 \text{ dpm}/\mu\text{Ci})]$	
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	2.29E+00
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	2.29E-03
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	3.39E-06
Analysis Date	% Counting Error	0.61
04/20/2000		
Analysis Time		
10:30 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 4/21/00

STANDARD.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: BLANK2

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

BLANK

Type	Disintegrations per minute from Counter (dpm)	15.49
BLNK-PREP	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33254	Digest Grams of Solids / Liter (D g/L)	10.52
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	21.94
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4261
SOLID	% Counting Error	5.64
Batch Number	Detection Limit (Ld)	7.37
20001356	Critical Level (Lc)	1.54
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	7.30E-03
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/g}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
WL33254		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(D \text{ g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	7.30E-03
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.47E-03
Analysis Date	% Counting Error	5.64
04/20/2000		
Analysis Time		
10:30 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 7/2/00

BLANK.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: SAM3

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	35.67
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33254	Digest Grams of Solids / Liter (D g/L)	10.52
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	21.94
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4173
SOLID	% Counting Error	4.92
Batch Number	Detection Limit (Ld)	7.53
20001356	Critical Level (Lc)	1.54
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.68E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	$\text{H3 } \mu\text{Ci/g} = (\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000812		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	1.68E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.55E-03
Analysis Date	% Counting Error	4.92
04/20/2000		
Analysis Time		
10:30 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 7/21/00

SAMPLE.WB1 REV 2.0

21811NML

1431

WORKBOOK PAGE: SPIKE4

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SPIKE
Type	dpm of Sample from Counter (dpm1)	35.67
SPK	dpm of Sample + Spike from Counter (dpm2)	2548.77
Work List	Volume of Sample in Distillation Vial in mL (Svol)	1.5
33254	Volume of Spike in Distillation Vial in mL (SPK vol)	1.5
Test Code	Volume Transferred to Scintillation Vial in mL (TR vol)	1
@H3-01	Spike Book Number (Spk BN)	61B57
Matrix	Spike Value in $\mu\text{Ci/mL}$ (SPK val)	2.4107E-03
SOLID	Background Count Rate in cpm (BKG cpm)	21.94
Batch Number	Background Count Time in Minutes (BKG Time)	50
20001356	Instrument Fractional Efficiency of Sample (EFF)	0.4173
Rerun	Detection Limit (Ld)	7.53
0	Critical Level (Lc)	1.54
Sample Prep	H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam)	1.61E-05
H2ODIGHC	H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s)	1.15E-03
Sample #	Vol. Ratio Sample Vol. to Total Vol. (VRsam)	5.00E-01
S00T000812	Vol. Ratio Spike Vol. to Total Vol. (VRspike)	5.00E-01
Instrument Code	Spk val = value taken from RCTABLE and then decayed using a $\frac{1}{2}$ life of 29.1 years Detection Limit (Ld) = $((2.72 / \text{BKG time}) + (2 * \text{Lc})) / \text{EFF}$ Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG time)}$ H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam) = $\text{dpm1} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s) = $\text{dpm2} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ Volume Ratio of Sample Volume to Total Volume (VRsam) = $\text{Svol} / (\text{Svol} + \text{SPK vol})$ Volume Ratio of Spike Volume to Total Volume (VRspike) = $\text{SPK vol} / (\text{Svol} + \text{SPK vol})$ QC Actual in $\mu\text{Ci/mL}$ = SPK val QC Found in $\mu\text{Ci/mL}$ = $((\text{Rs+s}) - (\text{Rsam} * \text{VRsam})) / (\text{VRspike})$ Percent Spike Recovery = $\text{QC Found} / \text{QC Actual} * 100$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete		
04/20/2000		
Analysis Date		
04/20/2000		
Analysis Time		
10:30 AM	QC Actual in $\mu\text{Ci/mL}$	= 2.41E-03
Sample Point	QC Found in $\mu\text{Ci/mL}$	= 2.28E-03
AZ-101	Percent Spike Recovery	= 94.6%

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SA	Date: 4/21/00

SPIKE.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: SAM5

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	30.46
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33254	Digest Grams of Solids / Liter (D g/L)	10.6
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	21.94
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.42
SOLID	% Counting Error	5.07
Batch Number	Detection Limit (Ld)	7.48
20001356	Critical Level (Lc)	1.54
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.42E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/g}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000813		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(D \text{ g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	1.42E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	3.50E-03
Analysis Date	% Counting Error	5.07
04/20/2000		
Analysis Time		
10:30 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 7/21/00

SAMPLE.WB1 REV 2.0

21811NML

1433

WORKBOOK PAGE: SAM6

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	33.77
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	11
33254	Digest Grams of Solids / Liter (D g/L)	13.37
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	21.94
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4209
SOLID	% Counting Error	4.96
Batch Number	Detection Limit (Ld)	7.46
20001356	Critical Level (Lc)	1.54
Rerun	Tritium Concentration in $\mu\text{Ci/g}$	1.25E-02
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
H2ODIGHC	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/g}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF}) / (\text{SS} * (\text{D g/L}) * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000814		
Instrument Code	Detection Limit ($\mu\text{Ci/g}$) = $(\text{Ld})(\text{DF})(1000) / [(\text{D g/L})(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/g}$	1.25E-02
04/20/2000	Detection Limit in $\mu\text{Ci/g}$	2.77E-03
Analysis Date	% Counting Error	4.96
04/20/2000		
Analysis Time		
10:30 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 4/21/00

SAMPLE.WB1 REV 2.0

21811NML

1434

LABCORE Completed Worklist Report for Worklist# 33274

Analyst: gll

Instrument: LSC02

Book#: _____

Method: LA-218-114 Rev/Mod _____

Worklist Comment: AZ-101 (2), @H3-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0H3-01	H3-01	LIQUID	2.41E-03	2.30E-3	95.436 % Recovery	
1 STD	0	0H3-01	H3-01E	LIQUID	1	5.60E-01	0.560 % Ct. Error	
2 BLNK	0	0H3-01	H3-01	LIQUID	1	3.70E-4	0.000 uCi/mL	
2 BLNK	0	0H3-01	H3-01E	LIQUID	1	5.14E+00	5.140 uCi/mL	
3 SAMPLE	S00T000780	0	0H3-01	H3-01	N/A	1.90E-02	4.58e-005 uCi/mL	
3 SAMPLE	S00T000780	0	0H3-01	H3-01E	N/A	8.90E-01	1.00e-004 % Ct. Error	
4 SPK	S00T000780	0	0H3-01	H3-01	2.41E-03	2.26E-03	93.776 % Recovery	
5 SAMPLE	S00T000783	0	0H3-01	H3-01	N/A	1.88E-02	4.54e-005 uCi/mL	
5 SAMPLE	S00T000783	0	0H3-01	H3-01E	N/A	8.90E-01	1.00e-004 % Ct. Error	
6 SAMPLE	S00T000786	0	0H3-01	H3-01	N/A	1.87E-02	4.52e-005 uCi/mL	
6 SAMPLE	S00T000786	0	0H3-01	H3-01E	N/A	8.90E-01	1.00e-004 % Ct. Error	

Final page for worklist# 33274

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 2/16/00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33274

Analyst: gll Instrument: LSC00 6000 Book# 61657
Method: LA-218-114 Rev/Mod B-6
Worklist Comment: AZ-101 (2), @H3-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@H3-01	LIQUID		
2	BLNK				@H3-01	LIQUID		
3	SAMPLE	S00T000780 0			@H3-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
4	SPK	S00T000780 0			@H3-01	LIQUID		
5	SAMPLE	S00T000783 0			@H3-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		
6	SAMPLE	S00T000786 0			@H3-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested:		H3-01		, H3-01E		

Final page for worklist # 33274

[Signature] 4-19-00
Signature Date

[Signature] 4/20/00
Signature Date
[Signature] 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS

		STANDARD
Type	Disintegrations per minute from Counter (dpm)	5097.49
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33274	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	12.86
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.5043
LIQUID	% Counting Error	0.56
Batch Number	Detection Limit (Ld)	4.79
20001376	Critical Level (Lc)	1.18
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	2.30E+00
0	Standard Book No.	61B57
Sample Prep	Standard Value in $\mu\text{Ci/mL}$	2.4111E-03
N/A		
Sample #	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
WL33274	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Instrument Code	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WC16085	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Prepared By	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS}) (2220000 \text{ dpm}/\mu\text{Ci})]$	
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	2.30E+00
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	2.30E-03
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	2.16E-06
Analysis Date	% Counting Error	0.56
04/19/2000		
Analysis Time		
11:25 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 4/21/00

STANDARD.WB1 REV 2.0

21811NML

1437

WORKBOOK PAGE: BLANK2

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

BLANK

Type	Disintegrations per minute from Counter	(dpm)	39.1
BLNK	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	21
33274	Digest Dilution Factor	(DDF)	1
Test Code	Background Count Rate in Counts per Minute	(BKG cpm)	12.86
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.5026
LIQUID	% Counting Error		5.14
Batch Number	Detection Limit	(Ld)	4.81
20001376	Critical Level	(Lc)	1.18
Rerun	Tritium Concentration in $\mu\text{Ci/L}$		3.70E-01
0			
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$		
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * Lc)) / \text{EFF}$		
Sample #	H3 $\mu\text{Ci/L}$	= $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
WL33274	H3 $\mu\text{Ci/mL}$	= $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$		
WC16085			
Prepared By			
SZC			
Chemist			
SAC			
Analyst	Tritium Concentration in $\mu\text{Ci/L}$		3.70E-01
GLL			
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$		3.70E-04
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$		4.55E-05
Analysis Date	% Counting Error		5.14
04/19/2000			
Analysis Time			
11:25 AM			
Sample Point			
AZ-101			

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 4/2/00

BLANK.WB1 REV 2.0

21811NML

1438

WORKBOOK PAGE: SAM3

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	2009.75
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	21
33274	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	12.86
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.4997
LIQUID	% Counting Error	0.89
Batch Number	Detection Limit (Ld)	4.84
20001376	Critical Level (Lc)	1.18
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	1.90E+01
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $(2.72 / \text{BKG Time}) + (2 * \text{Lc}) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000780	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	1.90E+01
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	1.90E-02
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	4.58E-05
Analysis Date	% Counting Error	0.89
04/19/2000		
Analysis Time		
11:25 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:		SAC	Date: 11/21/00

SAMPLE.WB1 REV 2.0

21811NML

1439

WORKBOOK PAGE: SPIKE4

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SPIKE
Type	dpm of Sample from Counter (dpm1)	2009.75
SPK	dpm of Sample + Spike from Counter (dpm2)	3517.22
Work List	Volume of Sample in Distillation Vial in mL (Svol)	1.5
33274	Volume of Spike in Distillation Vial in mL (SPK vol)	1.5
Test Code	Volume Transferred to Scintillation Vial in mL (TR vol)	1
@H3-01	Spike Book Number (Spk BN)	61B57
Matrix	Spike Value in $\mu\text{Ci/mL}$ (SPK val)	2.4111E-03
LIQUID	Background Count Rate in cpm (BKG cpm)	12.86
Batch Number	Background Count Time in Minutes (BKG Time)	50
20001376	Instrument Fractional Efficiency of Sample (EFF)	0.4997
Rerun	Detection Limit (Ld)	4.84
0	Critical Level (Lc)	1.18
Sample Prep	H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam)	9.05E-04
N/A	H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s)	1.58E-03
Sample #	Vol. Ratio Sample Vol. to Total Vol. (VRsam)	5.00E-01
S00T000780	Vol. Ratio Spike Vol. to Total Vol. (VRspike)	5.00E-01
Instrument Code	Spk val = value taken from RCTABLE and then decayed using a $\frac{1}{2}$ life of 29.1 years Detection Limit (Ld) = $((2.72 / \text{BKG time}) + (2 * \text{Lc})) / \text{EFF}$ Critical Level (Lc) = $2.33 * \text{the Square Root of } (\text{BKG cpm} / \text{BKG time})$ H3 $\mu\text{Ci/mL}$ in Sample Vial (Rsam) = $\text{dpm1} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ H3 $\mu\text{Ci/mL}$ in Sample + Spike Vial (Rs+s) = $\text{dpm2} / (\text{TR vol} * (2220000\text{dpm}/\mu\text{Ci}))$ Volume Ratio of Sample Volume to Total Volume (VRsam) = $\text{Svol} / (\text{Svol} + \text{SPK vol})$ Volume Ratio of Spike Volume to Total Volume (VRspike) = $\text{SPK vol} / (\text{Svol} + \text{SPK vol})$ QC Actual in $\mu\text{Ci/mL}$ = SPK val QC Found in $\mu\text{Ci/mL}$ = $((\text{Rs+s}) - (\text{Rsam} * \text{VRsam})) / (\text{VRspike})$ Percent Spike Recovery = $\text{QC Found} / \text{QC Actual} * 100$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
GLL		
Date Complete		
04/20/2000		
Analysis Date		
04/19/2000		
Analysis Time		
11:25 AM		
Sample Point	QC Actual in $\mu\text{Ci/mL}$	= 2.41E-03
AZ-101	QC Found in $\mu\text{Ci/mL}$	= 2.26E-03
	Percent Spike Recovery	= 93.9%

Analyst:	GLL	Date:	04/20/2000
Signature of Chemist:	SA	Date:	4/21/00

SPIKE.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: SAM5

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	1986.21
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	21
33274	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	12.86
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.5033
LIQUID	% Counting Error	0.89
Batch Number	Detection Limit (Ld)	4.80
20001376	Critical Level (Lc)	1.18
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	1.88E+01
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000783	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	1.88E+01
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	1.88E-02
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	4.54E-05
Analysis Date	% Counting Error	0.89
04/19/2000		
Analysis Time		
11:25 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 4/21/00

SAMPLE.WB1 REV 2.0

21811NML

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WORKBOOK PAGE: SAM6

H3 : LA-218-114 (B-6), LA-218-115(B-2) TRITIUM LIQUIDS/ SOLIDS

		SAMPLE
Type	Disintegrations per minute from Counter (dpm)	1973.82
SAMPLE	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	21
33274	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	12.86
@H3-01	Background Count Time in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.5065
LIQUID	% Counting Error	0.89
Batch Number	Detection Limit (Ld)	4.77
20001376	Critical Level (Lc)	1.18
Rerun	Tritium Concentration in $\mu\text{Ci/L}$	1.87E+01
0		
Sample Prep	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG Time)}$	
N/A	Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$	
Sample #	H3 $\mu\text{Ci/L}$ = $(\text{dpm} * (1000\text{mL/L}) * \text{DF} * \text{DDF}) / (\text{SS} * (2220000\text{dpm}/\mu\text{Ci}))$	
S00T000786	H3 $\mu\text{Ci/mL}$ = $\mu\text{Ci/L}/1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(\text{Ld})(\text{DF})(\text{DDF}) / [(\text{SS})(2220000 \text{ dpm}/\mu\text{Ci})]$	
WC16085		
Prepared By		
SZC		
Chemist		
SAC		
Analyst	Tritium Concentration in $\mu\text{Ci/L}$	1.87E+01
GLL		
Date Complete	Tritium Concentration in $\mu\text{Ci/mL}$	1.87E-02
04/20/2000	Detection Limit in $\mu\text{Ci/mL}$	4.52E-05
Analysis Date	% Counting Error	0.89
04/19/2000		
Analysis Time		
11:25 AM		
Sample Point		
AZ-101		

Analyst:	GLL	Date: 04/20/2000
Signature of Chemist:	SAC	Date: 4/21/00

SAMPLE.WB1 REV 2.0

21811NML

1442

LABCORE Completed Worklist Report for Worklist# 31884

Analyst: ak1

Instrument: AB16

Book#: _____

Method: LA-508-101 Rev/Mod _____

Worklist Comment: AZ101 FOR @AB-01, RLC

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0AB-01	ALPHA01	LIQUID		2.28E-04	3.37E-4	103.947	% Recovery
1 STD	0	0AB-01	ALPHA01E	LIQUID		1	3.04E+00	3.040	% Ct. Error
1 STD	0	0AB-01	BETA-01	LIQUID		3.38E-03	3.62E-3	107.101	% Recovery
1 STD	0	0AB-01	BETA-01E	LIQUID		1	6.21E-01	0.621	% Ct. Error
2 BLNK	0	0AB-01	ALPHA01	LIQUID		1	<8.16E-8		uCi/mL
2 BLNK	0	0AB-01	ALPHA01E	LIQUID		1.00	2.94E+02	294.000	uCi/mL
2 BLNK	0	0AB-01	BETA-01	LIQUID		1	<9.52E-7		uCi/mL
2 BLNK	0	0AB-01	BETA-01E	LIQUID		1.00	5.00E+02	500.000	uCi/mL
3 BLNK/BKG	0	0AB-01	ALPHA01	LIQUID		1.00E+00	2.05E+00	2.050	BLNK/BKG
3 BLNK/BKG	0	0AB-01	BETA-01	LIQUID		1.00E+00	1.14E+00	1.140	BLNK/BKG
4 SAMPLE	S99T001892	0	0AB-01	ALPHA01	LIQUID	N/A	< 1.10E-07	1.34E-007	uCi/mL
4 SAMPLE	S99T001892	0	0AB-01	ALPHA01E	LIQUID	N/A	1.65E+02		% Ct. Error
4 SAMPLE	S99T001892	0	0AB-01	BETA-01	LIQUID	N/A	< 7.36E-07	7.72E-007	uCi/mL
4 SAMPLE	S99T001892	0	0AB-01	BETA-01E	LIQUID	N/A	5.00E+02		% Ct. Error
5 DUP	S99T001892	0	0AB-01	ALPHA01	LIQUID	<1.10E-7	8.51E-8		RPD
5 DUP	S99T001892	0	0AB-01	ALPHA01E	LIQUID	1.00	1.07E+02	107.000	% Ct. Error
5 DUP	S99T001892	0	0AB-01	BETA-01	LIQUID	<7.36E-7	<5.52E-7		RPD
5 DUP	S99T001892	0	0AB-01	BETA-01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Error

Final page for worklist# 31884

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

9 Dec 99
Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 31884

Analyst: AKL Instrument: AB00 #16 Book# 52B57

Method: LA-508-101 Rev/Mod G2

Worklist Comment: AZ101 FOR @AB-01, RLC

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@AB-01	LIQUID		
2	BLNK				@AB-01	LIQUID		
3	BLNK/BKG				@AB-01	LIQUID		
4	SAMPLE	S99T001892 0			@AB-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E								
5	DUP	S99T001892 0			@AB-01	LIQUID		

Final page for worklist # 31884

Alita Huron 12/6/99
Signature Date

Steve Z Cabore 12/9/99
Signature Date
McB 12/9/99

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1 2 *12/10/00*TB : LA-508-101 (G-*p*) LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	16	16
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	101930	101268
31884	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	16.9	16.9
TB	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	STANDARD BOOK NUMBER (Std BN)	52B57	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.4195	0.4195
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	3380.767	3358.700
Batch Number	Standard Value in $\mu\text{Ci/mL}$	3.38E-03	
99004370	Concentration in $\mu\text{Ci/L}$ =	3.63E+00	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	3.61E+00	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	3.6184E+00	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
WL31884	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	TOTAL BETA CONCENTRATION in $\mu\text{Ci/mL}$ =	3.62E-03	DETECTION LEVEL
Analyst			
AKL			
Date Complete			3.86E-06 $\mu\text{Ci/mL}$
12/09/99	RELATIVE COUNTING ERROR =	0.6%	
Analysis Date			
12/08/99			
Analysis Time			
02:50 PM			
Sample Point			
AZ-101 (2)			

Analyst:

SZC

Date: 09-Dec-99

Signature of Chemist:

SAC

Date: 9 Dec 99

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: STD2 714D 4/24/00

AT : LA-508-101 (G-0) LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	16
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	4304
31884	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.13
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@AB-01	STANDARD BOOK NUMBER (Std BN)	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	143.337
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.28E-04
99004370	Concentration in $\mu\text{Ci/L}$ =	2.41E-01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	2.33E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.3682E-01
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL31884	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.37E-04
Analyst		
AKL		
Date Complete		
12/09/99	RELATIVE COUNTING ERROR =	3.0%
Analysis Date		
12/08/99		
Analysis Time		
02:50 PM		
Sample Point		
AZ-101 (2)		

DETECTION
LEVEL6.68E-07
 $\mu\text{Ci/mL}$

Analyst:	SZC	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9 Dec 99

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK3

TB : LA-508-101 (G-0) ² *MD* *12/10* LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	16	16
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	519	640
31884	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	16.9	16.9
TB	SAMPLE SIZE in mL (SS)	5.000	5.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4195	0.4195
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	2.162	4.433
Batch Number			
99004370	Blank Concentration in $\mu\text{Ci/L}$	< 4.64E-04	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	9.52E-04	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 9.5208E-04	
Sample Prep			
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/ μCi)		
WL31884	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L}$ / 1000mL/L		
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Maximum) =	< 9.52E-07	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from Rmax.		
AKL			
Date Complete	RELATIVE COUNTING ERROR	500.0%	7.72E-07 $\mu\text{Ci/mL}$
12/09/99			
Analysis Date			
12/08/99			
Analysis Time			
02:50 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9 Dec 99
BLANK.WB1 Rev. 1.0	508101ML	

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WORKBOOK PAGE: BLANK4

AT : LA-508-101 (G-0) ² _{12/21/99} LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	16	16
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	10	6
31884	COUNT TIME in MINUTES (CT)	30	30
AT or IB ?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	5.000	5.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.203	0.243
Batch Number			
99004370	Blank Concentration in $\mu\text{Ci/L}$	6.83E-05	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 8.16E-05	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 8.1613E-05	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 8.16E-08	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from R_s .		
AKL			
Date Complete	RELATIVE COUNTING ERROR	293.7%	1.34E-07 $\mu\text{Ci/mL}$
12/09/99			
Analysis Date			
12/08/99			
Analysis Time			
02:50 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9.2.99
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM7

TB : LA-508-101 (G-0) ^{2nd} _{12/21/0} LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	520	556
31884	COUNT TIME in MINUTES (CT)	30	30
AI or TB ?	BACKGROUND in cpm (BKG)	16.9	16.9
TB	SAMPLE SIZE in mL (SS)	5.000	5.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4195	0.4195
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	2.196	3.427

Batch Number	
99004370	Blank Concentration in $\mu\text{Ci/L}$ < 4.72E-04
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ < 7.36E-04
0	Maximum Concentration in $\mu\text{Ci/L}$ < 7.3587E-04

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
S99T001892	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L}$ / 1000mL/L
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SZC	
Chemist	
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Maximum) = < 7.36E-07
Analyst	
AKL	LESS THAN Value was Determined from Rmax.
Date Complete	
12/09/99	RELATIVE COUNTING ERROR 500.0%
Analysis Date	
12/08/99	
Analysis Time	
02:50 PM	
Sample Point	
AZ-101 (2)	

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9 Dec 99

SAMPLE.WB1 Rev. 1.

508101ML

WORKBOOK PAGE: SAM8

AT : LA-508-101 (G-01) ^{2 LAD} _{6/21/00} LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	10	8
31884	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	5.000	5.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.203	0.326
Batch Number			
99004370	Blank Concentration in $\mu\text{Ci/L}$	6.83E-05	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 1.10E-04	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 1.0960E-04	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S99T001892	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 1.10E-07	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from R_s .		
AKL			
Date Complete	RELATIVE COUNTING ERROR	164.9%	1.34E-07 $\mu\text{Ci/mL}$
12/09/99			
Analysis Date			
12/08/99			
Analysis Time			
02:50 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9-2-99
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: DUP9

TB : LA-508-101 (G-0) ² _{12/21/99} LIQUIDS

	DUP	REPLICATE
Type	DETECTOR NUMBER	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	531
31884	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	16.9
TB	SAMPLE SIZE in mL (SS)	5.000
Test Code	DILUTION FACTOR (DF)	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4195
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	2.572
Batch Number		
99004370	Blank Concentration in $\mu\text{Ci/L}$	< 5.52E-04
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 3.76E-04
0	Maximum Concentration in $\mu\text{Ci/L}$	< 5.5235E-04
Sample Prep		
N/A		
Sample #	Rs (Sample Count Rate) = (TC / CT) - BKG	
S99T001892	TOTAL BETA $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/ μCi)	
Instrument Code	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L}$ / 1000mL/L	
WB27806	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100	
Prepared By	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
SZC		
Chemist		
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Maximum) =	< 5.52E-07
Analyst		DETECTION LEVEL
AKL	LESS THAN Value was Determined from Rmax.	
Date Complete	RELATIVE COUNTING ERROR	500.0%
12/09/99		7.72E-07 $\mu\text{Ci/mL}$
Analysis Date		
12/08/99		
Analysis Time		
02:50 PM		
Sample Point		
AZ-101 (2)		

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9 Dec 99
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: DUP10

AT : LA-508-101 (G-0) ² _{1421/0} LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	11	12
31884	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	5.000	5.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.237	0.270
Batch Number			
99004370	Blank Concentration in $\mu\text{Ci/L}$	7.95E-05	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	9.07E-05	
0	Average Concentration in $\mu\text{Ci/L}$	8.5065E-05	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S99T001892	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	8.51E-08	DETECTION LEVEL
Analyst			
AKL			
Date Complete			1.34E-07 $\mu\text{Ci/mL}$
12/09/99	RELATIVE COUNTING ERROR	106.6%	
Analysis Date			
12/08/99			
Analysis Time			
02:50 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 09-Dec-99
Signature of Chemist:	SAC	Date: 9 Dec 99

SAMPLE.WB1 Rev. 1. 508101ML

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LABCORE Completed Worklist Report for Worklist# 33248

Analyst: scl

Instrument: AB14

Book#: _____

Method: LA-508-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @AB-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		QAB-01	ALPHA01 SOLID	3.27E-04	3.99E-4	91.437 % Recovery	
1	STD		0		QAB-01	ALPHA01E SOLID	1	2.72E+00	2.720 % Ct. Error	
1	STD		0		QAB-01	BETA-01 SOLID	3.52E-03	3.62E-3	102.841 % Recovery	
1	STD		0		QAB-01	BETA-01E SOLID	1	6.00E-01	0.600 % Ct. Error	
2	BLNK-PREP		0		QAB-01	ALPHA01E SOLID	1	<1.59E+0	uCi/g	
2	BLNK-PREP		0		QAB-01	ALPHA01E SOLID	1.00	5.00E+02	500.000 uCi/g	
2	BLNK-PREP		0		QAB-01	BETA-01 SOLID	1	1.35E+1	13.500 uCi/g	
2	BLNK-PREP		0		QAB-01	BETA-01E SOLID	1.00	5.45E+01	54.500 uCi/g	
3	BLNK/BKG		0		QAB-01	ALPHA01 SOLID	1.00E+00	4.32E-01	0.432 BLNK/BKG	
3	BLNK/BKG		0		QAB-01	BETA-01 SOLID	1.00E+00	1.42E+00	1.420 BLNK/BKG	
4	SAMPLE	S00T000797	0	F	QAB-01	ALPHA01 SOLID	N/A	4.17E+01	3.830 uCi/g	
4	SAMPLE	S00T000797	0	F	QAB-01	ALPHA01E SOLID	N/A	1.58E+01	% Ct. Error	
4	SAMPLE	S00T000797	0	F	QAB-01	BETA-01 SOLID	N/A	3.68E+04	10.300 uCi/g	
4	SAMPLE	S00T000797	0	F	QAB-01	BETA-01E SOLID	N/A	4.03E-01	% Ct. Error	
5	SPK	S00T000797	0	F	QAB-01	ALPHA01 SOLID	5.05E-02	4.45E-02	88.119 % Recovery	
5	SPK	S00T000797	0	F	QAB-01	BETA-01 SOLID	1.35E-01	1.46E-01	108.148 % Recovery	
6	SAMPLE	S00T000798	0	F	QAB-01	ALPHA01 SOLID	N/A	5.12E+01	3.620 uCi/g	
6	SAMPLE	S00T000798	0	F	QAB-01	ALPHA01E SOLID	N/A	1.40E+01	% Ct. Error	
6	SAMPLE	S00T000798	0	F	QAB-01	BETA-01 SOLID	N/A	4.86E+04	9.710 uCi/g	
6	SAMPLE	S00T000798	0	F	QAB-01	BETA-01E SOLID	N/A	3.23E-01	% Ct. Error	
7	SAMPLE	S00T000799	0	F	QAB-01	ALPHA01 SOLID	N/A	5.01E+01	3.870 uCi/g	
7	SAMPLE	S00T000799	0	F	QAB-01	ALPHA01E SOLID	N/A	1.42E+01	% Ct. Error	
7	SAMPLE	S00T000799	0	F	QAB-01	BETA-01 SOLID	N/A	4.73E+04	10.400 uCi/g	
7	SAMPLE	S00T000799	0	F	QAB-01	BETA-01E SOLID	N/A	3.39E-01	% Ct. Error	
8	SAMPLE	S00T000800	0	F	QAB-01	ALPHA01 SOLID	N/A	8.23E+01	3.630 uCi/g	
8	SAMPLE	S00T000800	0	F	QAB-01	ALPHA01E SOLID	N/A	1.06E+01	% Ct. Error	
8	SAMPLE	S00T000800	0	F	QAB-01	BETA-01 SOLID	N/A	3.69E+04	9.730 uCi/g	
8	SAMPLE	S00T000800	0	F	QAB-01	BETA-01E SOLID	N/A	3.72E-01	% Ct. Error	
9	SPK	S00T000800	0	F	QAB-01	ALPHA01 SOLID	5.05E-02	4.61E-02	91.287 % Recovery	
9	SPK	S00T000800	0	F	QAB-01	BETA-01 SOLID	1.35E-01	1.41E-01	104.444 % Recovery	
10	SAMPLE	S00T000801	0	F	QAB-01	ALPHA01 SOLID	N/A	7.92E+01	3.590 uCi/g	
10	SAMPLE	S00T000801	0	F	QAB-01	ALPHA01E SOLID	N/A	1.10E+01	% Ct. Error	
10	SAMPLE	S00T000801	0	F	QAB-01	BETA-01 SOLID	N/A	3.37E+04	9.630 uCi/g	
10	SAMPLE	S00T000801	0	F	QAB-01	BETA-01E SOLID	N/A	3.76E-01	% Ct. Error	
11	SAMPLE	S00T000802	0	F	QAB-01	ALPHA01 SOLID	N/A	8.86E+01	3.720 uCi/g	
11	SAMPLE	S00T000802	0	F	QAB-01	ALPHA01E SOLID	N/A	1.06E+01	% Ct. Error	
11	SAMPLE	S00T000802	0	F	QAB-01	BETA-01 SOLID	N/A	3.85E+04	9.980 uCi/g	
11	SAMPLE	S00T000802	0	F	QAB-01	BETA-01E SOLID	N/A	3.70E-01	% Ct. Error	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33248

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	-----	------	--------	--------	-------	-------------	------

Final page for worklist# 33248

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

21 Apr 00
Reviewer Signature Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33248

Analyst: S. L Instrument: AB00 AB14 Book# 51857

Method: LA-508-101 Rev/Mod G-2

Worklist Comment: AZ-101 (2), @AB-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@AB-01	SOLID		
2 BLNK-PREP			@AB-01	SOLID		
3 BLNK/BKG			@AB-01	SOLID		
4 SAMPLE	S00T000797	0 F	@AB-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						
5 SPK	S00T000797	0 F	@AB-01	SOLID		
6 SAMPLE	S00T000798	0 F	@AB-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						
7 SAMPLE	S00T000799	0 F	@AB-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						
8 SAMPLE	S00T000800	0 F	@AB-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						
9 SPK	S00T000800	0 F	@AB-01	SOLID		
10 SAMPLE	S00T000801	0 F	@AB-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						
11 SAMPLE	S00T000802	0 F	@AB-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E						

Final page for worklist # 33248

Sue Lai 4-18-00
Signature Date

Em Berke 4-19-00
Signature Date
Sylvia Z Chen 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

TB : LA-508-101 (G-2) LA-508-113 (B-2) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	14	14
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	109434	107371
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@AB-01	STANDARD BOOK NUMBER (Std BN)	59B57	59B57
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	3640.100	3571.333
Batch Number	Standard Value in $\mu\text{Ci/mL}$	3.52E-03	
20001350	Concentration in $\mu\text{Ci/L}$ =	3.66E+00	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	3.59E+00	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	3.6206E+00	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
WL33248-STD	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA CONCENTRATION in $\mu\text{Ci/mL}$ =	3.62E-03	DETECTION LEVEL
Analyst			
SCL			
Date Complete			2.47E-06
04/19/2000	RELATIVE COUNTING ERROR =	0.6%	$\mu\text{Ci/mL}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: STD2

AT : LA-508-101 (G-2) LA-508-113 (B-2) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	14
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	5204
33248	COUNT TIME in MINUTES (CT)	5225
AT or TB ?	BACKGROUND in cpm (BKG)	30
AT	SAMPLE SIZE in mL (SS)	0.27
Test Code	DILUTION FACTOR (DF)	1.000
@AB-01	STANDARD BOOK NUMBER (Std BN)	1.000
Matrix	EFFICIENCY FACTOR (EFF)	59B57
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.2614
Batch Number	Standard Value in $\mu\text{Ci/mL}$	0.2614
20001350	Concentration in $\mu\text{Ci/L}$ =	173.197
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	3.27E-04
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.98E-01
Sample Prep		
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/ μCi)	
WL33248-STD	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L	
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100	
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
EMB		
Chemist		
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.99E-04
Analyst		
SCL		
Date Complete		
04/19/2000	RELATIVE COUNTING ERROR =	2.7%
Analysis Date		
04/18/2000		
Analysis Time		
01:35 PM		
Sample Point		
AZ-101		

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK3

TB : LA-508-101 (G-2)

SOLIDS

	BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	14
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	315
33248	COUNT TIME in MINUTES (CT)	30
AT of TB ?	BACKGROUND in cpm (BKG)	7.7
TB	SAMPLE SIZE in mL (SS)	0.500
Test Code	DILUTION FACTOR (DF)	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9
Matrix	EFFICIENCY FACTOR (EFF)	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	2.800
Batch Number		
20001350	Blank Concentration in $\mu\text{Ci/g}$	1.17E+01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.53E+01
0	Average Concentration in $\mu\text{Ci/g}$	1.3518E+01
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$	
WL33248 BLNK-PREP	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
Instrument Code	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
WB27807		
Prepared By		
EMB		
Chemist		
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	1.35E+01
Analyst		
SCL		
Date Complete		
04/19/2000	RELATIVE COUNTING ERROR	54.5%
Analysis Date		
04/18/2000		
Analysis Time		
01:35 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

BLANK.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: BLANK4

AT : LA-508-101 (G-2)

SOLIDS

	BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	14
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	3
33248	COUNT TIME in MINUTES (CT)	30
AT of TB ?	BACKGROUND in cpm (BKG)	0.27
AT	SAMPLE SIZE in mL (SS)	0.500
Test Code	DILUTION FACTOR (DF)	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9
Matrix	EFFICIENCY FACTOR (EFF)	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.221
Batch Number		
20001350	Blank Concentration in $\mu\text{Ci/g}$	< 1.59E+00
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 1.59E+00
0	Maximum Concentration in $\mu\text{Ci/g}$	< 1.5883E+00
Sample Prep		
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)	
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100	
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
EMB		
Chemist		
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 1.59E+00
Analyst	LESS Than Value was Determined from Lc.	
SCL		
Date Complete	RELATIVE COUNTING ERROR	500.0%
04/19/2000		
Analysis Date		
04/18/2000		
Analysis Time		
01:35 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

BLANK.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: SAM7

TB : LA-508-101 (G-2)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	291918	237333
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9	4.9
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	9722.900	7903.400
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	4.06E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.30E+04	
0	Average Concentration in $\mu\text{Ci/g}$	3.6846E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = (TC / CT) - BKG		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000797			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	3.68E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			1.03E+01
04/19/2000	RELATIVE COUNTING ERROR	0.4%	$\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SAM8

AT : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	189	176
33248	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9	4.9
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	6.030	5.597
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	4.33E+01	
Run	Replicate Concentration in $\mu\text{Ci/g}$	4.02E+01	
0	Average Concentration in $\mu\text{Ci/g}$	4.1710E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000797			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	4.17E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			3.83E+00
04/19/2000	RELATIVE COUNTING ERROR	15.8%	$\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SPK9

TB : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	718961	684910
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9	4.9
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	36B57	36B57
20001350	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	1.3495E-01	1.3495E-01
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.4486	0.4486
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	1.00E+05	9.54E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	3.6846E+04	
FUSIONHC			
Sample #			
S00T000797			
Instrument Code			
WB27807			
Prepared By			
EMB			
Chemist			
SAC			
Analyst			
SCL			
Date Complete			
04/19/2000			
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Rs (Sample Count Rate) = (TC / CT) - BKG	
SAMPLE + SPIKE $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)	
QC ACTUAL = SVal	
QC FOUND = (((S+S $\mu\text{Ci/g}$ - SAMPLE $\mu\text{Ci/g}$) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))	
PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) * 100	

QC ACTUAL	=	1.35E-01
QC FOUND	=	1.46E-01
AVG. PERCENT SPIKE RECOVERY	=	108.5%

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SPIKE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SPK10

AT : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	75664	79807
33248	COUNT TIME in MINUTES (CT)	30	30
AT	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.9	4.9
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	19B59	19B59
20001350	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	5.0482E-02	5.0482E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2614	0.2614
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	1.81E+04	1.91E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	4.1710E+01	
FUSIONHC			
Sample #			
S00T000797			
Instrument Code			
WB27807			
Prepared By			
EMB			
Chemist			
SAC			
Analyst			
SCL			
Effective Date			
04/19/2000			
Analysis Date			
04/18/2000	QC ACTUAL =	5.05E-02	
Analysis Time	QC FOUND =	4.45E-02	
01:35 PM	AVG. PERCENT SPIKE RECOVERY =	88.2%	
Sample Point			
AZ-101			

Rs (Sample Count Rate) = (TC / CT) - BKG
SAMPLE + SPIKE $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)
QC ACTUAL = SVal
QC FOUND = (((S+S $\mu\text{Ci/g}$ - SAMPLE $\mu\text{Ci/g}$) * ((SDF/(SVol*1000)))/(DF/SS/Dg/L))))
PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) * 100

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SPIKE.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: SAM11

TB : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	368470	368867
33248	COUNT TIME in MINUTES (CT)	30	30
A of TB ?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.18	5.18
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	12274.633	12287.867
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	4.85E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	4.86E+04	
0	Average Concentration in $\mu\text{Ci/g}$	4.8571E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000798			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	4.86E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			9.71E+00
04/19/2000	RELATIVE COUNTING ERROR	0.3%	$\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SAM12

AT : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	249	220
33248	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.18	5.18
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	8.030	7.063
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	5.45E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	4.79E+01	
0	Average Concentration in $\mu\text{Ci/g}$	5.1220E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000798			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	$\text{ALPHA TOTAL in } \mu\text{Ci/g (Average)} =$	5.12E+01	DETECTION LEVEL 3.62E+00 $\mu\text{Ci/g}$
Analyst			
SCL			
Date Complete			
04/19/2000	RELATIVE COUNTING ERROR	14.0%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: SAM13

TB : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	334737	335606
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.84	4.84
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	11150.200	11179.167
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	4.72E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	4.73E+04	
0	Average Concentration in $\mu\text{Ci/g}$	4.7256E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000799			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	4.73E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			1.04E+01 $\mu\text{Ci/g}$
04/19/2000	RELATIVE COUNTING ERROR	0.3%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SAMPLE.WB1 Rev. 1. 508101ML

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WORKBOOK PAGE: SAM14

AT : LA-508-101 (G-2)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	217	213
33248	COUNT TIME in MINUTES (CT)	30	30
AT of TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.84	4.84
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	6.963	6.830
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	5.06E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	4.96E+01	
0	Average Concentration in $\mu\text{Ci/g}$	5.0097E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000799			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	5.01E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			3.87E+00 $\mu\text{Ci/g}$
04/19/2000	RELATIVE COUNTING ERROR	14.2%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	50810TML	

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WORKBOOK PAGE: SAM15

TB : LA-508-101 (G-2)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	277859	281042
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.17	5.17
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	9254.267	9360.367
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	3.67E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.71E+04	
0	Average Concentration in $\mu\text{Ci/g}$	3.6880E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000800			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	3.69E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			9.73E+00 $\mu\text{Ci/g}$
04/19/2000	RELATIVE COUNTING ERROR	0.4%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SAM16

AT : LA-508-101 (G-2)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	386	365
33248	COUNT TIME in MINUTES (CT)	30	30
AT of TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.17	5.17
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	12.597	11.897
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	8.57E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	8.09E+01	
0	Average Concentration in $\mu\text{Ci/g}$	8.3280E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = (TC / CT) - BKG		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000800			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	8.33E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			
04/19/2000	RELATIVE COUNTING ERROR	10.6%	3.63E+00 $\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: SPK17

TB : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	700170	704197
33248	COUNT TIME in MINUTES (CT)	30	30
Atom B?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.17	5.17
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	36B57	36B57
20001350	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	1.3495E-01	1.3495E-01
Rotun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.4486	0.4486
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	9.25E+04	9.30E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	3.6880E+04	
FUSIONHC			
Sample #			
S00T000800	Rs (Sample Count Rate) = (TC / CT) - BKG		
Instrument Code	SAMPLE + SPIKE $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
WB27807	QC ACTUAL = SVal		
Prepared By	QC FOUND = (((S+S $\mu\text{Ci/g}$ - SAMPLE $\mu\text{Ci/g}$) * ((SDF/(SVol*1000)))/(DF/SS/Dg/L))))		
EMB	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) * 100		
Chemist			
SAC			
Analyst			
SCL			
Page Complete			
04/19/2000			
Analysis Date			
04/18/2000	QC ACTUAL	=	1.35E-01
Analysis Time	QC FOUND	=	1.41E-01
01:35 PM	AVG. PERCENT SPIKE RECOVERY	=	104.8%
Sample Point			
AZ-101			

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist: <i>[Signature]</i>	SAC	Date: APR 21 2000
SPIKE.WB1 Rev. 1.0	508101ML	

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WORKBOOK PAGE: SPK18

AT : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Typ	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	81065	80179
33248	COUNT TIME in MINUTES (CT)	30	30
Approx. AT	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.17	5.17
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	19B59	19B59
20001350	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	5.0482E-02	5.0482E-02
Recovery	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2614	0.2614
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	1.84E+04	1.82E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	8.3280E+01	
FUSIONHC			
Sample #			
S00T000800	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Instrument Code	$SAMPLE + SPIKE \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
WB27807	QC ACTUAL = SVal		
Prepared By	$QC \text{ FOUND} = (((S+S \mu\text{Ci/g} - SAMPLE \mu\text{Ci/g}) * ((SDF/(SVol*1000)))/(DF/SS/Dg/L))))$		
EMB	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
Chemist			
SAC			
Analyst			
SCL			
Batch Complete			
04/19/2000			
Analysis Date			
04/18/2000	QC ACTUAL =	5.05E-02	
Analysis Time	QC FOUND =	4.61E-02	
01:35 PM	AVG. PERCENT SPIKE RECOVERY =	91.3%	
Sample Point			
AZ-101			

Analyst:	EMB	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SPIKE.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: SAM19

TB : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	274585	271886
33248	COUNT TIME in MINUTES (CT)	30	30
At 5 TB?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.22	5.22
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	9145.133	9055.167
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	3.59E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.55E+04	
0	Average Concentration in $\mu\text{Ci/g}$	3.5714E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000801			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	3.57E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			9.63E+00 $\mu\text{Ci/g}$
04/19/2000	RELATIVE COUNTING ERROR	0.4%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1. 508101ML		

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WORKBOOK PAGE: SAM20

AT : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	380	342
33248	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.22	5.22
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	12.397	11.130
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	8.35E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	7.50E+01	
0	Average Concentration in $\mu\text{Ci/g}$	7.9227E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000801			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	7.92E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			3.59E+00
04/19/2000	RELATIVE COUNTING ERROR	11.0%	$\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SAM21

TB : LA-508-101 (G-2) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	287139	281585
33248	COUNT TIME in MINUTES (CT)	30	30
AT or TB?	BACKGROUND in cpm (BKG)	7.7	7.7
TB	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.04	5.04
Matrix	EFFICIENCY FACTOR (EFF)	0.4486	0.4486
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	9563.600	9378.467
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	3.89E+04	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.81E+04	
0	Average Concentration in $\mu\text{Ci/g}$	3.8497E+04	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000802			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/g}$ (Average) =	3.85E+04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			9.98E+00 $\mu\text{Ci/g}$
04/19/2000	RELATIVE COUNTING ERROR	0.4%	
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 19-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SAMPLE.WB1 Rev. 1.

508101ML

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WORKBOOK PAGE: SAM22

AT : LA-508-101 (G-2)

SOLIDS

		SAMPLE	REPLICATE
Detector Number	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	412	366
33248	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.27	0.27
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.04	5.04
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	13.463	11.930
Batch Number			
20001350	Blank Concentration in $\mu\text{Ci/g}$	9.39E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	8.32E+01	
0	Average Concentration in $\mu\text{Ci/g}$	8.8567E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000802			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	8.86E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			3.72E+00
04/19/2000	RELATIVE COUNTING ERROR	10.6%	$\mu\text{Ci/g}$
Analysis Date			
04/18/2000			
Analysis Time			
01:35 PM			
Sample Point			
AZ-101			

Analyst:

SCL

Date: 19-Apr-2000

Signature of Chemist:

SAC

Date:

SAMPLE.WB1 Rev. 1.

508101ML

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LABCORE Completed Worklist Report for Worklist# 33270

Analyst: ak1

Instrument: AB15

Book#: _____

Method: LA-508-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @AB-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0AB-01	ALPHA01	LIQUID	2.28E-04	2.38E-4	104.386	% Recovery
1 STD	0	0AB-01	ALPHA01E	LIQUID	1	3.00E+00	3.000	% Ct. Error
1 STD	0	0AB-01	BETA-01	LIQUID	3.35E-03	3.62E-3	108.060	% Recovery
1 STD	0	0AB-01	BETA-01E	LIQUID	1	6.13E-01	0.613	% Ct. Error
2 BLNK	0	0AB-01	ALPHA01	LIQUID	1	4.32E-2		uCi/mL
2 BLNK	0	0AB-01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
2 BLNK	0	0AB-01	BETA-01	LIQUID	1	7.45E-1	0.745	uCi/mL
2 BLNK	0	0AB-01	BETA-01E	LIQUID	1.00	8.22E+01	82.200	uCi/mL
3 BLNK/BKG	0	0AB-01	ALPHA01	LIQUID	1.00E+00	5.83E-01	0.583	BLNK/BKG
3 BLNK/BKG	0	0AB-01	BETA-01	LIQUID	1.00E+00	1.50E+00	1.500	BLNK/BKG
4 SAMPLE	S00T000780	0	0AB-01	ALPHA01	N/A	4.65E-02	8.04e-002	uCi/mL
4 SAMPLE	S00T000780	0	0AB-01	ALPHA01E	N/A	5.00E+02		% Ct. Error
4 SAMPLE	S00T000780	0	0AB-01	BETA-01	N/A	2.05E+03	0.351	uCi/mL
4 SAMPLE	S00T000780	0	0AB-01	BETA-01E	N/A	2.59E-01		% Ct. Error
5 SPK	S00T000780	0	0AB-01	ALPHA01	5.05E-02	4.68E-02	92.673	% Recovery
5 SPK	S00T000780	0	0AB-01	BETA-01	1.35E-01	1.45E-01	107.407	% Recovery
6 SAMPLE	S00T000783	0	0AB-01	ALPHA01	N/A	4.65E-02	8.04e-002	uCi/mL
6 SAMPLE	S00T000783	0	0AB-01	ALPHA01E	N/A	3.67E+02		% Ct. Error
6 SAMPLE	S00T000783	0	0AB-01	BETA-01	N/A	2.02E+03	0.351	uCi/mL
6 SAMPLE	S00T000783	0	0AB-01	BETA-01E	N/A	2.62E-01		% Ct. Error
7 SAMPLE	S00T000786	0	0AB-01	ALPHA01	N/A	6.25E-02	8.04e-002	uCi/mL
7 SAMPLE	S00T000786	0	0AB-01	ALPHA01E	N/A	5.00E+02		% Ct. Error
7 SAMPLE	S00T000786	0	0AB-01	BETA-01	N/A	1.99E+03	0.351	uCi/mL
7 SAMPLE	S00T000786	0	0AB-01	BETA-01E	N/A	2.63E-01		% Ct. Error

Final page for worklist# 33270

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

04/18/00 12:52

ws2

Page: 1

LABCORE Data Entry Template for Worklist# 33270

Analyst: AKL Instrument: AB00 #15 Book# 52657Method: LA-508-101 Rev/Mod G2

Worklist Comment: AZ-101 (2), @AB-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@AB-01	LIQUID		
2	BLNK				@AB-01	LIQUID		
3	BLNK/BKG				@AB-01	LIQUID		
4	SAMPLE	S00T000780 0			@AB-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E								
5	SPK	S00T000780 0			@AB-01	LIQUID		
6	SAMPLE	S00T000783 0			@AB-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E								
7	SAMPLE	S00T000786 0			@AB-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: ALPHA01 , ALPHA01E, BETA-01 , BETA-01E								

Final page for worklist # 33270

Aleta Henson 4/19/00
Signature Date

Emy Bouché 4-20-00
Signature Date
April 2 Chrom 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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WORKBOOK PAGE: STD1

TB : LA-508-101 (G-2) LA-508-113 (B-2) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	15
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	103584
33270	COUNT TIME in MINUTES (CT)	30
At or TB ?	BACKGROUND in cpm (BKG)	14
TB	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@AB-01	STANDARD BOOK NUMBER (Std BN)	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.4298
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	3438.800
Batch Number	Standard Value in $\mu\text{Ci/mL}$	3.35E-03
20001372	Concentration in $\mu\text{Ci/L}$ =	3.60E+00
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	3.64E+00
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	3.6229E+00
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL33270-STD	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
EMB		
Chemist		
SAC	TOTAL BETA CONCENTRATION in $\mu\text{Ci/mL}$ =	3.62E-03
Analyst		
AKL		
Dts Complete		
04/20/2000	RELATIVE COUNTING ERROR =	0.6%
Analysis Date		
04/19/2000		
Analysis Time		
01:15 PM		
Sample Point		
AZ-101 (2)		

Analyst:	EMB	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

STANDARD.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: STD2

AT : LA-508-101 (G-2) LA-508-113 (B-2) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	15
STD	DISH SIZE (1 , 2 , or 5) (MS)	2
Work List	GROSS COUNTS (GC)	4284
33270	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.2
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@AB-01	STANDARD BOOK NUMBER (Std BN)	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.2695
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	142.600
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.28E-04
20001372	Concentration in $\mu\text{Ci/L}$ =	2.38E-01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	2.38E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.3835E-01
Sample Prep		
N/A	R_s (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL33270-STD	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
EMB		
Chemist		
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.38E-04
Analyst		
AKL		
Date Complete		
04/20/2000	RELATIVE COUNTING ERROR =	3.0%
Analysis Date		
04/19/2000		
Analysis Time		
01:15 PM		
Sample Point		
AZ-101 (2)		

Analyst:	EMB	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

STANDARD.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: BLANK3

TB : LA-508-101 (G-2)

LIQUIDS

	BLNK	REPLICATE	
Type	15	15	
BLNK	2	2	
Work List	492	766	
33270	30	30	
Also TB?	14	14	
TB	0.100	0.100	
Test Code	10201	10201	
@AB-01	1	1	
Matrix	0.4298	0.4298	
LIQUID	2.400	11.533	
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$ 2.57E+02		
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ 1.23E+03		
0	Average Concentration in $\mu\text{Ci/L}$ 7.4481E+02		
Sample Prep			
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/ μCi)		
WL33270-BLNK	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L}$ / 1000mL/L		
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Average) = 7.45E-01	DETECTION LEVEL 3.51E-01 $\mu\text{Ci/mL}$	
Analyst			
AKL			
Date Complete	RELATIVE COUNTING ERROR	82.2%	
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

BLANK.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: BLANK4

AT : LA-508-101 (G-2) LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	2	5
33270	COUNT TIME in MINUTES (CT)	30	30
Who is IB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.191	0.191
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$	< 3.25E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 3.25E+01	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 3.2485E+01	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
33270-BLNK	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 3.25E-02	DETECTION LEVEL
Analyst	LESS Than Value was Determined from Lc.		
AKL			
Date Complete	RELATIVE COUNTING ERROR	500.0%	8.04E-02 $\mu\text{Ci/mL}$
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

BLANK.WB1 Rev. 1.0 508101ML

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WORKBOOK PAGE: SAM7

TB : LA-508-101 (G-2) LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	575580	577461
33270	COUNT TIME in MINUTES (CT)	30	30
Also TB?	BACKGROUND in cpm (BKG)	14	14
TB	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4298	0.4298
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	19172.000	19234.700
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$	2.05E+06	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	2.06E+06	
0	Average Concentration in $\mu\text{Ci/L}$	2.0531E+06	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000780	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Average) =	2.05E+03	DETECTION LEVEL
Analyst			
AKL			
Date Complete			3.51E-01 $\mu\text{Ci/mL}$
04/20/2000	RELATIVE COUNTING ERROR	0.3%	
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: SAM8

AT : LA-508-101 (G-2) LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	6	8
33270	COUNT TIME in MINUTES (CT)	30	30
AT or IB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Est Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matl	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.191	0.272

Batch Number	
20001372	Blank Concentration in $\mu\text{Ci/L}$ < 3.25E+01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ < 4.65E+01
0	Maximum Concentration in $\mu\text{Ci/L}$ < 4.6455E+01

Sample Prep	N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	S00T000780	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
Instrument Code	WB26872	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Prepared By	EMB	$\text{Relative Counting Error} = [(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
Chemist	SAC	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 4.65E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.		
RELATIVE COUNTING ERROR	500.0%	8.04E-02 $\mu\text{Ci/mL}$

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SPK9

TB : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	15	15
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	329519	330806
33270	COUNT TIME in MINUTES (CT)	10	10
AT or TB ?	BACKGROUND in cpm (BKG)	14	14
TB	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	36B57	36B57
20001372	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	1.3494E-01	1.3494E-01
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.4298	0.4298
0	SAMPLE + SPIKE $\mu\text{Ci/mL}$ (S+S)	3.52E+03	3.54E+03
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/mL}$ in SAMPLE	2.0531E+03	
N/A			
Sample #			
S00T000780			
Instrument Code			
WB26872			
Prepared By			
EMB			
Chemist			
SAC			
Analyst			
AKL			
Date Complete			
04/20/2000			
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Rs (Sample Count Rate) = (TC / CT) - BKG	
SAMPLE + SPIKE $\mu\text{Ci/mL}$ = Rs * DF * DDF / (EFF * SS * 2220000dpm/ μCi)	
QC ACTUAL = SVal	
QC FOUND = (((S+S $\mu\text{Ci/mL}$ - SAMPLE $\mu\text{Ci/mL}$) * ((SDF/SVol)/(DF*DDF/SS))))	
PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) * 100	

QC ACTUAL	=	1.35E-01
QC FOUND	=	1.45E-01
AVG. PERCENT SPIKE RECOVERY	=	107.2%

Analyst:	EMB	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SPIKE.WB1 Rev. 1.0

508101ML

1484

WORKBOOK PAGE: SPK10

AT : LA-508-101 (G-2) LA-508-113 (B-2) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	15	15
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	27825	28128
33270	COUNT TIME in MINUTES (CT)	10	10
AT or TB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	19B59	19B59
20001372	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	5.0481E-02	5.0481E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2695	0.2695
0	SAMPLE + SPIKE $\mu\text{Ci/mL}$ (S+S)	4.74E+02	4.80E+02
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/mL}$ in SAMPLE	< 4.6455E-02	
N/A			
Sample #			
S00T000780	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Instrument Code	SAMPLE + SPIKE $\mu\text{Ci/mL}$ = $R_s * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
WB26872	QC ACTUAL = SVal		
Prepared By	QC FOUND = $((S+S \mu\text{Ci/mL} - \text{SAMPLE } \mu\text{Ci/mL}) * ((SDF/SVol)/(DF*DDF/SS)))$		
EMB	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
Chemist			
SAC			
Analyst			
AKL			
Date Complete	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.		
04/20/2000			
Analysis Date			
04/19/2000	QC ACTUAL =	5.05E-02	
Analysis Time	QC FOUND =	4.68E-02	
01:15 PM	AVG. PERCENT SPIKE RECOVERY =	92.6%	
Sample Point			
AZ-101 (2)			

Analyst:	EMB	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000

SPIKE.WB1 Rev. 1.0

508101ML

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WORKBOOK PAGE: SAM11

TB : LA-508-101 (G-2) LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	562468	570338
33270	COUNT TIME in MINUTES (CT)	30	30
At or TB ?	BACKGROUND in cpm (BKG)	14	14
TB	SAMPLE SIZE in mL (SS)	0.100	0.100
1000000	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4298	0.4298
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	18734.933	18997.267
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$	2.00E+06	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	2.03E+06	
0	Average Concentration in $\mu\text{Ci/L}$	2.0170E+06	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000783	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chamber			
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Average) =	2.02E+03	DETECTION LEVEL
Analyst			
AKL			
Date Complete			3.51E-01 $\mu\text{Ci/mL}$
04/20/2000	RELATIVE COUNTING ERROR	0.3%	
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: SAM12

AT : LA-508-101 (G-2) LIQUIDS

		SAMPLE	REPLICATE
DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work Unit	GROSS COUNTS (GC)	13	8
33270	COUNT TIME in MINUTES (CT)	30	30
AVOID BKG	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Ext Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Eff	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.233	0.272
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$	3.98E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 4.65E+01	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 4.6455E+01	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000783	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 4.65E-02	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from R_s .		
AKL			
Date Complete			8.04E-02
04/20/2000	RELATIVE COUNTING ERROR	366.7%	$\mu\text{Ci/mL}$
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SAM13

TB : LA-508-101 (G-2) LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	555506	561316
33270	COUNT TIME in MINUTES (CT)	30	30
Net Count	BACKGROUND in cpm (BKG)	14	14
TB	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.4298	0.4298
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	18502.867	18696.533
Batch Number			
20001372	Blank Concentration in $\mu\text{Ci/L}$	1.98E+06	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	2.00E+06	
0	Average Concentration in $\mu\text{Ci/L}$	1.9885E+06	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	TOTAL BETA $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000786	TOTAL BETA $\mu\text{Ci/mL}$ = TOTAL BETA $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
EMB			
Chemist			
SAC	TOTAL BETA in $\mu\text{Ci/mL}$ (Average) =	1.99E+03	DETECTION LEVEL
Analyst			
AKL			
Date Complete			3.51E-01 $\mu\text{Ci/mL}$
04/20/2000	RELATIVE COUNTING ERROR	0.3%	
Analysis Date			
04/19/2000			
Analysis Time			
01:15 PM			
Sample Point			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: SAM14

AT : LA-508-101 (G-2) LIQUIDS

AT : LA-508-101 (G-2) LIQUIDS		SAMPLE	REPLICATE
	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
	GROSS COUNTS (GC)	7	17
33270	COUNT TIME in MINUTES (CT)	30	30
	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
	DILUTION FACTOR (DF)	10201	10201
@AB-01	DIGEST DILUTION FACTOR (DDF)	1	1
	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.232	0.367
20001372	Blank Concentration in $\mu\text{Ci/L}$	< 3.95E+01	
	Replicate Concentration in $\mu\text{Ci/L}$	6.25E+01	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 6.2518E+01	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG		
	ALPHA TOTAL $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/ μCi)		
S00T000786	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L		
	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
EMB			
SAC	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum)	=	< 6.25E-02
AKL	LESS THAN Value was Determined from Rmax.		
04/20/2000	RELATIVE COUNTING ERROR	500.0%	
04/19/2000			
01:15 PM			
AZ-101 (2)			

Analyst:	AKL	Date: 20-Apr-2000
Signature of Chemist:	SAC	Date: APR 21 2000
SAMPLE.WB1 Rev. 1.	508101ML	

HNF-1701 REV. 0

LABCORE Completed Worklist Report for Worklist# 32085

Analyst: scl

Instrument: AB14

Book#: _____

Method: LA-508-101 Rev/Mod _____

Worklist Comment: AZ-101 FOR @ALPHA01 RTS

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.28E-04	2.35E-4	103.070	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.14E+00	3.140	% Ct. Error
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	43.80E+0		uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01E	SOLID	1.00	5.00E+02	500.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01	SOLID	1.00E+00	1.09E+00	1.090	BLNK/BKG
4 SAMPLE	S00T000015	0 F	@ALPHA01 ALPHA01	SOLID	N/A	5.62E+01	6.730	uCi/g
4 SAMPLE	S00T000015	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.86E+01		% Ct. Error
5 DUP	S00T000015	0 F	@ALPHA01 ALPHA01	SOLID	5.62E+1	6.43E+1	13.444	RPD
5 DUP	S00T000015	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	1.77E+01	17.700	% Ct. Error
6 SPK	S00T000015	0 F	@ALPHA01 ALPHA01	SOLID	5.05E-02	4.47E-02	88.515	% Recovery
7 SAMPLE	S00T000016	0 F	@ALPHA01 ALPHA01	SOLID	N/A	6.45E+01	7.120	uCi/g
7 SAMPLE	S00T000016	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.83E+01		% Ct. Error
8 DUP	S00T000016	0 F	@ALPHA01 ALPHA01	SOLID	6.45E+1	5.70E+1	12.346	RPD
8 DUP	S00T000016	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	1.90E+01	19.000	% Ct. Error

Comments Section:

Comments for sample# S00T000015 and test @ALPHA01.

Result out of limits: @ALPHA01 ALPHA01 in sample S00T000015

Comments for sample# S00T000016 and test @ALPHA01.

Result out of limits: @ALPHA01 ALPHA01 in sample S00T000016

Final page for worklist# 32085

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 32085

Analyst: S.L Instrument: AB00 146 Book# 52857

Method: LA-508-101 Rev/Mod 6-2

Worklist Comment: AZ-101 FOR @ALPHA01 RTS

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S00T000015	0	F	@ALPHA01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
5	DUP	S00T000015	0	F	@ALPHA01	SOLID		
6	SPK	S00T000015	0	F	@ALPHA01	SOLID		
7	SAMPLE	S00T000016	0	F	@ALPHA01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
8	DUP	S00T000016	0	F	@ALPHA01	SOLID		

Final page for worklist # 32085

Sue Lai 1-11-2000
Signature Date

Sue Lai 1/12/00
Signature Date
Ang RPL 1-12-00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (G-²³⁵U) ^{1/12/00} LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	14
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	3921
32085	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.2614
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	130.470
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.28E-04
20000068	Concentration in $\mu\text{Ci/L}$ =	2.25E-01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	2.44E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.3454E-01
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL32085	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L	
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.35E-04
Analyst		
SCL		
Date Complete		
01/12/2000	RELATIVE COUNTING ERROR =	3.1%
Analysis Date		
01/11/2000		
Analysis Time		
01:00 PM		
Sample Point		
AZ-101		

DETECTION
LEVEL8.60E-07
 $\mu\text{Ci/mL}$

Analyst:

SZC

Date: 12-Jan-2000

Signature of Chemist:

SAC

Date: 12 Jan 2000

STANDARD.WB1 Rev. 1.0

508101ML

1492

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (G-0) ² _{1411/12} SOLIDS

Type	DETECTOR NUMBER	BLNK-PREP	REPLICATE
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	14	14
Work List	GROSS COUNTS (GC)	2	2
32085	COUNT TIME in MINUTES (CT)	9	6
AT or TB ?	BACKGROUND in cpm (BKG)	30	30
AT	SAMPLE SIZE in mL (SS)	0.23	0.23
Test Code	DILUTION FACTOR (DF)	0.250	0.250
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	10201	10201
Matrix	EFFICIENCY FACTOR (EFF)	5.22	5.22
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.2614	0.2614
Batch Number		0.289	0.204
20000068	Blank Concentration in $\mu\text{Ci/g}$		
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 3.90E+00	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 2.75E+00	
Sample Prep		< 3.8971E+00	
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 3.90E+00	DETECTION LEVEL
Analyst			
SCL	LESS THAN Value was Determined from Rmax.		
Date Complete	RELATIVE COUNTING ERROR	500.0%	6.73E+00 $\mu\text{Ci/g}$
01/12/2000			
Analysis Date			
01/11/2000			
Analysis Time			
01:00 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 2000
BLANK.WB1 Rev. 1.0	508101ML	

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WORKBOOK PAGE: SAM4

AT : LA-508-101 (G-0) ² ₁₄₂₄₁₀₀ SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	134	130
32085	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.22	5.22
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	4.237	4.103

Batch Number	
20000068	Blank Concentration in $\mu\text{Ci/g}$ 5.71E+01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 5.53E+01
0	Average Concentration in $\mu\text{Ci/g}$ 5.6171E+01

Sample Prep	
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$
S00T000015	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SZC	
Chemist	
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 5.62E+01
Analyst	
SCL	
Date Complete	
01/12/2000	RELATIVE COUNTING ERROR 18.6%
Analysis Date	
01/11/2000	
Analysis Time	
01:00 PM	
Sample Point	
AZ-101	

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 2000
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (G-0) ² _(12/21/00) SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	14	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	142	157
32085	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.2	5.2
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	4.503	5.003
Batch Number			
20000068	Blank Concentration in $\mu\text{Ci/g}$	6.09E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.77E+01	
0	Average Concentration in $\mu\text{Ci/g}$	6.4275E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000015			
Instrument Code	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	6.43E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			6.75E+00 $\mu\text{Ci/g}$
01/12/2000	RELATIVE COUNTING ERROR	17.7%	
Analysis Date			
01/11/2000			
Analysis Time			
01:00 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: SPK6

AT : LA-508-101 (G-0) ^{2nd 6/12/00} LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	80299	75637
32085	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.250	0.250
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.22	5.22
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	19B59	19B59
20000068	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	5.0503E-02	5.0503E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2614	0.2614
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	3.61E+04	3.40E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	5.6171E+01	
FUSIONHC			
Sample #			
S00T000015	$R_s (\text{Sample Count Rate}) = (TC / CT) - BKG$ $\text{SAMPLE} + \text{SPIKE } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$ $QC \text{ ACTUAL} = SVal$ $QC \text{ FOUND} = (((S+S \mu\text{Ci/g} - \text{SAMPLE } \mu\text{Ci/g}) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))$ $\text{PERCENT SPIKE RECOVERY} = (QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
Instrument Code			
WB27807			
Prepared By			
SZC			
Chemist			
SAC			
Analyst			
SCL			
Date Complete			
01/12/2000			
Analysis Date			
01/11/2000	QC ACTUAL	=	5.05E-02
Analysis Time	QC FOUND	=	4.47E-02
01:00 PM	AVG. PERCENT SPIKE RECOVERY	=	88.5%
Sample Point			
AZ-101			

Analyst:	SZC	Date: *****
Signature of Chemist:	SAC	Date: <i>2 Jan 2000</i>
SPIKE.WB1 Rev. 1.0 508101ML		

WORKBOOK PAGE: SAM7

AT : LA-508-101 (G-0)² ⁴⁰ _{Capitel} SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	151	134
32085	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	4.93	4.93
Matrix	EFFICIENCY FACTOR (EFF)	0.2614	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	4.803	4.237
Batch Number			
20000068	Blank Concentration in $\mu\text{Ci/g}$	6.85E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.04E+01	
0	Average Concentration in $\mu\text{Ci/g}$	6.4467E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = (TC / CT) - BKG		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000016			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	6.45E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			7.12E+00
01/12/2000	RELATIVE COUNTING ERROR	18.3%	$\mu\text{Ci/g}$
Analysis Date			
01/11/2000			
Analysis Time			
01:00 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 2000
SAMPLE.WB1 Rev. 1.	508101ML	

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WORKBOOK PAGE: DUP8

AT : LA-508-101 (G-01)²_{6/21/00} SOLIDS

	DUP	REPLICATE
Type	DETECTOR NUMBER	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	143
32085	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.23
AT	SAMPLE SIZE in mL (SS)	0.250
Test Code	DILUTION FACTOR (DF)	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.25
Matrix	EFFICIENCY FACTOR (EFF)	0.2614
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	4.537
Batch Number		
20000068	Blank Concentration in $\mu\text{Ci/g}$	6.08E+01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	5.32E+01
0	Average Concentration in $\mu\text{Ci/g}$	5.6966E+01
Sample Prep		
FUSIONHC	Rs (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)	
S00T000016		
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100	
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	5.70E+01
Analyst		
SCL		
Date Complete		
01/12/2000	RELATIVE COUNTING ERROR	19.0%
Analysis Date		
01/11/2000		
Analysis Time		
01:00 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 2000
SAMPLE.WB1 Rev. 1. 508101ML		

LABCORE Completed Worklist Report for Worklist# 32086

Analyst: gll

Instrument: AB16

Book#: _____

Method: LA-508-101 Rev/Mod _____

Worklist Comment: AZ-101 FOR @ALPHA01 RTS

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.28E-04	2.32E-4	101.754	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.08E+00	3.080	% Ct. Erro
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	<3.62E+0		uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01E	SOLID	1.00	5.00E+02	500.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01	SOLID	1.00E+00	7.08E-01	0.708	BLNK/BKG
4 SAMPLE	S00T000017	0 F	@ALPHA01 ALPHA01	SOLID	N/A	7.25E+01	8.460	uCi/g
4 SAMPLE	S00T000017	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.69E+01		% Ct. Error
5 DUP	S00T000017	0 F	@ALPHA01 ALPHA01	SOLID	7.25E+1	6.30E+1	14.022	RPD
5 DUP	S00T000017	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	1.86E+01	18.600	% Ct. Erro
6 SAMPLE	S00T000021	0 F	@ALPHA01 ALPHA01	SOLID	N/A	1.09E+02	8.410	uCi/g
6 SAMPLE	S00T000021	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.32E+01		% Ct. Error
7 DUP	S00T000021	0 F	@ALPHA01 ALPHA01	SOLID	1.09E+2	1.10E+2	0.913	RPD
7 DUP	S00T000021	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	1.36E+01	13.600	% Ct. Erro
8 SPK	S00T000021	0 F	@ALPHA01 ALPHA01	SOLID	3.81E-02	3.49E-02	91.601	% Recovery

Comments Section:

Comments for sample# S00T000017 and test @ALPHA01.

Result out of limits: @ALPHA01 ALPHA01 in sample S00T000017

Comments for sample# S00T000021 and test @ALPHA01.

Result out of limits: @ALPHA01 ALPHA01 in sample S00T000021

Final page for worklist# 32086

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 32086

Analyst: gll Instrument: AB00 16 Book# 52857

Method: LA-508-101 Rev/Mod B-2

Worklist Comment: AZ-101 FOR @ALPHA01 RTS

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S00T000017	0	F	@ALPHA01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
5	DUP	S00T000017	0	F	@ALPHA01	SOLID		
6	SAMPLE	S00T000021	0	F	@ALPHA01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
7	DUP	S00T000021	0	F	@ALPHA01	SOLID		
8	SPK	S00T000021	0	F	@ALPHA01	SOLID		

Final page for worklist # 32086

Ang L. Platt 1-11-00
Signature Date

Ang L. Platt 1-12-00
Signature Date
Newright 1/12/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (G-0) LA-508-113 (B-0) STANDARD

Type	DETECTOR NUMBER	STANDARD	REPLICATE
STD	DISH SIZE (1, 2, or 5) (MS)	16	16
Work List	GROSS COUNTS (GC)	4076	4234
32086	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4	0.4
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	52B57	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	135.467	140.733
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.28E-04	
20000069	Concentration in $\mu\text{Ci/L}$ =	2.27E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	2.36E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.3186E-01	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
WL32086-STD	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
GLL			
Chemist			
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.32E-04	DETECTION LEVEL
Analyst			
GLL			
Date Complete			1.06E-06 $\mu\text{Ci/mL}$
01/12/2000	RELATIVE COUNTING ERROR =	3.1%	
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (G-0) ² ^{MD} ^{1/12/00} SOLIDS

Type	DETECTOR NUMBER	BLNK-PREP	REPLICATE
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	16	16
Work List	GROSS COUNTS (GC)	2	2
32086	COUNT TIME in MINUTES (CT)	7	10
AT or TB ?	BACKGROUND in cpm (BKG)	30	30
AT	SAMPLE SIZE in mL (SS)	0.4	0.4
Test Code	DILUTION FACTOR (DF)	0.250	0.250
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	10201	10201
Matrix	EFFICIENCY FACTOR (EFF)	5.1	5.1
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.2683	0.2683
Batch Number		0.269	0.269
20000069	Blank Concentration in $\mu\text{Ci/g}$	< 3.62E+00	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 3.62E+00	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 3.6193E+00	
Sample Prep			
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
WL32086-BLNK			
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
GLL			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 3.62E+00	DETECTION LEVEL
Analyst	LESS Than Value was Determined from Lc.		
GLL			
Date Complete	RELATIVE COUNTING ERROR	500.0%	8.46E+00 $\mu\text{Ci/g}$
01/12/2000			
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 1/12/00
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (G-0) ² ^{LD} ^{11/21/00} SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	180	168
32086	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4	0.4
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.1	5.1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	5.600	5.200
Batch Number			
20000069	Blank Concentration in $\mu\text{Ci/g}$	7.52E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.98E+01	
0	Average Concentration in $\mu\text{Ci/g}$	7.2536E+01	

Sample Prep	
FUSIONHC	$R_s \text{ (Sample Count Rate)} = (TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S00T000017	
Instrument Code	$\text{Relative Counting Error} = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Detection Levels and Less Than Values are determined from Procedure EA-500-002.			
Prepared By			
GLL			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	7.25E+01
Analyst			DETECTION LEVEL
GLL			
Date Complete			8.46E+00
01/12/2000	RELATIVE COUNTING ERROR	16.9%	$\mu\text{Ci/g}$
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

(/ system:exit)yes~

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:	<i>SAC</i>	Date: 12 Jan 00

SAMPLE.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (G-0) ^{2 LAD} _{1/12/00} SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	158	143
32086	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4	0.4
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.02	5.02
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	4.867	4.367
Batch Number			
20000069	Blank Concentration in $\mu\text{Ci/g}$	6.64E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	5.96E+01	
0	Average Concentration in $\mu\text{Ci/g}$	6.3002E+01	

Sample Prep	
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S00T000017	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By			
GLL			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	6.30E+01
Analyst			
GLL			
Date Complete			
01/12/2000	RELATIVE COUNTING ERROR		18.6%
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

{/ system,exit}yes~

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:	<i>[Signature]</i>	SAC Date: 12 Jan 00

SAMPLE.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE SAM6

AT : LA-508-101 (G-0) ^{2 MD} _{6/21/00} SOLIDS

	SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	256
32086	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4
AT	SAMPLE SIZE in mL (SS)	0.250
Test Code	DILUTION FACTOR (DF)	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.13
Matrix	EFFICIENCY FACTOR (EFF)	0.2683
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	8.133

Batch Number	
20000069	Blank Concentration in $\mu\text{Ci/g}$ 1.09E+02
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 1.09E+02
0	Average Concentration in $\mu\text{Ci/g}$ 1.0861E+02

Sample Prep	
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S00T000021	
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
GLL	
Chemist	
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.09E+02
Analyst	
GLL	
Date Complete	
01/12/2000	RELATIVE COUNTING ERROR 13.2%
Analysis Date	
01/11/2000	
Analysis Time	
03:05 PM	
Sample Point	
AZ-101	

(/ system:exit)yes~

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:		Date: 12 Jan 00
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP7

AT : LA-508-101 (G-0) ^{2 LAD} ^{12/11/00} SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5)	2	2
Work List	GROSS COUNTS (GC)	242	305
32086	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4	0.4
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.43	5.43
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	7.667	9.767
Batch Number			
20000069	Blank Concentration in $\mu\text{Ci/g}$	9.67E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.23E+02	
0	Average Concentration in $\mu\text{Ci/g}$	1.0997E+02	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000021			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
GLL			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.10E+02	DETECTION LEVEL
Analyst			
GLL			
Date Complete			7.94E+00
01/12/2000	RELATIVE COUNTING ERROR	13.6%	$\mu\text{Ci/g}$
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

(/ system;exit)yes~

Analyst:	GLL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SPK8

AT : LA-508-101 (G-0) LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	16	16
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	61244	63966
32086	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.4	0.4
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.250	0.250
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.13	5.13
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	12B59	12B59
20000069	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	3.8087E-02	3.8087E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2683	0.2683
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	2.73E+04	2.85E+04
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	1.0861E+02	
FUSIONHC			
Sample #			
S00T000021			
Instrument Code			
WB27806			
Prepared By			
GLL			
Chemist			
SAC			
Analyst			
GLL			
Date Complete			
01/12/2000			
Analysis Date			
01/11/2000			
Analysis Time			
03:05 PM			
Sample Point			
AZ-101			

R_s (Sample Count Rate) = $(TC / CT) - BKG$
 $SAMPLE + SPIKE \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
 $QC \text{ ACTUAL} = SVal$
 $QC \text{ FOUND} = ((S+S \mu\text{Ci/g} - SAMPLE \mu\text{Ci/g}) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))$
 $PERCENT \text{ SPIKE RECOVERY} = (QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$

QC ACTUAL	=	3.81E-02
QC FOUND	=	3.49E-02
AVG. PERCENT SPIKE RECOVERY	=	91.6%

Analyst:	GLL	Date: *****
Signature of Chemist:	SAC	Date: 12 Jan 01
SPIKE.WB1 Rev. 1.0	508101ML	

LABCORE Completed Worklist Report for Worklist# 32087

Analyst: scl Instrument: AB15 Book#: _____
Method: LA-508-101 Rev/Mod _____
Worklist Comment: AZ-101 FOR @ALPHA01 RTS

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01 ALPHA01	SOLID	2.28E-04	2.39E-4	104.825	% Recovery
1	STD		0		@ALPHA01 ALPHA01E	SOLID	1.00	3.02E+00	3.020	% Ct. Error
2	BLNK-PREP		0		@ALPHA01 ALPHA01	SOLID	1	<4.95E+0		uCi/g
2	BLNK-PREP		0		@ALPHA01 ALPHA01E	SOLID	1.00	1.96E+02	196.000	uCi/g
3	BLNK/BKG		0		@ALPHA01 ALPHA01	SOLID	1.00E+00	3.33E+00	3.330	BLNK/BKG
4	SAMPLE	S00T000022	0	F	@ALPHA01 ALPHA01	SOLID	N/A	9.90E+01	4.860	uCi/g
4	SAMPLE	S00T000022	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	1.40E+01		% Ct. Error
5	DUP	S00T000022	0	F	@ALPHA01 ALPHA01	SOLID	9.90E+1	1.10E+2	10.526	RPD
5	DUP	S00T000022	0	F	@ALPHA01 ALPHA01E	SOLID	1.00	1.23E+01	12.300	% Ct. Error
6	SAMPLE	S00T000023	0	F	@ALPHA01 ALPHA01	SOLID	N/A	8.84E+01	2.250	uCi/g
6	SAMPLE	S00T000023	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	9.60E+00		% Ct. Error
7	DUP	S00T000023	0	F	@ALPHA01 ALPHA01	SOLID	8.84E+1	8.56E+1	3.218	RPD
7	DUP	S00T000023	0	F	@ALPHA01 ALPHA01E	SOLID	1.00	9.73E+00	9.730	% Ct. Error

Comments Section:

Comments for sample# S00T000022 and test @ALPHA01.
Result out of limits: @ALPHA01 ALPHA01 in sample S00T000022

Comments for sample# S00T000023 and test @ALPHA01.
Result out of limits: @ALPHA01 ALPHA01 in sample S00T000023

Final page for worklist# 32087

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 12 Jan 00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 32087

Analyst: S. L Instrument: AB00 Book# 52857

Method: LA-508-101 Rev/Mod G7-2

Worklist Comment: AZ-101 FOR @ALPHA01 RTS

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S00T000022	0	F	@ALPHA01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
5	DUP	S00T000022	0	F	@ALPHA01	SOLID		
6	SAMPLE	S00T000023	0	F	@ALPHA01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: ALPHA01 , ALPHA01E						
7	DUP	S00T000023	0	F	@ALPHA01	SOLID		

Final page for worklist # 32087

Sue Lai 1-11-2000
Signature Date

[Signature] 1/12/00
Signature Date
[Signature] 1/12/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1 2-14-00

AT : LA-508-101 (G-0) LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	4216	4371
32087	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	52B57	52B57
Matrix	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	140.433	145.600
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.28E-04	
20000070	Concentration in $\mu\text{Ci/L}$ =	2.35E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	2.43E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	2.3904E-01	

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
WL32087	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.39E-04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			6.02E-07 $\mu\text{Ci/mL}$
01/12/2000	RELATIVE COUNTING ERROR =	3.0%	
Analysis Date			
01/11/2000			
Analysis Time			
03:00 PM			
Sample Point			
AZ-101			

Analyst:	SZC	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (G-0)²_{1/12/00} SOLIDS

	BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	15
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	14
32087	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1
AT	SAMPLE SIZE in mL (SS)	0.250
Test Code	DILUTION FACTOR (DF)	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.05
Matrix	EFFICIENCY FACTOR (EFF)	0.2695
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.367
Batch Number		
20000070	Blank Concentration in $\mu\text{Ci/g}$	4.95E+00
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 3.58E+00
0	Maximum Concentration in $\mu\text{Ci/g}$	< 4.9519E+00
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$	
WL32087		
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 4.95E+00
Analyst		
SCL	LESS THAN Value was Determined from R_s .	
Date Complete	RELATIVE COUNTING ERROR	196.0%
01/12/2000		
Analysis Date		
01/11/2000		
Analysis Time		
03:00 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00

BLANK.WB1 Rev. 1.0

508101ML

1511

WORKBOOK PAGE: SAM4

AT : LA-508-101 (G-0) ² _{1.51/1.0} SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	205	241
32087	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.250	0.250
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.05	5.05
Matrix	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	6.733	7.933
Batch Number			
20000070	Blank Concentration in $\mu\text{Ci/g}$	9.09E+01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.07E+02	
0	Average Concentration in $\mu\text{Ci/g}$	9.9038E+01	
Sample Prep			
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S00T000022			
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	9.90E+01	DETECTION LEVEL
Analyst			
SCL			
Date Complete	RELATIVE COUNTING ERROR	14.0%	4.86E+00 $\mu\text{Ci/g}$
01/12/2000			
Analysis Date			
01/11/2000			
Analysis Time			
03:00 PM			
Sample Point			
AZ-101			

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00

SAMPLE.WB1 Rev. 1.0

508101ML

1512

WORKBOOK PAGE: DUP5

AT : LA-508-101 (G-0)²_{AD} SOLIDS

	DUP	REPLICATE
Type	DETECTOR NUMBER	15
DUP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	263
32087	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1
AT	SAMPLE SIZE in mL (SS)	0.250
Test Code	DILUTION FACTOR (DF)	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.54
Matrix	EFFICIENCY FACTOR (EFF)	0.2695
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	8.667
Batch Number		
20000070	Blank Concentration in $\mu\text{Ci/g}$	1.07E+02
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.14E+02
0	Average Concentration in $\mu\text{Ci/g}$	1.1018E+02
Sample Prep		
FUSIONHC	R_s (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$	
S00T000022		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.10E+02
Analyst		
SCL		
Date Complete		
01/12/2000	RELATIVE COUNTING ERROR	12.3%
Analysis Date		
01/11/2000		
Analysis Time		
03:00 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00

SAMPLE.WB1 Rev. 1.0

508101ML

1513

WORKBOOK PAGE: SAM6

AT : LA-508-101 (G-0) ² _{11/21/00} SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	429	426
32087	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	10201	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.46	5.46
Matrix	EFFICIENCY FACTOR (EFF)	0.2695	0.2695
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	14.200	14.100

Batch Number	
20000070	Blank Concentration in $\mu\text{Ci/g}$ 8.87E+01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 8.81E+01
0	Average Concentration in $\mu\text{Ci/g}$ 8.8374E+01

Sample Prep	
FUSIONHC	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S00T000023	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SZC	
Chemist	
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 8.84E+01
Analyst	
SCL	
Date Complete	
01/12/2000	RELATIVE COUNTING ERROR 9.6%
Analysis Date	
01/11/2000	
Analysis Time	
03:00 PM	
Sample Point	
AZ-101	

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	<i>SAC</i>	SAC Date: <i>11 Jan 00</i>
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP7

AT : LA-508-101 (G-0) ²⁴⁹ _{1/21/00} SOLIDS

	DUP	REPLICATE
Type	DETECTOR NUMBER	15
DUP	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	415
32087	COUNT TIME in MINUTES (CT)	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.1
AT	SAMPLE SIZE in mL (SS)	0.500
Test Code	DILUTION FACTOR (DF)	10201
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	5.54
Matrix	EFFICIENCY FACTOR (EFF)	0.2695
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	13.733
Batch Number		
20000070	Blank Concentration in $\mu\text{Ci/g}$	8.45E+01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	8.66E+01
0	Average Concentration in $\mu\text{Ci/g}$	8.5559E+01
Sample Prep		
FUSIONHC	Rs (Sample Count Rate) = (TC / CT) - BKG	
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)	
S00T000023		
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SAC	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	8.56E+01
Analyst		
SCL		
Date Complete	RELATIVE COUNTING ERROR	9.7%
01/12/2000		
Analysis Date		
01/11/2000		
Analysis Time		
03:00 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date: 12-Jan-2000
Signature of Chemist:	SAC	Date: 12 Jan 00
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed Worklist Report for Worklist# 31890

Analyst: aki

Instrument: GEA01

Book#: 46B57

Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ101 FOR @GEA-08, mcb

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@GEA-08 CO60-02	LIQUID	4.894e-03	5.41e-03	110.544	% Recovery
1	STD		0		@GEA-08 CO60-02E	LIQUID	1	2.87	2.870	% Ct Error
1	STD		0		@GEA-08 CS13702	LIQUID	7.984e-03	8.01e-03	100.326	% Recovery
1	STD		0		@GEA-08 CS13702E	LIQUID	1	2.69	2.690	% Ct Error
2	BLNK		0		@GEA-08 CO60-02	LIQUID	1	<2.79e-6		uCi/mL
2	BLNK		0		@GEA-08 SB12502	LIQUID	1	<7.32e-6		uCi/mL
2	BLNK		0		@GEA-08 CS13402	LIQUID	1	<2.55e-6		uCi/mL
2	BLNK		0		@GEA-08 CS13702	LIQUID	1	<3.31e-6		uCi/mL
2	BLNK		0		@GEA-08 EU15202	LIQUID	1	<5.79e-6		uCi/mL
2	BLNK		0		@GEA-08 EU15402	LIQUID	1	<8.12e-6		uCi/mL
2	BLNK		0		@GEA-08 EU15502	LIQUID	1	<4.28e-6		uCi/mL
2	BLNK		0		@GEA-08 RA22602	LIQUID	1	<5.55e-5		uCi/mL
2	BLNK		0		@GEA-08 AC22802	LIQUID	1	<1.56e-5		uCi/mL
2	BLNK		0		@GEA-08 AM24102	LIQUID	1	<3.86e-6		uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 CO60-02	LIQUID	N/A	< 2.672e-06	2.67e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 CO60-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 SB12502	LIQUID	N/A	< 7.285e-06	7.28e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 SB12502E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 CS13402	LIQUID	N/A	< 2.300e-06	2.30e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 CS13402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 CS13702	LIQUID	N/A	< 3.245e-06	3.24e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 CS13702E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 EU15202	LIQUID	N/A	< 5.752e-06	5.75e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 EU15202E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 EU15402	LIQUID	N/A	< 8.982e-06	8.98e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 EU15402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 EU15502	LIQUID	N/A	< 4.321e-06	4.32e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 EU15502E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 RA22602	LIQUID	N/A	< 5.616e-05	5.62e-005	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 RA22602E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 AC22802	LIQUID	N/A	< 1.596e-05	1.60e-005	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 AC22802E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S99T001892	0		@GEA-08 AM24102	LIQUID	N/A	< 3.819e-06	3.82e-006	uCi/mL
3	SAMPLE	S99T001892	0		@GEA-08 AM24102E	LIQUID	N/A	n/a		% Ct. Error
4	DUP	S99T001892	0		@GEA-08 CO60-02	LIQUID	<2.67e-6	<2.96e-6		RPD
4	DUP	S99T001892	0		@GEA-08 CO60-02E	LIQUID	1	n/a		% Ct Error
4	DUP	S99T001892	0		@GEA-08 SB12502	LIQUID	<7.28e-6	<7.20e-6		RPD
4	DUP	S99T001892	0		@GEA-08 SB12502E	LIQUID	1	n/a		% Ct Error
4	DUP	S99T001892	0		@GEA-08 CS13402	LIQUID	<2.30e-6	<2.50e-6		RPD
4	DUP	S99T001892	0		@GEA-08 CS13402E	LIQUID	1	n/a		% Ct Error
4	DUP	S99T001892	0		@GEA-08 CS13702	LIQUID	<3.24e-6	<3.41e-6		RPD

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 31890

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 DUP	S99T001892	0	GEA-08	CS13702E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	FU15202 LIQUID	<5.75e-6	<5.74e-6		RPD
4 DUP	S99T001892	0	GEA-08	FU15202E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	FU15402 LIQUID	<8.98e-6	<9.19e-6		RPD
4 DUP	S99T001892	0	GEA-08	FU15402E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	FU15502 LIQUID	<4.32e-6	<4.32e-6		RPD
4 DUP	S99T001892	0	GEA-08	FU15502E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	RA22602 LIQUID	<5.62e-5	<5.41e-5		RPD
4 DUP	S99T001892	0	GEA-08	RA22602E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	AC22802 LIQUID	<1.60e-5	<1.65e-5		RPD
4 DUP	S99T001892	0	GEA-08	AC22802E LIQUID	1	n/a		% Ct Error
4 DUP	S99T001892	0	GEA-08	AM24102 LIQUID	<3.82e-6	<3.83e-6		RPD
4 DUP	S99T001892	0	GEA-08	AM24102E LIQUID	1	n/a		% Ct Error

Final page for worklist# 31890

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

 Reviewer Signature _____ Date 12/9/99

Units shown for QC (BLK/BKG) may not reflect the actual units.

12/08/99 15:27
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 31890Analyst: AKL Instrument: GEA00 / Book# 46B57Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ101 FOR @GEA-08, mcb

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@GEA-08	LIQUID		
2	BLNK				@GEA-08	LIQUID		
3	SAMPLE	S99T001892 0			@GEA-08	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 , CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 , EU15502E, RA22602 , RA22602E, SB12502 , SB12502E								
4	DUP	S99T001892 0			@GEA-08	LIQUID		

Final page for worklist # 31890

Signature

Date

Signature

Date

MGB 12/8/99

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

12/07/99 11:25
ws2

HNF-1701 REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 31890

Analyst: ALL Instrument: GEA00 _____ Book# 46657

Method: LA-548-121 Rev/Mod F2

Worklist Comment: AZ101 FOR @GEA-07, RLC

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-07	LIQUID		
2 BLNK			@GEA-07	LIQUID		
3 SAMPLE	S99T001892 0		@GEA-07	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 , CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 , EU15502E, RA22602 , RA22602E, SB12502 , SB12502E						
4 DUP	S99T001892 0		@GEA-07	LIQUID		

Final page for worklist # 31890

Alita Huron 12/8/99
Signature Date

Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Q shel #2

1519

 * 222-S Laboratory Counting Room 8-DEC-1999 16:09:06.42 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 31890
 Sample ID: WL31890-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1588.cnf
 Geometry: 41
 Count Time: 0 00:50:00.00 sec
 Real Time: 0 00:50:16.09 sec
 Dead Time: 0.5%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 8-DEC-1999 15:18:20.09
 Decayed to: 8-DEC-1999 15:18:20.09
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	31.84	1174	1.05	63.88	59	10	12.1			
0	36.39	318	1.22	72.99	69	9	34.6			
0	59.55	236	0.83	119.29	115	9	45.7		AM-241	0.180
0	661.79*	6809	1.48	1323.47	1315	16	2.7		CS-137	8.01
0	1173.38	3346	1.83	2346.76	2337	20	4.1		CO-60	5.62
0	1332.61	2823	1.90	2665.33	2655	17	4.0		CO-60	5.25

Summary of Nuclide Activity
 Sample ID : WL31890-STD

Page : 2
 Acquisition date : 8-DEC-1999 15:18:20

Total number of lines in spectrum 6
 Number of unidentified lines 2
 Number of lines tentatively identified by NID 4 66.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected uCi/L	Decay Corr uCi/L			
CO-60	5.27Y	1.00	5.414E+00	5.414E+00	0.155E+00	2.87	
CS-137	30.00Y	1.00	8.012E+00	8.012E+00	0.215E+00	2.69	
AM-241	432.20Y	1.00	1.802E-01	1.802E-01	0.823E-01	45.67	
Total Activity :			1.361E+01	1.361E+01			

Grand Total Activity : 1.361E+01 1.361E+01

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report

Sample ID : WL31890-STD

Page : 3

Acquisition date : 8-DEC-1999 15:18:20

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	451.	477.59	7.2283E-01
NA-24	30.	1368.55	5.4123E-02
K-40	566.	1460.75	2.1153E+00
AR-41	49.	1293.60	7.4994E-02
SC-46	230.	1120.55	1.1816E-01
CR-51	477.	320.08	5.3147E-01
MN-54	225.	834.83	9.0263E-02
CO-56	225.	846.76	9.1403E-02
CO-58	210.	810.78	8.5407E-02
FE-59	193.	1099.25	1.8943E-01
ZN-65	197.	1115.55	2.1531E-01
SE-75	542.	264.66	8.3271E-02
KR-85	386.	514.00	1.7118E+01
SR-85	386.	514.01	7.7364E-02
Y-88	9.	1836.06	3.8370E-02
Y-91	81.	1204.67	2.5527E+01
NB-94	227.	871.09	9.4170E-02
ZRNB-95	200.	724.20	3.3829E-01
RU-103	370.	497.08	7.7526E-02
RURH-106	229.	621.93	1.3924E+00
AG-108m	193.	722.94	8.0680E-02
CD-109	579.	88.03	8.2519E-01
AG-110M	360.	657.76	9.5876E-02
SN-113	416.	391.69	9.3593E-02
TE-123m	721.	159.00	4.7387E-02
SB-124	262.	602.73	7.3181E-02
SB-125	439.	427.89	2.2653E-01
TE-125m	681.	109.27	1.1834E+01
I-129	445.	39.60	4.6776E-01
I-131	467.	364.48	7.3226E-02
XE-131m	745.	163.93	2.0999E+00
BA-133	448.	356.02	9.1778E-02
CS-134	243.	604.70	7.0879E-02
CS-136	198.	818.51	8.3557E-02
CS-138	23.	1435.86	1.0466E-01
CE-139	689.	165.85	4.9866E-02
BA-140	279.	537.31	2.7168E-01
LA-140	16.	1596.21	4.7931E-02
CE-141	730.	145.44	7.9491E-02
CE-144	732.	133.51	3.3308E-01
CEPR-144	732.	133.51	6.6544E-01
EU-152	734.	121.78	1.2587E-01
EU-154	49.	1274.51	1.8449E-01
EU-155	639.	86.54	9.5255E-02
HF-181	394.	482.18	8.7829E-02
TA-182	506.	67.75	6.8914E-02
HG-203	533.	279.20	6.1925E-02
BI-207	261.	569.70	6.9231E-02
TL-208	532.	277.36	7.9384E-01
PB-210	501.	46.50	8.1598E-01
BI-212	243.	727.18	1.2385E+00

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL31890-STD

Acquisition date : 8-DEC-1999 15:18:20

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-212	712.	238.63	1.1784E-01
BI-214	331.	609.31	1.8077E-01
PB-214	605.	351.92	3.2582E-01
RA-224	606.	240.99	1.2089E+00
RA-226	774.	186.10	1.2888E+00
AC-228	316.	911.21	4.3261E-01
TH-228	641.	84.37	2.4694E+00
TH-229	571.	88.47	1.1986E-01
U-232	528.	57.78	1.5166E+01
PA-233	466.	312.17	1.3426E-01
UTH-233	588.	245.34	4.3456E+01
PA-234M	222.	1001.03	1.6212E+01
TH-234	534.	63.29	7.7985E-01
U-235	780.	185.71	7.8634E-02
NP-237	644.	86.48	2.5282E-01
U-237	616.	101.07	1.2321E-01
NP-238	213.	984.45	3.6820E-01
NP-239	588.	106.12	1.3533E-01
PU-239	733.	129.30	5.6927E+02
AM-243	676.	74.67	5.3718E-02

* 222-S Laboratory Counting Room 8-DEC-1999 19:24:12.19 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 31890
Sample ID: WL31890-BLK
Sample Size: 1.00000E-02 L
Dilution Factor: 1.00000E+00

Removed by:

Newlight

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
File Number: dka300:[spec.GEA1]1g1589.cnf
Geometry: 41
Count Time: 0 02:30:00.00 sec
Real Time: 0 02:30:50.46 sec
Dead Time: 0.6%

Verified by:

John Relyea 9Dec99

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 8-DEC-1999 16:52:50.23
Decayed to: 8-DEC-1999 16:52:50.23
Standard Deviations: 2
Analysis Library: ENVGEA
Analyst: VR
Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

***** No peaks found *****

Summary of Nuclide Activity
Sample ID : WL31890-BLK

Page : 2
Acquisition date : 8-DEC-1999 16:52:50

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report

Page : 3

Sample ID : WL31890-BLK

Acquisition date : 8-DEC-1999 16:52:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	325.	477.59	2.0567E-02
NA-24	67.	1368.55	2.7325E-03
K-40	1766.	1460.75	1.2329E-01
AR-41	86.	1293.60	4.3433E-03
SC-46	284.	1120.55	4.3614E-03
CR-51	594.	320.08	1.9725E-02
MN-54	177.	834.83	2.6826E-03
CO-56	160.	846.76	2.5906E-03
CO-58	158.	810.78	2.4857E-03
FE-59	148.	1099.25	5.5489E-03
CO-60	83.	1332.50	2.7852E-03
ZN-65	153.	1115.55	6.3613E-03
SE-75	781.	264.66	3.3191E-03
KR-85	424.	514.00	5.9721E-01
SR-85	423.	514.01	2.6988E-03
Y-88	21.	1836.06	1.8746E-03
Y-91	165.	1204.67	1.1889E+00
NB-94	164.	871.09	2.6862E-03
ZRNB-95	219.	724.20	1.1767E-02
RU-103	343.	497.08	2.4932E-03
RURH-106	222.	621.93	4.5712E-02
AG-108m	209.	722.94	2.7960E-03
CD-109	1180.	88.03	3.9001E-02
AG-110M	207.	657.76	2.4429E-03
SN-113	453.	391.69	3.2526E-03
TE-123m	1304.	159.00	2.1126E-03
SB-124	242.	602.73	2.3472E-03
SB-125	411.	427.89	7.3152E-03
TE-125m	1270.	109.27	5.3555E-01
I-129	721.	39.60	1.9732E-02
I-131	459.	364.48	2.4263E-03
XE-131m	1343.	163.93	9.3647E-02
BA-133	491.	356.02	3.1988E-03
CS-134	283.	604.70	2.5460E-03
CS-136	182.	818.51	2.6815E-03
CS-137	309.	661.66	3.3123E-03
CS-138	51.	1435.86	1.0431E-02
CE-139	1333.	165.85	2.2974E-03
BA-140	295.	537.31	9.3168E-03
LA-140	43.	1596.21	2.5069E-03
CE-141	1405.	145.44	3.6570E-03
CE-144	1489.	133.51	1.5737E-02
CEPR-144	1489.	133.51	3.1446E-02
EU-152	1417.	121.78	5.7935E-03
EU-154	90.	1274.51	8.1199E-03
EU-155	1176.	86.54	4.2812E-03
HF-181	347.	482.18	2.7524E-03
TA-182	949.	67.75	3.1252E-03
HG-203	706.	279.20	2.3680E-03
BI-207	284.	569.70	2.4028E-03
TL-208	718.	277.36	3.0655E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL31890-BLK

Acquisition date : 8-DEC-1999 16:52:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-210	857.	46.50	3.5470E-02
BI-212	278.	727.18	4.4094E-02
PB-212	1224.	238.63	5.1241E-03
BI-214	672.	609.31	8.5071E-03
PB-214	820.	351.92	2.8086E-02
RA-224	1031.	240.99	5.2632E-02
RA-226	1303.	186.10	5.5475E-02
AC-228	374.	911.21	1.5648E-02
TH-228	1314.	84.37	1.1704E-01
TH-229	1168.	88.47	5.6725E-03
U-232	995.	57.78	6.8960E-01
PA-233	609.	312.17	5.1039E-03
UTH-233	855.	245.34	1.7395E+00
PA-234M	161.	1001.03	4.6316E-01
TH-234	1098.	63.29	3.6990E-02
U-235	1310.	185.71	3.3817E-03
NP-237	1191.	86.48	1.1391E-02
U-237	1232.	101.07	5.7902E-03
NP-238	152.	984.45	1.0580E-02
NP-239	1310.	106.12	6.7514E-03
PU-239	1407.	129.30	2.6138E+01
AM-241	1028.	59.54	3.8614E-03
AM-243	1259.	74.67	2.4292E-03

 * 222-S Laboratory Counting Room 8-DEC-1999 22:44:09.10 *

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 31890
 Sample ID: S99T001892-SAM
 Sample Size: 1.00000E-02 L
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1590.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:53.43 sec
 Dead Time: 0.6%

Verified by:

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 8-DEC-1999 20:12:45.89
 Decayed to: 8-DEC-1999 20:12:45.89
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: NEW
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/L
0	1460.92*	87	1.83	2922.07	2912	20118.6		K-40	5.434E-02

Summary of Nuclide Activity

Page : 2

Sample ID : S99T001892-SAM

Acquisition date : 8-DEC-1999 20:12:45

Total number of lines in spectrum 1
 Number of unidentified lines 0
 Number of lines tentatively identified by NID 1 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.434E-02	5.434E-02	6.443E-02	118.57	97
Total Activity :			5.434E-02	5.434E-02			92 Dec 99

Grand Total Activity : 5.434E-02 5.434E-02

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T001892-SAM

Page : 3
Acquisition date : 8-DEC-1999 20:12:45

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	340.	477.59	2.1001E-02
NA-24	48.	1368.55	2.3330E-03
AR-41	90.	1293.60	4.4380E-03
SC-46	285.	1120.55	4.3699E-03
CR-51	629.	320.08	2.0294E-02
MN-54	187.	834.83	2.7532E-03
CO-56	162.	846.76	2.6062E-03
CO-58	158.	810.78	2.4851E-03
FE-59	144.	1099.25	5.4879E-03
CO-60	76.	1332.50	2.6722E-03
ZN-65	138.	1115.55	6.0516E-03
SE-75	834.	264.66	3.4275E-03
KR-85	432.	514.00	6.0244E-01
SR-85	431.	514.01	2.7217E-03
Y-88	22.	1836.06	1.9269E-03
Y-91	151.	1204.67	1.1388E+00
NB-94	174.	871.09	2.7633E-03
ZRNB-95	196.	724.20	1.1179E-02
RU-103	341.	497.08	2.4851E-03
RURH-106	236.	621.93	4.7139E-02
AG-108m	193.	722.94	2.6905E-03
CD-109	1192.	88.03	3.9182E-02
AG-110M	214.	657.76	2.4870E-03
SN-113	442.	391.69	3.2116E-03
TE-123m	1261.	159.00	2.0784E-03
SB-124	221.	602.73	2.2493E-03
SB-125	407.	427.89	7.2849E-03
TE-125m	1372.	109.27	5.5627E-01
I-129	755.	39.60	2.0188E-02
I-131	465.	364.48	2.4416E-03
XE-131m	1354.	163.93	9.4036E-02
BA-133	534.	356.02	3.3338E-03
CS-134	229.	604.70	2.2998E-03
CS-136	176.	818.51	2.6391E-03
CS-137	296.	661.66	3.2454E-03
CS-138	57.	1435.86	1.0993E-02
CE-139	1371.	165.85	2.3298E-03
BA-140	292.	537.31	9.2755E-03
LA-140	42.	1596.21	2.4828E-03
CE-141	1419.	145.44	3.6747E-03
CE-144	1466.	133.51	1.5617E-02
CEPR-144	1466.	133.51	3.1205E-02
EU-152	1396.	121.78	5.7515E-03
EU-154	111.	1274.51	8.9824E-03
EU-155	1199.	86.54	4.3206E-03
HF-181	334.	482.18	2.7033E-03
TA-182	900.	67.75	3.0446E-03
HG-203	733.	279.20	2.4124E-03
BI-207	264.	569.70	2.3221E-03
TL-208	797.	277.36	3.2247E-02
PB-210	863.	46.50	3.5595E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T001892-SAM

Acquisition date : 8-DEC-1999 20:12:45

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BI-212	248.	727.18	4.1692E-02
PB-212	1201.	238.63	5.0783E-03
BI-214	648.	609.31	8.3563E-03
PB-214	840.	351.92	2.8437E-02
RA-224	1019.	240.99	5.2323E-02
RA-226	1335.	186.10	5.6159E-02
AC-228	390.	911.21	1.5959E-02
TH-228	1239.	84.37	1.1367E-01
TH-229	1189.	88.47	5.7226E-03
U-232	1017.	57.78	6.9702E-01
PA-233	636.	312.17	5.2142E-03
UTH-233	863.	245.34	1.7473E+00
PA-234M	157.	1001.03	4.5759E-01
TH-234	1029.	63.29	3.5827E-02
U-235	1316.	185.71	3.3891E-03
NP-237	1207.	86.48	1.1467E-02
U-237	1222.	101.07	5.7670E-03
NP-238	137.	984.45	1.0046E-02
NP-239	1379.	106.12	6.9244E-03
PU-239	1398.	129.30	2.6064E+01
AM-241	1005.	59.54	3.8193E-03
AM-243	1255.	74.67	2.4257E-03

* 222-S Laboratory Counting Room 9-DEC-1999 05:03:20.20 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 31890
Sample ID: S99T001892-DUP
Sample Size: 1.00000E-02 L
Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
File Number: dka300:[spec.GEA1]1g1593.cnf
Geometry: 41
Count Time: 0 02:30:00.00 sec
Real Time: 0 02:30:50.63 sec
Dead Time: 0.6%

Verified by:

9 Dec 99

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 9-DEC-1999 02:32:00.90
Decayed to: 9-DEC-1999 02:32:00.90
Standard Deviations: 2
Analysis Library: ENVGEA
Analyst: NEW
Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

***** No peaks found *****

Summary of Nuclide Activity
Sample ID : S99T001892-DUP

Page : 2
Acquisition date : 9-DEC-1999 02:32:00

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
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"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T001892-DUP

Page : 3
Acquisition date : 9-DEC-1999 02:32:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	329.	477.59	2.0676E-02
NA-24	60.	1368.55	2.5861E-03
K-40	1732.	1460.75	1.2211E-01
AR-41	112.	1293.60	4.9084E-03
SC-46	275.	1120.55	4.2945E-03
CR-51	585.	320.08	1.9575E-02
MN-54	178.	834.83	2.6839E-03
CO-56	154.	846.76	2.5451E-03
CO-58	190.	810.78	2.7147E-03
FE-59	131.	1099.25	5.2522E-03
CO-60	94.	1332.50	2.9587E-03
ZN-65	149.	1115.55	6.2776E-03
SE-75	805.	264.66	3.3686E-03
KR-85	384.	514.00	5.6891E-01
SR-85	383.	514.01	2.5707E-03
Y-88	22.	1836.06	1.9010E-03
Y-91	148.	1204.67	1.1289E+00
NB-94	167.	871.09	2.7131E-03
ZRNB-95	196.	724.20	1.1154E-02
RU-103	310.	497.08	2.3730E-03
RURH-106	237.	621.93	4.7179E-02
AG-108m	206.	722.94	2.7752E-03
CD-109	1135.	88.03	3.8251E-02
AG-110M	222.	657.76	2.5283E-03
SN-113	447.	391.69	3.2316E-03
TE-123m	1326.	159.00	2.1305E-03
SB-124	277.	602.73	2.5082E-03
SB-125	398.	427.89	7.2003E-03
TE-125m	1301.	109.27	5.4186E-01
I-129	764.	39.60	2.0298E-02
I-131	467.	364.48	2.4474E-03
XE-131m	1379.	163.93	9.4890E-02
BA-133	543.	356.02	3.3602E-03
CS-134	273.	604.70	2.5026E-03
CS-136	164.	818.51	2.5534E-03
CS-137	328.	661.66	3.4073E-03
CS-138	61.	1435.86	1.1323E-02
CE-139	1342.	165.85	2.3056E-03
BA-140	285.	537.31	9.1569E-03
LA-140	37.	1596.21	2.3549E-03
CE-141	1347.	145.44	3.5823E-03
CE-144	1435.	133.51	1.5453E-02
CEPR-144	1435.	133.51	3.0877E-02
EU-152	1393.	121.78	5.7449E-03
EU-154	117.	1274.51	9.1942E-03
EU-155	1200.	86.54	4.3227E-03
HF-181	324.	482.18	2.6638E-03
TA-182	934.	67.75	3.1010E-03
HG-203	765.	279.20	2.4633E-03
BI-207	287.	569.70	2.4152E-03
TL-208	773.	277.36	3.1772E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T001892-DUP

Acquisition date : 9-DEC-1999 02:32:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-210	867.	46.50	3.5678E-02
BI-212	237.	727.18	4.0802E-02
PB-212	1232.	238.63	5.1420E-03
BI-214	634.	609.31	8.2655E-03
PB-214	802.	351.92	2.7781E-02
RA-224	1022.	240.99	5.2403E-02
RA-226	1239.	186.10	5.4117E-02
AC-228	416.	911.21	1.6468E-02
TH-228	1315.	84.37	1.1705E-01
TH-229	1125.	88.47	5.5685E-03
U-232	1067.	57.78	7.1358E-01
PA-233	621.	312.17	5.1537E-03
UTH-233	864.	245.34	1.7484E+00
PA-234M	159.	1001.03	4.6140E-01
TH-234	1055.	63.29	3.6260E-02
U-235	1241.	185.71	3.2926E-03
NP-237	1212.	86.48	1.1489E-02
U-237	1241.	101.07	5.8098E-03
NP-238	128.	984.45	9.7237E-03
NP-239	1315.	106.12	6.7643E-03
PU-239	1345.	129.30	2.5572E+01
AM-241	1010.	59.54	3.8291E-03
AM-243	1248.	74.67	2.4186E-03

LABCORE Completed Worklist Report for Worklist# 33252

Analyst: scl

Instrument: GEA02

Book#: 6057

Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @GEA-05 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD	0			@GEA-05 CO60-02	SOLID	2.699e-03	2.65e-03	98.185 % Recovery	
1	STD	0			@GEA-05 CO60-02H	SOLID	1	4.44	4.440 % Ct Error	
1	STD	0			@GEA-05 CS13702	SOLID	6.127e-03	6.40e-03	104.456 % Recovery	
1	STD	0			@GEA-05 CS13702H	SOLID	1	3.18	3.180 % Ct Error	
2	BLNK-PREP	0			@GEA-05 NA22-02	SOLID	1	<4.16e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 NA24-02	SOLID	1	<3.14e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 K40-02	SOLID	1	<1.27e1		uCi/g
2	BLNK-PREP	0			@GEA-05 CO56-02	SOLID	1	<3.38e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 CO57-02	SOLID	1	<2.27e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 CO60-02	SOLID	1	<3.70e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 SE75-02	SOLID	1	<4.07e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 SR85-02	SOLID	1	<3.90e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 Y88-02	SOLID	1	<3.77e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 NB94-02	SOLID	1	<3.69e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 ZR95-02	SOLID	1	<1.65e0		uCi/g
2	BLNK-PREP	0			@GEA-05 RU10302	SOLID	1	<3.28e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 RU10602	SOLID	1	<6.38e0		uCi/g
2	BLNK-PREP	0			@GEA-05 CD10902	SOLID	1	<7.28e0		uCi/g
2	BLNK-PREP	0			@GEA-05 SW11302	SOLID	1	<4.30e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 SB12502	SOLID	1	<9.91e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 I13102	SOLID	1	<3.22e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 CS13402	SOLID	1	<3.21e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 CS13702	SOLID	1	<8.61e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 CE14402	SOLID	1	<3.48e0		uCi/g
2	BLNK-PREP	0			@GEA-05 RU15202	SOLID	1	<6.93e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 RU15402	SOLID	1	<1.21e0		uCi/g
2	BLNK-PREP	0			@GEA-05 RU15502	SOLID	1	<8.64e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 HG20302	SOLID	1	<2.98e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 TL20802	SOLID	1	<4.00e0		uCi/g
2	BLNK-PREP	0			@GEA-05 BI21202	SOLID	1	<6.30e0		uCi/g
2	BLNK-PREP	0			@GEA-05 PB21202	SOLID	1	<5.64e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 BI21402	SOLID	1	<1.05e0		uCi/g
2	BLNK-PREP	0			@GEA-05 PB21402	SOLID	1	<3.45e0		uCi/g
2	BLNK-PREP	0			@GEA-05 RA22402	SOLID	1	<5.84e0		uCi/g
2	BLNK-PREP	0			@GEA-05 RA22602	SOLID	1	<6.10e0		uCi/g
2	BLNK-PREP	0			@GEA-05 AC22802	SOLID	1	<1.81e0		uCi/g
2	BLNK-PREP	0			@GEA-05 TH22802	SOLID	1	<2.30e1		uCi/g
2	BLNK-PREP	0			@GEA-05 TH22902	SOLID	1	<1.05e0		uCi/g
2	BLNK-PREP	0			@GEA-05 U23302	SOLID	1	<2.05e2		uCi/g
2	BLNK-PREP	0			@GEA-05 PA23302	SOLID	1	<6.26e-1		uCi/g
2	BLNK-PREP	0			@GEA-05 PA23402	SOLID	1	<5.72e1		uCi/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
2	BLNK-PREP	0			EGEA-05 TE23402	SOLID	1	<1.48e1		uCi/g
2	BLNK-PREP	0			EGEA-05 U23502	SOLID	1	<3.65e-1		uCi/g
2	BLNK-PREP	0			EGEA-05 NP23702	SOLID	1	<2.29e0		uCi/g
2	BLNK-PREP	0			EGEA-05 NP23902	SOLID	1	<9.57e-1		uCi/g
2	BLNK-PREP	0			EGEA-05 PU23902	SOLID	1	<3.18e3		uCi/g
2	BLNK-PREP	0			EGEA-05 AM24102	SOLID	1	<1.96e0		uCi/g
2	BLNK-PREP	0			EGEA-05 AM24302	SOLID	1	<6.62e-1		uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 NA22-02	SOLID	N/A	< 1.087e+01	10.870	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 NA22-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 NA24-02	SOLID	N/A	< 4.013e-01	0.401	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 NA24-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 K40-02	SOLID	N/A	< 1.238e+01	12.380	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 K40-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 C056-02	SOLID	N/A	< 6.325e-01	0.632	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 C056-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 C057-02	SOLID	N/A	< 1.452e+01	14.520	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 C057-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 C060-02	SOLID	N/A	2.694e+00		uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 C060-02E	SOLID	N/A	16.3		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 SE75-02	SOLID	N/A	< 1.762e+00	1.762	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 SE75-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 SR85-02	SOLID	N/A	< 1.362e+00	1.362	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 SR85-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 Y88-02	SOLID	N/A	< 3.181e-01	0.318	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 Y88-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 NB94-02	SOLID	N/A	< 9.653e-01	0.965	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 NB94-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 ZR95-02	SOLID	N/A	< 2.769e+01	27.690	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 ZR95-02E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 RU10302	SOLID	N/A	< 1.469e+00	1.469	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 RU10302E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 RU10602	SOLID	N/A	< 2.049e+01	20.490	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 RU10602E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 CD10902	SOLID	N/A	< 5.118e+01	51.180	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 CD10902E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 SN11302	SOLID	N/A	< 1.998e+00	1.998	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 SN11302E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 SB12502	SOLID	N/A	1.708e+01		uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 SB12502E	SOLID	N/A	15.4		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 I13102	SOLID	N/A	< 1.498e+00	1.498	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 I13102E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 CS13402	SOLID	N/A	< 1.123e+00	1.123	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 CS13402E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 CS13702	SOLID	N/A	7.755e+02		uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 CS13702E	SOLID	N/A	0.740		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 CE14402	SOLID	N/A	< 1.972e+01	19.720	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 CE14402E	SOLID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000797	0	F	EGEA-05 EU15202	SOLID	N/A	< 4.802e+00	4.802	uCi/g
3	SAMPLE	S00T000797	0	F	EGEA-05 EU15202E	SOLID	N/A	n/a		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
3 SAMPLE	S00T000797	0 F	OGRA-05 EU15402	SOLID	N/A	3.061e+01		uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 EU15402E	SOLID	N/A	5.03		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 EU15502	SOLID	N/A	4.327e+01		uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 EU15502E	SOLID	N/A	9.50		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 HG20302	SOLID	N/A	1.260e+00	1.260	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 HG20302E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 TL20802	SOLID	N/A	1.633e+01	16.330	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 TL20802E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 BI21102	SOLID	N/A	1.005e+01	10.050	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 BI21202E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 PB21102	SOLID	N/A	2.376e+00	2.376	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 PB21202E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 BI21402	SOLID	N/A	2.439e+00	2.439	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 BI21402E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 PB21402	SOLID	N/A	1.299e+01	12.990	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 PB21402E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 RA22402	SOLID	N/A	2.616e+01	26.160	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 RA22402E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 RA22602	SOLID	N/A	2.934e+01	29.340	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 RA22602E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 AC22802	SOLID	N/A	2.552e+00	2.552	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 AC22802E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 TH22802	SOLID	N/A	1.477e+02	147.700	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 TH22802E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 TH22902	SOLID	N/A	7.028e+00	7.028	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 TH22902E	SOLID	N/A	n/a	1.50e-005	% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 U23302	SOLID	N/A	9.301e+02	930.100	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 U23302E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 PA23302	SOLID	N/A	2.796e+00	2.796	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 PA23302E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 PA23402	SOLID	N/A	1.132e+02	113.200	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 PA23402E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 TH23402	SOLID	N/A	9.216e+01	92.160	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 TH23402E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 U23502	SOLID	N/A	1.780e+00	1.780	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 U23502E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 NP23702	SOLID	N/A	1.179e+02	117.900	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 NP23702E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 NP23902	SOLID	N/A	6.805e+00	6.805	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 NP23902E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 PU23902	SOLID	N/A	1.722e+04	17220.000	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 PU23902E	SOLID	N/A	n/a		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 AM24102	SOLID	N/A	4.673e+01		uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 AM24102E	SOLID	N/A	24.2		% Ct. Error
3 SAMPLE	S00T000797	0 F	OGRA-05 AM24302	SOLID	N/A	3.926e+00	3.926	uCi/g
3 SAMPLE	S00T000797	0 F	OGRA-05 AM24302E	SOLID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000798	0 F	OGRA-05 NA22-02	SOLID	N/A	1.888e+01	10.880	uCi/g
4 SAMPLE	S00T000798	0 F	OGRA-05 NA22-02E	SOLID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000798	0 F	OGRA-05 NA24-02	SOLID	N/A	4.026e-01	0.403	uCi/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	SAMPLE	S00T000798	0	F	OGRA-05	NA24-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	K40-02 SOLID	N/A	1.242e+01	12.420	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	K40-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	C056-02 SOLID	N/A	6.197e-01	0.620	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	C056-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	C057-02 SOLID	N/A	1.600e+01	16.000	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	C057-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	C060-02 SOLID	N/A	2.934e+00		uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	C060-02E SOLID	N/A	14.6		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	SE75-02 SOLID	N/A	1.751e+00	1.751	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	SE75-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	SR85-02 SOLID	N/A	1.358e+00	1.358	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	SR85-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	Y88-02 SOLID	N/A	3.725e-01	0.372	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	Y88-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	NB94-02 SOLID	N/A	9.297e-01	0.930	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	NB94-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	ZR95-02 SOLID	N/A	3.021e+01	30.210	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	ZR95-02E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	KU10302 SOLID	N/A	1.437e+00	1.437	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	KU10302E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	KU10602 SOLID	N/A	2.154e+01	21.540	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	KU10602E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	CD10902 SOLID	N/A	3.865e+02	386.500	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	CD10902E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	SH11302 SOLID	N/A	2.003e+00	2.003	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	SH11302E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	SB12502 SOLID	N/A	1.851e+01		uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	SB12502E SOLID	N/A	16.4		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	I13102 SOLID	N/A	1.452e+00	1.452	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	I13102E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	CS13402 SOLID	N/A	1.113e+00	1.113	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	CS13402E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	CS13702 SOLID	N/A	8.012e+02		uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	CS13702E SOLID	N/A	0.710		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	CE14402 SOLID	N/A	1.963e+01	19.630	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	CE14402E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15202 SOLID	N/A	4.852e+00	4.852	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15202E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15402 SOLID	N/A	3.301e+01		uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15402E SOLID	N/A	4.55		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15502 SOLID	N/A	4.691e+01		uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	KU15502E SOLID	N/A	8.92		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	HG20302 SOLID	N/A	1.278e+00	1.278	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	HG20302E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	TL20802 SOLID	N/A	1.659e+01	16.590	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	TL20802E SOLID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000798	0	F	OGRA-05	BI21202 SOLID	N/A	9.391e+00	9.391	uCi/g
4	SAMPLE	S00T000798	0	F	OGRA-05	BI21202E SOLID	N/A	n/a		% Ct. Error

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LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
4	SAMPLE	S00T000798	0	F	EGEA-05	PB21202	SOLID	N/A	< 2.374e+00	2.374 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	PB21202E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	BI21402	SOLID	N/A	< 2.456e+00	2.456 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	BI21402E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	PB21402	SOLID	N/A	< 1.281e+01	12.810 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	PB21402E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	RA22402	SOLID	N/A	< 2.620e+01	26.200 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	RA22402E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	RA22602	SOLID	N/A	< 2.962e+01	29.620 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	RA22602E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	AC22802	SOLID	N/A	< 2.340e+00	2.340 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	AC22802E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	TH22802	SOLID	N/A	< 1.502e+02	150.200 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	TH22802E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	TH22902	SOLID	N/A	< 7.184e+00	7.184 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	TH22902E	SOLID	N/A	n/a	1.50e-005 % Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	U23302	SOLID	N/A	< 9.364e+02	936.400 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	U23302E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	PA23302	SOLID	N/A	< 2.740e+00	2.740 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	PA23302E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	PA23402	SOLID	N/A	< 1.111e+02	111.100 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	PA23402E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	TH23402	SOLID	N/A	< 9.385e+01	93.850 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	TH23402E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	U23502	SOLID	N/A	< 1.790e+00	1.790 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	U23502E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	NP23702	SOLID	N/A	< 1.160e+02	116.000 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	NP23702E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	NP23902	SOLID	N/A	< 6.928e+00	6.928 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	NP23902E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	FU23902	SOLID	N/A	< 1.752e+04	17520.000 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	FU23902E	SOLID	N/A	n/a	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	AM24102	SOLID	N/A	< 5.251e+01	52.510 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	AM24102E	SOLID	N/A	19.4	% Ct. Error
4	SAMPLE	S00T000798	0	F	EGEA-05	AM24302	SOLID	N/A	< 4.007e+00	4.007 uCi/g
4	SAMPLE	S00T000798	0	F	EGEA-05	AM24302E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	NA22-02	SOLID	N/A	< 1.200e+01	12.000 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	NA22-02E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	NA24-02	SOLID	N/A	< 4.726e-01	0.473 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	NA24-02E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	K40-02	SOLID	N/A	< 1.331e+01	13.310 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	K40-02E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	CO56-02	SOLID	N/A	< 6.457e-01	0.646 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	CO56-02E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	CO57-02	SOLID	N/A	< 1.493e+01	14.930 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	CO57-02E	SOLID	N/A	n/a	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	CO60-02	SOLID	N/A	< 2.707e+00	2.707 uCi/g
5	SAMPLE	S00T000799	0	F	EGEA-05	CO60-02E	SOLID	N/A	14.5	% Ct. Error
5	SAMPLE	S00T000799	0	F	EGEA-05	SE75-02	SOLID	N/A	< 1.821e+00	1.821 uCi/g

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LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
5 SAMPLE	S00T000799	0 F	OGRA-05	SE75-02E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	SR85-02 SOLID	N/A	1.439e+00	1.439	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	SR85-02E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	Y88-02 SOLID	N/A	3.185e-01	0.319	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	Y88-02E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	WB94-02 SOLID	N/A	9.733e-01	0.973	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	WB94-02E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	ZR95-02 SOLID	N/A	3.076e+01	30.760	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	ZR95-02E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	KU10302 SOLID	N/A	1.506e+00	1.506	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	KU10302E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	KU10602 SOLID	N/A	2.189e+01	21.890	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	KU10602E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	CD10902 SOLID	N/A	4.050e+02	405.000	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	CD10902E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	BN11302 SOLID	N/A	2.118e+00	2.118	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	BN11302E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	SB12502 SOLID	N/A	1.781e+01		uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	SB12502E SOLID	N/A	17.9		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	IL13102 SOLID	N/A	1.573e+00	1.573	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	IL13102E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	CS13402 SOLID	N/A	1.171e+00	1.171	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	CS13402E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	CS13702 SOLID	N/A	8.409e+02		uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	CS13702E SOLID	N/A	0.720		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	CE14402 SOLID	N/A	2.047e+01	20.470	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	CE14402E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15202 SOLID	N/A	5.011e+00	5.011	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15202E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15402 SOLID	N/A	3.388e+01		uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15402E SOLID	N/A	4.62		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15502 SOLID	N/A	4.897e+01		uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	KU15502E SOLID	N/A	9.15		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	HG20302 SOLID	N/A	1.341e+00	1.341	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	HG20302E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	TL20802 SOLID	N/A	1.720e+01	17.200	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	TL20802E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	BI21202 SOLID	N/A	9.511e+00	9.511	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	BI21202E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	PE21202 SOLID	N/A	2.484e+00	2.484	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	PE21202E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	BI21402 SOLID	N/A	2.613e+00	2.613	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	BI21402E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	PE21402 SOLID	N/A	1.369e+01	13.690	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	PE21402E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	RA22402 SOLID	N/A	2.754e+01	27.540	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	RA22402E SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05	RA22602 SOLID	N/A	3.080e+01	30.800	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05	RA22602E SOLID	N/A	n/a		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
5 SAMPLE	S00T000799	0 F	OGRA-05 AC22802	SOLID	N/A	< 2.587e+00	2.587	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 AC22802E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 TH22802	SOLID	N/A	< 1.554e+02	155.400	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 TH22802E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 TH22902	SOLID	N/A	< 7.447e+00	7.447	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 TH22902E	SOLID	N/A	n/a	1.50e-005	% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 U23302	SOLID	N/A	< 9.934e+02	993.400	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 U23302E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 PA23302	SOLID	N/A	< 2.967e+00	2.967	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 PA23302E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 PA23402	SOLID	N/A	< 1.097e+02	109.700	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 PA23402E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 TH23402	SOLID	N/A	< 9.689e+01	96.890	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 TH23402E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 U23502	SOLID	N/A	< 1.863e+00	1.863	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 U23502E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 NP23702	SOLID	N/A	< 1.215e+02	121.500	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 NP23702E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 NP23902	SOLID	N/A	< 7.152e+00	7.152	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 NP23902E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 PU23902	SOLID	N/A	< 1.837e+04	18370.000	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 PU23902E	SOLID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 AM24102	SOLID	N/A	< 4.442e+01		uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 AM24102E	SOLID	N/A	23.8		% Ct. Error
5 SAMPLE	S00T000799	0 F	OGRA-05 AM24302	SOLID	N/A	< 4.109e+00	4.109	uCi/g
5 SAMPLE	S00T000799	0 F	OGRA-05 AM24302E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 NA22-02	SOLID	N/A	< 1.664e+01	16.640	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 NA22-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 NA24-02	SOLID	N/A	< 4.625e-01	0.463	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 NA24-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 K40-02	SOLID	N/A	< 3.456e+00	3.456	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 K40-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 CO56-02	SOLID	N/A	< 6.670e-01	0.667	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 CO56-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 CO57-02	SOLID	N/A	< 2.269e+01	22.690	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 CO57-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 CO60-02	SOLID	N/A	< 4.159e+00		uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 CO60-02E	SOLID	N/A	11.4		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 SE75-02	SOLID	N/A	< 1.846e+00	1.846	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 SE75-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 SR85-02	SOLID	N/A	< 1.453e+00	1.453	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 SR85-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 Y88-02	SOLID	N/A	< 3.015e-01	0.301	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 Y88-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 NB94-02	SOLID	N/A	< 1.104e+00	1.104	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 NB94-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 ZR95-02	SOLID	N/A	< 4.636e+01	46.360	uCi/g
6 SAMPLE	S00T000800	0 F	OGRA-05 ZR95-02E	SOLID	N/A	n/a		% Ct. Error
6 SAMPLE	S00T000800	0 F	OGRA-05 RU10302	SOLID	N/A	< 1.587e+00	1.587	uCi/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	SAMPLE	S00T000800	0	F	EGEA-05	RU10302E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	RU10602	SOLID	N/A	< 2.283e+01	22.830 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	RU10602E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	CD10902	SOLID	N/A	< 5.383e+02	538.300 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	CD10902E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	SN11302	SOLID	N/A	< 2.123e+00	2.123 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	SN11302E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	SB12502	SOLID	N/A	2.398e+01	uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	SB12502E	SOLID	N/A	13.1	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	I13102	SOLID	N/A	< 1.591e+00	1.591 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	I13102E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	CS13402	SOLID	N/A	< 1.223e+00	1.223 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	CS13402E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	CS13702	SOLID	N/A	1.004e+03	uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	CS13702E	SOLID	N/A	0.630	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	CH14402	SOLID	N/A	< 1.901e+01	19.010 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	CH14402E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15202	SOLID	N/A	< 5.042e+00	5.042 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15202E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15402	SOLID	N/A	4.874e+01	uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15402E	SOLID	N/A	3.54	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15502	SOLID	N/A	6.267e+01	uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	EU15502E	SOLID	N/A	5.91	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	HG20302	SOLID	N/A	< 1.342e+00	1.342 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	HG20302E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	TL20802	SOLID	N/A	< 1.709e+01	17.090 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	TL20802E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	BI21202	SOLID	N/A	< 9.566e+00	9.566 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	BI21202E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	FB21202	SOLID	N/A	< 2.463e+00	2.463 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	FB21202E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	BI21402	SOLID	N/A	< 1.627e+00	1.627 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	BI21402E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	FB21402	SOLID	N/A	< 1.394e+01	13.940 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	FB21402E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	RA22402	SOLID	N/A	< 2.728e+01	27.280 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	RA22402E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	RA22602	SOLID	N/A	< 2.979e+01	29.790 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	RA22602E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	AC22802	SOLID	N/A	< 2.484e+00	2.484 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	AC22802E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	TH22802	SOLID	N/A	< 1.431e+02	143.100 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	TH22802E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	TH22902	SOLID	N/A	< 6.832e+00	6.832 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	TH22902E	SOLID	N/A	n/a	1.50e-005 % Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	U23302	SOLID	N/A	< 9.721e+02	972.100 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	U23302E	SOLID	N/A	n/a	% Ct. Error
6	SAMPLE	S00T000800	0	F	EGEA-05	PA23302	SOLID	N/A	< 2.966e+00	2.966 uCi/g
6	SAMPLE	S00T000800	0	F	EGEA-05	PA23302E	SOLID	N/A	n/a	% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S00T000800	0 F	OGHA-05	PA23402	SOLID	N/A <	1.185e+02	118.500 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	PA23402E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	TH23402	SOLID	N/A <	8.865e+01	88.650 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	TH23402E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	U23502	SOLID	N/A <	1.805e+00	1.805 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	U23502E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	NP23702	SOLID	N/A <	1.615e+02	161.500 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	NP23702E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	NP23902	SOLID	N/A <	6.976e+00	6.976 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	NP23902E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	FU23902	SOLID	N/A <	1.674e+04	16740.000 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	FU23902E	SOLID	N/A	n/a	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	AM24102	SOLID	N/A	8.201e+01	uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	AM24102E	SOLID	N/A	14.8	% Ct. Error
6 SAMPLE	S00T000800	0 F	OGHA-05	AM24302	SOLID	N/A <	3.786e+00	3.786 uCi/g
6 SAMPLE	S00T000800	0 F	OGHA-05	AM24302E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	NA22-02	SOLID	N/A <	1.518e+01	15.180 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	NA22-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	NA24-02	SOLID	N/A <	4.394e-01	0.439 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	NA24-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	K40-02	SOLID	N/A <	4.517e+00	4.517 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	K40-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	CO56-02	SOLID	N/A <	6.765e-01	0.676 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	CO56-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	CO57-02	SOLID	N/A <	2.197e+01	21.970 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	CO57-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	CO60-02	SOLID	N/A	3.831e+00	uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	CO60-02E	SOLID	N/A	11.4	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	SE75-02	SOLID	N/A <	1.874e+00	1.874 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	SE75-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	SE85-02	SOLID	N/A <	1.520e+00	1.520 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	SE85-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	Y88-02	SOLID	N/A <	3.352e-01	0.335 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	Y88-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	NB94-02	SOLID	N/A <	1.105e+00	1.105 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	NB94-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	IR95-02	SOLID	N/A <	4.234e+01	42.340 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	IR95-02E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	RU10302	SOLID	N/A <	1.612e+00	1.612 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	RU10302E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	RU10602	SOLID	N/A <	2.306e+01	23.060 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	RU10602E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	CD10902	SOLID	N/A <	5.860e+02	586.000 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	CD10902E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	SN11302	SOLID	N/A <	2.233e+00	2.233 uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	SN11302E	SOLID	N/A	n/a	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	SE12502	SOLID	N/A	2.529e+01	uCi/g
7 SAMPLE	S00T000801	0 F	OGHA-05	SE12502E	SOLID	N/A	14.8	% Ct. Error
7 SAMPLE	S00T000801	0 F	OGHA-05	I13102	SOLID	N/A <	1.602e+00	1.602 uCi/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
7	SAMPLE	S00T000801	0	F	EGEA-05	I13102E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	CS13402	SOLID	N/A	< 1.218e+00	1.218 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	CS13402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	CS13702	SOLID	N/A	1.092e+03	uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	CS13702E	SOLID	N/A	0.610	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	CE14402	SOLID	N/A	< 1.921e+01	19.210 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	CE14402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15202	SOLID	N/A	< 4.998e+00	4.998 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15202E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15402	SOLID	N/A	4.579e+01	uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15402E	SOLID	N/A	3.52	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15502	SOLID	N/A	6.418e+01	uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	KU15502E	SOLID	N/A	6.52	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	HG20302	SOLID	N/A	< 1.354e+00	1.354 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	HG20302E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	TL20802	SOLID	N/A	< 1.755e+01	17.550 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	TL20802E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	BI21202	SOLID	N/A	< 9.683e+00	9.683 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	BI21202E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	PB21202	SOLID	N/A	< 2.476e+00	2.476 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	PB21202E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	BI21402	SOLID	N/A	< 2.739e+00	2.739 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	BI21402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	PB21402	SOLID	N/A	< 1.432e+01	14.320 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	PB21402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	RA22402	SOLID	N/A	< 2.789e+01	27.890 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	RA22402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	RA22602	SOLID	N/A	< 3.008e+01	30.080 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	RA22602E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	AC22802	SOLID	N/A	< 2.533e+00	2.533 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	AC22802E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	TH22802	SOLID	N/A	< 1.444e+02	144.400 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	TH22802E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	TH22902	SOLID	N/A	< 6.892e+00	6.892 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	TH22902E	SOLID	N/A	n/a	1.50e-005 % Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	U23302	SOLID	N/A	< 9.979e+02	997.900 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	U23302E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	PA23302	SOLID	N/A	< 2.986e+00	2.986 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	PA23302E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	PA23402	SOLID	N/A	< 1.187e+02	118.700 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	PA23402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	TH23402	SOLID	N/A	< 8.860e+01	88.600 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	TH23402E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	U23502	SOLID	N/A	< 1.826e+00	1.826 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	U23502E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	NP23702	SOLID	N/A	< 1.759e+02	175.900 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	NP23702E	SOLID	N/A	n/a	% Ct. Error
7	SAMPLE	S00T000801	0	F	EGEA-05	NP23902	SOLID	N/A	< 6.957e+00	6.957 uCi/g
7	SAMPLE	S00T000801	0	F	EGEA-05	NP23902E	SOLID	N/A	n/a	% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
7 SAMPLE	S00T000801	0 F	EGEA-05 PU23902	SOLID	N/A <	1.706e+04	17060.000	uCi/g
7 SAMPLE	S00T000801	0 F	EGEA-05 PU23902E	SOLID	N/A	n/a		% Ct. Error
7 SAMPLE	S00T000801	0 F	EGEA-05 AM24102	SOLID	N/A	7.529e+01		uCi/g
7 SAMPLE	S00T000801	0 F	EGEA-05 AM24102E	SOLID	N/A	16.3		% Ct. Error
7 SAMPLE	S00T000801	0 F	EGEA-05 AM24302	SOLID	N/A <	3.765e+00	3.765	uCi/g
7 SAMPLE	S00T000801	0 F	EGEA-05 AM24302E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 NA22-02	SOLID	N/A <	1.820e+01	18.200	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 NA22-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 NA24-02	SOLID	N/A <	4.754e-01	0.475	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 NA24-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 K40-02	SOLID	N/A <	1.248e+01	12.480	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 K40-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CO56-02	SOLID	N/A <	6.835e-01	0.683	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CO56-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CO57-02	SOLID	N/A <	2.421e+01	24.210	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CO57-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CO60-02	SOLID	N/A	4.365e+00		uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CO60-02E	SOLID	N/A	11.4		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 SE75-02	SOLID	N/A <	1.918e+00	1.918	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 SE75-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 SR85-02	SOLID	N/A <	1.495e+00	1.495	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 SR85-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 Y88-02	SOLID	N/A <	3.930e-01	0.393	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 Y88-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 NB94-02	SOLID	N/A <	1.213e+00	1.213	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 NB94-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 ZR95-02	SOLID	N/A <	4.823e+01	48.230	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 ZR95-02E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 RU10302	SOLID	N/A <	1.633e+00	1.633	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 RU10302E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 RU10602	SOLID	N/A <	2.360e+01	23.600	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 RU10602E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CD10902	SOLID	N/A <	6.270e+02	627.000	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CD10902E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 SN11302	SOLID	N/A <	2.195e+00	2.195	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 SN11302E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 SB12502	SOLID	N/A	2.679e+01		uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 SB12502E	SOLID	N/A	12.3		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 I13102	SOLID	N/A <	1.678e+00	1.678	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 I13102E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CS13402	SOLID	N/A <	1.236e+00	1.236	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CS13402E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CS13702	SOLID	N/A	1.028e+03		uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CS13702E	SOLID	N/A	0.640		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 CR14402	SOLID	N/A <	1.990e+01	19.900	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 CR14402E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 EU15202	SOLID	N/A <	5.218e+00	5.218	uCi/g
8 SAMPLE	S00T000802	0 F	EGEA-05 EU15202E	SOLID	N/A	n/a		% Ct. Error
8 SAMPLE	S00T000802	0 F	EGEA-05 EU15402	SOLID	N/A	5.256e+01		uCi/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
8	SAMPLE	S00T000802	0	F	EGEA-05	EUI5402E	SOLID	N/A	3.42	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	EUI5502	SOLID	N/A	7.183e+01	uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	EUI5502E	SOLID	N/A	5.91	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	HG20302	SOLID	N/A	1.386e+00	1.386 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	HG20302E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	TL20802	SOLID	N/A	1.780e+01	17.800 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	TL20802E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	BI21202	SOLID	N/A	9.998e+00	9.998 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	BI21202E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	PB21202	SOLID	N/A	2.563e+00	2.563 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	PB21202E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	BI21402	SOLID	N/A	2.710e+00	2.710 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	BI21402E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	PB21402	SOLID	N/A	1.440e+01	14.400 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	PB21402E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	RA22402	SOLID	N/A	2.809e+01	28.090 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	RA22402E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	RA22602	SOLID	N/A	3.065e+01	30.650 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	RA22602E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	AC22802	SOLID	N/A	2.741e+00	2.741 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	AC22802E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	TH22802	SOLID	N/A	1.497e+02	149.700 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	TH22802E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	TH22902	SOLID	N/A	7.284e+00	7.284 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	TH22902E	SOLID	N/A	n/a	1.50e-005 % Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	U23302	SOLID	N/A	1.004e+03	1004.000 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	U23302E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	PA23302	SOLID	N/A	3.047e+00	3.047 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	PA23302E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	PA23402	SOLID	N/A	1.350e+02	135.000 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	PA23402E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	TH23402	SOLID	N/A	9.335e+01	93.350 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	TH23402E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	U23502	SOLID	N/A	1.863e+00	1.863 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	U23502E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	NP23702	SOLID	N/A	1.882e+02	188.200 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	NP23702E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	NP23902	SOLID	N/A	7.389e+00	7.389 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	NP23902E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	FU23902	SOLID	N/A	1.754e+04	17540.000 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	FU23902E	SOLID	N/A	n/a	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	AM24102	SOLID	N/A	9.206e+01	92.060 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	AM24102E	SOLID	N/A	12.6	% Ct. Error
8	SAMPLE	S00T000802	0	F	EGEA-05	AM24302	SOLID	N/A	3.912e+00	3.912 uCi/g
8	SAMPLE	S00T000802	0	F	EGEA-05	AM24302E	SOLID	N/A	n/a	% Ct. Error

Comments Section:

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33252

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
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Comments for sample# S00T000797 and test @GEA-05 .

DL=0 => n/a.

Comments for sample# S00T000798 and test @GEA-05 .

DL=0 => n/a.

Comments for sample# S00T000799 and test @GEA-05 .

DL=0 => n/a.

Comments for sample# S00T000800 and test @GEA-05 .

DL=0 => n/a.

Comments for sample# S00T000801 and test @GEA-05 .

DL=0 => n/a.

Comments for sample# S00T000802 and test @GEA-05 .

DL=0 => n/a.

Final page for worklist# 33252

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33252

Analyst: S.L Instrument: GEA00 X2 Book# 60B57

Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @GEA-05 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-05	SOLID		
2 BLNK-PREP			@GEA-05	SOLID		
3 SAMPLE	S00T000797 0 F		@GEA-05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 ,						
AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 ,						
CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 ,						
CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 ,						
CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 ,						
EU15502E, HG20302 , HG20302E, I13102 , I13102E, K40-02 ,						
K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 ,						
NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						
PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 ,						
PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 ,						
RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 ,						
SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 ,						
SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 ,						
TH23402E, TL20802 , TL20802E, U23302 , U23302E, U23502 ,						
U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						
4 SAMPLE	S00T000798 0 F		@GEA-05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 ,						
AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 ,						
CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 ,						
CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 ,						
CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 ,						
EU15502E, HG20302 , HG20302E, I13102 , I13102E, K40-02 ,						
K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 ,						
NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						
PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 ,						
PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 ,						
RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 ,						
SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 ,						
SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 ,						
TH23402E, TL20802 , TL20802E, U23302 , U23302E, U23502 ,						
U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 33252

S Type	Sample#	R A	Test	Matrix	Group#	Project
5 SAMPLE	S00T000799	0 F	@GEA-05	SOLID	99000433	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 , AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 , CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 , CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 , CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 , EU15502E, HG20302 , HG20302E, I13102 , I13102E , K40-02 , K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 , NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 , PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 , PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 , RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 , SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 , SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 , TH23402E, TL20802 , TL20802E, U23302 , U23302E , U23502 , U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						
6 SAMPLE	S00T000800	0 F	@GEA-05	SOLID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 , AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 , CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 , CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 , CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 , EU15502E, HG20302 , HG20302E, I13102 , I13102E , K40-02 , K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 , NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 , PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 , PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 , RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 , SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 , SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 , TH23402E, TL20802 , TL20802E, U23302 , U23302E , U23502 , U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						
7 SAMPLE	S00T000801	0 F	@GEA-05	SOLID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 , AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 , CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 , CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 , CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 , EU15502E, HG20302 , HG20302E, I13102 , I13102E , K40-02 , K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 , NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

J 14:10

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LABCORE Data Entry Template for Worklist# 33252

S Type	Sample#	R A	Test	Matrix	Group#	Project
			PA23302E, PA23402		PA23402E, PB21202	PB21202E, PB21402
			PB21402E, PU23902		PU23902E, RA22402	RA22402E, RA22602
			RA22602E, RU10302		RU10302E, RU10602	RU10602E, SB12502
			SB12502E, SE75-02		SE75-02E, SN11302	SN11302E, SR85-02
			SR85-02E, TH22802		TH22802E, TH22902	TH22902E, TH23402
			TH23402E, TL20802		TL20802E, U23302	U23302E, U23502
			U23502E, Y88-02		Y88-02E, ZR95-02	ZR95-02E

8 SAMPLE S00T000802 0 F @GEA-05 SOLID 99000438 AZ-101 (2)

Analytes Requested: AC22802, AC22802E, AM24102, AM24102E, AM24302, AM24302E, BI21202, BI21202E, BI21402, BI21402E, CD10902, CD10902E, CE14402, CE14402E, CO56-02, CO56-02E, CO57-02, CO57-02E, CO60-02, CO60-02E, CS13402, CS13402E, CS13702, CS13702E, EU15202, EU15202E, EU15402, EU15402E, EU15502, EU15502E, HG20302, HG20302E, I13102, I13102E, K40-02, K40-02E, NA22-02, NA22-02E, NA24-02, NA24-02E, NB94-02, NB94-02E, NP23702, NP23702E, NP23902, NP23902E, PA23302, PA23302E, PA23402, PA23402E, PB21202, PB21202E, PB21402, PB21402E, PU23902, PU23902E, RA22402, RA22402E, RA22602, RA22602E, RU10302, RU10302E, RU10602, RU10602E, SB12502, SB12502E, SE75-02, SE75-02E, SN11302, SN11302E, SR85-02, SR85-02E, TH22802, TH22802E, TH22902, TH22902E, TH23402, TH23402E, TL20802, TL20802E, U23302, U23302E, U23502, U23502E, Y88-02, Y88-02E, ZR95-02, ZR95-02E

Final page for worklist # 33252

Sue La 4-18-00
Signature Date

MCB 4/24/00
Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 18-APR-2000 11:35:56.18 *

>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33252
 Sample ID: WL33252-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2824.cnf
 Geometry: 42
 Count Time: 0 00:50:00.00 sec
 Real Time: 0 00:50:21.32 sec
 Dead Time: 0.7%

Verified by:

>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 18-APR-2000 10:44:55.91
 Decayed to: 18-APR-2000 10:34:20.60
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.82*	4383	1.55	1323.51	1317	12	3.2		CS-137	6.40
0	1173.44	1321	1.78	2346.89	2339	18	6.5		CO-60	2.61
0	1332.69	1233	2.03	2665.47	2656	16	6.1		CO-60	2.69

Summary of Nuclide Activity
 Sample ID : WL33252-STD

Page : 2
 Acquisition date : 18-APR-2000 10:44:55

Total number of lines in spectrum 3
 Number of unidentified lines 0
 Number of lines tentatively identified by NID 3 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	2.651E+00	2.651E+00	0.118E+00	4.44	
CS-137	30.00Y	1.00	6.402E+00	6.402E+00	0.204E+00	3.18	
Total Activity :			9.053E+00	9.053E+00			

Grand Total Activity : 9.053E+00 9.053E+00

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33252-STD

Page : 3
Acquisition date : 18-APR-2000 10:44:55

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	197.	477.59	6.0922E-01
NA-22	21.	1274.53	5.0181E-02
NA-24	5.	1368.55	3.0011E-02
Al-28	6.	1778.00	1.4328E+01
K-40	98.	1460.75	1.0733E+00
AR-41	12.	1293.60	5.0483E-02
SC-46	64.	1120.55	7.5805E-02
CR-51	203.	320.08	4.3694E-01
MN-54	99.	834.83	7.3857E-02
CO-56	86.	846.76	7.0044E-02
CO-57	240.	122.06	3.7271E-02
CO-58	88.	810.78	6.8727E-02
FE-59	64.	1099.25	1.3199E-01
ZN-65	60.	1115.55	1.4485E-01
SE-75	259.	264.66	7.1791E-02
KR-85	150.	514.00	1.3664E+01
SR-85	150.	514.01	6.1766E-02
Y-88	4.	1836.06	3.3419E-02
Y-91	26.	1204.67	1.7680E+01
NB-94	101.	871.09	7.7125E-02
ZRNB-95	64.	724.20	2.4252E-01
RU-103	148.	497.08	6.2755E-02
RURH-106	112.	621.93	1.2345E+00
AG-108m	71.	722.94	6.1876E-02
CD-109	199.	88.03	1.1430E+00
AG-110M	132.	657.76	7.3528E-02
SN-113	225.	391.69	8.7196E-02
TE-123m	230.	159.00	3.5914E-02
SB-124	84.	602.73	5.3295E-02
SB-125	217.	427.89	2.0280E-01
TE-125m	202.	109.27	0.0000E+00
Sn-126	206.	87.60	9.2071E-02
I-129	200.	39.60	1.2551E+01
I-131	208.	364.48	6.2060E-02
XE-131m	250.	163.93	1.6113E+00
BA-133	188.	356.02	7.5372E-02
CS-134	96.	604.70	5.6915E-02
CS-136	96.	818.51	7.2135E-02
CS-138	9.	1435.86	1.0600E-01
CE-139	253.	165.85	3.9813E-02
BA-140	140.	537.31	2.4562E-01
LA-140	3.	1596.21	3.0357E-02
CE-141	242.	145.44	6.3778E-02
CE-144	219.	133.51	2.6718E-01
CEPR-144	219.	133.51	5.3378E-01
EU-152	235.	121.78	1.1181E-01
EU-154	21.	1274.51	1.4541E-01
EU-155	216.	86.54	1.3459E-01
HF-181	166.	482.18	7.2927E-02
TA-182	205.	67.75	1.8494E-01
HG-203	247.	279.20	5.2670E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL33252-STD

Acquisition date : 18-APR-2000 10:44:55

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BI-207	93.	569.70	5.3077E-02
TL-208	248.	277.36	6.7835E-01
PB-210	169.	46.50	8.1139E+00
BI-212	77.	727.18	8.8208E-01
PB-212	270.	238.63	9.0810E-02
BI-214	135.	609.31	1.4653E-01
PB-214	232.	351.92	3.3641E-01
RA-224	280.	240.99	1.0273E+00
RA-226	243.	186.10	9.2673E-01
AC-228	107.	911.21	3.0963E-01
TH-228	191.	84.37	3.4431E+00
TH-229	197.	88.47	1.6457E-01
U-232	194.	57.78	6.3785E+01
PA-233	209.	312.17	1.1325E-01
UTH-233	248.	245.34	3.5243E+01
PA-234M	86.	1001.03	1.2302E+01
TH-234	182.	63.29	2.3425E+00
U-235	245.	185.71	5.6639E-02
NP-237	217.	86.48	3.5720E-01
U-237	196.	101.07	1.3349E-01
NP-238	93.	984.45	2.9626E-01
NP-239	217.	106.12	1.4853E-01
PU-239	226.	129.30	4.7403E+02
AM-241	206.	59.54	3.2660E-01
AM-243	218.	74.67	1.0058E-01

 * 222-S Laboratory Counting Room 18-APR-2000 14:49:06.37 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: WL33252-BLNK
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2825.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:27.52 sec
 Dead Time: 0.3%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-APR-2000 12:18:05.27
 Decayed to: 18-APR-2000 12:18:05.27
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: MB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/L
0	661.82*	86	1.39	1323.53	1319	11 55.4		CS-137	4.22

Summary of Nuclide Activity

Page : 2

Sample ID : WL33252-BLNK

Acquisition date : 18-APR-2000 12:18:05

Total number of lines in spectrum 1
 Number of unidentified lines 0
 Number of lines tentatively identified by NID 1 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS 137	30.00Y	1.00	4.220E+00	4.220E+00	2.336E+00	55.35	MAN
Total Activity :			4.220E+00	4.220E+00			4/21/00

Grand Total Activity : 4.220E+00 4.220E+00

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33252-BLNK

Page : 3
Acquisition date : 18-APR-2000 12:18:05

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	99.	477.59	1.4828E+01
NA-22	31.	1274.53	2.0398E+00
NA-24	13.	1368.55	1.5374E+00
Al-28	11.	1778.00	7.7300E+01
K-40	303.	1460.75	6.2091E+01
AR-41	25.	1293.60	2.8859E+00
SC-46	58.	1120.55	2.4474E+00
CR-51	135.	320.08	1.2110E+01
MN-54	41.	834.83	1.6452E+00
CO-56	40.	846.76	1.6555E+00
CO-57	186.	122.06	1.1119E+00
CO-58	54.	810.78	1.8424E+00
FE-59	35.	1099.25	3.3946E+00
CO-60	22.	1332.50	1.8117E+00
ZN-65	35.	1115.55	3.7928E+00
SE-75	173.	264.66	1.9935E+00
KR-85	126.	514.00	4.2288E+02
SR-85	125.	514.01	1.9098E+00
Y-88	12.	1836.06	1.8492E+00
Y-91	38.	1204.67	7.1189E+02
NB-94	46.	871.09	1.8087E+00
ZRNB-95	63.	724.20	8.1052E+00
RU-103	83.	497.08	1.6049E+00
RURH-106	61.	621.93	3.1285E+01
AG-108m	54.	722.94	1.8416E+00
CD-109	170.	88.03	3.5660E+01
AG-110M	58.	657.76	1.6812E+00
SN-113	112.	391.69	2.1053E+00
TE-123m	197.	159.00	1.1233E+00
SB-124	70.	602.73	1.6392E+00
SB-125	106.	427.89	4.8572E+00
TE-125m	187.	109.27	0.0000E+00
Sn-126	173.	87.60	2.8500E+00
I-129	180.	39.60	4.0150E+02
I-131	115.	364.48	1.5787E+00
XE-131m	225.	163.93	5.1729E+01
BA-133	128.	356.02	2.1102E+00
CS-134	63.	604.70	1.5709E+00
CS-136	33.	818.51	1.4700E+00
CS-138	17.	1435.86	7.5564E+00
CE-139	206.	165.85	1.2150E+00
BA-140	83.	537.31	6.4601E+00
LA-140	10.	1596.21	1.6204E+00
CE-141	194.	145.44	1.9340E+00
CE-144	195.	133.51	8.5209E+00
CEPR-144	195.	133.51	1.7028E+01
EU-152	190.	121.78	3.3973E+00
EU-154	32.	1274.51	5.9360E+00
EU-155	187.	86.54	4.2342E+00
HF-181	98.	482.18	1.9112E+00
TA-182	138.	67.75	5.1485E+00

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL33252-BLNK

Acquisition date : 18-APR-2000 12:18:05

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
HG-203	164.	279.20	1.4583E+00
BI-207	64.	569.70	1.4981E+00
TL-208	181.	277.36	1.9590E+01
PB-210	154.	46.50	2.6124E+02
BI-212	84.	727.18	3.0852E+01
PB-212	219.	238.63	2.7615E+00
BI-214	146.	609.31	5.1243E+00
PB-214	179.	351.92	1.6919E+01
RA-224	187.	240.99	2.8627E+01
RA-226	222.	186.10	2.9900E+01
AC-228	76.	911.21	8.8582E+00
TH-228	180.	84.37	1.1253E+02
TH-229	169.	88.47	5.1536E+00
U-232	168.	57.78	2.0050E+03
PA-233	133.	312.17	3.0675E+00
UTH-233	176.	245.34	1.0065E+03
PA-234M	37.	1001.03	2.8023E+02
TH-234	152.	63.29	7.2460E+01
U-235	214.	185.71	1.7871E+00
NP-237	188.	86.48	1.1233E+01
U-237	197.	101.07	4.5124E+00
NP-238	46.	984.45	7.2603E+00
NP-239	187.	106.12	4.6895E+00
PU-239	215.	129.30	1.5569E+04
AM-241	156.	59.54	9.6242E+00
AM-243	199.	74.67	3.2422E+00

 * 222-S Laboratory Counting Room 18-APR-2000 18:53:40.28 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: S00T797-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2827.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:15.22 sec
 Dead Time: 0.8%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-APR-2000 16:21:53.86
 Decayed to: 18-APR-2000 16:21:53.86
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.62	1448	0.95	119.15	116	8	24.2		AM-241	229.
0	86.43	3406	0.93	172.77	168	10	13.6		NP-237	576.
									EU-155	217.
0	105.34	2817	1.05	210.60	207	8	13.3		EU-155	208.
0	123.13	4233	1.00	246.18	242	9	9.4		CO-57	71.1
									EU-154	151.
0	176.42	419	0.96	352.74	350	7	59.7		SB-125	87.7
0	248.14	645	1.31	496.16	493	8	36.1		EU-154	164.
0	428.11	899	1.30	856.08	852	9	23.7		SB-125	86.2
0	463.49	246	0.92	926.85	924	8	81.1		SB-125	71.5
0	591.75	261	1.42	1183.38	1177	12	50.4			
0	600.82	391	1.23	1201.52	1198	8	25.2		SB-125	84.7
0	635.88	212	1.01	1271.63	1267	9	46.4		SB-125	76.0
0	661.80*	77215	1.46	1323.48	1315	16	0.7		CS-137	3.797E+03
0	723.35	663	1.51	1446.59	1439	14	13.3		ZRNB-95	136.
									EU-154	150.
0	756.68	164	1.31	1513.24	1508	10	32.5			
0	873.33	366	1.63	1746.57	1739	13	17.3		EU-154	159.
0	996.50	233	1.57	1992.95	1986	15	29.3		EU-154	131.
0	1005.00	403	1.65	2009.96	2003	16	18.5		EU-154	133.
0	1173.73	196	1.61	2347.46	2340	16	24.1		CO-60	13.0

Post-NID Peak Search Report (continued)
Sample ID : S00T797-SAM

Page : 2
Acquisition date : 18-APR-2000 16:21:53

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	1274.57	752	2.23	2549.19	2540	16	8.3		EU-154	155.
									NA-22	53.3
0	1332.95	183	2.05	2665.99	2656	21	22.2		CO-60	13.4
0	1597.27	46	1.41	3194.79	3187	12	45.0			

Summary of Nuclide Activity
Sample ID : S00T797-SAM

Page : 3
Acquisition date : 18-APR-2000 16:21:53

Total number of lines in spectrum 21
Number of unidentified lines 2
Number of lines tentatively identified by NID 19 90.48%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	5.328E+01	5.328E+01	0.442E+01	8.29	JR
CO-57	271.80D	1.00	7.112E+01	7.113E+01	0.671E+01	9.44	JR
CO-60	5.27Y	1.00	1.323E+01	1.323E+01	0.216E+01	16.31	
ZRNB-95	64.02D	1.00	1.357E+02	1.357E+02	0.180E+02	13.28	JR
SB-125	2.73Y	1.00	8.368E+01	8.369E+01	1.286E+01	15.37	
CS-137	30.00Y	1.00	3.797E+03	3.797E+03	0.028E+03	0.74	
EU-154	8.59Y	1.00	1.504E+02	1.504E+02	0.076E+02	5.03	
EU-155	4.68Y	1.00	2.122E+02	2.122E+02	0.202E+02	9.50	
NP-237	2.14E+06Y	1.00	5.755E+02	5.755E+02	0.780E+02	13.55	JR
AM-241	432.20Y	1.00	2.293E+02	2.293E+02	0.554E+02	24.18	
Total Activity :			5.321E+03	5.321E+03			22 Apr 00

Grand Total Activity : 5.321E+03 5.321E+03

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T797-SAM

Page : 4
Acquisition date : 18-APR-2000 16:21:53

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	2718.	477.59	7.4081E+01
NA-24	22.	1368.55	1.9662E+00
Al-28	7.	1778.00	6.3404E+01
K-40	289.	1460.75	6.0656E+01
AR-41	29.	1293.60	3.0996E+00
SC-46	103.	1120.55	3.1963E+00
CR-51	2760.	320.08	5.2754E+01
MN-54	136.	834.83	2.8977E+00
CO-56	153.	846.76	3.0994E+00
CO-58	152.	810.78	2.9994E+00
FE-59	94.	1099.25	5.3350E+00
ZN-65	62.	1115.55	4.9389E+00
SE-75	3475.	264.66	8.6348E+00
KR-85	1649.	514.00	1.4764E+03
SR-85	1648.	514.01	6.6759E+00
Y-88	8.	1836.06	1.5586E+00
Y-91	60.	1204.67	8.7712E+02
NB-94	351.	871.09	4.7298E+00
RU-103	1831.	497.08	7.1959E+00
RURH-106	697.	621.93	1.0042E+02
AG-108m	847.	722.94	6.8679E+00
CD-109	9066.	88.03	2.5080E+02
AG-110M	1648.	657.76	8.4393E+00
SN-113	2636.	391.69	9.7882E+00
TE-123m	5747.	159.00	5.8638E+00
SB-124	1093.	602.73	6.1831E+00
TE-125m	7441.	109.27	0.0000E+00
Sn-126	10319.	87.60	2.1211E+01
I-129	4859.	39.60	2.0149E+03
I-131	2711.	364.48	7.3415E+00
XE-131m	5448.	163.93	2.4678E+02
BA-133	2733.	356.02	9.3953E+00
CS-134	855.	604.70	5.5042E+00
CS-136	143.	818.51	2.9379E+00
CS-138	23.	1435.86	8.6540E+00
CE-139	5260.	165.85	5.9488E+00
BA-140	1248.	537.31	2.3920E+01
LA-140	62.	1596.21	3.6098E+00
CE-141	6308.	145.44	1.0655E+01
CE-144	6728.	133.51	4.8358E+01
CEPR-144	6728.	133.51	9.6629E+01
EU-152	9778.	121.78	2.3531E+01
HF-181	2250.	482.18	8.7539E+00
TA-182	6951.	67.75	3.5051E+01
HG-203	3145.	279.20	6.1723E+00
BI-207	877.	569.70	5.2749E+00
TL-208	3212.	277.36	8.0017E+01
PB-210	4897.	46.50	1.4210E+03
BI-212	223.	727.18	4.9229E+01
PB-212	4126.	238.63	1.1641E+01
BI-214	837.	609.31	1.1950E+01

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T797-SAM

Acquisition date : 18-APR-2000 16:21:53

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	2677.	351.92	6.3645E+01
RA-224	4006.	240.99	1.2817E+02
RA-226	5465.	186.10	1.4379E+02
AC-228	157.	911.21	1.2507E+01
TH-228	7983.	84.37	7.2357E+02
TH-229	8129.	88.47	3.4435E+01
U-232	6255.	57.78	1.1804E+04
PA-233	2856.	312.17	1.3700E+01
UTH-233	3862.	245.34	4.5574E+03
PA-234M	160.	1001.03	5.5481E+02
TH-234	6393.	63.29	4.5157E+02
U-235	5435.	185.71	8.7214E+00
U-237	7725.	101.07	2.7319E+01
NP-238	99.	984.45	1.0358E+01
NP-239	10158.	106.12	3.3344E+01
PU-239	6721.	129.30	8.4396E+04
AM-243	7506.	74.67	1.9236E+01

 * 222-S Laboratory Counting Room 18-APR-2000 22:34:22.23 *

>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33252
 Sample ID: S00T000798-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2828.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:16.07 sec
 Dead Time: 0.8%

Verified by:

>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 18-APR-2000 20:02:33.68
 Decayed to: 18-APR-2000 20:02:33.68
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.55	1720	1.06	119.02	116	7	19.4		AM-241	272.
0	86.60	3555	0.97	173.11	169	9	12.9		NP-237	601.
									EU-155	227.
									CD-109	2.002E+03
0	105.38	3569	1.10	210.66	207	9	12.3		EU-155	263.
0	123.15	4931	1.02	246.20	242	9	8.6		CO-57	82.9
									EU-154	175.
0	248.10	559	0.95	496.08	493	7	39.6		EU-154	142.
0	428.00	963	1.06	855.88	852	9	23.3		SB-125	92.4
0	592.13	290	1.34	1184.13	1180	10	39.6			
0	600.86	440	1.49	1201.59	1197	10	27.0		SB-125	95.3
0	635.97	336	1.50	1271.81	1266	14	44.5		SB-125	120.
0	661.82*	84422	1.47	1323.52	1316	16	0.7		CS-137	4.151E+03
0	723.52	764	1.63	1446.93	1441	13	11.2		ZRNB-95	156.
									EU-154	172.
0	757.59	160	1.20	1515.08	1508	13	45.4			
0	873.59	377	1.55	1747.09	1742	13	16.7		EU-154	164.
1	996.46	319	1.81	1992.87	1986	32	17.2	1.48E+00	EU-154	181.
1	1005.04	536	1.94	2010.02	1986	32	12.2		EU-154	176.
0	1173.34	223	1.41	2346.69	2340	14	21.4		CO-60	14.8
0	1274.63	795	1.92	2549.31	2539	20	8.9		EU-154	164.
									NA-22	56.4

Post-NID Peak Search Report (continued)

Page : 2

Sample ID : S00T000798-SAM

Acquisition date : 18-APR-2000 20:02:33

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	1332.87	213	2.38	2665.82	2659	20	20.0		CO-60	15.7
0	1596.98	31	0.81	3194.19	3190	11	74.7			

Summary of Nuclide Activity
Sample ID : S00T000798-SAM

Page : 3
Acquisition date : 18-APR-2000 20:02:33

Total number of lines in spectrum 19
Number of unidentified lines 2
Number of lines tentatively identified by NID 17 89.47%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	5.637E+01	5.637E+01	0.500E+01	8.87	JAR
CO-57	271.80D	1.00	8.285E+01	8.286E+01	0.714E+01	8.62	JAR
CO-60	5.27Y	1.00	1.525E+01	1.525E+01	0.223E+01	14.63	
ZRNB-95	64.02D	1.00	1.564E+02	1.565E+02	0.176E+02	11.24	JAR
CD-109	462.90D	1.00	2.002E+03	2.002E+03	0.258E+03	12.91	JAR
SB-125	2.73Y	1.00	9.588E+01	9.589E+01	1.577E+01	16.44	
CS-137	30.00Y	1.00	4.151E+03	4.151E+03	0.030E+03	0.71	
EU-154	8.59Y	1.00	1.705E+02	1.705E+02	0.078E+02	4.55	
EU-155	4.68Y	1.00	2.432E+02	2.432E+02	0.217E+02	8.92	
NP-237	2.14E+06Y	1.00	6.008E+02	6.008E+02	0.775E+02	12.91	JAR
AM-241	432.20Y	1.00	2.723E+02	2.723E+02	0.527E+02	19.36	20 Apr 00
Total Activity :			7.846E+03	7.847E+03			

Grand Total Activity : 7.846E+03 7.847E+03

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000798-SAM

Page : 4
Acquisition date : 18-APR-2000 20:02:33

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	3011.	477.59	7.7924E+01
NA-24	26.	1368.55	2.0857E+00
Al-28	10.	1778.00	7.3462E+01
K-40	326.	1460.75	6.4323E+01
AR-41	33.	1293.60	3.3114E+00
SC-46	114.	1120.55	3.3583E+00
CR-51	3128.	320.08	5.6128E+01
MN-54	160.	834.83	3.1300E+00
CO-56	165.	846.76	3.2101E+00
CO-58	167.	810.78	3.1348E+00
FE-59	82.	1099.25	5.0005E+00
ZN-65	83.	1115.55	5.6648E+00
SE-75	3838.	264.66	9.0697E+00
KR-85	1834.	514.00	1.5558E+03
SR-85	1832.	514.01	7.0355E+00
Y-88	13.	1836.06	1.9298E+00
Y-91	73.	1204.67	9.5702E+02
NB-94	365.	871.09	4.8157E+00
RU-103	1962.	497.08	7.4454E+00
RURH-106	864.	621.93	1.1159E+02
AG-108m	938.	722.94	7.2187E+00
AG-110M	1743.	657.76	8.6746E+00
SN-113	2965.	391.69	1.0375E+01
TE-123m	6372.	159.00	6.1718E+00
SB-124	1107.	602.73	6.2210E+00
TE-125m	8611.	109.27	0.0000E+00
Sn-126	11943.	87.60	2.2809E+01
I-129	5610.	39.60	2.1637E+03
I-131	2847.	364.48	7.5221E+00
XE-131m	6256.	163.93	2.6429E+02
BA-133	2905.	356.02	9.6827E+00
CS-134	939.	604.70	5.7640E+00
CS-136	158.	818.51	3.0779E+00
CS-138	24.	1435.86	8.7787E+00
CE-139	6071.	165.85	6.3875E+00
BA-140	1281.	537.31	2.4234E+01
LA-140	65.	1596.21	3.6696E+00
CE-141	7006.	145.44	1.1225E+01
CE-144	7453.	133.51	5.0879E+01
CEPR-144	7453.	133.51	1.0167E+02
EU-152	11161.	121.78	2.5131E+01
HF-181	2442.	482.18	9.1156E+00
TA-182	7891.	67.75	3.7332E+01
HG-203	3625.	279.20	6.6223E+00
BI-207	914.	569.70	5.3834E+00
TL-208	3712.	277.36	8.5951E+01
PB-210	5515.	46.50	1.5073E+03
BI-212	217.	727.18	4.8643E+01
PB-212	4611.	238.63	1.2299E+01
BI-214	960.	609.31	1.2775E+01
PB-214	2910.	351.92	6.6338E+01

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T000798-SAM

Acquisition date : 18-APR-2000 20:02:33

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
RA-224	4496.	240.99	1.3571E+02
RA-226	6228.	186.10	1.5343E+02
AC-228	147.	911.21	1.2123E+01
TH-228	9234.	84.37	7.7782E+02
TH-229	9503.	88.47	3.7213E+01
U-232	6957.	57.78	1.2444E+04
PA-233	3068.	312.17	1.4193E+01
UTH-233	4379.	245.34	4.8506E+03
PA-234M	173.	1001.03	5.7569E+02
TH-234	7416.	63.29	4.8614E+02
U-235	6146.	185.71	9.2698E+00
U-237	9038.	101.07	2.9535E+01
NP-238	134.	984.45	1.1965E+01
NP-239	11776.	106.12	3.5888E+01
PU-239	7783.	129.30	9.0775E+04
AM-243	8750.	74.67	2.0758E+01

 * 222-S Laboratory Counting Room 19-APR-2000 02:15:58.63 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: S00T000799-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2829.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:16.80 sec
 Dead Time: 0.8%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-APR-2000 23:44:11.54
 Decayed to: 18-APR-2000 23:44:11.54
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uci/L
0	59.66	1356	0.87	119.25	116	7	23.8		AM-241	215.
0	86.64	3482	0.96	173.20	169	9	12.7		NP-237	588.
									EU-155	222.
									CD-109	1.960E+03
0	105.27	3515	1.10	210.46	206	10	13.1		EU-155	259.
0	123.15	4301	1.03	246.21	242	9	9.6		CO-57	72.3
									EU-154	153.
0	247.97	731	1.45	495.82	492	8	33.0		EU-154	185.
0	428.13	758	0.93	856.13	852	9	29.5		SB-125	72.7
0	591.91	227	1.74	1183.69	1179	9	45.8			
0	600.85	468	1.34	1201.57	1197	10	25.6		SB-125	101.
0	636.10	275	1.75	1272.08	1267	11	43.5		SB-125	98.5
0	661.83*	82825	1.47	1323.54	1316	16	0.7		CS-137	4.073E+03
0	692.49	123	0.80	1384.86	1379	11	46.7		CO-57	3.303E+03
0	723.36	727	1.45	1446.61	1440	12	11.0		ZRNB-95	149.
									EU-154	164.
0	757.13	141	1.81	1514.15	1509	11	44.6			
0	873.34	377	1.48	1746.59	1739	15	17.5		EU-154	164.
0	996.44	285	1.49	1992.83	1986	15	23.0		EU-154	161.
0	1004.99	539	1.47	2009.94	2003	15	12.6		EU-154	177.
0	1173.40	186	2.05	2346.82	2340	13	22.4		CO-60	12.3

Post-NID Peak Search Report (continued)

Page : 2

Sample ID : S00T000799-SAM

Acquisition date : 18-APR-2000 23:44:11

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	1274.71	819	1.58	2549.48	2541	16	8.0		EU-154	169.
									NA-22	58.1
0	1333.24	188	2.29	2666.56	2659	19	19.0		CO-60	13.8
0	1595.95	53	0.65	3192.14	3184	16	36.4			

Summary of Nuclide Activity

Page : 3

Sample ID : S00T000799-SAM

Acquisition date : 18-APR-2000 23:44:11

Total number of lines in spectrum 20
 Number of unidentified lines 2
 Number of lines tentatively identified by NID 18 90.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	5.810E+01	5.810E+01	0.466E+01	8.02	JR
CO-57	271.80D	1.00	7.225E+01	7.226E+01	0.694E+01	9.60	JR
CO-60	5.27Y	1.00	1.313E+01	1.313E+01	0.191E+01	14.54	
ZRNB-95	64.02D	1.00	1.488E+02	1.489E+02	0.164E+02	11.01	JR
CD-109	462.90D	1.00	1.960E+03	1.960E+03	0.249E+03	12.70	JR
SB-125	2.73Y	1.00	8.616E+01	8.616E+01	1.544E+01	17.92	
CS-137	30.00Y	1.00	4.073E+03	4.073E+03	0.029E+03	0.72	
EU-154	8.59Y	1.00	1.643E+02	1.643E+02	0.076E+02	4.62	
EU-155	4.68Y	1.00	2.372E+02	2.372E+02	0.217E+02	9.15	
NP-237	2.14E+06Y	1.00	5.883E+02	5.883E+02	0.747E+02	12.70	JR
AM-241	432.20Y*****		2.148E+02	2.148E+02	0.511E+02	23.78	22 Apr 00
Total Activity :			7.616E+03	7.616E+03			

Grand Total Activity : 7.616E+03 7.616E+03

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000799-SAM

Page : 4
Acquisition date : 18-APR-2000 23:44:11

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	2896.	477.59	7.6433E+01
NA-24	31.	1368.55	2.2873E+00
Al-28	14.	1778.00	8.6225E+01
K-40	327.	1460.75	6.4407E+01
AR-41	43.	1293.60	3.7217E+00
SC-46	98.	1120.55	3.1195E+00
CR-51	3110.	320.08	5.5965E+01
MN-54	146.	834.83	2.9963E+00
CO-56	156.	846.76	3.1254E+00
CO-58	160.	810.78	3.0752E+00
FE-59	88.	1099.25	5.1857E+00
ZN-65	75.	1115.55	5.4002E+00
SE-75	3623.	264.66	8.8145E+00
KR-85	1797.	514.00	1.5403E+03
SR-85	1796.	514.01	6.9667E+00
Y-88	8.	1836.06	1.5414E+00
Y-91	54.	1204.67	8.3351E+02
NB-94	348.	871.09	4.7107E+00
RU-103	1879.	497.08	7.2891E+00
RURH-106	777.	621.93	1.0596E+02
AG-108m	902.	722.94	7.0822E+00
AG-110M	1677.	657.76	8.5122E+00
SN-113	2893.	391.69	1.0249E+01
TE-123m	6084.	159.00	6.0320E+00
SB-124	1085.	602.73	6.1593E+00
TE-125m	8041.	109.27	0.0000E+00
Sn-126	11247.	87.60	2.2138E+01
I-129	5300.	39.60	2.1034E+03
I-131	2919.	364.48	7.6156E+00
XE-131m	5784.	163.93	2.5420E+02
BA-133	2807.	356.02	9.5196E+00
CS-134	908.	604.70	5.6692E+00
CS-136	156.	818.51	3.0599E+00
CS-138	17.	1435.86	7.6029E+00
CE-139	5797.	165.85	6.2425E+00
BA-140	1238.	537.31	2.3828E+01
LA-140	55.	1596.21	3.4130E+00
CE-141	6550.	145.44	1.0856E+01
CE-144	7078.	133.51	4.9588E+01
CEPR-144	7077.	133.51	9.9087E+01
EU-152	10392.	121.78	2.4255E+01
HF-181	2478.	482.18	9.1820E+00
TA-182	7524.	67.75	3.6457E+01
HG-203	3479.	279.20	6.4888E+00
BI-207	954.	569.70	5.4961E+00
TL-208	3482.	277.36	8.3271E+01
PB-210	5318.	46.50	1.4804E+03
BI-212	194.	727.18	4.6033E+01
PB-212	4405.	238.63	1.2024E+01
BI-214	940.	609.31	1.2646E+01
PB-214	2904.	351.92	6.6271E+01

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T000799-SAM

Acquisition date : 18-APR-2000 23:44:11

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
RA-224	4336.	240.99	1.3329E+02
RA-226	5878.	186.10	1.4909E+02
AC-228	158.	911.21	1.2521E+01
TH-228	8636.	84.37	7.5236E+02
TH-229	8911.	88.47	3.6044E+01
U-232	6412.	57.78	1.1950E+04
PA-233	3141.	312.17	1.4358E+01
UTH-233	4302.	245.34	4.8081E+03
PA-234M	146.	1001.03	5.3093E+02
TH-234	6898.	63.29	4.6897E+02
U-235	5813.	185.71	9.0172E+00
U-237	8244.	101.07	2.8217E+01
NP-238	117.	984.45	1.1216E+01
NP-239	10951.	106.12	3.4615E+01
PU-239	7468.	129.30	8.8931E+04
AM-243	8026.	74.67	1.9887E+01

 * 222-S Laboratory Counting Room 19-APR-2000 09:19:49.19 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: S00T800-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2832.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:25.27 sec
 Dead Time: 0.9%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 06:47:53.88
 Decayed to: 19-APR-2000 06:47:53.88
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.60	2675	0.91	119.12	115	9	14.8		AM-241	424.
0	86.61	4943	0.93	173.13	169	9	8.9		Sn-126	221.
									NP-237	835.
									EU-155	315.
									CD-109	2.783E+03
0	105.33	4489	1.05	210.57	207	7	7.9		EU-155	331.
0	123.06	6979	1.04	246.03	241	10	6.5		CO-57	117.
									EU-154	248.
0	176.19	461	1.02	352.28	350	7	58.1		SB-125	96.6
0	248.17	1027	1.41	496.23	492	9	27.5		EU-154	260.
0	428.04	1354	1.38	855.95	851	10	19.5		SB-125	130.
0	463.55	513	1.45	926.97	924	8	44.5		SB-125	149.
0	591.79	387	1.42	1183.46	1179	10	33.9			
0	600.84	463	1.34	1201.55	1197	10	29.1		SB-125	100.
0	636.00	450	1.39	1271.87	1267	10	26.5		SB-125	161.
0	661.84*	105544	1.48	1323.55	1316	16	0.6		CS-137	5.190E+03
0	692.54	96	1.61	1384.96	1379	13	82.3		Sn-126	5.53
									CO-57	2.578E+03
0	723.45	1170	1.55	1446.79	1440	16	9.0		ZRNB-95	240.
									EU-154	264.
0	756.96	266	1.75	1513.81	1508	13	27.1			
0	873.23	621	1.79	1746.38	1738	17	13.0		EU-154	271.

Post-NID Peak Search Report (continued)

Page : 2

Sample ID : S00T800-SAM

Acquisition date : 19-APR-2000 06:47:53

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	996.43	406	1.78	1992.80	1986	14	17.5		EU-154	230.
0	1004.98	750	1.64	2009.91	2001	17	11.6		EU-154	247.
0	1173.36	345	1.72	2346.73	2337	18	16.0		CO-60	22.9
0	1274.63	1213	1.97	2549.31	2540	17	6.2		EU-154	250.
									NA-22	86.0
0	1332.83	276	1.84	2665.75	2658	18	16.2		CO-60	20.3
0	1460.99*	24	2.02	2922.14	2912	18	174.4		K-40	17.9
0	1494.51	37	2.07	2989.19	2984	11	41.4			
0	1597.09	59	1.55	3194.43	3189	12	35.0			
0	1765.09*	14	1.83	3530.55	3524	14	132.5		BI-214	8.41

Summary of Nuclide Activity
Sample ID : S00T800-SAM

Page : 3
Acquisition date : 19-APR-2000 06:47:53

Total number of lines in spectrum 25
Number of unidentified lines 3
Number of lines tentatively identified by NID 22 88.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	8.601E+01	8.601E+01	0.533E+01	6.20	830
K-40	1.28E+09Y	1.00	1.787E+01	1.787E+01	3.116E+01	174.39	230
CO-57	271.80D	1.00	1.173E+02	1.173E+02	0.076E+02	6.50	830
CO-60	5.27Y	1.00	2.146E+01	2.146E+01	0.245E+01	11.41	
ZRNB-95	64.02D	1.00	2.396E+02	2.397E+02	0.216E+02	9.03	830
CD-109	462.90D	1.00	2.783E+03	2.783E+03	0.249E+03	8.93	830
SB-125	2.73Y	1.00	1.237E+02	1.237E+02	0.162E+02	13.08	
Sn-126	1.00E+05Y	1.00	2.207E+02	2.207E+02	0.197E+02	8.93	830
CS-137	30.00Y	1.00	5.190E+03	5.190E+03	0.033E+03	0.63	
EU-154	8.59Y	1.00	2.516E+02	2.516E+02	0.089E+02	3.54	
EU-155	4.68Y	1.00	3.238E+02	3.238E+02	0.191E+02	5.91	
BI-214	28700.00D	1.00	8.414E+00	8.414E+00	11.15E+00	132.54	830
NP-237	2.14E+06Y	1.00	8.352E+02	8.352E+02	0.746E+02	8.93	830
AM-241	432.20Y*****		4.236E+02	4.236E+02	0.628E+02	14.82	20 Apr 00
Total Activity :			1.064E+04	1.064E+04			

Grand Total Activity : 1.064E+04 1.064E+04

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report

Sample ID : S00T800-SAM

Page : 4

Acquisition date : 19-APR-2000 06:47:53

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	3661.	477.59	8.5841E+01
NA-24	35.	1368.55	2.3910E+00
Al-28	12.	1778.00	8.0752E+01
AR-41	49.	1293.60	3.9404E+00
SC-46	118.	1120.55	3.4047E+00
CR-51	3581.	320.08	6.0010E+01
MN-54	152.	834.83	3.0541E+00
CO-56	191.	846.76	3.4482E+00
CO-58	189.	810.78	3.3288E+00
FE-59	88.	1099.25	5.1654E+00
ZN-65	106.	1115.55	6.3634E+00
SE-75	4251.	264.66	9.5414E+00
KR-85	2094.	514.00	1.6610E+03
SR-85	2092.	514.01	7.5102E+00
Y-88	8.	1836.06	1.5586E+00
Y-91	59.	1204.67	8.7044E+02
NB-94	517.	871.09	5.7072E+00
RU-103	2388.	497.08	8.2038E+00
RURH-106	969.	621.93	1.1804E+02
AG-108m	1365.	722.94	8.6812E+00
AG-110M	2023.	657.76	9.3367E+00
SN-113	3322.	391.69	1.0976E+01
TE-123m	6136.	159.00	6.0572E+00
SB-124	1395.	602.73	6.9711E+00
TE-125m	7604.	109.27	0.0000E+00
I-129	5339.	39.60	2.1112E+03
I-131	3410.	364.48	8.2249E+00
XE-131m	5802.	163.93	2.5460E+02
BA-133	3427.	356.02	1.0508E+01
CS-134	1134.	604.70	6.3239E+00
CS-136	175.	818.51	3.2345E+00
CS-138	21.	1435.86	8.3962E+00
CE-139	5765.	165.85	6.2256E+00
BA-140	1606.	537.31	2.7087E+01
LA-140	74.	1596.21	3.9025E+00
CE-141	6564.	145.44	1.0868E+01
CE-144	6964.	133.51	4.9192E+01
CEPR-144	6963.	133.51	9.8290E+01
EU-152	12011.	121.78	2.6065E+01
HF-181	3035.	482.18	1.0151E+01
TA-182	6972.	67.75	3.5104E+01
HG-203	3981.	279.20	6.9363E+00
BI-207	1150.	569.70	6.0236E+00
TL-208	3925.	277.36	8.8363E+01
PB-210	5455.	46.50	1.4992E+03
BI-212	225.	727.18	4.9457E+01
PB-212	4946.	238.63	1.2735E+01
PB-214	3437.	351.92	7.2093E+01
RA-224	4858.	240.99	1.4102E+02
RA-226	6275.	186.10	1.5401E+02
AC-228	166.	911.21	1.2842E+01

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T800-SAM

Acquisition date : 19-APR-2000 06:47:53

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
TH-228	8348.	84.37	7.3982E+02
TH-229	8556.	88.47	3.5323E+01
U-232	6761.	57.78	1.2269E+04
PA-233	3586.	312.17	1.5333E+01
UTH-233	4705.	245.34	5.0260E+03
PA-234M	196.	1001.03	6.1254E+02
TH-234	6587.	63.29	4.5832E+02
U-235	6231.	185.71	9.3334E+00
U-237	8164.	101.07	2.8079E+01
NP-238	140.	984.45	1.2228E+01
NP-239	11892.	106.12	3.6064E+01
PU-239	7071.	129.30	8.6552E+04
AM-243	7774.	74.67	1.9575E+01

 * 222-S Laboratory Counting Room 19-APR-2000 12:32:20.71 *

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: S00T801
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2833.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:28.25 sec
 Dead Time: 1.0%

Verified by:

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 10:00:22.94
 Decayed to: 19-APR-2000 10:00:22.94
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: MB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.52	2480	0.93	118.96	115	9	16.3		AM-241	393.
0	86.59	5433	0.98	173.09	169	9	8.2		Sn-126	243.
									NP-237	918.
									EU-155	347.
									CD-109	3.059E+03
0	105.32	4316	1.08	210.55	206	10	10.8		EU-155	318.
0	123.08	6823	1.01	246.06	242	9	6.2		CO-57	115.
									EU-154	243.
0	248.03	977	1.15	495.95	492	9	30.0		EU-154	248.
0	428.11	1625	1.55	856.09	851	12	19.3		SB-125	156.
0	592.14	308	1.20	1184.15	1179	10	43.1			
0	600.58	549	1.16	1201.04	1196	11	25.9		SB-125	119.
0	635.94	299	1.49	1271.76	1267	10	43.4		SB-125	107.
0	661.77*	115842	1.46	1323.42	1315	16	0.6		CS-137	5.696E+03
0	692.69	142	1.54	1385.26	1380	13	50.0		Sn-126	8.19
									CO-57	3.821E+03
0	723.36	1079	1.45	1446.61	1441	12	8.7		ZRNB-95	221.
									EU-154	243.
0	756.90	246	1.45	1513.68	1507	14	31.1			
0	873.09	561	1.51	1746.10	1737	16	14.2		EU-154	244.
0	996.21	413	1.45	1992.36	1986	13	16.1		EU-154	233.
0	1004.99	737	1.58	2009.93	2003	15	10.6		EU-154	242.

Post-NID Peak Search Report (continued)

Page : 2

Sample ID : S00T801

Acquisition date : 19-APR-2000 10:00:22

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	1173.33	301	1.62	2346.68	2338	18	19.9		CO-60	20.0
0	1274.58	1118	2.07	2549.22	2542	15	6.6		EU-154	230.
									NA-22	79.2
0	1332.60	273	1.71	2665.28	2657	15	13.9		CO-60	20.0
0	1460.98*	32	1.90	2922.12	2913	181	50.5		K-40	23.6
0	1596.71	41	1.28	3193.66	3187	14	56.8			

Summary of Nuclide Activity
Sample ID : S00T801

Page : 3
Acquisition date : 19-APR-2000 10:00:22

Total number of lines in spectrum 21
Number of unidentified lines 2
Number of lines tentatively identified by NID 19 90.48%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	7.923E+01	7.923E+01	0.524E+01	6.61	JZR
K-40	1.28E+09Y	1.00	2.358E+01	2.358E+01	3.550E+01	150.55	JZR
CO-57	271.80D	1.00	1.146E+02	1.147E+02	0.071E+02	6.19	JZR
CO-60	5.27Y	1.00	2.001E+01	2.001E+01	0.229E+01	11.42	
ZRNB-95	64.02D	1.00	2.208E+02	2.210E+02	0.192E+02	8.71	JZR
CD-109	462.90D	1.00	3.059E+03	3.059E+03	0.250E+03	8.17	JZR
SB-125	2.73Y	1.00	1.323E+02	1.323E+02	0.195E+02	14.76	
Sn-126	1.00E+05Y	1.00	2.426E+02	2.426E+02	0.198E+02	8.17	JZR
CS-137	30.00Y	1.00	5.696E+03	5.696E+03	0.034E+03	0.61	
EU-154	8.59Y	1.00	2.387E+02	2.387E+02	0.084E+02	3.52	
EU-155	4.68Y	1.00	3.351E+02	3.352E+02	0.219E+02	6.52	
NP-237	2.14E+06Y	1.00	9.181E+02	9.181E+02	0.750E+02	8.17	JZR
AM-241	432.20Y*****		3.928E+02	3.928E+02	0.639E+02	16.28	20 Apr 00
Total Activity :			1.147E+04	1.147E+04			

Grand Total Activity : 1.147E+04 1.147E+04

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T801

Page : 4
Acquisition date : 19-APR-2000 10:00:22

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	3998.	477.59	8.9672E+01
NA-24	32.	1368.55	2.2936E+00
Al-28	8.	1778.00	6.9384E+01
AR-41	33.	1293.60	3.3180E+00
SC-46	121.	1120.55	3.4446E+00
CR-51	3827.	320.08	6.2020E+01
MN-54	172.	834.83	3.2363E+00
CO-56	201.	846.76	3.5315E+00
CO-58	202.	810.78	3.4333E+00
FE-59	90.	1099.25	5.2385E+00
ZN-65	100.	1115.55	6.1841E+00
SE-75	4471.	264.66	9.7823E+00
KR-85	2337.	514.00	1.7538E+03
SR-85	2336.	514.01	7.9320E+00
Y-88	11.	1836.06	1.7495E+00
Y-91	51.	1204.67	8.1034E+02
NB-94	529.	871.09	5.7697E+00
RU-103	2514.	497.08	8.4157E+00
RURH-106	1008.	621.93	1.2035E+02
AG-108m	1307.	722.94	8.4967E+00
AG-110M	2492.	657.76	1.0350E+01
SN-113	3750.	391.69	1.1654E+01
TE-123m	6293.	159.00	6.1337E+00
SB-124	1350.	602.73	6.8591E+00
TE-125m	8076.	109.27	0.0000E+00
I-129	5518.	39.60	2.1461E+03
I-131	3526.	364.48	8.3615E+00
XE-131m	6230.	163.93	2.6375E+02
BA-133	3602.	356.02	1.0769E+01
CS-134	1146.	604.70	6.3555E+00
CS-136	178.	818.51	3.2611E+00
CS-138	22.	1435.86	8.5074E+00
CE-139	6156.	165.85	6.4317E+00
BA-140	1730.	537.31	2.8096E+01
LA-140	60.	1596.21	3.5597E+00
CE-141	6883.	145.44	1.1127E+01
CE-144	7250.	133.51	5.0185E+01
CEPR-144	7250.	133.51	1.0028E+02
EU-152	12034.	121.78	2.6090E+01
HF-181	3256.	482.18	1.0509E+01
TA-182	7238.	67.75	3.5763E+01
HG-203	4137.	279.20	7.0700E+00
BI-207	1235.	569.70	6.2389E+00
TL-208	4221.	277.36	9.1609E+01
PB-210	5504.	46.50	1.5059E+03
BI-212	235.	727.18	5.0544E+01
PB-212	5098.	238.63	1.2927E+01
BI-214	1207.	609.31	1.4299E+01
PB-214	3693.	351.92	7.4731E+01
RA-224	5179.	240.99	1.4557E+02
RA-226	6524.	186.10	1.5701E+02

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T801

Acquisition date : 19-APR-2000 10:00:22

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
AC-228	177.	911.21	1.3221E+01
TH-228	8672.	84.37	7.5392E+02
TH-229	8878.	88.47	3.5977E+01
U-232	6847.	57.78	1.2346E+04
PA-233	3708.	312.17	1.5588E+01
UTH-233	5057.	245.34	5.2091E+03
PA-234M	201.	1001.03	6.1980E+02
TH-234	6708.	63.29	4.6250E+02
U-235	6500.	185.71	9.5311E+00
U-237	8071.	101.07	2.7920E+01
NP-238	137.	984.45	1.2092E+01
NP-239	12059.	106.12	3.6316E+01
PU-239	7486.	129.30	8.9040E+04
AM-243	7838.	74.67	1.9654E+01

 * 222-S Laboratory Counting Room 19-APR-2000 17:15:04.68 *

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33252
 Sample ID: S00T802-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2835.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:31:26.24 sec
 Dead Time: 0.9%

Verified by:

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 14:43:05.21
 Decayed to: 19-APR-2000 14:43:05.21
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uci/L
0	59.57	2927	0.98	119.05	115	8	12.6		AM-241	464.
0	86.60	5613	0.97	173.12	169	9	8.1		NP-237	948.
									EU-155	358.
									CD-109	3.160E+03
0	105.43	4975	1.00	210.76	207	9	8.7		EU-155	367.
0	123.09	7262	1.05	246.08	241	9	5.9		CO-57	122.
									EU-154	258.
0	176.63	637	1.28	353.16	349	8	47.5		SB-125	133.
0	248.08	920	1.19	496.04	492	8	28.4		EU-154	233.
0	428.05	1557	1.29	855.97	851	10	17.2		SB-125	149.
0	463.25	527	1.35	926.37	923	9	47.5		SB-125	153.
0	591.70	330	1.21	1183.28	1178	12	46.4			
0	600.83	537	1.30	1201.54	1197	10	24.8		SB-125	116.
0	635.89	362	1.35	1271.65	1266	10	35.1		SB-125	130.
0	661.78*	105409	1.48	1323.43	1315	16	0.6		CS-137	5.183E+03
0	692.44	216	2.03	1384.76	1377	16	40.5		CO-57	5.814E+03
0	723.42	1187	1.69	1446.73	1440	13	8.0		ZRNB-95	243.
									EU-154	268.
0	756.99	259	1.66	1513.87	1508	12	27.1			
0	873.41	657	1.74	1746.74	1739	17	13.9		EU-154	286.
0	996.11	470	1.71	1992.17	1985	16	16.3		EU-154	266.
0	1004.71	841	1.76	2009.38	2000	17	10.8		EU-154	276.

Post-NID Peak Search Report (continued)
Sample ID : S00T802-SAM

Page : 2
Acquisition date : 19-APR-2000 14:43:05

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	1173.27	346	1.93	2346.55	2337	21	18.3		CO-60	23.0
0	1274.55	1294	1.80	2549.17	2539	19	6.7		EU-154	266.
									NA-22	91.7
0	1332.59	291	2.18	2665.27	2657	17	14.5		CO-60	21.4
0	1596.22	63	1.74	3192.67	3185	13	30.4			

Summary of Nuclide Activity
Sample ID : S00T802-SAM

Page : 3
Acquisition date : 19-APR-2000 14:43:05

Total number of lines in spectrum 22
Number of unidentified lines 2
Number of lines tentatively identified by NID 20 90.91%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
NA-22	2.60Y	1.00	9.171E+01	9.171E+01	0.617E+01	6.73	MR
CO-57	271.80D	1.00	1.220E+02	1.220E+02	0.072E+02	5.89	MR
CO-60	5.27Y	1.00	2.196E+01	2.196E+01	0.249E+01	11.36	
ZRNB-95	64.02D	1.00	2.429E+02	2.431E+02	0.194E+02	7.97	MR
GD-109	462.90D	1.00	3.160E+03	3.160E+03	0.255E+03	8.05	MR
SB-125	2.73Y	1.00	1.349E+02	1.349E+02	0.166E+02	12.28	
CS-137	30.00Y	1.00	5.183E+03	5.183E+03	0.033E+03	0.64	
EU-154	8.59Y	1.00	2.651E+02	2.651E+02	0.091E+02	3.42	
EU-155	4.68Y	1.00	3.620E+02	3.620E+02	0.214E+02	5.91	
NP-237	2.14E+06Y	1.00	9.484E+02	9.484E+02	0.764E+02	8.05	MR
AM-241	432.20Y*****		4.636E+02	4.636E+02	0.585E+02	12.61	20 Apr 00
Total Activity :			1.100E+04	1.100E+04			

Grand Total Activity : 1.100E+04 1.100E+04

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T802-SAM

Page : 4
Acquisition date : 19-APR-2000 14:43:05

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	3678.	477.59	8.6045E+01
NA-24	35.	1368.55	2.3962E+00
Al-28	8.	1778.00	6.6737E+01
K-40	311.	1460.75	6.2914E+01
AR-41	52.	1293.60	4.0714E+00
SC-46	132.	1120.55	3.6001E+00
CR-51	3579.	320.08	5.9996E+01
MN-54	140.	834.83	2.9338E+00
CO-56	191.	846.76	3.4446E+00
CO-58	162.	810.78	3.0951E+00
FE-59	100.	1099.25	5.5083E+00
ZN-65	99.	1115.55	6.1556E+00
SE-75	4365.	264.66	9.6672E+00
KR-85	2107.	514.00	1.6661E+03
SR-85	2106.	514.01	7.5351E+00
Y-88	14.	1836.06	1.9805E+00
Y-91	64.	1204.67	9.0480E+02
NB-94	596.	871.09	6.1160E+00
RU-103	2403.	497.08	8.2291E+00
RURH-106	984.	621.93	1.1894E+02
AG-108m	1372.	722.94	8.7030E+00
AG-110M	2252.	657.76	9.8457E+00
SN-113	3375.	391.69	1.1062E+01
TE-123m	6351.	159.00	6.1619E+00
SB-124	1362.	602.73	6.8896E+00
TE-125m	8061.	109.27	0.0000E+00
Sn-126	12967.	87.60	2.3762E+01
I-129	5505.	39.60	2.1435E+03
I-131	3606.	364.48	8.4551E+00
XE-131m	6108.	163.93	2.6117E+02
BA-133	3386.	356.02	1.0445E+01
CS-134	1100.	604.70	6.2298E+00
CS-136	162.	818.51	3.1162E+00
CS-138	18.	1435.86	7.7350E+00
CE-139	6217.	165.85	6.4631E+00
BA-140	1582.	537.31	2.6884E+01
LA-140	68.	1596.21	3.7483E+00
CE-141	6917.	145.44	1.1154E+01
CE-144	7250.	133.51	5.0185E+01
CEPR-144	7251.	133.51	1.0028E+02
EU-152	12228.	121.78	2.6298E+01
HF-181	2957.	482.18	1.0021E+01
TA-182	7414.	67.75	3.6191E+01
HG-203	4037.	279.20	6.9848E+00
BI-207	1091.	569.70	5.8707E+00
TL-208	4048.	277.36	8.9722E+01
PB-210	5626.	46.50	1.5223E+03
BI-212	234.	727.18	5.0392E+01
PB-212	5090.	238.63	1.2917E+01
BI-214	1099.	609.31	1.3656E+01
PB-214	3484.	351.92	7.2590E+01

Minimum Detectable Activity Report (continued)

Page : 5

Sample ID : S00T802-SAM

Acquisition date : 19-APR-2000 14:43:05

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
RA-224	4895.	240.99	1.4156E+02
RA-226	6316.	186.10	1.5450E+02
AC-228	194.	911.21	1.3816E+01
TH-228	8689.	84.37	7.5468E+02
TH-229	9246.	88.47	3.6711E+01
U-232	6806.	57.78	1.2309E+04
PA-233	3598.	312.17	1.5359E+01
UTH-233	4774.	245.34	5.0625E+03
PA-234M	244.	1001.03	6.8050E+02
TH-234	6943.	63.29	4.7047E+02
U-235	6306.	185.71	9.3889E+00
U-237	8607.	101.07	2.8827E+01
NP-238	142.	984.45	1.2309E+01
NP-239	12685.	106.12	3.7240E+01
PU-239	7379.	129.30	8.8403E+04
AM-243	7888.	74.67	1.9716E+01

**This document was too large to scan
as a single document. It has
been divided into smaller sections.**

Section 5 of 5

Document Information			
Document #	HNF-1701	Revision	0
Title	TANK 241AZ101, CORES 266, 269 ANALYTICAL RESULTS FOR THE FINAL REPORT		
Date			
Originator	STEEN FH	Originator Co.	FH
Recipient		Recipient Co.	
References			
Keywords			
Projects			
Other Information			

LABCORE Completed Worklist Report for Worklist# 33277

Analyst: akl

Instrument: GEA02

Book#: 46B57

Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ-101 (2), @GEA-05 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@GEA-05	CO60-02	LIQUID	4.665e-03	5.17e-03	110.825 % Recovery	
1 STD	0	@GEA-05	CO60-02E	LIQUID	1	2.98	2.980 % Ct Error	
1 STD	0	@GEA-05	CS13702	LIQUID	7.917e-03	8.41e-03	106.227 % Recovery	
1 STD	0	@GEA-05	CS13702E	LIQUID	1	2.86	2.860 % Ct Error	
2 BLNK	0	@GEA-05	NA22-02	LIQUID	1	<1.87e-2	uCi/mL	
2 BLNK	0	@GEA-05	NA24-02	LIQUID	1	<1.40e-2	uCi/mL	
2 BLNK	0	@GEA-05	K40-02	LIQUID	1	<3.27e-1	uCi/mL	
2 BLNK	0	@GEA-05	CO56-02	LIQUID	1	<1.71e-2	uCi/mL	
2 BLNK	0	@GEA-05	CO57-02	LIQUID	1	<1.10e-2	uCi/mL	
2 BLNK	0	@GEA-05	CO60-02	LIQUID	1	<1.70e-2	uCi/mL	
2 BLNK	0	@GEA-05	SE75-02	LIQUID	1	<1.85e-2	uCi/mL	
2 BLNK	0	@GEA-05	SR85-02	LIQUID	1	<1.76e-2	uCi/mL	
2 BLNK	0	@GEA-05	Y88-02	LIQUID	1	<1.55e-2	uCi/mL	
2 BLNK	0	@GEA-05	NB94-02	LIQUID	1	<1.70e-2	uCi/mL	
2 BLNK	0	@GEA-05	ZR95-02	LIQUID	1	<7.95e-2	uCi/mL	
2 BLNK	0	@GEA-05	RU10302	LIQUID	1	<1.76e-2	uCi/mL	
2 BLNK	0	@GEA-05	RU10602	LIQUID	1	<3.20e-1	uCi/mL	
2 BLNK	0	@GEA-05	CD10902	LIQUID	1	<3.74e-1	uCi/mL	
2 BLNK	0	@GEA-05	SN11302	LIQUID	1	<2.13e-2	uCi/mL	
2 BLNK	0	@GEA-05	SB12502	LIQUID	1	<4.30e-2	uCi/mL	
2 BLNK	0	@GEA-05	I13102	LIQUID	1	<1.66e-2	uCi/mL	
2 BLNK	0	@GEA-05	CS13402	LIQUID	1	<1.66e-2	uCi/mL	
2 BLNK	0	@GEA-05	CS13702	LIQUID	1	<4.19e-2	uCi/mL	
2 BLNK	0	@GEA-05	CE14402	LIQUID	1	<1.56e-1	uCi/mL	
2 BLNK	0	@GEA-05	EU15202	LIQUID	1	<3.25e-2	uCi/mL	
2 BLNK	0	@GEA-05	EU15402	LIQUID	1	<5.43e-2	uCi/mL	
2 BLNK	0	@GEA-05	EU15502	LIQUID	1	<4.38e-2	uCi/mL	
2 BLNK	0	@GEA-05	HG20302	LIQUID	1	<1.41e-2	uCi/mL	
2 BLNK	0	@GEA-05	TL20802	LIQUID	1	<1.86e-1	uCi/mL	
2 BLNK	0	@GEA-05	BI21202	LIQUID	1	<2.55e-1	uCi/mL	
2 BLNK	0	@GEA-05	PB21202	LIQUID	1	<2.67e-2	uCi/mL	
2 BLNK	0	@GEA-05	BI21402	LIQUID	1	<5.15e-2	uCi/mL	
2 BLNK	0	@GEA-05	PB21402	LIQUID	1	<1.74e-1	uCi/mL	
2 BLNK	0	@GEA-05	RA22402	LIQUID	1	<2.76e-1	uCi/mL	
2 BLNK	0	@GEA-05	RA22602	LIQUID	1	<3.05e-1	uCi/mL	
2 BLNK	0	@GEA-05	AC22802	LIQUID	1	<9.70e-2	uCi/mL	
2 BLNK	0	@GEA-05	TH22802	LIQUID	1	<1.11e0	uCi/mL	
2 BLNK	0	@GEA-05	TH22902	LIQUID	1	<5.35e-2	uCi/mL	
2 BLNK	0	@GEA-05	U23302	LIQUID	1	<9.54e0	uCi/mL	
2 BLNK	0	@GEA-05	PA23302	LIQUID	1	<3.10e-2	uCi/mL	
2 BLNK	0	@GEA-05	PA23402	LIQUID	1	<2.84e0	uCi/mL	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33277

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
2	BLNK		0	@GEA-05 TH23402	LIQUID	1	<7.49e-1		uCi/mL
2	BLNK		0	@GEA-05 U23502	LIQUID	1	<1.85e-2		uCi/mL
2	BLNK		0	@GEA-05 NP23702	LIQUID	1	<1.16e-1		uCi/mL
2	BLNK		0	@GEA-05 NP23902	LIQUID	1	<4.70e-2		uCi/mL
2	BLNK		0	@GEA-05 PU23902	LIQUID	1	<1.46e2		uCi/mL
2	BLNK		0	@GEA-05 AM24102	LIQUID	1	<8.74e-2		uCi/mL
2	BLNK		0	@GEA-05 AM24302	LIQUID	1	<3.26e-2		uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 NA22-02	LIQUID	N/A	< 2.548e-02	2.55e-002	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 NA22-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 NA24-02	LIQUID	N/A	< 2.751e-02	2.75e-002	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 NA24-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 K40-02	LIQUID	N/A	< 1.620e-01	0.162	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 K40-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 C056-02	LIQUID	N/A	< 3.960e-02	3.96e-002	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 C056-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 C057-02	LIQUID	N/A	< 2.517e-01	0.252	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 C057-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 C060-02	LIQUID	N/A	< 2.287e-02	2.29e-002	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 C060-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 SE75-02	LIQUID	N/A	< 4.821e-01	0.482	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 SE75-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 SR85-02	LIQUID	N/A	< 4.055e-01	0.406	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 SR85-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 Y88-02	LIQUID	N/A	< 7.228e-03	7.23e-003	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 Y88-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 NB94-02	LIQUID	N/A	< 3.936e-02	3.94e-002	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 NB94-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 ZR95-02	LIQUID	N/A	< 3.868e-01	0.387	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 ZR95-02E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 RU10302	LIQUID	N/A	< 4.596e-01	0.460	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 RU10302E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 RU10602	LIQUID	N/A	< 6.025e+00	6.025	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 RU10602E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 CD10902	LIQUID	N/A	< 7.823e+00	7.823	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 CD10902E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 SN11302	LIQUID	N/A	< 6.247e-01	0.625	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 SN11302E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 SB12502	LIQUID	N/A	< 1.584e+00	1.584	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 SB12502E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 I13102	LIQUID	N/A	< 4.471e-01	0.447	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 I13102E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 CS13402	LIQUID	N/A	1.170e+00		uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 CS13402E	LIQUID	N/A	6.83		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 CS13702	LIQUID	N/A	1.960e+03		uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 CS13702E	LIQUID	N/A	0.100		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 CE14402	LIQUID	N/A	< 3.828e+00	3.828	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 CE14402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0	@GEA-05 EU15202	LIQUID	N/A	< 7.618e-01	0.762	uCi/mL
3	SAMPLE	S00T000780	0	@GEA-05 EU15202E	LIQUID	N/A	n/a		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33277

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
3	SAMPLE	S00T000780	0		@GEA-05 EU15402	LIQUID	N/A <	7.403e-02	7.40e-002	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 EU15402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 EU15502	LIQUID	N/A <	8.850e-01	0.885	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 EU15502E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 HG20302	LIQUID	N/A <	3.545e-01	0.354	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 HG20302E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 TL20802	LIQUID	N/A <	4.568e+00	4.568	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 TL20802E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 BI21202	LIQUID	N/A <	1.291e+00	1.291	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 BI21202E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 PB21202	LIQUID	N/A <	6.317e-01	0.632	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 PB21202E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 BI21402	LIQUID	N/A <	6.613e-01	0.661	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 BI21402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 PB21402	LIQUID	N/A <	4.264e+00	4.264	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 PB21402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 RA22402	LIQUID	N/A <	7.024e+00	7.024	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 RA22402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 RA22602	LIQUID	N/A <	7.188e+00	7.188	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 RA22602E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 AC22802	LIQUID	N/A <	1.497e-01	0.150	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 AC22802E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 TH22802	LIQUID	N/A <	2.383e+01	23.830	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 TH22802E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 TH22902	LIQUID	N/A <	1.134e+00	1.134	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 TH22902E	LIQUID	N/A	n/a	1.50e-005	% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 U23302	LIQUID	N/A <	2.520e+02	252.000	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 U23302E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 PA23302	LIQUID	N/A <	8.037e-01	0.804	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 PA23302E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 PA23402	LIQUID	N/A <	4.822e+00	4.822	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 PA23402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 TH23402	LIQUID	N/A <	1.603e+01	16.030	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 TH23402E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 U23502	LIQUID	N/A <	4.344e-01	0.434	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 U23502E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 NP23702	LIQUID	N/A <	2.344e+00	2.344	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 NP23702E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 NP23902	LIQUID	N/A <	1.012e+00	1.012	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 NP23902E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 PU23902	LIQUID	N/A <	3.334e+03	3334.000	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 PU23902E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 AM24102	LIQUID	N/A <	2.101e+00	2.101	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 AM24102E	LIQUID	N/A	n/a		% Ct. Error
3	SAMPLE	S00T000780	0		@GEA-05 AM24302	LIQUID	N/A <	6.429e-01	0.643	uCi/mL
3	SAMPLE	S00T000780	0		@GEA-05 AM24302E	LIQUID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000783	0		@GEA-05 NA22-02	LIQUID	N/A <	2.284e-02	2.28e-002	uCi/mL
4	SAMPLE	S00T000783	0		@GEA-05 NA22-02E	LIQUID	N/A	n/a		% Ct. Error
4	SAMPLE	S00T000783	0		@GEA-05 NA24-02	LIQUID	N/A <	2.565e-02	2.56e-002	uCi/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33277

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 SAMPLE	S00T000783	0	@GEA-05	NA24-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	K40-02	LIQUID	N/A	3.600e-01	0.360	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	K40-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CO56-02	LIQUID	N/A	4.041e-02	4.04e-002	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CO56-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CO57-02	LIQUID	N/A	2.495e-01	0.249	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CO57-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CO60-02	LIQUID	N/A	2.010e-02	2.01e-002	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CO60-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	SE75-02	LIQUID	N/A	4.791e-01	0.479	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	SE75-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	SR85-02	LIQUID	N/A	4.033e-01	0.403	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	SR85-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	Y88-02	LIQUID	N/A	1.392e-02	1.39e-002	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	Y88-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	NB94-02	LIQUID	N/A	3.775e-02	3.77e-002	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	NB94-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	ZR95-02	LIQUID	N/A	3.855e-01	0.386	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	ZR95-02E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	RU10302	LIQUID	N/A	4.563e-01	0.456	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	RU10302E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	RU10602	LIQUID	N/A	5.997e+00	5.997	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	RU10602E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CD10902	LIQUID	N/A	7.782e+00	7.782	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CD10902E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	SN11302	LIQUID	N/A	6.183e-01	0.618	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	SN11302E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	SB12502	LIQUID	N/A	1.574e+00	1.574	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	SB12502E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	IL13102	LIQUID	N/A	4.446e-01	0.445	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	IL13102E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CS13402	LIQUID	N/A	1.120e+00		uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CS13402E	LIQUID	N/A	7.39		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CS13702	LIQUID	N/A	1.930e+03		uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CS13702E	LIQUID	N/A	0.100		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	CE14402	LIQUID	N/A	3.797e+00	3.797	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	CE14402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	EU15202	LIQUID	N/A	7.559e-01	0.756	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	EU15202E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	EU15402	LIQUID	N/A	6.628e-02	6.63e-002	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	EU15402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	EU15502	LIQUID	N/A	8.802e-01	0.880	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	EU15502E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	HG20302	LIQUID	N/A	3.521e-01	0.352	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	HG20302E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	TL20802	LIQUID	N/A	4.522e+00	4.522	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	TL20802E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05	BI21202	LIQUID	N/A	1.271e+00	1.271	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05	BI21202E	LIQUID	N/A	n/a		% Ct. Error

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LABCORE Completed Worklist Report for Worklist# 33277

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
4 SAMPLE	S00T000783	0	@GEA-05 PB21202	LIQUID	N/A <	6.268e-01	0.627	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 PB21202E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 BI21402	LIQUID	N/A <	6.584e-01	0.658	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 BI21402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 PB21402	LIQUID	N/A <	4.234e+00	4.234	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 PB21402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 RA22402	LIQUID	N/A <	6.985e+00	6.985	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 RA22402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 RA22602	LIQUID	N/A <	7.151e+00	7.151	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 RA22602E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 AC22802	LIQUID	N/A <	1.561e-01	0.156	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 AC22802E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 TH22802	LIQUID	N/A <	2.382e+01	23.820	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 TH22802E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 TH22902	LIQUID	N/A <	1.128e+00	1.128	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 TH22902E	LIQUID	N/A	n/a	1.50e-005	% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 U23302	LIQUID	N/A <	2.505e+02	250.500	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 U23302E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 PA23302	LIQUID	N/A <	7.988e-01	0.799	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 PA23302E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 PA23402	LIQUID	N/A <	4.964e+00	4.964	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 PA23402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 TH23402	LIQUID	N/A <	1.591e+01	15.910	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 TH23402E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 U23502	LIQUID	N/A <	4.326e-01	0.433	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 U23502E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 NP23702	LIQUID	N/A <	2.331e+00	2.331	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 NP23702E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 NP23902	LIQUID	N/A <	1.001e+00	1.001	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 NP23902E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 PU23902	LIQUID	N/A <	3.308e+03	3308.000	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 PU23902E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 AM24102	LIQUID	N/A <	2.076e+00	2.076	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 AM24102E	LIQUID	N/A	n/a		% Ct. Error
4 SAMPLE	S00T000783	0	@GEA-05 AM24302	LIQUID	N/A <	6.399e-01	0.640	uCi/mL
4 SAMPLE	S00T000783	0	@GEA-05 AM24302E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 NA22-02	LIQUID	N/A <	2.291e-02	2.29e-002	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 NA22-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 NA24-02	LIQUID	N/A <	2.576e-02	2.58e-002	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 NA24-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 K40-02	LIQUID	N/A <	6.445e-01	0.644	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 K40-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 C056-02	LIQUID	N/A <	3.892e-02	3.89e-002	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 C056-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 C057-02	LIQUID	N/A <	2.434e-01	0.243	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 C057-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 C060-02	LIQUID	N/A <	2.099e-02	2.10e-002	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 C060-02E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 SE75-02	LIQUID	N/A <	4.670e-01	0.467	uCi/mL

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LABCORE Completed Worklist Report for Worklist# 33277

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
5	SAMPLE	S00T000786	0		@GEA-05 SE75-02E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 SR85-02	LIQUID	N/A	3.910e-01	0.391	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 SR85-02E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 Y88-02	LIQUID	N/A	1.442e-02	1.44e-002	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 Y88-02E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 NB94-02	LIQUID	N/A	3.818e-02	3.82e-002	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 NB94-02E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 ZR95-02	LIQUID	N/A	3.651e-01	0.365	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 ZR95-02E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 RU10302	LIQUID	N/A	4.441e-01	0.444	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 RU10302E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 RU10602	LIQUID	N/A	5.830e+00	5.830	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 RU10602E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 CD10902	LIQUID	N/A	7.550e+00	7.550	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 CD10902E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 SN11302	LIQUID	N/A	6.013e-01	0.601	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 SN11302E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 SB12502	LIQUID	N/A	1.529e+00	1.529	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 SB12502E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 T13102	LIQUID	N/A	4.310e-01	0.431	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 T13102E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 CS13402	LIQUID	N/A	1.120e+00		uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 CS13402E	LIQUID	N/A	5.90		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 CS13702	LIQUID	N/A	1.820e+03		uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 CS13702E	LIQUID	N/A	0.110		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 CE14402	LIQUID	N/A	3.692e+00	3.692	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 CE14402E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 EU15202	LIQUID	N/A	7.364e-01	0.736	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 EU15202E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 EU15402	LIQUID	N/A	6.642e-02	6.64e-002	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 EU15402E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 EU15502	LIQUID	N/A	8.528e-01	0.853	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 EU15502E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 HG20302	LIQUID	N/A	3.420e-01	0.342	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 HG20302E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 TL20802	LIQUID	N/A	4.406e+00	4.406	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 TL20802E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 BI21202	LIQUID	N/A	1.181e+00	1.181	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 BI21202E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 PB21202	LIQUID	N/A	6.113e-01	0.611	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 PB21202E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 BI21402	LIQUID	N/A	9.993e-02	9.99e-002	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 BI21402E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 PB21402	LIQUID	N/A	4.093e+00	4.093	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 PB21402E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 RA22402	LIQUID	N/A	6.789e+00	6.789	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 RA22402E	LIQUID	N/A	n/a		% Ct. Error
5	SAMPLE	S00T000786	0		@GEA-05 RA22602	LIQUID	N/A	6.924e+00	6.924	uCi/mL
5	SAMPLE	S00T000786	0		@GEA-05 RA22602E	LIQUID	N/A	n/a		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33277

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
5 SAMPLE	S00T000786	0	@GEA-05 AC22802	LIQUID	N/A <	1.354e-01	0.135	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 AC22802E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 TH22802	LIQUID	N/A <	2.306e+01	23.060	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 TH22802E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 TH22902	LIQUID	N/A <	1.097e+00	1.097	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 TH22902E	LIQUID	N/A	n/a	1.50e-005	% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 U23302	LIQUID	N/A <	2.428e+02	242.800	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 U23302E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 PA23302	LIQUID	N/A <	7.745e-01	0.774	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 PA23302E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 PA23402	LIQUID	N/A <	4.913e+00	4.913	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 PA23402E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 TH23402	LIQUID	N/A <	1.544e+01	15.440	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 TH23402E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 U23502	LIQUID	N/A <	4.191e-01	0.419	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 U23502E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 NP23702	LIQUID	N/A <	2.259e+00	2.259	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 NP23702E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 NP23902	LIQUID	N/A <	9.762e-01	0.976	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 NP23902E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 PU23902	LIQUID	N/A <	3.221e+03	3221.000	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 PU23902E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 AM24102	LIQUID	N/A <	2.024e+00	2.024	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 AM24102E	LIQUID	N/A	n/a		% Ct. Error
5 SAMPLE	S00T000786	0	@GEA-05 AM24302	LIQUID	N/A <	6.191e-01	0.619	uCi/mL
5 SAMPLE	S00T000786	0	@GEA-05 AM24302E	LIQUID	N/A	n/a		% Ct. Error

Comments Section:

Comments for sample# S00T000780 and test @GEA-05 .
DL=0 => n/a.

Comments for sample# S00T000783 and test @GEA-05 .
DL=0 => n/a.

Comments for sample# S00T000786 and test @GEA-05 .
DL=0 => n/a.

Final page for worklist# 33277

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33277

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
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Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33277

Analyst: AKL Instrument: GEA00 #2 Book# 46B57

Method: LA-548-121 Rev/Mod F2

Worklist Comment: AZ-101 (2), @GEA-05 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-05	LIQUID		
2 BLNK			@GEA-05	LIQUID		
3 SAMPLE	S00T000780 0		@GEA-05	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 ,						
AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 ,						
CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 ,						
CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 ,						
CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 ,						
EU15502E, HG20302 , HG20302E, I13102 , I13102E , K40-02 ,						
K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 ,						
NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						
PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 ,						
PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 ,						
RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 ,						
SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 ,						
SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 ,						
TH23402E, TL20802 , TL20802E, U23302 , U23302E , U23502 ,						
U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						
4 SAMPLE	S00T000783 0		@GEA-05	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AC22802 , AC22802E, AM24102 , AM24102E, AM24302 ,						
AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 ,						
CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 ,						
CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 ,						
CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 ,						
EU15502E, HG20302 , HG20302E, I13102 , I13102E , K40-02 ,						
K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 ,						
NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						
PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 ,						
PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 ,						
RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 ,						
SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 ,						
SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 ,						
TH23402E, TL20802 , TL20802E, U23302 , U23302E , U23502 ,						
U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

04/18/00 12:59

Page: 2

ws2

LABCORE Data Entry Template for Worklist# 33277

S Type	Sample#	R A	Test	Matrix	Group#	Project
5 SAMPLE	S00T000786 0	@GEA-05	LIQUID		99000438	AZ-101 (2)
Analytes Requested:						
AC22802 , AC22802E, AM24102 , AM24102E, AM24302 ,						
AM24302E, BI21202 , BI21202E, BI21402 , BI21402E, CD10902 ,						
CD10902E, CE14402 , CE14402E, CO56-02 , CO56-02E, CO57-02 ,						
CO57-02E, CO60-02 , CO60-02E, CS13402 , CS13402E, CS13702 ,						
CS13702E, EU15202 , EU15202E, EU15402 , EU15402E, EU15502 ,						
EU15502E, HG20302 , HG20302E, I13102 , I13102E, K40-02 ,						
K40-02E , NA22-02 , NA22-02E, NA24-02 , NA24-02E, NB94-02 ,						
NB94-02E, NP23702 , NP23702E, NP23902 , NP23902E, PA23302 ,						
PA23302E, PA23402 , PA23402E, PB21202 , PB21202E, PB21402 ,						
PB21402E, PU23902 , PU23902E, RA22402 , RA22402E, RA22602 ,						
RA22602E, RU10302 , RU10302E, RU10602 , RU10602E, SB12502 ,						
SB12502E, SE75-02 , SE75-02E, SN11302 , SN11302E, SR85-02 ,						
SR85-02E, TH22802 , TH22802E, TH22902 , TH22902E, TH23402 ,						
TH23402E, TL20802 , TL20802E, U23302 , U23302E, U23502 ,						
U23502E , Y88-02 , Y88-02E , ZR95-02 , ZR95-02E						

Final page for worklist # 33277

Alita Jensen 4/19/00
 Signature Date

MB 4/24/00
 Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 19-APR-2000 19:07:43.41 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33277
 Sample ID: WL33277-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2836.cnf
 Geometry: 42
 Count Time: 0 00:50:00.00 sec
 Real Time: 0 00:50:22.07 sec
 Dead Time: 0.7%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 18:16:46.48
 Decayed to: 19-APR-2000 18:16:46.48
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.86*	5759	1.49	1323.59	1316	16	2.9		CS-137	8.41
0	1173.37	2632	1.87	2346.75	2337	17	4.2		CO-60	5.20
0	1332.70	2357	1.90	2665.49	2655	18	4.2		CO-60	5.14

Summary of Nuclide Activity

Page : 2

Sample ID : WL33277-STD

Acquisition date : 19-APR-2000 18:16:46

Total number of lines in spectrum	3	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	3	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	5.169E+00	5.169E+00	0.154E+00	2.98	
CS-137	30.00Y	1.00	8.412E+00	8.412E+00	0.241E+00	2.86	
Total Activity :			1.358E+01	1.358E+01			

Grand Total Activity :	1.358E+01	1.358E+01
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Flags: "K" = Keyline not found

"M" = Manually accepted

"E" = Manually edited

"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33277-STD

Page : 3
Acquisition date : 19-APR-2000 18:16:46

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	286.	477.59	7.2988E-01
NA-22	24.	1274.53	5.3180E-02
NA-24	9.	1368.55	3.7508E-02
Al-28	12.	1778.00	7.9773E-01
K-40	115.	1460.75	1.1571E+00
AR-41	21.	1293.60	6.0318E-02
SC-46	126.	1120.55	1.0447E-01
CR-51	300.	320.08	5.2753E-01
MN-54	134.	834.83	8.5454E-02
CO-56	147.	846.76	9.0289E-02
CO-57	278.	122.06	4.0062E-02
CO-58	136.	810.78	8.4493E-02
FE-59	143.	1099.25	1.9361E-01
ZN-65	133.	1115.55	2.1065E-01
SE-75	331.	264.66	8.0891E-02
KR-85	223.	514.00	1.6503E+01
SR-85	222.	514.01	7.4602E-02
Y-88	6.	1836.06	4.0088E-02
Y-91	47.	1204.67	2.3292E+01
NB-94	151.	871.09	9.3482E-02
ZRNB-95	135.	724.20	3.4451E-01
RU-103	211.	497.08	7.4400E-02
RURH-106	146.	621.93	1.4005E+00
AG-108m	122.	722.94	7.9840E-02
CD-109	261.	88.03	1.3009E+00
AG-110M	203.	657.76	9.0250E-02
SN-113	300.	391.69	1.0018E-01
TE-123m	340.	159.00	4.3343E-02
SB-124	159.	602.73	7.2051E-02
SB-125	320.	427.89	2.4456E-01
TE-125m	321.	109.27	0.0000E+00
Sn-126	274.	87.60	1.0569E-01
I-129	287.	39.60	1.4932E+01
I-131	302.	364.48	7.4110E-02
XE-131m	323.	163.93	1.8251E+00
BA-133	272.	356.02	9.0107E-02
CS-134	152.	604.70	7.0738E-02
CS-136	144.	818.51	8.7336E-02
CS-138	7.	1435.86	7.6311E-02
CE-139	346.	165.85	4.6375E-02
BA-140	178.	537.31	2.7488E-01
LA-140	5.	1596.21	3.5125E-02
CE-141	380.	145.44	7.9384E-02
CE-144	332.	133.51	3.2712E-01
CEPR-144	332.	133.51	6.5368E-01
EU-152	284.	121.78	1.2260E-01
EU-154	24.	1274.51	1.5450E-01
EU-155	282.	86.54	1.5314E-01
HF-181	266.	482.18	9.1337E-02
TA-182	257.	67.75	2.0610E-01
HG-203	339.	279.20	6.1399E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL33277-STD

Acquisition date : 19-APR-2000 18:16:46

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BI-207	152.	569.70	6.6951E-02
TL-208	314.	277.36	7.5934E-01
PB-210	252.	46.50	9.8164E+00
BI-212	136.	727.18	1.1525E+00
PB-212	394.	238.63	1.0898E-01
BI-214	175.	609.31	1.6587E-01
PB-214	317.	351.92	2.9767E-01
RA-224	402.	240.99	1.2218E+00
RA-226	378.	186.10	1.1483E+00
AC-228	198.	911.21	4.1471E-01
TH-228	311.	84.37	4.3534E+00
TH-229	264.	88.47	1.8984E-01
U-232	238.	57.78	7.0495E+01
PA-233	301.	312.17	1.3497E-01
UTH-233	392.	245.34	4.3968E+01
PA-234M	148.	1001.03	1.5914E+01
TH-234	291.	63.29	2.9394E+00
U-235	375.	185.71	6.9504E-02
NP-237	283.	86.48	4.0649E-01
U-237	266.	101.07	1.5434E-01
NP-238	164.	984.45	3.8760E-01
NP-239	306.	106.12	1.7480E-01
PU-239	339.	129.30	5.7691E+02
AM-241	253.	59.54	3.6059E-01
AM-243	285.	74.67	1.1445E-01

 * 222-S Laboratory Counting Room 19-APR-2000 21:49:06.19 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33277
 Sample ID: WL33277-BLK
 Sample Size: 1.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2837.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:31.81 sec
 Dead Time: 0.4%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 19:18:02.71
 Decayed to: 19-APR-2000 19:18:02.71
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/L
0	1461.15*	44	1.93	2922.46	2915	15 99.7		K-40	327.

Summary of Nuclide Activity

Page : 2

Sample ID : WL33277-BLK

Acquisition date : 19-APR-2000 19:18:02

Total number of lines in spectrum 1
 Number of unidentified lines 0
 Number of lines tentatively identified by NID 1 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.271E+02	3.271E+02	3.260E+02	99.66	870
Total Activity :			3.271E+02	3.271E+02			20Apr00

Grand Total Activity : 3.271E+02 3.271E+02

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33277-BLK

Page : 3
Acquisition date : 19-APR-2000 19:18:02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	83.	477.59	1.3653E+02
NA-22	26.	1274.53	1.8692E+01
NA-24	10.	1368.55	1.3950E+01
Al-28	2.	1778.00	3.7783E+02
AR-41	29.	1293.60	3.0926E+01
SC-46	75.	1120.55	2.7553E+01
CR-51	124.	320.08	1.1647E+02
MN-54	33.	834.83	1.4955E+01
CO-56	43.	846.76	1.7081E+01
CO-57	181.	122.06	1.0952E+01
CO-58	38.	810.78	1.5723E+01
FE-59	20.	1099.25	2.6095E+01
CO-60	19.	1332.50	1.7027E+01
ZN-65	34.	1115.55	3.7464E+01
SE-75	149.	264.66	1.8521E+01
KR-85	106.	514.00	3.8999E+03
SR-85	106.	514.01	1.7610E+01
Y-88	8.	1836.06	1.5547E+01
Y-91	31.	1204.67	6.4514E+03
NB-94	40.	871.09	1.6978E+01
ZRNB-95	60.	724.20	7.9492E+01
RU-103	100.	497.08	1.7553E+01
RURH-106	64.	621.93	3.2028E+02
AG-108m	59.	722.94	1.9183E+01
CD-109	188.	88.03	3.7425E+02
AG-110M	66.	657.76	1.7841E+01
SN-113	115.	391.69	2.1272E+01
TE-123m	207.	159.00	1.1479E+01
SB-124	67.	602.73	1.6124E+01
SB-125	82.	427.89	4.2993E+01
TE-125m	158.	109.27	0.0000E+00
Sn-126	193.	87.60	3.0050E+01
I-129	150.	39.60	3.6726E+03
I-131	129.	364.48	1.6623E+01
XE-131m	178.	163.93	4.6202E+02
BA-133	140.	356.02	2.2099E+01
CS-134	71.	604.70	1.6641E+01
CS-136	40.	818.51	1.6134E+01
CS-137	315.	661.66	4.1900E+01
CS-138	16.	1435.86	7.3503E+01
CE-139	211.	165.85	1.2297E+01
BA-140	77.	537.31	6.2227E+01
LA-140	14.	1596.21	1.8504E+01
CE-141	206.	145.44	1.9881E+01
CE-144	163.	133.51	7.8196E+01
CEPR-144	163.	133.51	1.5619E+02
EU-152	173.	121.78	3.2486E+01
EU-154	26.	1274.51	5.4265E+01
EU-155	201.	86.54	4.3785E+01
HF-181	74.	482.18	1.6746E+01
TA-182	165.	67.75	5.6094E+01

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
HG-203	153.	279.20	1.4086E+01
BI-207	72.	569.70	1.5801E+01
TL-208	162.	277.36	1.8592E+02
PB-210	155.	46.50	2.6215E+03
BI-212	56.	727.18	2.5497E+02
PB-212	203.	238.63	2.6663E+01
BI-214	147.	609.31	5.1484E+01
PB-214	190.	351.92	1.7379E+02
RA-224	173.	240.99	2.7565E+02
RA-226	232.	186.10	3.0514E+02
AC-228	92.	911.21	9.6998E+01
TH-228	175.	84.37	1.1118E+03
TH-229	182.	88.47	5.3460E+01
U-232	125.	57.78	1.7415E+04
PA-233	136.	312.17	3.0993E+01
UTH-233	157.	245.34	9.5355E+03
PA-234M	38.	1001.03	2.8418E+03
TH-234	163.	63.29	7.4862E+02
U-235	230.	185.71	1.8492E+01
NP-237	202.	86.48	1.1637E+02
U-237	172.	101.07	4.2250E+01
NP-238	35.	984.45	6.4195E+01
NP-239	188.	106.12	4.7038E+01
PU-239	189.	129.30	1.4644E+05
AM-241	127.	59.54	8.7368E+01
AM-243	202.	74.67	3.2640E+01

 * 222-S Laboratory Counting Room 20-APR-2000 00:43:12.23 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33277
 Sample ID: S00T000780-SAM
 Sample Size: 1.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2838.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:48:13.39 sec
 Dead Time: 11%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-APR-2000 21:54:28.03
 Decayed to: 19-APR-2000 21:54:28.03
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	605.09	3135	1.43	1210.06	1206	9	19.1		CS-134	1.245E+03
0	661.94*	3977791	1.52	1323.76	1315	18	0.1		CS-137	1.956E+06
0	796.12	2025	1.60	1592.14	1583	16	7.4		CS-134	1.159E+03
0	802.42	208	1.17	1604.74	1599	12	45.5		CS-134	1.174E+03
0	1323.35	770	2.23	2646.79	2638	18	8.4			
0	1366.27	54	1.18	2732.64	2722	19	58.1			
0	1461.20*	22	1.89	2922.55	2915	14	191.3		K-40	162.

Summary of Nuclide Activity
Sample ID : S00T000780-SAM

Page : 2
Acquisition date : 19-APR-2000 21:54:28

Total number of lines in spectrum 7
Number of unidentified lines 2
Number of lines tentatively identified by NID 5 71.43%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.620E+02	1.620E+02	3.099E+02	191.27	199
CS-134	2.06Y	1.00	1.169E+03	1.169E+03	0.080E+03	6.83	20 Apr 00
CS-137	30.00Y	1.00	1.956E+06	1.956E+06	0.002E+06	0.10	
Total Activity :			1.957E+06	1.957E+06			

Grand Total Activity : 1.957E+06 1.957E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000780-SAM

Page : 3
Acquisition date : 19-APR-2000 21:54:28

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	124175.	477.59	4.9604E+03
NA-22	51.	1274.53	2.5483E+01
NA-24	46.	1368.55	2.7509E+01
Al-28	8.	1778.00	7.4618E+02
AR-41	48.	1293.60	4.1081E+01
SC-46	142.	1120.55	3.7204E+01
CR-51	99393.	320.08	3.1375E+03
MN-54	255.	834.83	3.9124E+01
CO-56	255.	846.76	3.9595E+01
CO-57	103401.	122.06	2.5171E+02
CO-58	338.	810.78	4.4050E+01
FE-59	109.	1099.25	5.7337E+01
CO-60	37.	1332.50	2.2870E+01
ZN-65	127.	1115.55	6.9404E+01
SE-75	110102.	264.66	4.8213E+02
KR-85	62258.	514.00	8.9652E+04
SR-85	62248.	514.01	4.0553E+02
Y-88	1.	1836.06	7.2283E+00
Y-91	56.	1204.67	8.4919E+03
NB-94	240.	871.09	3.9363E+01
ZRNB-95	1602.	724.20	3.8676E+02
RU-103	76389.	497.08	4.5959E+02
RURH-106	25998.	621.93	6.0247E+03
AG-108m	1599.	722.94	9.3857E+01
CD-109	88930.	88.03	7.8226E+03
AG-110M	59208.	657.76	4.9989E+02
SN-113	109395.	391.69	6.2467E+02
TE-123m	107248.	159.00	2.5183E+02
SB-124	28163.	602.73	3.0949E+02
SB-125	125673.	427.89	1.5836E+03
TE-125m	95540.	109.27	0.0000E+00
Sn-126	88842.	87.60	6.2002E+02
I-129	81746.	39.60	8.2125E+04
I-131	102307.	364.48	4.4709E+02
XE-131m	107688.	163.93	1.0909E+04
BA-133	100902.	356.02	5.6559E+02
CS-136	310.	818.51	4.2558E+01
CS-138	26.	1435.86	1.0062E+02
CE-139	107636.	165.85	2.6744E+02
BA-140	45717.	537.31	1.4287E+03
LA-140	16.	1596.21	1.9556E+01
CE-141	107285.	145.44	4.3707E+02
CE-144	106731.	133.51	1.9159E+03
CEPR-144	106731.	133.51	3.8284E+03
EU-152	103306.	121.78	7.6176E+02
EU-154	51.	1274.51	7.4030E+01
EU-155	88657.	86.54	8.8504E+02
HF-181	99336.	482.18	5.7575E+02
TA-182	82225.	67.75	1.1997E+03
HG-203	105502.	279.20	3.5450E+02
BI-207	30372.	569.70	3.0542E+02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S00T000780-SAM

Acquisition date : 19-APR-2000 21:54:28

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
TL-208	106439.	277.36	4.5675E+03
PB-210	81230.	46.50	5.7545E+04
BI-212	1607.	727.18	1.2909E+03
PB-212	123330.	238.63	6.3174E+02
BI-214	26501.	609.31	6.6134E+02
PB-214	100392.	351.92	4.2637E+03
RA-224	121870.	240.99	7.0244E+03
RA-226	138266.	186.10	7.1876E+03
AC-228	229.	911.21	1.4970E+02
TH-228	87336.	84.37	2.3825E+04
TH-229	88971.	88.47	1.1341E+03
U-232	81063.	57.78	4.2269E+05
PA-233	100044.	312.17	8.0366E+02
UTH-233	119907.	245.34	2.5203E+05
PA-234M	119.	1001.03	4.8221E+03
TH-234	81401.	63.29	1.6030E+04
U-235	136570.	185.71	4.3443E+02
NP-237	88656.	86.48	2.3441E+03
U-237	92052.	101.07	9.3922E+02
NP-238	130.	984.45	1.1830E+02
NP-239	94016.	106.12	1.0123E+03
PU-239	106015.	129.30	3.3342E+06
AM-241	81080.	59.54	2.1011E+03
AM-243	84635.	74.67	6.4291E+02

 * 222-S Laboratory Counting Room 20-APR-2000 06:50:11.45 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33277
 Sample ID: S00T000783-SAM
 Sample Size: 1.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2841.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:47:56.46 sec
 Dead Time: 11%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-APR-2000 04:01:44.99
 Decayed to: 20-APR-2000 04:01:44.99
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	605.05	2394	1.62	1209.97	1206	9	24.9		CS-134	950.
0	661.95*	3916306	1.52	1323.77	1315	18	0.1		CS-137	1.926E+06
0	796.20	1992	1.56	1592.30	1583	17	7.9		CS-134	1.141E+03
0	802.68	233	1.42	1605.26	1600	11	34.9		CS-134	1.312E+03
0	1323.41	774	2.08	2646.90	2638	18	9.3			
0	1365.43	66	1.43	2730.96	2725	11	31.4			
0	1461.25*	49	2.01	2922.65	2915	17	88.4		K-40	360.

Summary of Nuclide Activity
Sample ID : S00T000783-SAM

Page : 2
Acquisition date : 20-APR-2000 04:01:44

Total number of lines in spectrum 7
Number of unidentified lines 2
Number of lines tentatively identified by NID 5 71.43%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.600E+02	3.600E+02	3.181E+02	88.35	MA
CS-134	2.06Y	1.00	1.123E+03	1.123E+03	0.083E+03	7.39	20Apr00
CS-137	30.00Y	1.00	1.926E+06	1.926E+06	0.002E+06	0.10	
Total Activity :			1.927E+06	1.927E+06			

Grand Total Activity : 1.927E+06 1.927E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000783-SAM

Page : 3
Acquisition date : 20-APR-2000 04:01:44

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	121844.	477.59	4.9137E+03
NA-22	40.	1274.53	2.2837E+01
NA-24	40.	1368.55	2.5649E+01
Al-28	12.	1778.00	9.0738E+02
AR-41	34.	1293.60	3.5029E+01
SC-46	140.	1120.55	3.7023E+01
CR-51	98538.	320.08	3.1240E+03
MN-54	294.	834.83	4.1939E+01
CO-56	266.	846.76	4.0414E+01
CO-57	101597.	122.06	2.4951E+02
CO-58	353.	810.78	4.4988E+01
FE-59	105.	1099.25	5.6352E+01
CO-60	28.	1332.50	2.0100E+01
ZN-65	109.	1115.55	6.4408E+01
SE-75	108718.	264.66	4.7910E+02
KR-85	61582.	514.00	8.9165E+04
SR-85	61578.	514.01	4.0334E+02
Y-88	6.	1836.06	1.3922E+01
Y-91	64.	1204.67	8.9902E+03
NB-94	220.	871.09	3.7750E+01
ZRNB-95	1591.	724.20	3.8549E+02
RU-103	75289.	497.08	4.5627E+02
RURH-106	25755.	621.93	5.9966E+03
AG-108m	1606.	722.94	9.4052E+01
CD-109	88016.	88.03	7.7824E+03
AG-110M	57745.	657.76	4.9369E+02
SN-113	107163.	391.69	6.1828E+02
TE-123m	106068.	159.00	2.5044E+02
SB-124	27465.	602.73	3.0564E+02
SB-125	124206.	427.89	1.5743E+03
TE-125m	93462.	109.27	0.0000E+00
Sn-126	87883.	87.60	6.1667E+02
I-129	80443.	39.60	8.1469E+04
I-131	101162.	364.48	4.4458E+02
XE-131m	106040.	163.93	1.0825E+04
BA-133	99479.	356.02	5.6159E+02
CS-136	350.	818.51	4.5153E+01
CS-138	24.	1435.86	9.6899E+01
CE-139	106447.	165.85	2.6596E+02
BA-140	45321.	537.31	1.4225E+03
LA-140	11.	1596.21	1.6748E+01
CE-141	106868.	145.44	4.3622E+02
CE-144	105005.	133.51	1.9004E+03
CEPR-144	105006.	133.51	3.7973E+03
EU-152	101732.	121.78	7.5594E+02
EU-154	40.	1274.51	6.6284E+01
EU-155	87692.	86.54	8.8022E+02
HF-181	98476.	482.18	5.7326E+02
TA-182	81482.	67.75	1.1942E+03
HG-203	104054.	279.20	3.5206E+02
BI-207	30024.	569.7	3.0367E+02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S00T000783-SAM

Acquisition date : 20-APR-2000 04:01:44

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
TL-208	104304.	277.36	4.5215E+03
PB-210	80114.	46.50	5.7149E+04
BI-212	1557.	727.18	1.2709E+03
PB-212	121412.	238.63	6.2681E+02
BI-214	26265.	609.31	6.5839E+02
PB-214	99323.	351.92	4.2343E+03
RA-224	120505.	240.99	6.9849E+03
RA-226	136876.	186.10	7.1514E+03
AC-228	250.	911.21	1.5613E+02
TH-228	87281.	84.37	2.3817E+04
TH-229	88048.	88.47	1.1282E+03
U-232	79211.	57.78	4.1784E+05
PA-233	98831.	312.17	7.9878E+02
UTH-233	118479.	245.34	2.5052E+05
PA-234M	126.	1001.03	4.9637E+03
TH-234	80181.	63.29	1.5910E+04
U-235	135399.	185.71	4.3257E+02
NP-237	87693.	86.48	2.3314E+03
U-237	91548.	101.07	9.3664E+02
NP-238	137.	984.45	1.2116E+02
NP-239	91934.	106.12	1.0010E+03
PU-239	104346.	129.30	3.3079E+06
AM-241	79179.	59.54	2.0764E+03
AM-243	83831.	74.67	6.3985E+02

 * 222-S Laboratory Counting Room 20-APR-2000 09:41:31.31 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33277
 Sample ID: S00T786-SAM
 Sample Size: 1.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA2
 File Number: dka300:[spec.GEA2]2g2842.cnf
 Geometry: 42
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:46:57.20 sec
 Dead Time: 10%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 20-APR-2000 06:54:04.14
 Decayed to: 20-APR-2000 06:54:04.14
 Standard Deviations: 2
 Analysis Library: SUPER
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA2]2GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 14:49:30.70
 Date of last efficiency calibration: 3-MAY-1999 14:49:59.73

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	27.57	11141	1.45	55.08	54	5	7.6			
0	605.01	3113	1.73	1209.89	1206	10	20.3		CS-134	1.236E+03
0	661.94*	3704205	1.52	1323.76	1315	18	0.1		CS-137	1.822E+06
0	796.15	1951	1.64	1592.19	1586	12	6.2		CS-134	1.117E+03
0	802.44	179	1.63	1604.78	1599	10	44.5		CS-134	1.012E+03
0	1323.32	679	2.00	2646.72	2636	19	9.5			
0	1365.39	63	1.95	2730.88	2723	13	32.6			
0	1764.89*	16	1.86	3530.14	3523	141	02.3		BI-214	99.9

Summary of Nuclide Activity

Page : 2

Sample ID : S00T786-SAM

Acquisition date : 20-APR-2000 06:54:04

Total number of lines in spectrum 8
 Number of unidentified lines 3
 Number of lines tentatively identified by NID 5 62.50%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr	2-Sigma	Flags
			Uncorrected	Decay Corr			
			uCi/L	uCi/L	2-Sigma Error	%Error	
CS-134	2.06Y	1.00	1.123E+03	1.123E+03	0.066E+03	5.90	
CS-137	30.00Y	1.00	1.822E+06	1.822E+06	0.002E+06	0.11	
BI-214	28700.00D	1.00	9.993E+01	9.993E+01	10.23E+01	102.35	
Total Activity :			1.823E+06	1.823E+06			

JAR
20 Apr 00

Grand Total Activity : 1.823E+06 1.823E+06

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T786-SAM

Page : 3
Acquisition date : 20-APR-2000 06:54:04

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	115963.	477.59	4.7938E+03
NA-22	41.	1274.53	2.2906E+01
NA-24	40.	1368.55	2.5756E+01
Al-28	12.	1778.00	8.7849E+02
K-40	327.	1460.75	6.4445E+02
AR-41	47.	1293.60	4.0375E+01
SC-46	147.	1120.55	3.7864E+01
CR-51	92768.	320.08	3.0313E+03
MN-54	252.	834.83	3.8901E+01
CO-56	246.	846.76	3.8924E+01
CO-57	96645.	122.06	2.4337E+02
CO-58	356.	810.78	4.5145E+01
FE-59	104.	1099.25	5.5952E+01
CO-60	31.	1332.50	2.0988E+01
ZN-65	123.	1115.55	6.8435E+01
SE-75	103285.	264.66	4.6699E+02
KR-85	57876.	514.00	8.6447E+04
SR-85	57868.	514.01	3.9103E+02
Y-88	7.	1836.06	1.4424E+01
Y-91	61.	1204.67	8.8136E+03
NB-94	225.	871.09	3.8178E+01
ZRNB-95	1425.	724.20	3.6507E+02
RU-103	71304.	497.08	4.4405E+02
RURH-106	24341.	621.93	5.8302E+03
AG-108m	1458.	722.94	8.9669E+01
CD-109	82827.	88.03	7.5500E+03
AG-110M	55060.	657.76	4.8210E+02
SN-113	101339.	391.69	6.0127E+02
TE-123m	100339.	159.00	2.4360E+02
SB-124	26413.	602.73	2.9975E+02
SB-125	117210.	427.89	1.5294E+03
TE-125m	89023.	109.27	0.0000E+00
Sn-126	82630.	87.60	5.9799E+02
I-129	75626.	39.60	7.8997E+04
I-131	95073.	364.48	4.3101E+02
XE-131m	99881.	163.93	1.0506E+04
BA-133	94152.	356.02	5.4638E+02
CS-136	266.	818.51	3.9508E+01
CS-138	16.	1435.86	8.1238E+01
CE-139	99532.	165.85	2.5719E+02
BA-140	42403.	537.31	1.3761E+03
LA-140	17.	1596.21	2.0166E+01
CE-141	100031.	145.44	4.2206E+02
CE-144	99274.	133.51	1.8479E+03
CEPR-144	99270.	133.51	3.6924E+03
EU-152	96539.	121.78	7.3643E+02
EU-154	40.	1274.51	6.6423E+01
EU-155	82305.	86.54	8.5281E+02
HF-181	92728.	482.18	5.5630E+02
TA-182	76949.	67.75	1.1606E+03
HG-203	98156.	279.20	3.4196E+02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S00T786-SAM

Acquisition date : 20-APR-2000 06:54:04

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BI-207	28124.	569.70	2.9394E+02
TL-208	99020.	277.36	4.4057E+03
PB-210	75244.	46.50	5.5386E+04
BI-212	1340.	727.18	1.1806E+03
PB-212	115476.	238.63	6.1132E+02
PB-214	93850.	351.92	4.0934E+03
RA-224	113827.	240.99	6.7885E+03
RA-226	128297.	186.10	6.9240E+03
AC-228	186.	911.21	1.3539E+02
TH-228	81826.	84.37	2.3062E+04
TH-229	83256.	88.47	1.0972E+03
U-232	75057.	57.78	4.0676E+05
PA-233	92893.	312.17	7.7446E+02
UTH-233	111224.	245.34	2.4275E+05
PA-234M	124.	1001.03	4.9130E+03
TH-234	75498.	63.29	1.5439E+04
U-235	127087.	185.71	4.1910E+02
NP-237	82294.	86.48	2.2586E+03
U-237	85746.	101.07	9.0650E+02
NP-238	107.	984.45	1.0772E+02
NP-239	87449.	106.12	9.7623E+02
PU-239	98914.	129.30	3.2208E+06
AM-241	75249.	59.54	2.0243E+03
AM-243	78471.	74.67	6.1910E+02

LABCORE Completed Worklist Report for Worklist# 34184

Analyst: scl

Instrument: GEA01

Book#: 60857

Method: LA-548-121 Rev/Mod F-2

Worklist Comment: AZ101 (2), @GEA-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0	GEA-01	CO60-02	LIQUID	2.611e-03	2.85e-03	109.154 % Recovery
1 STD	0	0	GEA-01	CO60-02E	LIQUID	1	4.05	4.050 % Ct Error
1 STD	0	0	GEA-01	CS13702	LIQUID	6.091e-03	6.49e-03	106.551 % Recovery
1 STD	0	0	GEA-01	CS13702E	LIQUID	1	3.05	3.050 % Ct Error
2 BLNK	0	0	GEA-01	CO60-02	LIQUID	1	<5.86e-3	uCi/mL
2 BLNK	0	0	GEA-01	CS13702	LIQUID	1	<7.53e-3	uCi/mL
3 SAMPLE	S99T001833	0	GEA-01	CO60-02	LIQUID	N/A	5.819e-02	5.82e-002 uCi/mL
3 SAMPLE	S99T001833	0	GEA-01	CO60-02E	LIQUID	N/A	n/a	% Ct. Error
3 SAMPLE	S99T001833	0	GEA-01	CS13702	LIQUID	N/A	2.730e+03	uCi/mL
3 SAMPLE	S99T001833	0	GEA-01	CS13702E	LIQUID	N/A	0.120	% Ct. Error
4 DUP	S99T001833	0	GEA-01	CO60-02	LIQUID	<5.82e-2	<5.95e-2	RPD
4 DUP	S99T001833	0	GEA-01	CO60-02E	LIQUID	1	n/a	% Ct Error
4 DUP	S99T001833	0	GEA-01	CS13702	LIQUID	2.73e+03	2.73e+03	0.000 RPD
4 DUP	S99T001833	0	GEA-01	CS13702E	LIQUID	1	0.120	0.120 % Ct Error
5 SAMPLE	S99T001838	0	GEA-01	CO60-02	LIQUID	N/A	5.677e-02	5.68e-002 uCi/mL
5 SAMPLE	S99T001838	0	GEA-01	CO60-02E	LIQUID	N/A	n/a	% Ct. Error
5 SAMPLE	S99T001838	0	GEA-01	CS13702	LIQUID	N/A	2.040e+03	uCi/mL
5 SAMPLE	S99T001838	0	GEA-01	CS13702E	LIQUID	N/A	0.140	% Ct. Error
6 DUP	S99T001838	0	GEA-01	CO60-02	LIQUID	<5.68e-2	<5.78e-2	RPD
6 DUP	S99T001838	0	GEA-01	CO60-02E	LIQUID	1	n/a	% Ct Error
6 DUP	S99T001838	0	GEA-01	CS13702	LIQUID	2.04e+03	2.02e+03	0.985 RPD
6 DUP	S99T001838	0	GEA-01	CS13702E	LIQUID	1	0.140	0.140 % Ct Error
7 SAMPLE	S99T001863	0	GEA-01	CO60-02	LIQUID	N/A	6.090e-02	6.09e-002 uCi/mL
7 SAMPLE	S99T001863	0	GEA-01	CO60-02E	LIQUID	N/A	n/a	% Ct. Error
7 SAMPLE	S99T001863	0	GEA-01	CS13702	LIQUID	N/A	2.360e+03	uCi/mL
7 SAMPLE	S99T001863	0	GEA-01	CS13702E	LIQUID	N/A	0.130	% Ct. Error
8 DUP	S99T001863	0	GEA-01	CO60-02	LIQUID	<6.09e-2	<6.46e-2	RPD
8 DUP	S99T001863	0	GEA-01	CO60-02E	LIQUID	1	n/a	% Ct Error
8 DUP	S99T001863	0	GEA-01	CS13702	LIQUID	2.36e+03	2.35e+03	0.425 RPD
8 DUP	S99T001863	0	GEA-01	CS13702E	LIQUID	1	0.130	0.130 % Ct Error
9 SAMPLE	S99T001919	0	GEA-01	CO60-02	LIQUID	N/A	6.511e-02	6.51e-002 uCi/mL
9 SAMPLE	S99T001919	0	GEA-01	CO60-02E	LIQUID	N/A	n/a	% Ct. Error
9 SAMPLE	S99T001919	0	GEA-01	CS13702	LIQUID	N/A	2.340e+03	uCi/mL
9 SAMPLE	S99T001919	0	GEA-01	CS13702E	LIQUID	N/A	0.130	% Ct. Error
10 DUP	S99T001919	0	GEA-01	CO60-02	LIQUID	<6.51e-2	<6.48e-2	RPD
10 DUP	S99T001919	0	GEA-01	CO60-02E	LIQUID	1	n/a	% Ct Error
10 DUP	S99T001919	0	GEA-01	CS13702	LIQUID	2.34e+03	2.35e+03	0.426 RPD
10 DUP	S99T001919	0	GEA-01	CS13702E	LIQUID	1	0.130	0.130 % Ct Error

Comments Section:

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 34184

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
----------	---------	-----	------	--------	--------	-------	-------------	------

Comments for sample# S99T001833 and test @GEA-01 .
DL=0 => n/a.

Comments for sample# S99T001838 and test @GEA-01 .
DL=0 => n/a.

Comments for sample# S99T001863 and test @GEA-01 .
DL=0 => n/a.

Comments for sample# S99T001919 and test @GEA-01 .
DL=0 => n/a.

Final page for worklist# 34184

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 7/24/00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 34184

Analyst: S.L Instrument: GEA00 #1 Book# 60857

Method: LA-548-121 Rev/Mod F-2

RUSH

Worklist Comment: AZ101 (2), @GEA-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-01	LIQUID		
2 BLNK			@GEA-01	LIQUID		
3 SAMPLE	S99T001833 0		@GEA-01	LIQUID	99000433	AZ-101 (2) <i>cell 19</i>
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
4 DUP	S99T001833 0		@GEA-01	LIQUID		
5 SAMPLE	S99T001838 0		@GEA-01	LIQUID	99000433	AZ-101 (2) <i>cell 19</i>
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
6 DUP	S99T001838 0		@GEA-01	LIQUID		
7 SAMPLE	S99T001845 0		@GEA-01	LIQUID	99000433	AZ-101 (2) <i>cell 19</i>
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
8 DUP	S99T001845 0		@GEA-01	LIQUID		
9 SAMPLE	S99T001863 0		@GEA-01	LIQUID	99000438	AZ-101 (2) <i>19</i>
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
10 DUP	S99T001863 0		@GEA-01	LIQUID		
11 SAMPLE	S99T001919 0		@GEA-01	LIQUID	99000438	AZ-101 (2) <i>8</i>
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
12 DUP	S99T001919 0		@GEA-01	LIQUID		

Final page for worklist # 34184

See Jan 7-19-00
Signature Date

Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquant Code

07/24/00 08:06
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 34184

Analyst: _____ Instrument: GEA00 _____ Book# _____

Method: LA-548-121 Rev/Mod _____

Worklist Comment: AZ101 (2), @GEA-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-01	LIQUID		
2 BLNK			@GEA-01	LIQUID		
3 SAMPLE	S99T001833 0		@GEA-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
4 DUP	S99T001833 0		@GEA-01	LIQUID		
5 SAMPLE	S99T001838 0		@GEA-01	LIQUID	99000433	AZ-101 (2)
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
6 DUP	S99T001838 0		@GEA-01	LIQUID		
7 SAMPLE	S99T001863 0		@GEA-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
8 DUP	S99T001863 0		@GEA-01	LIQUID		
9 SAMPLE	S99T001919 0		@GEA-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: CO60-02 , CO60-02E, CS13702 , CS13702E						
10 DUP	S99T001919 0		@GEA-01	LIQUID		

Final page for worklist # 34184_____
Signature Date

 Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 20-JUL-2000 05:59:21.43 *

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: WL34184-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1656.cnf
 Geometry: 41
 Count Time: 0 00:50:00.00 sec
 Real Time: 0 00:50:11.48 sec
 Dead Time: 0.4%

Verified by:

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 05:08:34.39
 Decayed to: 20-JUL-2000 05:08:34.39
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	31.77	1070	1.02	63.76	58	10	12.1			
0	36.56	261	1.10	73.34	69	9	39.4			
0	59.49	199	0.96	119.17	116	8	46.6		AM-241	0.152
0	661.85*	5516	1.48	1323.59	1316	16	3.1		CS-137	6.49
0	1173.42	1677	1.71	2346.84	2340	14	5.9		CO-60	2.82
0	1332.64	1548	1.88	2665.39	2657	18	5.6		CO-60	2.88

Summary of Nuclide Activity

Page : 2

Sample ID : WL34184-STD

Acquisition date : 20-JUL-2000 05:08:34

Total number of lines in spectrum 6
 Number of unidentified lines 2
 Number of lines tentatively identified by NID 4 66.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	2.847E+00	2.847E+00	0.115E+00	4.05	
CS-137	30.00Y	1.00	6.490E+00	6.490E+00	0.198E+00	3.05	
AM-241	432.20Y	1.00	1.519E-01	1.519E-01	0.708E-01	46.61	
Total Activity :			9.488E+00	9.488E+00			

Grand Total Activity : 9.488E+00 9.488E+00

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL34184-STD

Page : 3
Acquisition date : 20-JUL-2000 05:08:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	341.	477.59	6.3105E-01
NA-24	19.	1368.55	4.4345E-02
K-40	573.	1460.75	2.1286E+00
AR-41	51.	1293.60	7.6847E-02
SC-46	145.	1120.55	9.4703E-02
CR-51	379.	320.08	4.7512E-01
MN-54	151.	834.83	7.4608E-02
CO-56	145.	846.76	7.4182E-02
CO-58	152.	810.78	7.3165E-02
FE-59	144.	1099.25	1.6468E-01
ZN-65	124.	1115.55	1.7267E-01
SE-75	443.	264.66	7.5500E-02
KR-85	290.	514.00	1.4898E+01
SR-85	290.	514.01	6.7349E-02
Y-88	6.	1836.06	3.3683E-02
Y-91	61.	1204.67	2.2214E+01
NB-94	126.	871.09	7.1073E-02
ZRNB-95	133.	724.20	2.7826E-01
RU-103	271.	497.08	6.6617E-02
RURH-106	178.	621.93	1.2356E+00
AG-108m	132.	722.94	6.7228E-02
CD-109	534.	88.03	7.9350E-01
AG-110M	275.	657.76	8.4152E-02
SN-113	404.	391.69	9.2188E-02
TE-123m	597.	159.00	4.3198E-02
SB-124	169.	602.73	5.9285E-02
SB-125	329.	427.89	1.9692E-01
TE-125m	585.	109.27	1.0988E+01
I-129	389.	39.60	4.3818E-01
I-131	359.	364.48	6.4466E-02
XE-131m	648.	163.93	1.9607E+00
BA-133	358.	356.02	8.2371E-02
CS-134	178.	604.70	6.1120E-02
CS-136	140.	818.51	7.0950E-02
CS-138	25.	1435.86	1.0997E-01
CE-139	661.	165.85	4.8842E-02
BA-140	224.	537.31	2.4422E-01
LA-140	18.	1596.21	5.0598E-02
CE-141	635.	145.44	7.4275E-02
CE-144	648.	133.51	3.1376E-01
CEPR-144	648.	133.51	6.2687E-01
EU-152	651.	121.78	1.1866E-01
EU-154	35.	1274.51	1.5654E-01
EU-155	545.	86.54	8.8118E-02
HF-181	312.	482.18	7.8374E-02
TA-182	468.	67.75	6.6333E-02
HG-203	429.	279.20	5.5687E-02
BI-207	186.	569.70	5.8852E-02
TL-208	459.	277.36	7.3887E-01
PB-210	415.	46.50	7.4318E-01
BI-212	152.	727.18	9.8901E-01

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL34184-STD

Acquisition date : 20-JUL-2000 05:08:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-212	649.	238.63	1.1264E-01
BI-214	284.	609.31	3.5725E-01
PB-214	464.	351.92	2.8627E-01
RA-224	578.	240.99	1.1813E+00
RA-226	679.	186.10	1.2089E+00
AC-228	210.	911.21	3.5512E-01
TH-228	620.	84.37	2.4294E+00
TH-229	522.	88.47	1.1471E-01
U-232	482.	57.78	1.4519E+01
PA-233	398.	312.17	1.2439E-01
UTH-233	512.	245.34	4.0588E+01
PA-234M	135.	1001.03	1.2792E+01
TH-234	484.	63.29	7.4268E-01
U-235	688.	185.71	7.3955E-02
NP-237	550.	86.48	2.3413E-01
U-237	566.	101.07	1.1821E-01
NP-238	137.	984.45	2.9846E-01
NP-239	588.	106.12	1.3536E-01
PU-239	647.	129.30	5.3579E+02
AM-243	563.	74.67	4.9126E-02

 * 222-S Laboratory Counting Room 20-JUL-2000 08:43:23.81 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: WL34184-BLK
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1657.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:24.71 sec
 Dead Time: 0.3%

Verified by:

. >>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 06:12:22.17
 Decayed to: 20-JUL-2000 06:12:22.17
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:10:20.91

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.70*	95	1.60	1323.29	1318	13	83.2		CS-137	7.53

Summary of Nuclide Activity

Page : 2

Sample ID : WL34184-BLK

Acquisition date : 20-JUL-2000 06:12:22

Total number of lines in spectrum 1
 Number of unidentified lines 0
 Number of lines tentatively identified by NID 1 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS 137	30.00Y	1.00	7.529E+00	7.529E+00	6.261E+00	83.1%	
Total Activity :			7.529E+00	7.529E+00			

Grand Total Activity : 7.529E+00 7.529E+00

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

24 July 00

Minimum Detectable Activity Report

Page : 3

Sample ID : WL34184-BLK

Acquisition date : 20-JUL-2000 06:12:22

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	339.	477.59	4.2347E+01
NA-24	53.	1368.55	4.9295E+00
K-40	1736.	1460.75	2.4697E+02
AR-41°	85.	1293.60	8.6896E+00
SC-46	264.	1120.55	8.5096E+00
CR-51	647.	320.08	4.1552E+01
MN-54	176.	834.83	5.3964E+00
CO-56	155.	846.76	5.1563E+00
CO-58	160.	810.78	5.0563E+00
FE-59	140.	1099.25	1.0945E+01
CO-60	90.	1332.50	5.8591E+00
ZN-65	153.	1115.55	1.2873E+01
SE-75	763.	264.66	6.6255E+00
KR-85	428.	514.00	1.2114E+03
SR-85	427.	514.01	5.4722E+00
Y-88	22.	1836.06	3.8873E+00
Y-91	150.	1204.67	2.2971E+03
NB-94	141.	871.09	5.0464E+00
ZRNB-95	216.	724.20	2.3616E+01
RU-103	348.	497.08	5.0681E+00
RURH-106	227.	621.93	9.3340E+01
AG-108m	225.	722.94	5.8524E+00
CD-109	1115.	88.03	7.6604E+01
AG-110M	218.	657.76	5.0674E+00
SN-113	458.	391.69	6.6049E+00
TE-123m	1318.	159.00	4.2910E+00
SB-124	266.	602.73	4.9651E+00
SB-125	390.	427.89	1.4404E+01
TE-125m	1321.	109.27	1.1037E+03
I-129	737.	39.60	4.0294E+01
I-131	484.	364.48	5.0304E+00
XE-131m	1345.	163.93	1.8932E+02
BA-133	500.	356.02	6.5222E+00
CS-134	268.	604.70	5.0040E+00
CS-136	160.	818.51	5.0933E+00
CS-138	47.	1435.86	2.0283E+01
CE-139	1361.	165.85	4.6895E+00
BA-140	256.	537.31	1.7571E+01
LA-140	50.	1596.21	5.4403E+00
CE-141	1467.	145.44	7.5465E+00
CE-144	1440.	133.51	3.1271E+01
CEPR-144	1440.	133.51	6.2489E+01
EU-152	1343.	121.78	1.1401E+01
EU-154	109.	1274.51	1.8008E+01
EU-155	1214.	86.54	8.7834E+00
HF-181	347.	482.18	5.5580E+00
TA-182	963.	67.75	6.3600E+00
HG-203	770.	279.20	4.9930E+00
BI-207	275.	569.70	4.7828E+00
TL-208	741.	277.36	6.2864E+01
PB-210	841.	46.50	7.0698E+01

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL34184-BLK

Acquisition date : 20-JUL-2000 06:12:22

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BI-212	250.	727.18	8.4556E+01
PB-212	1291.	238.63	1.0627E+01
BI-214	640.	609.31	8.9253E+01
PB-214	825.	351.92	5.6770E+01
RA-224	1050.	240.99	1.0728E+02
RA-226	1300.	186.10	1.1195E+02
AC-228	359.	911.21	3.0978E+01
TH-228	1278.	84.37	2.3315E+02
TH-229	1093.	88.47	1.1088E+01
U-232	1007.	57.78	1.4013E+03
PA-233	613.	312.17	1.0342E+01
UTH-233	890.	245.34	3.5837E+03
PA-234M	135.	1001.03	8.6154E+02
TH-234	1035.	63.29	7.2558E+01
U-235	1296.	185.71	6.7959E+00
NP-237	1220.	86.48	2.3289E+01
U-237	1275.	101.07	1.1891E+01
NP-238	148.	984.45	2.1051E+01
NP-239	1292.	106.12	1.3545E+01
PU-239	1408.	129.30	5.2826E+04
AM-241	963.	59.54	7.5539E+00
AM-243	1358.	74.67	5.0931E+00

 * 222-S Laboratory Counting Room 20-JUL-2000 11:42:04.59 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1833-SAM
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1658.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:43:13.38 sec
 Dead Time: 8.1%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 08:58:14.79
 Decayed to: 20-JUL-2000 08:58:14.79
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: SZC
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	26.56	8315	0.95	53.33	51	29	7.6	1.55E+03		
8	29.64	58266	1.54	59.50	51	29	2.6		I-129	2.224E+04
8	31.90	460323	1.25	64.02	51	29	0.4			
8	36.30	137254	1.75	72.80	51	29	1.0			
3	72.85*	7408	1.21	145.88	142	13	12.3	3.96E+00		
3	74.97*	14179	1.00	150.11	142	13	5.9		AM-243	5.960E+03
0	84.76*	9315	1.16	169.68	167	6	8.9		TH-228	1.847E+05
0	87.44*	3521	1.18	175.05	173	7	25.9		NP-237	7.125E+03
									CD-109	2.448E+04
0	186.91*	1558	1.32	373.90	372	6	67.0		U-235	822.
									RA-226	1.352E+04
0	604.96	2238	1.55	1209.82	1206	9	20.0		CS-134	1.742E+03
0	661.79*	2844803	1.51	1323.46	1315	17	0.1		CS-137	2.732E+06
0	693.62	681	2.29	1387.12	1380	19	33.3			
0	795.98*	1503	1.63	1591.85	1585	13	7.5		CS-134	1.669E+03
0	802.23	129	1.64	1604.34	1600	10	52.2		CS-134	1.410E+03
0	1322.96	342	2.04	2646.03	2636	18	18.4			

Summary of Nuclide Activity

Page : 2

Sample ID : S99T1833-SAM

Acquisition date : 20-JUL-2000 08:58:14

Total number of lines in spectrum 15
 Number of unidentified lines 6
 Number of lines tentatively identified by NID 9 60.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	2.447E+04	2.448E+04	0.633E+04	25.87	07R
I-129	5.73E+09D	1.00	2.224E+04	2.224E+04	0.057E+04	2.56	07R
CS-134	2.06Y	1.00	1.671E+03	1.671E+03	0.116E+03	6.97	
CS-137	30.00Y	1.00	2.732E+06	2.732E+06	0.003E+06	0.12	
RA-226	1600.00Y*****	1.00	1.352E+04	1.352E+04	0.906E+04	67.03	07R
TH-228	1.91Y	1.00	1.847E+05	1.847E+05	0.165E+05	8.91	07R
U-235	7.04E+08Y	1.00	8.221E+02	8.221E+02	5.511E+02	67.03	07R
NP-237	2.14E+06Y	1.00	7.125E+03	7.125E+03	1.843E+03	25.87	07R
AM-243	7380.00Y*****	1.00	5.960E+03	5.960E+03	0.349E+03	5.86	07R
Total Activity :			2.993E+06	2.993E+06			24 July 00

Grand Total Activity : 2.993E+06 2.993E+06

Flags: "K" = Keyline not found

"E" = Manually edited

"M" = Manually accepted

"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1833-SAM

Page : 3
Acquisition date : 20-JUL-2000 08:58:14

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	91383.	477.59	8.4498E+03
NA-24	96.	1368.55	7.2128E+01
K-40	1801.	1460.75	2.7605E+03
AR-41	106.	1293.60	1.1036E+02
SC-46	325.	1120.55	1.0584E+02
CR-51	69918.	320.08	5.4049E+03
MN-54	252.	834.83	7.5412E+01
CO-56	229.	846.76	7.2835E+01
CO-58	218.	810.78	6.9159E+01
FE-59	181.	1099.25	1.3935E+02
CO-60	72.	1332.50	5.8189E+01
ZN-65	209.	1115.55	1.6802E+02
SE-75	68166.	264.66	7.9218E+02
KR-85	46608.	514.00	1.5335E+05
SR-85	46602.	514.01	6.9364E+02
Y-88	22.	1836.06	4.2840E+01
Y-91	164.	1204.67	2.6665E+04
NB-94	226.	871.09	7.3879E+01
ZRNB-95	296.	724.20	3.2978E+02
RU-103	57061.	497.08	7.8677E+02
RURH-106	14663.	621.93	8.8685E+03
AG-108m	290.	722.94	7.9328E+01
AG-110M	85520.	657.76	1.1731E+03
SN-113	82801.	391.69	1.0957E+03
TE-123m	77147.	159.00	4.3452E+02
SB-124	16475.	602.73	4.6454E+02
SB-125	98022.	427.89	2.7991E+03
TE-125m	65160.	109.27	1.0744E+05
I-131	76022.	364.48	7.8193E+02
XE-131m	78375.	163.93	1.9072E+04
BA-133	74644.	356.02	9.8924E+02
CS-136	221.	818.51	6.9993E+01
CS-138	52.	1435.86	2.4948E+02
CE-139	79053.	165.85	4.7096E+02
BA-140	33418.	537.31	2.4089E+03
LA-140	38.	1596.21	5.3111E+01
CE-141	73397.	145.44	7.1460E+02
CE-144	71399.	133.51	2.9789E+03
CEPR-144	71398.	133.51	5.9522E+03
EU-152	72169.	121.78	1.1431E+03
EU-154	108.	1274.51	1.9875E+02
EU-155	65388.	86.54	9.1179E+02
HF-181	73744.	482.18	9.8446E+02
TA-182	55732.	67.75	6.7837E+02
HG-203	67892.	279.20	5.9134E+02
BI-207	19855.	569.70	4.8573E+02
TL-208	67946.	277.36	7.5927E+03
PB-210	49468.	46.50	6.5603E+03
BI-212	358.	727.18	1.2052E+03
PB-212	77080.	238.63	1.0493E+03
BI-214	15561.	609.31	5.7272E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1833-SAM

Acquisition date : 20-JUL-2000 08:58:14

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	73870.	351.92	7.2373E+03
RA-224	75910.	240.99	1.1639E+04
AC-228	449.	911.21	4.0031E+02
TH-229	61981.	88.47	1.1789E+03
U-232	52069.	57.78	1.3651E+05
PA-233	69567.	312.17	1.3797E+03
UTH-233	73078.	245.34	4.1285E+05
PA-234M	197.	1001.03	1.1794E+04
TH-234	53575.	63.29	7.2453E+03
U-237	60674.	101.07	1.1474E+03
NP-238	180.	984.45	2.6573E+02
NP-239	62790.	106.12	1.3149E+03
PU-239	71589.	129.30	5.1154E+06
AM-241	52583.	59.54	7.6294E+02

 * 222-S Laboratory Counting Room 20-JUL-2000 16:01:28.38 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T001833-DUP
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

Raymond

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1660.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:43:11.34 sec
 Dead Time: 8.1%

Verified by:

John Helgeson 24 July 00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 13:17:46.02
 Decayed to: 20-JUL-2000 13:17:46.02
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	26.56	8315	0.95	53.33	51	29	7.6	1.53E+03		
8	29.64	57567	1.54	59.49	51	29	2.6		I-129	2.197E+04
8	31.90	458071	1.25	64.01	51	29	0.4			
8	36.29	137729	1.75	72.79	51	29	1.0			
2	72.81*	7161	1.10	145.79	142	12	12.8	2.71E+00		
2	74.97*	13851	1.00	150.10	142	12	6.0		AM-243	5.822E+03
0	84.69*	8843	1.14	169.55	166	8	11.8		TH-228	1.753E+05
0	87.41*	2672	1.00	174.99	173	7	34.1		NP-237	5.407E+03
									CD-109	1.857E+04
0	186.34*	2917	2.26	372.76	370	7	40.2		U-235	1.539E+03
									RA-226	2.531E+04
0	604.62	2058	1.56	1209.13	1205	9	22.0		CS-134	1.601E+03
0	661.53*	2841010	1.70	1322.95	1314	18	0.1		CS-137	2.728E+06
3	691.38	308	2.09	1382.65	1378	15	42.8	3.75E+00		
3	692.96	207	1.72	1385.81	1378	15	68.1			
3	694.05	171	1.55	1387.98	1378	15	74.7			
0	795.67*	1562	2.03	1591.22	1584	15	7.2		CS-134	1.735E+03
0	1322.73	423	2.63	2645.56	2637	23	17.1			

Summary of Nuclide Activity
Sample ID : S99T001833-DUP

Page : 2
Acquisition date : 20-JUL-2000 13:17:46

Total number of lines in spectrum 16
Number of unidentified lines 8
Number of lines tentatively identified by NID 8 50.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	1.857E+04	1.857E+04	0.634E+04	34.11	870
I-129	5.73E+09D	1.00	2.197E+04	2.197E+04	0.057E+04	2.58	870
CS-134	2.06Y	1.00	1.720E+03	1.720E+03	0.118E+03	6.88	
CS-137	30.00Y	1.00	2.728E+06	2.728E+06	0.003E+06	0.12	
RA-226	1600.00Y	1.00	2.531E+04	2.531E+04	1.016E+04	40.16	870
TH-228	1.91Y	1.00	1.753E+05	1.753E+05	0.206E+05	11.75	870
U-235	7.04E+08Y	1.00	1.539E+03	1.539E+03	0.618E+03	40.16	870
NP-237	2.14E+06Y	1.00	5.407E+03	5.407E+03	1.844E+03	34.11	870
AM-243	7380.00Y*****	1.00	5.823E+03	5.822E+03	0.350E+03	6.01	870
Total Activity :			2.984E+06	2.984E+06			24 July 00

Grand Total Activity : 2.984E+06 2.984E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T001833-DUP

Page : 3
Acquisition date : 20-JUL-2000 13:17:46

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	90923.	477.59	8.4286E+03
NA-24	72.	1368.55	6.3155E+01
K-40	1693.	1460.75	2.6777E+03
AR-41	95.	1293.60	1.0506E+02
SC-46	328.	1120.55	1.0621E+02
CR-51	69883.	320.08	5.4036E+03
MN-54	240.	834.83	7.3589E+01
CO-56	224.	846.76	7.2059E+01
CO-58	254.	810.78	7.4361E+01
FE-59	185.	1099.25	1.4098E+02
CO-60	76.	1332.50	5.9527E+01
ZN-65	183.	1115.55	1.5778E+02
SE-75	68595.	264.66	7.9466E+02
KR-85	46757.	514.00	1.5359E+05
SR-85	46751.	514.01	6.9474E+02
Y-88	24.	1836.06	4.4903E+01
Y-91	176.	1204.67	2.7624E+04
NB-94	229.	871.09	7.4304E+01
ZRNB-95	324.	724.20	3.4462E+02
RU-103	56723.	497.08	7.8444E+02
RURH-106	14611.	621.93	8.8530E+03
AG-108m	308.	722.94	8.1682E+01
AG-110M	145647.	657.76	1.5302E+03
SN-113	82986.	391.69	1.0969E+03
TE-123m	76839.	159.00	4.3365E+02
SB-124	16959.	602.73	4.7127E+02
SB-125	98098.	427.89	2.8002E+03
TE-125m	65200.	109.27	1.0747E+05
I-131	76090.	364.48	7.8227E+02
XE-131m	78428.	163.93	1.9079E+04
BA-133	74368.	356.02	9.8742E+02
CS-136	214.	818.51	6.8968E+01
CS-138	60.	1435.86	2.6829E+02
CE-139	78744.	165.85	4.7004E+02
BA-140	33049.	537.31	2.3956E+03
LA-140	38.	1596.21	5.2946E+01
CE-141	73451.	145.44	7.1486E+02
CE-144	71591.	133.51	2.9828E+03
CEPR-144	71591.	133.51	5.9602E+03
EU-152	72058.	121.78	1.1422E+03
EU-154	119.	1274.51	2.0750E+02
EU-155	65336.	86.54	9.1142E+02
HF-181	72889.	482.18	9.7875E+02
TA-182	54980.	67.75	6.7378E+02
HG-203	67804.	279.20	5.9096E+02
BI-207	19425.	569.70	4.8047E+02
TL-208	67810.	277.36	7.5851E+03
PB-210	49774.	46.50	6.5806E+03
BI-212	359.	727.18	1.2067E+03
PB-212	77212.	238.63	1.0502E+03
BI-214	15470.	609.31	5.7095E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T001833-DUP

Acquisition date : 20-JUL-2000 13:17:46

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	73680.	351.92	7.2266E+03
RA-224	75539.	240.99	1.1611E+04
AC-228	397.	911.21	3.7691E+02
TH-229	61768.	88.47	1.1769E+03
U-232	52170.	57.78	1.3664E+05
PA-233	68912.	312.17	1.3732E+03
UTH-233	73127.	245.34	4.1299E+05
PA-234M	211.	1001.03	1.2168E+04
TH-234	54132.	63.29	7.2828E+03
U-237	60392.	101.07	1.1447E+03
NP-238	172.	984.45	2.5970E+02
NP-239	62290.	106.12	1.3097E+03
PU-239	71753.	129.30	5.1213E+06
AM-241	52761.	59.54	7.6422E+02

 * 222-S Laboratory Counting Room 20-JUL-2000 18:48:56.56 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T001838-SAM
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1661.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:39:53.35 sec
 Dead Time: 6.2%

Verified by:

. >>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 16:08:32.00
 Decayed to: 20-JUL-2000 16:08:32.00
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	26.56	6491	0.95	53.33	51	29	8.4	1.26E+03		
8	29.64	43109	1.54	59.50	51	29	3.0		I-129	1.645E+04
8	31.90	343581	1.21	64.01	51	29	0.4			
8	36.28	105886	1.75	72.77	51	29	1.2			
2	72.83*	5610	1.10	145.84	142	13	14.3	4.95E+00		
2	74.97*	10463	1.03	150.10	142	13	6.9		AM-243	4.398E+03
0	84.67*	6025	1.04	169.51	167	7	13.5		TH-228	1.195E+05
0	87.45*	2154	0.96	175.05	173	7	36.7		NP-237	4.359E+03
									CD-109	1.497E+04
0	604.81	1591	1.33	1209.52	1206	9	24.6		CS-134	1.238E+03
0	661.68*	2125345	1.51	1323.24	1315	16	0.1		CS-137	2.041E+06
0	795.94*	1100	1.48	1591.76	1585	14	9.6		CS-134	1.222E+03
0	1322.82	214	1.64	2645.74	2639	16	25.3			
0	1460.56*	126	2.16	2921.34	2911	22	80.6		K-40	1.745E+03

Summary of Nuclide Activity
Sample ID : S99T001838-SAM

Page : 2
Acquisition date : 20-JUL-2000 16:08:32

Total number of lines in spectrum 13
Number of unidentified lines 5
Number of lines tentatively identified by NID 8 61.54%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.745E+03	1.745E+03	1.407E+03	80.62	gtr
CD-109	462.90D	1.00	1.497E+04	1.497E+04	0.549E+04	36.69	gtr
I-129	5.73E+09D	1.00	1.645E+04	1.645E+04	0.049E+04	2.97	gtr
CS-134	2.06Y	1.00	1.224E+03	1.224E+03	0.110E+03	8.95	
CS-137	30.00Y	1.00	2.041E+06	2.041E+06	0.003E+06	0.14	
TH-228	1.91Y	1.00	1.195E+05	1.195E+05	0.162E+05	13.52	gtr
NP-237	2.14E+06Y	1.00	4.359E+03	4.359E+03	1.599E+03	36.69	gtr
AM-243	7380.00Y*****	1.00	4.398E+03	4.398E+03	0.303E+03	6.89	gtr
Total Activity :			2.204E+06	2.204E+06			24 July 00

Grand Total Activity : 2.204E+06 2.204E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T001838-SAM

Page : 3
Acquisition date : 20-JUL-2000 16:08:32

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	68151.	477.59	7.2992E+03
NA-24	71.	1368.55	6.2744E+01
AR-41	98.	1293.60	1.0530E+02
SC-46	290.	1120.55	1.0017E+02
CR-51	52402.	320.08	4.6806E+03
MN-54	228.	834.83	7.1756E+01
CO-56	204.	846.76	6.8890E+01
CO-58	196.	810.78	6.5718E+01
FE-59	157.	1099.25	1.3022E+02
CO-60	68.	1332.50	5.6766E+01
ZN-65	175.	1115.55	1.5415E+02
SE-75	51854.	264.66	6.9114E+02
KR-85	34907.	514.00	1.3277E+05
SR-85	34900.	514.01	6.0051E+02
Y-88	17.	1836.06	3.8259E+01
Y-91	166.	1204.67	2.6872E+04
NB-94	231.	871.09	7.4679E+01
ZRNB-95	299.	724.20	3.3152E+02
RU-103	42564.	497.08	6.7976E+02
RURH-106	10929.	621.93	7.6625E+03
AG-108m	281.	722.94	7.8103E+01
AG-110M	70689.	657.76	1.0668E+03
SN-113	61867.	391.69	9.4741E+02
TE-123m	57885.	159.00	3.7650E+02
SB-124	12619.	602.73	4.0680E+02
SB-125	73438.	427.89	2.4235E+03
TE-125m	49277.	109.27	9.3464E+04
I-131	56977.	364.48	6.7709E+02
XE-131m	59046.	163.93	1.6558E+04
BA-133	55842.	356.02	8.5592E+02
CS-136	207.	818.51	6.7859E+01
CS-138	54.	1435.86	2.4997E+02
CE-139	59181.	165.85	4.0762E+02
BA-140	24714.	537.31	2.0725E+03
LA-140	29.	1596.21	4.6740E+01
CE-141	55467.	145.44	6.2140E+02
CE-144	53745.	133.51	2.5853E+03
CEPR-144	53746.	133.51	5.1660E+03
EU-152	54087.	121.78	9.8990E+02
EU-154	111.	1274.51	2.0061E+02
EU-155	48950.	86.54	7.8917E+02
HF-181	54288.	482.18	8.4495E+02
TA-182	41704.	67.75	5.8703E+02
HG-203	50725.	279.20	5.1131E+02
BI-207	14877.	569.70	4.2072E+02
TL-208	50742.	277.36	6.5637E+03
PB-210	37190.	46.50	5.6905E+03
BI-212	325.	727.18	1.1505E+03
PB-212	58267.	238.63	9.1263E+02
BI-214	11785.	609.31	4.8878E+03
PB-214	55443.	351.92	6.1522E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T001838-SAM

Acquisition date : 20-JUL-2000 16:08:32

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
RA-224	56926.	240.99	1.0080E+04
RA-226	88926.	186.10	1.2057E+04
AC-228	428.	911.21	3.9091E+02
TH-229	46440.	88.47	1.0208E+03
U-232	39014.	57.78	1.1821E+05
PA-233	52102.	312.17	1.1944E+03
UTH-233	55195.	245.34	3.5891E+05
PA-234M	189.	1001.03	1.1546E+04
TH-234	40498.	63.29	6.3017E+03
U-235	87478.	185.71	7.2711E+02
U-237	45869.	101.07	9.9785E+02
NP-238	167.	984.45	2.5630E+02
NP-239	47329.	106.12	1.1416E+03
PU-239	53681.	129.30	4.4311E+06
AM-241	39385.	59.54	6.6055E+02

 * 222-S Laboratory Counting Room 20-JUL-2000 21:38:19.41 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1838-DUP
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1662.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:39:49.03 sec
 Dead Time: 6.1%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 18:57:59.35
 Decayed to: 20-JUL-2000 18:57:59.35
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	29.80	53092	1.70	59.81	51	29	2.9	1.02E+03	I-129	2.027E+04
8	31.93	319277	1.11	64.08	51	29	0.4			
8	36.27	104180	1.75	72.74	51	29	1.2			
4	72.77*	5374	1.12	145.71	142	13	14.7	3.45E+00		
4	74.96*	10504	1.04	150.09	142	13	6.8		AM-243	4.416E+03
0	84.65*	6076	1.16	169.46	166	8	14.8		TH-228	1.205E+05
									UTH-233	9.838E+03
0	87.40*	2178	1.03	174.96	173	7	36.1		UTH-233	2.143E+03
									NP-237	4.407E+03
									CD-109	1.514E+04
0	186.07*	1253	1.55	372.22	370	6	71.1		U-235	661.
									RA-226	1.088E+04
0	604.90	1189	1.30	1209.69	1206	9	33.1		CS-134	925.
0	661.81*	2101844	1.48	1323.50	1315	16	0.1		CS-137	2.019E+06
2	795.95*	1043	1.64	1591.79	1583	28	8.4	1.13E+00	CS-134	1.159E+03
2	802.10	109	1.68	1604.09	1583	28	53.2		CS-134	1.195E+03
0	969.84*	58	1.80	1939.60	1934	14	111.6			
0	1323.37	184	2.25	2646.84	2636	18	33.5			

Summary of Nuclide Activity
Sample ID : S99T1838-DUP

Page : 2
Acquisition date : 20-JUL-2000 18:57:59

Total number of lines in spectrum 14
Number of unidentified lines 4
Number of lines tentatively identified by NID 10 71.43%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	1.514E+04	1.514E+04	0.546E+04	36.08	870
I-129	5.73E+09D	1.00	2.027E+04	2.027E+04	0.059E+04	2.91	870
CS-134	2.06Y	1.00	1.139E+03	1.139E+03	0.092E+03	8.06	
CS-137	30.00Y	1.00	2.019E+06	2.019E+06	0.003E+06	0.14	
RA-226	1600.00Y	1.00	1.088E+04	1.088E+04	0.774E+04	71.14	870
TH-228	1.91Y	1.00	1.205E+05	1.205E+05	0.178E+05	14.80	870
UTH-233	1.59E+05Y	1.00	2.143E+03	2.143E+03	0.773E+03	36.08	870
U-235	7.04E+08Y	1.00	6.614E+02	6.614E+02	4.705E+02	71.14	870
NP-237	2.14E+06Y	1.00	4.407E+03	4.407E+03	1.590E+03	36.08	870
AM-243	7380.00Y*****	1.00	4.416E+03	4.416E+03	0.301E+03	6.82	870
Total Activity :			2.198E+06	2.198E+06			24 July 00

Grand Total Activity : 2.198E+06 2.198E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1838-DUP

Page : 3
Acquisition date : 20-JUL-2000 18:57:59

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	68364.	477.59	7.3106E+03
NA-24	63.	1368.55	5.8987E+01
K-40	1767.	1460.75	2.7343E+03
AR-41	110.	1293.60	1.1148E+02
SC-46	301.	1120.55	1.0190E+02
CR-51	52084.	320.08	4.6664E+03
MN-54	216.	834.83	6.9927E+01
CO-56	201.	846.76	6.8366E+01
CO-58	187.	810.78	6.4222E+01
FE-59	165.	1099.25	1.3313E+02
CO-60	71.	1332.50	5.7794E+01
ZN-65	154.	1115.55	1.4508E+02
SE-75	50888.	264.66	6.8469E+02
KR-85	34946.	514.00	1.3284E+05
SR-85	34942.	514.01	6.0087E+02
Y-88	23.	1836.06	4.3712E+01
Y-91	164.	1204.67	2.6721E+04
NB-94	208.	871.09	7.1063E+01
ZRNB-95	285.	724.20	3.2391E+02
RU-103	41938.	497.08	6.7476E+02
RURH-106	10896.	621.93	7.6510E+03
AG-108m	274.	722.94	7.7108E+01
AG-110M	58370.	657.76	9.6958E+02
SN-113	61317.	391.69	9.4320E+02
TE-123m	57478.	159.00	3.7518E+02
SB-124	12379.	602.73	4.0294E+02
SB-125	72128.	427.89	2.4018E+03
TE-125m	48732.	109.27	9.2947E+04
I-131	56280.	364.48	6.7294E+02
XE-131m	58501.	163.93	1.6482E+04
BA-133	55319.	356.02	8.5190E+02
CS-136	230.	818.51	7.1464E+01
CS-138	46.	1435.86	2.3155E+02
CE-139	58936.	165.85	4.0678E+02
BA-140	24552.	537.31	2.0657E+03
LA-140	43.	1596.21	5.6100E+01
CE-141	54796.	145.44	6.1764E+02
CE-144	53546.	133.51	2.5805E+03
CEPR-144	53547.	133.51	5.1565E+03
EU-152	53510.	121.78	9.8461E+02
EU-154	107.	1274.51	1.9738E+02
EU-155	48679.	86.54	7.8699E+02
HF-181	54444.	482.18	8.4616E+02
TA-182	41137.	67.75	5.8304E+02
HG-203	50254.	279.20	5.0893E+02
BI-207	14495.	569.70	4.1531E+02
TL-208	50415.	277.36	6.5426E+03
PB-210	36729.	46.50	5.6552E+03
BI-212	329.	727.18	1.1566E+03
PB-212	57377.	238.63	9.0564E+02
BI-214	11715.	609.31	4.8712E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1838-DUP

Acquisition date : 20-JUL-2000 18:57:59

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	54934.	351.92	6.1214E+03
RA-224	55988.	240.99	9.9969E+03
AC-228	398.	911.21	3.7742E+02
TH-229	45986.	88.47	1.0158E+03
U-232	38745.	57.78	1.1781E+05
PA-233	51792.	312.17	1.1908E+03
PA-234M	150.	1001.03	1.0343E+04
TH-234	39698.	63.29	6.2393E+03
U-237	45592.	101.07	9.9484E+02
NP-238	158.	984.45	2.4933E+02
NP-239	46508.	106.12	1.1317E+03
PU-239	53507.	129.30	4.4239E+06
AM-241	38959.	59.54	6.5698E+02

 * 222-S Laboratory Counting Room 21-JUL-2000 00:36:54.10 *

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1863-SAM
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1663.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:41:27.38 sec
 Dead Time: 7.1%

Verified by:

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-JUL-2000 21:54:52.92
 Decayed to: 20-JUL-2000 21:54:52.92
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
9	27.45	19362	1.84	55.12	51	29	6.0	1.05E+03		
9	29.46	60418	1.86	59.14	51	29	2.9		I-129	2.306E+04
9	31.90	397183	1.23	64.00	51	29	0.4			
9	36.35	126523	1.92	72.91	51	29	1.2			
2	72.83*	5953	1.10	145.83	142	12	14.4	3.56E+00		
2	74.96*	12253	1.00	150.08	142	12	6.3		AM-243	5.151E+03
0	84.64*	7266	1.12	169.43	166	8	13.4		TH-228	1.441E+05
									UTH-233	1.177E+04
0	87.41*	2157	0.97	174.98	173	6	34.9		UTH-233	2.122E+03
									NP-237	4.365E+03
									CD-109	1.499E+04
0	186.06*	1305	0.85	372.20	370	6	73.7		U-235	688.
									RA-226	1.132E+04
0	604.80	1720	1.79	1209.50	1206	9	24.3		CS-134	1.338E+03
0	661.81*	2458197	1.50	1323.51	1316	16	0.1		CS-137	2.361E+06
0	795.94*	1270	1.68	1591.76	1584	15	8.6		CS-134	1.411E+03
0	802.23	163	1.54	1604.35	1599	12	42.4		CS-134	1.778E+03
0	1323.28	203	1.82	2646.66	2641	16	29.3			

Summary of Nuclide Activity
Sample ID : S99T1863-SAM

Page : 2
Acquisition date : 20-JUL-2000 21:54:52

Total number of lines in spectrum 14
Number of unidentified lines 5
Number of lines tentatively identified by NID 9 64.29%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	1.499E+04	1.499E+04	0.524E+04	34.93	87R
I-129	5.73E+09D	1.00	2.306E+04	2.306E+04	0.066E+04	2.88	87R
CS-134	2.06Y	1.00	1.411E+03	1.411E+03	0.112E+03	7.96	
CS-137	30.00Y	1.00	2.361E+06	2.361E+06	0.003E+06	0.13	
RA-226	1600.00Y	1.00	1.132E+04	1.132E+04	0.835E+04	73.72	87R
TH-228	1.91Y	1.00	1.441E+05	1.441E+05	0.193E+05	13.38	87R
UTH-233	1.59E+05Y	1.00	2.122E+03	2.122E+03	0.741E+03	34.93	87R
U-235	7.04E+08Y	1.00	6.885E+02	6.885E+02	5.075E+02	73.72	87R
NP-237	2.14E+06Y	1.00	4.365E+03	4.365E+03	1.525E+03	34.93	87R
AM-243	7380.00Y	1.00	5.151E+03	5.151E+03	0.326E+03	6.34	87R
Total Activity :			2.568E+06	2.568E+06			24 July 00

Grand Total Activity : 2.568E+06 2.568E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1863-SAM

Page : 3
Acquisition date : 20-JUL-2000 21:54:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	79415.	477.59	7.8782E+03
NA-24	62.	1368.55	5.8580E+01
K-40	1790.	1460.75	2.7522E+03
AR-41	92.	1293.60	1.0271E+02
SC-46	272.	1120.55	9.7064E+01
CR-51	61371.	320.08	5.0645E+03
MN-54	233.	834.83	7.2557E+01
CO-56	223.	846.76	7.1934E+01
CO-58	179.	810.78	6.2892E+01
FE-59	150.	1099.25	1.2752E+02
CO-60	79.	1332.50	6.0900E+01
ZN-65	167.	1115.55	1.5078E+02
SE-75	59885.	264.66	7.4261E+02
KR-85	40695.	514.00	1.4332E+05
SR-85	40688.	514.01	6.4825E+02
Y-88	26.	1836.06	4.6598E+01
Y-91	172.	1204.67	2.7324E+04
NB-94	229.	871.09	7.4369E+01
ZRNB-95	264.	724.20	3.1200E+02
RU-103	49036.	497.08	7.2948E+02
RURH-106	12724.	621.93	8.2643E+03
AG-108m	263.	722.94	7.5595E+01
AG-110M	69915.	657.76	1.0609E+03
SN-113	71658.	391.69	1.0195E+03
TE-123m	66708.	159.00	4.0412E+02
SB-124	14271.	602.73	4.3249E+02
SB-125	84666.	427.89	2.6018E+03
TE-125m	56742.	109.27	1.0028E+05
I-131	66161.	364.48	7.2953E+02
XE-131m	68176.	163.93	1.7790E+04
BA-133	64617.	356.02	9.2055E+02
CS-136	226.	818.51	7.0782E+01
CS-138	62.	1435.86	2.6792E+02
CE-139	68643.	165.85	4.3892E+02
BA-140	28825.	537.31	2.2377E+03
LA-140	37.	1596.21	5.2031E+01
CE-141	63828.	145.44	6.6648E+02
CE-144	61928.	133.51	2.7747E+03
CEPR-144	61929.	133.51	5.5444E+03
EU-152	62382.	121.78	1.0629E+03
EU-154	110.	1274.51	2.0050E+02
EU-155	56715.	86.54	8.4931E+02
HF-181	63486.	482.18	9.1356E+02
TA-182	48307.	67.75	6.3167E+02
HG-203	58717.	279.20	5.5002E+02
BI-207	17175.	569.70	4.5190E+02
TL-208	58655.	277.36	7.0557E+03
PB-210	43119.	46.50	6.1260E+03
BI-212	339.	727.18	1.1730E+03
PB-212	66916.	238.63	9.7786E+02
BI-214	13497.	609.31	5.2791E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1863-SAM

Acquisition date : 20-JUL-2000 21:54:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	63930.	351.92	6.6656E+03
RA-224	65365.	240.99	1.0801E+04
AC-228	421.	911.21	3.8799E+02
TH-229	53591.	88.47	1.0964E+03
U-232	45123.	57.78	1.2710E+05
PA-233	60225.	312.17	1.2839E+03
PA-234M	174.	1001.03	1.1103E+04
TH-234	46607.	63.29	6.7589E+03
U-237	52575.	101.07	1.0682E+03
NP-238	165.	984.45	2.5460E+02
NP-239	54609.	106.12	1.2263E+03
PU-239	62132.	129.30	4.7663E+06
AM-241	45714.	59.54	7.1150E+02

 * 222-S Laboratory Counting Room 21-JUL-2000 06:59:50.89 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1863-DUP
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

Im Barbu

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1667.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:41:23.73 sec
 Dead Time: 7.1%

Verified by:

John Relyea 24 July 00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-JUL-2000 04:17:56.45
 Decayed to: 21-JUL-2000 04:17:56.45
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	26.56	6930	0.95	53.33	51	29	8.4	1.38E+03		
8	29.64	49678	1.54	59.50	51	29	2.8		I-129	1.896E+04
8	31.90	396182	1.23	64.02	51	29	0.4			
8	36.30	121137	1.75	72.81	51	29	1.1			
1	72.86*	5765	1.00	145.88	142	12	13.1	2.50E+00		
1	74.96*	11905	1.01	150.10	142	12	6.5		AM-243	5.004E+03
0	84.72*	7483	1.21	169.60	167	7	11.6		TH-228	1.484E+05
0	87.38*	2241	0.93	174.93	173	7	37.9		NP-237	4.535E+03
									CD-109	1.558E+04
0	185.58*	1151	1.53	371.25	369	6	82.5		U-235	607.
									RA-226	9.986E+03
0	604.98	1849	1.45	1209.85	1206	9	22.6		CS-134	1.438E+03
0	661.82*	2446863	1.49	1323.53	1316	16	0.1		CS-137	2.350E+06
0	795.92*	1279	1.59	1591.72	1585	13	7.7		CS-134	1.421E+03
0	801.84	150	1.11	1603.57	1598	13	49.8		CS-134	1.639E+03
0	911.49*	88	1.52	1822.88	1814		18101.0			
0	1323.18	294	1.60	2646.46	2639	16	18.4			
0	1460.94*	63	1.94	2922.11	2912		20165.4		K-40	874.
0	1730.25	23	0.93	3461.04	3457	9	77.8			

Summary of Nuclide Activity
Sample ID : S99T1863-DUP

Page : 2
Acquisition date : 21-JUL-2000 04:17:56

Total number of lines in spectrum 17
Number of unidentified lines 6
Number of lines tentatively identified by NID 11 64.71%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	8.743E+02	8.743E+02	14.46E+02	165.41	JGR
CD-109	462.90D	1.00	1.558E+04	1.558E+04	0.591E+04	37.94	JGR
I-129	5.73E+09D	1.00	1.896E+04	1.896E+04	0.053E+04	2.77	JGR
CS-134	2.06Y	1.00	1.426E+03	1.426E+03	0.103E+03	7.24	
CS-137	30.00Y	1.00	2.350E+06	2.350E+06	0.003E+06	0.13	
RA-226	1600.00Y	1.00	9.986E+03	9.986E+03	8.240E+03	82.51	JGR
TH-230	1.91Y	1.00	1.484E+05	1.484E+05	0.173E+05	11.65	JGR
U-235	7.04E+08Y	1.00	6.072E+02	6.072E+02	5.010E+02	82.51	JGR
NP-237	2.14E+06Y	1.00	4.535E+03	4.535E+03	1.720E+03	37.94	JGR
AM-243	7380.00Y*****	1.00	5.004E+03	5.004E+03	0.326E+03	6.51	JGR
Total Activity :			2.555E+06	2.555E+06			24 July 00

Grand Total Activity : 2.555E+06 2.555E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1863-DUP

Page : 3
Acquisition date : 21-JUL-2000 04:17:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7 .	79054.	477.59	7.8603E+03
NA-24	71.	1368.55	6.2699E+01
AR-41	92.	1293.60	1.0292E+02
SC-46	312.	1120.55	1.0376E+02
CR-51	60422.	320.08	5.0253E+03
MN-54	235.	834.83	7.2849E+01
CO-56	215.	846.76	7.0549E+01
CO-58	196.	810.78	6.5675E+01
FE-59	193.	1099.25	1.4361E+02
CO-60	90.	1332.50	6.4552E+01
ZN-65	163.	1115.55	1.4910E+02
SE-75	59139.	264.66	7.3798E+02
KR-85	40013.	514.00	1.4211E+05
SR-85	40007.	514.01	6.4282E+02
Y-88	18.	1836.06	3.9508E+01
Y-91	164.	1204.67	2.6730E+04
NB-94	200.	871.09	6.9661E+01
ZRNB-95	262.	724.20	3.1064E+02
RU-103	49151.	497.08	7.3033E+02
RURH-106	12695.	621.93	8.2551E+03
AG-108m	274.	722.94	7.7137E+01
AG-110M	68784.	657.76	1.0523E+03
SN-113	71513.	391.69	1.0184E+03
TE-123m	66760.	159.00	4.0427E+02
SB-124	14324.	602.73	4.3328E+02
SB-125	84382.	427.89	2.5974E+03
TE-125m	56519.	109.27	1.0008E+05
I-131	65791.	364.48	7.2748E+02
XE-131m	67216.	163.93	1.7665E+04
BA-133	64283.	356.02	9.1817E+02
CS-136	217.	818.51	6.9465E+01
CS-138	63.	1435.86	2.6988E+02
CE-139	67809.	165.85	4.3625E+02
BA-140	28559.	537.31	2.2274E+03
LA-140	51.	1596.21	6.0368E+01
CE-141	63632.	145.44	6.6546E+02
CE-144	61849.	133.51	2.7729E+03
CEPR-144	61850.	133.51	5.5408E+03
EU-152	62388.	121.78	1.0630E+03
EU-154	102.	1274.51	1.9295E+02
EU-155	56938.	86.54	8.5097E+02
HF-181	63520.	482.18	9.1381E+02
TA-182	47583.	67.75	6.2693E+02
HG-203	58676.	279.20	5.4983E+02
BI-207	16847.	569.70	4.4758E+02
TL-208	58734.	277.36	7.0604E+03
PB-210	43011.	46.50	6.1184E+03
BI-212	306.	727.18	1.1173E+03
PB-212	66852.	238.63	9.7739E+02
BI-214	13269.	609.31	5.2327E+03
PB-214	63768.	351.92	6.6549E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1863-DUP

Acquisition date : 21-JUL-2000 04:17:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
RA-224	65272.	240.99	1.0793E+04
AC-228	453.	911.21	4.0202E+02
TH-229	53788.	88.47	1.0984E+03
U-232	44925.	57.78	1.2683E+05
PA-233	59586.	312.17	1.2771E+03
UTH-233	63067.	245.34	3.8359E+05
PA-234M	168.	1001.03	1.0929E+04
TH-234	46480.	63.29	6.7498E+03
U-237	52925.	101.07	1.0717E+03
NP-238	132.	984.45	2.2865E+02
NP-239	54613.	106.12	1.2263E+03
PU-239	61541.	129.30	4.7437E+06
AM-241	45398.	59.54	7.0904E+02

 * 222-S Laboratory Counting Room 22-JUL-2000 00:48:53.67 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1919-SAM
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

Em Barba

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1669.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:41:19.59 sec
 Dead Time: 7.0%

Verified by:

John Belzer 24 July 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-JUL-2000 22:07:00.63
 Decayed to: 21-JUL-2000 22:07:00.63
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
9	27.45	27201	1.84	55.12	51	29	4.3	1.11E+03		
9	29.80	55268	1.70	59.81	51	29	3.0		I-129	2.110E+04
9	31.94	392365	1.24	64.08	51	29	0.4			
9	36.41	125409	1.92	73.03	51	29	1.2			
3	72.91*	6350	1.21	145.99	142	12	13.4	3.34E+00		
3	75.01*	11343	0.95	150.19	142	12	6.8		AM-243	4.768E+03
4	84.80*	9155	1.22	169.77	166	12	9.4	2.52E+00	TH-228	1.815E+05
4	87.37*	2625	1.04	174.90	166	12	28.5		NP-237	5.312E+03
									CD-109	1.825E+04
0	604.95	1539	1.34	1209.79	1206	9	27.4		CS-134	1.198E+03
0	661.80*	2435799	1.50	1323.48	1315	16	0.1		CS-137	2.339E+06
0	795.87*	1220	1.52	1591.63	1584	15	8.8		CS-134	1.356E+03
0	1323.23	252	1.61	2646.57	2641	15	22.2			

Summary of Nuclide Activity

Page : 2

Sample ID : S99T1919-SAM

Acquisition date : 21-JUL-2000 22:07:00

Total number of lines in spectrum 12
 Number of unidentified lines 5
 Number of lines tentatively identified by NID 7 58.33%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	1.824E+04	1.825E+04	0.519E+04	28.47	JR
I-129	5.73E+09D	1.00	2.110E+04	2.110E+04	0.062E+04	2.96	JR
CS-134	2.06Y	1.00	1.337E+03	1.337E+03	0.112E+03	8.39	
CS-137	30.00Y	1.00	2.339E+06	2.339E+06	0.003E+06	0.13	
TH-228	1.91Y	1.00	1.815E+05	1.815E+05	0.170E+05	9.38	JR
NP-237	2.14E+06Y	1.00	5.312E+03	5.312E+03	1.512E+03	28.47	JR
AM-243	7380.00Y*****	1.00	4.768E+03	4.768E+03	0.325E+03	6.82	JR
Total Activity :			2.572E+06	2.572E+06			24 July 00

Grand Total Activity : 2.572E+06 2.572E+06

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1919-SAM

Page : 3
Acquisition date : 21-JUL-2000 22:07:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	78889.	477.59	7.8520E+03
NA-24	61.	1368.55	5.8190E+01
K-40	1823.	1460.75	2.7768E+03
AR-41	104.	1293.60	1.0897E+02
SC-46	334.	1120.55	1.0718E+02
CR-51	60073.	320.08	5.0108E+03
MN-54	239.	834.83	7.3383E+01
CO-56	208.	846.76	6.9431E+01
CO-58	214.	810.78	6.8435E+01
FE-59	138.	1099.25	1.2243E+02
CO-60	91.	1332.50	6.5107E+01
ZN-65	170.	1115.55	1.5221E+02
SE-75	58851.	264.66	7.3618E+02
KR-85	39905.	514.00	1.4192E+05
SR-85	39900.	514.01	6.4196E+02
Y-88	21.	1836.06	4.2243E+01
Y-91	159.	1204.67	2.6274E+04
NB-94	223.	871.09	7.3383E+01
ZRNB-95	298.	724.20	3.3069E+02
RU-103	48775.	497.08	7.2753E+02
RURH-106	12572.	621.93	8.2150E+03
AG-108m	273.	722.94	7.7007E+01
AG-110M	70526.	657.76	1.0655E+03
SN-113	71228.	391.69	1.0164E+03
TE-123m	65960.	159.00	4.0185E+02
SB-124	14257.	602.73	4.3227E+02
SB-125	83673.	427.89	2.5865E+03
TE-125m	55830.	109.27	9.9469E+04
I-131	65176.	364.48	7.2408E+02
XE-131m	66917.	163.93	1.7625E+04
BA-133	63752.	356.02	9.1438E+02
CS-136	211.	818.51	6.8494E+01
CS-138	48.	1435.86	2.3789E+02
CE-139	67864.	165.85	4.3643E+02
BA-140	28432.	537.31	2.2224E+03
LA-140	42.	1596.21	5.5055E+01
CE-141	62832.	145.44	6.6128E+02
CE-144	61502.	133.51	2.7652E+03
CEPR-144	61502.	133.51	5.5253E+03
EU-152	61946.	121.78	1.0592E+03
EU-154	120.	1274.51	2.0822E+02
EU-155	55811.	86.54	8.4253E+02
HF-181	62786.	482.18	9.0852E+02
TA-182	47703.	67.75	6.2772E+02
HG-203	57857.	279.20	5.4599E+02
BI-207	16834.	569.70	4.4741E+02
TL-208	58222.	277.36	7.0297E+03
PB-210	42899.	46.50	6.1104E+03
BI-212	332.	727.18	1.1617E+03
PB-212	66573.	238.63	9.7535E+02
BI-214	13201.	609.31	5.2171E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1919-SAM

Acquisition date : 21-JUL-2000 22:07:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	63561.	351.92	6.6414E+03
RA-224	64972.	240.99	1.0768E+04
RA-226	101477.	186.10	1.2878E+04
AC-228	424.	911.21	3.8916E+02
TH-229	53239.	88.47	1.0928E+03
U-232	44732.	57.78	1.2655E+05
PA-233	59841.	312.17	1.2798E+03
UTH-233	62980.	245.34	3.8333E+05
PA-234M	168.	1001.03	1.0915E+04
TH-234	46056.	63.29	6.7190E+03
U-235	100091.	185.71	7.7766E+02
U-237	51949.	101.07	1.0618E+03
NP-238	164.	984.45	2.5389E+02
NP-239	54323.	106.12	1.2231E+03
PU-239	61516.	129.30	4.7427E+06
AM-241	45362.	59.54	7.0876E+02

 * 222-S Laboratory Counting Room 22-JUL-2000 07:25:48.11 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 34184
 Sample ID: S99T1919-DUP
 Sample Size: 5.00000E-04 L
 Dilution Factor: 1.01000E+02

Removed by:

Skulsh

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1672.cnf
 Geometry: 43
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:41:24.38 sec
 Dead Time: 7.1%

Verified by:

John Relyea 24 July 00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 22-JUL-2000 04:43:52.29
 Decayed to: 22-JUL-2000 04:43:52.29
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 3-MAY-1999 13:41:13.72

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
8	26.56	7175	0.95	53.33	51	28	8.2	1.34E+03		
8	29.80	57566	1.70	59.81	51	28	2.9		I-129	2.197E+04
8	31.93	396093	1.23	64.06	51	28	0.4			
8	36.32	120554	1.75	72.85	51	28	1.1			
2	72.87*	6031	1.10	145.91	142	13	14.2	2.60E+00		
2	74.98*	11851	1.00	150.14	142	13	6.5		AM-243	4.982E+03
0	84.71*	7195	1.20	169.59	166	8	13.5		TH-228	1.427E+05
									UTH-233	1.165E+04
0	87.40*	2672	1.07	174.95	173	7	31.8		UTH-233	2.630E+03
									NP-237	5.408E+03
									CD-109	1.858E+04
0	604.89	1932	1.38	1209.67	1206	9	21.7		CS-134	1.503E+03
0	661.83*	2447070	1.50	1323.55	1316	16	0.1		CS-137	2.350E+06
0	796.05*	1277	1.48	1591.99	1584	16	8.9		CS-134	1.419E+03
0	802.24	162	1.19	1604.36	1600	11	39.8		CS-134	1.770E+03
0	1323.26	240	2.07	2646.63	2640	14	23.2			

Summary of Nuclide Activity
Sample ID : S99T1919-DUP

Page : 2
Acquisition date : 22-JUL-2000 04:43:52

Total number of lines in spectrum 13
Number of unidentified lines 5
Number of lines tentatively identified by NID 8 61.54%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	462.90D	1.00	1.858E+04	1.858E+04	0.591E+04	31.82	0.00
I-129	5.73E+09D	1.00	2.197E+04	2.197E+04	0.063E+04	2.86	0.00
CS-134	2.06Y	1.00	1.439E+03	1.439E+03	0.116E+03	8.04	
CS-137	30.00Y	1.00	2.350E+06	2.350E+06	0.003E+06	0.13	
TH-228	1.91Y	1.00	1.426E+05	1.427E+05	0.193E+05	13.53	0.00
UTH-233	1.59E+05Y	1.00	2.630E+03	2.630E+03	0.837E+03	31.82	0.00
NP-237	2.14E+06Y	1.00	5.408E+03	5.408E+03	1.721E+03	31.82	0.00
AM-243	7380.00Y*****	1.00	4.982E+03	4.982E+03	0.325E+03	6.53	0.00
Total Activity :			2.548E+06	2.548E+06			

Grand Total Activity : 2.548E+06 2.548E+06

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S99T1919-DUP

Page : 3
Acquisition date : 22-JUL-2000 04:43:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	79782.	477.59	7.8963E+03
NA-24	74.	1368.55	6.3910E+01
K-40	1813.	1460.75	2.7691E+03
AR-41	108.	1293.60	1.1068E+02
SC-46	304.	1120.55	1.0243E+02
CR-51	60711.	320.08	5.0372E+03
MN-54	225.	834.83	7.1373E+01
CO-56	216.	846.76	7.0824E+01
CO-58	214.	810.78	6.8529E+01
FE-59	168.	1099.25	1.3439E+02
CO-60	90.	1332.50	6.4772E+01
ZN-65	173.	1115.55	1.5344E+02
SE-75	59270.	264.66	7.3879E+02
KR-85	40565.	514.00	1.4309E+05
SR-85	40560.	514.01	6.4723E+02
Y-88	17.	1836.06	3.8793E+01
Y-91	159.	1204.67	2.6282E+04
NB-94	208.	871.09	7.0931E+01
ZRNB-95	256.	724.20	3.0767E+02
RU-103	49008.	497.08	7.2927E+02
RURH-106	12730.	621.93	8.2663E+03
AG-108m	279.	722.94	7.7902E+01
AG-110M	68517.	657.76	1.0503E+03
SN-113	71485.	391.69	1.0182E+03
TE-123m	66179.	159.00	4.0251E+02
SB-124	14373.	602.73	4.3401E+02
SB-125	84378.	427.89	2.5974E+03
TE-125m	56051.	109.27	9.9666E+04
I-131	65387.	364.48	7.2525E+02
XE-131m	67829.	163.93	1.7745E+04
BA-133	63798.	356.02	9.1471E+02
CS-136	204.	818.51	6.7340E+01
CS-138	53.	1435.86	2.4882E+02
CE-139	67723.	165.85	4.3598E+02
BA-140	28708.	537.31	2.2332E+03
LA-140	48.	1596.21	5.8866E+01
CE-141	63659.	145.44	6.6560E+02
CE-144	61851.	133.51	2.7730E+03
CEPR-144	61850.	133.51	5.5409E+03
EU-152	61986.	121.78	1.0595E+03
EU-154	108.	1274.51	1.9815E+02
EU-155	57386.	86.54	8.5430E+02
HF-181	63624.	482.18	9.1455E+02
TA-182	47813.	67.75	6.2845E+02
HG-203	59061.	279.20	5.5163E+02
BI-207	16976.	569.70	4.4929E+02
TL-208	59105.	277.36	7.0827E+03
PB-210	43017.	46.50	6.1188E+03
BI-212	311.	727.18	1.1261E+03
PB-212	66801.	238.63	9.7702E+02
BI-214	13558.	609.31	5.2894E+03

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S99T1919-DUP

Acquisition date : 22-JUL-2000 04:43:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PB-214	64041.	351.92	6.6695E+03
RA-224	65805.	240.99	1.0837E+04
RA-226	101792.	186.10	1.2898E+04
AC-228	409.	911.21	3.8244E+02
TH-229	53801.	88.47	1.0985E+03
U-232	45390.	57.78	1.2748E+05
PA-233	59771.	312.17	1.2791E+03
PA-234M	174.	1001.03	1.1109E+04
TH-234	46513.	63.29	6.7522E+03
U-235	100406.	185.71	7.7888E+02
U-237	52419.	101.07	1.0666E+03
NP-238	167.	984.45	2.5624E+02
NP-239	54108.	106.12	1.2207E+03
PU-239	62057.	129.30	4.7635E+06
AM-241	45785.	59.54	7.1205E+02

LABCORE Completed Worklist Report for Worklist# 33255

Analyst: aki

Instrument: GEA01

Book#: 55357

Method: LA-378-103 Rev/Mod _____

Worklist Comment: AZ-f01 (2), @I129-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@I129-01 I129-01	SOLID	3.04E-03	2.89E-3	95.066 %	Recovery
1 STD	0		@I129-01 I129-01C	SOLID	100	7.44E+01	74.400 %	Recovery
1 STD	0		@I129-01 I129-01E	SOLID	1.00	4.86E+00	4.860 %	Ct. Error
2 BLNK-PREP	0		@I129-01 I129-01	SOLID	1	<3.37E-3		uCi/g
2 BLNK-PREP	0		@I129-01 I129-01C	SOLID	100	8.16E+01	81.600 %	Recovery
2 BLNK-PREP	0		@I129-01 I129-01E	SOLID	1.00	0.00E+00	0.000	uCi/g
3 SAMPLE	S00T000806	0 W	@I129-01 I129-01	SOLID	N/A	< 3.04E-03	3.04E-003	uCi/g
3 SAMPLE	S00T000806	0 W	@I129-01 I129-01C	SOLID	N/A	8.75E+01		% Recovery
3 SAMPLE	S00T000806	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error
4 SAMPLE	S00T000807	0 W	@I129-01 I129-01	SOLID	N/A	< 2.77E-03	2.77E-003	uCi/g
4 SAMPLE	S00T000807	0 W	@I129-01 I129-01C	SOLID	N/A	9.11E+01		% Recovery
4 SAMPLE	S00T000807	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error
5 SAMPLE	S00T000808	0 W	@I129-01 I129-01	SOLID	N/A	< 2.23E-03	2.23E-003	uCi/g
5 SAMPLE	S00T000808	0 W	@I129-01 I129-01C	SOLID	N/A	9.61E+01		% Recovery
5 SAMPLE	S00T000808	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error

Final page for worklist# 33255

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 2/10/00

Units shown for QC (BLK/BKG) may not reflect the actual units.

04/17/00 14:15
WS2

Page: 1

LABCORE Data Entry Template for Worklist# 33255Analyst: ALL Instrument: GEA00 Book# 55657Method: LA-378-103 Rev/Mod E1

Worklist Comment: AZ-101 (2), @I129-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@I129-01	SOLID		
2	BLNK-PREP				@I129-01	SOLID		
3	SAMPLE	S00T000806	0	W	@I129-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								
4	SAMPLE	S00T000807	0	W	@I129-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								
5	SAMPLE	S00T000808	0	W	@I129-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								

Final page for worklist # 33255

Alita Hansen 4/16/00
Signature Date

MGB 4/21/00
Signature Date
Ang RPLT 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 20-APR-2000 16:17:53.68 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33255
 Sample ID: WL33255-STD
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1078.cnf
 Geometry: 01
 Count Time: 0 00:50:00.00 sec
 Real Time: 0 00:50:08.82 sec
 Dead Time: 0.3%

Verified by:

4/21/00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-APR-2000 15:27:13.12
 Decayed to: 20-APR-2000 15:27:13.12
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.33	3298	1.02	58.88	53	10	5.0		I-129	2.162E-03
0	33.68	809	1.14	67.57	64	9	13.8			
0	39.30	552	0.98	78.80	74	10	18.3		I-129	2.046E-03
0	1764.45*	7	1.61	3529.48	3523	13220.4				

Summary of Nuclide Activity

Page : 2

Sample ID : WL33255-STD

Acquisition date : 20-APR-2000 15:27:13

Total number of lines in spectrum	4	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	2	50.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.00	2.153E-03	2.153E-03	0.105E-03	4.86	
Total Activity :			2.153E-03	2.153E-03			

Grand Total Activity :	2.153E-03	2.153E-03
------------------------	-----------	-----------

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33255-STD

Page : 3
Acquisition date : 20-APR-2000 15:27:13

All nuclides have been identified. No MDA report generated.

 * 222-S Laboratory Counting Room 20-APR-2000 18:54:57.77 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33255
 Sample ID: WL33255-BLK
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1079.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:25.47 sec
 Dead Time: 0.3%

Verified by:

4/21/00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-APR-2000 16:24:03.46
 Decayed to: 20-APR-2000 16:24:03.46
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: EMB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.60*	72	1.51	1323.09	1318	11	92.9			

Summary of Nuclide Activity

Page : 2

Sample ID : WL33255-BLK

Acquisition date : 20-APR-2000 16:24:03

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found

"M" = Manually accepted

"E" = Manually edited

"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33255-BLK

Page : 3
Acquisition date : 20-APR-2000 16:24:03

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	661.	29.50	2.6703E-05

 * 222-S Laboratory Counting Room 20-APR-2000 21:32:53.26 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33255
 Sample ID: S00T000806-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1080.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:24.50 sec
 Dead Time: 0.3%

Verified by:

4/21/00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-APR-2000 19:01:57.30
 Decayed to: 20-APR-2000 19:01:57.30
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: VR
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	1121.33	150	2.07	2242.64	2235	19 51.9			
0	1591.14*	51	5.54	3182.63	3172	22 79.2			

Summary of Nuclide Activity
Sample ID : S00T000806-SAM

Page : 2
Acquisition date : 20-APR-2000 19:01:57

Total number of lines in spectrum	2	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000806-SAM

Page : 3
Acquisition date : 20-APR-2000 19:01:57

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	617.	29.50	2.5823E-05

* 222-S Laboratory Counting Room 21-APR-2000 00:44:45.81 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33255
Sample ID: S00T000807-SAM
Sample Size: 1.00000E+00 ML
Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
File Number: dka300:[spec.GEA1]1g1081.cnf
Geometry: 01
Count Time: 0 02:30:00.00 sec
Real Time: 0 02:30:26.05 sec
Dead Time: 0.3%

Verified by:

4/21/00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 20-APR-2000 22:13:48.85
Decayed to: 20-APR-2000 22:13:48.85
Standard Deviations: 2
Analysis Library: I129
Analyst: VR
Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report
***** No peaks found *****

Summary of Nuclide Activity
Sample ID : S00T000807-SAM

Page : 2
Acquisition date : 20-APR-2000 22:13:48

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000807-SAM

Page : 3
Acquisition date : 20-APR-2000 22:13:48

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	603.	29.50	2.5537E-05

* 222-S Laboratory Counting Room 21-APR-2000 06:34:35.47 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33255
Sample ID: S00T000808-SAM
Sample Size: 1.00000E+00 ML
Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA1
File Number: dka300:[spec.GEA1]1g1084.cnf
Geometry: 01
Count Time: 0 02:30:00.00 sec
Real Time: 0 02:30:25.49 sec
Dead Time: 0.3%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 21-APR-2000 04:03:41.86
Decayed to: 21-APR-2000 04:03:41.86
Standard Deviations: 2
Analysis Library: I129
Analyst: VR
Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

***** No peaks found *****

Summary of Nuclide Activity
Sample ID : S00T000808-SAM

Page : 2
Acquisition date : 21-APR-2000 04:03:41

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T000808-SAM

Page : 3
Acquisition date : 21-APR-2000 04:03:41

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	555.	29.50	2.4528E-05

WORKBOOK PAGE: STD1

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ^{LAD} ^{4/21/00} IODINE-129

		STANDARD
Type	GROSS WEIGHT (wt2)	6.9032
STD	TARE WEIGHT (wt1)	6.8805
Work List	MASS PRECIPITATE (net wt)	0.0227
33255	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	2.153E-3
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST DILUTION FACTOR (DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY (Rec)	0.7443
Batch Number	COUNT TIME IN MINUTES	150
20001357	COUNTING UNCERTAINTY (%)	4.86
Rerun	STANDARD BOOK NUMBER	55B57
0	STANDARD VALUE in μ Ci / mL	3.04E-03
Sample Prep	One mL of the solution is equivalent to 0.0305 grams. Carrier Percent Recovery = $(wt2 - wt1) * 100 / 0.0305$ I-129 μ Ci/mL = $(I-129 \text{ GEA})(DF)(DDF) / [(Rec)(SS)]$	
NOT LISTED		
Sample #		
WL33255-STD		
Instrument Code		
WC48587		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/21/2000		
Analysis Date		
04/18/2000		
Analysis Time	Iodine 129 in μ Ci / mL	2.89E-03
04:00 PM	Carrier Percent Recovery	74.4%
Sample Point	Counting Uncertainty	4.9%
AZ-101	Standard Recovery	= 95.3%

Analyst:	AKL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

STANDARD.WB1 REV. 2.0

37810NML

1637

WORKBOOK PAGE: BLANK2

I-129: LA-378-101 (D-0), 103 ^{E-1} ~~(D-2)~~ ^{and} ~~102/100~~ IODINE-129

		BLNK-PREP
Type	GROSS WEIGHT (wt2)	6.9546
BLNK-PREP	TARE WEIGHT (wt1)	6.9297
Work List	MASS PRECIPITATE (net wt)	0.0249
33255	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.6703E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	9.7100
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.8164
Batch Number	COUNT TIME IN MINUTES	150
20001357	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	3.3685E-03
0		
Sample Prep		
NOT LISTED		
Sample #		
WL33250-BLNK	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Ci/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]	
MCB	Detection Limit = I-129 μ Ci/g	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/21/2000		
Analysis Date		
04/18/2000		
Analysis Time	Iodine 129 in μ Ci / g <	3.37E-03
04:00 PM	Carrier Percent Recovery	81.6%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

BLANK.WB1 REV 2.0

37810NML

WORKBOOK PAGE: SAM3

I-129: LA-378-101 (D-0), 103 ^{E-1} ~~(D-2)~~ ^{LAD} ~~1/12/00~~ IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.9533
SAMPLE	TARE WEIGHT (wt1)	6.9266
Work List	MASS PRECIPITATE (net wt)	0.0267
33255	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.5823E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	9.7100
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.8754
Batch Number	COUNT TIME IN MINUTES	150
20001357	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	3.0379E-03
0		
Sample Prep		
H2ODIGHC		
Sample #		
S00T000806	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Ci/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]	
MCB	Detection Limit = I-129 μ Ci/g	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/21/2000		
Analysis Date		
04/18/2000		
Analysis Time	Iodine 129 in μ Ci / g	< 3.04E-03
04:00 PM	Carrier Percent Recovery	87.5%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.

37810NML

WORKBOOK PAGE: SAM4

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1 100 6/2/00} IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.8333
SAMPLE	TARE WEIGHT (wt1)	6.8055
Work Log	MASS PRECIPITATE (net wt)	0.0278
33255	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.5537E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	10.1200
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.9115
Batch Number	COUNT TIME IN MINUTES	150
20001357	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	2.7685E-03
0		
Sample Prep		
H2ODIGHC		
Sample #		
S00T000807	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Cl/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]	
MCB	Detection Limit = I-129 μ Ci/g	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/21/2000		
Analysis Date		
04/18/2000		
Analysis Time	Iodine 129 in μ Ci / g <	2.77E-03
04:00 PM	Carrier Percent Recovery	91.1%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.

37810NML

1640

WORKBOOK PAGE: SAM5

I-129: LA-378-101 (D-0), 103 (D-2) ^{El had} IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.8844
SAMPLE	TARE WEIGHT (wt1)	6.8551
Work List	MASS PRECIPITATE (net wt)	0.0293
33255	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.4528E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	11.4700
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.9607
Batch Number	COUNT TIME IN MINUTES	150
20001357	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	2.2260E-03
0		
Sample Prep		
H2ODIGHC		
Sample #		
S00T000808	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Cl/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]	
MCB	Detection Limit = I-129 μ Ci/g	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/21/2000		
Analysis Date		
04/18/2000		
Analysis Time	Iodine 129 in μ Ci / g <	2.23E-03
04:00 PM	Carrier Percent Recovery	96.1%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.

37810NML

1641

LABCORE Completed Worklist Report for Worklist# 33278

Analyst: ak1 Instrument: GEA01 Book#: _____

Method: LA-378-103 Rev/Mod _____

Worklist Comment: AZ-101 (2), @I129-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@I129-01	I129-01	LIQUID	3.04E-03	3.55E-3	116.776	% Recovery
1 STD	0	@I129-01	I129-01C	LIQUID	100	5.02E+01	50.200	% Recovery
1 STD	0	@I129-01	I129-01E	LIQUID	1.00	3.20E+00	3.200	% Ct. Error
2 BLNK	0	@I129-01	I129-01	LIQUID	1	<9.12E-5		uCi/mL
2 BLNK	0	@I129-01	I129-01C	LIQUID	100	5.61E+01	56.100	% Recovery
2 BLNK	0	@I129-01	I129-01E	LIQUID	1.00	0.00E+00	0.000	uCi/mL
3 SAMPLE	S00T000780	0	@I129-01	I129-01	N/A	9.57E-05	9.57e-005	uCi/mL
3 SAMPLE	S00T000780	0	@I129-01	I129-01C	N/A	5.38E+01		% Recovery
3 SAMPLE	S00T000780	0	@I129-01	I129-01E	N/A	0.00E+00		% Ct. Error
4 SAMPLE	S00T000783	0	@I129-01	I129-01	N/A	7.89E-05	7.89e-005	uCi/mL
4 SAMPLE	S00T000783	0	@I129-01	I129-01C	N/A	6.59E+01		% Recovery
4 SAMPLE	S00T000783	0	@I129-01	I129-01E	N/A	0.00E+00		% Ct. Error
5 SAMPLE	S00T000786	0	@I129-01	I129-01	N/A	9.23E-05	9.23e-005	uCi/mL
5 SAMPLE	S00T000786	0	@I129-01	I129-01C	N/A	5.51E+01		% Recovery
5 SAMPLE	S00T000786	0	@I129-01	I129-01E	N/A	0.00E+00		% Ct. Error

Final page for worklist# 33278

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

24 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33278

Analyst: AKL Instrument: GEA00 / Book# 55B57

Method: LA-378-103 Rev/Mod E1

Worklist Comment: AZ-101 (2), @I129-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@I129-01	LIQUID		
2	BLNK				@I129-01	LIQUID		
3	SAMPLE	S00T000780 0			@I129-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								
4	SAMPLE	S00T000783 0			@I129-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								
5	SAMPLE	S00T000786 0			@I129-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E								

Final page for worklist # 33278

Alita Hurn 4/24/00
Signature Date

Raymond 4.24.2000
Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 21-APR-2000 09:15:06.61 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33278
 Sample ID: WL33278-STD
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1085.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:25.97 sec
 Dead Time: 0.3%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-APR-2000 06:44:09.86
 Decayed to: 21-APR-2000 06:44:09.86
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: NEW
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.48	8110	1.05	59.18	55	9	3.3		I-129	1.772E-03
0	33.59	2104	1.08	67.39	64	9	8.8			
0	39.36	1547	0.93	78.92	73	10	11.3		I-129	1.910E-03
0	661.79*	75	1.38	1323.46	1319	11	87.3			
0	1764.51*	26	2.06	3529.59	3520	171	35.3			

Summary of Nuclide Activity

Page : 2

Sample ID : WL33278-STD

Acquisition date : 21-APR-2000 06:44:09

Total number of lines in spectrum	5	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	2	40.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.00	1.782E-03	1.782E-03	0.057E-03	3.20	
Total Activity :			1.782E-03	1.782E-03			

Grand Total Activity :	1.782E-03	1.782E-03
------------------------	-----------	-----------

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33278-STD

Page : 3
Acquisition date : 21-APR-2000 06:44:09

All nuclides have been identified. No MDA report generated.

 * 222-S Laboratory Counting Room 21-APR-2000 12:06:46.81 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33278
 Sample ID: WL33278-BLNK
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1086.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:25.86 sec
 Dead Time: 0.3%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-APR-2000 09:35:52.32
 Decayed to: 21-APR-2000 09:35:52.32
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: MB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.67*	65	1.62	1323.23	1318	10	95.9	3.69E+00		

Summary of Nuclide Activity

Page : 2

Sample ID : WL33278-BLNK

Acquisition date : 21-APR-2000 09:35:52

Total number of lines in spectrum 1
Number of unidentified lines 1
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33278-BLNK

Page : 3
Acquisition date : 21-APR-2000 09:35:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	604.	29.50	2.5554E-05

 * 222-S Laboratory Counting Room 21-APR-2000 15:10:37.37 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33278
 Sample ID: S00T780
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

Newright

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1087.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:26.68 sec
 Dead Time: 0.3%

Verified by:

John Relyea 24 Apr 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-APR-2000 12:39:39.46
 Decayed to: 21-APR-2000 12:39:39.46
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: MB
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uci/SAMPLE
0	727.82*	59	1.65	1455.53	1450	11105.4			

Summary of Nuclide Activity
Sample ID : S00T780

Page : 2
Acquisition date : 21-APR-2000 12:39:39

Total number of lines in spectrum 1
Number of unidentified lines 1
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T780

Page : 3
Acquisition date : 21-APR-2000 12:39:39

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	613.	29.50	2.5738E-05

 * 222-S Laboratory Counting Room 21-APR-2000 19:27:46.52 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33278
 Sample ID: S00T783-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

SLU Allen

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1090.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:25.35 sec
 Dead Time: 0.3%

Verified by:

John Rebyen 24 Apr 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-APR-2000 16:56:50.54
 Decayed to: 21-APR-2000 16:56:50.54
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: NEW
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.91*	120	2.38	1323.70	1317	15 69.0			

Summary of Nuclide Activity

Page : 2

Sample ID : S00T783-SAM

Acquisition date : 21-APR-2000 16:56:50

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T783-SAM

Page : 3
Acquisition date : 21-APR-2000 16:56:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	625.	29.50	2.5987E-05

 * 222-S Laboratory Counting Room 21-APR-2000 22:00:23.57 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33278
 Sample ID: S00T786-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

gllale

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1091.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:25.87 sec
 Dead Time: 0.3%

Verified by:

John Relyea 24 Apr 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 21-APR-2000 19:29:25.87
 Decayed to: 21-APR-2000 19:29:25.87
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: SLH2
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	1378.07*	57	1.16	2756.29	2747	18 71.9			

Summary of Nuclide Activity
Sample ID : S00T786-SAM

Page : 2
Acquisition date : 21-APR-2000 19:29:25

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T786-SAM

Page : 3
Acquisition date : 21-APR-2000 19:29:25

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	597.	29.50	2.5410E-05

WORKBOOK PAGE: STD1

I-129: LA-378-101 (D-0), 103 ^{E-1} ~~(D-2)~~ ^{14D} ^{1/24/00} IODINE-129

		STANDARD
Type	GROSS WEIGHT (wt2)	6.8486
STD	TARE WEIGHT (wt1)	6.8333
Work List	MASS PRECIPITATE (net wt)	0.0153
33278	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	1.782E-3
Inst Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST DILUTION FACTOR (DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY (Rec)	0.5016
Batch Number	COUNT TIME IN MINUTES	150
20001377	COUNTING UNCERTAINTY (%)	3.2
Rerun	STANDARD BOOK NUMBER	55B57
0	STANDARD VALUE in μ Ci/mL	3.04E-03
Sample Prep	<p>One mL of the solution is equivalent to 0.0305 grams.</p> <p>Carrier Percent Recovery = $(wt2-wt1)*100/0.0305$</p> <p>I-129 μCi/mL = $(I-129 \text{ GEA})(DF)(DDF) / [(Rec)(SS)]$</p>	
NOT LISTED		
Sample #		
WL 33278-STD		
Instrument Code		
WC48587		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/20/2000		
Analysis Time	Iodine 129 in μ Ci / mL	3.55E-03
02:30 PM	Carrier Percent Recovery	50.2%
Sample Point	Counting Uncertainty	3.2%
AZ-101	Standard Recovery =	117.0%

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

STANDARD.WB1 REV. 2.0

37810NML

1659

WORKBOOK PAGE: BLANK2

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ^{WAD} ^{6/21/00} IODINE-129

		BLANK
Type	GROSS WEIGHT (wt2)	6.8525
BLNK	TARE WEIGHT (wt1)	6.8354
Work List	MASS PRECIPITATE (net wt)	0.0171
33278	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.5554E-5
Test Code	SAMPLE VOLUME in mL (SS)	0.5000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST DILUTION FACTOR (DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY (Rec)	0.5607
Batch Number	COUNT TIME IN MINUTES	150
20001377	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / mL (DL)	9.1158E-05
0		
Sample Prep		
NOT LISTED		
Sample #		
WL33278-BLNK	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = $(wt2-wt1)*100/0.0305$	
Prepared By	I-129 μ Ci/mL = $(I-129 \text{ GEA})(DF)(DDF) / [(Rec)(SS)]$	
MCB	Detection Limit = I-129 μ Ci/mL	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/20/2000		
Analysis Time	Iodine 129 in μ Ci / mL <	9.12E-05
02:30 PM	Carrier Percent Recovery	56.1%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

BLANK.WB1 REV 2.0

37810NML

1660

WORKBOOK PAGE: SAM3

I-129: LA-378-101 (D-0), 103 ^{E-1} ~~(D-2)~~ ⁴⁴⁰ _{6/2/00} IODINE-129

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ¹⁴⁰ ¹⁴¹ ¹⁴² ¹⁴³ ¹⁴⁴ ¹⁴⁵ ¹⁴⁶ ¹⁴⁷ ¹⁴⁸ ¹⁴⁹ ¹⁵⁰ IODINE-129			SAMPLE
Type	GROSS WEIGHT	(wt2)	6.9355
SAMPLE	TARE WEIGHT	(wt1)	6.9191
Work List	MASS PRECIPITATE	(net wt)	0.0164
33278	I-129 μ Ci / SAMPLE from GEA	(I-129 GEA)	<2.5738E-5
Test Code	SAMPLE VOLUME in mL	(SS)	0.5000
@I129-01	DILUTION FACTOR	(DF)	1.0000
Matrix	DIGEST DILUTION FACTOR	(DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY	(Rec)	0.5377
Batch Number	COUNT TIME IN MINUTES		150
20001377	COUNTING UNCERTAINTY	(%)	N/A
Rerun	DETECTION LIMIT in μ Ci / mL	(DL)	9.5733E-05
0	One mL of the solution is equivalent to 0.0305 grams. Carrier Percent Recovery = (wt2-wt1)*100/0.0305 I-129 μ Ci/mL = (I-129 GEA)(DF)(DDF) / [(Rec)(SS)] Detection Limit = I-129 μ Ci/mL		
Sample Prep			
NOT LISTED			
Sample #			
S00T000780			
Instrument Code			
WC48587			
Prepared By			
MCB			
Chemist			
SAC			
Analyst			
AKL			
Date Complete			
04/24/2000			
Analysis Date			
04/20/2000			
Analysis Time	Iodine 129 in μ Ci / mL	<	9.57E-05
02:30 PM	Carrier Percent Recovery		53.8%
Sample Point	Counting Uncertainty		0.0%
AZ-101			

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV.2.

37810NML

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WORKBOOK PAGE: SAM4

I-129: LA-378-101 (D-0), 103 ^{E-1} ~~(D-2)~~ ^{had} ~~labelled~~ IODINE-129

			SAMPLE
Type	GROSS WEIGHT	(wt2)	6.8925
SAMPLE	TARE WEIGHT	(wt1)	6.8724
Work List	MASS PRECIPITATE	(net wt)	0.0201
33278	I-129 μ Ci / SAMPLE from GEA	(I-129 GEA)	<2.5987E-5
Test Code	SAMPLE VOLUME in mL	(SS)	0.5000
@I129-01	DILUTION FACTOR	(DF)	1.0000
Matrix	DIGEST DILUTION FACTOR	(DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY	(Rec)	0.6590
Batch Number	COUNT TIME IN MINUTES		150
20001377	COUNTING UNCERTAINTY	(%)	N/A
Rerun	DETECTION LIMIT in μ Ci / mL	(DL)	7.8866E-05
0			
Sample Prep			
NOT LISTED			
Sample #			
S00T000783	One mL of the solution is equivalent to 0.0305 grams.		
Instrument Code			
WC48587	Carrier Percent Recovery = $(wt2-wt1)*100/0.0305$		
Prepared By	I-129 μ Ci/mL = $(I-129 \text{ GEA})(DF)(DDF) / [(Rec)(SS)]$		
MCB	Detection Limit = I-129 μ Ci/mL		
Chemist			
SAC			
Analyst			
AKL			
Date Complete			
04/24/2000			
Analysis Date			
04/20/2000			
Analysis Time	Iodine 129 in μ Ci / mL	<	7.89E-05
02:30 PM	Carrier Percent Recovery		65.9%
Sample Point	Counting Uncertainty		0.0%
AZ-101			

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV 2.

37810NML

1662

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ¹⁴³ ^{6/2/00} IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.9477
SAMPLE	TARE WEIGHT (wt1)	6.9309
Work List	MASS PRECIPITATE (net wt)	0.0168
33278	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.5410E-5
Test Code	SAMPLE VOLUME in mL (SS)	0.5000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST DILUTION FACTOR (DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY (Rec)	0.5508
Batch Number	COUNT TIME IN MINUTES	150
20001377	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / mL (DL)	9.2263E-05
0		
Sample Prep		
NOT LISTED		
Sample #		
S00T000786	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Ci/mL = (I-129 GEA)(DF)(DDF) / [(Rec)(SS)]	
MCB	Detection Limit = I-129 μ Ci/mL	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/20/2000		
Analysis Time	Iodine 129 in μ Ci / mL <	9.23E-05
02:30 PM	Carrier Percent Recovery	55.1%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV 2.

37810NML

1663

LABCORE Completed Worklist Report for Worklist# 33279

Analyst: ak1

Instrument: GEA01

Book#: _____

Method: LA-378-103 Rev/Mod _____

Worklist Comment: AZ-101 (2), @I129-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	@I129-01 I129-01	SOLID	3.04E-03	3.69E-3	121.382 % Recovery	
1 STD		0	@I129-01 I129-01C	SOLID	100	5.05E+01	50.500 % Recovery	
1 STD		0	@I129-01 I129-01E	SOLID	1.00	3.28E+00	3.280 % Ct. Error	
2 BLNK-PREP		0	@I129-01 I129-01	SOLID	1	<4.90E-3		uCi/g
2 BLNK-PREP		0	@I129-01 I129-01C	SOLID	100	4.92E+01	49.200 % Recovery	
2 BLNK-PREP		0	@I129-01 I129-01E	SOLID	1.00	0.00E+00	0.000	uCi/g
3 SAMPLE	S00T000812	0 W	@I129-01 I129-01	SOLID	N/A <	4.47E-03	4.47e-003	uCi/g
3 SAMPLE	S00T000812	0 W	@I129-01 I129-01C	SOLID	N/A	5.54E+01		% Recovery
3 SAMPLE	S00T000812	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error
4 SAMPLE	S00T000813	0 W	@I129-01 I129-01	SOLID	N/A <	5.43E-03	5.43e-003	uCi/g
4 SAMPLE	S00T000813	0 W	@I129-01 I129-01C	SOLID	N/A	4.52E+01		% Recovery
4 SAMPLE	S00T000813	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error
5 SAMPLE	S00T000814	0 W	@I129-01 I129-01	SOLID	N/A <	3.99E-03	3.99e-003	uCi/g
5 SAMPLE	S00T000814	0 W	@I129-01 I129-01C	SOLID	N/A	4.95E+01		% Recovery
5 SAMPLE	S00T000814	0 W	@I129-01 I129-01E	SOLID	N/A	0.00E+00		% Ct. Error

Final page for worklist# 33279

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

27 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33279

Analyst: ALL Instrument: GEA00 #1 Book# 55B57

Method: LA-378-103 Rev/Mod F1

Worklist Comment: AZ-101 (2), @I129-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@I129-01	SOLID		
2 BLNK-PREP			@I129-01	SOLID		
3 SAMPLE	S00T000812 0 W	@I129-01	SOLID		99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E						
4 SAMPLE	S00T000813 0 W	@I129-01	SOLID		99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E						
5 SAMPLE	S00T000814 0 W	@I129-01	SOLID		99000438	AZ-101 (2)
Analytes Requested: I129-01 , I129-01C, I129-01E						

Final page for worklist # 33279

Alita Huron 4/21/00
Signature Date

Shirley Z Cochran 4/24/00
Signature Date
Raymond 4.24.2000

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 22-APR-2000 04:07:40.99 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33279
 Sample ID: WL33279-STD
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

SLHalel

>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1094.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:26.72 sec
 Dead Time: 0.3%

Verified by:

John Relyea 24 Apr

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 22-APR-2000 01:36:43.61
 Decayed to: 22-APR-2000 01:36:43.61
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: SLH2
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.48	8456	1.04	59.17	55	10	3.4		I-129	1.847E-03
0	33.64	2323	1.10	67.49	64	9	8.0			
0	39.41	1693	0.95	79.02	73	11	10.9		I-129	2.092E-03
0	661.71*	65	1.44	1323.30	1319	10	97.1			
0	970.56	56	0.89	1941.03	1931	12	112.6			

Summary of Nuclide Activity

Page : 2

Sample ID : WL33279-STD

Acquisition date : 22-APR-2000 01:36:43

Total number of lines in spectrum	5	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	2	40.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.00	1.865E-03	1.865E-03	0.061E-03	3.28	
Total Activity :			1.865E-03	1.865E-03			

Grand Total Activity :	1.865E-03	1.865E-03
------------------------	-----------	-----------

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
 "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33279-STD

Page : 3
Acquisition date : 22-APR-2000 01:36:43

All nuclides have been identified. No MDA report generated.

 * 222-S Laboratory Counting Room 22-APR-2000 06:40:53.10 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33279
 Sample ID: WL33279-BLNK
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

Newlight

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1095.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:28.13 sec
 Dead Time: 0.3%

Verified by:

John Relyea 24 Apr 00

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 22-APR-2000 04:09:54.09
 Decayed to: 22-APR-2000 04:09:54.09
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: SLH2
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.91*	90	1.65	1323.71	1319	10 69.8			

Summary of Nuclide Activity
Sample ID : WL33279-BLNK

Page : 2
Acquisition date : 22-APR-2000 04:09:54

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL33279-BLNK

Page : 3
Acquisition date : 22-APR-2000 04:09:54

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	593.	29.50	2.5326E-05

 * 222-S Laboratory Counting Room 22-APR-2000 13:51:23.79 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33279
 Sample ID: S00T812-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1096.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:24.65 sec
 Dead Time: 0.3%

Verified by:

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 22-APR-2000 11:20:27.37
 Decayed to: 22-APR-2000 11:20:27.37
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: NEW
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

***** No peaks found *****

Summary of Nuclide Activity
Sample ID : S00T812-SAM

Page : 2
Acquisition date : 22-APR-2000 11:20:27

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T812-SAM

Page : 3
Acquisition date : 22-APR-2000 11:20:27

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	628.	29.50	2.6050E-05

 * 222-S Laboratory Counting Room 22-APR-2000 17:37:43.19 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 33279
 Sample ID: S00T813-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

SL Walker

>>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1098.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:30.63 sec
 Dead Time: 0.3%

Verified by:

John Rehyon 24 Apr 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 22-APR-2000 15:06:41.03
 Decayed to: 22-APR-2000 15:06:41.03
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: NEW
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.86*	93	1.39	1323.61	1320	10 66.8			

Summary of Nuclide Activity

Page : 2

Sample ID : S00T813-SAM

Acquisition date : 22-APR-2000 15:06:41

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
 "E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T813-SAM

Page : 3
Acquisition date : 22-APR-2000 15:06:41

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	628.	29.50	2.6057E-05

 * 222-S Laboratory Counting Room 22-APR-2000 20:45:55.60 *

>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Worklist #: 33279
 Sample ID: S00T814-SAM
 Sample Size: 1.00000E+00 ML
 Dilution Factor: 1.00000E+00

Removed by:

SLH

>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA1
 File Number: dka300:[spec.GEA1]1g1099.cnf
 Geometry: 01
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:29.38 sec
 Dead Time: 0.3%

Verified by:

John Relyea 24 Apr 2000

>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

Sample Count Time: 22-APR-2000 18:14:54.79
 Decayed to: 22-APR-2000 18:14:54.79
 Standard Deviations: 2
 Analysis Library: I129
 Analyst: SLH2
 Background Subtract: DKA300:[SPEC.GEA1]1GBACK

>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 3-MAY-1999 13:09:39.34
 Date of last efficiency calibration: 10-SEP-1999 09:25:17.85

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw %Err	Fit	Nuclides	Activity uCi/SAMPLE
0	661.45*	190	1.56	1322.78	1317	11 34.9			
0	1378.08*	31	1.33	2756.32	2751	12102.6			

Summary of Nuclide Activity
Sample ID : S00T814-SAM

Page : 2
Acquisition date : 22-APR-2000 18:14:54

Total number of lines in spectrum	2	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found	"M" = Manually accepted
"E" = Manually edited	"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S00T814-SAM

Page : 3
Acquisition date : 22-APR-2000 18:14:54

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	645.	29.50	2.6386E-05

WORKBOOK PAGE: STD1

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} _{4/21/00} IODINE-129

		STANDARD
Type	GROSS WEIGHT (wt2)	6.8380
STD	TARE WEIGHT (wt1)	6.8226
Work List	MASS PRECIPITATE (net wt)	0.0154
33279	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	1.865E-3
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST DILUTION FACTOR (DDF)	1.0000
LIQUID	CARRIER FRACTIONAL RECOVERY (Rec)	0.5049
Batch Number	COUNT TIME IN MINUTES	150
20001378	COUNTING UNCERTAINTY (%)	3.28
Rerun	STANDARD BOOK NUMBER	55B57
0	STANDARD VALUE in μ Ci/mL	3.04E-03
Sample Prep		
NOT LISTED		
Sample #		
WL33279	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Ci/mL = (I-129 GEA)(DF)(DDF) / [(Rec)(SS)]	
SZC		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/21/2000		
Analysis Time	Iodine 129 in μ Ci / mL	3.69E-03
01:35 PM	Carrier Percent Recovery	50.5%
Sample Point	Counting Uncertainty	3.3%
AZ-101	Standard Recovery =	121.6%

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

STANDARD.WB1 REV. 2.0

37810NML

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WORKBOOK PAGE: BLANK2

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ^{1A} ₁₂₁₁₀₀ IODINE-129

Type	GROSS WEIGHT	(wt2)	6.8253
BLNK-PREP	TARE WEIGHT	(wt1)	6.8103
Work List	MASS PRECIPITATE	(net wt)	0.0150
33279	I-129 μ Ci / SAMPLE from GEA	(I-129 GEA)	<2.5326E-5
Fast Code	SAMPLE VOLUME in mL	(SS)	1.0000
@1129-01	DILUTION FACTOR	(DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER	(Dg/L)	10.5200
SOLID	CARRIER FRACTIONAL RECOVERY	(Rec)	0.4918
Batch Number	COUNT TIME IN MINUTES		150
20001378	COUNTING UNCERTAINTY	(%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g	(DL)	4.8951E-03
0			
Sample Prep			
NOT LISTED			
Sample #			
WL33279	One mL of the solution is equivalent to 0.0305 grams.		
Instrument Code			
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305		
Prepared By	I-129 μ Ci/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]		
SZC	Detection Limit = I-129 μ Ci/g		
Chemist			
SAC			
Analyst			
AKL			
Date Complete			
04/24/2000			
Analysis Date			
04/21/2000			
Analysis Time	Iodine 129 in μ Ci / g	<	4.90E-03
01:35 PM	Carrier Percent Recovery		49.2%
Sample Point	Counting Uncertainty		0.0%
AZ-101			

Analyst:	AKL	Date:	04/24/2000
Signature of Chemist:		SAC	Date: APR 24 2000

BLANK.WB1 REV 2.0

37810NML

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WORKBOOK PAGE: SAM3

I-129: LA-378-101 (D-0), 103 (D-2) ^{E-1} ^{mp} ¹⁰⁰ IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.9231
SAMPLE	TARE WEIGHT (wt1)	6.9062
Work List	MASS PRECIPITATE (net wt)	0.0169
33279	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.6050E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	10.5200
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.5541
Batch Number	COUNT TIME IN MINUTES	150
20001378	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	4.4689E-03
0		
Sample Prep		
H2ODIGHC		
Sample #		
S00T000812	One mL of the solution is equivalent to 0.0305 grams.	
Instrument Code		
WC48587	Carrier Percent Recovery = (wt2-wt1)*100/0.0305	
Prepared By	I-129 μ Ci/g = (I-129 GEA)(1000 mL/L)(DF) / [(Rec)(SS)(D g/L)]	
SZC	Detection Limit = I-129 μ Ci/g	
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/21/2000		
Analysis Time	Iodine 129 in μ Ci / g <	4.47E-03
01:35 PM	Carrier Percent Recovery	55.4%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV 2.

37810NML

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I-129: LA-378-101 (D-0), 103 ^{E-1} (D-2) ^{MP} ^{6/21/00} IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.8624
SAMPLE	TARE WEIGHT (wt1)	6.8486
Work List	MASS PRECIPITATE (net wt)	0.0138
33279	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.6057E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	10.6000
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.4525
Batch Number	COUNT TIME IN MINUTES	150
20001378	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	5.4330E-03
0	<p>One mL of the solution is equivalent to 0.0305 grams.</p> <p>Carrier Percent Recovery = $(wt2 - wt1) * 100 / 0.0305$</p> <p>I-129 μCi/g = $(I-129 \text{ GEA})(1000 \text{ mL/L})(DF) / [(Rec)(SS)(D \text{ g/L})]$</p> <p>Detection Limit = I-129 μCi/g</p>	
Sample Prep		
H2ODIGHC		
Sample #		
S00T000813		
Instrument Code		
WC48587		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/21/2000		
Analysis Time	Iodine 129 in μ Ci / g	< 5.43E-03
01:35 PM	Carrier Percent Recovery	45.2%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV 2.

37810NML

1683

WORKBOOK PAGE: SAM5

I-129: LA-378-101 (D-0), 103 (D-2)

IODINE-129

		SAMPLE
Type	GROSS WEIGHT (wt2)	6.8211
SAMPLE	TARE WEIGHT (wt1)	6.8060
Work List	MASS PRECIPITATE (net wt)	0.0151
33279	I-129 μ Ci / SAMPLE from GEA (I-129 GEA)	<2.6386E-5
Test Code	SAMPLE VOLUME in mL (SS)	1.0000
@I129-01	DILUTION FACTOR (DF)	1.0000
Matrix	DIGEST GRAMS OF SOLID / LITER (Dg/L)	13.3700
SOLID	CARRIER FRACTIONAL RECOVERY (Rec)	0.4951
Batch Number	COUNT TIME IN MINUTES	150
20001378	COUNTING UNCERTAINTY (%)	N/A
Rerun	DETECTION LIMIT in μ Ci / g (DL)	3.9863E-03
0	<p>One mL of the solution is equivalent to 0.0305 grams.</p> <p>Carrier Percent Recovery = $(wt2 - wt1) * 100 / 0.0305$</p> <p>I-129 μCi/g = $(I-129 \text{ GEA}) (1000 \text{ mL/L}) (DF) / [(Rec)(SS)(D \text{ g/L})]$</p> <p>Detection Limit = I-129 μCi/g</p>	
Sample Prep		
H2ODIGHC		
Sample #		
S00T000814		
Instrument Code		
WC48587		
Prepared By		
SZC		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
04/24/2000		
Analysis Date		
04/21/2000		
Analysis Time	Iodine 129 in μ Ci / g	< 3.99E-03
01:35 PM	Carrier Percent Recovery	49.5%
Sample Point	Counting Uncertainty	0.0%
AZ-101		

Analyst:	AKL	Date: 04/24/2000
Signature of Chemist:	SAC	Date: APR 24 2000

SAMPLE.WB1 REV 2.

37810NML

1684

LABCORE Completed Worklist Report for Worklist# 33250

Analyst: scl

Instrument: LSC02

Book#: _____

Method: LA-348-104 Rev/Mod _____

Worklist Comment: AZ-101 (2), @C14-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@C14-01	C14-01	SOLID	1.51E-03	1.10E-3	72.848	% Recovery
1 STD	0	@C14-01	C14-01E	SOLID	1	5.90E-01	0.590	% Ct. Error
2 BLNK-PREP	0	@C14-01	C14-01	SOLID	1	<2.30E-3		uCi/g
2 BLNK-PREP	0	@C14-01	C14-01E	SOLID	1	4.38E+00	4.380	uCi/g
3 SAMPLE	S00T000806	0 W	@C14-01	C14-01	SOLID	N/A	2.30E-03	2.30e-003 uCi/g
3 SAMPLE	S00T000806	0 W	@C14-01	C14-01E	SOLID	N/A	4.09E+00	1.00e-006 % Ct. Error
4 SPK	S00T000806	0 W	@C14-01	C14-01	SOLID	1.51E-03	1.12E-03	74.172 % Recovery
5 SAMPLE	S00T000807	0 W	@C14-01	C14-01	SOLID	N/A	2.33E-03	2.21e-003 uCi/g
5 SAMPLE	S00T000807	0 W	@C14-01	C14-01E	SOLID	N/A	4.04E+00	1.00e-006 % Ct. Error
6 SAMPLE	S00T000808	0 W	@C14-01	C14-01	SOLID	N/A	2.12E-03	1.94e-003 uCi/g
6 SAMPLE	S00T000808	0 W	@C14-01	C14-01E	SOLID	N/A	4.01E+00	1.00e-006 % Ct. Error

Final page for worklist# 33250

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

04/17/00 14:06

Page: 1

ws2

LABCORE Data Entry Template for Worklist# 33250Analyst: S.L Instrument: LSC00 6000 Book# 69857Method: LA-348-104 Rev/Mod C6

Worklist Comment: AZ-101 (2), @C14-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@C14-01	SOLID		
2	BLNK-PREP				@C14-01	SOLID		
3	SAMPLE	S00T000806 0 W			@C14-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
4	SPK	S00T000806 0 W			@C14-01	SOLID		
5	SAMPLE	S00T000807 0 W			@C14-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
6	SAMPLE	S00T000808 0 W			@C14-01	SOLID	99000433	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						

Final page for worklist # 33250

Sue Lai 4-20-00
Signature Date

APB 4/24/00
Signature Date
Sue 2 (Chen) 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1686

WORKBOOK PAGE: STD1

C-14 : LA-348-104 (C-6) Carbon-14

		STD
Type	Disintegrations per Minute from Counter (dpm)	2442.58
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33250	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9194
LIQUID	% Counting Uncertainty (from LSC)	0.59
Batch Number	Standard Book Number	67B57
20001352	Standard Value in $\mu\text{Ci/mL}$	1.51E-03
Rerun	Detection Limit (dpm) (Ld)	4.93
0	Critical Level (Lc)	2.24
Sample Prep	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
N/A	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
Sample Number	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
WL33250-STD	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS) (2220000 \text{ dpm}/\mu\text{Ci})]$	
WC51586		
Prepared By		
MCB		
Chemist	% Recovery	72.93%
SAC		
Analyst	C-14 Concentration in $\mu\text{Ci/L}$	1.10E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	1.10E-03
04/21/2000	Detection Limit in $\mu\text{Ci/mL}$	2.22E-06
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	04/21/2000
Signature of Chemist:	SAC	Date:	APR 21 2000

STANDARD.WB1 REV 2.

348104ML

1687

WORKBOOK PAGE: BLANK2

C-14 : LA-348-104 (C-6) Carbon-14

		BLNK-PREP
Type	Disintegrations per Minute from Counter (dpm)	-0.66
BLNK-PREP	Sample Volume in mL (SS)	0.1
Work List	Dilution Factor (DF)	1
33250	Digest Factor (g/L) (D g/L)	9.71
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9148
SOLID	% Counting Uncertainty (from LSC)	4.38
Batch Number	Detection Limit (dpm) (Ld)	4.96
20001352	Critical Level (Lc)	2.24
Rerun		
0	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
N/A	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
WL33250-BLANK	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$ < 2.30E-03	
04/21/2000	Detection Limit in $\mu\text{Ci/g}$ 2.30E-03	
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	04/21/2000
Signature of Chemist:	SAC	Date:	APR 21 2000

BLANK.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SAM3

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	4.67
SAMPLE	Sample Volume in mL (SS)	0.1
Work List	Dilution Factor (DF)	1
33250	Digest Factor (g/L) (D g/L)	9.71
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9164
SOLID	% Counting Uncertainty (from LSC)	4.09
Batch Number	Detection Limit (dpm) (Ld)	4.95
20001352	Critical Level (Lc)	2.24
Rerun		
0	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
S00T000806	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$ < 2.30E-03	
04/21/2000	Detection Limit in $\mu\text{Ci/g}$ 2.30E-03	
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	04/21/2000
Signature of Chemist:		SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SPIKE4

C-14 : LA-348-104 (C-6) CARBON-14 SPIKE

		SPIKE
Type	dpm of Sample from Counter (dpm1)	4.67
SPK	dpm of Sample + Spike from Counter (dpm2)	2490.9
Work List	Volume of Sample in Sample Vial in mL (SS)	0.100
33250	Volume of Sample in Sample + Spike Vial in mL (SPK'D SS)	0.100
Inst Code	Background Count Rate in cpm (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Volume of Spike in mL (SPK vol)	1.000
SOLID	Sample Dilution Factor (SAM DF)	1
Batch Number	Spike Dilution Factor (SPK DF)	1
20001352	Book Number of Spike (Spk BN)	67B57
Rerun	Spike Value in $\mu\text{Ci/mL}$ (SPK val)	1.51E-03
0	Instrument Fractional Efficiency (EFF)	0.9149
Sample Prep	Detection Limit (Ld)	4.95
H2ODIGHC	C-14 $\mu\text{Ci/mL}$ in Sample (Rsam)	0.00E+00
Sample Number	C-14 $\mu\text{Ci/mL}$ in Sample + Spike (Rs+s)	1.12E-02
S00T000806		
Instrument Code		
WC51586		
Prepared By		
MCB	Critical Level (Lc) = $2.33 [\text{Square Root of (BKG cpm / BKG Time)}]$	
Chemist	Detection Limit (Ld) = $[(2.72 / \text{BKG Time}) + (2) (Lc)] / \text{EFF}$	
SAC	C-14 $\mu\text{Ci/mL}$ in Sample = $(\text{dpm1}) (\text{SAM DF}) / [(\text{SS}) (2220000\text{dpm}/\mu\text{Ci})]$	
Analyst	C-14 $\mu\text{Ci/mL}$ in S+S = $(\text{dpm2}) (\text{SAM DF}) / [(\text{SS}) (2220000\text{dpm}/\mu\text{Ci})]$	
SCL	QC Actual in $\mu\text{Ci/mL}$ = SPK val	
Date Complete	QC Found = $(\text{Rs+s} - \text{Rsam}) ((\text{SPK DF}/\text{SPK vol}) / (\text{SAM DF}/\text{SPK'D SS}))$	
04/21/2000	Percent Spike Recovery = $\text{QC Found} / \text{QC Actual} * 100$	
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM	QC Actual in $\mu\text{Ci/mL}$ =	1.51E-03
Sample Point	QC Found in $\mu\text{Ci/mL}$ =	1.12E-03
AZ-101	Percent Spike Recovery =	74.4%

NOTE: The sample dpm was LESS THAN the detection limit (Ld), therefore zero (0) was used for Rsam (sample value) in the QC Found calculation.

Analyst:	SCL	Date: 04/21/2000
Signature of Chemist:	SAC	Date: APR 21 2000

SPIKE.WB1 REV 2.0

348104ML

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04/21/2000

08:41:00

WORKBOOK PAGE: SAM5

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	5.23
SAMPLE	Sample Volume in mL (SS)	0.1
Work List	Dilution Factor (DF)	1
33250	Digest Factor (g/L) (D g/L)	10.12
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9154
SOLID	% Counting Uncertainty (from LSC)	4.04
Batch Number	Detection Limit (dpm) (Ld)	4.96
20001352	Critical Level (Lc)	2.24
Rerun		
0	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
S00T000807	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$	2.33E-03
04/21/2000	Detection Limit in $\mu\text{Ci/g}$	2.21E-03
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	04/21/2000
Signature of Chemist:		SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SAM6

C-14 : LA-348-104 (C-6)**Carbon-14**

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	5.4
SAMPLE	Sample Volume in mL (SS)	0.1
Work List	Dilution Factor (DF)	1
33250	Digest Factor (g/L) (D g/L)	11.47
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	46.26
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9188
SOLID	% Counting Uncertainty (from LSC)	4.01
Batch Number	Detection Limit (dpm) (Ld)	4.94
20001352	Critical Level (Lc)	2.24
Rerun		
0	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $[(2.72 / \text{BKG time}) + (2) (Lc)] / \text{EFF}$	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
S00T000808	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$	2.12E-03
04/21/2000	Detection Limit in $\mu\text{Ci/g}$	1.94E-03
Analysis Date		
04/20/2000		
Analysis Time		
03:30 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	04/21/2000
Signature of Chemist:		SAC	Date: APR 21 2000

SAMPLE.WB1 REV 2.0

348104ML

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LABCORE Completed Worklist Report for Worklist# 33506

Analyst: scl Instrument: LSC03 Book#: _____

Method: LA-348-104 Rev/Mod _____

Worklist Comment: Rerun of 33436 AZ101. gll

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@C14-01	C14-01	SOLID	1.51E-03	1.40E-3	92.715 % Recovery
1	STD		0		@C14-01	C14-01E	SOLID	1	5.20E-01	0.520 % Ct. Error
2	BLNK-PREP		0		@C14-01	C14-01	SOLID	1	<7.97E-4	uCi/g
2	BLNK-PREP		0		@C14-01	C14-01E	SOLID	1	4.43E+00	4.430 uCi/g
3	SAMPLE	S00T000812	0	W	@C14-01	C14-01	SOLID	N/A	2.14E-03	7.98e-004 uCi/g
3	SAMPLE	S00T000812	0	W	@C14-01	C14-01E	SOLID	N/A	3.94E+00	1.00e-006 % Ct. Error
4	SPK	S00T000812	0	W	@C14-01	C14-01	SOLID	1.51E-03	1.32E-03	87.417 % Recovery
5	SAMPLE	S00T000813	0	W	@C14-01	C14-01	SOLID	N/A	1.50E-03	7.92e-004 uCi/g
5	SAMPLE	S00T000813	0	W	@C14-01	C14-01E	SOLID	N/A	4.07E+00	1.00e-006 % Ct. Error
6	SAMPLE	S00T000814	0	W	@C14-01	C14-01	SOLID	N/A	1.23E-03	6.28e-004 uCi/g
6	SAMPLE	S00T000814	0	W	@C14-01	C14-01E	SOLID	N/A	4.05E+00	1.00e-006 % Ct. Error

Final page for worklist# 33506

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 15 May 00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33506

Analyst: S.L Instrument: LSC00 03 Book# 68857Method: LA-348-104 Rev/Mod C-6

Worklist Comment: Rerun of 33436 AZ101. gll

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@C14-01	SOLID		
2	BLNK-PREP				@C14-01	SOLID		
3	SAMPLE	S00T000812	0	W	@C14-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
4	SPK	S00T000812	0	W	@C14-01	SOLID		
5	SAMPLE	S00T000813	0	W	@C14-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
6	SAMPLE	S00T000814	0	W	@C14-01	SOLID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						

Final page for worklist # 33506

Sue Lai 5-11-00
Signature Date

McBroom 5/13/00
Signature Date
Ang L. Phat 5/15/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

C-14 : LA-348-104 (C-6) Carbon-14

		STD
Type	Disintegrations per Minute from Counter (dpm)	3114.57
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33506	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	41.14
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9216
LIQUID	% Counting Uncertainty (from LSC)	0.52
Batch Number	Standard Book Number	68B57
20001611	Standard Value in $\mu\text{Ci/mL}$	1.51E-03
Rerun	Detection Limit (dpm) (Ld)	4.65
0	Critical Level (Lc)	2.11
Sample Prep		
N/A	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Number	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
WL33506-STD	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Instrument Code	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
WC51586	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS) (2220000 \text{ dpm}/\mu\text{Ci})]$	
Prepared By		
MCB		
Chemist	% Recovery	93.00%
SAC		
Analyst	C-14 Concentration in $\mu\text{Ci/L}$	1.40E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	1.40E-03
05/13/2000	Detection Limit in $\mu\text{Ci/mL}$	2.09E-06
Analysis Date		
05/11/2000		
Analysis Time		
01:50 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/13/2000
Signature of Chemist:	SAC	Date:	MAY 15 2000

STANDARD.WB1 REV 2.

348104ML

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WORKBOOK PAGE: BLANK2

C-14 : LA-348-104 (C-6) Carbon-14

		BLNK-PREP
Type	Disintegrations per Minute from Counter (dpm)	1.01
BLNK-PREP	Sample Volume in mL (SS)	0.25
Worklist	Dilution Factor (DF)	1
33506	Digest Factor (g/L) (D g/L)	10.52
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	41.14
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9196
SOLID	% Counting Uncertainty (from LSC)	4.43
Batch Number	Detection Limit (dpm) (Ld)	4.66
20001611	Critical Level (Lc)	2.11
Rerun		
0	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
N/A	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
WL33506-BLNK	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$ < 7.97E-04	
05/13/2000	Detection Limit in $\mu\text{Ci/g}$ 7.97E-04	
Analysis Date		
05/11/2000		
Analysis Time		
01:50 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/13/2000
Signature of Chemist:	SAC	Date:	MAY 15 2000

BLANK.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SAM3

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	12.52
SAMPLE	Sample Volume in mL (SS)	0.25
Work List	Dilution Factor (DF)	1
33506	Digest Factor (g/L) (D g/L)	10.52
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	41.14
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9185
SOLID	% Counting Uncertainty (from LSC)	3.94
Batch Number	Detection Limit (dpm) (Ld)	4.66
20001611	Critical Level (Lc)	2.11
Rerun		
3	Critical Level (Lc) = $2.33 \text{ [Square Root of (BKG cpm / BKG time)]}$	
Sample Prep	Detection Limit (Ld) = $[(2.72 / \text{BKG time}) + (2) (Lc)] / \text{EFF}$	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
S00T000812	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$	2.14E-03
05/13/2000	Detection Limit in $\mu\text{Ci/g}$	7.98E-04
Analysis Date		
05/11/2000		
Analysis Time		
01:50 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/13/2000
Signature of Chemist:		SAC	Date: MAY 15 2000

SAMPLE.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SPIKE4

C-14 : LA-348-104 (C-6) CARBON-14 SPIKE

			SPIKE
Type	dpm of Sample from Counter	(dpm1)	12.52
SPK	dpm of Sample + Spike from Counter	(dpm2)	2946.38
Work List	Volume of Sample in Sample Vial in mL	(SS)	0.250
33506	Volume of Sample in Sample + Spike Vial in mL	(SPK'D SS)	0.250
Test Code	Background Count Rate in cpm	(BKG cpm)	41.14
@C14-01	Background Count Time in Minutes	(BKG time)	50
Matrix	Volume of Spike in mL	(SPK vol)	1.000
SOLID	Sample Dilution Factor	(SAM DF)	1
Batch Number	Spike Dilution Factor	(SPK DF)	1
20001611	Book Number of Spike	(Spk BN)	68B57
Rerun	Spike Value in $\mu\text{Ci/mL}$	(SPK val)	1.51E-03
3	Instrument Fractional Efficiency	(EFF)	0.9188
Sample Prep	Detection Limit	(Ld)	4.65
H2ODIGHC	C-14 $\mu\text{Ci/mL}$ in Sample	(Rsam)	2.26E-05
Sample Number	C-14 $\mu\text{Ci/mL}$ in Sample + Spike	(Rs+s)	5.31E-03
S00T000812			
Instrument Code			
WC51586			
Prepared By			
MCB			
Chemist			
SAC			
Analyst			
SCL			
Date Complete			
05/13/2000			
Analysis Date			
05/11/2000			
Analysis Time			
01:50 PM			
Sample Point			
AZ-101			
		QC Actual in $\mu\text{Ci/mL}$	1.51E-03
		QC Found in $\mu\text{Ci/mL}$	1.32E-03
		Percent Spike Recovery	87.6%

Analyst:	SCL	Date: 05/13/2000
Signature of Chemist:	SAC	Date: MAY 15 2000

SPIKE.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SAM5

C-14 : LA-348-104 (C-6)**Carbon-14**

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	8.8
SAMPLE	Sample Volume in mL (SS)	0.25
Work List	Dilution Factor (DF)	1
33506	Digest Factor (g/L) (D g/L)	10.6
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	41.14
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9194
SOLID	% Counting Uncertainty (from LSC)	4.07
Batch Number	Detection Limit (dpm) (Ld)	4.66
20001611	Critical Level (Lc)	2.11
Rerun		
3	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Prep	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
S00T000813	Detection Limit ($\mu\text{Ci/g}$) = $(Ld)(DF)(1000) / [(D \text{ g/L})(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$	1.50E-03
05/13/2000	Detection Limit in $\mu\text{Ci/g}$	7.92E-04
Analysis Date		
05/11/2000		
Analysis Time		
01:50 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/13/2000
Signature of Chemist:	SAC	Date:	MAY 15 2000

SAMPLE.WB1 REV 2.0

348104ML

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WORKBOOK PAGE: SAM6

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	9.16
SAMPLE	Sample Volume in mL (SS)	0.25
Work List	Dilution Factor (DF)	1
33506	Digest Factor (g/L) (D g/L)	13.37
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	41.14
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9194
SOLID	% Counting Uncertainty (from LSC)	4.05
Batch Number	Detection Limit (dpm) (Ld)	4.66
20001611	Critical Level (Lc)	2.11
Rerun		
3	Critical Level (Lc) = 2.33 [Square Root of (BKG cpm / BKG time)]	
Sample Prep	Detection Limit (Ld) = [(2.72 / BKG time) + (2) (Lc)] / EFF	
H2ODIGHC	C-14 $\mu\text{Ci/L}$ = (dpm) (1000mL/L) (DF) (DDF) / [(SS) (2220000dpm/ μCi)]	
Sample Number	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L}$ / 1000mL/L	
S00T000814	Detection Limit ($\mu\text{Ci/g}$) = (Ld)(DF)(1000) / [(D g/L)(SS)(2220000 dpm/ μCi)]	
Instrument Code		
WC51586		
Prepared By		
MCB		
Chemist		
SAC		
Analyst		
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/g}$	1.23E-03
05/13/2000	Detection Limit in $\mu\text{Ci/g}$	6.28E-04
Analysis Date		
05/11/2000		
Analysis Time		
01:50 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/13/2000
Signature of Chemist:	SAC	Date:	MAY 15 2000

SAMPLE.WB1 REV 2.0

348104ML

1700

LABCORE Completed Worklist Report for Worklist# 33650

Analyst: scl

Instrument: LSC02

Book#: _____

Method: LA-348-104 Rev/Mod _____

Worklist Comment: RERUN (2) OF 33355,AZ-101(2). EMB

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0		@C14-01	C14-01	LIQUID	1.51E-03	1.35E-3	89.404 % Recovery
1 STD		0		@C14-01	C14-01E	LIQUID	1	5.40E-01	0.540 % Ct. Error
2 BLNK		0		@C14-01	C14-01	LIQUID	1	<2.15E-5	uCi/mL
2 BLNK		0		@C14-01	C14-01E	LIQUID	1	4.37E+00	4.370 uCi/mL
3 SAMPLE	S00T000780	0		@C14-01	C14-01	LIQUID	N/A	2.10E-03	2.15e-005 uCi/mL
3 SAMPLE	S00T000780	0		@C14-01	C14-01E	LIQUID	N/A	1.31E+00	1.00e-006 % Ct. Error
4 SAMPLE	S00T000783	0		@C14-01	C14-01	LIQUID	N/A	1.83E-03	2.15e-005 uCi/mL
4 SAMPLE	S00T000783	0		@C14-01	C14-01E	LIQUID	N/A	1.40E+00	1.00e-006 % Ct. Error
5 SPK	S00T000783	0		@C14-01	C14-01	LIQUID	1.51E-03	1.51E-03	100.000 % Recovery
6 SAMPLE	S00T000786	0		@C14-01	C14-01	LIQUID	N/A	2.22E-03	2.14e-005 uCi/mL
6 SAMPLE	S00T000786	0		@C14-01	C14-01E	LIQUID	N/A	1.28E+00	1.00e-006 % Ct. Error

Final page for worklist# 33650

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 197/2/00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33650

Analyst: SL Instrument: LSC00 6000 Book# 68357

Method: LA-348-104 Rev/Mod C6

Worklist Comment: RERUN (2) OF 33355, AZ-101(2). EMB

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@C14-01	LIQUID		
2	BLNK				@C14-01	LIQUID		
3	SAMPLE	S00T000780 0			@C14-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
4	SAMPLE	S00T000783 0			@C14-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						
5	SPK	S00T000783 0			@C14-01	LIQUID		
6	SAMPLE	S00T000786 0			@C14-01	LIQUID	99000438	AZ-101 (2)
		Analytes Requested: C14-01 , C14-01E						

Final page for worklist # 33650

SL 5-18-00
Signature Date

SL 5-19-00
Signature Date
newing 5/19/00

Data Entry Comments:

WORKBOOK PAGE: STD1

C-14 : LA-348-104 (C-6) Carbon-14

		STD
Type	Disintegrations per Minute from Counter (dpm)	3006.79
STD	Sample Volume in mL (SS)	1
Work List	Dilution Factor (DF)	1
33650	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	42.18
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9118
LIQUID	% Counting Uncertainty (from LSC)	0.54
Batch Number	Standard Book Number	68B57
20001758	Standard Value in $\mu\text{Ci/mL}$	1.51E-03
Rerun	Detection Limit (dpm) (Ld)	4.75
0	Critical Level (Lc)	2.14
Sample Prep		
N/A	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
Sample Number	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
WL33650-STD	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
Instrument Code	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
WC16085	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS) (2220000 \text{ dpm}/\mu\text{Ci})]$	
Prepared By		
GLL		
Chemist	% Recovery	89.78%
SAC		
Analyst	C-14 Concentration in $\mu\text{Ci/L}$	1.35E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	1.35E-03
05/19/2000	Detection Limit in $\mu\text{Ci/mL}$	2.14E-06
Analysis Date		
05/18/2000		
Analysis Time		
02:25 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/19/2000
Signature of Chemist:	SAC	Date:	

STANDARD.WB1 REV 2.

348104ML

1703

WORKBOOK PAGE: BLANK2

C-14 : LA-348-104 (C-6)**Carbon-14**

		BLNK
Type	Disintegrations per Minute from Counter (dpm)	0.05
BLNK	Sample Volume in mL (SS)	0.1
Work List	Dilution Factor (DF)	1
33650	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	42.18
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9081
LIQUID	% Counting Uncertainty (from LSC)	4.37
Batch Number	Detection Limit (dpm) (Ld)	4.77
20001758	Critical Level (Lc)	2.14
Regrn	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
0	Detection Limit (Ld) = $[(2.72 / \text{BKG time}) + (2) (Lc)] / \text{EFF}$	
Sample Prep	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
N/A	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Sample Number	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
WL33650-BLNK	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
Instrument Code		
WC16085		
Prepared By		
GLL		
Chemist		
SAC		
Analysis	C-14 Concentration in $\mu\text{Ci/L}$	< 2.15E-02
SCL		
Date/Complete	C-14 Concentration in $\mu\text{Ci/mL}$	< 2.15E-05
05/19/2000	Detection Limit in $\mu\text{Ci/mL}$	2.15E-05
Analysis Date		
05/18/2000		
Analysis Time		
02:25 PM		
Sample Point		
AZ-101		

Analyst:		SCL	Date:	05/19/2000
Signature of Chemist:		SAC	Date:	

BLANK.WB1 REV 2.0

348104ML

1704

WORKBOOK PAGE: SAM3

C-14 : LA-348-104 (C-6)**Carbon-14**

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	466.89
SAMPLE	Sample Volume in mL (SS)	0.1
Work File	Dilution Factor (DF)	1
33650	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	42.18
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9088
LIQUID	% Counting Uncertainty (from LSC)	1.31
Batch Number	Detection Limit (dpm) (Ld)	4.77
20001758	Critical Level (Lc)	2.14
Reason	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
0	Detection Limit (Ld) = $[(2.72 / \text{BKG time}) + (2) (Lc)] / \text{EFF}$	
Sample Prep	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
N/A	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Sample Number	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
S00T000780		
Instrument Code		
WC16085		
Prepared By		
GLL		
Chemist		
SAC		
Analysis	C-14 Concentration in $\mu\text{Ci/L}$	2.10E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	2.10E-03
05/19/2000	Detection Limit in $\mu\text{Ci/mL}$	2.15E-05
Analysis Date		
05/18/2000		
Analysis Time		
02:25 PM		
Sample Name		
AZ-101		

Analyst:	SCL	Date:	05/19/2000
Signature of Chemist:	SAC	Date:	

SAMPLE.WB1 REV 2.0

348104ML

1705

WORKBOOK PAGE: SAM4

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Net	Disintegrations per Minute from Counter (dpm)	405.22
SAMPLE	Sample Volume in mL (SS)	0.1
Work Sheet	Dilution Factor (DF)	1
33650	Digest Dilution Factor (DDF)	1
Test Code	Background Count Rate in Counts per Minute (BKG cpm)	42.18
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9102
LIQUID	% Counting Uncertainty (from LSC)	1.4
Batch Number	Detection Limit (dpm) (Ld)	4.76
20001758	Critical Level (Lc)	2.14
Result	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
0	Detection Limit (Ld) = $[(2.72 / \text{BKG time}) + (2) (Lc)] / \text{EFF}$	
Sample Prep	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
N/A	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Sample Number	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
S00T000783		
Instrument Code		
WC16085		
Prepared By		
GLL		
Chemist		
SAC		
Analysis	C-14 Concentration in $\mu\text{Ci/L}$	1.83E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	1.83E-03
05/19/2000	Detection Limit in $\mu\text{Ci/mL}$	2.15E-05
Analysis Date		
05/18/2000		
Analysis Time		
02:25 PM		
Sample Polarity		
AZ-101		

Analyst:	SCL	Date:	05/19/2000
Signature of Chemist:	SAC	Date:	

SAMPLE.WB1 REV 2.0

348104ML

1706

WORKBOOK PAGE: SPIKE5

C-14 : LA-348-104 (C-6) CARBON-14 SPIKE

		SPIKE
SPK	dpm of Sample from Counter (dpm1)	405.22
	dpm of Sample + Spike from Counter (dpm2)	3762.25
33650	Volume of Sample in Sample Vial in mL (SS)	0.100
	Volume of Sample in Sample + Spike Vial in mL (SPK'D SS)	0.100
@C14-01	Background Count Rate in cpm (BKG cpm)	42.18
	Background Count Time in Minutes (BKG time)	50
LIQUID	Volume of Spike in mL (SPK vol)	1.000
	Sample Dilution Factor (SAM DF)	1
20001758	Spike Dilution Factor (SPK DF)	1
	Book Number of Spike (Spk BN)	68B57
0	Spike Value in $\mu\text{Ci/mL}$ (SPK val)	1.51E-03
	Instrument Fractional Efficiency (EFF)	0.9091
N/A	Detection Limit (Ld)	4.76
	C-14 $\mu\text{Ci/mL}$ in Sample (Rsam)	1.83E-03
S00T000783	C-14 $\mu\text{Ci/mL}$ in Sample + Spike (Rs+s)	1.69E-02
WC16085	<p> Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG Time)} \right]$ Detection Limit (Ld) = $\left[(2.72 / \text{BKG Time}) + (2) (Lc) \right] / \text{EFF}$ C-14 $\mu\text{Ci/mL}$ in Sample = $(\text{dpm1}) (\text{SAM DF}) / \left[(\text{SS}) (2220000\text{dpm}/\mu\text{Ci}) \right]$ C-14 $\mu\text{Ci/mL}$ in S+S = $(\text{dpm2}) (\text{SAM DF}) / \left[(\text{SS}) (2220000\text{dpm}/\mu\text{Ci}) \right]$ QC Actual in $\mu\text{C/mL}$ = SPK val QC Found = $(\text{Rs+s} - \text{Rsam}) ((\text{SPK DF}/\text{SPK vol}) / (\text{SAM DF}/\text{SPK'D SS}))$ Percent Spike Recovery = $\text{QC Found} / \text{QC Actual} * 100$ </p>	
GLL		
SAC		
SCL		
05/19/2000		
05/18/2000		
02:25 PM		
AZ-101	QC Actual in $\mu\text{Ci/mL}$	= 1.51E-03
	QC Found in $\mu\text{Ci/mL}$	= 1.51E-03
	Percent Spike Recovery	= 100.2%

Analyst:

SCL

Date: 05/19/2000

1707

05/19/2000 08:51:25

WORKBOOK PAGE: SAM6

C-14 : LA-348-104 (C-6) Carbon-14

		SAMPLE
Type	Disintegrations per Minute from Counter (dpm)	492.8
SAMPLE	Sample Volume in mL (SS)	0.1
Workfile	Dilution Factor (DF)	1
33650	Digest Dilution Factor (DDF)	1
Instrument Code	Background Count Rate in Counts per Minute (BKG cpm)	42.18
@C14-01	Background Count Time in Minutes (BKG time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9105
LIQUID	% Counting Uncertainty (from LSC)	1.28
Batch Number	Detection Limit (dpm) (Ld)	4.76
20001758	Critical Level (Lc)	2.14
Rerun	Critical Level (Lc) = $2.33 \left[\text{Square Root of (BKG cpm / BKG time)} \right]$	
0	Detection Limit (Ld) = $\left[(2.72 / \text{BKG time}) + (2) (Lc) \right] / \text{EFF}$	
Sample Prep	C-14 $\mu\text{Ci/L}$ = $(\text{dpm}) (1000\text{mL/L}) (DF) (DDF) / [(SS) (2220000\text{dpm}/\mu\text{Ci})]$	
N/A	$\mu\text{Ci/mL}$ = $\mu\text{Ci/L} / 1000\text{mL/L}$	
Sample Number	Detection Limit ($\mu\text{Ci/mL}$) = $(Ld)(DF)(DDF) / [(SS)(2220000 \text{ dpm}/\mu\text{Ci})]$	
S00T000786		
Instrument Code		
WC16085		
Prepared By		
GLL		
Chemist		
SAC		
Analyst	C-14 Concentration in $\mu\text{Ci/L}$	2.22E+00
SCL		
Date Complete	C-14 Concentration in $\mu\text{Ci/mL}$	2.22E-03
05/19/2000	Detection Limit in $\mu\text{Ci/mL}$	2.14E-05
Analyst Date		
05/18/2000		
Analysis Time		
02:25 PM		
Sample Point		
AZ-101		

Analyst:	SCL	Date:	05/19/2000
Signature of Chemist:	SAC	Date:	

SAMPLE.WB1 REV 2.0

348104ML

1708

05/19/2000 08:51:25

LABCORE Completed Worklist Report for Worklist# 33257

Analyst: scl

Instrument: AB18

Book#: _____

Method: LA-220-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @SR90-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@SR90-01 SR90-01	SOLID	6.19E-04	5.81E-4	93.861	% Recovery
1	STD		0		@SR90-01 SR90-01C	SOLID	100	9.18E+01	91.800	% Recovery
1	STD		0		@SR90-01 SR90-01E	SOLID	1.00	2.82E+00	2.820	% Ct. Error
2	BLNK-PREP		0		@SR90-01 SR90-01	SOLID	1	4.92E+0	4.920	uCi/g
2	BLNK-PREP		0		@SR90-01 SR90-01C	SOLID	100	9.03E+01	90.300	% Recovery
2	BLNK-PREP		0		@SR90-01 SR90-01E	SOLID	1.00	1.27E+02	127.000	uCi/g
3	BLNK/BKG		0		@SR90-01 SR90-01	SOLID	1	1.27E+00	1.270	BLNK/BKG
4	SAMPLE	S00T000797	0	F	@SR90-01 SR90-01	SOLID	N/A	2.00E+04	8.150	uCi/g
4	SAMPLE	S00T000797	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.15E+01		% Recovery
4	SAMPLE	S00T000797	0	F	@SR90-01 SR90-01E	SOLID	N/A	6.83E-01		% Ct. Error
5	SAMPLE	S00T000798	0	F	@SR90-01 SR90-01	SOLID	N/A	2.29E+04	7.650	uCi/g
5	SAMPLE	S00T000798	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.18E+01		% Recovery
5	SAMPLE	S00T000798	0	F	@SR90-01 SR90-01E	SOLID	N/A	6.18E-01		% Ct. Error
6	SAMPLE	S00T000799	0	F	@SR90-01 SR90-01	SOLID	N/A	2.16E+04	8.140	uCi/g
6	SAMPLE	S00T000799	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.21E+01		% Recovery
6	SAMPLE	S00T000799	0	F	@SR90-01 SR90-01E	SOLID	N/A	6.56E-01		% Ct. Error
7	SAMPLE	S00T000800	0	F	@SR90-01 SR90-01	SOLID	N/A	1.69E+04	7.590	uCi/g
7	SAMPLE	S00T000800	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.21E+01		% Recovery
7	SAMPLE	S00T000800	0	F	@SR90-01 SR90-01E	SOLID	N/A	7.16E-01		% Ct. Error
8	SAMPLE	S00T000801	0	F	@SR90-01 SR90-01	SOLID	N/A	1.66E+04	7.520	uCi/g
8	SAMPLE	S00T000801	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.18E+01		% Recovery
8	SAMPLE	S00T000801	0	F	@SR90-01 SR90-01E	SOLID	N/A	7.19E-01		% Ct. Error
9	SAMPLE	S00T000802	0	F	@SR90-01 SR90-01	SOLID	N/A	1.84E+04	7.830	uCi/g
9	SAMPLE	S00T000802	0	F	@SR90-01 SR90-01C	SOLID	N/A	9.10E+01		% Recovery
9	SAMPLE	S00T000802	0	F	@SR90-01 SR90-01E	SOLID	N/A	6.98E-01		% Ct. Error

Final page for worklist# 33257

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 21 Jan 00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33257

Analyst: SL Instrument: AB00 18 Book# 60 B57

Method: LA-220-101 Rev/Mod E-5

Worklist Comment: AZ-101 (2), @SR90-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@SR90-01	SOLID		
2	BLNK-PREP				@SR90-01	SOLID		
3	BLNK/BKG				@SR90-01	SOLID		
4	SAMPLE	S00T000797	0	F	@SR90-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
5	SAMPLE	S00T000798	0	F	@SR90-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
6	SAMPLE	S00T000799	0	F	@SR90-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
7	SAMPLE	S00T000800	0	F	@SR90-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
8	SAMPLE	S00T000801	0	F	@SR90-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
9	SAMPLE	S00T000802	0	F	@SR90-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								

Final page for worklist # 33257

Sue Lee 4-19-00
Signature Date

Sue Lee 4/20/00
Signature Date
newright 4/20/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7) LIQUIDS

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7) LIQUIDS					STANDARD
Type	DETECTOR NUMBER	18	CARRIER ADDED in mL (CVA)	1.000	
STD	TOTAL COUNTS (TC)	5053	GROSS WEIGHT (W2)	7.4068	
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT (W1)	7.3150	
33257	BACKGROUND in cpm (BKG)	7.4	NET WEIGHT (W3)	0.0918	
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS) (DT)	5.57	
@SR90-01	DILUTION FACTOR (DF)	1			
Matrix	DIGEST DILUTION FACTOR DDF	1			
LIQUID	SAMPLE COUNT RATE (Rs)	497.90	SR-90 EFFICIENCY FACTO (C1)	0.3931	
Batch Number	CRITICAL LEVEL (Lc)	1.64	Y-90 EFFICIENCY FACTOR (C2)	0.4709	
20001359	TIME OF SEPARATION (ST)	09:35	Rmax	N/A	
Rerun	DATE OF SEPARATION (SD)	04/19/2000	DETECTION LIMIT (Ld)	3.37	
0	TIME OF COUNT (TOC)	15:09	Sr-89/90 CONC. in µCi/L 5.8091E-01		
Sample Prep	DATE OF COUNT (DOC)	04/19/2000			
N/A	STANDARD BOOK #	60B57			
Sample #	STANDARD VALUE in µCi/mL	6.1904E-04			
WL33257					
Instrument Code					
WB27809	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
Prepared By	Sr-89/90 CONC in µCi/mL REPLACE RS WITH RMAX IF RS<=LcAND RS>=0 OR REPLACE RS WITH Lc IF RS<0				
SZC	RS*DF*DDF*1000/(((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))))*SS*REC*2220000)				
Chemist	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))				
SAC	Relative Counting Error = The Square Root of ((TC + BKG * CT) / (TC - BKG * CT)*1.96)				
Analyst	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
SCL	NOTE: Expected weight = CVA * 0.1				
Date Complete	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
04/20/2000	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
Analysis Date					
04/19/2000	Sr-89/90 CONCENTRATION	5.81E-04	µCi/mL	DETECTION LEVEL 3.93E-06 µCi/L	
Analysis Time					
01:35 PM	RELATIVE COUNTING ERROR	2.8%			
Sample Point					
AZ-101	PERCENT CARRIER RECOVERY	91.8%			

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

STANDARD.WB1 REV 2.0

22010NML

1711

WORKBOOK PAGE: BLANK2

LA-220-101 / E-5 Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

Type	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA)	1.000
BLNK-PREP	TOTAL COUNTS	(TC)	94	GROSS WEIGHT	(W2)	7.3960
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3057
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3)	0.0903
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	5.90
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	4.9			
SOLID	SAMPLE COUNT RATE	(Rs)	2.00	SR-90 EFFICIENCY FACTOR	(C1)	0.3931
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2)	0.4709
20001359	TIME OF SEPARATION	(ST)	09:35	Rmax		N/A
Rerun	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld)	3.37
0	TIME OF COUNT	(TOC)	15:29	Sr-89/90 CONC in µCi/g 4.9199E+00		
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000			
N/A						
Sample #						
WL33257						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27809	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))) * SS*(Dg/L)*REC*2220000)					
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT)) * 1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
04/20/2000						
Analysis Date						
04/19/2000	Sr-89/90 CONCENTRATION	4.92E+00		µCi/g	DETECTION LEVEL	
Analysis Time						
01:35 PM	RELATIVE COUNTING ERROR	127.0%		8.29E+00		
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY	90.3%		µCi/g		

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

BLANK.WB1 REV 2.0

22010NML

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WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE
Type	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA) 1.000
SAMPLE	TOTAL COUNTS	(TC)	82681	GROSS WEIGHT	(W2) 7.3954
Work Unit	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1) 7.3039
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3) 0.0915
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT) 6.23
@SR90-01	DILUTION FACTOR	DF	10201		
Matrix	DIGEST FACTOR (g/L)	(D g/L)	4.9		
SOLID	SAMPLE COUNT RATE	(Rs)	8260.70	SR-90 EFFICIENCY FACTOR	(C1) 0.3931
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2) 0.4709
20001359	TIME OF SEPARATION	(ST)	09:35	Rmax	N/A
Refin	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld) 3.37
0	TIME OF COUNT	(TOC)	15:49	Sr-89/90 CONC in $\mu\text{Ci/g}$	1.9979E+04
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000		
FUSIONHC					
Sample ID					
S00T000797					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27809	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0				
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)				
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))				
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96				
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
Analyst	NOTE: Expected weight = CVA * 0.1				
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Work Completion	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
04/20/2000					
Work Date					
04/19/2000	Sr-89/90 CONCENTRATION	2.00E+04		$\mu\text{Ci/g}$	DETECTION LEVEL 8.15E+00 $\mu\text{Ci/g}$
Analysis Time					
01:35 PM	RELATIVE COUNTING ERROR	0.7%			
Sample Point					
AZ-101	PERCENT CARRIER RECOVERY	91.5%			

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

SAMPLE.WB1 REV 2.0

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WORKBOOK PAGE: SAM5

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)						SAMPLE		
Type	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA)	1.000		
SAMPLE	TOTAL COUNTS	(TC)	100929	GROSS WEIGHT	(W2)	7.3999		
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3081		
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3)	0.0918		
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	6.58		
@SR90-01	DILUTION FACTOR	DF	10201					
Matrix	DIGEST FACTOR (g/L)	(D g/L)	5.18					
SOLID	SAMPLE COUNT RATE	(Rs)	10085.50	SR-90 EFFICIENCY FACTOR	(C1)	0.3931		
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2)	0.4709		
20001359	TIME OF SEPARATION	(ST)	09:35	Rmax		N/A		
Retun	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld)	3.37		
0	TIME OF COUNT	(TOC)	16:10	Sr-89/90 CONC in µCi/g 2.2909E+04				
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000					
FUSIONHC								
Sample #								
S00T000798								
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)							
WB27809	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0							
Prepared By	RS*1000*DF/(((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))))*SS*(Dg/L)*REC*2220000)							
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))							
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96							
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100							
Analyst	NOTE: Expected weight = CVA * 0.1							
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.							
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100							
04/20/2000								
Analysis Date								
04/19/2000	Sr-89/90 CONCENTRATION		2.29E+04	µCi/g	DETECTION LEVEL 7.65E+00 µCi/g			
Analysis Time								
01:35 PM	RELATIVE COUNTING ERROR		0.6%					
Sample Point								
AZ-101	PERCENT CARRIER RECOVERY		91.8%					

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000
SAMPLE.WB1 REV 2.0 22010NML			

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WORKBOOK PAGE: SAM6

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE	
Type	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	89601	GROSS WEIGHT	(W2)	7.3953
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3032
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3)	0.0921
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	6.80
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	4.84			
SOLID	SAMPLE COUNT RATE	(Rs)	8952.70	SR-90 EFFICIENCY FACTOR	(C1)	0.3931
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2)	0.4709
20001359	TIME OF SEPARATION	(ST)	09:42	Rmax		N/A
Run	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld)	3.37
0	TIME OF COUNT	(TOC)	16:30	Sr-89/90 CONC in µCi/g		2.1641E+04
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000			
FUSIONHC						
Sample #						
S00T000799						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27809	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)					
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
04/20/2000						
Analysis Date						DETECTION LEVEL 8.14E+00 µCi/g
04/19/2000	Sr-89/90 CONCENTRATION 2.16E+04 µCi/g					
Analysis Time						
01:35 PM	RELATIVE COUNTING ERROR 0.7%					
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY 92.1%					

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

SAMPLE.WB1 REV 2.0

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WORKBOOK PAGE: SAM7

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE
DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS (TC)	75058	GROSS WEIGHT	(W2)	7.4275
Work Unit	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT	(W1)	7.3354
33257	BACKGROUND in cpm (BKG)	7.4	NET WEIGHT	(W3)	0.0921
Matrix Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS)	(DT)	7.15
@SR90-01	DILUTION FACTOR (DF)	10201			
Matrix	DIGEST FACTOR (g/L) (D g/L)	5.17			
SOLID	SAMPLE COUNT RATE (Rs)	7498.40	SR-90 EFFICIENCY FACTOR	(C1)	0.3931
Batch Number	CRITICAL LEVEL (Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2)	0.4709
20001359	TIME OF SEPARATION (ST)	09:42	Rmax		N/A
Round	DATE OF SEPARATION (SD)	04/19/2000	DETECTION LIMIT	(Ld)	3.37
0	TIME OF COUNT (TOC)	16:51	Sr-89/90 CONC in $\mu\text{Ci/g}$ 1.6904E+04		
Sample Prep	DATE OF COUNT (DOC)	04/19/2000			
FUSIONHC					
Sample #					
S00T000800					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27809	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0				
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)				
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))				
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96				
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
Analyst	NOTE: Expected weight = CVA * 0.1				
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
04/20/2000					
Analysis Date					
04/19/2000	Sr-89/90 CONCENTRATION	1.69E+04	$\mu\text{Ci/g}$	DETECTION LEVEL	
Analysis Time					
01:35 PM	RELATIVE COUNTING ERROR	0.7%	7.59E+00 $\mu\text{Ci/g}$		
Sample Point					
AZ-101	PERCENT CARRIER RECOVERY	92.1%			

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

SAMPLE.WB1 REV 2.0

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WORKBOOK PAGE: SAM8

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE	
TYPE	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	74444	GROSS WEIGHT	(W2)	7.3739
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.2821
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3)	0.0918
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	7.48
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	5.22			
SOLID	SAMPLE COUNT RATE	(Rs)	7437.00	SR-90 EFFICIENCY FACTOR	(C1)	0.3931
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2)	0.4709
20001359	TIME OF SEPARATION	(ST)	09:42	Rmax		N/A
Regrn	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld)	3.37
0	TIME OF COUNT	(TOC)	17:11	Sr-89/90 CONC in $\mu\text{Ci/g}$		1.6598E+04
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000			
FUSIONHC						
Sample #						
S00T000801						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27809	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if $RS \leq Lc$ and $RS > 0$ or Replace RS with Lc if $RS < 0$					
Prepared By	$RS * 1000 * DF / ((C1 + C2 * (1 - e^{-(\ln(2) / 64.2 * DT))}) * SS * (Dg/L) * REC * 2220000)$					
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery $((W2 - W1) / (CVA * 0.1000))$					
Chemist	Relative Counting Error = (The Square Root of $(TC + BKG * CT) / (TC - BKG * CT)$) * 1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$					
04/20/2000						
Analysis Date						DETECTION LEVEL 7.52E+00 $\mu\text{Ci/g}$
04/19/2000	Sr-89/90 CONCENTRATION 1.66E+04 $\mu\text{Ci/g}$					
Analysis Time						
01:35 PM	RELATIVE COUNTING ERROR 0.7%					
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY 91.8%					

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

SAMPLE.WB1 REV 2.0

22010NML

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WORKBOOK PAGE: SAM9

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE
Type	DETECTOR NUMBER		18	CARRIER ADDED in mL	(CVA) 1.000
SAMPLE	TOTAL COUNTS	(TC)	79081	GROSS WEIGHT	(W2) 7.3954
Work File	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1) 7.3044
33257	BACKGROUND in cpm	(BKG)	7.4	NET WEIGHT	(W3) 0.0910
101 Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT) 7.82
@SR90-01	DILUTION FACTOR	DF	10201		
Matrix	DIGEST FACTOR (g/L)	(D g/L)	5.04		
SOLID	SAMPLE COUNT RATE	(Rs)	7900.70	SR-90 EFFICIENCY FACTOR	(C1) 0.3931
Batch Number	CRITICAL LEVEL	(Lc)	1.64	Y-90 EFFICIENCY FACTOR	(C2) 0.4709
20001359	TIME OF SEPARATION	(ST)	09:42	Rmax	N/A
Rerun	DATE OF SEPARATION	(SD)	04/19/2000	DETECTION LIMIT	(Ld) 3.37
0	TIME OF COUNT	(TOC)	17:31	Sr-89/90 CONC in $\mu\text{Ci/g}$ 1.8357E+04	
Sample Prep	DATE OF COUNT	(DOC)	04/19/2000		
FUSIONHC					
Sample #					
S00T000802					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27809	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0				
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))) * SS*(Dg/L)*REC*2220000)				
SZC	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))				
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT)) * 1.96				
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
Analyst	NOTE: Expected weight = CVA * 0.1				
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
04/20/2000					
Analysis Date					DETECTION LEVEL 7.83E+00 $\mu\text{Ci/g}$
04/19/2000	Sr-89/90 CONCENTRATION	1.84E+04	$\mu\text{Ci/g}$		
Analysis Time					
01:35 PM	RELATIVE COUNTING ERROR	0.7%			
Sample Point					
AZ-101	PERCENT CARRIER RECOVERY	91.0%			

Analyst:	SCL	Date:	20-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000

SAMPLE.WB1 REV 2.0

22010NML

1718

LABCORE Completed Worklist Report for Worklist# 33271

Analyst: crj

Instrument: AB13

Book#: _____

Method: LA-220-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @SR90-01 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@SR90-01 SR90-01	LIQUID	8.19E-04	8.27E-4	100.977	% Recovery
1	STD		0		@SR90-01 SR90-01C	LIQUID	100	9.22E+01	92.200	% Recovery
1	STD		0		@SR90-01 SR90-01E	LIQUID	1.00	2.10E+00	2.100	% Ct. Error
2	BLNK		0		@SR90-01 SR90-01	LIQUID	1	<4.37E-2		uCi/mL
2	BLNK		0		@SR90-01 SR90-01C	LIQUID	100	9.13E+01	91.300	% Recovery
2	BLNK		0		@SR90-01 SR90-01E	LIQUID	1.00	3.20E+02	320.000	uCi/mL
3	BLNK/BKG		0		@SR90-01 SR90-01	LIQUID	1	1.11E+00	1.110	BLNK/BKG
4	SAMPLE	S00T000780	0		@SR90-01 SR90-01	LIQUID	N/A	1.11E+00	5.97e-002	uCi/mL
4	SAMPLE	S00T000780	0		@SR90-01 SR90-01C	LIQUID	N/A	9.12E+01		% Recovery
4	SAMPLE	S00T000780	0		@SR90-01 SR90-01E	LIQUID	N/A	9.01E+00		% Ct. Error
5	SAMPLE	S00T000783	0		@SR90-01 SR90-01	LIQUID	N/A	1.03E+00	5.91e-002	uCi/mL
5	SAMPLE	S00T000783	0		@SR90-01 SR90-01C	LIQUID	N/A	9.20E+01		% Recovery
5	SAMPLE	S00T000783	0		@SR90-01 SR90-01E	LIQUID	N/A	9.38E+00		% Ct. Error
6	SAMPLE	S00T000786	0		@SR90-01 SR90-01	LIQUID	N/A	9.08E-01	6.02e-002	uCi/mL
6	SAMPLE	S00T000786	0		@SR90-01 SR90-01C	LIQUID	N/A	9.03E+01		% Recovery
6	SAMPLE	S00T000786	0		@SR90-01 SR90-01E	LIQUID	N/A	1.02E+01		% Ct. Error

Final page for worklist# 33271

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

2-1 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33271

Analyst: CRT Instrument: AB00 13 Book# 4657

Method: LA-220-101 Rev/Mod E-5

Worklist Comment: AZ-101 (2), @SR90-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@SR90-01	LIQUID		
2	BLNK				@SR90-01	LIQUID		
3	BLNK/BKG				@SR90-01	LIQUID		
4	SAMPLE	S00T000780 0			@SR90-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
5	SAMPLE	S00T000783 0			@SR90-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								
6	SAMPLE	S00T000786 0			@SR90-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SR90-01 , SR90-01C, SR90-01E								

Final page for worklist # 33271

[Signature] 4/21/00
Signature Date

[Signature] 4/21/00
Signature Date
Newright 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7) LIQUIDS

				STANDARD
Type	DETECTOR NUMBER	13	CARRIER ADDED in mL (CVA)	1.000
STD	TOTAL COUNTS (TC)	8869	GROSS WEIGHT (W2)	7.4064
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT (W1)	7.3142
33271	BACKGROUND in cpm (BKG)	6.2	NET WEIGHT (W3)	0.0922
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS) (DT)	21.43
@SR90-01	DILUTION FACTOR (DF)	1		
Matrix	DIGEST DILUTION FACTOR DDF	1		
LIQUID	SAMPLE COUNT RATE (Rs)	880.70	SR-90 EFFICIENCY FACTO (C1)	0.4152
Batch Number	CRITICAL LEVEL (Lc)	1.50	Y-90 EFFICIENCY FACTOR (C2)	0.5078
20001381	TIME OF SEPARATION (ST)	12:48	Rmax	N/A
Rerun	DATE OF SEPARATION (SD)	04/20/2000	DETECTION LIMIT (Ld)	3.09
0	TIME OF COUNT (TOC)	10:14	Sr-89/90 CONC. in µCi/L 8.2728E-01	
Sample Prep	DATE OF COUNT (DOC)	04/21/2000		
N/A	STANDARD BOOK #	46B57		
Sample #	STANDARD VALUE in µCi/mL	8.1855E-04		
WL33271-STD				
Instrument Code				
WB27810	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)			
Prepared By	Sr-89/90 CONC in µCi/mL REPLACE RS WITH RMAX IF RS<=Lc AND RS>=0 OR REPLACE RS WITH Lc IF RS<0			
MCB	RS*DF*DDF*1000/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*REC*2220000)			
Chemist	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))			
SAC	Relative Counting Error = The Square Root of ((TC + BKG * CT) / (TC - BKG * CT)*1.96)			
Analyst	Percent Carrier Recovery = (Net Weight / Expected weight) * 100			
CRJ	NOTE: Expected weight = CVA * 0.1			
Date Complete	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			
04/21/2000	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100			
Analysis Date	Sr-89/90 CONCENTRATION 8.27E-04 µCi/mL			DETECTION LEVEL 2.90E-06 µCi/L
Analysis Time				
09:20 AM	RELATIVE COUNTING ERROR 2.1%			
Sample Point				
AZ-101	PERCENT CARRIER RECOVERY 92.2%			

Analyst:	CRJ	Date:	21-Apr-2000
Signature of Chemist:	SAC	Date:	APR 24 2000

STANDARD.WB1 REV 2.0

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WORKBOOK PAGE: BLANK2

LA-220-101 / E-5 Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					BLNK	
DETECTOR NUMBER		13	CARRIER ADDED in mL	(CVA)	1.000	
BLNK	TOTAL COUNTS (TC)	69	GROSS WEIGHT	(W2)	7.3976	
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT	(W1)	7.3063	
33271	BACKGROUND in cpm (BKG)	6.2	NET WEIGHT	(W3)	0.0913	
Test Code	SAMPLE VOLUME in mL (SS)	0.500	DELTA TIME (HOURS)	(DT)	21.60	
@SR90-01	DILUTION FACTOR DF	10201				
Matrix	DIGEST DILUTION FACTOR (DDF)	1				
LIQUID	SAMPLE COUNT RATE (Rs)	0.70	SR-90 EFFICIENCY FACTOR	(C1)	0.4152	
Batch Number	CRITICAL LEVEL (Lc)	1.50	Y-90 EFFICIENCY FACTOR	(C2)	0.5078	
20001381	TIME OF SEPARATION (ST)	12:48	Rmax		2.26	
ReRun	DATE OF SEPARATION (SD)	04/20/2000	DETECTION LIMIT	(Ld)	3.09	
0	TIME OF COUNT (TOC)	10:24	Sr-89/90 CONC in µCi/L	<	4.3725E+01	
Sample Prep	DATE OF COUNT (DOC)	04/21/2000				
N/A						
Sample #						
WL33271-BLNK						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27810	Sr-89/90 CONC in µCi/L Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*DF*DDF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*REC*2220000)					
MCB	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
CRJ	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Print Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
04/21/2000						
Analysis Date						
04/21/2000	Sr-89/90 CONCENTRATION	< 4.37E-02	µCi/mL	DETECTION LEVEL 5.97E-02 µCi/mL		
Analysis Time	LESS THAN Value was Determined from Rmax.					
09:20 AM	RELATIVE COUNTING ERROR	320.5%				
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY	91.3%				

Analyst:	CRJ	Date:	21-Apr-2000
Signature of Chemist:	SAC	Date:	APR 24 2000

BLANK.WB1 REV 2.0

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WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE	
TYPE	DETECTOR NUMBER		13	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	637	GROSS WEIGHT	(W2)	7.4208
Work Unit	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3296
33271	BACKGROUND in cpm	(BKG)	6.2	NET WEIGHT	(W3)	0.0912
ID Code	SAMPLE VOLUME in mL	(SS)	0.500	DELTA TIME (HOURS)	(DT)	21.72
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST DILUTION FACTOR	(DDF)	1			
LIQUID	SAMPLE COUNT RATE	(Rs)	57.50	SR-90 EFFICIENCY FACTOR	(C1)	0.4152
Batch Number	CRITICAL LEVEL	(Lc)	1.50	Y-90 EFFICIENCY FACTOR	(C2)	0.5078
20001381	TIME OF SEPARATION	(ST)	12:52	Rmax		N/A
Run	DATE OF SEPARATION	(SD)	04/20/2000	DETECTION LIMIT	(Ld)	3.09
0	TIME OF COUNT	(TOC)	10:35	Sr-89/90 CONC in $\mu\text{Ci/L}$		1.1114E+03
Sample Prep	DATE OF COUNT	(DOC)	04/21/2000			
N/A						
Sample #						
S00T000780						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27810	Sr-89/90 CONC in $\mu\text{Ci/L}$ Replace RS with RMAX if $RS \leq Lc$ and $RS > 0$ or Replace RS with Lc if $RS < 0$					
Prepared By	$RS * DF * DDF / ((C1 + C2 * (1 - e^{(-\text{natural log } 2) / (64.2 * DT))}) * SS * REC * 2220000)$					
MCB	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery $((W2 - W1) / (CVA * 0.1000))$					
Chemist	Relative Counting Error = (The Square Root of $(TC + BKG * CT) / (TC - BKG * CT)$) * 1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
CRJ	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$					
04/21/2000						
Analysis Date	Sr-89/90 CONCENTRATION					DETECTION LEVEL
04/21/2000	1.11E+00 $\mu\text{Ci/mL}$					
Analysis Time						
09:20 AM	RELATIVE COUNTING ERROR					
Sample Point	9.0%					5.97E-02
AZ-101	PERCENT CARRIER RECOVERY					$\mu\text{Ci/mL}$
	91.2%					

Analyst:	CRJ	Date:	21-Apr-2000
Signature of Chemist:	SAC	Date:	APR 24 2000
SAMPLE.WB1 REV 2.0 22010NML			

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WORKBOOK PAGE: SAM5

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE	
TYPE	DETECTOR NUMBER		13	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	599	GROSS WEIGHT	(W2)	7.4218
Work Unit	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3298
33271	BACKGROUND in cpm	(BKG)	6.2	NET WEIGHT	(W3)	0.0920
Isotope Code	SAMPLE VOLUME in mL	(SS)	0.500	DELTA TIME (HOURS)	(DT)	21.88
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST DILUTION FACTOR	(DDF)	1			
LIQUID	SAMPLE COUNT RATE	(Rs)	53.70	SR-90 EFFICIENCY FACTOR	(C1)	0.4152
Batch Number	CRITICAL LEVEL	(Lc)	1.50	Y-90 EFFICIENCY FACTOR	(C2)	0.5078
20001381	TIME OF SEPARATION	(ST)	12:52	Rmax		N/A
Run	DATE OF SEPARATION	(SD)	04/20/2000	DETECTION LIMIT	(Ld)	3.09
0	TIME OF COUNT	(TOC)	10:45	Sr-89/90 CONC in $\mu\text{Ci/L}$ 1.0275E+03		
Sample Prep	DATE OF COUNT	(DOC)	04/21/2000			
N/A						
Sample #						
S00T000783						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27810	Sr-89/90 CONC in $\mu\text{Ci/L}$ Replace RS with RMAX if $RS \leq Lc$ and $RS > 0$ or Replace RS with Lc if $RS < 0$					
Prepared By	$RS * DF * DDF / ((C1 + C2 * (1 - e^{-(\ln 2) / 64.2 * DT)})) * SS * REC * 2220000$					
MCB	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery $((W2 - W1) / (CVA * 0.1000))$					
Chemist	Relative Counting Error = $(\text{The Square Root of } (TC + BKG * CT) / (TC - BKG * CT)) * 1.96$					
SAC	Percent Carrier Recovery = $(\text{Net Weight} / \text{Expected weight}) * 100$					
Analyst	NOTE: Expected weight = $CVA * 0.1$					
CRJ	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$					
04/21/2000						
Analysis Date						DETECTION LEVEL 5.91E-02 $\mu\text{Ci/mL}$
04/21/2000	Sr-89/90 CONCENTRATION 1.03E+00 $\mu\text{Ci/mL}$					
Analysis Time						
09:20 AM	RELATIVE COUNTING ERROR 9.4%					
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY 92.0%					

Analyst:	CRJ	Date:	21-Apr-2000
Signature of Chemist:	SAC	Date:	APR 24 2000

SAMPLE.WB1 REV 2.0

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WORKBOOK PAGE: SAM6

Sr-89/90 : LA-220-101 (E-5), 102 (INACTIVE), 104 (E-7)

					SAMPLE	
Type	DETECTOR NUMBER		13	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	528	GROSS WEIGHT	(W2)	7.4228
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.3325
33271	BACKGROUND in cpm	(BKG)	6.2	NET WEIGHT	(W3)	0.0903
Inst Code	SAMPLE VOLUME in mL	(SS)	0.500	DELTA TIME (HOURS)	(DT)	21.98
@SR90-01	DILUTION FACTOR	DF	10201			
Matrix	DIGEST DILUTION FACTOR	(DDF)	1			
LIQUID	SAMPLE COUNT RATE	(Rs)	46.60	SR-90 EFFICIENCY FACTOR	(C1)	0.4152
Batch Number	CRITICAL LEVEL	(Lc)	1.50	Y-90 EFFICIENCY FACTOR	(C2)	0.5078
20001381	TIME OF SEPARATION	(ST)	12:56	Rmax		N/A
Return	DATE OF SEPARATION	(SD)	04/20/2000	DETECTION LIMIT	(Ld)	3.09
0	TIME OF COUNT	(TOC)	10:55	Sr-89/90 CONC in µCi/L		9.0770E+02
Sample Prep	DATE OF COUNT	(DOC)	04/21/2000			
N/A						
Sample #						
S00T000786						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27810	Sr-89/90 CONC in µCi/L Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*DF*DDF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*REC*2220000)					
MCB	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
CRJ	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
04/21/2000						
Analyis Date						DETECTION LEVEL 6.02E-02 µCi/mL
04/21/2000	Sr-89/90 CONCENTRATION		9.08E-01	µCi/mL		
Analyis Time						
09:20 AM	RELATIVE COUNTING ERROR		10.2%			
Sample Point						
AZ-101	PERCENT CARRIER RECOVERY		90.3%			

Analyst:	CRJ	Date:	21-Apr-2000
Signature of Chemist:	SAC	Date:	APR 21 2000
SAMPLE.WB1 REV 2.0		22010NML	

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LABCORE Completed Worklist Report for Worklist# 33258

Analyst: rro

Instrument: LSC03

Book#: _____

Method: LA-438-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @TC99-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@TC99-01 TC99-01	SOLID	3.43E-03	3.30E-3	96.210	% Recovery
1 STD	0		@TC99-01 TC99-01T	SOLID	100	7.01E+01	70.100	% Recovery
1 STD	0		@TC99-01 TC99-01E	SOLID	1	8.60E-01	0.860	% Ct. Error
2 BLNK-PREP	0		@TC99-01 TC99-01	SOLID	1	<1.26E-1		uCi/g
2 BLNK-PREP	0		@TC99-01 TC99-01T	SOLID	100	6.64E+01	66.400	% Recovery
2 BLNK-PREP	0		@TC99-01 TC99-01E	SOLID	1.00	1.06E+01	10.600	uCi/g
3 SAMPLE	S00T000797	0 F	@TC99-01 TC99-01	SOLID	N/A	1.69E-01	0.125	uCi/g
3 SAMPLE	S00T000797	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.69E+01		% Recovery
3 SAMPLE	S00T000797	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.74E+00		% Ct. Error
4 SAMPLE	S00T000798	0 F	@TC99-01 TC99-01	SOLID	N/A	1.22E-01	0.119	uCi/g
4 SAMPLE	S00T000798	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.62E+01		% Recovery
4 SAMPLE	S00T000798	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.99E+00		% Ct. Error
5 SAMPLE	S00T000799	0 F	@TC99-01 TC99-01	SOLID	N/A	1.42E-01	0.129	uCi/g
5 SAMPLE	S00T000799	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.56E+01		% Recovery
5 SAMPLE	S00T000799	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.94E+00		% Ct. Error
6 SAMPLE	S00T000800	0 F	@TC99-01 TC99-01	SOLID	N/A	1.88E-01	0.121	uCi/g
6 SAMPLE	S00T000800	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.56E+01		% Recovery
6 SAMPLE	S00T000800	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.57E+00		% Ct. Error
7 SAMPLE	S00T000801	0 F	@TC99-01 TC99-01	SOLID	N/A	1.97E-01	0.115	uCi/g
7 SAMPLE	S00T000801	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.79E+01		% Recovery
7 SAMPLE	S00T000801	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.47E+00		% Ct. Error
8 SAMPLE	S00T000802	0 F	@TC99-01 TC99-01	SOLID	N/A	2.46E-01	0.120	uCi/g
8 SAMPLE	S00T000802	0 F	@TC99-01 TC99-01T	SOLID	N/A	6.75E+01		% Recovery
8 SAMPLE	S00T000802	0 F	@TC99-01 TC99-01E	SOLID	N/A	8.23E+00		% Ct. Error

Final page for worklist# 33258

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

 Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

04/17/00 14:17
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 33258Analyst: RR Instrument: LSC00 6500 Book# 46857Method: LA-438-101 Rev/Mod E-5

Worklist Comment: AZ-101 (2), @TC99-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@TC99-01	SOLID		
2	BLNK-PREP				@TC99-01	SOLID		
3	SAMPLE	S00T000797	0	F	@TC99-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
4	SAMPLE	S00T000798	0	F	@TC99-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
5	SAMPLE	S00T000799	0	F	@TC99-01	SOLID	99000433	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
6	SAMPLE	S00T000800	0	F	@TC99-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
7	SAMPLE	S00T000801	0	F	@TC99-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
8	SAMPLE	S00T000802	0	F	@TC99-01	SOLID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								

Final page for worklist # 33258

RR E. Geel 4/18/00
Signature Date

Ray L. Platt 4/19/00
Signature Date
Em. Baile 4-19-00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Tc-99 : LA-438-101 (E-5)

LIQUID

		STANDARD	
Type	Tracer Book Number (Tr BN)	39B57	
STD	Activity for 100µl of Spike Added in dpm	5637.7	
Work List	Volume of Sample in mL (SS)	1	
33258	Dilution Factor (DF)	1	
Test Code	Digest Dilution Factor (DDF)	1	
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3423.72	
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	6058.29	
LIQUID	Background cpm (BKG cpm)	19.15	
Batch Number	Background Time Counted in Minutes (BKG time)	20	
20001360	Instrument Fractional Efficiency (EFF)	0.7782	
Rerun	% Counting Error	0.86	
0	Standard Value µCi/mL	3.428E-03	
Sample Prep	Standard Book # (Std BN)	46B57	
N/A	Detection Limit (Ld)	6.03	
Sample #	Critical Level (Lc)	2.28	
WL33258-STD	Tc-99 Concentration in µCi/L =	3.3002E+00	
Instrument Code	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)		
WC51586	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF		
Prepared By	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))		
GLL	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))		
Chemist	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3		
SAC			
Analyst			
RRO			
Date Complete	Tc-99 Concentration in µCi/mL =	3.30E-03	
04/19/2000		DETECTION LEVEL 5.82E-06 µCi/mL	
Analysis Date	% Counting Error =		0.9
04/18/2000			
Analysis Time	Spike (Tracer) Recovery =		70.1%
04:00 PM			
Sample Point			
AZ-101			

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 2000

STANDARD.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: BLANK2

Tc-99 : LA-438-101 (E-5)

SOLIDS

		BLNK-PREP
Type	Tracer Book Number (Tr BN)	39B57
BLNK-PREP	Activity for 100µl of Spike Added in dpm	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	4.9
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	-2.61
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2491.71
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7814
Rerun	% Counting Error	10.61
0	Detection Limit (Ld)	6.01
Sample Prep	Critical Level (Lc)	2.28
N/A	Tc-99 Concentration in µCi/g =	< 1.2612E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
WL33258-BLNK	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
Chemist		
SAC		
Analyst		
RRO		
Date Complete		
04/19/2000	Tc-99 Concentration in µCi/g =	< 1.26E-01
Analysis Date		
04/18/2000	% Counting Error =	10.6
Analysis Time		
04:00 PM	Spike (Tracer) Recovery =	66.4%
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 2000

BLANK.WB1 REV 2.0

438101ML

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04/19/2000 08:24:25

WORKBOOK PAGE: SAM3

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	4.9
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	8.11
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2521
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7822
Rerun	% Counting Error	8.74
0	Detection Limit (Ld)	6.00
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	1.6894E-01
Sample #	Critical Level (Lc) = $2.33 * \text{the Square Root of (BKG cpm / BKG time)}$	
S00T000797	Detection Limit (Ld) = $((2.72 / \text{BKG time}) + (2 * Lc)) / \text{EFF}$	
Instrument Code	Detection Level = $Ld * dm3 * DF * DDF / ((2220000 \text{dpm}/\mu\text{Ci}) * SS * (dm2 - dm1))$	
WC51586	Tc-99 µCi/g = $(dm1 * (1000 \text{mL/L}) * dm3 * DF) / ((2220000 \text{dpm}/\mu\text{Ci}) * SS * Dg/L * (dm2 - dm1))$	
Prepared By	Spike (Tracer) Recovery = $(dm2 - dm1) * 1.5 * 100 / dm3$	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/g	1.69E-01
04/19/2000		DETECTION LEVEL
Analysis Date	% Counting Error	8.7
04/18/2000		1.25E-01 µCi/g
Analysis Time	Spike (Tracer) Recovery	66.9%
04:00 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 00

SAMPLE.WB1 REV 2.0 438101ML

1730

WORKBOOK PAGE: SAM4

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	5.18
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	6.11
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2494.99
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.783
Rerun	% Counting Error	8.99
0	Detection Limit (Ld)	6.00
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	1.2156E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000798	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/g	1.22E-01
04/19/2000		DETECTION LEVEL
Analysis Date	% Counting Error	9.0
04/18/2000		1.19E-01 µCi/g
Analysis Time	Spike (Tracer) Recovery	66.2%
04:00 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 April
SAMPLE.WB1 REV 2.0 438101ML		

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WORKBOOK PAGE: SAM5

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	4.84
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	6.59
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2472.76
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7834
Rerun	% Counting Error	8.94
0	Detection Limit (Ld)	5.99
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	1.4161E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000799	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/g	1.42E-01
04/19/2000		
Analysis Date	% Counting Error	8.9
04/18/2000		
Analysis Time	Spike (Tracer) Recovery	65.6%
04:00 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 00

SAMPLE.WB1 REV 2.0 438101ML

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04/19/2000 08:24:25

WORKBOOK PAGE: SAM6

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	5.17
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	9.32
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2475.2
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7836
Rerun	% Counting Error	8.57
0	Detection Limit (Ld)	5.99
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	1.8751E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000800	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/g	1.88E-01
04/19/2000		DETECTION LEVEL
Analysis Date	% Counting Error	8.6
04/18/2000		1.21E-01
Analysis Time	Spike (Tracer) Recovery	65.6%
04:00 PM		µCi/g
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 00
SAMPLE.WB1 REV 2.0 438101ML		

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04/19/2000 08:24:26

WORKBOOK PAGE: SAM7

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	5.22
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	10.22
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2561.34
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7836
Rerun	% Counting Error	8.47
0	Detection Limit (Ld)	5.99
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	1.9684E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000801	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/g	1.97E-01
04/19/2000		DETECTION LEVEL
Analysis Date	% Counting Error	8.5
04/18/2000		1.15E-01 µCi/g
Analysis Time	Spike (Tracer) Recovery	67.9%
04:00 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 2000

SAMPLE.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: SAM8

Tc-99 : LA-438-101 (E-5)

SOLIDS

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33258	Dilution Factor (DF)	101
Test Code	Digest Grams of Solids/Liter (Dg/L)	5.04
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	12.26
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2550.16
SOLID	Background cpm (BKG cpm)	19.15
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001360	Instrument Fractional Efficiency (EFF)	0.7835
Rerun	% Counting Error	8.23
0	Detection Limit (Ld)	5.99
Sample Prep	Critical Level (Lc)	2.28
FUSIONHC	Tc-99 Concentration in µCi/g	2.4584E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000802	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/g = (dm1 * (1000mL/L) * dm3 * DF) / ((2220000dpm/µCi) * SS * Dg/L * (dm2 - dm1))	
Prepared By	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
GLL		
Chemist		
SAC		
Analyst		
RRO		
Date Complete		
04/19/2000	Tc-99 Concentration in µCi/g	2.46E-01
Analysis Date		DETECTION LEVEL
04/18/2000	% Counting Error	8.2
Analysis Time		1.20E-01
04:00 PM	Spike (Tracer) Recovery	67.5%
Sample Point		µCi/g
AZ-101		

Analyst:	RRO	Date: 04/19/2000
Signature of Chemist:	SAC	Date: 19 Apr 2000

SAMPLE.WB1 REV 2.0

438101ML

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LABCORE Completed Worklist Report for Worklist# 33275

Analyst: rro

Instrument: LSC02

Book#: _____

Method: LA-438-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @TC99-01 No Peroxide skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	@TC99-01 TC99-01	LIQUID	2.07E-03	2.03E-3	98.068	% Recovery
1 STD		0	@TC99-01 TC99-01T	LIQUID	100	6.42E+01	64.200	% Recovery
1 STD		0	@TC99-01 TC99-01E	LIQUID	1	1.14E+00	1.140	% Ct. Error
2 BLNK		0	@TC99-01 TC99-01	LIQUID	1	<5.55E-4		uCi/mL
2 BLNK		0	@TC99-01 TC99-01T	LIQUID	100	6.24E+01	62.400	% Recovery
2 BLNK		0	@TC99-01 TC99-01E	LIQUID	1.00	1.07E+01	10.700	uCi/mL
3 SAMPLE	S00T000778	0	@TC99-01 TC99-01	LIQUID	N/A	4.25E-01	5.64e-004	uCi/mL
3 SAMPLE	S00T000778	0	@TC99-01 TC99-01T	LIQUID	N/A	6.10E+01		% Recovery
3 SAMPLE	S00T000778	0	@TC99-01 TC99-01E	LIQUID	N/A	8.20E-01		% Ct. Error
4 SAMPLE	S00T000781	0	@TC99-01 TC99-01	LIQUID	N/A	4.27E-01	4.93e-004	uCi/mL
4 SAMPLE	S00T000781	0	@TC99-01 TC99-01T	LIQUID	N/A	6.99E+01		% Recovery
4 SAMPLE	S00T000781	0	@TC99-01 TC99-01E	LIQUID	N/A	7.60E-01		% Ct. Error
5 SAMPLE	S00T000784	0	@TC99-01 TC99-01	LIQUID	N/A	2.90E-01	3.78e-004	uCi/mL
5 SAMPLE	S00T000784	0	@TC99-01 TC99-01T	LIQUID	N/A	9.13E+01		% Recovery
5 SAMPLE	S00T000784	0	@TC99-01 TC99-01E	LIQUID	N/A	8.10E-01		% Ct. Error

Final page for worklist# 33275

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

24 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33275

Analyst: RRO Instrument: LSC00 6000 Book# 60357

Method: LA-438-101 Rev/Mod E-5

Worklist Comment: AZ-101 (2), @TC99-01 No Peroxide skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@TC99-01	LIQUID		
2	BLNK				@TC99-01	LIQUID		
3	SAMPLE	S00T000778 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
4	SAMPLE	S00T000781 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
5	SAMPLE	S00T000784 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								

Final page for worklist # 33275

RRO 4/20/00
Signature Date

MCB 4/21/00
Signature Date
A7 4/21/00

Data Entry Comments:

WORKBOOK PAGE: STD1

Tc-99 : LA-438-101 (E-5)

LIQUID

		STANDARD
Type	Tracer Book Number (Tr BN)	39B57
STD	Activity for 100µl of Spike Added in dpm	5637.7
Work List	Volume of Sample in mL (SS)	1
33275	Dilution Factor (DF)	1
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	1929.14
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	4342.91
LIQUID	Background cpm (BKG cpm)	13.4
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001382	Instrument Fractional Efficiency (EFF)	0.777
Re-run	% Counting Error	1.14
0	Standard Value µCi/mL	2.065E-03
Sample Prep	Standard Book # (Std BN)	60B57
N/A	Detection Limit (Ld)	5.08
Sample #	Critical Level (Lc)	1.91
WL33275-STD	Tc-99 Concentration in µCi/L =	2.0296E+00
Instrument Code	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
WC16085	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Prepared By	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
MCB	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Chemist	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL =	2.03E-03
04/21/2000		
Analyst Date	% Counting Error =	1.1
04/20/2000		
Analyst Time	Spike (Tracer) Recovery =	64.2%
02:30 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 00

STANDARD.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: BLANK2

Tc-99 : LA-438-101 (E-5)

LIQUID

		BLNK
Type	Tracer Book Number (Tr BN)	39B57
BLNK	Activity for 100µl of Spike Added in dpm	5637.7
Work List	Volume of Sample in mL (SS)	1
33275	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	-15.12
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2329.7
LIQUID	Background cpm (BKG cpm)	13.4
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001382	Instrument Fractional Efficiency (EFF)	0.778
Regrun	% Counting Error	10.71
0	Detection Limit (Ld)	5.08
Sample Prep	Critical Level (Lc)	1.91
N/A	Tc-99 Concentration in µCi/L =	< 5.5542E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
WL33275-BLNK	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC16085	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
MCB	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL =	< 5.55E-04
04/21/2000	DETECTION LEVEL	
Analysis Date	% Counting Error =	10.7
04/20/2000	5.55E-04 µCi/mL	
Analysis Time	Spike (Tracer) Recovery =	62.4%
02:30 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 00

BLANK.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: SAM3

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33275	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3802.84
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	6095.75
LIQUID	Background cpm (BKG cpm)	13.4
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001382	Instrument Fractional Efficiency (EFF)	0.783
Rerun	% Counting Error	0.82
0	Detection Limit (Ld)	5.05
Sample Prep	Critical Level (Lc)	1.91
N/A	Tc-99 Concentration in µCi/L	4.2539E+02
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000778	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC16085	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
MCB	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist		
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL	4.25E-01
04/21/2000		DETECTION LEVEL
Analyst Date	% Counting Error	0.8
04/20/2000		5.64E-04 µCi/mL
Analysis Time	Spike (Tracer) Recovery	61.0%
02:30 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 00

SAMPLE.WB1 REV 2.0 438101ML

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WORKBOOK PAGE: SAM4

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33275	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	4374.97
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	7003.63
LIQUID	Background cpm (BKG cpm)	13.4
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001382	Instrument Fractional Efficiency (EFF)	0.7811
Rerun	% Counting Error	0.76
0	Detection Limit (Ld)	5.06
Sample Prep	Critical Level (Lc)	1.91
N/A	Tc-99 Concentration in µCi/L	4.2689E+02
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000781	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC16085	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
MCB	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist		
JFR		
Analyst		
RRO		
Date Complete		
04/21/2000	Tc-99 Concentration in µCi/mL	4.27E-01
Analysis Date		DETECTION LEVEL
04/20/2000	% Counting Error	0.8
Analysis Time		4.93E-04
02:30 PM	Spike (Tracer) Recovery	69.9%
Sample Point		µCi/mL
AZ-101		

Analyst:	RRO	Date:	04/21/2000
Signature of Chemist:	JFR	Date:	24 Apr 00
SAMPLE.WB1 REV 2.0			
438101ML			

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WORKBOOK PAGE: SAM5

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33275	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3883.29
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	7316.35
LIQUID	Background cpm (BKG cpm)	13.4
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001382	Instrument Fractional Efficiency (EFF)	0.7816
Rerun	% Counting Error	0.81
0	Detection Limit (Ld)	5.05
Sample Prep	Critical Level (Lc)	1.91
N/A	Tc-99 Concentration in µCi/L	2.9013E+02
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000784	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC16085	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
MCB	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist		
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL	2.90E-01
04/21/2000		
Analysis Date	% Counting Error	0.8
04/20/2000		
Analysis Time	Spike (Tracer) Recovery	91.3%
02:30 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 29 Apr 00

SAMPLE.WB1 REV 2.0

438101 ML

LABCORE Completed Worklist Report for Worklist# 33276

Analyst: rro

Instrument: LSC03

Book#: _____

Method: LA-438-101 Rev/Mod _____

Worklist Comment: AZ-101 (2), @TC99-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@TC99-01 TC99-01	LIQUID	2.07E-03	2.02E-3	97.585	% Recovery
1 STD	0		@TC99-01 TC99-01T	LIQUID	100	6.61E+01	66.100	% Recovery
1 STD	0		@TC99-01 TC99-01E	LIQUID	1	1.13E+00	1.130	% Ct. Error
2 BLNK	0		@TC99-01 TC99-01	LIQUID	1	<5.57E-4		uCi/mL
2 BLNK	0		@TC99-01 TC99-01T	LIQUID	100	6.35E+01	63.500	% Recovery
2 BLNK	0		@TC99-01 TC99-01E	LIQUID	1.00	1.01E+01	10.100	uCi/mL
3 SAMPLE	S00T000780	0	@TC99-01 TC99-01	LIQUID	N/A	3.75E-01	5.06e-004	uCi/mL
3 SAMPLE	S00T000780	0	@TC99-01 TC99-01T	LIQUID	N/A	6.99E+01		% Recovery
3 SAMPLE	S00T000780	0	@TC99-01 TC99-01E	LIQUID	N/A	8.30E-01		% Ct. Error
4 SAMPLE	S00T000783	0	@TC99-01 TC99-01	LIQUID	N/A	3.67E-01	4.90e-004	uCi/mL
4 SAMPLE	S00T000783	0	@TC99-01 TC99-01T	LIQUID	N/A	6.93E+01		% Recovery
4 SAMPLE	S00T000783	0	@TC99-01 TC99-01E	LIQUID	N/A	8.20E-01		% Ct. Error
5 SAMPLE	S00T000786	0	@TC99-01 TC99-01	LIQUID	N/A	4.52E-01	5.76e-004	uCi/mL
5 SAMPLE	S00T000786	0	@TC99-01 TC99-01T	LIQUID	N/A	6.04E+01		% Recovery
5 SAMPLE	S00T000786	0	@TC99-01 TC99-01E	LIQUID	N/A	8.10E-01		% Ct. Error

Final page for worklist# 33276

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 24 Apr 00

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33276

Analyst: RAC Instrument: LSC00 6500 Book# 60357

Method: LA-438-101 Rev/Mod E-5

Worklist Comment: AZ-101 (2), @TC99-01 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@TC99-01	LIQUID		
2	BLNK				@TC99-01	LIQUID		
3	SAMPLE	S00T000780 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
4	SAMPLE	S00T000783 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								
5	SAMPLE	S00T000786 0			@TC99-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: TC99-01 , TC99-01E, TC99-01T								

Final page for worklist # 33276

RAC 4/19/00
Signature Date

Julia Z. Chon 4/21/00
Signature Date
New York 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Tc-99 : LA-438-101 (E-5)

LIQUID

		STANDARD
Type	Tracer Book Number (Tr BN)	39B57
STD	Activity for 100µl of Spike Added in dpm	5637.7
Work List	Volume of Sample in mL (SS)	1
33276	Dilution Factor (DF)	1
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	1972.75
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	4457.2
LIQUID	Background cpm (BKG cpm)	13
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001383	Instrument Fractional Efficiency (EFF)	0.7776
Regrun	% Counting Error	1.13
0	Standard Value µCi/mL	2.065E-03
Sample Prep	Standard Book # (Std BN)	60B57
N/A	Detection Limit (Ld)	5.01
Sample #	Critical Level (Lc)	1.88
WL33276	Tc-99 Concentration in µCi/L =	2.0165E+00
Instrument Code	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
WC51586	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Prepared By	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
SZC	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Chemist	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL =	2.02E-03
04/21/2000		
Analysis Date	% Counting Error =	1.1
04/19/2000		
Analysis Time	Spike (Tracer) Recovery =	66.1%
03:40 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 00

STANDARD.WB1 REV 2.0

438101ML

1745

WORKBOOK PAGE: BLANK2

Tc-99 : LA-438-101 (E-5)

LIQUID

		BLNK
Type	Tracer Book Number (Tr BN)	39B57
BLNK	Activity for 100µl of Spike Added in dpm	5637.7
Work List	Volume of Sample in mL (SS)	1
33276	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	-7.86
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	2379.1
LIQUID	Background cpm (BKG cpm)	13
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001383	Instrument Fractional Efficiency (EFF)	0.7507
Rerun	% Counting Error	10.11
0	Detection Limit (Ld)	5.19
Sample Prep	Critical Level (Lc)	1.88
N/A	Tc-99 Concentration in µCi/L = <	5.5724E-01
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
WL33276	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
SZC	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist	NOTE: Reported result is a LESS THAN value calculated from the statistical Detection Limit (Ld).	
JFR		
Analyst		
RRO		
Data Complete		
04/21/2000	Tc-99 Concentration in µCi/mL = <	5.57E-04
Analysis Date	DETECTION LEVEL	
04/19/2000	% Counting Error =	10.1
Analysis Time	5.57E-04 µCi/mL	
03:40 PM	Spike (Tracer) Recovery =	63.5%
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 2000

BLANK.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: SAM3

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33276	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3841.33
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	6468.31
LIQUID	Background cpm (BKG cpm)	13
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001383	Instrument Fractional Efficiency (EFF)	0.7517
Rerun	% Counting Error	0.83
0	Detection Limit (Ld)	5.18
Sample Prep	Critical Level (Lc)	1.88
N/A	Tc-99 Concentration in µCi/L	3.7506E+02
Sample #	Critical Level (Lc) = $2.33 \cdot \text{the Square Root of (BKG cpm / BKG time)}$ Detection Limit (Ld) = $((2.72 / \text{BKG time}) + (2 \cdot \text{Lc})) / \text{EFF}$ Detection Level = $\text{Ld} \cdot \text{dm3} \cdot \text{DF} \cdot \text{DDF} / ((2220000 \text{dpm}/\mu\text{Ci}) \cdot \text{SS} \cdot (\text{dm2} - \text{dm1}))$ Tc-99 µCi/L = $(\text{dm1} \cdot (1000 \text{mL/L}) \cdot \text{dm3} \cdot \text{DF} \cdot \text{DDF}) / ((2220000 \text{dpm}/\mu\text{Ci}) \cdot \text{SS} \cdot (\text{dm2} - \text{dm1}))$ Tc-99 µCi/mL = $\mu\text{Ci/L} / (1000 \text{mL/L})$ Spike (Tracer) Recovery = $(\text{dm2} - \text{dm1}) \cdot 1.5 \cdot 100 / \text{dm3}$	
S00T000780		
Instrument Code		
WC51586		
Prepared By		
SZC		
Chemist		
JFR		
Analyst		
RRO		
Date Complete		
04/21/2000	Tc-99 Concentration in µCi/mL	3.75E-01
Analysis Date		
04/19/2000	% Counting Error	0.8
Analysis Time		
03:40 PM	Spike (Tracer) Recovery	69.9%
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 2000
SAMPLE.WB1 REV 2.0		
438101ML		

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WORKBOOK PAGE: SAM4

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Worklist	Volume of Sample in mL (SS)	1
33276	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3726.33
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	6331.31
LIQUID	Background cpm (BKG cpm)	13
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001383	Instrument Fractional Efficiency (EFF)	0.7826
Run	% Counting Error	0.82
0	Detection Limit (Ld)	4.97
Sample Prep	Critical Level (Lc)	1.88
N/A	Tc-99 Concentration in µCi/L	3.6690E+02
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000783	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
SZC	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist		
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL	3.67E-01
04/21/2000		DETECTION
Analysis Date		LEVEL
04/19/2000	% Counting Error	0.8
Analysis Time		4.90E-04
03:40 PM	Spike (Tracer) Recovery	69.3%
Sample Point		µCi/mL
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 00

SAMPLE.WB1 REV 2.0

438101ML

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WORKBOOK PAGE: SAM5

Tc-99 : LA-438-101 (E-5)

LIQUID

		SAMPLE
Type	Tracer Book Number (Tr BN)	39B57
SAMPLE	Activity for 100µl of Spike Added in dpm (dm3)	5637.7
Work List	Volume of Sample in mL (SS)	1
33276	Dilution Factor (DF)	101
Test Code	Digest Dilution Factor (DDF)	1
@TC99-01	dpm of Sample from Liquid Scintillation Counter (dm1)	3994.33
Matrix	dpm of Sample+Spike from Liquid Scintillation Counter (dm2)	6263.38
LIQUID	Background cpm (BKG cpm)	13
Batch Number	Background Time Counted in Minutes (BKG time)	20
20001383	Instrument Fractional Efficiency (EFF)	0.7645
Rerun	% Counting Error	0.81
0	Detection Limit (Ld)	5.09
Sample Prep	Critical Level (Lc)	1.88
N/A	Tc-99 Concentration in µCi/L	4.5151E+02
Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG time)	
S00T000786	Detection Limit (Ld) = ((2.72 / BKG time) + (2 * Lc)) / EFF	
Instrument Code	Detection Level = Ld * dm3 * DF * DDF / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
WC51586	Tc-99 µCi/L = (dm1 * (1000mL/L) * dm3 * DF * DDF) / ((2220000dpm/µCi) * SS * (dm2 - dm1))	
Prepared By	Tc-99 µCi/mL = µCi/L / (1000mL/L)	
SZC	Spike (Tracer) Recovery = (dm2 - dm1) * 1.5 * 100 / dm3	
Chemist		
JFR		
Analyst		
RRO		
Date Complete	Tc-99 Concentration in µCi/mL	4.52E-01
04/21/2000		DETECTION LEVEL
Analysis Date	% Counting Error	
04/19/2000		5.76E-04 µCi/mL
Analysis Time	Spike (Tracer) Recovery	
03:40 PM		
Sample Point		
AZ-101		

Analyst:	RRO	Date: 04/21/2000
Signature of Chemist:	JFR	Date: 24 Apr 2000

SAMPLE.WB1 REV 2.0 438101ML

1749

LABCORE Completed Worklist Report for Worklist# 32135

Analyst: rro

Instrument: AB20

Book#: _____

Method: LA-953-104 Rev/Mod _____

Worklist Comment: AZ-101 Rerun of WLs 32088-32090. gll

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	@AM24101 AM24101	SOLID	1.07E-04	9.89E-5	92.430	% Recovery
1 STD		0	@AM24101 AM24101E	SOLID	1.0	1.99E+00	1.990	% Ct Error
1 STD		0	@AM24101 AM24101T	SOLID	100.	7.90E+01	79.000	% Recovery
2 BLNK-PREP		0	@AM24101 AM24101	SOLID	1	<8.56E+0		uCi/g
2 BLNK-PREP		0	@AM24101 AM24101E	SOLID	1.0	1.00E+02	100.000	% Ct Error
2 BLNK-PREP		0	@AM24101 AM24101T	SOLID	100.	6.97E+01	69.700	% Recovery
3 SAMPLE	S00T000015	0 F	@AM24101 AM24101	SOLID	N/A	5.83E+01	9.890	uCi/g
3 SAMPLE	S00T000015	0 F	@AM24101 AM24101E	SOLID	N/A	3.14E+00		% Ct. Error
3 SAMPLE	S00T000015	0 F	@AM24101 AM24101T	SOLID	N/A	8.83E+01		% Recovery
4 DUP	S00T000015	0 F	@AM24101 AM24101	SOLID	5.83E+1	6.05E+1	3.704	RPD
4 DUP	S00T000015	0 F	@AM24101 AM24101E	SOLID	1.0	3.06E+00	3.060	% Ct Error
4 DUP	S00T000015	0 F	@AM24101 AM24101T	SOLID	100.0	8.99E+01	89.900	% Recovery
5 SAMPLE	S00T000016	0 F	@AM24101 AM24101	SOLID	N/A	5.19E+01	8.300	uCi/g
5 SAMPLE	S00T000016	0 F	@AM24101 AM24101E	SOLID	N/A	3.11E+00		% Ct. Error
5 SAMPLE	S00T000016	0 F	@AM24101 AM24101T	SOLID	N/A	9.47E+01		% Recovery
6 DUP	S00T000016	0 F	@AM24101 AM24101	SOLID	5.19E+1	5.93E+1	13.309	RPD
6 DUP	S00T000016	0 F	@AM24101 AM24101E	SOLID	1.0	3.15E+00	3.150	% Ct Error
6 DUP	S00T000016	0 F	@AM24101 AM24101T	SOLID	100.0	7.95E+01	79.500	% Recovery
7 SAMPLE	S00T000017	0 F	@AM24101 AM24101	SOLID	N/A	7.36E+01	12.300	uCi/g
7 SAMPLE	S00T000017	0 F	@AM24101 AM24101E	SOLID	N/A	3.00E+00		% Ct. Error
7 SAMPLE	S00T000017	0 F	@AM24101 AM24101T	SOLID	N/A	8.27E+01		% Recovery
8 DUP	S00T000017	0 F	@AM24101 AM24101	SOLID	7.36E+1	6.45E+1	13.179	RPD
8 DUP	S00T000017	0 F	@AM24101 AM24101E	SOLID	1.0	3.11E+00	3.110	% Ct Error
8 DUP	S00T000017	0 F	@AM24101 AM24101T	SOLID	100.0	8.20E+01	82.000	% Recovery
9 SAMPLE	S00T000021	0 F	@AM24101 AM24101	SOLID	N/A	1.16E+02	13.000	uCi/g
9 SAMPLE	S00T000021	0 F	@AM24101 AM24101E	SOLID	N/A	2.53E+00		% Ct. Error
9 SAMPLE	S00T000021	0 F	@AM24101 AM24101T	SOLID	N/A	9.05E+01		% Recovery
10 DUP	S00T000021	0 F	@AM24101 AM24101	SOLID	1.16E+2	9.14E+1	23.722	RPD
10 DUP	S00T000021	0 F	@AM24101 AM24101E	SOLID	1.0	2.51E+00	2.510	% Ct Error
10 DUP	S00T000021	0 F	@AM24101 AM24101T	SOLID	100.0	1.05E+02	105.000	% Recovery
11 SAMPLE	S00T000022	0 F	@AM24101 AM24101	SOLID	N/A	9.72E+01	14.800	uCi/g
11 SAMPLE	S00T000022	0 F	@AM24101 AM24101E	SOLID	N/A	2.78E+00		% Ct. Error
11 SAMPLE	S00T000022	0 F	@AM24101 AM24101T	SOLID	N/A	7.86E+01		% Recovery
12 DUP	S00T000022	0 F	@AM24101 AM24101	SOLID	9.72E+1	1.09E+2	11.445	RPD
12 DUP	S00T000022	0 F	@AM24101 AM24101E	SOLID	1.0	2.48E+00	2.480	% Ct Error
12 DUP	S00T000022	0 F	@AM24101 AM24101T	SOLID	100.0	8.94E+01	89.400	% Recovery
13 SAMPLE	S00T000023	0 F	@AM24101 AM24101	SOLID	N/A	9.31E+01	10.800	uCi/g
13 SAMPLE	S00T000023	0 F	@AM24101 AM24101E	SOLID	N/A	2.56E+00		% Ct. Error
13 SAMPLE	S00T000023	0 F	@AM24101 AM24101T	SOLID	N/A	9.21E+01		% Recovery
14 DUP	S00T000023	0 F	@AM24101 AM24101	SOLID	9.31E+1	8.44E+1	9.803	RPD
14 DUP	S00T000023	0 F	@AM24101 AM24101E	SOLID	1.0	2.65E+00	2.650	% Ct Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 32135

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
14	DUP	S00T000023	0	F	AM24101	AM24101T SOLID	100.0	9.46E+01	94.600 % Recovery	

Final page for worklist# 32135

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

14 Jan 00
Reviewer Signature Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 32135

Analyst: RED Instrument: AM01 Book# 46B57Method: LA-953-104 Rev/Mod B-3

Worklist Comment: AZ-101 Rerun of WLS 32088-32090. gll

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@AM24101	SOLID		
2	BLNK-PREP				@AM24101	SOLID		
3	SAMPLE	S00T000015	0	F	@AM24101	SOLID	99000433	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
4	DUP	S00T000015	0	F	@AM24101	SOLID		
5	SAMPLE	S00T000016	0	F	@AM24101	SOLID	99000433	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
6	DUP	S00T000016	0	F	@AM24101	SOLID		
7	SAMPLE	S00T000017	0	F	@AM24101	SOLID	99000433	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
8	DUP	S00T000017	0	F	@AM24101	SOLID		
9	SAMPLE	S00T000021	0	F	@AM24101	SOLID	99000438	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
10	DUP	S00T000021	0	F	@AM24101	SOLID		
11	SAMPLE	S00T000022	0	F	@AM24101	SOLID	99000438	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
12	DUP	S00T000022	0	F	@AM24101	SOLID		
13	SAMPLE	S00T000023	0	F	@AM24101	SOLID	99000438	AZ-101 (2)
		Analytes Requested: AM24101 , AM24101E, AM24101T						
14	DUP	S00T000023	0	F	@AM24101	SOLID		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

01/13/00 12:16
ws2

Page: 2

LABCORE Data Entry Template for Worklist# 32135

S Type	Sample#	R A Test	Matrix	Group#	Project
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Final page for worklist # 32135

Robin R O'Dell 1-13-00
Signature Date

Em Burke 1-14-00
Signature Date
MCB 1/14/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL32135-STD-AM
File ID: 2a2041.CNF

Counted on: 1/14/ 0 @ 3:14
Detector: AEA2
Geometry number: 1
Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	1164.0	1164.0	301.629	301.629	12.000	5.576	6.000	2.081
2	1241.0	1241.0	255.743	255.727	10.000	4.584	5.000	1.678
3	30.2	30.2	148.538	148.531	190.000	1.000	95.000	0.100
4	9.8	9.8	83.531	83.285	20.000	111.407	10.000	31.120
5?	7.2	7.2	53.692	53.191	22.000	2.237	11.000	10.836
6?	7.5	7.5	46.352	45.049	22.000	1.706	11.000	0.131

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea	
1	Am241	0.406	5.479	5.476	0.003	30.03	39.67	1.4	189.9	0.855E-04	
	Pu238		5.487	5.476	0.011				247.9	0.112E-03	
2	Am243	0.418	5.266	5.265	0.001	10.02	40.93	1.4	186.0	0.838E-04	
3	Ra226	0.024	4.782	4.772	0.010	0.00	2.39	5.8	11.3	0.510E-05	
	Np237		4.769	4.772	-0.003				12.4	0.557E-05	
4	U 235	0.011	4.386	4.472	-0.086	0.51	1.04	15.2	8.2	0.369E-05	
5	????			4.333			0.11	55.7			
6	????			4.296			0.49	16.0			
Totals:		0.859	<--valid peaks only-->				84.03				

DETECTOR CALIBRATION

Energy(MEV) = 4.088 + (0.0046)*Channel
Energy range (MeV): 4.088 TO 6.444
Efficiency = 0.2223 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	46958.0	100.000
Smoothed	46958.0	100.000
Composite fit	40628.1	86.520
Residuals	6329.9	13.480

Spectrum 2a2041.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 7888.7

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Raw Data Dump for AEA Spectrum: 2a2041.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	7.	4.	6.	7.
21	11.	4.	7.	9.	9.	2.	7.	6.	4.	11.
31	7.	8.	6.	12.	5.	7.	8.	11.	14.	8.
41	8.	9.	9.	11.	5.	14.	12.	10.	6.	10.
51	7.	11.	10.	11.	15.	7.	7.	6.	11.	7.
61	14.	5.	7.	14.	13.	5.	9.	15.	16.	4.
71	7.	15.	13.	11.	12.	14.	14.	8.	13.	14.
81	10.	11.	18.	18.	11.	13.	11.	11.	9.	17.
91	11.	10.	6.	15.	15.	17.	10.	18.	15.	15.
101	14.	22.	17.	13.	24.	15.	9.	18.	16.	17.
111	19.	15.	16.	20.	18.	17.	14.	19.	24.	14.
121	19.	14.	23.	15.	17.	18.	15.	23.	27.	24.
131	23.	18.	25.	26.	21.	13.	19.	31.	26.	17.
141	15.	32.	24.	23.	27.	25.	35.	30.	38.	21.
151	31.	31.	30.	27.	18.	30.	32.	30.	28.	24.
161	27.	42.	38.	25.	30.	35.	31.	44.	30.	36.
171	36.	39.	46.	39.	39.	51.	40.	42.	46.	41.
181	40.	54.	48.	55.	54.	57.	46.	51.	56.	60.
191	55.	63.	68.	55.	56.	67.	69.	69.	57.	59.
201	69.	83.	65.	85.	95.	70.	90.	73.	98.	93.
211	107.	83.	106.	104.	125.	107.	117.	105.	139.	121.
221	139.	140.	162.	152.	154.	183.	179.	199.	152.	183.
231	213.	197.	221.	232.	233.	274.	251.	287.	287.	326.
241	333.	381.	404.	427.	527.	544.	562.	636.	676.	687.
251	729.	892.	1081.	1200.	1360.	1497.	1427.	1063.	699.	388.
261	251.	226.	199.	196.	172.	189.	184.	187.	194.	163.
271	170.	164.	161.	151.	157.	156.	168.	184.	194.	204.
281	218.	226.	225.	247.	272.	293.	311.	344.	357.	416.
291	477.	468.	536.	557.	556.	654.	751.	850.	1007.	1207.
301	1323.	1358.	1289.	964.	717.	454.	301.	245.	205.	214.
311	153.	118.	86.	66.	46.	29.	14.	6.	3.	1.
321	1.	0.	0.	0.	0.	0.	0.	1.	0.	0.
331	2.	1.	1.	0.	3.	0.	0.	0.	1.	1.
341	1.	1.	2.	1.	1.	0.	0.	0.	2.	0.
351	1.	0.	1.	0.	0.	1.	1.	0.	1.	0.
361	2.	1.	0.	0.	0.	1.	1.	0.	0.	0.
371	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
381	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.
391	1.	0.	1.	0.	0.	0.	0.	1.	1.	1.
401	0.	0.	0.	1.	1.	2.	0.	0.	0.	1.
411	2.	0.	1.	1.	0.	0.	2.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.
431	0.	0.	0.	0.	0.	3.	0.	1.	0.	0.
441	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	1.	0.	0.	0.	1.	0.	0.	0.
461	0.	1.	0.	0.	0.	0.	0.	0.	1.	0.
471	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 WL32135-BLKN-AM
 File ID: 3a3085.CNF

Counted on: 1/14/ 0 @ 3:15
 Detector: AEA3
 Geometry number: 1
 Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	459.9	459.9	255.039	255.039	12.000	5.061	6.000	1.482

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			Count Rate c/m	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.				
1	Am243	0.834	5.266	5.260	0.0060.02	17.70	2.1	80.9	0.364E-04
Totals:		0.834	<--valid peaks only-->			17.70			

DETECTOR CALIBRATION

Energy(MEV) = 4.087 + (0.0046)*Channel
 Energy range (MeV): 4.087 TO 6.442
 Efficiency = 0.2210 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	10188.0	100.000
Smoothed	10188.0	100.000
Composite fit	8495.6	83.388
Residuals	1692.4	16.612

Analyzed by: _____
 SLH2

Spectrum 3a3085.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3056.8

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Raw Data Dump for AEA Spectrum: 3a3085.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	3.	2.	0.	1.
21	2.	4.	4.	1.	2.	0.	0.	2.	2.	1.
31	4.	0.	3.	4.	4.	0.	1.	1.	0.	2.
41	2.	1.	3.	0.	5.	1.	1.	2.	2.	0.
51	2.	3.	3.	2.	1.	5.	3.	2.	4.	4.
61	1.	3.	6.	2.	2.	3.	4.	1.	1.	1.
71	1.	1.	5.	0.	8.	0.	2.	0.	3.	4.
81	2.	3.	0.	2.	1.	3.	2.	5.	2.	4.
91	3.	3.	3.	2.	2.	3.	2.	6.	4.	0.
101	5.	2.	2.	3.	2.	6.	2.	4.	2.	6.
111	2.	1.	2.	4.	5.	1.	2.	2.	5.	5.
121	4.	3.	5.	9.	2.	7.	2.	4.	5.	3.
131	1.	5.	5.	2.	2.	3.	1.	7.	3.	4.
141	8.	6.	6.	10.	7.	5.	8.	8.	10.	6.
151	4.	7.	7.	6.	5.	11.	7.	8.	10.	10.
161	13.	7.	4.	5.	7.	6.	9.	11.	9.	6.
171	7.	9.	6.	10.	5.	7.	7.	8.	10.	12.
181	11.	8.	12.	12.	8.	19.	18.	8.	12.	16.
191	13.	21.	22.	18.	20.	21.	14.	23.	27.	20.
201	20.	27.	26.	36.	21.	29.	26.	26.	40.	35.
211	33.	31.	46.	47.	40.	33.	39.	45.	35.	47.
221	47.	54.	55.	75.	61.	64.	64.	77.	84.	77.
231	100.	75.	111.	91.	124.	121.	129.	134.	126.	166.
241	166.	160.	182.	208.	237.	226.	277.	284.	321.	305.
251	345.	382.	442.	491.	525.	518.	436.	353.	241.	125.
261	81.	55.	32.	28.	29.	33.	18.	27.	22.	22.
271	12.	7.	7.	8.	4.	0.	1.	2.	2.	0.
281	3.	2.	1.	3.	2.	1.	2.	4.	2.	2.
291	1.	1.	0.	4.	3.	2.	2.	0.	2.	2.
301	4.	6.	2.	4.	2.	0.	0.	1.	0.	0.
311	1.	0.	0.	1.	1.	0.	1.	1.	0.	0.
321	1.	0.	0.	0.	1.	0.	0.	0.	0.	0.
331	0.	0.	1.	0.	0.	0.	3.	0.	0.	0.
341	0.	0.	1.	0.	0.	1.	0.	1.	2.	1.
351	2.	0.	0.	0.	0.	1.	1.	1.	1.	0.
361	0.	1.	1.	1.	0.	0.	1.	0.	1.	0.
371	0.	0.	0.	1.	0.	0.	0.	0.	1.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
391	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
401	0.	1.	0.	0.	0.	0.	0.	0.	1.	0.
411	1.	1.	1.	0.	0.	0.	0.	0.	1.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T015-SAM-AM
File ID: 4a4178.CNF

Counted on: 1/14/ 0 @ 3:15
Detector: AEA4
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	200.1	200.1	297.870	297.870	12.000	6.250	6.000	0.923
2	306.2	306.2	252.416	252.305	12.000	5.388	6.000	0.683
3?	12.8	12.8	197.818	196.703	8.000	1.288	4.000	0.485
4	11.4	11.4	117.362	117.205	124.000	1.000	62.000	0.100
5	4.0	4.0	94.217	93.426	22.000	26.036	11.000	0.663

PEAK RESULTS

Peak Error Limit: 30%

Peak		AEA		Peak Centroid			Count		%err	d/m	Activity uCi/ea
ID	Isotope	Frac	Exp.	Obs.	Diff.	FWHM	Rate	c/m			
1	Am241	0.334	5.479	5.459	0.020	0.03	12.90	2.5		63.1	0.284E-04
	Pu238		5.487	5.459	0.028					82.3	0.371E-04
2	Am243	0.570	5.266	5.249	0.017	0.02	21.99	2.0		102.0	0.460E-04
3		????		4.993			0.33	53.6			
4	Th230	0.023	4.617	4.627	-.010	0.00	0.88	10.6		16.9	0.761E-05
	Np237		4.640	4.627	0.013					67.5	0.304E-04
5	U 235	0.017	4.386	4.518	-.132	0.12	0.66	17.8		5.4	0.241E-05
	Th230		4.617	4.518	0.099					12.7	0.573E-05

Totals: 0.944 <--valid peaks only--> 36.44

DETECTOR CALIBRATION

Energy(MEV) = 4.088 + (0.0046)*Channel

Energy range (MeV): 4.088 TO 6.444

Efficiency = 0.2177 CPM/DPM

(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	18525.0	100.000
Smoothed	18525.0	100.000
Composite fit	17650.8	95.281
Residuals	874.3	4.719

Spectrum 4a4178.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 2451.7

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Raw Data Dump for AEA Spectrum: 4a4178.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	5.	6.	6.
21	3.	1.	6.	7.	3.	4.	7.	2.	5.	8.
31	4.	4.	8.	6.	7.	3.	7.	7.	6.	3.
41	10.	7.	8.	8.	1.	5.	5.	10.	3.	5.
51	6.	6.	6.	4.	5.	6.	2.	6.	9.	3.
61	6.	7.	8.	4.	8.	5.	7.	8.	6.	8.
71	5.	7.	8.	8.	10.	9.	7.	10.	15.	5.
81	12.	4.	9.	11.	9.	9.	12.	9.	9.	10.
91	8.	10.	9.	12.	11.	11.	8.	7.	8.	11.
101	16.	11.	13.	9.	15.	18.	15.	10.	10.	14.
111	12.	8.	12.	19.	11.	14.	11.	17.	17.	8.
121	10.	9.	10.	16.	12.	18.	18.	11.	10.	14.
131	15.	18.	15.	11.	21.	15.	18.	11.	23.	23.
141	24.	29.	22.	18.	20.	17.	24.	26.	17.	23.
151	24.	21.	26.	27.	19.	24.	26.	17.	22.	29.
161	26.	16.	26.	23.	20.	36.	16.	26.	35.	25.
171	28.	25.	27.	36.	33.	33.	30.	37.	28.	35.
181	28.	36.	34.	46.	35.	38.	37.	32.	43.	50.
191	43.	54.	49.	47.	50.	63.	73.	63.	57.	60.
201	55.	52.	65.	58.	87.	77.	83.	79.	77.	95.
211	63.	96.	102.	91.	83.	100.	102.	102.	118.	116.
221	125.	115.	122.	121.	137.	130.	146.	137.	160.	160.
231	153.	184.	182.	168.	187.	199.	202.	209.	246.	225.
241	212.	232.	286.	285.	295.	284.	278.	288.	299.	317.
251	324.	341.	381.	352.	306.	226.	161.	102.	73.	68.
261	67.	72.	69.	70.	87.	76.	70.	85.	86.	59.
271	80.	83.	69.	89.	76.	68.	102.	96.	90.	112.
281	108.	109.	118.	128.	128.	137.	139.	130.	143.	159.
291	145.	160.	157.	176.	150.	189.	221.	226.	208.	194.
301	162.	102.	63.	50.	23.	32.	27.	28.	16.	16.
311	6.	5.	4.	2.	0.	2.	0.	1.	1.	1.
321	0.	0.	0.	0.	0.	0.	1.	1.	0.	2.
331	0.	0.	0.	1.	0.	0.	0.	1.	0.	1.
341	0.	1.	0.	1.	1.	0.	0.	1.	0.	2.
351	1.	0.	0.	0.	0.	3.	0.	2.	1.	2.
361	2.	1.	1.	1.	0.	1.	1.	0.	0.	0.
371	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
401	2.	0.	1.	0.	0.	0.	1.	0.	1.	1.
411	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
421	1.	0.	0.	2.	0.	0.	1.	1.	1.	0.
431	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T015-DUP-AM
 File ID: 5a5601.CNF

Counted on: 1/14/ 0 @ 3:16
 Detector: AEA5
 Geometry number: 1
 Count time: 28802. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	241.8	241.8	300.839	300.839	14.000	6.937	7.000	1.233
2	376.3	376.3	255.400	255.313	12.000	6.488	6.000	1.055
3	12.9	12.9	149.455	149.199	116.000	1.000	58.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			Count	%err		Activity		
			Exp.	Obs.	Diff.	FWHM	Rate c/m	@95	d/m	uCi/ea	
1	Pu238	0.346	5.487	5.460	0.027	0.03	13.74	2.4	80.2	0.361E-04	
	Am241		5.479	5.460	0.019				61.4	0.277E-04	
2	Am243	0.571	5.266	5.251	0.015	0.03	22.65	2.0	96.1	0.433E-04	
3	U 234	0.026	4.759	4.763	-0.004	0.00	1.02	9.7	4.3	0.193E-05	
	Np237		4.769	4.763	0.006				4.9	0.222E-05	

Totals:		0.942	<--valid peaks only-->				37.41				

DETECTOR CALIBRATION

Energy(MEV) = 4.076 + (0.0046)*Channel
 Energy range (MeV): 4.076 TO 6.432
 Efficiency = 0.2381 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	19056.0	100.000
Smoothed	19056.0	100.000
Composite fit	17958.1	94.239
Residuals	1097.9	5.761

Analyzed by: _____

SLH2

Spectrum 5a5601.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 2871.4

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Raw Data Dump for AEA Spectrum: 5a5601.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	3.	3.	4.	2.
21	1.	3.	5.	2.	2.	3.	2.	3.	3.	4.
31	2.	1.	6.	1.	7.	4.	2.	4.	2.	1.
41	3.	1.	4.	6.	6.	4.	5.	4.	3.	2.
51	6.	2.	2.	0.	5.	2.	1.	2.	4.	5.
61	3.	3.	6.	5.	5.	4.	3.	4.	5.	6.
71	6.	6.	7.	6.	1.	7.	1.	3.	2.	5.
81	3.	8.	7.	5.	5.	2.	4.	5.	4.	4.
91	4.	3.	8.	6.	4.	7.	4.	7.	4.	4.
101	10.	8.	8.	6.	3.	4.	7.	10.	10.	4.
111	6.	8.	10.	4.	5.	13.	9.	10.	3.	7.
121	8.	8.	1.	10.	15.	4.	8.	10.	10.	14.
131	10.	7.	5.	6.	12.	8.	11.	13.	12.	5.
141	9.	10.	14.	13.	11.	17.	14.	18.	14.	20.
151	17.	12.	13.	12.	7.	14.	14.	11.	13.	10.
161	20.	14.	16.	19.	15.	16.	20.	13.	16.	24.
171	24.	27.	18.	25.	15.	26.	29.	21.	27.	23.
181	28.	29.	31.	20.	30.	26.	33.	32.	27.	22.
191	37.	37.	38.	41.	35.	41.	56.	36.	41.	44.
201	51.	43.	54.	45.	57.	61.	52.	47.	54.	68.
211	56.	67.	73.	80.	80.	86.	82.	84.	88.	85.
221	81.	97.	94.	92.	113.	129.	111.	130.	116.	143.
231	132.	141.	161.	148.	194.	183.	193.	205.	175.	240.
241	219.	242.	258.	255.	242.	269.	324.	313.	289.	358.
251	349.	363.	359.	408.	428.	447.	420.	354.	297.	196.
261	144.	116.	98.	84.	83.	72.	89.	74.	61.	73.
271	83.	74.	90.	83.	87.	92.	87.	73.	82.	103.
281	102.	90.	110.	125.	106.	130.	135.	115.	154.	162.
291	144.	164.	194.	187.	178.	216.	198.	205.	252.	226.
301	277.	257.	216.	207.	155.	97.	59.	47.	30.	33.
311	30.	20.	13.	9.	1.	5.	2.	0.	0.	1.
321	0.	0.	0.	1.	0.	0.	1.	2.	0.	0.
331	1.	1.	0.	1.	1.	1.	2.	0.	1.	0.
341	1.	2.	2.	0.	1.	0.	1.	2.	0.	2.
351	1.	1.	1.	2.	6.	1.	0.	1.	2.	1.
361	3.	0.	0.	3.	0.	2.	0.	0.	1.	1.
371	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	1.	0.	1.	0.	0.	0.	2.	0.	0.
411	0.	0.	0.	1.	0.	0.	0.	1.	1.	2.
421	1.	0.	0.	0.	1.	0.	0.	0.	2.	1.
431	0.	1.	0.	0.	1.	3.	0.	0.	1.	0.
441	0.	0.	0.	1.	0.	0.	1.	0.	0.	0.
451	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
GENERAL ALPHA ENERGY ANALYSIS
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T016-SAM-AM
File ID: 6a6593.CNF

Counted on: 1/14/ 0 @ 3:16
Detector: AEA6
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	297.7	297.7	250.870	250.870	24.000	25.839	12.000	3.592
2	11.5	11.5	121.217	121.011	148.000	1.000	74.000	0.100
3?	2.1	2.1	111.900	111.291	6.000	0.411	3.000	0.120

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am243	0.691	5.266	5.241	0.025	50.12	24.78	1.8	115.2	0.519E-04
	Po210		5.305	5.241	0.064				114.1	0.514E-04
2	Th230	0.025	4.617	4.643	-0.026	60.00	0.89	10.3	17.1	0.769E-05
	Np237		4.640	4.643	-0.003				68.3	0.308E-04
3		????		4.599			0.06	137.		
Totals:		0.715	<--valid peaks only-->				25.67			

DETECTOR CALIBRATION

Energy (MEV) = 4.087 + (0.0046)*Channel

Energy range (MeV): 4.087 TO 6.442

Efficiency = 0.2173 CPM/DPM

(Data reduction compression factor: 1.)

Am-241 = 0.330 } fractions
Am-243 = 0.670 }
TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	17228.0	100.000
Smoothed	17228.0	100.000
Composite fit	12353.3	71.705
Residuals	4874.7	28.295

Am-241 Count = 12.4 c/m

Analyzed by: _____

SLH2

John Relyea
14 Jan 00

2246.3

$$\begin{aligned} \text{Total} &= 26.4 \\ \text{Am-241} &= \frac{8.7}{26.4} = 0.330 \\ \text{Am-243} &= \frac{17.7}{26.4} = 0.670 \end{aligned}$$

Raw Data Dump for AEA Spectrum: 6a6593.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	1.	3.	4.
21	6.	3.	4.	2.	3.	4.	3.	4.	2.	4.
31	6.	5.	3.	2.	6.	4.	3.	8.	0.	4.
41	1.	4.	11.	2.	3.	0.	3.	7.	8.	6.
51	6.	4.	5.	6.	4.	6.	7.	5.	8.	3.
61	5.	6.	4.	8.	4.	3.	7.	10.	6.	5.
71	3.	1.	10.	6.	7.	2.	4.	10.	10.	4.
81	8.	6.	7.	6.	6.	6.	6.	12.	3.	5.
91	15.	9.	6.	7.	9.	10.	16.	7.	7.	6.
101	11.	9.	12.	12.	6.	6.	10.	13.	10.	12.
111	10.	14.	14.	11.	8.	6.	10.	11.	13.	14.
121	11.	20.	9.	13.	9.	4.	12.	13.	9.	15.
131	8.	12.	20.	5.	10.	14.	19.	8.	14.	14.
141	12.	15.	14.	12.	16.	16.	14.	13.	15.	18.
151	20.	17.	13.	26.	17.	12.	23.	25.	19.	21.
161	25.	17.	21.	16.	25.	28.	24.	30.	30.	24.
171	28.	30.	35.	21.	26.	28.	26.	31.	42.	29.
181	30.	40.	37.	29.	39.	41.	37.	46.	33.	34.
191	43.	41.	43.	44.	46.	41.	44.	43.	47.	54.
201	62.	57.	58.	66.	53.	57.	78.	84.	73.	75.
211	73.	83.	75.	81.	90.	74.	94.	123.	68.	91.
221	63.	86.	120.	109.	124.	124.	142.	128.	135.	140.
231	146.	167.	188.	183.	162.	174.	199.	211.	180.	220.
241	215.	262.	261.	268.	273.	304.	232.	302.	287.	323.
251	301.	317.	273.	291.	271.	219.	195.	184.	151.	144.
261	116.	114.	75.	69.	80.	78.	71.	71.	70.	75.
271	62.	65.	67.	66.	77.	65.	65.	76.	94.	84.
281	85.	102.	93.	116.	106.	110.	133.	120.	132.	151.
291	127.	149.	151.	177.	142.	143.	153.	156.	152.	129.
301	124.	107.	119.	90.	74.	69.	52.	36.	38.	34.
311	24.	25.	5.	6.	7.	5.	5.	0.	6.	1.
321	1.	1.	1.	0.	0.	0.	0.	0.	0.	1.
331	0.	1.	1.	0.	0.	0.	1.	0.	0.	1.
341	1.	0.	0.	0.	1.	0.	0.	0.	1.	0.
351	0.	0.	2.	0.	2.	2.	2.	0.	3.	1.
361	0.	0.	0.	1.	0.	0.	1.	4.	0.	1.
371	1.	1.	1.	1.	0.	0.	1.	0.	0.	0.
381	0.	0.	0.	0.	0.	1.	0.	1.	1.	0.
391	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.
411	0.	0.	0.	0.	2.	1.	1.	0.	1.	0.
421	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.
431	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	1.	1.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T016-DUP-AM
File ID: 7a7643.CNF

Counted on: 1/14/ 0 @ 3:17
Detector: AEA7
Geometry number: 1
Count time: 28803. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	201.2	201.2	299.115	299.115	14.000	7.580	7.000	1.159
2	335.0	335.0	253.422	253.327	14.000	5.688	7.000	0.832
3	14.3	14.3	142.403	142.158	140.000	1.000	70.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate	%err @95	d/m	Activity uCi/ea
1	Am241	0.337	5.479	5.473	0.0060	0.03	12.92	2.5	57.8	0.260E-04
	Pu238		5.487	5.473	0.014				75.5	0.340E-04
2	Am243	0.562	5.266	5.262	0.0040	0.03	21.54	2.0	91.5	0.412E-04
3	U 234	0.029	4.759	4.751	0.0080	0.00	1.13	9.4	4.7	0.214E-05
	Np237		4.769	4.751	0.018				5.5	0.246E-05
Totals:		0.929	<--valid peaks only-->				35.59			

DETECTOR CALIBRATION

Energy(MEV) = 4.097 + (0.0046)*Channel
Energy range (MeV): 4.097 TO 6.452
Efficiency = 0.2378 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	18391.0	100.000
Smoothed	18391.0	100.000
Composite fit	17084.4	92.896
Residuals	1306.6	7.104

Analyzed by: _____

SLH2

Spectrum 7a7643.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 2673.7

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Raw Data Dump for AEA Spectrum: 7a7643.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	7.	3.	2.
21	4.	7.	7.	3.	5.	3.	2.	7.	3.	8.
31	4.	3.	8.	4.	1.	6.	4.	6.	6.	1.
41	2.	4.	2.	2.	2.	6.	5.	5.	6.	6.
51	6.	3.	7.	3.	5.	3.	2.	3.	5.	7.
61	4.	5.	6.	0.	3.	4.	5.	4.	5.	3.
71	4.	10.	3.	8.	10.	8.	3.	4.	3.	6.
81	5.	3.	8.	4.	5.	9.	5.	5.	4.	6.
91	9.	3.	8.	8.	8.	8.	6.	5.	6.	2.
101	11.	12.	11.	4.	5.	6.	8.	8.	8.	6.
111	14.	7.	10.	9.	11.	15.	15.	12.	10.	13.
121	9.	13.	10.	8.	11.	12.	15.	6.	12.	7.
131	8.	19.	18.	11.	10.	15.	21.	15.	20.	15.
141	15.	20.	22.	17.	16.	11.	14.	11.	15.	14.
151	23.	17.	23.	10.	19.	21.	22.	20.	16.	16.
161	18.	25.	27.	18.	24.	23.	28.	16.	29.	27.
171	30.	22.	31.	29.	26.	33.	27.	30.	30.	34.
181	24.	28.	33.	28.	31.	39.	46.	37.	38.	41.
191	38.	46.	53.	39.	50.	56.	53.	54.	45.	58.
201	52.	58.	77.	72.	59.	64.	58.	84.	71.	75.
211	75.	68.	76.	86.	86.	87.	108.	93.	89.	96.
221	119.	97.	114.	116.	116.	128.	131.	167.	135.	139.
231	144.	153.	173.	190.	174.	202.	195.	203.	224.	228.
241	224.	236.	265.	256.	291.	283.	299.	280.	312.	322.
251	334.	342.	414.	386.	375.	334.	260.	157.	128.	87.
261	73.	79.	51.	81.	67.	82.	76.	76.	70.	82.
271	78.	73.	93.	80.	76.	78.	71.	86.	95.	98.
281	116.	80.	112.	103.	122.	117.	146.	146.	119.	153.
291	150.	159.	165.	159.	155.	203.	190.	215.	218.	208.
301	206.	176.	147.	94.	67.	49.	31.	32.	26.	12.
311	20.	14.	7.	9.	7.	3.	1.	0.	0.	0.
321	0.	1.	1.	0.	0.	0.	1.	1.	0.	2.
331	0.	1.	2.	0.	1.	0.	0.	0.	0.	0.
341	0.	0.	2.	0.	1.	1.	3.	1.	2.	1.
351	2.	0.	1.	2.	1.	1.	1.	4.	0.	1.
361	1.	1.	1.	0.	2.	2.	0.	1.	1.	0.
371	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.
411	0.	1.	1.	0.	0.	0.	0.	0.	1.	0.
421	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.
431	0.	0.	1.	0.	0.	0.	1.	0.	0.	0.
441	1.	0.	0.	0.	0.	0.	0.	1.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
471	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
481	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T017-SAM-AM
 File ID: 8a8632.CNF

Counted on: 1/14/ 0 @ 3:17
 Detector: AEA8
 Geometry number: 1
 Count time: 28803. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	351.0	351.0	301.805	301.805	12.000	5.348	6.000	1.314
2	508.3	508.3	255.785	255.747	10.000	4.302	5.000	1.078

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.363	5.479 5.477 0.002	20.02	15.29	2.3	75.4	0.340E-04
	Pu238		5.487 5.477 0.010				98.5	0.444E-04
2	Am243	0.502	5.266 5.265 0.001	10.02	21.12	2.0	98.9	0.446E-04
Totals:		0.865	<--valid peaks only-->		36.41			

DETECTOR CALIBRATION

Energy (MEV) = 4.089 + (0.0046)*Channel
 Energy range (MeV): 4.089 TO 6.444
 Efficiency = 0.2156 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	20215.0	100.000
Smoothed	20215.0	100.000
Composite fit	17478.3	86.462
Residuals	2736.7	13.538

Analyzed by: _____

SLH2

Raw Data Dump for AEA Spectrum: 8a8632.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	4.	2.	2.	1.
21	2.	2.	3.	1.	2.	3.	0.	0.	2.	3.
31	2.	2.	1.	0.	1.	1.	1.	1.	1.	1.
41	2.	2.	5.	1.	5.	4.	2.	2.	3.	5.
51	0.	2.	3.	3.	1.	3.	3.	2.	5.	4.
61	2.	2.	2.	2.	4.	3.	5.	4.	4.	6.
71	7.	4.	4.	5.	5.	4.	2.	5.	3.	2.
81	4.	3.	4.	3.	6.	4.	5.	5.	9.	5.
91	3.	1.	2.	2.	7.	3.	7.	3.	6.	4.
101	1.	2.	2.	5.	4.	8.	4.	4.	6.	4.
111	3.	7.	6.	6.	5.	7.	6.	7.	5.	5.
121	5.	3.	5.	3.	4.	6.	4.	10.	10.	5.
131	14.	5.	3.	7.	10.	9.	6.	4.	8.	9.
141	9.	7.	9.	8.	5.	5.	9.	12.	12.	9.
151	6.	12.	8.	7.	14.	13.	16.	5.	12.	17.
161	16.	18.	21.	13.	12.	11.	22.	17.	10.	16.
171	12.	24.	22.	29.	19.	17.	18.	21.	19.	21.
181	18.	21.	21.	22.	26.	25.	26.	27.	23.	31.
191	34.	31.	23.	26.	28.	26.	36.	38.	37.	51.
201	44.	45.	34.	33.	57.	56.	46.	51.	49.	55.
211	50.	43.	79.	67.	55.	53.	66.	69.	76.	77.
221	92.	94.	79.	95.	85.	102.	107.	96.	124.	124.
231	138.	137.	151.	154.	165.	139.	184.	184.	181.	205.
241	216.	215.	237.	294.	256.	317.	274.	343.	317.	316.
251	343.	393.	425.	476.	572.	630.	566.	496.	280.	161.
261	102.	99.	90.	98.	71.	85.	81.	92.	75.	72.
271	88.	87.	85.	69.	68.	83.	73.	103.	105.	92.
281	105.	100.	111.	107.	121.	131.	148.	127.	157.	191.
291	182.	195.	212.	215.	205.	253.	264.	272.	284.	330.
301	341.	424.	389.	304.	225.	133.	83.	87.	53.	58.
311	43.	34.	32.	20.	12.	5.	3.	2.	0.	1.
321	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.
331	0.	0.	1.	1.	2.	1.	0.	0.	0.	0.
341	1.	1.	0.	1.	2.	0.	1.	1.	1.	2.
351	0.	3.	0.	0.	0.	0.	1.	2.	0.	1.
361	1.	2.	1.	3.	2.	1.	1.	2.	0.	3.
371	2.	0.	1.	1.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	1.	0.	1.
391	0.	0.	0.	1.	0.	0.	0.	0.	0.	1.
401	0.	0.	1.	0.	1.	0.	0.	1.	0.	0.
411	0.	0.	1.	0.	1.	1.	0.	0.	0.	0.
421	1.	0.	1.	0.	0.	0.	0.	0.	1.	0.
431	2.	2.	0.	0.	1.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
451	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T017-DUP-AM
 File ID: 9a9403.CNF

Counted on: 1/14/ 0 @ 3:18
 Detector: AEA9
 Geometry number: 1
 Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	319.1	319.1	300.112	300.112	12.000	5.032	6.000	1.287
2	551.1	551.1	253.522	253.495	10.000	4.713	5.000	1.323
3	11.1	11.1	157.206	156.941	146.000	1.000	73.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.338	5.479	5.476	0.0030.02	13.40	2.4	61.9	0.279E-04	
	Pu238		5.487	5.476	0.011			80.9	0.364E-04	
2	Am243	0.542	5.266	5.261	0.0050.02	21.52	2.0	94.5	0.426E-04	
3	Ra226	0.022	4.782	4.817	-.0350.00	0.88	9.6	4.0	0.181E-05	

Totals:		0.902	<--valid peaks only-->				35.80			

DETECTOR CALIBRATION

Energy (MEV) = 4.095 + (0.0046)*Channel
 Energy range (MeV): 4.095 TO 6.450
 Efficiency = 0.2301 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	19046.0	100.000
Smoothed	19046.0	100.000
Composite fit	17183.9	90.223
Residuals	1862.1	9.777

Analyzed by: _____

SLH2

Spectrum 9a9403.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3915.8

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Raw Data Dump for AEA Spectrum: 9a9403.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	1.	1.	1.	0.	1.	2.
21	2.	1.	1.	1.	0.	1.	0.	2.	1.	0.
31	1.	1.	2.	1.	3.	2.	0.	1.	3.	2.
41	1.	0.	0.	2.	1.	0.	2.	2.	1.	1.
51	1.	2.	0.	2.	1.	3.	2.	2.	0.	2.
61	2.	2.	2.	0.	1.	2.	2.	3.	6.	4.
71	1.	3.	1.	3.	1.	3.	2.	1.	1.	0.
81	0.	3.	2.	1.	2.	2.	0.	1.	1.	3.
91	2.	4.	3.	1.	3.	4.	1.	2.	5.	4.
101	3.	1.	4.	2.	1.	2.	1.	3.	10.	4.
111	2.	3.	3.	5.	7.	6.	1.	0.	7.	5.
121	3.	5.	4.	3.	5.	6.	2.	6.	4.	1.
131	5.	7.	6.	9.	5.	6.	3.	1.	3.	10.
141	4.	4.	8.	3.	4.	12.	9.	3.	5.	4.
151	10.	9.	10.	10.	12.	9.	11.	10.	11.	8.
161	10.	11.	3.	14.	8.	10.	13.	13.	15.	20.
171	13.	16.	19.	14.	13.	15.	7.	20.	18.	18.
181	18.	20.	17.	9.	19.	20.	21.	20.	20.	27.
191	21.	17.	14.	21.	24.	33.	26.	27.	28.	27.
201	30.	31.	34.	42.	42.	29.	38.	44.	64.	42.
211	52.	71.	63.	45.	48.	68.	64.	63.	75.	62.
221	86.	85.	85.	91.	98.	103.	117.	129.	133.	104.
231	126.	146.	171.	146.	171.	147.	189.	214.	185.	212.
241	233.	274.	260.	316.	299.	366.	342.	377.	414.	425.
251	476.	580.	638.	635.	638.	468.	313.	183.	109.	98.
261	90.	80.	73.	53.	62.	84.	81.	58.	48.	74.
271	49.	64.	66.	62.	79.	72.	72.	81.	92.	85.
281	94.	106.	99.	108.	136.	127.	132.	154.	156.	151.
291	176.	217.	192.	212.	237.	248.	271.	288.	324.	357.
301	370.	343.	200.	105.	100.	69.	39.	47.	42.	37.
311	30.	28.	13.	9.	5.	2.	1.	0.	0.	0.
321	1.	1.	0.	0.	0.	1.	0.	0.	1.	0.
331	0.	1.	0.	0.	0.	1.	0.	0.	1.	0.
341	2.	0.	1.	0.	1.	0.	0.	2.	0.	1.
351	0.	1.	1.	1.	4.	0.	1.	0.	0.	2.
361	1.	1.	1.	0.	0.	1.	1.	0.	1.	3.
371	3.	0.	0.	1.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
421	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
431	1.	1.	0.	0.	0.	1.	1.	1.	0.	1.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T021-SAM-AM
File ID: 10a1046.CNF

Counted on: 1/14/ 0 @ 2:18
Detector: AEA10
Geometry number: 1
Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	552.3	552.3	301.060	301.060	14.000	6.048	7.000	1.311
2	511.8	511.8	255.171	255.094	12.000	4.981	6.000	1.123
3	11.5	11.5	155.074	154.937	170.000	1.000	85.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate	%err c/m @95	d/m	Activity uCi/ea
1	Am241	0.492	5.479	5.469	0.010	0.03	26.73	1.7	126.7	0.571E-04
	Pu238		5.487	5.469	0.018				165.4	0.745E-04
2	Am243	0.430	5.266	5.258	0.008	0.02	23.40	2.0	105.3	0.474E-04
3	Ra226	0.017	4.782	4.797	-.015	0.00	0.91	9.6	4.3	0.193E-05
	Np237		4.769	4.797	-.028				4.7	0.211E-05
Totals:		0.939	<--valid peaks only-->				51.04			

DETECTOR CALIBRATION

Energy (MEV) = 4.084 + (0.0046)*Channel
Energy range (MeV): 4.084 TO 6.440
Efficiency = 0.2244 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	26098.0	100.000
Smoothed	26098.0	100.000
Composite fit	24503.1	93.889
Residuals	1594.9	6.111

Analyzed by: _____

SLH2

Spectrum 10a1046.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3921.6

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Raw Data Dump for AEA Spectrum: 10a1046.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	2.	1.	4.	0.	2.	0.
21	1.	2.	0.	0.	1.	1.	2.	0.	1.	1.
31	3.	1.	2.	1.	2.	0.	0.	3.	0.	3.
41	1.	6.	2.	1.	0.	0.	0.	1.	1.	2.
51	1.	3.	2.	1.	0.	2.	4.	1.	2.	1.
61	2.	1.	2.	3.	3.	4.	1.	3.	3.	3.
71	3.	1.	3.	2.	2.	4.	2.	3.	1.	3.
81	1.	3.	1.	1.	3.	1.	5.	2.	1.	2.
91	4.	2.	0.	4.	2.	5.	5.	3.	5.	4.
101	5.	3.	2.	4.	2.	2.	5.	3.	1.	8.
111	7.	4.	4.	3.	5.	6.	6.	4.	3.	7.
121	5.	3.	7.	5.	4.	7.	6.	7.	9.	4.
131	5.	9.	1.	3.	5.	9.	11.	8.	4.	6.
141	12.	8.	4.	5.	12.	8.	8.	9.	9.	11.
151	8.	12.	10.	11.	16.	14.	10.	10.	5.	11.
161	17.	14.	9.	12.	11.	11.	14.	11.	19.	13.
171	11.	10.	10.	18.	21.	21.	10.	20.	18.	16.
181	21.	10.	21.	21.	24.	10.	21.	17.	20.	30.
191	33.	26.	32.	35.	38.	30.	33.	33.	34.	43.
201	40.	38.	36.	49.	41.	35.	54.	59.	58.	70.
211	67.	45.	73.	75.	77.	59.	62.	83.	85.	101.
221	90.	103.	98.	96.	113.	108.	135.	112.	135.	145.
231	146.	163.	156.	191.	168.	193.	194.	224.	233.	216.
241	240.	236.	283.	292.	336.	316.	352.	325.	368.	440.
251	451.	477.	494.	576.	610.	613.	563.	430.	299.	168.
261	147.	121.	108.	102.	110.	113.	108.	146.	123.	118.
271	135.	116.	121.	132.	114.	140.	136.	145.	153.	169.
281	186.	209.	184.	212.	222.	227.	269.	283.	287.	286.
291	331.	369.	396.	403.	417.	463.	397.	494.	505.	547.
301	620.	636.	518.	418.	301.	190.	120.	111.	86.	77.
311	60.	41.	36.	28.	12.	18.	8.	5.	1.	0.
321	0.	0.	0.	0.	1.	0.	2.	0.	0.	0.
331	0.	1.	0.	0.	0.	0.	0.	1.	1.	0.
341	1.	0.	0.	1.	1.	1.	0.	2.	2.	2.
351	0.	0.	2.	0.	1.	2.	3.	0.	1.	2.
361	1.	1.	2.	3.	2.	2.	5.	6.	4.	5.
371	3.	2.	4.	1.	0.	0.	0.	0.	0.	0.
381	0.	0.	1.	0.	0.	0.	1.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
401	1.	0.	1.	0.	0.	1.	0.	1.	0.	0.
411	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.
421	0.	0.	0.	0.	1.	1.	0.	0.	1.	2.
431	2.	1.	0.	0.	0.	0.	0.	1.	3.	0.
441	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	1.	1.	0.	0.	1.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T021-DUP-AM
 File ID: 11a1108.CNF

Counted on: 1/14/ 0 @ 2:19
 Detector: AEA11
 Geometry number: 1
 Count time: 28805. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	304.6	304.6	299.309	299.309	12.000	11.378	6.000	1.347
2	239.4	239.4	254.238	254.695	12.000	5.743	6.000	0.447
3?	5.3	5.3	72.244	71.048	12.000	10.132	6.000	2.263
4?	3.7	3.7	35.751	32.771	10.000	36.427	5.000	20.987

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate	%err @95	d/m	Activity uCi/ea
1	Pu238	0.513	5.487	5.463	0.024	0.05	24.95	1.8	148.4	0.668E-04
	Am241		5.479	5.463	0.016				113.6	0.512E-04
2	Am243	0.537	5.266	5.258	0.008	0.03	26.08	2.0	112.8	0.508E-04
3		????		4.413			0.27	30.7		
4		????		4.237			0.22	34.2		

Totals:		1.050	<--valid peaks only-->				51.03			

DETECTOR CALIBRATION

Energy (MEV) = 4.087 + (0.0046)*Channel
 Energy range (MeV): 4.087 TO 6.442
 Efficiency = 0.2336 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	23332.0	100.000
Smoothed	23332.0	100.000
Composite fit	24737.6	106.024
Residuals	-1405.6	-6.024

Analyzed by: _____

SLH2

Display Max.: 2337.8

1782

Raw Data Dump for AEA Spectrum: 11a1108.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	2.	6.	3.	5.	2.	5.
21	7.	3.	4.	4.	8.	4.	4.	3.	4.	2.
31	6.	7.	7.	8.	5.	3.	4.	4.	7.	6.
41	3.	7.	5.	9.	10.	7.	7.	3.	7.	5.
51	2.	2.	8.	5.	9.	7.	5.	6.	8.	7.
61	7.	6.	6.	8.	8.	8.	7.	8.	8.	15.
71	7.	10.	12.	9.	6.	6.	8.	7.	5.	8.
81	4.	15.	6.	9.	14.	10.	4.	11.	11.	1.
91	5.	9.	9.	8.	12.	7.	8.	15.	8.	13.
101	8.	11.	18.	11.	12.	14.	7.	11.	9.	9.
111	13.	11.	17.	15.	11.	16.	6.	9.	18.	19.
121	10.	13.	14.	16.	11.	16.	13.	21.	14.	15.
131	20.	18.	12.	15.	17.	15.	15.	16.	14.	27.
141	15.	18.	22.	17.	20.	21.	29.	36.	24.	28.
151	23.	22.	19.	31.	22.	26.	29.	22.	30.	28.
161	19.	20.	34.	38.	25.	37.	15.	26.	34.	44.
171	24.	40.	29.	24.	35.	36.	41.	40.	41.	33.
181	38.	44.	44.	43.	51.	43.	39.	71.	44.	56.
191	55.	66.	51.	50.	64.	64.	64.	64.	70.	64.
201	64.	75.	73.	78.	85.	78.	72.	80.	69.	83.
211	86.	109.	104.	115.	115.	88.	121.	123.	103.	126.
221	119.	103.	133.	158.	122.	146.	171.	140.	152.	153.
231	190.	146.	187.	194.	184.	220.	201.	219.	248.	234.
241	264.	272.	269.	251.	254.	242.	262.	287.	296.	278.
251	273.	301.	295.	289.	336.	337.	313.	261.	208.	155.
261	116.	111.	136.	134.	125.	116.	128.	119.	121.	146.
271	133.	143.	137.	159.	122.	127.	174.	167.	177.	188.
281	184.	200.	187.	196.	220.	225.	222.	235.	239.	236.
291	251.	259.	259.	282.	244.	267.	269.	280.	273.	272.
301	283.	337.	303.	182.	146.	81.	67.	55.	45.	43.
311	32.	23.	23.	10.	11.	1.	2.	0.	0.	0.
321	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
331	0.	1.	0.	0.	0.	0.	0.	1.	1.	1.
341	0.	0.	1.	0.	0.	0.	2.	2.	0.	0.
351	0.	1.	0.	0.	5.	2.	0.	3.	1.	0.
361	2.	1.	1.	2.	2.	0.	3.	0.	1.	4.
371	2.	4.	2.	0.	0.	2.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	1.	0.	1.
391	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	1.	0.	0.	1.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	1.	0.	0.	0.	0.	1.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T022-SAM-AM
File ID: 12a1275.CNF

Counted on: 1/14/ 0 @ 2:20
Detector: AEA12
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	428.2	428.2	299.470	299.470	12.000	6.280	6.000	1.429
2	464.2	464.2	253.697	253.625	12.000	5.186	6.000	1.172
3	19.8	19.8	161.705	161.546	152.000	1.000	76.000	0.100
4	7.4	7.4	115.873	115.662	8.000	2.526	4.000	0.354

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			Count Rate	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.				
1	Am241	0.419	5.479	5.462	0.0170.03	20.17	2.0	101.4	0.457E-04
	Pu238		5.487	5.462	0.025			132.4	0.596E-04
2	Am243	0.443	5.266	5.251	0.0150.02	21.32	2.0	101.8	0.459E-04
3	Th229	0.033	4.842	4.828	0.0140.00	1.57	7.3	12.8	0.577E-05
4	????			4.616		0.45	19.7		
Totals:		0.894	<--valid peaks only-->			43.07			

DETECTOR CALIBRATION

Energy (MEV) = 4.084 + (0.0046)*Channel
Energy range (MeV): 4.084 TO 6.440
Efficiency = 0.2116 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	23131.0	100.000
Smoothed	23131.0	100.000
Composite fit	20893.8	90.328
Residuals	2237.2	9.672

Analyzed by: _____

SLH2

Spectrum 12a1275.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3452.8

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Raw Data Dump for AEA Spectrum: 12a1275.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	1.	2.	2.	5.	2.
21	2.	4.	4.	3.	4.	1.	1.	3.	2.	2.
31	4.	7.	3.	6.	7.	2.	7.	0.	5.	4.
41	5.	7.	3.	3.	0.	1.	1.	0.	6.	4.
51	2.	6.	5.	6.	3.	4.	3.	4.	6.	3.
61	4.	4.	9.	6.	3.	3.	5.	6.	3.	7.
71	4.	11.	6.	7.	6.	5.	4.	5.	3.	5.
81	6.	9.	4.	9.	7.	3.	9.	3.	5.	8.
91	5.	8.	7.	16.	7.	6.	6.	8.	11.	10.
101	11.	9.	8.	1.	9.	9.	12.	10.	12.	12.
111	11.	11.	6.	11.	11.	18.	13.	11.	8.	4.
121	8.	13.	4.	9.	8.	12.	13.	14.	10.	11.
131	12.	10.	12.	12.	6.	16.	13.	15.	11.	10.
141	15.	13.	13.	8.	12.	17.	13.	21.	18.	14.
151	22.	13.	14.	16.	15.	22.	13.	20.	18.	20.
161	27.	18.	25.	16.	22.	14.	30.	15.	17.	19.
171	17.	23.	27.	24.	29.	28.	30.	29.	28.	25.
181	29.	29.	40.	34.	24.	26.	42.	30.	29.	33.
191	35.	41.	40.	43.	42.	42.	49.	51.	50.	57.
201	48.	58.	61.	65.	50.	63.	57.	75.	60.	73.
211	68.	66.	75.	73.	66.	89.	85.	96.	82.	72.
221	100.	93.	96.	107.	112.	108.	114.	124.	116.	158.
231	153.	150.	180.	181.	179.	174.	188.	192.	207.	234.
241	214.	224.	264.	257.	320.	319.	336.	351.	344.	385.
251	444.	489.	515.	549.	545.	454.	316.	189.	130.	120.
261	112.	93.	98.	82.	96.	92.	118.	98.	107.	104.
271	83.	98.	109.	103.	107.	107.	127.	132.	140.	156.
281	155.	161.	166.	159.	173.	199.	219.	228.	230.	250.
291	281.	295.	300.	318.	306.	351.	403.	445.	437.	494.
301	443.	384.	280.	160.	115.	108.	82.	68.	51.	41.
311	36.	24.	16.	9.	2.	2.	1.	0.	0.	0.
321	0.	0.	0.	1.	0.	1.	0.	0.	3.	3.
331	0.	1.	1.	0.	0.	0.	0.	1.	2.	2.
341	0.	0.	2.	2.	0.	1.	0.	1.	1.	2.
351	2.	0.	2.	4.	0.	1.	1.	1.	2.	3.
361	3.	1.	5.	4.	1.	1.	2.	4.	3.	1.
371	4.	1.	1.	0.	0.	0.	0.	1.	0.	0.
381	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.
401	1.	0.	0.	0.	0.	0.	0.	1.	0.	1.
411	1.	1.	0.	0.	1.	1.	2.	1.	1.	0.
421	0.	0.	1.	0.	1.	1.	0.	0.	0.	0.
431	0.	0.	1.	0.	0.	0.	1.	0.	1.	0.
441	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T022-DUP-AM
 File ID: 13a1361.CNF

Counted on: 1/14/ 0 @ 2:20
 Detector: AEA13
 Geometry number: 1
 Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	335.9	335.9	300.585	300.585	14.000	7.949	7.000	0.866
2	264.3	264.3	254.952	254.542	16.000	6.579	8.000	0.633

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Pu238	0.527	5.487 5.467 0.02	0.04	28.27	1.7	158.4	0.713E-04
	Am241		5.479 5.467 0.012				121.3	0.546E-04
2	Am243	0.452	5.266 5.255 0.011	0.03	24.25	2.1	98.8	0.445E-04
Totals:		0.979	<--valid peaks only-->		52.52			

DETECTOR CALIBRATION

Energy (MEV) = 4.084 + (0.0046)*Channel
 Energy range (MeV): 4.084 TO 6.439
 Efficiency = 0.2479 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	25742.0	100.000
Smoothed	25742.0	100.000
Composite fit	25213.4	97.947
Residuals	528.6	2.053

Analyzed by: _____

SLH2

2655.5

1788

Raw Data Dump for AEA Spectrum: 13a1361.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	1.	5.	7.	4.	2.
21	7.	4.	6.	8.	5.	4.	6.	4.	7.
31	1.	2.	5.	9.	5.	4.	7.	6.	2.
41	9.	4.	6.	4.	5.	6.	7.	7.	9.
51	12.	5.	8.	6.	7.	7.	7.	8.	4.
61	8.	7.	9.	4.	6.	11.	9.	8.	7.
71	7.	9.	8.	7.	11.	6.	8.	9.	5.
81	9.	6.	9.	10.	6.	9.	8.	10.	10.
91	9.	11.	10.	10.	14.	7.	8.	10.	10.
101	9.	20.	12.	13.	8.	12.	13.	15.	15.
111	11.	7.	15.	16.	17.	24.	7.	17.	14.
121	14.	13.	15.	19.	13.	11.	14.	11.	22.
131	16.	18.	16.	18.	20.	15.	20.	16.	23.
141	13.	18.	17.	29.	28.	21.	24.	23.	20.
151	24.	21.	21.	23.	25.	21.	26.	26.	34.
161	29.	34.	33.	27.	27.	27.	41.	34.	28.
171	33.	33.	31.	40.	25.	38.	34.	40.	41.
181	47.	41.	49.	57.	42.	57.	68.	57.	55.
191	60.	51.	61.	57.	68.	65.	65.	62.	80.
201	61.	81.	90.	62.	81.	74.	89.	85.	82.
211	87.	101.	108.	99.	111.	120.	103.	118.	120.
221	133.	140.	139.	160.	170.	168.	169.	159.	188.
231	198.	181.	183.	228.	204.	199.	222.	235.	231.
241	241.	283.	277.	269.	324.	300.	320.	344.	296.
251	328.	312.	340.	370.	364.	361.	361.	300.	288.
261	140.	135.	129.	143.	130.	129.	140.	123.	130.
271	165.	139.	153.	133.	167.	159.	168.	161.	191.
281	186.	229.	179.	217.	223.	221.	244.	222.	260.
291	305.	286.	283.	301.	301.	294.	303.	320.	327.
301	366.	338.	329.	283.	193.	119.	89.	77.	65.
311	46.	33.	32.	14.	11.	11.	2.	4.	0.
321	0.	0.	1.	3.	1.	0.	0.	1.	0.
331	0.	2.	0.	2.	0.	0.	0.	0.	0.
341	1.	1.	0.	1.	0.	3.	1.	0.	2.
351	3.	1.	3.	2.	1.	0.	0.	0.	2.
361	2.	2.	0.	2.	1.	2.	1.	3.	3.
371	3.	0.	1.	5.	0.	1.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	1.	0.	0.	1.	0.	1.	0.	0.	1.
411	0.	1.	0.	0.	0.	2.	0.	0.	0.
421	0.	1.	1.	0.	1.	2.	0.	1.	0.
431	1.	1.	1.	1.	0.	1.	0.	1.	1.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	1.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.							

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T023-SAM-AM
 File ID: 14a1447.CNF

Counted on: 1/14/ 0 @ 2:21
 Detector: AEA14
 Geometry number: 1
 Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	684.9	684.9	300.165	300.165	14.000	6.020	7.000	2.183
2	771.7	771.7	254.269	254.253	12.000	4.357	6.000	1.650

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.466	5.479 5.472 0.007	0.03	24.14	1.8	108.9	0.490E-04
	Pu238		5.487 5.472 0.015				142.2	0.640E-04
2	Am243	0.476	5.266 5.261 0.005	0.02	24.69	1.8	105.8	0.476E-04
Totals:		0.942	<--valid peaks only-->		48.83			

DETECTOR CALIBRATION

Energy (MEV) = 4.091 + (0.0046)*Channel
 Energy range (MeV): 4.091 TO 6.446
 Efficiency = 0.2358 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	24881.0	100.000
Smoothed	24881.0	100.000
Composite fit	23437.2	94.197
Residuals	1443.8	5.803

Analyzed by: _____

SLH2

Spectrum 14a1447.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 5184.2

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Raw Data Dump for AEA Spectrum: 14a1447.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
21	0.	1.	2.	1.	0.	1.	1.	0.	1.	3.
31	3.	2.	0.	0.	0.	1.	0.	0.	4.	2.
41	0.	0.	0.	0.	1.	2.	3.	0.	2.	0.
51	1.	0.	0.	0.	1.	1.	0.	1.	3.	3.
61	1.	3.	3.	0.	0.	0.	1.	2.	4.	0.
71	1.	0.	1.	0.	1.	4.	2.	3.	2.	0.
81	1.	1.	2.	0.	1.	2.	2.	2.	2.	0.
91	0.	0.	2.	2.	1.	1.	3.	2.	1.	2.
101	1.	0.	1.	1.	0.	1.	1.	0.	2.	2.
111	4.	5.	1.	3.	5.	2.	1.	2.	0.	0.
121	2.	3.	0.	1.	0.	1.	2.	1.	1.	0.
131	3.	2.	2.	1.	0.	2.	3.	5.	1.	1.
141	2.	2.	1.	1.	2.	5.	5.	1.	1.	3.
151	3.	2.	2.	4.	2.	4.	3.	2.	2.	4.
161	1.	2.	5.	3.	3.	2.	4.	4.	5.	4.
171	3.	5.	3.	6.	8.	4.	4.	6.	5.	6.
181	7.	2.	2.	4.	5.	9.	6.	2.	11.	8.
191	6.	5.	11.	4.	12.	13.	11.	12.	11.	12.
201	15.	13.	11.	14.	18.	19.	18.	29.	27.	25.
211	25.	30.	36.	40.	27.	36.	33.	48.	39.	40.
221	43.	43.	59.	45.	47.	69.	74.	88.	92.	90.
231	64.	99.	111.	138.	122.	162.	159.	182.	180.	196.
241	228.	242.	266.	332.	340.	395.	413.	449.	446.	563.
251	608.	768.	727.	930.	894.	825.	558.	323.	179.	166.
261	103.	86.	72.	72.	73.	87.	79.	75.	94.	64.
271	62.	51.	62.	65.	71.	67.	82.	84.	103.	111.
281	116.	146.	158.	165.	167.	188.	248.	247.	274.	272.
291	339.	356.	371.	402.	479.	502.	563.	605.	761.	778.
301	798.	682.	490.	354.	242.	167.	148.	135.	105.	85.
311	68.	48.	30.	19.	12.	8.	2.	0.	1.	0.
321	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.
331	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
341	0.	0.	0.	0.	2.	0.	1.	3.	0.	0.
351	1.	2.	0.	0.	1.	2.	5.	2.	3.	3.
361	3.	3.	3.	0.	1.	4.	0.	4.	3.	3.
371	4.	2.	1.	1.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
411	1.	0.	0.	0.	0.	1.	1.	0.	2.	0.
421	1.	1.	1.	0.	0.	0.	0.	1.	0.	0.
431	0.	0.	0.	2.	3.	4.	1.	1.	1.	1.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T023-DUP-AM
 File ID: 15a1506.CNF

Counted on: 1/14/ 0 @ 2:22
 Detector: AEA15
 Geometry number: 1
 Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	462.1	462.1	302.229	302.229	14.000	5.957	7.000	1.347
2	532.2	532.2	256.106	256.050	12.000	5.419	6.000	1.264
3	11.1	11.1	155.251	155.106	152.000	1.000	76.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid	Count	%err	Activity
			Exp. Obs. Diff. FWHM	Rate	c/m	uCi/ea
1	Am241	0.435	5.479 5.469 0.0100.03	21.68	1.9	0.440E-04
	Pu238		5.487 5.469 0.018			0.575E-04
2	Am243	0.483	5.266 5.256 0.0100.02	24.07	1.9	0.464E-04
3	Ra226	0.018	4.782 4.792 -.0100.00	0.88	9.8	0.177E-05
	Np237		4.769 4.792 -.023			0.194E-05

Totals:		0.937	<--valid peaks only-->		46.62	

DETECTOR CALIBRATION

Energy(MEV) = 4.078 + (0.0046)*Channel
 Energy range (MeV): 4.078 TO 6.434
 Efficiency = 0.2358 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	23898.0	100.000
Smoothed	23898.0	100.000
Composite fit	22383.4	93.662
Residuals	1514.6	6.338

Analyzed by: _____

SLH2

Spectrum 15a1506.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3606.2

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.1.....2.
..1.....2..
...1.....2...
..2....1.....
.....1..
.....1
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.....1
1...

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Raw Data Dump for AEA Spectrum: 15a1506.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	1.	3.	2.	4.	2.	3.
21	2.	5.	2.	4.	0.	3.	2.	3.	1.	2.
31	0.	1.	0.	4.	3.	1.	1.	4.	1.	0.
41	2.	2.	1.	6.	1.	3.	0.	1.	3.	3.
51	3.	3.	1.	2.	5.	5.	2.	5.	5.	1.
61	7.	2.	0.	1.	2.	3.	1.	2.	4.	3.
71	6.	2.	0.	2.	6.	3.	7.	4.	1.	2.
81	2.	2.	3.	3.	2.	3.	2.	5.	3.	6.
91	1.	5.	1.	5.	4.	8.	3.	6.	2.	1.
101	3.	3.	6.	4.	3.	3.	1.	1.	3.	0.
111	1.	7.	4.	3.	4.	8.	2.	4.	4.	3.
121	2.	2.	5.	2.	2.	5.	8.	7.	6.	6.
131	7.	8.	8.	8.	4.	7.	2.	3.	6.	2.
141	5.	7.	13.	5.	9.	8.	5.	11.	8.	11.
151	13.	11.	10.	12.	12.	12.	13.	8.	11.	7.
161	5.	11.	13.	13.	19.	7.	12.	10.	17.	11.
171	18.	12.	8.	12.	16.	16.	17.	14.	24.	27.
181	22.	24.	19.	18.	24.	19.	16.	27.	20.	28.
191	25.	21.	29.	27.	34.	29.	20.	32.	36.	29.
201	38.	42.	32.	46.	40.	38.	49.	41.	46.	52.
211	48.	48.	60.	69.	52.	65.	59.	70.	67.	80.
221	90.	74.	86.	96.	90.	107.	98.	117.	141.	137.
231	131.	134.	166.	155.	153.	190.	200.	188.	207.	221.
241	238.	230.	231.	286.	299.	315.	338.	366.	397.	385.
251	414.	420.	453.	523.	616.	618.	627.	575.	427.	272.
261	206.	144.	125.	112.	99.	102.	106.	101.	94.	101.
271	90.	111.	102.	105.	104.	98.	118.	115.	126.	119.
281	143.	151.	166.	139.	165.	196.	191.	202.	229.	189.
291	276.	253.	292.	273.	318.	316.	363.	369.	373.	405.
301	492.	515.	530.	467.	371.	250.	179.	115.	88.	73.
311	57.	43.	41.	35.	25.	10.	7.	3.	5.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
331	0.	1.	0.	0.	0.	0.	0.	0.	0.	2.
341	1.	0.	3.	0.	1.	0.	1.	2.	2.	1.
351	3.	3.	1.	0.	2.	3.	1.	1.	0.	0.
361	1.	5.	1.	2.	0.	3.	0.	7.	0.	2.
371	6.	2.	1.	0.	0.	1.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	1.	0.	0.	0.	0.	1.	0.	0.
421	0.	0.	0.	0.	1.	0.	0.	0.	0.	1.
431	2.	0.	1.	1.	0.	2.	1.	0.	1.	1.
441	4.	0.	1.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

WORKBOOK PAGE: STD1

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ *had* *liberal* LIQUID

				STD
Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.406
STD	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.418
Work List	Sample D.F. (DF)	1	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.200	Total AT Counts	4291
Test Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	39.67
LIQUID	Detector Number	20	Am 243 cpm	40.93
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125	Standard Book No	46B57	AEA Count Time (min)	480
Rerun	Standard Value in $\mu\text{Ci/mL}$	1.070E-04	Am 241 $\mu\text{Ci/L}$ =	9.8879E-02
0			Cm 243/244 $\mu\text{Ci/L}$ =	< 1.5417E-02
Sample Prep				
N/A				
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
32135-STD	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
WC16101	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
Prepared By				
EMB				
Chemist				
JFR	Am 241 $\mu\text{Ci/mL}$ =	9.89E-05	DETECTION LEVELS in $\mu\text{Ci/mL}$	
Analyst	Relative Counting Error =	2.0%		
RRO				
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			Am 241
01/14/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 1.54E-05		1.54E-05
Analysis Date	Relative Counting Error =	100.0%		Cm 243/244
01/13/2000	Am 243 Tracer Recovery =	79.0%		1.54E-05
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00

STANDARD.WB1 REV 1.2

953103ML

1796

WORKBOOK PAGE: BLANK2

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ₄₀ _{6/24/00} LIQUID / SO BLNK-PREP

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0
BLNK-PREP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.834
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	951
Test Code	Digest Grams of Solids/L (Dg/L)	5.220	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0
SOLID	Detector Number	20	Am 243 cpm	17.7
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	< 8.5582E+00
0			Cm 243/244 $\mu\text{Ci/g}$ =	< 8.5582E+00
Sample Prep				
N/A				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
WL32135 BLNK-PREP	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
WC16101	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
Prepared By				
EMB				
Chemist	NOTE: Am-241 Result is a LESS THAN Value.			
JFR	Am241 $\mu\text{Ci/g}$ =	< 8.56E+00	DETECTION LEVELS in $\mu\text{Ci/g}$	
Analyst	Relative Counting Error =	100.0%		
RRO				
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 8.56E+00	Am 241	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	69.7%	8.56E+00	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00

BLANK.WB1 REV 1.2

953103ML

WORKBOOK PAGE: SAM3

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ₁₄₀ LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	SAMPLE
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.334
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0.57
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	0
Test Code	Digest Grams of Solids/L (Dg/L)	5.220	AT Count Time (min) (TC)	1760
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	30
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.1
SOLID	Detector Number	20	Am 243 cpm	12.9
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	21.99
20000125			Cm 243/244 cpm	0
Rerun			AEA Count Time (min)	480
1			Am 241 $\mu\text{Ci/g}$ =	5.8287E+01
Sample Prep			Cm 243/244 $\mu\text{Ci/g}$ =	< 9.8856E+00
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000015	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
WC16101	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
Prepared By				
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	5.83E+01	DETECTION	
Analyst	Relative Counting Error =	3.1%	LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 9.89E+00	9.89E+00	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	88.3%	9.89E+00	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	01/14/2000

SAMPLE.WB1 REV 1.2

953108ML

WORKBOOK PAGE: DUP4

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ^{3/10} _{10/10}

LIQUID / SO

DUP

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.346
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.571
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1790
Test Code	Digest Grams of Solids/L (Dg/L)	5.200	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	13.74
SOLID	Detector Number	20	Am 243 cpm	22.65
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	6.0507E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 9.7228E+00

Sample Prep	
FUSIONHC	
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]
S00T000015	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]
Instrument Code	
WC16101	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV
EMB	
Chemist	
JFR	Am241 $\mu\text{Ci/g}$ = 6.05E+01
Analyst	Relative Counting Error = 3.1%
RRO	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$ < 9.72E+00
Analysis Date	Relative Counting Error = 100.0%
01/13/2000	Am 243 Tracer Recovery = 89.9%

Analysis Time		DETECTION LEVELS in $\mu\text{Ci/g}$
10:00 PM		Am 241
Sample Point		9.72E+00
AZ-101 (2)		Cm 243/244
		9.72E+00

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	17 Jan 00

SAMPLE WB1 REV 1.2

953103ML

1799

WORKBOOK PAGE: SAM5

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ LAD 6/21/00 LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	SAMPLE
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.33
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0.67
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	0
Test Code	Digest Grams of Solids/L (Dg/L)	4.930	AT Count Time (min) (TC)	1606
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	30
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.1
SOLID	Detector Number	20	Am 243 cpm	12.4
Batch Number	Detector Efficiency (DetEff)	0.3347	Am 243/244 cpm	24.78
20000125			Cm 243/244 cpm	0
Rerun			AEA Count Time (min)	480
1			Am 241 $\mu\text{Ci/g}$ =	5.1875E+01
Sample Prep			Cm 243/244 $\mu\text{Ci/g}$ =	< 8.3035E+00
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000016	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16101	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ = 5.19E+01		DETECTION	
Analyst	Relative Counting Error = 3.1%		LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$ < 8.30E+00		8.30E+00	
Analysis Date	Relative Counting Error = 100.0%		Cm 243/244	
01/13/2000	Am 243 Tracer Recovery = 94.7%		8.30E+00	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	1/14/00
SAMPLE WB1 REV 1.2	953103ML		

1800

WORKBOOK PAGE: DUP6

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-D) ³ Y ¹⁰ 1/12/00 LIQUID / SO				DUP
Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.337
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.562
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1608
Test Code	Digest Grams of Solids/L (Dg/L)	5.250	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	12.92
SOLID	Detector Number	20	Am 243 cpm	21.54
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	5.9307E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.1068E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000016	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16101	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) * (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ = 5.93E+01		DETECTION	
Analyst	Relative Counting Error = 3.1%		LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$ < 1.11E+01		1.11E+01	
Analysis Date	Relative Counting Error = 100.0%		Cm 243/244	
01/13/2000	Am 243 Tracer Recovery = 79.5%		1.11E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	1/14/2000
SAMPLE.WB1 REV 1.2 953103ML			

1801

WORKBOOK PAGE: SAM7

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ₁₀₀ LIQUID / SO				SAMPLE
Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.363
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.502
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1873
Test Code	Digest Grams of Solids/L (Dg/L)	5.100	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	15.29
SOLID	Detector Number	20	Am 243 cpm	21.12
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	7.3621E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.2257E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000017	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16101	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	7.36E+01	DETECTION	
Analyst	Relative Counting Error =	3.0%	LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.23E+01	1.23E+01	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	82.7%	1.23E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00
SAMPLE.WB1 REV 1.2 953103ML			

WORKBOOK PAGE: DUP8

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-D) ³ LIQUID / SO				DUP
Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.338
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.542
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1719
Test Code	Digest Grams of Solids/L (Dg/L)	5.020	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.1
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	13.4
SOLID	Detector Number	20	Am 243 cpm	21.52
Batch Number	Detector Efficiency (DetEff)	0.3347	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	6.4503E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.1641E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000017	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16101	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	6.45E+01	DETECTION	
Analyst	Relative Counting Error =	3.1%	LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.16E+01	1.16E+01	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	82.0%	1.16E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00
SAMPLE WB1 REV 1.2	953103ML		

1803

WORKBOOK PAGE: SAM9

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ^{AD} ^{utilized} LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.492
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.43
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	2365
Test Code	Digest Grams of Solids/L (Dg/L)	5.130	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.03
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	26.73
SOLID	Detector Number	21	Am 243 cpm	23.4
Batch Number	Detector Efficiency (DetEff)	0.3315	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	1.1581E+02
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.3011E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000021	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16105	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ = 1.16E+02		DETECTION	
Analyst	Relative Counting Error = 2.5%		LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$ < 1.30E+01		1.30E+01	
Analysis Date	Relative Counting Error = 100.0%		Cm 243/244	
01/13/2000	Am 243 Tracer Recovery = 90.5%		1.30E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00

SAMPLE.WB1 REV 1.2 953103ML

1804

WORKBOOK PAGE: DUP10

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ 11/1/00 LIQUID / SO				DUP
Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.513
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.537
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	2195
Test Code	Digest Grams of Solids/L (Dg/L)	5.430	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.03
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	24.95
SOLID	Detector Number	21	Am 243 cpm	26.08
Batch Number	Detector Efficiency (DetEff)	0.3315	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	9.1351E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 8.9036E+00
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000021	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16105	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ = 9.14E+01		DETECTION	
Analyst	Relative Counting Error = 2.5%		LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$ < 8.90E+00		8.90E+00	
Analysis Date	Relative Counting Error = 100.0%		Cm 243/244	
01/13/2000	Am 243 Tracer Recovery = 104.8%		8.90E+00	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00
SAMPLE.WB1 REV 1.2	953103ML		

WORKBOOK PAGE: SAM11

3 ^{up}
11/12/00

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	SAMPLE		
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.419		
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0.443		
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	0		
Test Code	Digest Grams of Solids/L (Dg/L)	5.050	AT Count Time (min) (TC)	1996		
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	30		
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.03		
SOLID	Detector Number	21	Am 243 cpm	20.17		
Batch Number	Detector Efficiency (DetEff)	0.3315	Am 243/244 cpm	21.32		
20000125			AEA Count Time (min)	0		
Rerun			Am 241 $\mu\text{Ci/g}$ =	480		
1			Am 243/244 $\mu\text{Ci/g}$ =	9.7249E+01		
Sample Prep				< 1.4756E+01		
FUSIONHC						
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]					
S00T000022	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]					
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100					
WC16105	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV					
Prepared By						
EMB						
Chemist						
JFR	Am241 $\mu\text{Ci/g}$ =	9.72E+01	DETECTION LEVELS in $\mu\text{Ci/g}$			
Analyst	Relative Counting Error =	2.8%				
RRO						
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.					
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.48E+01	Am 241			
Analysis Date	Relative Counting Error =	100.0%	1.48E+01			
01/13/2000	Am 243 Tracer Recovery =	78.6%	Cm 243/244			
Analysis Time			1.48E+01			
10:00 PM						
Sample Point						
AZ-101 (2)						

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00

SAMPLE.WB1 REV 1.2 953103ML

WORKBOOK PAGE: DUP12

3
40
6/21/00

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	DUP		
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.527		
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0.452		
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	0		
Test Code	Digest Grams of Solids/L (Dg/L)	5.540	AT Count Time (min) (TC)	2223		
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	30		
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.03		
SOLID	Detector Number	21	Am 243 cpm	28.27		
Batch Number	Detector Efficiency (DetEff)	0.3315	Cm 243/244 cpm	24.25		
20000125			AEA Count Time (min)	0		
Rerun			Am 241 $\mu\text{Ci/g}$ =	480		
1			Am 243/244 $\mu\text{Ci/g}$ =	1.0928E+02		
Sample Prep				< 1.1600E+01		
FUSIONHC						
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]					
S00T000022	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]					
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100					
WC16105	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV					
Prepared By						
EMB						
Chemist						
JFR	Am241 $\mu\text{Ci/g}$ =	1.09E+02	DETECTION LEVELS in $\mu\text{Ci/g}$			
Analyst	Relative Counting Error =	2.5%				
RRO						
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.					
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.16E+01	Am 241			
Analysis Date	Relative Counting Error =	100.0%	1.16E+01			
01/13/2000	Am 243 Tracer Recovery =	89.4%	Cm 243/244			
Analysis Time				1.16E+01		
10:00 PM						
Sample Point						
AZ-101 (2)						

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	14 Jan 00

SAMPLE.WB1 REV 1.2 953103ML

1807

WORKBOOK PAGE: SAM13

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ *wait* LIQUID / SO

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	SAMPLE
SAMPLE	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.466
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0.476
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	0
Test Code	Digest Grams of Solids/L (Dg/L)	5.460	AT Count Time (min) (TC)	2175
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	30
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.03
SOLID	Detector Number	21	Am 243 cpm	24.14
Batch Number	Detector Efficiency (DetEff)	0.3315	Cm 243/244 cpm	24.69
20000125			AEA Count Time (min)	0
Rerun			Am 241 $\mu\text{Ci/g}$ =	480
1			Am 243/244 $\mu\text{Ci/g}$ =	9.3101E+01
Sample Prep				< 1.0848E+01
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000023	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16105	Relative Counting Error = Square Root of $[(1/(\text{Am-243 cpm} * \text{min})) + (1/(\text{Am-241 or Cm-243/244 cpm} * \text{min}))] * 1.96 * 100$			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	9.31E+01	DETECTION	
Analyst	Relative Counting Error =	2.6%	LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.08E+01	1.08E+01	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	92.1%	1.08E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	1/14/00

SAMPLE.WB1 REV 1.2 953103ML

1808

30-Dec-1899

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ _{1/14/00} LIQUID / SO DUP

Type	Date Counted	JAN-14-2000	Am 241 AEA Frac. (C241)	0.435
DUP	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.483
Work List	Sample D.F. (DF)	10201	Cm 243/244 AEA Frac. (Cm)	0
32135	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	2201
Test Code	Digest Grams of Solids/L (Dg/L)	5.540	AT Count Time (min) (TC)	30
@AM24101	Tracer Book No.	10B59	Background in cpm (Bkg)	0.03
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	21.68
SOLID	Detector Number	21	Am 243 cpm	24.07
Batch Number	Detector Efficiency (DetEff)	0.3315	Cm 243/244 cpm	0
20000125			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	8.4411E+01
1			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.0261E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000023	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WC16105	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
EMB				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	8.44E+01	DETECTION	
Analyst	Relative Counting Error =	2.6%	LEVELS	
RRO			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
01/14/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.03E+01	1.03E+01	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
01/13/2000	Am 243 Tracer Recovery =	94.6%	1.03E+01	
Analysis Time				
10:00 PM				
Sample Point				
AZ-101 (2)				

Analyst:	RRO	Date:	01/14/2000
Signature of Chemist:	JFR	Date:	1/14/00
SAMPLE.WB1 REV 1.2	853103ML		

LABCORE Completed Worklist Report for Worklist# 33272

Analyst: gll

Instrument: AB13

Book#: _____

Method: LA-953-104 Rev/Mod _____

Worklist Comment: AZ-101 (2), @AM24102 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@AM24102 AM24101	LIQUID	9.80E-05	8.70E-5	88.776 %	Recovery
1	STD		0		@AM24102 AM24101E	LIQUID	1.00	2.11E+00	2.110 %	Ct Error
1	STD		0		@AM24102 AM24101T	LIQUID	100	7.54E+01	75.400 %	Recovery
2	BLNK		0		@AM24102 AM24101	LIQUID	1	<3.10E-4		uCi/mL
2	BLNK		0		@AM24102 AM24101E	LIQUID	1.00	1.00E+02	100.000 %	Ct Error
2	BLNK		0		@AM24102 AM24101T	LIQUID	100	6.04E+01	60.400 %	Recovery
2	BLNK		0		@AM24102 CM24301	LIQUID	1	<3.10E-4		uCi/mL
2	BLNK		0		@AM24102 CM24301E	LIQUID	1.00	1.00E+02	100.000	uCi/mL
3	SAMPLE	S00T000780	0		@AM24102 AM24101	LIQUID	N/A	1.14E-03	3.22e-004	uCi/mL
3	SAMPLE	S00T000780	0		@AM24102 AM24101E	LIQUID	N/A	3.68E+00		% Ct. Error
3	SAMPLE	S00T000780	0		@AM24102 AM24101T	LIQUID	N/A	7.26E+01		% Recovery
3	SAMPLE	S00T000780	0		@AM24102 CM24301	LIQUID	N/A	< 3.22E-04	3.22e-004	uCi/mL
3	SAMPLE	S00T000780	0		@AM24102 CM24301E	LIQUID	N/A	1.00E+02		% Ct. Error
4	SAMPLE	S00T000783	0		@AM24102 AM24101	LIQUID	N/A	6.26E-04	3.26e-004	uCi/mL
4	SAMPLE	S00T000783	0		@AM24102 AM24101E	LIQUID	N/A	4.55E+00		% Ct. Error
4	SAMPLE	S00T000783	0		@AM24102 AM24101T	LIQUID	N/A	6.80E+01		% Recovery
4	SAMPLE	S00T000783	0		@AM24102 CM24301	LIQUID	N/A	< 3.26E-04	3.26e-004	uCi/mL
4	SAMPLE	S00T000783	0		@AM24102 CM24301E	LIQUID	N/A	1.00E+02		% Ct. Error
5	SAMPLE	S00T000786	0		@AM24102 AM24101	LIQUID	N/A	< 3.35E-04	3.35e-004	uCi/mL
5	SAMPLE	S00T000786	0		@AM24102 AM24101E	LIQUID	N/A	7.10E+00		% Ct. Error
5	SAMPLE	S00T000786	0		@AM24102 AM24101T	LIQUID	N/A	6.29E+01		% Recovery
5	SAMPLE	S00T000786	0		@AM24102 CM24301	LIQUID	N/A	< 3.35E-04	3.35e-004	uCi/mL
5	SAMPLE	S00T000786	0		@AM24102 CM24301E	LIQUID	N/A	1.00E+02		% Ct. Error

Final page for worklist# 33272

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John Relyea 27 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33272

Analyst: GL Instrument: AM01 13 Book# 60357

Method: LA-953-104 Rev/Mod B-3

Worklist Comment: AZ-101 (2), @AM24102 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@AM24102	LIQUID		
2 BLNK			@AM24102	LIQUID		
3 SAMPLE	S00T000780 0		@AM24102	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
4 SAMPLE	S00T000783 0		@AM24102	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
5 SAMPLE	S00T000786 0		@AM24102	LIQUID	99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						

Final page for worklist # 33272

Ang L. H. T. 4-26-00
Signature Date

W. Raymond 4-27-2000
Signature Date
WCB 4/27/00

Data Entry Comments:

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33272-STD-AM
File ID: 19a1993.CNF

Counted on: 4/27/ 0 @ 1:12
Detector: AEA19
Geometry number: 1
Count time: 28802. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	906.9	906.9	301.290	301.290	12.000	4.994	6.000	1.576
2	1092.7	1092.7	255.523	255.503	10.000	4.608	5.000	1.485
3	23.5	23.5	118.976	118.975	232.000	1.000	116.000	0.100
4?	4.5	4.5	88.674	84.683	12.000	4.756	6.000	0.665
5?	6.1	6.1	58.075	57.664	12.000	4.794	6.000	1.039

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid	Count	%err	Activity	
			Exp. Obs. Diff. FWHM	Rate c/m	@95	d/m uCi/ea	
1	Am241	0.358	5.479 5.471 0.008	0.02	33.24	1.6	149.8 0.675E-04
	Pu238		5.487 5.471 0.016				195.5 0.881E-04
2	Am243	0.419	5.266 5.261 0.005	0.02	38.92	1.5	166.5 0.750E-04
3	Th230	0.020	4.617 4.632 -0.015	0.00	1.82	6.6	32.2 0.145E-04
	Np237		4.640 4.632 0.008				128.7 0.580E-04
4	????		4.475		0.28	34.9	
5	????		4.350		0.28	29.1	

Totals:		0.796	<--valid peaks only-->		73.98		

DETECTOR CALIBRATION

Energy (MEV) = 4.085 + (0.0046)*Channel
Energy range (MeV): 4.085 TO 6.440
Efficiency = 0.2361 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	44611.0	100.000
Smoothed	44616.8	100.013
Composite fit	35784.7	80.215
Residuals	8826.3	19.785

Analyzed by: _____
1812

Raw Data Dump for AEA Spectrum: 19a1993.CNF

1	0.	0.	9.	3.	8.	7.	9.	4.	6.	6.
11	8.	3.	7.	5.	5.	4.	6.	4.	6.	10.
21	7.	6.	8.	8.	3.	6.	4.	11.	9.	5.
31	4.	6.	6.	4.	7.	6.	5.	8.	4.	4.
41	6.	10.	3.	6.	6.	7.	5.	9.	11.	11.
51	10.	7.	7.	11.	10.	12.	13.	13.	14.	12.
61	8.	10.	11.	6.	9.	10.	8.	9.	7.	6.
71	8.	10.	13.	15.	7.	8.	10.	10.	14.	13.
81	12.	11.	15.	10.	18.	12.	11.	11.	18.	12.
91	12.	11.	12.	7.	18.	13.	10.	13.	19.	23.
101	17.	9.	9.	14.	14.	18.	14.	12.	15.	14.
111	17.	21.	16.	16.	23.	16.	24.	21.	22.	27.
121	16.	24.	16.	19.	20.	12.	21.	28.	29.	22.
131	17.	19.	28.	22.	21.	31.	26.	23.	28.	23.
141	31.	25.	27.	33.	35.	35.	35.	41.	33.	32.
151	30.	34.	34.	36.	32.	27.	43.	36.	36.	42.
161	31.	30.	42.	39.	48.	47.	49.	43.	50.	57.
171	56.	42.	58.	47.	66.	67.	53.	55.	45.	60.
181	78.	57.	75.	66.	69.	79.	70.	74.	67.	79.
191	71.	103.	78.	87.	107.	87.	89.	90.	130.	105.
201	106.	130.	102.	115.	117.	124.	116.	126.	149.	137.
211	133.	130.	131.	134.	159.	151.	170.	168.	156.	182.
221	196.	170.	206.	231.	215.	224.	210.	211.	236.	237.
231	231.	277.	258.	271.	287.	326.	324.	293.	319.	359.
241	341.	404.	401.	469.	473.	486.	535.	559.	594.	626.
251	750.	807.	900.	1074.	1286.	1367.	1178.	891.	500.	276.
261	231.	222.	207.	188.	205.	217.	207.	202.	186.	188.
271	178.	169.	188.	176.	175.	187.	201.	207.	202.	213.
281	234.	268.	226.	263.	265.	251.	289.	312.	334.	354.
291	396.	386.	483.	469.	488.	514.	608.	643.	828.	963.
301	1053.	1094.	940.	660.	389.	226.	212.	155.	167.	125.
311	110.	75.	52.	44.	34.	10.	3.	1.	0.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
331	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
341	0.	1.	0.	0.	0.	0.	1.	1.	0.	0.
351	3.	0.	1.	0.	0.	0.	0.	0.	1.	1.
361	2.	1.	1.	0.	2.	0.	0.	0.	0.	1.
371	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	1.	0.	0.	0.	1.
481	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
511	1.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33272-BLK-AM
File ID: 20a2065.CNF

Counted on: 4/27/ 0 @ 1:13
Detector: AEA20
Geometry number: 1
Count time: 28800. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	543.1	543.1	254.741	254.741	10.000	4.160	5.000	1.656
2	44.8	44.8	212.764	212.318	36.000	89.357	18.000	31.888
3	18.6	18.6	178.902	177.648	18.000	21.929	9.000	0.735
4?	1.5	1.5	127.546	127.102	4.000	0.000	2.000	3.758

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate	%err @95	d/m	Activity uCi/ea
1	Am243	0.687	5.266	5.267	-.0010	10.02	16.73	2.2	75.6	0.340E-04
2	Pu239	0.175	5.147	5.071	0.076	60.41	4.25	9.6	19.0	0.856E-05
	Pu240		5.144	5.071	0.073				19.0	0.856E-05
3	Pu242	0.156	4.891	4.912	-.021	10.10	3.81	5.4	17.0	0.767E-05
	Th229		4.842	4.912	-.070				29.4	0.132E-04
4	????		4.679				0.00	1000.		
Totals:		1.018	<--valid peaks only-->				24.79			

DETECTOR CALIBRATION

Energy (MEV) = 4.095 + (0.0046)*Channel
Energy range (MeV): 4.095 TO 6.450
Efficiency = 0.2236 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	11688.0	100.000
Smoothed	11686.7	99.989
Composite fit	11897.9	101.796
Residuals	-209.9	-1.796

Analyzed by: _____

NEW

Display Max.: 3445.1

1816

Raw Data Dump for AEA Spectrum: 20a2065.CNF

1	0.	0.	3.	2.	1.	6.	4.	3.	2.	2.
11	3.	2.	4.	3.	8.	1.	1.	4.	2.	3.
21	4.	6.	1.	2.	5.	2.	5.	3.	2.	3.
31	2.	4.	0.	2.	6.	3.	3.	4.	1.	4.
41	3.	3.	1.	3.	2.	2.	6.	5.	3.	4.
51	4.	7.	3.	3.	3.	6.	5.	5.	1.	4.
61	2.	7.	5.	5.	3.	1.	3.	8.	4.	3.
71	7.	8.	8.	5.	7.	8.	2.	9.	3.	6.
81	6.	6.	4.	3.	3.	2.	8.	5.	7.	9.
91	6.	4.	4.	11.	6.	5.	10.	6.	2.	8.
101	7.	16.	7.	8.	11.	4.	5.	7.	4.	7.
111	4.	6.	7.	10.	8.	8.	4.	8.	9.	13.
121	10.	11.	10.	10.	13.	6.	19.	12.	14.	8.
131	9.	14.	6.	13.	9.	9.	5.	13.	10.	10.
141	12.	12.	14.	10.	8.	14.	11.	20.	17.	12.
151	9.	17.	12.	18.	17.	15.	18.	12.	20.	22.
161	31.	14.	19.	17.	18.	21.	16.	14.	22.	24.
171	20.	19.	20.	18.	19.	23.	29.	32.	22.	29.
181	25.	23.	27.	22.	23.	17.	31.	38.	33.	29.
191	34.	31.	32.	26.	41.	29.	24.	35.	32.	30.
201	38.	41.	32.	44.	34.	35.	39.	39.	42.	39.
211	50.	56.	52.	48.	49.	31.	56.	45.	60.	63.
221	67.	57.	63.	59.	70.	66.	65.	67.	59.	77.
231	77.	78.	98.	95.	96.	114.	116.	98.	127.	130.
241	161.	172.	173.	186.	195.	227.	244.	295.	286.	341.
251	382.	435.	517.	631.	658.	587.	479.	316.	158.	82.
261	61.	61.	42.	48.	45.	27.	39.	22.	31.	19.
271	15.	8.	8.	2.	2.	1.	2.	1.	1.	1.
281	1.	2.	1.	1.	1.	1.	2.	1.	1.	0.
291	2.	1.	2.	1.	4.	2.	6.	4.	3.	3.
301	2.	4.	5.	3.	2.	3.	1.	0.	3.	3.
311	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
321	0.	0.	0.	0.	0.	0.	1.	2.	0.	0.
331	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
341	0.	0.	1.	0.	1.	1.	0.	0.	1.	1.
351	1.	0.	0.	1.	1.	0.	0.	1.	0.	1.
361	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
371	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	1.	0.	0.	0.	0.	0.	0.	1.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T780-SAM-AM
 File ID: 21a2144.CNF

Counted on: 4/27/ 0 @ 1:15
 Detector: AEA21
 Geometry number: 1
 Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	278.8	278.8	300.496	300.496	14.000	6.423	7.000	3.308
2	675.0	675.0	254.567	254.565	10.000	4.539	5.000	2.176

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.243	5.479	5.468	0.011	10.03	8.52	3.1	39.1	0.176E-04
	Pu238		5.487	5.468	0.019				51.0	0.230E-04
2	Am243	0.550	5.266	5.256	0.010	100.02	19.27	2.0	83.9	0.378E-04
Totals:		0.794	<--valid peaks only-->				27.79			

DETECTOR CALIBRATION

Energy (MEV) = 4.085 + (0.0046)*Channel
 Energy range (MeV): 4.085 TO 6.441
 Efficiency = 0.2319 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	16811.0	100.000
Smoothed	16815.8	100.028
Composite fit	13339.8	79.352
Residuals	3471.2	20.648

Analyzed by: _____

NEW

Spectrum 21a2144.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 4344.8

[illegible]

Raw Data Dump for AEA Spectrum: 21a2144.CNF

1	0.	0.	4.	4.	3.	1.	2.	3.	3.	1.
11	3.	1.	0.	3.	2.	1.	2.	1.	1.	2.
21	1.	1.	6.	1.	7.	4.	3.	4.	2.	2.
31	2.	5.	4.	5.	3.	2.	2.	4.	6.	3.
41	1.	2.	1.	2.	1.	5.	5.	6.	2.	7.
51	6.	2.	8.	3.	5.	4.	3.	4.	5.	4.
61	3.	10.	3.	7.	3.	5.	2.	1.	0.	4.
71	6.	5.	0.	8.	4.	3.	4.	6.	3.	2.
81	4.	2.	6.	5.	4.	6.	7.	7.	7.	8.
91	3.	6.	6.	7.	5.	7.	2.	8.	6.	3.
101	10.	8.	6.	4.	5.	5.	2.	9.	8.	7.
111	8.	4.	6.	7.	4.	7.	7.	10.	2.	7.
121	10.	11.	11.	9.	8.	12.	6.	7.	7.	6.
131	12.	4.	14.	5.	6.	12.	4.	12.	14.	8.
141	8.	7.	11.	10.	13.	15.	11.	6.	12.	11.
151	12.	15.	7.	6.	4.	16.	20.	14.	15.	11.
161	10.	14.	20.	17.	13.	9.	12.	19.	11.	23.
171	22.	10.	14.	18.	15.	20.	17.	26.	14.	14.
181	17.	13.	19.	22.	31.	11.	19.	21.	17.	21.
191	23.	32.	30.	24.	24.	28.	23.	34.	26.	37.
201	24.	36.	25.	33.	39.	40.	26.	41.	33.	32.
211	28.	42.	39.	34.	35.	38.	38.	47.	39.	45.
221	43.	58.	44.	52.	75.	56.	55.	56.	78.	69.
231	76.	76.	94.	83.	83.	103.	117.	109.	127.	109.
241	145.	147.	174.	198.	220.	276.	324.	298.	357.	395.
251	535.	586.	704.	786.	800.	718.	591.	346.	212.	120.
261	93.	73.	59.	66.	57.	62.	58.	57.	52.	34.
271	44.	34.	32.	15.	26.	24.	28.	23.	27.	34.
281	39.	43.	32.	46.	38.	51.	73.	54.	60.	98.
291	87.	108.	112.	125.	156.	169.	227.	241.	321.	342.
301	305.	273.	255.	192.	140.	80.	69.	56.	41.	41.
311	35.	22.	19.	15.	6.	5.	1.	0.	0.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
331	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
341	1.	0.	0.	1.	0.	1.	1.	0.	1.	1.
351	1.	0.	1.	0.	0.	1.	1.	2.	0.	1.
361	2.	3.	2.	0.	3.	1.	1.	0.	1.	3.
371	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.
381	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
421	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.
441	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T783-SAM-AM
File ID: 22a2227.CNF

Counted on: 4/27/ 0 @ 1:16
Detector: AEA22
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	132.1	132.1	298.994	298.994	12.000	5.750	6.000	1.926
2	540.9	540.9	252.841	252.835	12.000	4.568	6.000	1.414
3	38.5	38.5	184.740	184.600	88.000	1.000	44.000	0.100
4?	6.3	6.3	176.417	175.735	102.000	1.000	51.000	0.100
5?	5.0	5.0	156.800	156.212	6.000	0.551	3.000	0.140
6?	7.5	7.5	130.129	129.715	8.000	1.725	4.000	0.462
7	8.5	8.5	90.711	90.417	18.000	28.923	9.000	2.346

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA		Peak Centroid			Count		%err @95	d/m	Activity uCi/ea
		Frac	Exp.	Obs.	Diff.	FWHM	Rate	c/m			
1	Am241	0.141	5.479	5.472	0.0070	0.03	4.81	4.1		21.0	0.947E-05
	Pu238		5.487	5.472	0.015					27.4	0.124E-04
2	Am243	0.579	5.266	5.259	0.0070	0.02	19.72	2.0		81.8	0.368E-04
3		0.090		4.946		0.00	3.08	5.2		12.6	0.569E-05
4		????		4.905			0.51	31.9			
5		????		4.815			0.17	75.4			
6		????		4.693			0.26	38.2			
7	U 235	0.027	4.386	4.512	-.1260	0.13	0.92	12.5		6.6	0.300E-05
Totals:		0.838	<--valid peaks only-->				28.54				

DETECTOR CALIBRATION

Energy(MEV) = 4.096 + (0.0046)*Channel
Energy range (MeV): 4.096 TO 6.452
Efficiency = 0.2436 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	16339.0	100.000
Smoothed	16343.9	100.030
Composite fit	14147.8	86.589
Residuals	2191.2	13.411

Spectrum 22a2227.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 3706.5

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7
7
7
7
7
7
7
7
7
7
7
7
6
6
6.
5.
53.
53.
4.3
4..3
4...3
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Raw Data Dump for AEA Spectrum: 22a2227.CNF

1	0.	0.	6.	3.	5.	4.	2.	7.	2.	2.
11	4.	4.	7.	7.	4.	5.	6.	4.	5.	1.
21	8.	5.	1.	2.	1.	5.	5.	4.	7.	10.
31	4.	5.	2.	7.	4.	8.	2.	8.	5.	3.
41	7.	4.	8.	6.	9.	6.	2.	6.	9.	6.
51	5.	10.	6.	9.	10.	5.	6.	7.	12.	8.
61	3.	1.	13.	2.	4.	4.	6.	5.	8.	5.
71	10.	11.	10.	9.	8.	6.	9.	8.	9.	4.
81	8.	13.	11.	6.	11.	9.	7.	7.	17.	15.
91	8.	15.	11.	12.	8.	10.	8.	8.	7.	11.
101	11.	12.	12.	7.	9.	12.	16.	7.	13.	6.
111	15.	11.	16.	14.	7.	9.	15.	12.	11.	12.
121	11.	14.	8.	18.	12.	11.	17.	15.	17.	23.
131	22.	15.	12.	13.	14.	13.	19.	14.	19.	18.
141	19.	17.	18.	16.	21.	24.	21.	16.	19.	26.
151	20.	20.	20.	26.	22.	25.	33.	30.	19.	20.
161	19.	25.	25.	23.	28.	16.	33.	25.	27.	30.
171	20.	23.	30.	33.	31.	43.	39.	31.	31.	24.
181	31.	30.	44.	43.	41.	37.	40.	33.	28.	32.
191	51.	44.	39.	40.	44.	51.	27.	42.	35.	53.
201	50.	61.	61.	55.	56.	61.	71.	51.	65.	64.
211	59.	72.	66.	82.	61.	81.	67.	71.	81.	84.
221	103.	84.	103.	92.	107.	106.	118.	102.	117.	117.
231	117.	132.	140.	136.	140.	138.	130.	195.	179.	191.
241	198.	207.	280.	272.	283.	303.	336.	359.	379.	469.
251	518.	594.	623.	627.	496.	347.	155.	100.	85.	80.
261	61.	64.	64.	56.	58.	46.	42.	49.	29.	41.
271	31.	28.	25.	25.	22.	26.	22.	26.	30.	39.
281	40.	32.	34.	34.	41.	31.	49.	45.	58.	71.
291	68.	67.	78.	90.	99.	111.	121.	143.	157.	144.
301	128.	89.	56.	32.	33.	30.	24.	25.	22.	14.
311	10.	5.	3.	2.	0.	0.	0.	0.	0.	1.
321	0.	0.	0.	2.	0.	1.	0.	0.	0.	0.
331	0.	1.	1.	0.	0.	1.	0.	1.	1.	0.
341	0.	0.	1.	1.	0.	0.	1.	1.	2.	1.
351	1.	0.	0.	0.	1.	1.	0.	2.	0.	1.
361	1.	3.	1.	0.	1.	2.	1.	1.	1.	0.
371	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
SOOT786-SAM-AM
File ID: 23a2338.CNF

Counted on: 4/27/ 0 @ 1:17
Detector: AEA23
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	44.6	44.6	302.338	302.338	12.000	5.718	6.000	1.662
2	461.3	461.3	255.510	255.507	10.000	4.443	5.000	1.457
3	37.2	37.2	182.607	182.545	94.000	1.000	47.000	0.100
4?	3.6	3.6	159.965	159.603	4.000	0.135	2.000	2.029
5?	3.0	3.0	151.332	151.332	8.000	0.024	4.000	0.006

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA		Peak Centroid			Count Rate	%err @95	d/m	Activity uCi/ea
		Frac	Exp.	Obs.	Diff.	FWHM				
1	Am241	0.067	5.479	5.486	-.0070	0.03	1.76	6.7	7.5	0.337E-05
	Pu238		5.487	5.486	0.001				9.8	0.440E-05
2	Am243	0.610	5.266	5.270	-.0040	0.02	16.14	2.2	65.1	0.293E-04
3		0.112		4.935		0.00	2.97	5.2	11.9	0.535E-05
4		????		4.829			0.01	858.		
5		????		4.791			0.09	110.		
Totals:		0.790	<--valid peaks only-->				20.88			

DETECTOR CALIBRATION

Energy (MEV) = 4.095 + (0.0046)*Channel
Energy range (MeV): 4.095 TO 6.450
Efficiency = 0.2505 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	12693.0	100.000
Smoothed	12696.1	100.025
Composite fit	10073.5	79.362
Residuals	2619.5	20.638

1824 Analyzed by: NEW

Spectrum 23a2338.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 2893.2

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Raw Data Dump for AEA Spectrum: 23a2338.CNF

1	0.	0.	3.	2.	3.	2.	2.	1.	2.	2.
11	2.	4.	1.	4.	2.	4.	5.	0.	1.	6.
21	5.	2.	1.	2.	3.	3.	0.	1.	0.	2.
31	3.	2.	2.	4.	4.	4.	0.	2.	5.	0.
41	2.	0.	3.	1.	1.	4.	3.	5.	1.	5.
51	4.	1.	2.	6.	5.	2.	2.	8.	3.	3.
61	4.	1.	2.	3.	3.	2.	2.	3.	6.	1.
71	2.	5.	4.	7.	2.	9.	2.	5.	3.	2.
81	2.	4.	6.	4.	3.	4.	6.	4.	2.	2.
91	10.	4.	4.	3.	6.	7.	6.	8.	7.	8.
101	8.	3.	8.	6.	9.	6.	9.	6.	10.	8.
111	5.	9.	2.	7.	11.	11.	5.	11.	7.	13.
121	9.	6.	2.	9.	10.	12.	13.	9.	3.	14.
131	9.	7.	12.	10.	18.	9.	12.	12.	10.	16.
141	15.	15.	14.	11.	16.	21.	15.	19.	12.	15.
151	22.	16.	15.	17.	15.	11.	18.	20.	21.	34.
161	23.	16.	19.	16.	20.	18.	22.	15.	24.	16.
171	23.	35.	25.	28.	28.	27.	24.	29.	32.	22.
181	32.	36.	36.	30.	27.	31.	25.	39.	29.	33.
191	46.	37.	45.	50.	32.	41.	43.	45.	52.	49.
201	44.	55.	47.	56.	51.	50.	54.	55.	55.	46.
211	53.	63.	66.	70.	60.	69.	74.	60.	73.	88.
221	78.	93.	65.	77.	87.	83.	87.	93.	93.	110.
231	106.	115.	103.	112.	102.	116.	108.	115.	130.	124.
241	155.	152.	158.	185.	173.	225.	251.	233.	256.	286.
251	328.	365.	409.	459.	500.	560.	482.	386.	257.	125.
261	77.	61.	40.	38.	48.	31.	36.	31.	37.	28.
271	17.	20.	21.	17.	15.	10.	11.	12.	6.	14.
281	10.	9.	12.	18.	13.	16.	15.	13.	13.	20.
291	19.	19.	21.	29.	18.	28.	17.	29.	39.	30.
301	63.	46.	50.	49.	38.	18.	16.	11.	12.	9.
311	5.	5.	3.	3.	8.	4.	0.	0.	1.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
331	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
341	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
351	1.	2.	0.	0.	1.	0.	1.	1.	1.	1.
361	3.	0.	4.	0.	0.	0.	0.	4.	0.	2.
371	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

WORKBOOK PAGE: STD1

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ^{314D} _{4/21/00} LIQUID

Type	Date Counted	APR-27-2000	Am 241 AEA Frac. (C241)	STD		
STD	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.358		
Work List	Sample D.F. (DF)	1	Cm 243/244 AEA Frac. (Cm)	0.419		
33272	Tracer Volume in mL (SPKV)	0.200	Total AT Counts	0		
Test Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	3867		
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	30		
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0.17		
LIQUID	Detector Number	13	Am 243 cpm	33.24		
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	38.92		
20001373	Standard Book No	60B57	AEA Count Time (min)	0		
Rerun	Standard Value in $\mu\text{Ci/mL}$	9.800E-05	Am 241 $\mu\text{Ci/L}$ =	480		
0			Cm 243/244 $\mu\text{Ci/L}$ =	8.6981E-02		
Sample Prep				< 1.6115E-02		
N/A						
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))					
WL33272-STD	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))					
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100					
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV					
Prepared By						
VAR						
Chemist						
JFR	Am 241 $\mu\text{Ci/mL}$ =	8.70E-05	DETECTION LEVELS in $\mu\text{Ci/mL}$			
Analyst	Relative Counting Error =	2.1%				
GLL						
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.					
04/27/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 1.61E-05	Am 241			
Analysis Date	Relative Counting Error =	100.0%	1.61E-05			
04/26/2000	Am 243 Tracer Recovery =	75.4%	Cm 243/244			
Analysis Time			1.61E-05			
03:30 PM						
Sample Point						
AZ-101 (2)						

Analyst:	GLL	Date:	04/27/2000
Signature of Chemist:	JFR	Date:	27 April 2000

STANDARD.WB1 REV 1.2

953103ML

WORKBOOK PAGE: BLANK2

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ _{8/21/00} LIQUID / SO				BLNK
Type	Date Counted	APR-27-2000	Am 241 AEA Frac. (C241)	0
BLNK	Sample Volume in mL (SS)	2.000	Am 243 AEA Frac. (C243)	0.687
Work List	Sample D.F. (DF)	101	Cm 243/244 AEA Frac. (Cm)	0
33272	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	949
Test Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.17
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0
LIQUID	Detector Number	13	Am 243 cpm	16.73
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001373			AEA Count Time (min)	480
Run			Am 241 $\mu\text{Ci/L}$ =	< 3.0964E-01
0			Cm 243/244 $\mu\text{Ci/L}$ =	< 3.0964E-01
Sample Prep				
N/A				
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
WL33272-BLK	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
Prepared By	VAR			
Chemist	NOTE: Am-241 Result is a LESS THAN Value.			
JFR	Am 241 $\mu\text{Ci/mL}$ =	< 3.10E-04	DETECTION LEVELS in $\mu\text{Ci/mL}$	
Analyst	Relative Counting Error =	100.0%		
GLL	NOTE: Cm-243/244 Result is a LESS THAN Value.			
Date Complete	Cm 243/244 $\mu\text{Ci/mL}$	< 3.10E-04	Am 241	
04/27/2000	Relative Counting Error =	100.0%	3.10E-04	
Analysis Date	Am 243 Tracer Recovery =	60.4%	Cm 243/244	
04/26/2000			3.10E-04	
Analysis Time				
03:30 PM				
Sample Point				
AZ-101 (2)				

Analyst:	GLL	Date:	04/27/2000
Signature of Chemist:	JFR	Date:	27 Apr 00

BLANK.WB1 REV 1.2

953103ML

WORKBOOK PAGE: SAM3

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ^{4d} ^{6.11/m}

LIQUID / SO				SAMPLE
Type	Date Counted	APR-27-2000	Am 241 AEA Frac. (C241)	0.243
SAMPLE	Sample Volume in mL (SS)	2.000	Am 243 AEA Frac. (C243)	0.55
Work List	Sample D.F. (DF)	101	Cm 243/244 AEA Frac. (Cm)	0
33272	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1422
Test Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.17
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	8.52
LIQUID	Detector Number	13	Am 243 cpm	19.27
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001373			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/L}$ =	1.1357E+00
0			Cm 243/244 $\mu\text{Ci/L}$ =	< 3.2183E-01
Sample Prep				
N/A				
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
S00T000780	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
Prepared By				
VAR				
Chemist				
JFR	Am 241 $\mu\text{Ci/mL}$ =	1.14E-03	DETECTION LEVELS in $\mu\text{Ci/mL}$	
Analyst	Relative Counting Error =	3.7%		
GLL				
Done Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			
04/27/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 3.22E-04	Am 241	
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244	
04/26/2000	Am 243 Tracer Recovery =	72.6%	3.22E-04	
Analysis Time				
03:30 PM				
Sample Point				
AZ-101 (2)				

Analyst:	GLL	Date:	04/27/2000
Signature of Chemist:	JFR	Date:	27 Apr 2000
SAMPLE.WB1 REV 1.2	953103ML		

WORKBOOK PAGE: SAM4

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ _{12/21/00} LIQUID / SO				SAMPLE	
Type	Date Counted	APR-27-2000	Am 241 AEA Frac. (C241)	0.141	
SAMPLE	Sample Volume in mL (SS)	2.000	Am 243 AEA Frac. (C243)	0.579	
Work List	Sample D.F. (DF)	101	Cm 243/244 AEA Frac. (Cm)	0	
33272	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1266	
Test Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	30	
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.17	
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	4.81	
LIQUID	Detector Number	13	Am 243 cpm	19.72	
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0	
20001373			AEA Count Time (min)	480	
Rerun			Am 241 $\mu\text{Ci/L}$ =	6.2598E-01	
0			Cm 243/244 $\mu\text{Ci/L}$ =	< 3.2633E-01	
Sample Prep					
N/A					
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))				
S00T000783	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))				
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
Prepared By					
VAR					
Chemist					
JFR	Am 241 $\mu\text{Ci/mL}$ =	6.26E-04	DETECTION LEVELS in $\mu\text{Ci/mL}$		
Analyst	Relative Counting Error =	4.5%			
GLL					
Data Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			Am 241	
04/27/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 3.26E-04		3.26E-04	
Analysis Date	Relative Counting Error =	100.0%		Cm 243/244	
04/26/2000	Am 243 Tracer Recovery =	68.0%		3.26E-04	
Analysis Time					
03:30 PM					
Sample Point					
AZ-101 (2)					

Analyst:	GLL	Date:	04/27/2000
Signature of Chemist:	JFR	Date:	27 Apr 00

SAMPLE.WB1 REV 1.2 953103ML

WORKBOOK PAGE: SAM5

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ^{3rd} 4/21/00 LIQUID / SO

				SAMPLE	
Type	Date Counted	APR-27-2000	Am 241 AEA Frac.	(C241)	0.067
SAMPLE	Sample Volume in mL (SS)	2.000	Am 243 AEA Frac.	(C243)	0.61
Work list	Sample D.F. (DF)	101	Cm 243/244 AEA Frac.	(Cm)	0
33272	Tracer Volume in mL (SPKV)	0.100	Total AT Counts		1111
Lab Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)		30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)		0.17
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm		1.76
LIQUID	Detector Number	13	Am 243 cpm		16.14
Detector Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm		0
20001373			AEA Count Time (min)		480
Range			Am 241 $\mu\text{Ci/L}$ =	<	3.3521E-01
0			Cm 243/244 $\mu\text{Ci/L}$ =	<	3.3521E-01
Sample Prep					
N/A					
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))				
S00T000786	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))				
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
Prepared By	VAR				
Chemist	NOTE: Am-241 Result is a LESS THAN Value.				
JFR	Am 241 $\mu\text{Ci/mL}$ =	< 3.35E-04	DETECTION LEVELS in $\mu\text{Ci/mL}$		
GLL	Relative Counting Error =	7.1%			
PAK Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.				
04/27/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 3.35E-04	Am 241		
Analysis Date	Relative Counting Error =	100.0%	Cm 243/244		
04/26/2000	Am 243 Tracer Recovery =	62.9%	3.35E-04		
Analysis Time					
03:30 PM					
Sample Point					
AZ-101 (2)					

Analyst:	GLL	Date:	04/27/2000
Signature of Chemist:	JFR	Date:	27 Apr 00

SAMPLE.WB1 REV 1.2

953103MK

1831

LABCORE Completed Worklist Report for Worklist# 33359

Analyst: ak1

Instrument: AB13

Book#: _____

Method: LA-953-104 Rev/Mod _____

Worklist Comment: Rerun WL33327 AZ-101 vr

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	@AM24102 AM24101	SOLID	1.07E-04	9.58E-5	89.533	% Recovery
1 STD		0	@AM24102 AM24101E	SOLID	1.00	1.81E+00	1.810	% Ct. Error
1 STD		0	@AM24102 AM24101T	SOLID	100	9.53E+01	95.300	% Recovery
2 BLNK-PREP		0	@AM24102 AM24101	SOLID	1	<3.25E+0		uCi/g
2 BLNK-PREP		0	@AM24102 AM24101E	SOLID	1.00	1.00E+02	100.000	% Ct. Error
2 BLNK-PREP		0	@AM24102 AM24101T	SOLID	100	9.54E+01	95.400	% Recovery
2 BLNK-PREP		0	@AM24102 CM24301	SOLID	1	<3.25E+0		uCi/g
2 BLNK-PREP		0	@AM24102 CM24301E	SOLID	1.00	1.00E+02	100.000	uCi/g
3 SAMPLE	S00T000797	0 F	@AM24102 AM24101	SOLID	N/A	4.43E+01	5.730	uCi/g
3 SAMPLE	S00T000797	0 F	@AM24102 AM24101E	SOLID	N/A	2.72E+00		% Ct. Error
3 SAMPLE	S00T000797	0 F	@AM24102 AM24101T	SOLID	N/A	9.45E+01		% Recovery
3 SAMPLE	S00T000797	0 F	@AM24102 CM24301	SOLID	N/A <	5.73E+00	5.730	uCi/g
3 SAMPLE	S00T000797	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error
4 SAMPLE	S00T000798	0 F	@AM24102 AM24101	SOLID	N/A	5.36E+01	6.200	uCi/g
4 SAMPLE	S00T000798	0 F	@AM24102 AM24101E	SOLID	N/A	2.55E+00		% Ct. Error
4 SAMPLE	S00T000798	0 F	@AM24102 AM24101T	SOLID	N/A	9.16E+01		% Recovery
4 SAMPLE	S00T000798	0 F	@AM24102 CM24301	SOLID	N/A <	6.20E+00	6.200	uCi/g
4 SAMPLE	S00T000798	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error
5 SAMPLE	S00T000799	0 F	@AM24102 AM24101	SOLID	N/A	4.93E+01	6.100	uCi/g
5 SAMPLE	S00T000799	0 F	@AM24102 AM24101E	SOLID	N/A	2.68E+00		% Ct. Error
5 SAMPLE	S00T000799	0 F	@AM24102 AM24101T	SOLID	N/A	9.26E+01		% Recovery
5 SAMPLE	S00T000799	0 F	@AM24102 CM24301	SOLID	N/A <	6.10E+00	6.100	uCi/g
5 SAMPLE	S00T000799	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error
6 SAMPLE	S00T000800	0 F	@AM24102 AM24101	SOLID	N/A	8.71E+01	12.000	uCi/g
6 SAMPLE	S00T000800	0 F	@AM24102 AM24101E	SOLID	N/A	2.75E+00		% Ct. Error
6 SAMPLE	S00T000800	0 F	@AM24102 AM24101T	SOLID	N/A	9.04E+01		% Recovery
6 SAMPLE	S00T000800	0 F	@AM24102 CM24301	SOLID	N/A <	1.20E+01	12.000	uCi/g
6 SAMPLE	S00T000800	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error
7 SAMPLE	S00T000801	0 F	@AM24102 AM24101	SOLID	N/A	8.08E+01	10.600	uCi/g
7 SAMPLE	S00T000801	0 F	@AM24102 AM24101E	SOLID	N/A	2.82E+00		% Ct. Error
7 SAMPLE	S00T000801	0 F	@AM24102 AM24101T	SOLID	N/A	9.44E+01		% Recovery
7 SAMPLE	S00T000801	0 F	@AM24102 CM24301	SOLID	N/A <	1.06E+01	10.600	uCi/g
7 SAMPLE	S00T000801	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error
8 SAMPLE	S00T000802	0 F	@AM24102 AM24101	SOLID	N/A	9.59E+01	11.800	uCi/g
8 SAMPLE	S00T000802	0 F	@AM24102 AM24101E	SOLID	N/A	2.61E+00		% Ct. Error
8 SAMPLE	S00T000802	0 F	@AM24102 AM24101T	SOLID	N/A	9.07E+01		% Recovery
8 SAMPLE	S00T000802	0 F	@AM24102 CM24301	SOLID	N/A <	1.18E+01	11.800	uCi/g
8 SAMPLE	S00T000802	0 F	@AM24102 CM24301E	SOLID	N/A	1.00E+02		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33359

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
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Final page for worklist# 33359

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John Relyea 3 May 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33359

Analyst: AKL Instrument: AM01 Book# 46B57

Method: LA-953-104 Rev/Mod B3

Worklist Comment: Rerun WL33327 AZ-101 vr

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@AM24102	SOLID		
2 BLNK-PREP			@AM24102	SOLID		
3 SAMPLE	S00T000797 0 F	@AM24102	SOLID		99000433	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
4 SAMPLE	S00T000798 0 F	@AM24102	SOLID		99000433	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
5 SAMPLE	S00T000799 0 F	@AM24102	SOLID		99000433	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
6 SAMPLE	S00T000800 0 F	@AM24102	SOLID		99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
7 SAMPLE	S00T000801 0 F	@AM24102	SOLID		99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						
8 SAMPLE	S00T000802 0 F	@AM24102	SOLID		99000438	AZ-101 (2)
Analytes Requested: AM24101 , AM24101E, AM24101T, CM24301 , CM24301E						

Final page for worklist # 33359

Alita Furon 5-2-00
Signature Date

Anna Z Cochran 5/3/00
Signature Date
Hy L. Lat 5/3/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33359-STD AM
File ID: 13a1332.CNF

Counted on: 5/ 2/ 0 @14:47
Detector: AEA13
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	1526.5	1526.5	301.436	301.436	12.000	6.361	6.000	3.105
2	1723.6	1723.6	255.633	255.627	10.000	4.661	5.000	2.150
3	32.1	32.1	205.635	205.253	34.000	104.146	17.000	36.154
4?	12.2	12.2	171.533	170.438	10.000	5.888	5.000	0.859
5?	5.2	5.2	150.534	149.686	26.000	4.663	13.000	0.188

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.					
1	Am241	0.450	5.479	5.471	0.008	0.03	47.51	1.3	205.5	0.926E-04
	Pu238		5.487	5.471	0.016				268.3	0.121E-03
2	Am243	0.478	5.266	5.260	0.006	0.02	50.48	1.3	207.4	0.934E-04
3	Th229	0.031	4.842	5.029	-.187	0.48	3.27	20.0	22.9	0.103E-04
	Pu242		4.891	5.029	-.138				13.3	0.600E-05
4		????		4.869			0.79	13.0		
5		????		4.773			0.84	12.6		
Totals:		0.958	<--valid peaks only-->				101.26			

DETECTOR CALIBRATION

Energy (MEV) = 4.084 + (0.0046)*Channel
Energy range (MeV): 4.084 TO 6.440
Efficiency = 0.2459 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	50719.0	100.000
Smoothed	50719.0	100.000
Composite fit	49386.4	97.373
Residuals	1332.6	2.627

Spectrum 13a1332.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 10679.8

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Raw Data Dump for AEA Spectrum: 13a1332.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
21	0.	2.	2.	1.	1.	1.	3.	3.	2.	3.
31	2.	3.	2.	4.	2.	1.	2.	3.	2.	1.
41	2.	3.	1.	5.	2.	3.	2.	1.	3.	5.
51	2.	0.	3.	2.	1.	4.	3.	5.	1.	0.
61	3.	3.	3.	2.	1.	3.	4.	2.	2.	3.
71	3.	4.	2.	2.	1.	2.	4.	4.	5.	5.
81	3.	3.	5.	7.	6.	2.	5.	5.	3.	8.
91	2.	4.	6.	9.	1.	3.	5.	4.	7.	2.
101	7.	5.	5.	3.	2.	5.	2.	4.	4.	4.
111	7.	4.	5.	6.	5.	4.	0.	2.	4.	6.
121	12.	9.	8.	5.	6.	5.	5.	6.	7.	7.
131	9.	8.	9.	6.	7.	8.	6.	4.	5.	14.
141	2.	8.	12.	14.	6.	11.	9.	8.	10.	13.
151	13.	10.	8.	11.	10.	11.	9.	14.	8.	7.
161	20.	12.	12.	10.	13.	19.	6.	20.	17.	10.
171	26.	22.	12.	20.	9.	12.	17.	14.	26.	13.
181	17.	20.	20.	17.	13.	21.	22.	17.	23.	22.
191	18.	26.	21.	22.	14.	26.	24.	20.	29.	25.
201	32.	39.	34.	24.	39.	37.	39.	24.	28.	25.
211	46.	42.	38.	50.	36.	48.	54.	57.	53.	57.
221	62.	66.	40.	63.	80.	69.	70.	93.	88.	97.
231	99.	117.	128.	144.	155.	195.	191.	194.	256.	268.
241	315.	369.	386.	499.	542.	663.	744.	818.	941.	1058.
251	1168.	1369.	1596.	1718.	1951.	1967.	1921.	1545.	1007.	515.
261	287.	228.	196.	173.	175.	170.	146.	120.	161.	129.
271	93.	116.	101.	85.	91.	86.	75.	89.	115.	123.
281	130.	151.	181.	176.	229.	222.	285.	303.	363.	369.
291	498.	595.	699.	774.	850.	973.	1193.	1278.	1448.	1582.
301	1666.	1791.	1577.	1268.	954.	632.	423.	334.	298.	259.
311	201.	163.	99.	96.	58.	41.	11.	3.	0.	0.
321	0.	0.	1.	0.	0.	0.	0.	1.	0.	0.
331	0.	0.	2.	0.	0.	2.	0.	0.	0.	0.
341	0.	0.	0.	1.	2.	1.	0.	2.	2.	0.
351	0.	1.	0.	0.	0.	4.	1.	1.	0.	0.
361	1.	2.	1.	0.	0.	0.	2.	0.	1.	0.
371	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

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 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 WL33359-BLNK_AM
 File ID: 14a1485.CNF

Counted on: 5/ 2/ 0 @14:48
 Detector: AEA14
 Geometry number: 1
 Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	1041.3	1041.3	254.119	254.119	12.000	4.165	6.000	2.729

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Exp.	Centroid Obs.	Diff.	FWHM	Count Rate	%err c/m @95	d/m	Activity uCi/ea
1	Am243	0.931	5.266	5.262	0.0040	0.02	25.40	1.8	109.2	0.492E-04
Totals:		0.931	<--valid peaks only-->				25.40			

DETECTOR CALIBRATION

Energy (MEV) = 4.093 + (0.0046)*Channel
 Energy range (MeV): 4.093 TO 6.449
 Efficiency = 0.2349 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	13092.0	100.000
Smoothed	13092.0	100.000
Composite fit	12193.8	93.139
Residuals	898.2	6.861

Analyzed by: _____

MB

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 6720.7

1
...1
.....1
.....1
.....1
.....

Raw Data Dump for AEA Spectrum: 14a1485.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.
21	0.	1.	0.	1.	1.	0.	1.	0.	0.	0.
31	0.	0.	0.	0.	1.	0.	1.	1.	1.	1.
41	1.	0.	0.	1.	1.	0.	1.	3.	1.	0.
51	0.	0.	1.	0.	0.	1.	1.	0.	2.	0.
61	0.	1.	1.	0.	1.	2.	0.	2.	2.	1.
71	1.	1.	0.	0.	0.	0.	1.	1.	1.	0.
81	2.	0.	2.	0.	1.	0.	0.	0.	1.	1.
91	1.	4.	1.	1.	1.	1.	0.	1.	2.	1.
101	0.	2.	0.	2.	1.	0.	0.	1.	2.	1.
111	1.	2.	1.	1.	2.	0.	2.	0.	1.	2.
121	1.	0.	1.	1.	0.	1.	1.	2.	2.	2.
131	1.	2.	0.	0.	1.	0.	0.	1.	2.	1.
141	0.	0.	3.	0.	2.	1.	1.	0.	2.	4.
151	1.	2.	2.	0.	0.	2.	5.	1.	2.	3.
161	1.	1.	2.	1.	2.	2.	1.	1.	1.	2.
171	4.	0.	1.	1.	1.	1.	2.	2.	1.	1.
181	4.	1.	1.	1.	0.	0.	1.	2.	2.	2.
191	4.	3.	2.	0.	2.	1.	4.	2.	4.	2.
201	5.	3.	4.	1.	4.	3.	7.	3.	1.	2.
211	8.	3.	2.	3.	1.	6.	7.	3.	10.	8.
221	7.	9.	6.	8.	9.	7.	17.	12.	17.	19.
231	33.	25.	45.	43.	50.	50.	49.	83.	89.	94.
241	132.	188.	185.	244.	283.	355.	398.	484.	523.	681.
251	887.	959.	1150.	1262.	1186.	1022.	701.	384.	220.	132.
261	79.	75.	79.	78.	73.	67.	64.	46.	26.	30.
271	13.	13.	8.	5.	1.	2.	0.	0.	1.	1.
281	1.	0.	0.	3.	1.	2.	0.	1.	2.	0.
291	3.	6.	3.	0.	5.	2.	5.	4.	7.	8.
301	3.	6.	1.	2.	0.	2.	1.	1.	2.	3.
311	1.	1.	2.	0.	1.	0.	0.	0.	0.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
331	0.	0.	0.	0.	0.	1.	1.	0.	1.	0.
341	0.	0.	0.	0.	0.	0.	1.	2.	0.	1.
351	2.	0.	2.	0.	3.	1.	1.	0.	2.	0.
361	2.	0.	1.	0.	2.	1.	0.	0.	0.	0.
371	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T797_AM
File ID: 15a1574.CNF

Counted on: 5/ 2/ 0 @14:48
Detector: AEA15
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	718.9	718.9	300.725	300.725	12.000	5.731	6.000	3.974
2	1011.4	1011.4	254.551	254.551	10.000	4.229	5.000	2.708

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate	%err c/m @95	d/m	Activity uCi/ea
1	Am241	0.409	5.479	5.477	0.002	0.03	19.18	2.0	84.8	0.382E-04
	Pu238		5.487	5.477	0.010				110.7	0.499E-04
2	Am243	0.533	5.266	5.265	0.001	0.02	25.00	1.8	105.0	0.473E-04
Totals:		0.942	<--valid peaks only-->				44.18			

DETECTOR CALIBRATION

Energy (MEV) = 4.094 + (0.0046)*Channel
Energy range (MeV): 4.094 TO 6.449
Efficiency = 0.2406 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	22509.0	100.000
Smoothed	22509.0	100.000
Composite fit	21209.2	94.226
Residuals	1299.8	5.774

Analyzed by: _____

MB

Spectrum 15a1574.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 6431.4

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Raw Data Dump for AEA Spectrum: 15a1574.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
21	1.	0.	0.	0.	1.	0.	2.	1.	2.	1.
31	1.	1.	2.	0.	1.	0.	0.	1.	0.	1.
41	0.	1.	0.	0.	1.	1.	0.	0.	0.	2.
51	1.	0.	1.	1.	0.	2.	0.	0.	2.	1.
61	0.	0.	0.	2.	1.	0.	3.	1.	1.	2.
71	0.	0.	2.	0.	1.	1.	2.	0.	0.	1.
81	1.	1.	2.	1.	0.	4.	2.	1.	0.	0.
91	1.	1.	1.	1.	0.	2.	2.	1.	0.	0.
101	1.	1.	0.	1.	3.	1.	1.	2.	0.	0.
111	2.	1.	0.	1.	0.	2.	2.	0.	2.	0.
121	2.	0.	3.	1.	4.	0.	3.	0.	2.	1.
131	0.	4.	1.	3.	0.	0.	4.	1.	2.	1.
141	1.	1.	2.	2.	1.	1.	1.	1.	3.	1.
151	2.	3.	1.	3.	0.	3.	0.	2.	3.	3.
161	0.	1.	3.	0.	2.	3.	4.	0.	1.	2.
171	2.	2.	4.	0.	2.	4.	2.	4.	4.	1.
181	0.	2.	1.	3.	4.	1.	3.	3.	3.	3.
191	4.	4.	5.	4.	3.	2.	4.	5.	4.	6.
201	4.	2.	7.	3.	0.	6.	3.	8.	4.	6.
211	6.	6.	4.	3.	7.	7.	8.	5.	11.	11.
221	14.	8.	10.	20.	14.	10.	12.	26.	15.	30.
231	25.	35.	41.	49.	43.	58.	55.	59.	74.	103.
241	120.	159.	191.	205.	243.	342.	382.	434.	524.	623.
251	752.	908.	1064.	1169.	1189.	1129.	822.	524.	253.	144.
261	96.	98.	74.	71.	79.	62.	61.	61.	51.	52.
271	38.	15.	22.	12.	12.	18.	20.	20.	25.	23.
281	41.	42.	46.	44.	44.	63.	91.	94.	136.	163.
291	192.	231.	249.	293.	356.	414.	475.	641.	740.	861.
301	854.	771.	648.	410.	323.	200.	177.	161.	136.	112.
311	86.	56.	53.	36.	20.	9.	2.	1.	0.	0.
321	0.	0.	0.	0.	0.	0.	1.	0.	1.	0.
331	0.	0.	0.	0.	0.	0.	2.	0.	0.	0.
341	0.	0.	0.	0.	0.	2.	2.	2.	0.	1.
351	1.	0.	0.	1.	1.	0.	3.	2.	2.	1.
361	3.	2.	0.	2.	2.	2.	2.	2.	6.	2.
371	4.	3.	2.	0.	1.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	4.	0.	1.	0.
431	0.	1.	1.	1.	1.	2.	3.	1.	0.	2.
441	1.	2.	0.	1.	0.	1.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	1.	0.	0.	0.	0.	0.	1.	0.	0.	1.
481	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T798_AM
 File ID: 16a1670.CNF

Counted on: 5/ 2/ 0 @14:49
 Detector: AEA16
 Geometry number: 1
 Count time: 28805. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	882.8	882.8	300.979	300.979	12.000	5.727	6.000	3.573
2	990.0	990.0	254.906	254.905	12.000	4.212	6.000	2.604

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.472	5.479 5.471 0.008	0.03	24.30	1.8	110.0	0.495E-04
	Pu238		5.487 5.471 0.016				143.6	0.647E-04
2	Am243	0.481	5.266 5.259 0.007	0.02	24.77	1.8	106.4	0.479E-04
Totals:		0.954	<--valid peaks only-->		49.07			

DETECTOR CALIBRATION

Energy (MEV) = 4.086 + (0.0046)*Channel
 Energy range (MeV): 4.086 TO 6.441
 Efficiency = 0.2351 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	24703.0	100.000
Smoothed	24703.0	100.000
Composite fit	23559.6	95.372
Residuals	1143.4	4.628

Analyzed by: _____

MB

Spectrum 16a1670.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 6052.1

[illegible]

Raw Data Dump for AEA Spectrum: 16a1670.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
21	0.	0.	0.	1.	0.	1.	1.	0.	0.	0.
31	2.	0.	0.	0.	1.	0.	0.	0.	2.	0.
41	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.
51	4.	2.	0.	1.	0.	0.	2.	1.	1.	1.
61	2.	1.	1.	0.	0.	0.	1.	0.	1.	0.
71	0.	0.	0.	0.	1.	0.	3.	1.	1.	2.
81	1.	0.	0.	0.	0.	0.	0.	0.	2.	1.
91	1.	0.	1.	1.	0.	0.	0.	2.	1.	0.
101	0.	1.	1.	0.	1.	0.	0.	2.	2.	0.
111	2.	0.	2.	1.	2.	0.	3.	2.	0.	2.
121	0.	0.	1.	0.	0.	2.	1.	1.	1.	0.
131	0.	0.	2.	1.	1.	1.	0.	0.	2.	0.
141	3.	1.	1.	1.	2.	4.	1.	1.	0.	0.
151	2.	3.	3.	2.	2.	0.	3.	2.	2.	2.
161	2.	3.	2.	1.	0.	4.	2.	2.	2.	3.
171	0.	3.	0.	6.	3.	2.	4.	3.	2.	0.
181	2.	2.	1.	0.	3.	3.	3.	1.	2.	3.
191	3.	2.	9.	2.	4.	1.	2.	0.	6.	5.
201	4.	5.	6.	2.	1.	2.	10.	2.	5.	6.
211	3.	5.	1.	7.	12.	8.	6.	10.	3.	6.
221	8.	7.	9.	10.	18.	18.	10.	15.	13.	31.
231	34.	31.	41.	45.	52.	58.	55.	84.	80.	97.
241	133.	148.	165.	210.	262.	326.	374.	420.	457.	530.
251	670.	781.	1029.	1100.	1193.	1102.	931.	627.	322.	167.
261	116.	93.	89.	78.	69.	89.	55.	64.	53.	62.
271	51.	33.	17.	16.	15.	22.	27.	29.	38.	35.
281	35.	49.	45.	69.	78.	104.	108.	130.	175.	200.
291	255.	282.	362.	368.	456.	571.	585.	734.	830.	1003.
301	1066.	969.	837.	561.	397.	279.	250.	179.	139.	150.
311	104.	81.	62.	35.	28.	12.	2.	2.	1.	0.
321	0.	0.	0.	0.	0.	1.	1.	0.	0.	0.
331	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
341	0.	0.	0.	1.	2.	0.	1.	2.	1.	0.
351	0.	1.	0.	0.	0.	0.	2.	2.	2.	2.
361	1.	5.	3.	1.	1.	1.	1.	5.	4.	4.
371	2.	5.	2.	3.	0.	1.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.
401	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
411	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	1.	1.	1.	1.	0.
431	2.	1.	0.	3.	0.	1.	2.	0.	1.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T799
File ID: 17a1709.CNF

Counted on: 5/ 2/ 0 @14:49
Detector: AEA17
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	679.7	679.7	301.247	301.247	14.000	6.568	7.000	3.552
2	869.8	869.8	255.004	255.001	12.000	4.853	6.000	2.529

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.436	5.479 5.480 -0.001	10.03	20.55	2.0	91.5	0.412E-04
	Pu238		5.487 5.480 0.007				119.4	0.538E-04
2	Am243	0.517	5.266 5.267 -0.001	10.02	24.34	1.8	102.9	0.463E-04
Totals:		0.953	<--valid peaks only-->		44.90			

DETECTOR CALIBRATION

Energy(MEV) = 4.094 + (0.0046)*Channel
Energy range (MeV): 4.094 TO 6.449
Efficiency = 0.2390 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	22616.0	100.000
Smoothed	22616.5	100.002
Composite fit	21551.5	95.293
Residuals	1064.5	4.707

Analyzed by: _____

MB

Spectrum 17a1709.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.:

5582.3

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Raw Data Dump for AEA Spectrum: 17a1709.CNF

1	0.	0.	0.	0.	1.	1.	0.	0.	0.	1.
11	0.	0.	0.	0.	1.	0.	0.	1.	0.	1.
21	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.
31	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.
41	0.	1.	0.	0.	0.	0.	0.	1.	0.	0.
51	1.	0.	0.	0.	0.	2.	0.	0.	0.	0.
61	0.	0.	0.	2.	0.	1.	0.	2.	1.	1.
71	1.	1.	1.	2.	0.	1.	0.	1.	0.	0.
81	1.	0.	3.	0.	0.	2.	2.	0.	0.	0.
91	0.	1.	0.	0.	0.	0.	1.	0.	0.	4.
101	0.	3.	0.	0.	0.	0.	2.	0.	3.	3.
111	0.	0.	3.	0.	2.	2.	1.	1.	1.	2.
121	2.	2.	0.	2.	1.	0.	3.	2.	2.	1.
131	0.	2.	0.	1.	3.	2.	1.	1.	0.	2.
141	2.	0.	2.	1.	2.	1.	2.	0.	1.	2.
151	3.	3.	0.	3.	1.	3.	2.	2.	2.	2.
161	2.	2.	8.	1.	2.	3.	2.	3.	3.	5.
171	3.	3.	4.	1.	4.	3.	3.	2.	6.	3.
181	5.	1.	7.	0.	2.	4.	5.	3.	5.	5.
191	4.	7.	2.	4.	7.	4.	4.	4.	5.	4.
201	8.	3.	8.	11.	2.	7.	4.	14.	12.	7.
211	5.	17.	7.	8.	7.	9.	11.	17.	17.	13.
221	15.	14.	14.	16.	23.	19.	23.	27.	27.	36.
231	51.	46.	49.	49.	60.	76.	69.	102.	96.	117.
241	144.	153.	190.	223.	279.	328.	383.	449.	462.	552.
251	650.	765.	873.	955.	1005.	962.	854.	635.	374.	222.
261	105.	78.	89.	67.	76.	68.	65.	63.	70.	52.
271	28.	51.	29.	32.	17.	20.	18.	21.	36.	36.
281	48.	40.	48.	72.	76.	92.	109.	124.	161.	179.
291	189.	269.	296.	363.	368.	440.	532.	589.	671.	722.
301	776.	758.	705.	537.	391.	266.	196.	165.	126.	103.
311	77.	70.	48.	37.	19.	17.	5.	0.	1.	0.
321	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.
331	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.
341	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
351	0.	0.	1.	1.	1.	0.	0.	0.	1.	2.
361	4.	2.	5.	2.	2.	1.	4.	2.	3.	5.
371	6.	2.	2.	1.	1.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
421	1.	0.	0.	0.	2.	0.	0.	1.	0.	0.
431	0.	0.	1.	1.	0.	0.	0.	1.	2.	0.
441	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T800_AM
 File ID: 18a1868.CNF

Counted on: 5/ 2/ 0 @14:49
 Detector: AEA18
 Geometry number: 1
 Count time: 28803. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	642.7	642.7	298.181	298.181	14.000	5.893	7.000	3.101
2	902.8	902.8	251.911	251.908	12.000	4.263	6.000	2.334

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.403	5.479	5.472	0.007	0.03	18.97	2.1	89.2	0.402E-04
	Pu238		5.487	5.472	0.015				116.4	0.524E-04
2	Am243	0.506	5.266	5.259	0.007	0.02	23.84	1.8	106.4	0.479E-04
Totals:		0.909	<--valid peaks only-->				42.82			

DETECTOR CALIBRATION

Energy (MEV) = 4.100 + (0.0046)*Channel
 Energy range (MeV): 4.100 TO 6.456
 Efficiency = 0.2264 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	22601.0	100.000
Smoothed	22601.5	100.002
Composite fit	20553.5	90.941
Residuals	2047.5	9.059

Analyzed by: _____

MB

Spectrum 18a1868.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 5973.0

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Raw Data Dump for AEA Spectrum: 18a1868.CNF

1	0.	0.	0.	1.	1.	2.	0.	0.	1.	1.
11	1.	0.	0.	0.	2.	0.	0.	2.	0.	0.
21	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.
31	0.	0.	1.	0.	2.	0.	1.	1.	0.	0.
41	3.	2.	0.	0.	0.	0.	0.	0.	0.	0.
51	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.
61	1.	1.	0.	0.	0.	0.	2.	1.	2.	1.
71	0.	1.	0.	1.	1.	1.	0.	0.	3.	1.
81	1.	2.	0.	1.	0.	0.	0.	0.	1.	1.
91	0.	0.	2.	0.	1.	4.	0.	0.	0.	2.
101	1.	4.	2.	0.	0.	1.	2.	0.	0.	2.
111	3.	0.	2.	1.	0.	0.	2.	0.	1.	1.
121	0.	2.	3.	0.	0.	2.	1.	2.	2.	0.
131	2.	2.	5.	3.	3.	0.	0.	2.	3.	4.
141	2.	8.	4.	3.	4.	2.	0.	0.	4.	1.
151	1.	2.	1.	1.	4.	3.	6.	2.	3.	5.
161	3.	2.	3.	3.	5.	3.	4.	0.	7.	3.
171	5.	0.	5.	2.	6.	3.	6.	11.	3.	8.
181	7.	5.	9.	11.	8.	10.	13.	9.	11.	11.
191	14.	14.	16.	9.	10.	14.	16.	13.	11.	16.
201	19.	12.	18.	17.	18.	15.	18.	21.	20.	20.
211	22.	33.	23.	28.	25.	22.	32.	29.	25.	36.
221	42.	38.	43.	34.	49.	47.	55.	61.	64.	71.
231	88.	91.	93.	84.	96.	108.	123.	139.	151.	184.
241	217.	235.	312.	379.	385.	458.	478.	607.	763.	946.
251	998.	1052.	1034.	871.	559.	280.	160.	109.	95.	84.
261	76.	79.	88.	76.	68.	79.	58.	49.	57.	46.
271	48.	27.	32.	42.	36.	50.	56.	48.	54.	71.
281	81.	80.	83.	116.	107.	141.	173.	196.	222.	280.
291	303.	348.	385.	450.	562.	613.	698.	728.	755.	668.
301	430.	314.	222.	158.	147.	110.	100.	90.	59.	57.
311	40.	19.	10.	4.	3.	0.	0.	1.	0.	2.
321	0.	0.	1.	1.	1.	0.	0.	0.	0.	0.
331	1.	0.	0.	1.	1.	0.	0.	1.	0.	1.
341	1.	1.	1.	0.	0.	1.	0.	1.	1.	0.
351	2.	3.	0.	1.	0.	2.	0.	2.	2.	4.
361	1.	6.	2.	4.	5.	9.	2.	4.	2.	3.
371	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
411	1.	0.	0.	0.	0.	0.	0.	0.	0.	1.
421	0.	0.	0.	1.	1.	0.	0.	1.	2.	0.
431	2.	1.	2.	3.	2.	1.	1.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T801_AM
 File ID: 19a1997.CNF

Counted on: 5/ 2/ 0 @14:50
 Detector: AEA19
 Geometry number: 1
 Count time: 28800. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	601.3	601.3	300.320	300.320	14.000	5.950	7.000	3.266
2	859.7	859.7	254.743	254.740	12.000	4.513	6.000	2.371

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.402	5.479	5.467	0.012	0.03	17.52	2.1	79.1	0.356E-04
	Pu238		5.487	5.467	0.020				103.2	0.465E-04
2	Am243	0.539	5.266	5.257	0.009	0.02	23.49	1.8	100.7	0.453E-04
Totals:		0.941	<--valid peaks only-->				41.01			

DETECTOR CALIBRATION

Energy(MEV) = 4.085 + (0.0046)*Channel
 Energy range (MeV): 4.085 TO 6.441
 Efficiency = 0.2357 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	20912.0	100.000
Smoothed	20912.0	100.000
Composite fit	19686.6	94.140
Residuals	1225.4	5.860

Analyzed by: _____

MB

Spectrum 19a1997.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 5587.1

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Raw Data Dump for AEA Spectrum: 19a1997.CNF

1	0.	0.	1.	0.	0.	0.	1.	0.	0.	1.
11	0.	0.	0.	0.	0.	0.	0.	0.	2.	0.
21	0.	0.	0.	1.	0.	0.	0.	1.	1.	0.
31	0.	0.	1.	0.	1.	1.	0.	0.	1.	0.
41	0.	0.	0.	1.	1.	1.	0.	0.	1.	1.
51	0.	0.	2.	0.	0.	0.	1.	2.	0.	0.
61	0.	0.	1.	1.	0.	1.	0.	0.	0.	0.
71	2.	0.	1.	1.	0.	2.	0.	0.	2.	0.
81	1.	0.	0.	1.	0.	0.	0.	0.	0.	0.
91	0.	0.	2.	3.	0.	1.	1.	0.	1.	4.
101	0.	0.	0.	1.	1.	0.	0.	1.	2.	0.
111	1.	0.	3.	0.	0.	0.	0.	1.	2.	3.
121	2.	2.	1.	2.	1.	0.	2.	1.	2.	1.
131	0.	1.	0.	0.	2.	1.	2.	0.	1.	0.
141	2.	0.	2.	1.	1.	2.	3.	3.	2.	1.
151	4.	0.	0.	1.	3.	1.	2.	0.	3.	2.
161	4.	0.	0.	4.	2.	0.	1.	3.	2.	2.
171	3.	2.	1.	1.	3.	4.	4.	4.	4.	5.
181	4.	3.	3.	3.	5.	5.	3.	4.	9.	3.
191	2.	5.	7.	4.	8.	7.	7.	6.	6.	6.
201	8.	12.	11.	14.	6.	11.	17.	11.	9.	9.
211	9.	14.	8.	12.	18.	14.	17.	13.	16.	16.
221	24.	9.	23.	29.	23.	24.	24.	45.	35.	45.
231	38.	50.	46.	49.	66.	64.	70.	78.	94.	129.
241	169.	156.	195.	242.	257.	325.	353.	417.	491.	607.
251	678.	743.	861.	962.	995.	954.	799.	506.	276.	136.
261	97.	93.	74.	69.	68.	59.	77.	49.	54.	40.
271	43.	37.	30.	22.	26.	19.	31.	28.	34.	43.
281	59.	59.	58.	58.	64.	89.	117.	135.	148.	174.
291	206.	273.	265.	313.	352.	408.	471.	574.	623.	727.
301	683.	583.	492.	351.	202.	154.	135.	106.	97.	88.
311	60.	49.	36.	13.	14.	6.	4.	0.	0.	0.
321	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
331	1.	0.	0.	0.	1.	0.	0.	0.	0.	0.
341	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
351	1.	2.	1.	0.	1.	1.	1.	1.	4.	2.
361	2.	4.	4.	1.	4.	3.	1.	4.	5.	4.
371	3.	3.	1.	0.	0.	1.	0.	1.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	1.	1.	0.	0.	0.	0.	0.
421	2.	0.	1.	1.	1.	0.	0.	1.	0.	0.
431	0.	2.	1.	1.	1.	1.	1.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
481	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T802 AM
 File ID: 20a2069.CNF

Counted on: 5/ 2/ 0 @14:50
 Detector: AEA20
 Geometry number: 1
 Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	693.5	693.5	300.244	300.244	14.000	6.385	7.000	3.041
2	854.6	854.6	253.850	253.843	12.000	4.981	6.000	2.277

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Am241	0.448	5.479	5.480	-.0010	10.03	21.83	1.9	103.6	0.467E-04
	Pu238		5.487	5.480	0.007				135.3	0.609E-04
2	Am243	0.524	5.266	5.267	-.0010	10.02	25.57	1.8	115.3	0.519E-04
Totals:		0.972	<--valid peaks only-->				47.40			

DETECTOR CALIBRATION

Energy (MEV) = 4.099 + (0.0046)*Channel
 Energy range (MeV): 4.099 TO 6.454
 Efficiency = 0.2241 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	23411.0	100.000
Smoothed	23411.5	100.002
Composite fit	22752.3	97.187
Residuals	658.7	2.813

Analyzed by: _____

MB

Spectrum 20a2069.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.:

5985.8

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Raw Data Dump for AEA Spectrum: 20a2069.CNF

1	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
21	1.	0.	0.	0.	1.	0.	0.	0.	0.	0.
31	1.	0.	1.	1.	0.	0.	0.	0.	0.	2.
41	1.	0.	0.	0.	0.	0.	1.	0.	0.	0.
51	0.	1.	0.	0.	0.	0.	1.	1.	0.	0.
61	0.	0.	0.	0.	0.	2.	0.	0.	1.	0.
71	1.	1.	0.	0.	1.	0.	0.	1.	0.	0.
81	0.	0.	1.	0.	0.	1.	0.	2.	0.	0.
91	2.	0.	0.	0.	0.	1.	0.	0.	0.	0.
101	2.	0.	0.	0.	0.	0.	1.	1.	0.	0.
111	0.	1.	0.	0.	0.	1.	1.	1.	2.	0.
121	0.	1.	0.	1.	1.	0.	1.	1.	1.	0.
131	2.	1.	0.	0.	0.	0.	0.	2.	0.	2.
141	1.	2.	0.	0.	3.	1.	2.	1.	0.	1.
151	0.	3.	2.	0.	1.	1.	1.	0.	1.	3.
161	0.	2.	3.	2.	0.	0.	2.	1.	2.	3.
171	3.	1.	3.	1.	2.	1.	2.	1.	1.	3.
181	1.	4.	1.	3.	1.	1.	0.	2.	1.	2.
191	2.	2.	1.	3.	4.	1.	1.	3.	2.	0.
201	4.	9.	5.	5.	6.	10.	5.	5.	10.	9.
211	3.	6.	6.	8.	9.	11.	11.	11.	24.	13.
221	19.	19.	20.	18.	22.	16.	28.	32.	36.	40.
231	54.	45.	38.	72.	90.	104.	105.	118.	148.	202.
241	191.	226.	262.	304.	374.	430.	491.	568.	657.	680.
251	806.	846.	910.	941.	992.	814.	574.	337.	179.	119.
261	99.	82.	71.	76.	63.	58.	58.	48.	49.	44.
271	29.	28.	20.	34.	36.	34.	34.	39.	50.	32.
281	76.	74.	98.	88.	106.	131.	139.	184.	186.	244.
291	284.	334.	385.	446.	505.	536.	612.	674.	711.	776.
301	802.	696.	574.	365.	245.	169.	166.	132.	109.	78.
311	72.	46.	37.	21.	8.	5.	5.	0.	0.	0.
321	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
331	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
341	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
351	1.	1.	0.	2.	0.	0.	1.	1.	0.	3.
361	0.	5.	2.	3.	2.	3.	0.	3.	3.	5.
371	5.	3.	0.	3.	0.	0.	0.	0.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	2.	1.	0.	1.	1.	1.	0.	0.	1.
431	1.	1.	4.	0.	1.	1.	0.	1.	3.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

WORKBOOK PAGE: STD1

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³⁴⁰ 4/21/00 LIQUID

				STD
Type	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0.45
STD	Sample Volume in mL (SS)	1.000	Am 243 AEA Frac. (C243)	0.478
Work List	Sample D.F. (DF)	1	Cm 243/244 AEA Frac. (Cm)	0
33359	Tracer Volume in mL (SPKV)	0.200	Total AT Counts	4281
Post Code	Digest D.F. (DDF)	1.000	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07
Unit	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	47.51
LIQUID	Detector Number	13	Am 243 cpm	50.48
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001468	Standard Book No	46B57	AEA Count Time (min)	480
Result	Standard Value in $\mu\text{Ci/mL}$	1.070E-04	Am 241 $\mu\text{Ci/L}$ =	9.5839E-02
0			Cm 243/244 $\mu\text{Ci/L}$ =	< 1.1176E-02
Sample Prep				
N/A				
Sample Number	Am-241 $\mu\text{Ci/L}$ = (C241 * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
WL33359	Cm-243/244 $\mu\text{Ci/L}$ = (Cm * Am-243 Tracer Value * SPKV * DF * DDF * (1000mL/L)) / (C243 * SS * (2220000dpm/ μCi))			
Instrument Code				
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
SZC				
Chemist				
JFR	Am 241 $\mu\text{Ci/mL}$ =	9.58E-05	DETECTION LEVELS in $\mu\text{Ci/mL}$	
Analyte	Relative Counting Error =	1.8%		
AKL				Am 241
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			1.12E-05
05/03/2000	Cm 243/244 $\mu\text{Ci/mL}$	< 1.12E-05		
Relative Counting Error	=	100.0%	Cm 243/244	
05/02/2000	Am 243 Tracer Recovery	= 95.3%	1.12E-05	
Am 241 Time				
09:15 AM				
Sample Room				
AZ-101				

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

STANDARD.WB1 REV 1.2

953103ML

WORKBOOK PAGE: BLANK2

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ^{3/4} _{10/1/00} LIQUID / SO BLNK-PREP

Type	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0	
BLNK-PREP	Sample Volume in mL (SS)	0.200	Am 243 AEA Frac. (C243)	0.931	
Webb List	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac. (Cm)	0	
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1102	
Tracer Code	Digest Grams of Solids/L (Dg/L)	4.900	AT Count Time (min) (TC)	30	
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07	
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	0	
SOLID	Detector Number	13	Am 243 cpm	25.4	
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0	
20001468			AEA Count Time (min)	480	
ReRun			Am 241 $\mu\text{Ci/g}$ =	< 3.2482E+00	
0			Cm 243/244 $\mu\text{Ci/g}$ =	< 3.2482E+00	
Sample Prep					
N/A					
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
WL33359	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
Instrument Code	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
WB27810	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
Prepared By	NOTE: Am-241 Result is a LESS THAN Value.				
SZC	Am241 $\mu\text{Ci/g}$ =	< 3.25E+00	DETECTION LEVELS in $\mu\text{Ci/g}$		
Count	Relative Counting Error =	100.0%			
JFR	NOTE: Cm-243/244 Result is a LESS THAN Value.			Am 241	
Analyst	Cm 243/244 $\mu\text{Ci/g}$ =	< 3.25E+00		3.25E+00	
AKL	Relative Counting Error =	100.0%		Cm 243/244	
Date Complete	Am 243 Tracer Recovery =	95.4%		3.25E+00	
05/03/2000					
Instr/L Date					
05/02/2000					
Amplifier					
09:15 AM					
Sample Point					
AZ-101					

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

BLANK.WB1 REV 1.2

853103ML

WORKBOOK PAGE: SAM3

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-8) ³ ₁₄ _{11/21/00} LIQUID / SO

				SAMPLE	
TYPE	Date Counted	MAY-02-2000	Am 241 AEA Frac.	(C241)	0.409
SAMPLE	Sample Volume in mL (SS)	0.200	Am 243 AEA Frac.	(C243)	0.533
Work Unit	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac.	(Cm)	0
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts		1905
Test Code	Digest Grams of Solids/L (Dg/L)	4.900	AT Count Time (min) (TC)		30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)		0.07
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm		19.18
SOLID	Detector Number	13	Am 243 cpm		25
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm		0
20001468			AEA Count Time (min)		480
ReRun			Am 241 $\mu\text{Ci/g}$ =		4.4280E+01
2			Cm 243/244 $\mu\text{Ci/g}$ =	<	5.7283E+00
Sample Prep					
FUSIONHC					
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
S00T000797	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
Instrument Code					
WB27810	Relative Counting Error = Square Root of [(1 / (Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
SZC					
Chemist					
JFR	Am241 $\mu\text{Ci/g}$ =	4.43E+01	DETECTION LEVELS in $\mu\text{Ci/g}$		
Analyst	Relative Counting Error =	2.7%			
AKL			Am 241 5.73E+00		
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.				
05/03/2000	Cm 243/244 $\mu\text{Ci/g}$	< 5.73E+00	Cm 243/244 5.73E+00		
Analysis Date	Relative Counting Error =	100.0%			
05/02/2000	Am 243 Tracer Recovery =	94.5%			
Analysis Time					
09:15 AM					
Sample Point					
AZ-101					

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

SAMPLE.WB1 REV 1.2

953103ML

WORKBOOK PAGE: SAM4

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ⁴⁰ ^{12/10} LIQUID / SO

TYPE	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0.472
SAMPLE	Sample Volume in mL (SS)	0.200	Am 243 AEA Frac. (C243)	0.481
	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac. (Cm)	0
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	2045
	Digest Grams of Solids/L (Dg/L)	5.180	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07
	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	24.3
SOLID	Detector Number	13	Am 243 cpm	24.77
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001468			AEA Count Time (min)	480
Rerun			Am 241 $\mu\text{Ci/g}$ =	5.3564E+01
2			Cm 243/244 $\mu\text{Ci/g}$ =	< 6.1976E+00

Sample Prep	
FUSIONHC	
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]
S00T000798	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]
Tracer Book No.	
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100
Am 243 Tracer Recovery	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV

SZC				
On-site				
JFR	Am241 $\mu\text{Ci/g}$	=	5.36E+01	DETECTION LEVELS in $\mu\text{Ci/g}$
Analyst	Relative Counting Error	=	2.6%	
AKL				Am 241
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			6.20E+00
05/03/2000	Cm 243/244 $\mu\text{Ci/g}$	<	6.20E+00	
Analysis Date	Relative Counting Error	=	100.0%	Cm 243/244
05/02/2000	Am 243 Tracer Recovery	=	91.6%	6.20E+00
Analysis Time				
09:15 AM				
Sample Point				
AZ-101				

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

SAMPLE.WB1 REV 1.2

953103ML

WORKBOOK PAGE: SAM5

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B.0) ³ ¹⁰ ¹⁰ ¹⁰ LIQUID / SO				SAMPLE
Type	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0.436
SAMPLE	Sample Volume in mL (SS)	0.200	Am 243 AEA Frac. (C243)	0.517
Work List	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac. (Cm)	0
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1924
Test Code	Digest Grams of Solids/L (Dg/L)	4.840	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	20.55
SOLID	Detector Number	13	Am 243 cpm	24.34
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001468			AEA Count Time (min)	480
Recon			Am 241 $\mu\text{Ci/g}$ =	4.9267E+01
2			Cm 243/244 $\mu\text{Ci/g}$ =	< 6.1029E+00
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000799	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Prep Code				
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
SZC				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ =	4.93E+01	DETECTION LEVELS in $\mu\text{Ci/g}$	
Analyte	Relative Counting Error =	2.7%	Am 241	6.10E+00
AKL			Cm 243/244	6.10E+00
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.			
05/03/2000	Cm 243/244 $\mu\text{Ci/g}$	< 6.10E+00		
Analysis Date	Relative Counting Error =	100.0%		
05/02/2000	Am 243 Tracer Recovery =	92.6%		
Analysis Time				
09:15 AM				
Sample Point				
AZ-101				

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00
SAMPLE.WB1 REV 1.2	953103ML		

WORKBOOK PAGE: SAM6

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-D) ³ ₁₀₀ LIQUID / SO

				SAMPLE	
Type	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0.403	
SAMPLE	Sample Volume in mL (SS)	0.100	Am 243 AEA Frac. (C243)	0.506	
Work LB	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac. (Cm)	0	
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1919	
Test Code	Digest Grams of Solids/L (Dg/L)	5.170	AT Count Time (min) (TC)	30	
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07	
Mainx	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	18.97	
SOLID	Detector Number	13	Am 243 cpm	23.84	
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0	
20001468			AEA Count Time (min)	480	
Recon			Am 241 $\mu\text{Ci/g}$ =	8.7117E+01	
2			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.1960E+01	
Sample Prep					
FUSIONHC					
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
S00T000800	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
Instrument Code					
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
SZC					
Chemist					
JFR	Am241 $\mu\text{Ci/g}$ =	8.71E+01	DETECTION LEVELS in $\mu\text{Ci/g}$		
Analyst	Relative Counting Error =	2.8%			
AKL			Am 241		
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		1.20E+01		
05/03/2000	Cm 243/244 $\mu\text{Ci/g}$	< 1.20E+01	Cm 243/244		
Analysis Date	Relative Counting Error =	100.0%	1.20E+01		
05/02/2000	Am 243 Tracer Recovery =	90.4%			
Analysis Time					
09:15 AM					
Sample Point					
AZ-101					

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

SAMPLE.WB1 REV 1.2

953103ML

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WORKBOOK PAGE: SAM7

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ^{3 (4) 2/2/00} LIQUID / SO

				SAMPLE	
Type	Date Counted	MAY-02-2000	Am 241 AEA Frac.	(C241)	0.402
SAMPLE	Sample Volume in mL (SS)	0.100	Am 243 AEA Frac.	(C243)	0.539
Work List	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac.	(Cm)	0
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts		1882
101000	Digest Grams of Solids/L (Dg/L)	5.220	AT Count Time (min) (TC)		30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)		0.07
Matrix	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm		17.52
SOLID	Detector Number	13	Am 243 cpm		23.49
Batch Number	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm		0
20001468			AEA Count Time (min)		480
Room			Am 241 $\mu\text{Ci/g}$ =		8.0799E+01
2			Cm 243/244 $\mu\text{Ci/g}$ =	<	1.0645E+01
Sample Prep					
FUSIONHC					
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
S00T000801	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]				
Instrument Code					
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100				
By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV				
SZC					
Chemist					
JFR	Am241 $\mu\text{Ci/g}$ = 8.08E+01		DETECTION LEVELS in $\mu\text{Ci/g}$		
AKL	Relative Counting Error = 2.8%				
Am 241			Am 241		
05/03/2000	NOTE: Cm-243/244 Result is a LESS THAN Value.		1.06E+01		
05/02/2000	Cm 243/244 $\mu\text{Ci/g}$ < 1.06E+01		Cm 243/244		
05/02/2000	Relative Counting Error = 100.0%		1.06E+01		
05/02/2000	Am 243 Tracer Recovery = 94.4%				
09:15 AM					
AZ-101					

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00
SAMPLE.WB1 REV 1.2	953103ML		

WORKBOOK PAGE: SAM8

Am 241 and Cm 243/244: LA-953-103 (VOID) or LA-953-104(B-0) ³ ₄₀ LIQUID / SO

				SAMPLE
DATE	Date Counted	MAY-02-2000	Am 241 AEA Frac. (C241)	0.448
SAMPLE	Sample Volume in mL (SS)	0.100	Am 243 AEA Frac. (C243)	0.524
WORK LIST	Sample D.F. (DF)	1111	Cm 243/244 AEA Frac. (Cm)	0
33359	Tracer Volume in mL (SPKV)	0.100	Total AT Counts	1859
1000	Digest Grams of Solids/L (Dg/L)	5.040	AT Count Time (min) (TC)	30
@AM24102	Tracer Book No.	10B59	Background in cpm (Bkg)	0.07
MIX	Am-243 Tracer Value (dpm/mL)	1130	Am 241 cpm	21.83
SOLID	Detector Number	13	Am 243 cpm	25.57
BATCH NUMBER	Detector Efficiency (DetEff)	0.3166	Cm 243/244 cpm	0
20001468			AEA Count Time (min)	480
Run			Am 241 $\mu\text{Ci/g}$ =	9.5930E+01
2			Cm 243/244 $\mu\text{Ci/g}$ =	< 1.1810E+01
Sample Prep				
FUSIONHC				
Sample Number	Am-241 $\mu\text{Ci/g}$ = (C241) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
S00T000802	Cm-243/244 $\mu\text{Ci/g}$ = (Cm) (Am-243 Tracer Value) (SPKV) (1000mL/L) (DF) / [(C243) (SS) (D g/L) (2220000dpm/ μCi)]			
Instrument Code				
WB27810	Relative Counting Error = Square Root of [(1/(Am-243 cpm * min)) + (1 / (Am-241 or Cm-243/244 cpm * min))] * 1.96 * 100			
Prepared By	Am 243 Tracer Recovery = (Total AT Counts / TC - Bkg) * (1/DetEff) * C243 * 100 / Am-243 Tracer Value * SPKV			
SZC				
Chemist				
JFR	Am241 $\mu\text{Ci/g}$ = 9.59E+01		DETECTION	
Analyst	Relative Counting Error = 2.6%		LEVELS	
AKL			in $\mu\text{Ci/g}$	
Date Complete	NOTE: Cm-243/244 Result is a LESS THAN Value.		Am 241	
05/03/2000	Cm 243/244 $\mu\text{Ci/g}$ < 1.18E+01		1.18E+01	
Analysis Date	Relative Counting Error = 100.0%		Cm 243/244	
05/02/2000	Am 243 Tracer Recovery = 90.7%		1.18E+01	
Analysis Time				
09:15 AM				
Sample Point				
AZ-101				

Analyst:	AKL	Date:	05/03/2000
Signature of Chemist:	JFR	Date:	3 May 00

SAMPLE.WB1 REV 1.2

953103ML

LABCORE Completed Worklist Report for Worklist# 33256

Analyst: ak1

Instrument: AB14

Book#: _____

Method: LA-953-104 Rev/Mod _____

Worklist Comment: AZ-101 (2), @PU23902 skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@PU23902 PU23901	SOLID	1.26E-04	1.19E-4	94.444	% Recovery
1	STD		0		@PU23902 PU23901T	SOLID	100.	9.51E+01	95.100	% Recovery
1	STD		0		@PU23902 PU23901E	SOLID	1.0	1.72E+00	1.720	% Ct. Error
2	BLNK-PREP		0		@PU23902 PU23901	SOLID	1	2.33E+0	2.330	uCi/g
2	BLNK-PREP		0		@PU23902 PU23901T	SOLID	100	9.97E+01	99.700	% Recovery
2	BLNK-PREP		0		@PU23902 PU23901E	SOLID	1.00	6.43E+00	6.430	uCi/g
2	BLNK-PREP		0		@PU23902 PU23801	SOLID	1	<1.46E+0		uCi/g
2	BLNK-PREP		0		@PU23902 PU23801E	SOLID	1	1.00E+02	100.000	uCi/g
3	SAMPLE	S00T000797	0	F	@PU23902 PU23901	SOLID	N/A	4.32E+00	1.510	uCi/g
3	SAMPLE	S00T000797	0	F	@PU23902 PU23901T	SOLID	N/A	1.03E+02		% Recovery
3	SAMPLE	S00T000797	0	F	@PU23902 PU23901E	SOLID	N/A	4.85E+00		% Ct. Error
3	SAMPLE	S00T000797	0	F	@PU23902 PU23801	SOLID	N/A	< 1.51E+00	1.510	uCi/g
3	SAMPLE	S00T000797	0	F	@PU23902 PU23801E	SOLID	N/A	1.00E+02		% Ct. Error
4	SAMPLE	S00T000798	0	F	@PU23902 PU23901	SOLID	N/A	3.03E+00	0.673	uCi/g
4	SAMPLE	S00T000798	0	F	@PU23902 PU23901T	SOLID	N/A	1.09E+02		% Recovery
4	SAMPLE	S00T000798	0	F	@PU23902 PU23901E	SOLID	N/A	3.47E+00		% Ct. Error
4	SAMPLE	S00T000798	0	F	@PU23902 PU23801	SOLID	N/A	< 6.73E-01	0.673	uCi/g
4	SAMPLE	S00T000798	0	F	@PU23902 PU23801E	SOLID	N/A	1.00E+02		% Ct. Error
5	SAMPLE	S00T000799	0	F	@PU23902 PU23901	SOLID	N/A	3.47E+00	0.802	uCi/g
5	SAMPLE	S00T000799	0	F	@PU23902 PU23901T	SOLID	N/A	9.91E+01		% Recovery
5	SAMPLE	S00T000799	0	F	@PU23902 PU23901E	SOLID	N/A	3.55E+00		% Ct. Error
5	SAMPLE	S00T000799	0	F	@PU23902 PU23801	SOLID	N/A	1.59E+00	0.802	uCi/g
5	SAMPLE	S00T000799	0	F	@PU23902 PU23801E	SOLID	N/A	5.04E+00		% Ct. Error
6	SAMPLE	S00T000800	0	F	@PU23902 PU23901	SOLID	N/A	4.85E+00	1.460	uCi/g
6	SAMPLE	S00T000800	0	F	@PU23902 PU23901T	SOLID	N/A	1.03E+02		% Recovery
6	SAMPLE	S00T000800	0	F	@PU23902 PU23901E	SOLID	N/A	4.01E+00		% Ct. Error
6	SAMPLE	S00T000800	0	F	@PU23902 PU23801	SOLID	N/A	< 1.46E+00	1.460	uCi/g
6	SAMPLE	S00T000800	0	F	@PU23902 PU23801E	SOLID	N/A	1.00E+02		% Ct. Error
7	SAMPLE	S00T000801	0	F	@PU23902 PU23901	SOLID	N/A	4.73E+00	1.420	uCi/g
7	SAMPLE	S00T000801	0	F	@PU23902 PU23901T	SOLID	N/A	1.07E+02		% Recovery
7	SAMPLE	S00T000801	0	F	@PU23902 PU23901E	SOLID	N/A	3.99E+00		% Ct. Error
7	SAMPLE	S00T000801	0	F	@PU23902 PU23801	SOLID	N/A	< 1.42E+00	1.420	uCi/g
7	SAMPLE	S00T000801	0	F	@PU23902 PU23801E	SOLID	N/A	1.00E+02		% Ct. Error
8	SAMPLE	S00T000802	0	F	@PU23902 PU23901	SOLID	N/A	5.84E+00	1.570	uCi/g
8	SAMPLE	S00T000802	0	F	@PU23902 PU23901T	SOLID	N/A	1.01E+02		% Recovery
8	SAMPLE	S00T000802	0	F	@PU23902 PU23901E	SOLID	N/A	3.75E+00		% Ct. Error
8	SAMPLE	S00T000802	0	F	@PU23902 PU23801	SOLID	N/A	< 1.57E+00	1.570	uCi/g
8	SAMPLE	S00T000802	0	F	@PU23902 PU23801E	SOLID	N/A	1.00E+02		% Ct. Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 33256

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	-----	------	--------	--------	-------	-------------	------

Final page for worklist# 33256

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John Relyea 24 Apr 00
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33256

Analyst: ALL Instrument: PU01 #14 Book# 46B57

Method: LA-953-104 Rev/Mod B3

Worklist Comment: AZ-101 (2), @PU23902 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@PU23902	SOLID		
2	BLNK-PREP				@PU23902	SOLID		
3	SAMPLE	S00T000797	0	F	@PU23902	SOLID	99000433	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						
4	SAMPLE	S00T000798	0	F	@PU23902	SOLID	99000433	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						
5	SAMPLE	S00T000799	0	F	@PU23902	SOLID	99000433	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						
6	SAMPLE	S00T000800	0	F	@PU23902	SOLID	99000438	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						
7	SAMPLE	S00T000801	0	F	@PU23902	SOLID	99000438	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						
8	SAMPLE	S00T000802	0	F	@PU23902	SOLID	99000438	AZ-101 (2)
		Analytes Requested: PU23801 , PU23801E, PU23901 , PU23901E, PU23901T						

Final page for worklist # 33256

Alita Hurson 4/20/00
Signature Date

Newlight 4/21/00
Signature Date
McBee 4/21/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1869

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33256-STD-PU
File ID: 2a2099.CNF

Counted on: 4/20/ 0 @20:27
Detector: AEA2
Geometry number: 1
Count time: 28805. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	962.7	962.7	361.128	361.128	10.000	3.625	5.000	0.648
2	1439.0	1439.0	227.564	227.563	10.000	3.984	5.000	1.024
3	20.1	20.1	139.473	137.858	116.000	1.000	58.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.					
1	Pu236	0.458	5.755	5.752	0.003	0.02	50.42	1.3	234.2	0.105E-03
2	Pu240	0.527	5.144	5.138	0.006	0.02	58.06	1.2	264.3	0.119E-03
	Pu239		5.147	5.138	0.009				264.3	0.119E-03
3		0.014		4.725		0.00	1.58	7.4	7.2	0.324E-05
Totals:		1.000	<--valid peaks only-->				110.06			

DETECTOR CALIBRATION

Energy(MEV) = 4.091 + (0.0046)*Channel
Energy range (MeV): 4.091 TO 6.447
Efficiency = 0.2197 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	52852.0	100.000
Smoothed	52852.0	100.000
Composite fit	52839.1	99.976
Residuals	12.9	0.024

Analyzed by: _____

VR

Display Max.: 9726.6

[illegible]

Raw Data Dump for AEA Spectrum: 2a2099.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	1.	2.	5.
21	2.	1.	2.	1.	3.	4.	5.	4.	3.	2.
31	2.	4.	6.	2.	7.	2.	0.	9.	3.	3.
41	3.	5.	8.	4.	1.	5.	2.	4.	4.	1.
51	4.	4.	2.	3.	1.	6.	6.	4.	4.	4.
61	3.	4.	7.	3.	4.	5.	3.	5.	3.	7.
71	11.	7.	6.	4.	6.	4.	9.	6.	6.	6.
81	5.	3.	11.	9.	5.	4.	7.	5.	3.	10.
91	8.	8.	8.	4.	8.	6.	10.	8.	4.	9.
101	10.	6.	8.	11.	7.	5.	12.	9.	8.	12.
111	6.	16.	17.	6.	14.	11.	17.	9.	12.	14.
121	14.	10.	9.	14.	11.	14.	12.	19.	18.	12.
131	17.	19.	19.	20.	18.	24.	23.	25.	25.	18.
141	25.	23.	21.	21.	14.	22.	17.	23.	32.	24.
151	20.	33.	24.	44.	29.	27.	34.	35.	28.	36.
161	25.	24.	35.	40.	37.	33.	60.	52.	40.	57.
171	54.	55.	56.	68.	59.	72.	64.	73.	99.	80.
181	62.	84.	92.	91.	106.	99.	119.	111.	137.	139.
191	127.	131.	152.	168.	143.	185.	220.	218.	223.	234.
201	242.	278.	272.	296.	326.	333.	352.	397.	433.	410.
211	501.	528.	598.	613.	607.	722.	784.	816.	872.	934.
221	946.	993.	1074.	1218.	1350.	1490.	1562.	1534.	1628.	1387.
231	856.	408.	123.	36.	16.	18.	10.	8.	6.	10.
241	9.	7.	9.	13.	12.	12.	13.	11.	9.	13.
251	20.	14.	16.	14.	17.	20.	15.	13.	13.	18.
261	8.	12.	19.	13.	4.	12.	13.	15.	14.	16.
271	15.	14.	13.	21.	23.	12.	8.	22.	21.	22.
281	21.	27.	17.	26.	19.	29.	22.	29.	19.	29.
291	25.	25.	30.	38.	32.	27.	31.	27.	36.	29.
301	34.	41.	35.	43.	36.	38.	40.	40.	54.	50.
311	43.	49.	55.	63.	62.	75.	68.	57.	67.	86.
321	74.	88.	97.	90.	117.	102.	137.	135.	120.	113.
331	161.	176.	184.	185.	203.	216.	238.	241.	273.	313.
341	314.	301.	353.	428.	434.	473.	530.	569.	603.	650.
351	707.	801.	800.	784.	738.	692.	750.	859.	859.	973.
361	1036.	1106.	1031.	719.	368.	123.	20.	4.	4.	0.
371	2.	2.	1.	2.	1.	1.	0.	0.	1.	1.
381	2.	0.	0.	0.	2.	1.	0.	0.	0.	0.
391	1.	0.	0.	0.	0.	0.	0.	1.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
411	0.	1.	0.	0.	0.	1.	0.	0.	0.	1.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	1.	0.	0.	0.	0.	1.	0.	0.	0.
471	0.	1.	0.	2.	1.	0.	0.	0.	0.	0.
481	0.	1.	0.	1.	0.	0.	0.	0.	0.	1.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
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Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33256-BLK-PU
File ID: 3a3043.CNF

Counted on: 4/20/ 0 @20:28
Detector: AEA3
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	842.5	842.5	361.171	361.171	12.000	4.453	6.000	0.890
2	39.0	39.0	227.918	227.887	14.000	6.504	7.000	1.289

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Pu236	0.969	5.755 5.751 0.004	0.02	41.41	1.4	197.6	0.890E-04
2	Pu240	0.048	5.144 5.138 0.006	0.03	2.03	6.4	9.5	0.428E-05
	Pu239		5.147 5.138 0.009				9.5	0.428E-05
Totals:		1.017	<--valid peaks only-->			43.44		

DETECTOR CALIBRATION

Energy (MEV) = 4.090 + (0.0046)*Channel
Energy range (MeV): 4.090 TO 6.445
Efficiency = 0.2139 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	20510.0	100.000
Smoothed	20510.0	100.000
Composite fit	20856.8	101.691
Residuals	-346.8	-1.691

Analyzed by: _____

VR

Spectrum 3a3043.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 5529.0

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Raw Data Dump for AEA Spectrum: 3a3043.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	0.	1.	1.
21	1.	0.	1.	0.	0.	2.	1.	1.	1.	0.
31	0.	1.	2.	1.	0.	0.	0.	0.	2.	1.
41	0.	0.	0.	1.	1.	1.	0.	0.	0.	0.
51	0.	1.	0.	1.	0.	0.	1.	0.	2.	1.
61	1.	3.	1.	0.	0.	0.	2.	1.	0.	0.
71	1.	0.	1.	1.	0.	1.	0.	1.	0.	3.
81	1.	1.	0.	1.	1.	1.	0.	2.	1.	1.
91	2.	1.	0.	3.	0.	1.	0.	0.	0.	1.
101	1.	1.	0.	2.	2.	1.	1.	0.	3.	1.
111	1.	0.	2.	2.	0.	2.	2.	1.	4.	0.
121	0.	3.	1.	3.	3.	2.	2.	1.	3.	2.
131	3.	0.	3.	1.	3.	0.	0.	4.	3.	1.
141	0.	1.	3.	4.	4.	1.	1.	1.	2.	2.
151	2.	2.	1.	3.	2.	1.	1.	6.	3.	2.
161	2.	2.	1.	0.	2.	3.	2.	3.	3.	2.
171	2.	5.	4.	1.	4.	3.	2.	4.	3.	4.
181	7.	3.	6.	0.	3.	4.	6.	2.	3.	4.
191	4.	9.	6.	3.	4.	4.	7.	7.	13.	7.
201	7.	7.	9.	12.	13.	10.	9.	17.	22.	15.
211	12.	12.	22.	18.	16.	35.	28.	30.	33.	27.
221	27.	32.	31.	42.	33.	36.	46.	42.	37.	41.
231	38.	22.	13.	4.	11.	4.	4.	7.	1.	10.
241	3.	9.	6.	2.	6.	5.	8.	2.	7.	9.
251	7.	10.	8.	9.	7.	6.	9.	8.	7.	3.
261	13.	7.	4.	6.	15.	5.	19.	12.	8.	11.
271	10.	11.	8.	9.	13.	13.	9.	8.	15.	12.
281	17.	12.	21.	15.	15.	17.	19.	21.	32.	16.
291	20.	25.	15.	19.	24.	30.	26.	19.	27.	25.
301	43.	25.	33.	42.	28.	25.	28.	38.	38.	36.
311	31.	42.	39.	38.	60.	41.	50.	48.	57.	53.
321	70.	63.	70.	88.	84.	93.	114.	112.	110.	131.
331	113.	135.	152.	162.	171.	159.	196.	202.	221.	223.
341	250.	281.	295.	324.	349.	375.	433.	487.	511.	589.
351	624.	621.	703.	678.	619.	686.	671.	747.	756.	845.
361	930.	938.	852.	687.	505.	223.	91.	22.	8.	2.
371	2.	0.	1.	1.	0.	0.	1.	0.	1.	0.
381	1.	1.	0.	0.	0.	0.	1.	0.	1.	0.
391	0.	0.	1.	0.	0.	0.	1.	0.	0.	0.
401	1.	0.	0.	0.	0.	0.	1.	1.	0.	0.
411	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.
421	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	1.	0.	1.	0.
451	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	1.	0.	1.	1.	0.	0.	0.	0.
471	0.	1.	0.	1.	0.	0.	0.	0.	1.	2.
481	1.	1.	1.	0.	0.	0.	0.	0.	1.	1.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T000797-SAM-P
File ID: 4a4140.CNF

Counted on: 4/20/ 0 @20:29
Detector: AEA4
Geometry number: 1
Count time: 28805. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	775.0	775.0	358.064	358.064	12.000	3.837	6.000	0.697
2?	7.6	7.6	268.893	268.225	26.000	0.881	13.000	0.126
3	82.9	82.9	225.329	225.300	14.000	5.065	7.000	1.184
4?	5.4	5.4	179.650	179.023	10.000	2.118	5.000	0.273

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			Count	%err		Activity	
			Exp.	Obs.	Diff.	FWHM	Rate c/m	@95	d/m	uCi/ea
1	Pu236	0.935	5.755	5.738	0.017	0.02	40.31	1.4	200.4	0.902E-04
2	Po210	0.010	5.305	5.325	-.020	0.00	0.44	19.8	2.1	0.959E-06
3	Pu240	0.086	5.144	5.127	0.017	0.02	3.71	4.8	18.1	0.814E-05
	Pu239		5.147	5.127	0.020				18.1	0.814E-05
4		????		4.914			0.36	20.0		

Totals:		1.032	<--valid peaks only-->				44.45			

DETECTOR CALIBRATION

Energy(MEV) = 4.091 + (0.0046)*Channel
Energy range (MeV): 4.091 TO 6.446
Efficiency = 0.2053 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	20689.0	100.000
Smoothed	20689.0	100.000
Composite fit	21513.3	103.984
Residuals	-824.3	-3.984

Analyzed by: _____

VR

Display Max.: 5599.4

1877

Raw Data Dump for AEA Spectrum: 4a4140.CNF							HNF-1701 REV. 0			
1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	0.	0.	1.
21	0.	0.	2.	2.	0.	1.	0.	0.	0.	1.
31	0.	0.	2.	1.	1.	0.	1.	2.	0.	0.
41	0.	1.	0.	1.	2.	0.	0.	0.	0.	3.
51	1.	2.	0.	1.	1.	3.	3.	0.	1.	0.
61	1.	1.	0.	1.	1.	1.	3.	0.	2.	0.
71	0.	1.	0.	1.	0.	1.	2.	3.	1.	0.
81	2.	0.	1.	4.	1.	4.	1.	1.	1.	2.
91	0.	0.	3.	1.	3.	2.	1.	2.	2.	0.
101	1.	1.	2.	0.	0.	2.	1.	1.	1.	1.
111	2.	2.	1.	0.	1.	2.	4.	1.	2.	3.
121	2.	3.	2.	4.	2.	2.	1.	2.	3.	2.
131	1.	3.	1.	3.	1.	3.	1.	1.	2.	2.
141	4.	5.	4.	8.	5.	1.	3.	3.	3.	5.
151	7.	5.	2.	7.	1.	3.	5.	0.	5.	3.
161	7.	6.	7.	8.	5.	5.	5.	4.	8.	6.
171	7.	4.	8.	7.	7.	12.	3.	6.	17.	8.
181	7.	9.	9.	6.	7.	8.	10.	7.	11.	11.
191	11.	8.	18.	14.	18.	9.	13.	11.	26.	20.
201	21.	13.	29.	23.	20.	30.	36.	27.	33.	33.
211	29.	44.	38.	49.	52.	57.	56.	50.	60.	77.
221	67.	72.	81.	82.	95.	97.	88.	68.	59.	40.
231	17.	13.	4.	8.	5.	3.	4.	11.	4.	2.
241	8.	5.	9.	7.	5.	8.	7.	0.	9.	8.
251	8.	13.	7.	8.	8.	6.	10.	15.	17.	14.
261	13.	8.	11.	14.	13.	9.	13.	14.	16.	17.
271	12.	9.	10.	15.	15.	7.	15.	18.	25.	12.
281	20.	21.	22.	21.	31.	27.	24.	28.	14.	21.
291	22.	33.	21.	24.	34.	36.	42.	35.	33.	38.
301	42.	38.	35.	42.	40.	32.	49.	34.	51.	48.
311	44.	58.	51.	41.	61.	63.	64.	61.	76.	80.
321	81.	96.	87.	89.	116.	95.	114.	144.	113.	168.
331	151.	184.	172.	220.	209.	229.	236.	260.	283.	298.
341	333.	330.	383.	425.	467.	493.	543.	602.	645.	659.
351	658.	625.	623.	616.	690.	695.	749.	851.	876.	798.
361	564.	340.	108.	35.	6.	2.	0.	1.	1.	1.
371	2.	1.	0.	1.	1.	0.	0.	0.	2.	0.
381	0.	1.	0.	0.	1.	0.	1.	0.	0.	0.
391	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	1.	1.	0.	0.	0.	0.	1.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	2.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	1.	0.	0.	0.	1.	0.
461	0.	0.	0.	0.	2.	0.	0.	0.	0.	0.
471	0.	1.	0.	1.	1.	1.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
491	0.	0.	0.	0.	1.	1.	0.	0.	0.	0.
511	0.	0.								

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G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T000798-SAM-P
File ID: 5a5659.CNF

Counted on: 4/20/ 0 @20:31
Detector: AEA5
Geometry number: 1
Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	942.9	942.9	360.189	360.189	10.000	3.858	5.000	0.666
2?	0.0	0.1	302.038	302.038	0.000	0.100	0.000	0.100
3	7.9	7.9	255.728	255.326	10.000	9.594	5.000	0.383
4	175.1	175.1	228.466	228.447	12.000	4.567	6.000	1.076
5?	2.9	2.9	185.591	183.071	4.000	1.416	2.000	0.443
6?	5.6	5.6	154.461	154.122	8.000	2.540	4.000	0.918

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA		Peak Centroid			Count Rate	%err @95	d/m	Activity uCi/ea
		Frac	Exp.	Obs.	Diff.	FWHM				
1	Pu236	0.900	5.755	5.735	0.020	0.02	51.09	1.3	215.1	0.969E-04
2		????		5.468			0.00	*****		
3	Am243	0.027	5.266	5.253	0.013	0.04	1.52	8.8	6.3	0.286E-05
4	Pu240	0.135	5.144	5.129	0.015	0.02	7.66	3.5	31.6	0.142E-04
	Pu239		5.147	5.129	0.018				31.6	0.142E-04
5		????		4.921			0.09	114.		
6		????		4.787			0.17	45.6		
Totals:		1.062	<--valid peaks only-->				60.28			

DETECTOR CALIBRATION

Energy (MEV) = 4.078 + (0.0046)*Channel
Energy range (MeV): 4.078 TO 6.434
Efficiency = 0.2424 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	27256.0	100.000
Smoothed	27256.0	100.000
Composite fit	29061.1	106.623
Residuals	-1805.1	-6.623

Spectrum 5a5659.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 6492.5

[illegible]

Raw Data Dump for AEA Spectrum: 5a5659.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	2.	0.	2.
21	0.	1.	3.	0.	2.	3.	1.	1.	1.	0.
31	0.	1.	1.	1.	2.	1.	1.	0.	1.	1.
41	0.	2.	1.	3.	2.	1.	2.	1.	0.	0.
51	2.	0.	1.	0.	3.	0.	1.	5.	1.	1.
61	0.	0.	4.	2.	2.	2.	2.	2.	1.	1.
71	1.	0.	3.	2.	1.	0.	2.	2.	1.	1.
81	4.	5.	2.	2.	2.	3.	3.	1.	1.	4.
91	6.	2.	1.	3.	3.	3.	1.	3.	3.	2.
101	1.	2.	2.	2.	1.	3.	2.	2.	3.	6.
111	6.	4.	4.	4.	2.	4.	1.	3.	4.	2.
121	4.	4.	2.	3.	4.	5.	8.	6.	3.	1.
131	9.	4.	1.	4.	8.	4.	1.	4.	4.	4.
141	3.	7.	5.	9.	6.	5.	4.	8.	7.	10.
151	7.	10.	8.	9.	14.	9.	8.	5.	5.	4.
161	6.	12.	7.	8.	7.	6.	5.	6.	10.	5.
171	5.	5.	7.	11.	14.	10.	16.	13.	11.	14.
181	13.	21.	12.	16.	19.	21.	15.	13.	18.	14.
191	20.	16.	29.	31.	26.	24.	22.	21.	25.	38.
201	41.	35.	41.	38.	41.	35.	36.	44.	55.	57.
211	73.	58.	76.	86.	95.	85.	98.	112.	137.	136.
221	146.	140.	159.	141.	144.	156.	199.	189.	201.	196.
231	171.	116.	64.	41.	27.	11.	6.	12.	3.	16.
241	11.	12.	12.	12.	7.	12.	7.	13.	9.	6.
251	9.	10.	10.	18.	16.	16.	17.	11.	14.	8.
261	7.	14.	13.	12.	11.	20.	16.	16.	23.	16.
271	24.	19.	21.	18.	20.	23.	21.	18.	26.	21.
281	29.	30.	24.	32.	34.	27.	40.	31.	33.	37.
291	36.	35.	40.	42.	44.	35.	35.	41.	54.	54.
301	47.	55.	58.	42.	48.	46.	48.	43.	42.	49.
311	50.	48.	69.	46.	63.	78.	77.	60.	84.	85.
321	97.	105.	91.	114.	126.	110.	111.	145.	129.	178.
331	164.	173.	163.	215.	212.	247.	253.	254.	280.	344.
341	362.	331.	386.	432.	426.	534.	577.	589.	624.	698.
351	850.	792.	785.	794.	707.	768.	783.	884.	900.	1018.
361	1080.	983.	774.	452.	154.	36.	4.	3.	1.	2.
371	1.	0.	0.	1.	0.	1.	0.	0.	2.	0.
381	1.	0.	1.	1.	1.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.
411	0.	1.	0.	0.	0.	2.	0.	0.	0.	0.
421	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
451	0.	0.	0.	1.	0.	0.	1.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
471	1.	2.	1.	1.	1.	2.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T000799-SAM-P
File ID: 6a6654.CNF

Counted on: 4/20/ 0 @20:32
Detector: AEA6
Geometry number: 1
Count time: 28804. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	869.3	869.3	358.430	358.430	16.000	8.058	8.000	1.642
2	17.7	17.7	302.566	302.566	24.000	0.035	12.000	0.001
3?	0.0	0.1	253.857	253.857	4.000	0.100	2.000	0.100
4?	3.1	3.1	250.355	249.000	6.000	0.000	3.000	0.297
5	149.5	149.5	226.137	226.096	14.000	7.282	7.000	1.604

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.					
1	Ra224	0.816	5.686	5.737	-.051	10.04	45.93	1.3	218.0	0.982E-04
	Pu236		5.755	5.737	0.018				209.1	0.942E-04
2	Am241	0.060	5.479	5.480	-.001	10.00	3.38	5.9	16.1	0.724E-05
	Pu238		5.487	5.480	0.007				21.0	0.945E-05
3		????		5.256			0.00	*****		
4		????		5.233			0.01	1917.		
5	Pu240	0.131	5.144	5.128	0.016	0.03	7.38	3.7	32.9	0.148E-04
	Pu239		5.147	5.128	0.019				32.9	0.148E-04
Totals:			1.007	<--valid peaks only-->			56.69			

DETECTOR CALIBRATION

Energy(MEV) = 4.088 + (0.0046)*Channel
Energy range (MeV): 4.088 TO 6.443
Efficiency = 0.2241 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	27026.0	100.000
Smoothed	27026.0	100.000
Composite fit	27219.8	100.717
Residuals	-193.8	-0.717

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 6551.4

2
2
2
2
2
2
2
2
2
2
2
5
25
2.5
2...5.
2.....5..
2.....5..
25
2
3
2
2
2
2.
2..
2.1
...1
..... 1
..... 1
..... 1
.....1
.....1.....
.....1....
.....1
..1

Raw Data Dump for AEA Spectrum: 6a6654.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	1.	1.	1.
21	2.	0.	0.	0.	1.	1.	0.	0.	2.	1.
31	1.	0.	2.	2.	1.	0.	1.	3.	0.	0.
41	1.	0.	0.	0.	2.	0.	2.	1.	0.	1.
51	0.	3.	6.	1.	0.	3.	2.	1.	1.	3.
61	1.	2.	2.	0.	2.	0.	2.	1.	2.	2.
71	0.	0.	2.	1.	3.	0.	3.	0.	0.	2.
81	4.	0.	3.	0.	2.	0.	1.	1.	1.	1.
91	3.	1.	1.	1.	2.	4.	1.	0.	3.	1.
101	2.	2.	0.	2.	1.	3.	1.	2.	5.	1.
111	3.	5.	3.	1.	5.	0.	5.	4.	2.	4.
121	6.	2.	4.	3.	3.	3.	5.	2.	3.	1.
131	6.	5.	4.	6.	5.	3.	9.	4.	9.	7.
141	4.	5.	7.	5.	5.	5.	5.	6.	5.	4.
151	8.	7.	6.	7.	8.	4.	9.	7.	9.	6.
161	8.	11.	7.	6.	9.	8.	9.	12.	6.	7.
171	19.	6.	8.	7.	11.	16.	14.	7.	15.	18.
181	15.	17.	14.	19.	15.	26.	8.	11.	13.	19.
191	21.	27.	21.	24.	30.	25.	27.	32.	34.	40.
201	46.	38.	32.	44.	56.	42.	51.	42.	65.	78.
211	66.	70.	82.	91.	100.	111.	127.	129.	123.	145.
221	148.	138.	141.	163.	174.	153.	167.	160.	150.	140.
231	95.	60.	43.	34.	14.	9.	6.	6.	8.	9.
241	13.	6.	9.	7.	12.	5.	10.	10.	14.	15.
251	13.	8.	13.	13.	14.	10.	11.	8.	12.	11.
261	8.	13.	13.	12.	14.	9.	20.	11.	14.	20.
271	16.	17.	21.	15.	13.	32.	15.	27.	27.	28.
281	25.	24.	43.	29.	27.	34.	34.	38.	34.	27.
291	39.	43.	47.	40.	32.	37.	39.	49.	50.	44.
301	52.	48.	53.	46.	50.	41.	40.	50.	48.	53.
311	41.	48.	55.	49.	65.	75.	54.	70.	89.	86.
321	91.	89.	105.	97.	111.	141.	129.	141.	148.	142.
331	169.	184.	208.	226.	236.	230.	260.	258.	310.	297.
341	341.	402.	406.	420.	478.	564.	553.	580.	652.	716.
351	722.	729.	756.	795.	762.	867.	932.	923.	881.	909.
361	853.	749.	609.	443.	267.	161.	95.	46.	20.	7.
371	2.	3.	2.	0.	0.	1.	1.	0.	0.	2.
381	0.	0.	2.	0.	0.	0.	0.	2.	0.	0.
391	0.	0.	0.	0.	0.	0.	2.	3.	0.	1.
401	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
411	1.	0.	0.	0.	0.	0.	0.	0.	1.	0.
421	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.
431	0.	0.	1.	0.	1.	1.	0.	0.	0.	2.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
451	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
461	0.	1.	0.	0.	1.	0.	1.	0.	0.	0.
471	0.	0.	2.	1.	1.	0.	0.	1.	1.	1.
481	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T000800-SAM-P
File ID: 7a7717.CNF

Counted on: 4/20/ 0 @20:33
Detector: AEA7
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	978.3	978.3	361.230	361.230	10.000	3.883	5.000	0.714
2	9.4	9.4	254.277	253.863	14.000	33.500	7.000	3.453
3	119.9	119.9	227.518	227.466	14.000	5.417	7.000	1.228

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp. Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Pu236	0.917	5.755 5.757 -0.002	0.02	50.44	1.3	216.5	0.975E-04
2	Am243	0.018	5.266 5.263 0.003	0.15	0.99	12.8	4.2	0.189E-05
	Po210		5.305 5.263 0.042				4.2	0.187E-05
3	Pu240	0.100	5.144 5.142 0.002	0.02	5.53	4.0	23.3	0.105E-04
	Pu239		5.147 5.142 0.005				23.3	0.105E-04
Totals:		1.035	<--valid peaks only-->			56.96		

DETECTOR CALIBRATION

Energy (MEV) = 4.095 + (0.0046)*Channel
Energy range (MeV): 4.095 TO 6.450
Efficiency = 0.2378 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	26422.0	100.000
Smoothed	26422.0	100.000
Composite fit	27347.7	103.503
Residuals	-925.7	-3.503

Analyzed by: _____

VR

6436.5

[illegible]

Raw Data Dump for AEA Spectrum: 7a7717.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
21	1.	1.	0.	2.	1.	1.	2.	1.	1.	1.
31	0.	2.	0.	1.	2.	1.	1.	0.	1.	0.
41	0.	1.	1.	0.	2.	2.	1.	1.	0.	1.
51	0.	0.	0.	1.	0.	1.	1.	0.	1.	0.
61	0.	1.	2.	1.	1.	1.	3.	1.	0.	0.
71	1.	0.	1.	1.	1.	0.	0.	0.	3.	2.
81	3.	3.	1.	2.	1.	0.	2.	2.	0.	2.
91	1.	3.	2.	0.	0.	1.	2.	2.	2.	1.
101	3.	0.	4.	1.	1.	2.	3.	0.	1.	1.
111	1.	2.	3.	4.	2.	2.	0.	4.	1.	3.
121	2.	2.	3.	5.	1.	4.	3.	1.	2.	3.
131	7.	2.	6.	4.	2.	6.	7.	2.	7.	4.
141	0.	3.	4.	4.	10.	4.	6.	5.	4.	4.
151	8.	6.	8.	8.	3.	6.	5.	5.	8.	2.
161	3.	11.	9.	3.	8.	4.	5.	3.	5.	11.
171	5.	9.	4.	7.	6.	7.	8.	12.	9.	9.
181	9.	7.	16.	15.	10.	11.	11.	10.	14.	12.
191	10.	23.	15.	23.	12.	18.	21.	18.	25.	30.
201	24.	26.	37.	37.	33.	35.	39.	40.	41.	41.
211	48.	50.	58.	52.	88.	57.	74.	87.	90.	87.
221	87.	101.	93.	116.	116.	131.	145.	127.	125.	127.
231	100.	71.	28.	26.	13.	8.	12.	7.	6.	9.
241	7.	6.	9.	9.	10.	8.	7.	12.	7.	9.
251	7.	7.	20.	16.	12.	10.	14.	13.	7.	5.
261	12.	15.	7.	13.	18.	14.	14.	15.	20.	15.
271	10.	22.	13.	17.	12.	23.	17.	22.	17.	19.
281	25.	33.	18.	32.	25.	27.	33.	36.	25.	26.
291	21.	35.	24.	40.	44.	39.	46.	49.	60.	51.
301	53.	55.	53.	67.	54.	47.	43.	57.	54.	48.
311	60.	56.	48.	59.	74.	75.	65.	75.	102.	73.
321	78.	93.	118.	106.	100.	122.	134.	158.	133.	156.
331	134.	160.	183.	201.	197.	218.	248.	232.	280.	303.
341	318.	365.	354.	414.	409.	436.	532.	551.	529.	666.
351	703.	728.	820.	821.	794.	763.	793.	805.	907.	955.
361	1041.	1112.	1038.	813.	476.	176.	54.	5.	1.	1.
371	2.	2.	0.	0.	2.	0.	0.	1.	1.	0.
381	1.	1.	1.	0.	0.	2.	0.	1.	0.	0.
391	0.	0.	0.	2.	0.	0.	1.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
411	0.	0.	0.	0.	0.	1.	0.	1.	0.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	1.	0.
431	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
441	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
461	0.	0.	0.	1.	1.	0.	0.	1.	1.	0.
471	0.	1.	0.	1.	0.	0.	0.	0.	2.	0.
481	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T000801-SAM-P
File ID: 8a8808.CNF

Counted on: 4/20/ 0 @20:34
Detector: AEA8
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	1025.0	1025.0	360.485	360.485	10.000	3.641	5.000	0.682
2?	2.9	2.9	301.259	299.895	8.000	0.322	4.000	0.682
3	128.8	128.8	227.206	227.198	14.000	5.201	7.000	1.287

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.					
1	Pu236	0.933	5.755	5.748	0.0070.02	51.76	1.2	245.2	0.110E-03	
2		????		5.470		0.02	676.			
3	Pu240	0.100	5.144	5.135	0.0090.02	5.56	3.8	25.8	0.116E-04	
	Pu239		5.147	5.135	0.012			25.8	0.116E-04	

Totals:		1.033	<--valid peaks only-->			57.32				

DETECTOR CALIBRATION

Energy (MEV) = 4.090 + (0.0046)*Channel
Energy range (MeV): 4.090 TO 6.445
Efficiency = 0.2154 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	26638.0	100.000
Smoothed	26638.0	100.000
Composite fit	27529.6	103.347
Residuals	-891.6	-3.347

Analyzed by: _____

VR

Display Max.: 6837.6

[illegible]

Raw Data Dump for AEA Spectrum: 8a8808.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.
21	1.	1.	1.	1.	1.	1.	4.	1.	0.	1.
31	0.	0.	1.	0.	2.	3.	2.	1.	1.	0.
41	2.	1.	1.	0.	0.	0.	0.	0.	1.	1.
51	1.	0.	0.	3.	2.	1.	1.	0.	0.	1.
61	2.	0.	0.	2.	0.	0.	0.	2.	1.	0.
71	1.	3.	0.	0.	0.	1.	1.	0.	1.	1.
81	1.	2.	2.	0.	0.	0.	2.	0.	2.	4.
91	0.	1.	4.	1.	2.	3.	1.	2.	3.	1.
101	3.	2.	3.	1.	1.	1.	5.	4.	1.	1.
111	2.	2.	0.	2.	1.	6.	6.	2.	3.	4.
121	2.	1.	1.	3.	1.	2.	3.	3.	7.	4.
131	4.	5.	6.	1.	5.	5.	4.	4.	6.	1.
141	4.	2.	4.	1.	4.	3.	10.	4.	4.	6.
151	2.	3.	7.	9.	7.	6.	5.	3.	4.	9.
161	5.	1.	0.	4.	4.	2.	6.	6.	5.	7.
171	7.	5.	4.	5.	13.	8.	5.	5.	14.	12.
181	10.	12.	8.	13.	8.	10.	6.	13.	18.	16.
191	8.	14.	19.	11.	16.	21.	18.	15.	19.	29.
201	22.	23.	34.	29.	30.	29.	35.	38.	46.	39.
211	44.	48.	60.	58.	61.	79.	75.	93.	83.	81.
221	86.	79.	103.	106.	125.	137.	143.	152.	128.	105.
231	77.	49.	28.	21.	4.	7.	7.	3.	10.	12.
241	7.	8.	9.	6.	11.	9.	7.	9.	4.	5.
251	7.	18.	13.	7.	14.	7.	14.	9.	9.	11.
261	14.	14.	10.	12.	12.	12.	16.	13.	13.	22.
271	13.	18.	18.	19.	17.	18.	24.	19.	21.	28.
281	28.	30.	29.	24.	38.	28.	33.	29.	33.	30.
291	28.	35.	35.	28.	42.	34.	41.	34.	55.	51.
301	56.	57.	48.	41.	43.	39.	35.	51.	43.	42.
311	54.	54.	68.	47.	53.	58.	57.	72.	82.	91.
321	84.	116.	87.	117.	108.	124.	147.	126.	150.	146.
331	162.	178.	179.	191.	234.	205.	262.	265.	294.	307.
341	324.	347.	396.	419.	435.	530.	567.	614.	693.	752.
351	837.	818.	832.	788.	760.	794.	894.	872.	1002.	1066.
361	1131.	1147.	946.	531.	184.	44.	13.	3.	3.	1.
371	1.	0.	2.	2.	1.	0.	0.	0.	0.	0.
381	0.	0.	1.	1.	2.	0.	0.	0.	0.	1.
391	0.	0.	2.	1.	0.	0.	0.	1.	0.	0.
401	0.	0.	0.	0.	1.	0.	0.	0.	1.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	1.	0.	0.	0.	0.	1.	0.
461	0.	1.	0.	0.	1.	0.	0.	0.	2.	0.
471	1.	0.	0.	0.	1.	0.	0.	0.	0.	2.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 S00T000802-SAM-P
 File ID: 9a9468.CNF

Counted on: 4/20/ 0 @20:35
 Detector: AEA9
 Geometry number: 1
 Count time: 28800. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	1064.0	1064.0	358.916	358.916	12.000	3.781	6.000	0.777
2	136.4	136.4	224.921	224.912	14.000	6.400	7.000	1.470

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Exp.	Peak Centroid Obs. Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Pu236	0.875	5.755	5.753 0.0020.02	20.02	50.23	1.3	224.0	0.101E-03
2	Pu240	0.112	5.144	5.136 0.0080.03	0.03	6.40	3.5	28.0	0.126E-04
	Pu239		5.147	5.136 0.011				28.0	0.126E-04

Totals:		0.987	<--valid peaks only-->				56.64		

DETECTOR CALIBRATION

Energy (MEV) = 4.102 + (0.0046)*Channel
 Energy range (MeV): 4.102 TO 6.457
 Efficiency = 0.2288 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	27553.0	100.000
Smoothed	27553.0	100.000
Composite fit	27185.5	98.666
Residuals	367.5	1.334

Analyzed by: _____

VR

Spectrum 9a9468.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 7476.3

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Raw Data Dump for AEA Spectrum: 9a9468.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	3.	1.	0.	0.
21	1.	2.	1.	2.	2.	1.	1.	1.	1.	0.
31	2.	2.	0.	0.	1.	1.	0.	1.	2.	0.
41	0.	4.	0.	1.	1.	3.	5.	1.	1.	1.
51	1.	0.	4.	1.	2.	3.	0.	1.	2.	1.
61	1.	2.	1.	2.	1.	1.	1.	1.	3.	1.
71	1.	0.	3.	0.	2.	2.	2.	2.	1.	1.
81	3.	2.	1.	2.	0.	0.	2.	0.	5.	3.
91	1.	2.	3.	1.	1.	2.	1.	0.	2.	2.
101	0.	3.	2.	0.	1.	1.	3.	4.	2.	3.
111	4.	4.	1.	3.	2.	2.	0.	4.	2.	0.
121	5.	3.	7.	2.	1.	3.	3.	2.	7.	2.
131	6.	2.	1.	5.	5.	8.	4.	6.	3.	4.
141	5.	4.	2.	5.	6.	0.	5.	6.	4.	3.
151	4.	4.	2.	4.	6.	5.	3.	2.	4.	4.
161	6.	7.	4.	4.	7.	2.	5.	14.	8.	9.
171	7.	5.	5.	4.	8.	9.	8.	10.	11.	10.
181	11.	8.	11.	13.	8.	8.	15.	17.	21.	14.
191	21.	17.	14.	28.	15.	21.	32.	25.	36.	24.
201	23.	34.	30.	37.	48.	38.	33.	59.	63.	64.
211	71.	65.	72.	83.	86.	68.	95.	117.	103.	120.
221	112.	118.	141.	137.	159.	135.	126.	134.	92.	51.
231	40.	18.	6.	9.	9.	9.	5.	7.	8.	7.
241	11.	8.	4.	6.	10.	11.	12.	11.	12.	14.
251	12.	11.	17.	12.	13.	9.	9.	19.	11.	16.
261	15.	11.	16.	9.	11.	12.	13.	17.	14.	14.
271	11.	20.	25.	19.	16.	24.	15.	26.	34.	24.
281	35.	23.	28.	26.	24.	44.	29.	37.	31.	33.
291	43.	41.	34.	39.	26.	43.	56.	52.	48.	49.
301	49.	50.	55.	36.	46.	43.	49.	42.	65.	60.
311	57.	69.	62.	74.	64.	78.	72.	67.	79.	102.
321	93.	105.	118.	127.	113.	148.	143.	150.	152.	174.
331	172.	187.	193.	210.	246.	264.	273.	277.	312.	341.
341	402.	388.	487.	458.	501.	616.	675.	750.	749.	863.
351	877.	833.	783.	811.	861.	888.	988.	1119.	1158.	1209.
361	1059.	772.	356.	133.	16.	5.	1.	0.	0.	0.
371	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
381	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
421	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.
431	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
451	2.	0.	1.	0.	0.	0.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
471	1.	1.	2.	0.	0.	0.	0.	0.	0.	0.
481	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

WORKBOOK PAGE: STD1

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ⁴⁰ ^(d=1/6) LIQUID

				STD
Type	DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)	0.458
STD	SAMPLE VOLUME in mL SS	1.000	PU 238 AEA FRAC (C238)	0.000
Work Unit	SAMPLE DILUTION FACTOR DF	1.000	PU 239 AEA FRAC (C239)	0.527
33256	TRACER VOLUME in mL SPKV	0.100	TOTAL AT COUNTS	3985
C1 Code	DIGEST DILUTION FACTOR DDF	1.000	AT COUNT TIME (MIN)	30
@PU23902	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	0.100
Value	DETECTOR NUMBER	14	PU 236 cpm	50.420
LIQUID	EFFICIENCY FACTOR EFF	0.278	PU 238 cpm	0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	58.060
20001358	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	480
Recon	PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/L	1.1918E-01
0	PU-238 TRACER VALUE (dpm/mL)	0.000		
Sample Prep	STANDARD BOOK NO	46B57		
N/A	STANDARD VALUE in μ Ci/mL	1.260E-04		
Sample #				
WL33256-STD				
Instrument Code	Decay Time = Date Counted - Tracer Preparation Date			
WB27807	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]			
Prepared By	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * 1/EFF * C236 * 100 / Pu-236 Decay Corr'd Value * SPKV			
NEW	Pu 239/240 μ Ci/L = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF)(DDF) / [(C236)(SS)(2220000 dpm/ μ Ci)]			
Operator	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)			
JFR	Pu 238 μ Ci/L = [(Pu 238 dpm)(DF)(DDF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/ μ Ci)(D g/L)(SS)]			
Analyst	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100			
AKL				
Analysis Date	04/21/2000	Pu 239/240 μ Ci/mL	1.19E-04	DETECTION LEVELS in μ Ci/mL Pu 239/240 7.14E-06
Analysis Date	04/20/2000	Relative Counting Error	= 1.7%	
Analysis Time	11:15 AM			
Sample Point	AZ-101	Pu 236 Tracer Recovery	= 95.1%	

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	Date:	24 Apr 00

STANDARD.WB1 REV 1.0

943128ML

WORKBOOK PAGE: BLANK2

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ *Liaild* LI

Type	DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)	BLNK-PREP
BLNK-PREP	SAMPLE VOLUME in mL SS	0.500	PU 238 AEA FRAC (C238)	0.000
Work List	SAMPLE DILUTION FACTOR DF	1111.000	PU 239 AEA FRAC (C239)	0.048
33256	TRACER VOLUME in mL SPKV	0.100	TOTAL AT COUNTS	1977
Test Code	DIGEST GRAMS of SOLIDS/ Dg/L	4.9000	AT COUNT TIME (MIN)	30
@PU23902	TRACER BOOK NO	18B59	BACKGROUND in cp (Bkg)	0.100
Matrix	DETECTOR NUMBER	14	PU 236 cpm	41.410
SOLID	EFFICIENCY FACTOR EFF	0.2781	PU 238 cpm	0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	2.030
20001358	TRACER PREPARATION VALUE (dpm/mL)	2687.00	AEA COUNT TIME	480
Rerun	PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.31	Pu 239/240 $\mu\text{Ci/g}$ =	2.327E+00
0	PU-238 TRACER VALUE (dpm/m)	0.00		

Sample Prep	
N/A	
Sample #	Decay Time = Date Counted - Tracer Preparation Date
WL33256-BLK	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of $\{(-\ln 2 * \text{Decay Time}/1040.95)\}$]
Instrument Code	Pu 236 Tracer Recovery = $(\text{Total AT Counts} / \text{TC} - \text{Bkg}) * \text{C236} * 100 / (\text{Pu-236 Decay Corr'd Value} * \text{SPKV} * \text{EFF})$
WB27807	Pu 239/240 $\mu\text{Ci/g}$ = $(\text{C239}) (\text{Pu 236 Decay Corr'd Value}) (\text{SPKV}) (1000 \text{ mL/L}) (\text{DF}) / [(\text{C236}) (\text{SS}) (\text{D g/L}) (2220000 \text{ dpm}/\mu\text{Ci})]$
Prepared By	Pu 238 dpm = $[(\text{Total AT Counts} / \text{TC}) - \text{Bkg} * 1/\text{EFF} * \text{C238}] - (\text{Pu-238 Tracer Value} * \text{SPKV} * \text{Pu 236 Tracer Recovery} / 100)$
NEW	Pu 238 $\mu\text{Ci/g}$ = $[(\text{Pu 238 dpm}) (\text{DF}) (1000 \text{ mL/L})] / [(\text{Pu-236 Tracer Recovery} / 100) (2220000 \text{ dpm}/\mu\text{Ci}) (\text{D g/L}) (\text{SS})]$
Chemist	Relative Counting Error = Square Root of $\{[1/(\text{Pu 236 cpm} * \text{min})] + [1/(\text{Pu 238 or 239/240 cpm} * \text{min})]\} * 1.96 * 100$
JFR	
Analyst	
AKL	
Date Complete	
04/21/2000	Pu 239/240 $\mu\text{Ci/g}$ = 2.33E+00
Analysis Date	Relative Counting Error = 6.4%
04/20/2000	
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.
11:15 AM	Pu 238 $\mu\text{Ci/g}$ < 1.46E+00
Sample Point	Relative Counting Error = 100.0%
AZ-101	Pu 236 Tracer Recovery = 99.7%

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	Date:	24 Apr 2000

BLANK.WB1 REV 1.0

943128ML

1895

04/21/2000

WORKBOOK PAGE: SAM3

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ¹⁴⁰ ^{121/12} LIQUID /

TYPE	DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)	SAMPLE
SAMPLE	SAMPLE VOLUME in mL	SS	0.500	PU 238 AEA FRAC (C238)
Work List	SAMPLE DILUTION FACTOR	DF	1111.000	PU 239 AEA FRAC (C239)
33256	TRACER VOLUME in mL	SPKV	0.100	TOTAL AT COUNTS
10134000	DIGEST GRAMS of SOLIDS/L	Dg/L	4.9000	AT COUNT TIME (MIN)
@PU23902	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	0.100
14013400	DETECTOR NUMBER	14	PU 236 cpm	40.310
SOLID	EFFICIENCY FACTOR	EFF	0.278	PU 238 cpm
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	3.710
20001358	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	480
Repin	PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g	4.3200E+00
0	PU-238 TRACER VALUE (dpm/mL)	0.000		

Sample Prep	
FUSIONHC	
Sample #	Decay Time = Date Counted - Tracer Preparation Date
S00T000797	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of ((-ln2 * Decay Time/1040.95))]
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)
WB27807	Pu 239/240 μ Ci/g = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF) / [(C236)(SS)(D g/L)(2220000 dpm/ μ Ci)]
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)
NEW	Pu 238 μ Ci/g = [(Pu 238 dpm)(DF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/ μ Ci)(D g/L)(SS)]
Chemist	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100
JFR	
Analyst	
AKL	

04/21/2000	Pu 239/240 μ Ci/g	4.32E+00	DETECTION LEVELS in μ Ci/g
04/20/2000	Relative Counting Error	= 4.9%	
11:15 AM	NOTE: Pu 238 Result is a LESS THAN Value.		Pu 239/240
AZ-101	Pu 238 μ Ci/g	< 1.51E+00	1.51E+00
	Relative Counting Error	= 100.0%	Pu 238
	Pu 236 Tracer Recovery	= 103.1%	1.51E+00

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Ralys</i>	Date:	24 Apr 00
SAMPLE.WB1 REV 1.0	943128ML		

WORKBOOK PAGE: SAM4

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³¹⁰ _{10/2/00}

LIQUID /

SAMPLE

Type	DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)	0.900
SAMPLE	SAMPLE VOLUME in mL	SS 0.100	PU 238 AEA FRAC (C238)	0.000
Work Unit	SAMPLE DILUTION FACTOR	DF 101.000	PU 239 AEA FRAC (C239)	0.135
33256	TRACER VOLUME in mL	SPKV 0.100	TOTAL AT COUNTS	2316
101/Code	DIGEST GRAMS of SOLIDS/L	Dg/L 5.1800	AT COUNT TIME (MIN)	30
@PU23902	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	0.100
Matrix	DETECTOR NUMBER	14	PU 236 cpm	51.090
SOLID	EFFICIENCY FACTOR	EFF 0.278	PU 238 cpm	0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	7.660
20001358	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	480
Retrun	PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g	3.0292E+00
0	PU-238 TRACER VALUE (dpm/mL)	0.000		

Sample Prep	
FUSIONHC	
Sample	Decay Time = Date Counted - Tracer Preparation Date
S00T000798	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)
WB27807	Pu 239/240 μ Ci/g = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF) / [(C236)(SS)(D g/L)(2220000 dpm/ μ Ci)]
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)
NEW	Pu 238 μ Ci/g = [(Pu 238 dpm)(DF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/ μ Ci)(D g/L)(SS)]
Chemist	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100
JFR	
Analys	
AKL	
Data Complete	
04/21/2000	Pu 239/240 μ Ci/g 3.03E+00
Analysis Date	Relative Counting Error = 3.5%
04/20/2000	
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.
11:15 AM	Pu 238 μ Ci/g < 6.73E-01
Sample Point	Relative Counting Error = 100.0%
AZ-101	Pu 236 Tracer Recovery = 108.5%

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	Date:	29 Apr 00
SAMPLE.WB1 REV 1.0	943128ML		

1897

WORKBOOK PAGE: SAM5

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³Y₂106 LIQUID /

				SAMPLE
DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)		0.816
SAMPLE VOLUME in mL	SS 0.100	PU 238 AEA FRAC (C238)		0.060
SAMPLE DILUTION FACTOR	DF 101.000	PU 239 AEA FRAC (C239)		0.131
TRACER VOLUME in mL	SPKV 0.100	TOTAL AT COUNTS		2332
DIGEST GRAMS of SOLIDS/L	Dg/L 4.8400	AT COUNT TIME (MIN)		30
TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)		0.100
DETECTOR NUMBER	14	PU 236 cpm		45.930
EFFICIENCY FACTOR	EFF 0.278	PU 238 cpm		3.380
TRACER PREPARATION DATE	08/30/99	PU 239 cpm		7.380
TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME		480
PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g		3.4698E+00
PU-238 TRACER VALUE (dpm/mL)	0.000			

Sample Prep

FUSIONHC

Sample #

S00T000799

Instrument Code

WB27807

Prepared By

NEW

Chemist

JFR

Analyst

AKL

Data Complete

04/21/2000

Analysis Date

04/20/2000

Analysis Time

11:15 AM

Sample Point

AZ-101

Decay Time = Date Counted - Tracer Preparation Date

Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]

Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)

Pu 239/240 μ Ci/g = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF) / [(C236)(SS)(D g/L)(2220000 dpm/ μ Ci)]

Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)

Pu 238 μ Ci/g = [(Pu 238 dpm)(DF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/ μ Ci)(D g/L)(SS)]

Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100

Pu 239/240 μ Ci/g	3.47E+00	DETECTION LEVELS in μ Ci/g
Relative Counting Error =	3.5%	
Pu 238 μ Ci/g	1.59E+00	Pu 239/240
Relative Counting Error =	5.0%	8.02E-01
Pu 236 Tracer Recovery =	99.1%	Pu 238
		8.02E-01

Analyst:

AKL

Date:

21-Apr-2000

Signature of Chemist:

JFR

Date:

24 Apr 00

SAMPLE.WB1 REV 1.0

943128ML

1898

WORKBOOK PAGE: SAM6

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ¹⁰ ^{12/12} LIQUID /

TYPE	DATE COUNTED	APR-20-2000	Pu 236 AEA FRAC (C236)	0.917
SAMPLE	SAMPLE VOLUME in mL	SS	Pu 238 AEA FRAC (C238)	0.000
Work Unit	SAMPLE DILUTION FACTOR	DF	Pu 239 AEA FRAC (C239)	0.100
33256	TRACER VOLUME in mL	SPKV	TOTAL AT COUNTS	2154
Test Code	DIGEST GRAMS of SOLIDS/L	Dg/L	AT COUNT TIME (MIN)	30
@PU23902	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	0.100
Method	DETECTOR NUMBER	14	Pu 236 cpm	50.440
SOLID	EFFICIENCY FACTOR	EFF	Pu 238 cpm	0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	Pu 239 cpm	5.530
20001358	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	480
Refin	PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g	4.8543E+00
0	PU-238 TRACER VALUE (dpm/mL)	0.000		

Sample Prep	
FUSIONHC	
Sample #	Decay Time = Date Counted - Tracer Preparation Date
S00T000800	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of $((-\ln 2) * \text{Decay Time} / 1040.95))$]
Instrument Code	Pu 236 Tracer Recovery = $(\text{Total AT Counts} / \text{TC} - \text{Bkg}) * \text{C236} * 100 / (\text{Pu-236 Decay Corr'd Value} * \text{SPKV} * \text{EFF})$
WB27807	Pu 239/240 μ Ci/g = $(\text{C239}) * (\text{Pu 236 Decay Corr'd Value}) * (\text{SPKV}) * (1000 \text{ mL/L}) * (\text{DF}) / [(\text{C236}) * (\text{SS}) * (\text{D g/L}) * (2220000 \text{ dpm}/\mu\text{Ci})]$
Prepared By	Pu 238 dpm = $[(\text{Total AT Counts} / \text{TC}) - \text{Bkg} * 1 / \text{EFF} * \text{C238}] - (\text{Pu-238 Tracer Value} * \text{SPKV} * \text{Pu 236 Tracer Recovery} / 100)$
NEW	Pu 238 μ Ci/g = $[(\text{Pu 238 dpm}) * (\text{DF}) * (1000 \text{ mL/L})] / [(\text{Pu-236 Tracer Recovery} / 100) * (2220000 \text{ dpm}/\mu\text{Ci}) * (\text{D g/L}) * (\text{SS})]$
Chemist	Relative Counting Error = Square Root of $[1 / ((\text{Pu 236 cpm} * \text{min})) + (1 / (\text{Pu 238 or 239/240 cpm} * \text{min}))] * 1.96 * 100$
JFR	
Analyst	
AKL	

Date Counted	Pu 239/240 μ Ci/g	4.85E+00	DETECTION LEVELS in μ Ci/g
04/21/2000	Relative Counting Error	= 4.0%	
Analysis Date	NOTE: Pu 238 Result is a LESS THAN Value.		Pu 239/240
04/20/2000	Pu 238 μ Ci/g	< 1.46E+00	1.46E+00
Analysis Time	Relative Counting Error	= 100.0%	Pu 238
11:15 AM	Pu 236 Tracer Recovery	= 102.8%	1.46E+00
Sample Point			
AZ-101			

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	JFR	Date: 24 Apr 00
SAMPLE.WB1 REV 1.0	943128ML		

1899

WORKBOOK PAGE: SAM7

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ _{1421/00}

LIQUID /

				SAMPLE
DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)		0.933
SAMPLE	SAMPLE VOLUME in mL SS 0.500	PU 238 AEA FRAC (C238)		0.000
SAMPLE DILUTION FACTOR	DF 1111.000	PU 239 AEA FRAC (C239)		0.100
33256	TRACER VOLUME in mL SPKV 0.100	TOTAL AT COUNTS		2197
DIGEST GRAMS of SOLIDS/L	Dg/L 5.2200	AT COUNT TIME (MIN)		30
@PU23902	TRACER BOOK NO 18B59	BACKGROUND in cpm (Bkg)		0.100
DETECTOR NUMBER	14	PU 236 cpm		51.760
SOLID	EFFICIENCY FACTOR EFF 0.278	PU 238 cpm		0.000
Batch Number	TRACER PREPARATION DATE 08/30/99	PU 239 cpm		5.560
20001358	TRACER PREPARATION VALUE (dpm/mL) 2687.000	AEA COUNT TIME		480
PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g		4.7254E+00
0	PU-238 TRACER VALUE (dpm/mL) 0.000			

Sample Prep	
FUSIONHC	
Sample #	Decay Time = Date Counted - Tracer Preparation Date
S00T000801	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of $\{(-\ln 2 * \text{Decay Time}/1040.95)\}$]
Instrument Code	Pu 236 Tracer Recovery = $(\text{Total AT Counts} / \text{TC} - \text{Bkg}) * \text{C236} * 100 / (\text{Pu-236 Decay Corr'd Value} * \text{SPKV} * \text{EFF})$
WB27807	Pu 239/240 μ Ci/g = $(\text{C239})(\text{Pu 236 Decay Corr'd Value})(\text{SPKV})(1000\text{mL/L})(\text{DF}) / [(\text{C236})(\text{SS})(\text{D g/L})(2220000 \text{ dpm}/\mu\text{Ci})]$
Prepared By	Pu 238 dpm = $\{(\text{Total AT Counts} / \text{TC}) - \text{Bkg} * 1/\text{EFF} * \text{C238}\} - (\text{Pu-238 Tracer Value} * \text{SPKV} * \text{Pu 236 Tracer Recovery} / 100)$
NEW	Pu 238 μ Ci/g = $\{(\text{Pu 238 dpm})(\text{DF})(1000\text{mL/L})\} / [(\text{Pu-236 Tracer Recovery} / 100)(2220000 \text{ dpm}/\mu\text{Ci})(\text{D g/L})(\text{SS})]$
Chemist	Relative Counting Error = Square Root of $\{[1/(\text{Pu 236 cpm} * \text{min})] + [1/(\text{Pu 238 or 239/240 cpm} * \text{min})]\} * 1.96 * 100$
JFR	
Analyst	
AKL	

04/21/2000	Pu 239/240 μ Ci/g	4.73E+00	DETECTION LEVELS in μ Ci/g
Analyst Date	Relative Counting Error	= 4.0%	
04/20/2000	NOTE: Pu 238 Result is a LESS THAN Value.		Pu 239/240
Analyst Date	Pu 238 μ Ci/g	< 1.42E+00	1.42E+00
11:15 AM	Relative Counting Error	= 100.0%	Pu 238
Sample Point	Pu 236 Tracer Recovery	= 106.7%	1.42E+00
AZ-101			

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	Date:	21 Apr 00
SAMPLE WB1 REV 1.0	943128ML		

WORKBOOK PAGE: SAM8

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ *1/21/00* LIQUID /

				SAMPLE
DATE COUNTED	APR-20-2000	PU 236 AEA FRAC (C236)		0.875
SAMPLE VOLUME in mL	SS 0.500	PU 238 AEA FRAC (C238)		0.000
SAMPLE DILUTION FACTOR	DF 1111.000	PU 239 AEA FRAC (C239)		0.112
TRACER VOLUME in mL	SPKV 0.100	TOTAL AT COUNTS		2212
DIGEST GRAMS of SOLIDS/L	Dg/L 5.0400	AT COUNT TIME (MIN)		30
TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)		0.100
DETECTOR NUMBER	14	PU 236 cpm		50.230
EFFICIENCY FACTOR	EFF 0.278	PU 238 cpm		0.000
TRACER PREPARATION DATE	08/30/99	PU 239 cpm		6.400
TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME		480
PU-236 DECAY CORR'D VALUE (dpm/mL)	2299.311	Pu 239/240 μ Ci/g		5.8448E+00
PU-238 TRACER VALUE (dpm/mL)	0.000			

Sample Prep	
FUSIONHC	
Sample #	Decay Time = Date Counted - Tracer Preparation Date
S00T000802	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of $\{(-\ln 2 * \text{Decay Time}/1040.95)\}$]
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)
WB27807	Pu 239/240 μ Ci/g = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF) / [(C236)(SS)(D g/L)(2220000 dpm/ μ Ci)]
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)
NEW	Pu 238 μ Ci/g = [(Pu 238 dpm)(DF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/ μ Ci)(D g/L)(SS)]
Chemist	Relative Counting Error = Square Root of $\{[1/(Pu 236 \text{ cpm} * \text{min})] + [1/(Pu 238 \text{ or } 239/240 \text{ cpm} * \text{min})]\} * 1.96 * 100$
JFR	
AKL	

04/21/2000	Pu 239/240 μ Ci/g	5.84E+00		DETECTION LEVELS in μ Ci/g
04/20/2000	Relative Counting Error	=	3.8%	Pu 239/240
11:15 AM	NOTE: Pu 238 Result is a LESS THAN Value.			1.57E+00
	Pu 238 μ Ci/g	<	1.57E+00	Pu 238
	Relative Counting Error	=	100.0%	1.57E+00
AZ-101	Pu 236 Tracer Recovery	=	100.8%	

Analyst:	AKL	Date:	21-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	Date:	24 Apr 00
SAMPLE.WB1 REV 1.0	943128ML		

LABCORE Completed Worklist Report for Worklist# 33280

Analyst: gl1

Instrument: PU01

Book#: _____

Method: LA-953-104 Rev/Mod _____

Worklist Comment: AZ-101 (2), @PU23901 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@PU23901	PU23901	LIQUID	9.20E-05	7.85E-5	85.326 % Recovery	
1 STD	0	@PU23901	PU23901T	LIQUID	100	1.05E+02	105.000 % Recovery	
1 STD	0	@PU23901	PU23901E	LIQUID	1.00	1.80E+00	1.800 % Ct Error	
2 BLNK	0	@PU23901	PU23901	LIQUID	1	<1.26E-4		uCi/mL
2 BLNK	0	@PU23901	PU23901T	LIQUID	100	9.90E+01	99.000 % Recovery	
2 BLNK	0	@PU23901	PU23901E	LIQUID	1.00	1.00E+02	100.000	uCi/mL
3 SAMPLE	S00T000780	0	@PU23901	PU23901	N/A	6.84E-04	1.32e-004	uCi/mL
3 SAMPLE	S00T000780	0	@PU23901	PU23901T	N/A	1.17E+02		% Recovery
3 SAMPLE	S00T000780	0	@PU23901	PU23901E	N/A	3.12E+00		% Ct. Error
4 SAMPLE	S00T000783	0	@PU23901	PU23901	N/A	6.94E-04	1.40e-004	uCi/mL
4 SAMPLE	S00T000783	0	@PU23901	PU23901T	N/A	1.07E+02		% Recovery
4 SAMPLE	S00T000783	0	@PU23901	PU23901E	N/A	3.20E+00		% Ct. Error
5 SAMPLE	S00T000786	0	@PU23901	PU23901	N/A	5.39E-04	1.25e-004	uCi/mL
5 SAMPLE	S00T000786	0	@PU23901	PU23901T	N/A	1.20E+02		% Recovery
5 SAMPLE	S00T000786	0	@PU23901	PU23901E	N/A	3.55E+00		% Ct. Error

Final page for worklist# 33280

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John Relyea
Reviewer Signature _____ Date *25 Apr 00*

Lower limit on standard recovery is currently 86.4% (used to be 75%); Accepted results. JRR 25 Apr 00

Units shown for QC (BLK/BKG) may not reflect the actual units.

04/18/00 13:01
ws2

Page: 1

LABCORE Data Entry Template for Worklist# 33280

Analyst: gll Instrument: PU01 #15 Book# 60857Method: LA-953-104 Rev/Mod B-3

Worklist Comment: AZ-101 (2), @PU23901 skm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@PU23901	LIQUID		
2	BLNK				@PU23901	LIQUID		
3	SAMPLE	S00T000780 0			@PU23901	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PU23901 , PU23901E, PU23901T								
4	SAMPLE	S00T000783 0			@PU23901	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PU23901 , PU23901E, PU23901T								
5	SAMPLE	S00T000786 0			@PU23901	LIQUID	99000438	AZ-101 (2)
Analytes Requested: PU23901 , PU23901E, PU23901T								

Final page for worklist # 33280

Signature [Signature] Date 4/24/00Signature [Signature] Date 4/25/00
W. Raymond 4.25.2000

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
WL33280-STD-PU
File ID: 2a2003.CNF

Counted on: 4/24/ 0 @18:30
Detector: AEA2
Geometry number: 1
Count time: 28802. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	858.7	858.7	361.359	361.359	10.000	3.571	5.000	0.478
2?	0.0	0.1	257.133	257.133	0.000	0.100	0.000	0.100
3	862.5	862.5	227.894	227.887	12.000	3.722	6.000	0.704

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid			Count Rate	%err @95	d/m	Activity uCi/ea
			Exp.	Obs.	Diff.				
1	Pu236	0.596	5.755	5.753	0.0020	56.95	1.2	256.7	0.116E-03
2		????		5.274		0.00	*****		
3	Pu240	0.453	5.144	5.139	0.0050	43.33	1.4	191.4	0.862E-04
	Pu239		5.147	5.139	0.008			191.4	0.862E-04

Totals:		1.049	<---valid peaks only-->			100.29			

DETECTOR CALIBRATION

Energy(MEV) = 4.091 + (0.0046)*Channel
Energy range (MeV): 4.091 TO 6.446
Efficiency = 0.2264 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	45884.0	100.000
Smoothed	45883.7	99.999
Composite fit	48140.6	104.918
Residuals	-2256.6	-4.918

Analyzed by: _____

SLH2

[illegible]

Raw Data Dump for AEA Spectrum: 2a2003.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	2.	3.	4.
21	2.	3.	0.	1.	1.	3.	2.	1.	2.	1.
31	2.	1.	4.	1.	1.	0.	3.	3.	5.	0.
41	1.	3.	0.	1.	2.	2.	3.	0.	3.	4.
51	1.	2.	3.	2.	4.	4.	0.	4.	1.	1.
61	5.	3.	3.	6.	3.	5.	2.	3.	0.	2.
71	5.	5.	4.	2.	5.	6.	7.	5.	4.	5.
81	3.	3.	3.	2.	6.	7.	3.	5.	5.	3.
91	3.	4.	3.	4.	6.	5.	7.	5.	4.	7.
101	6.	7.	5.	7.	7.	8.	6.	10.	6.	8.
111	5.	10.	4.	13.	10.	8.	11.	7.	6.	9.
121	5.	10.	12.	12.	8.	8.	11.	16.	15.	13.
131	12.	12.	16.	9.	14.	13.	8.	17.	15.	14.
141	19.	22.	24.	16.	21.	20.	19.	20.	25.	32.
151	34.	28.	26.	33.	39.	33.	34.	31.	46.	29.
161	33.	37.	40.	35.	40.	46.	39.	30.	64.	52.
171	55.	57.	58.	75.	62.	61.	72.	68.	69.	75.
181	87.	89.	75.	101.	77.	117.	129.	125.	108.	122.
191	167.	164.	161.	168.	161.	185.	192.	199.	205.	212.
201	246.	266.	244.	268.	274.	316.	309.	337.	339.	390.
211	374.	428.	417.	408.	466.	531.	557.	570.	637.	595.
221	592.	636.	630.	681.	767.	834.	896.	981.	932.	888.
231	620.	291.	104.	23.	10.	7.	9.	7.	9.	15.
241	7.	9.	7.	12.	13.	12.	8.	8.	17.	7.
251	14.	6.	16.	14.	17.	12.	16.	12.	20.	9.
261	8.	8.	18.	15.	13.	19.	9.	21.	14.	14.
271	15.	21.	17.	18.	22.	26.	16.	26.	25.	19.
281	32.	33.	30.	29.	34.	24.	32.	39.	41.	42.
291	40.	40.	40.	49.	43.	40.	47.	50.	41.	48.
301	57.	63.	64.	47.	50.	66.	62.	68.	85.	68.
311	92.	88.	72.	82.	86.	94.	100.	119.	118.	117.
321	140.	132.	138.	144.	183.	184.	185.	178.	218.	218.
331	202.	226.	246.	235.	290.	280.	294.	309.	341.	363.
341	378.	396.	415.	427.	488.	484.	534.	569.	570.	673.
351	713.	777.	781.	727.	701.	645.	642.	743.	761.	815.
361	928.	940.	960.	758.	414.	93.	25.	2.	2.	4.
371	1.	0.	0.	1.	0.	2.	2.	0.	1.	1.
381	0.	1.	2.	0.	0.	1.	1.	0.	0.	1.
391	1.	1.	0.	3.	1.	0.	0.	0.	1.	0.
401	0.	0.	1.	0.	2.	0.	0.	0.	0.	0.
411	0.	0.	0.	1.	0.	0.	3.	0.	0.	0.
421	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
441	0.	1.	0.	0.	1.	1.	0.	0.	1.	0.
451	0.	0.	0.	0.	1.	0.	0.	1.	1.	0.
461	0.	0.	1.	0.	0.	0.	1.	1.	0.	0.
471	0.	1.	1.	0.	0.	0.	0.	0.	0.	1.
481	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
 G E N E R A L A L P H A E N E R G Y A N A L Y S I S
 Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
 WL33280-BLNK-PU
 File ID: 3a3048.CNF

Counted on: 4/24/ 0 @18:31
 Detector: AEA3
 Geometry number: 1
 Count time: 28805. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	760.0	760.0	361.391	361.391	12.000	4.765	6.000	0.552

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea
1	Pu236	1.0 <i>1.0</i>	1.191 <i>5.755</i>	5.749	0.0060	0.02	58.20	1.2	263.5	0.119E-03
Totals:		1.191 <i>1.0</i>	---valid peaks only---				58.20			

DETECTOR CALIBRATION

25 Apr 02
 Energy (MEV) = 4.087 + (0.0046)*Channel
 Energy range (MeV): 4.087 TO 6.442
 Efficiency = 0.2254 CPM/DPM
 (Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	23470.0	100.000
Smoothed	23470.2	100.001
Composite fit	27941.9	119.054
Residuals	-4471.9	-19.054

Analyzed by: _____

SLH2

Display Max.: 5507.1

1908

Raw Data Dump for AEA Spectrum: 3a3048.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	0.	1.	1.	1.
21	0.	0.	0.	1.	0.	0.	0.	1.	0.	1.
31	0.	0.	1.	0.	0.	0.	0.	1.	1.	1.
41	0.	0.	1.	0.	1.	0.	0.	0.	1.	1.
51	0.	0.	0.	1.	0.	1.	1.	0.	0.	0.
61	2.	1.	2.	1.	0.	0.	0.	0.	0.	0.
71	0.	0.	0.	2.	0.	0.	2.	1.	1.	0.
81	0.	0.	0.	0.	0.	0.	1.	0.	1.	0.
91	1.	0.	0.	1.	0.	0.	1.	0.	0.	1.
101	0.	0.	1.	0.	3.	0.	0.	1.	1.	0.
111	1.	0.	1.	1.	1.	0.	1.	2.	2.	1.
121	0.	1.	0.	1.	0.	1.	0.	1.	1.	0.
131	1.	2.	0.	0.	0.	0.	2.	0.	0.	0.
141	2.	1.	0.	0.	3.	1.	2.	1.	1.	1.
151	2.	2.	0.	1.	2.	2.	0.	3.	3.	1.
161	0.	2.	4.	3.	2.	0.	2.	0.	3.	5.
171	2.	5.	0.	7.	4.	1.	2.	2.	1.	1.
181	3.	2.	2.	3.	1.	2.	3.	2.	1.	3.
191	5.	2.	2.	3.	3.	8.	3.	2.	5.	1.
201	4.	8.	2.	4.	3.	5.	0.	8.	6.	2.
211	4.	4.	2.	5.	3.	8.	6.	8.	5.	2.
221	8.	7.	6.	7.	8.	6.	7.	7.	5.	6.
231	6.	5.	4.	2.	4.	6.	9.	6.	7.	3.
241	9.	2.	6.	9.	5.	5.	6.	7.	12.	4.
251	6.	13.	11.	7.	13.	10.	16.	9.	14.	10.
261	8.	16.	12.	14.	15.	12.	11.	13.	14.	17.
271	12.	20.	19.	19.	20.	21.	21.	21.	26.	28.
281	19.	16.	22.	28.	21.	34.	33.	36.	31.	30.
291	30.	32.	34.	32.	27.	44.	33.	33.	46.	36.
301	39.	51.	42.	32.	71.	66.	73.	63.	57.	66.
311	84.	84.	83.	95.	86.	88.	105.	118.	113.	115.
321	127.	131.	136.	142.	158.	167.	187.	182.	195.	215.
331	216.	236.	253.	273.	283.	287.	304.	333.	348.	348.
341	361.	402.	429.	429.	514.	457.	533.	520.	554.	618.
351	635.	686.	755.	750.	732.	681.	637.	619.	727.	711.
361	769.	835.	800.	693.	543.	313.	103.	34.	5.	2.
371	1.	0.	1.	0.	0.	1.	2.	1.	0.	0.
381	0.	1.	1.	0.	0.	0.	0.	0.	0.	0.
391	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
401	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.
411	1.	0.	0.	0.	0.	1.	0.	0.	0.	0.
421	1.	0.	0.	1.	1.	0.	0.	0.	1.	0.
431	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	0.	1.	0.	0.	0.	0.	0.	0.	1.	0.
461	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
471	1.	0.	1.	0.	0.	0.	1.	2.	2.	1.
481	0.	1.	1.	1.	0.	2.	0.	0.	2.	3.
491	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T780-SAM-PU
File ID: 5a5663.CNF

Counted on: 4/24/ 0 @18:31
Detector: AEA5
Geometry number: 1
Count time: 28801. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	846.1	846.1	360.727	360.727	10.000	3.732	5.000	0.479
2?	0.0	0.1	303.747	303.747	0.000	0.100	0.000	0.100
3	163.3	163.3	229.216	229.183	10.000	4.571	5.000	0.730
4?	0.0	0.1	178.553	178.553	0.000	0.100	0.000	0.100

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Exp.	Obs.	Diff.	FWHM	Count Rate	%err @95	d/m	Activity uCi/ea	
1	Pu236	0.952	5.755	5.743	0.012	0.02	58.34	1.2	434.2	0.196E-03	
2		????		5.481			0.00	*****			
3	Pu240	0.156	5.144	5.138	0.006	0.02	9.58	3.0	69.9	0.315E-04	
	Pu239		5.147	5.138	0.009				69.9	0.315E-04	
4		????		4.905			0.00	9943.			
Totals:		1.108	<--valid peaks only-->				67.92				

DETECTOR CALIBRATION

Energy (MEV) = 4.084 + (0.0046)*Channel
Energy range (MeV): 4.084 TO 6.439
Efficiency = 0.1371 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	29433.0	100.000
Smoothed	29433.0	100.000
Composite fit	32604.8	110.776
Residuals	-3171.8	-10.776

Analyzed by: _____

SLH2

Display Max.: 5904.9

[illegible]

Raw Data Dump for AEA Spectrum: 5a5663.CNF

HNF-1701 REV. 0

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	2.	0.	1.	0.
21	0.	1.	0.	1.	0.	3.	1.	2.	1.	2.
31	2.	1.	1.	2.	2.	2.	2.	1.	2.	0.
41	2.	1.	0.	2.	0.	0.	3.	1.	0.	1.
51	0.	1.	0.	0.	0.	2.	1.	1.	2.	1.
61	2.	0.	2.	2.	2.	1.	1.	1.	0.	3.
71	3.	3.	0.	3.	1.	2.	1.	2.	1.	2.
81	1.	1.	4.	2.	4.	2.	0.	2.	1.	1.
91	3.	1.	5.	1.	1.	4.	2.	6.	2.	1.
101	0.	3.	2.	1.	2.	3.	2.	2.	7.	2.
111	2.	1.	5.	5.	4.	3.	5.	6.	3.	4.
121	4.	5.	3.	5.	5.	4.	5.	5.	3.	8.
131	7.	8.	4.	7.	9.	12.	11.	5.	9.	5.
141	7.	14.	13.	7.	7.	7.	8.	13.	24.	7.
151	5.	9.	10.	8.	10.	6.	10.	11.	6.	6.
161	11.	9.	12.	7.	15.	11.	12.	9.	14.	9.
171	9.	14.	11.	15.	11.	14.	19.	25.	18.	17.
181	17.	11.	23.	10.	18.	27.	21.	16.	20.	25.
191	30.	26.	34.	43.	36.	37.	47.	39.	37.	44.
201	52.	52.	44.	58.	56.	57.	61.	72.	74.	88.
211	69.	87.	113.	92.	101.	100.	98.	90.	130.	132.
221	138.	127.	120.	137.	158.	138.	158.	177.	180.	190.
231	194.	121.	102.	70.	44.	15.	13.	9.	6.	6.
241	10.	11.	9.	16.	8.	8.	8.	7.	16.	15.
251	12.	15.	10.	16.	15.	13.	9.	17.	27.	17.
261	18.	16.	19.	28.	20.	18.	17.	23.	25.	22.
271	21.	26.	30.	23.	27.	25.	34.	36.	33.	30.
281	29.	48.	42.	32.	42.	37.	62.	51.	55.	50.
291	47.	52.	65.	63.	67.	75.	66.	83.	69.	78.
301	82.	71.	98.	90.	88.	75.	71.	78.	67.	61.
311	75.	87.	84.	91.	78.	104.	83.	94.	129.	131.
321	133.	132.	156.	150.	147.	177.	178.	188.	193.	210.
331	208.	217.	234.	263.	266.	321.	314.	329.	366.	375.
341	382.	422.	424.	489.	478.	508.	548.	563.	622.	697.
351	721.	803.	808.	740.	699.	685.	687.	711.	740.	911.
361	906.	966.	827.	536.	231.	65.	14.	3.	2.	1.
371	3.	1.	1.	2.	1.	0.	0.	1.	2.	1.
381	1.	1.	0.	0.	0.	0.	0.	0.	1.	0.
391	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.
401	0.	1.	0.	0.	0.	0.	0.	1.	0.	1.
411	0.	1.	2.	0.	0.	0.	0.	0.	1.	0.
421	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.
431	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.
441	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
461	0.	1.	0.	0.	0.	0.	0.	1.	0.	0.
471	0.	0.	0.	1.	0.	1.	0.	0.	0.	1.
481	0.	2.	0.	0.	0.	2.	0.	0.	0.	0.
491	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T783-SAM-PU
File ID: 6a6658.CNF

Counted on: 4/24/ 0 @18:34
Detector: AEA6
Geometry number: 1
Count time: 28806. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	676.8	676.8	358.006	358.006	16.000	9.318	8.000	1.084
2?	86.3	86.3	353.657	351.215	8.000	1.770	4.000	1.183
3?	0.0	0.1	303.372	303.372	0.000	0.100	0.000	0.100
4	122.3	122.3	224.381	224.210	20.000	11.136	10.000	1.487
5?	5.1	5.1	147.743	147.321	6.000	0.869	3.000	0.661

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA Frac	Peak Centroid Exp.	Obs.	Diff.	FWHM	Count Rate c/m	%err @95	d/m	Activity uCi/ea	
1	Cm243	0.896	5.779	5.737	0.042	0.04	54.91	1.2	345.7	0.156E-03	
	Pu236		5.755	5.737	0.018				257.5	0.116E-03	
2		????		5.705			1.65	37.7			
3		????		5.485			0.00	*****			
4	Pu240	0.149	5.144	5.121	0.023	0.05	9.13	3.1	42.0	0.189E-04	
	Pu239		5.147	5.121	0.026				42.0	0.189E-04	
5		????		4.767			0.08	93.5			
Totals:		1.045	<--valid peaks only-->				64.04				

DETECTOR CALIBRATION

Energy(MEV) = 4.090 + (0.0046)*Channel
Energy range (MeV): 4.090 TO 6.445
Efficiency = 0.2176 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	29428.0	100.000
Smoothed	29428.0	100.000
Composite fit	31576.8	107.302
Residuals	-2148.8	-7.302

Analyzed by: _____

Spectrum 6a6658.CNF

1 Legend: Raw = Modeled Peaks = 1,2,..., etc

Display Max.: 5280.3

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5
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14.
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3..... 1
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2.....1.
...2.....1.....
.2.....1...
.....1..
...1

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Raw Data Dump for AEA Spectrum: 6a6658.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.
21	0.	1.	0.	1.	2.	1.	3.	0.	2.	2.
31	1.	2.	0.	1.	1.	3.	0.	1.	0.	2.
41	1.	1.	1.	1.	2.	3.	1.	2.	3.	1.
51	1.	2.	1.	3.	0.	1.	1.	1.	2.	1.
61	0.	1.	1.	6.	2.	0.	1.	0.	2.	1.
71	1.	3.	2.	2.	1.	3.	2.	1.	2.	3.
81	5.	0.	2.	3.	2.	1.	3.	3.	6.	4.
91	1.	4.	3.	5.	1.	3.	1.	5.	2.	1.
101	7.	1.	1.	7.	1.	3.	2.	1.	1.	5.
111	5.	5.	13.	3.	3.	9.	5.	5.	4.	9.
121	7.	4.	1.	8.	8.	3.	6.	10.	9.	3.
131	5.	4.	6.	3.	10.	10.	6.	9.	4.	6.
141	9.	8.	8.	12.	10.	13.	11.	19.	13.	10.
151	8.	9.	7.	14.	12.	9.	15.	8.	15.	9.
161	15.	6.	15.	16.	14.	17.	18.	15.	12.	16.
171	20.	17.	21.	18.	18.	16.	27.	21.	22.	29.
181	28.	32.	23.	36.	30.	26.	26.	29.	39.	31.
191	44.	35.	31.	46.	46.	46.	56.	54.	51.	48.
201	59.	61.	76.	74.	61.	74.	82.	89.	81.	92.
211	84.	109.	101.	89.	106.	124.	126.	103.	135.	130.
221	132.	116.	140.	135.	139.	127.	126.	128.	119.	90.
231	90.	49.	35.	34.	29.	16.	13.	8.	8.	9.
241	9.	13.	19.	21.	11.	8.	14.	21.	20.	13.
251	20.	16.	18.	16.	20.	17.	13.	12.	28.	32.
261	28.	25.	24.	21.	26.	28.	31.	26.	34.	32.
271	45.	30.	33.	28.	43.	38.	46.	32.	37.	38.
281	44.	47.	52.	47.	59.	53.	55.	52.	54.	57.
291	59.	64.	62.	79.	74.	56.	85.	79.	85.	94.
301	94.	102.	96.	87.	98.	93.	79.	88.	89.	88.
311	108.	101.	110.	108.	115.	129.	125.	147.	138.	148.
321	157.	152.	172.	182.	194.	214.	189.	236.	229.	304.
331	245.	275.	296.	319.	329.	341.	360.	371.	354.	428.
341	414.	454.	475.	471.	509.	510.	581.	591.	585.	653.
351	663.	689.	700.	686.	633.	638.	646.	717.	680.	688.
361	580.	612.	533.	381.	218.	148.	68.	33.	14.	7.
371	3.	2.	2.	2.	0.	0.	1.	0.	1.	0.
381	0.	0.	0.	2.	0.	1.	0.	0.	1.	0.
391	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.
401	0.	0.	0.	1.	0.	0.	1.	0.	0.	1.
411	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.
421	0.	1.	0.	0.	0.	1.	0.	0.	0.	0.
431	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
441	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
451	1.	0.	0.	0.	1.	1.	0.	0.	0.	0.
461	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
471	1.	1.	0.	1.	0.	1.	0.	0.	1.	0.
481	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

222-S Analytical Laboratory
G E N E R A L A L P H A E N E R G Y A N A L Y S I S
Rev. 2.11

DATA REDUCTION REPORT

SAMPLE
S00T786-SAM-PU
File ID: 7a7721.CNF

Counted on: 4/24/ 0 @18:34
Detector: AEA7
Geometry number: 1
Count time: 28800. Sec

PEAK ANALYSIS

Peak ID	Peak height		Peak center		FWHM		Tau	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	732.6	732.6	362.055	362.055	8.000	3.429	4.000	0.389
2?	50.3	50.3	353.962	352.317	8.000	0.652	4.000	5.264
3?	0.0	0.1	304.585	304.585	0.000	0.100	0.000	0.100
4?	0.0	0.1	258.870	258.870	0.000	0.100	0.000	0.100
5	134.8	134.8	228.161	228.105	12.000	4.568	6.000	0.826
6	8.8	8.8	147.214	146.548	22.000	16.150	11.000	1.956

PEAK RESULTS

Peak Error Limit: 30%

Peak ID	Isotope	AEA		Peak Centroid			Count		%err	d/m	Activity uCi/ea
		Frac	Exp.	Obs.	Diff.	FWHM	Rate	c/m			
1	Pu236	0.999	5.755	5.759	-.0040	0.02	55.76	1.2		239.2	0.108E-03
2		????		5.714			0.40	145.			
3		????		5.494			0.00	*****			
4		????		5.284			0.00	*****			
5	Pu240	0.129	5.144	5.143	0.0010	0.02	7.17	3.6		30.2	0.136E-04
	Pu239		5.147	5.143	0.004					30.2	0.136E-04
6	U 234	0.013	4.759	4.768	-.0090	0.07	0.73	13.2		3.1	0.139E-05
	Np237		4.769	4.768	0.001					3.6	0.160E-05

Totals:		1.141	<--valid peaks only-->				63.67				

DETECTOR CALIBRATION

Energy (MEV) = 4.093 + (0.0046)*Channel
Energy range (MeV): 4.093 TO 6.449
Efficiency = 0.2379 CPM/DPM
(Data reduction compression factor: 1.)

TOTAL COUNT DATA:

Item	Total	% Recovery
Raw spectrum	26794.0	100.000
Smoothed	26794.0	100.000
Composite fit	30755.7	114.786
Residuals	-3961.7	-14.786

4866.7

1917

Raw Data Dump for AEA Spectrum: 7a7721.CNF

1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
11	0.	0.	0.	0.	0.	0.	1.	1.	1.	1.
21	3.	1.	0.	0.	3.	4.	1.	0.	1.	0.
31	2.	0.	1.	1.	1.	1.	3.	3.	2.	1.
41	2.	1.	1.	0.	1.	2.	1.	4.	0.	0.
51	3.	3.	1.	3.	1.	0.	4.	0.	4.	1.
61	2.	2.	0.	2.	2.	2.	2.	2.	4.	1.
71	1.	3.	1.	0.	2.	5.	1.	1.	2.	5.
81	3.	0.	1.	0.	1.	2.	9.	4.	1.	0.
91	1.	4.	5.	0.	5.	1.	1.	3.	1.	3.
101	7.	3.	2.	4.	6.	2.	4.	7.	2.	6.
111	3.	3.	1.	5.	1.	2.	7.	4.	6.	5.
121	5.	7.	9.	6.	2.	12.	6.	7.	4.	5.
131	5.	5.	1.	16.	6.	4.	9.	9.	8.	7.
141	7.	9.	19.	9.	8.	10.	12.	12.	9.	9.
151	12.	9.	6.	8.	9.	8.	10.	6.	5.	13.
161	7.	9.	8.	8.	12.	11.	10.	14.	8.	13.
171	21.	20.	14.	9.	20.	16.	11.	13.	17.	25.
181	15.	23.	24.	19.	14.	17.	20.	23.	34.	29.
191	21.	33.	34.	34.	38.	35.	38.	32.	26.	46.
201	41.	46.	61.	51.	43.	58.	55.	62.	62.	61.
211	73.	68.	72.	68.	87.	94.	78.	111.	104.	102.
221	118.	97.	124.	110.	121.	142.	153.	162.	155.	153.
231	120.	94.	52.	37.	15.	22.	7.	8.	11.	19.
241	13.	12.	10.	8.	18.	13.	11.	17.	12.	12.
251	21.	15.	11.	19.	18.	15.	23.	25.	19.	18.
261	23.	20.	14.	15.	10.	24.	21.	16.	20.	19.
271	28.	27.	25.	19.	33.	34.	31.	37.	29.	39.
281	26.	34.	38.	43.	43.	43.	43.	51.	35.	49.
291	53.	57.	55.	61.	61.	65.	83.	78.	72.	61.
301	67.	83.	87.	98.	77.	82.	82.	87.	56.	79.
311	66.	86.	86.	86.	108.	120.	104.	103.	106.	115.
321	116.	139.	133.	151.	138.	130.	165.	182.	181.	195.
331	224.	195.	247.	232.	248.	275.	298.	296.	350.	320.
341	361.	367.	432.	404.	421.	405.	426.	476.	508.	545.
351	595.	635.	662.	635.	614.	581.	576.	560.	645.	654.
361	712.	758.	884.	758.	503.	226.	74.	11.	1.	1.
371	1.	1.	1.	1.	0.	0.	1.	0.	0.	0.
381	0.	0.	0.	0.	3.	0.	0.	0.	0.	0.
391	1.	0.	1.	1.	0.	0.	0.	0.	0.	0.
401	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
411	0.	0.	0.	0.	0.	0.	1.	0.	3.	0.
421	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
431	0.	0.	0.	1.	1.	0.	0.	1.	1.	0.
441	0.	1.	0.	1.	0.	0.	0.	0.	0.	0.
451	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
461	1.	1.	0.	0.	0.	0.	1.	0.	0.	2.
471	1.	0.	0.	0.	0.	1.	2.	1.	0.	0.
481	2.	0.	1.	0.	1.	0.	0.	0.	0.	0.
491	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
511	0.	0.								

WORKBOOK PAGE: STD1

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-70) ³ ¹⁰ ¹⁰ ¹⁰ LIQUID

Type	DATE COUNTED	APR-24-2000	PU 236 AEA FRAC (C236)	STD
STD	SAMPLE VOLUME in mL SS	1.000	PU 238 AEA FRAC (C238)	0.596
Work List	SAMPLE DILUTION FACTOR DF	1.000	PU 239 AEA FRAC (C239)	0.000
33280	TRACER VOLUME in mL SPKV	0.100	TOTAL AT COUNTS	0.453
Test Code	DIGEST DILUTION FACTOR DDF	1.000	AT COUNT TIME (MIN)	3498
@PU23901	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	30
Matrix	DETECTOR NUMBER	15	PU 236 cpm	0.170
LIQUID	EFFICIENCY FACTOR EFF	0.289	PU 238 cpm	56.950
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	0.000
20001379	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	43.330
Rerun	PU-236 DECAY CORR'D VALUE (dpm/mL)	2293.195	Pu 239/240 µCi/L	480
0	PU-238 TRACER VALUE (dpm/mL)	0.000		7.8513E-02
Sample Prep	STANDARD BOOK NO	60B57		
N/A	STANDARD VALUE in µCi/mL	9.204E-05		
Sample #				
WL33280-STD				
Instrument Code	Decay Time = Date Counted - Tracer Preparation Date			
WB26872	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]			
Prepared By	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * 1/EFF * C236 * 100 / Pu-236 Decay Corr'd Value * SPKV			
MCB	Pu 239/240 µCi/L = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF)(DDF) / [(C236)(SS)(2220000 dpm/µCi)]			
Chemist	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)			
JFR	Pu 238 µCi/L = [(Pu 238 dpm)(DF)(DDF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/µCi)(D g/L)(SS)]			
Analyst	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100			
GLL				
Data Complete				
04/25/2000	Pu 239/240 µCi/mL	7.85E-05	DETECTION LEVELS in µCi/mL	
Analysis Date	Relative Counting Error =	1.8%	Pu 239/240	
04/24/2000			5.20E-06	
Analysis Time				
08:45 AM				
Sample Point				
AZ-101	Pu 236 Tracer Recovery =	104.6%		

Analyst:	GLL	Date:	25-Apr-2000
Signature of Chemist:	JFR	Date:	25 Apr 00

STANDARD.WB1 REV 1.0

943128ML

WORKBOOK PAGE: BLANK2

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ^{3 LAD} _{6/6/00} L

Type	DATE COUNTED	APR-24-2000	PU 236 AEA FRAC (C236)	BLNK
BLNK	SAMPLE VOLUME in mL	SS	2.500	PU 238 AEA FRAC (C238)
Work List	SAMPLE DILUTION FACTOR	DF	101.000	PU 239 AEA FRAC (C239)
33280	TRACER VOLUME in mL	SPKV	0.100	TOTAL AT COUNTS
Test Code	DIGEST DILUTION FACTOR	DDF	1.0000	AT COUNT TIME (MIN)
@PU23901	TRACER BOOK NO		18B59	BACKGROUND in cp (Bkg)
Matrix	DETECTOR NUMBER		15	PU 236 cpm
LIQUID	EFFICIENCY FACTOR	EFF	0.2894	PU 238 cpm
Batch Number	TRACER PREPARATION DATE		08/30/99	PU 239 cpm
20001379	TRACER PREPARATION VALUE (dpm/mL)		2687.00	AEA COUNT TIME
Recovery	PU-236 DECAY CORR'D VALUE (dpm/mL)		2293.19	Pu 239/240 µCi/L =
0	PU-238 TRACER VALUE (dpm/mL)		0.00	< 1.265E-01
Sample Prep				
N/A				
Sample #	Decay Time = Date Counted - Tracer Preparation Date			
WL33280-BLNK	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]			
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)			
WB26872	Pu 239/240 µCi/L = (C239) * (Pu 236 Decay Corr'd Value) * (SPKV) * (1000mL/L) * (DF) * (DDF) / [(C236) * (SS) * (D g/L) * (2220000 dpm/µCi)]			
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)			
MCB	Pu 238 µCi/L = [(Pu 238 dpm) * (DF) * (DDF) * (1000mL/L)] / [(Pu-236 Tracer Recovery / 100) * (2220000 dpm/µCi) * (D g/L) * (SS)]			
Chemist	Relative Counting Error = Square Root of [(1 / (Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100			
JFR				
Analyst				
GLL				
Date Complete				
04/25/2000	Pu 239/240 µCi/mL	< 1.26E-04		DETECTION LEVELS in µCi/mL
Analysis Date	Relative Counting Error	= 100.0%		
04/24/2000				
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.			Pu 239/240
08:45 AM	Pu 238 µCi/mL	< 1.26E-04		1.26E-04
Sample Point	Relative Counting Error	= 100.0%		Pu 238
AZ-101	Pu 236 Tracer Recovery	= 99.0%		1.26E-04

Analyst:	GLL	Date:	25-Apr-2000
Signature of Chemist:	<i>John Relyea</i>	JFR	Date: 25 Apr 00

BLANK.WB1 REV 1.0

943128ML

WORKBOOK PAGE: SAM3

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ^{LA9} ^{1/16/00} LIQUID /

				SAMPLE	
Type	DATE COUNTED	APR-24-2000	PU 236 AEA FRAC (C236)		0.952
SAMPLE	SAMPLE VOLUME in mL SS	2.500	PU 238 AEA FRAC (C238)		0.000
Work List	SAMPLE DILUTION FACTOR DF	101.000	PU 239 AEA FRAC (C239)		0.156
33280	TRACER VOLUME in mL SPKV	0.100	TOTAL AT COUNTS		2449
Lab Code	DIGEST DILUTION FACTOR DDF	1.0000	AT COUNT TIME (MIN)		30
@PU23901	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)		0.170
Matrix	DETECTOR NUMBER	15	PU 236 cpm		58.340
LIQUID	EFFICIENCY FACTOR EFF	0.289	PU 238 cpm		0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm		9.580
20001379	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME		480
Regrin	PU-236 DECAY CORR'D VALUE (dpm/mL)	2293.195	Pu 239/240 µCi/L		6.8384E-01
0	PU-238 TRACER VALUE (dpm/mL)	0.000			
Sample Prep					
N/A					
Sample #	Decay Time = Date Counted - Tracer Preparation Date				
S00T000780	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]				
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)				
WB26872	Pu 239/240 µCi/L = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF)(DDF) / [(C236)(SS)(D g/L)(2220000 dpm/µCi)]				
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)				
MCB	Pu 238 µCi/L = [(Pu 238 dpm)(DF)(DDF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/µCi)(D g/L)(SS)]				
Chemist	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100				
JFR					
Analyst					
GLL					
Data Complete					
04/25/2000	Pu 239/240 µCi/mL	6.84E-04	DETECTION LEVELS in µCi/mL		
Analysis Date	Relative Counting Error =	3.1%			
04/24/2000					
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.				
08:45 AM	Pu 238 µCi/mL	< 1.32E-04	Pu 239/240 1.32E-04		
Sample Point	Relative Counting Error =	100.0%	Pu 238 1.32E-04		
AZ-101	Pu 236 Tracer Recovery =	116.9%			

Analyst:	GLL	Date:	25-Apr-2000
Signature of Chemist:	JFR	Date:	25 Apr 00

SAMPLE.WB1 REV 1.0

943128ML

WORKBOOK PAGE: SAM4

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ₄₀₀ ₄₀₀ LIQUID /

Type	DATE COUNTED	APR-24-2000	Pu 236 AEA FRAC (C236)	0.896	
SAMPLE	SAMPLE VOLUME in mL	SS	2.500	Pu 238 AEA FRAC (C238)	0.000
Work List	SAMPLE DILUTION FACTOR	DF	101.000	Pu 239 AEA FRAC (C239)	0.149
33280	TRACER VOLUME in mL	SPKV	0.100	TOTAL AT COUNTS	2374
Test Code	DIGEST DILUTION FACTOR	DDF	1.0000	AT COUNT TIME (MIN)	30
@PU23901	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	0.170	
Matrix	DETECTOR NUMBER	15	Pu 236 cpm	54.910	
LIQUID	EFFICIENCY FACTOR	EFF	0.289	Pu 238 cpm	0.000
Batch Number	TRACER PREPARATION DATE	08/30/99	Pu 239 cpm	9.130	
20001379	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	480	
Rerun	PU-236 DECAY CORR'D VALUE (dpm/mL)	2293.195	Pu 239/240 µCi/L	6.9398E-01	
0	PU-238 TRACER VALUE (dpm/mL)	0.000			
Sample Prep					
N/A					
Sample #	Decay Time = Date Counted - Tracer Preparation Date				
S00T000783	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]				
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)				
WB26872	Pu 239/240 µCi/L = (C239)(Pu 236 Decay Corr'd Value)(SPKV)(1000mL/L)(DF)(DDF) / [(C236)(SS)(D g/L)(2220000 dpm/µCi)]				
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)				
MCB	Pu 238 µCi/L = [(Pu 238 dpm)(DF)(DDF)(1000mL/L)] / [(Pu-236 Tracer Recovery / 100)(2220000 dpm/µCi)(D g/L)(SS)]				
Chemist	Relative Counting Error = Square Root of [(1/(Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100				
JFR					
Analyst					
GLL					
Date Complete					
04/25/2000	Pu 239/240 µCi/mL	6.94E-04			
Analysis Date	Relative Counting Error	= 3.2%			
04/24/2000					
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.				
08:45 AM	Pu 238 µCi/mL	< 1.40E-04			
Sample Point	Relative Counting Error	= 100.0%			
AZ-101	Pu 236 Tracer Recovery	= 106.6%			

Analyst:	GLL	Date:	25-Apr-2000
Signature of Chemist:	JFR	Date:	25 Apr 00

SAMPLE.WB1 REV 1.0

943128ML

1922

04/25/2000

I:\943128\OUT\33280.WB1

WORKBOOK PAGE: SAM5

Pu 238 and 239/240 : LA-943-128 (VOID) or LA-953-104(B-0) ³ ¹⁴⁷ ¹⁴² LIQUID /

TYPE	DATE COUNTED	APR-24-2000	PU 236 AEA FRAC (C236)	SAMPLE
SAMPLE	SAMPLE VOLUME in mL SS	2.500	PU 238 AEA FRAC (C238)	0.999
Work List	SAMPLE DILUTION FACTOR DF	101.000	PU 239 AEA FRAC (C239)	0.000
33280	TRACER VOLUME in mL SPKV	0.100	TOTAL AT COUNTS	0.129
Test Code	DIGEST DILUTION FACTOR DDF	1.0000	AT COUNT TIME (MIN)	2392
@PU23901	TRACER BOOK NO	18B59	BACKGROUND in cpm (Bkg)	30
Matrix	DETECTOR NUMBER	15	PU 236 cpm	0.170
LIQUID	EFFICIENCY FACTOR EFF	0.289	PU 238 cpm	55.760
Batch Number	TRACER PREPARATION DATE	08/30/99	PU 239 cpm	0.000
20001379	TRACER PREPARATION VALUE (dpm/mL)	2687.000	AEA COUNT TIME	7.170
Rerun	PU-236 DECAY CORR'D VALUE (dpm/mL)	2293.195	Pu 239/240 µCi/L	480
0	PU-238 TRACER VALUE (dpm/mL)	0.000		5.3888E-01
Sample Prep				
N/A				
Sample #	Decay Time = Date Counted - Tracer Preparation Date			
S00T000786	Pu-236 Decay Corr'd Value = Pu-236 Preparation Value * [e to the power of {(-ln2 * Decay Time/1040.95)}]			
Instrument Code	Pu 236 Tracer Recovery = (Total AT Counts / TC - Bkg) * C236 * 100 / (Pu-236 Decay Corr'd Value * SPKV * EFF)			
WB26872	Pu 239/240 µCi/L = (C239) * (Pu 236 Decay Corr'd Value) * (SPKV) * (1000 mL/L) * (DF) * (DDF) / [(C236) * (SS) * (D g/L) * (2220000 dpm/µCi)]			
Prepared By	Pu 238 dpm = [(Total AT Counts / TC) - Bkg * 1/EFF * C238] - (Pu-238 Tracer Value * SPKV * Pu 236 Tracer Recovery / 100)			
MCB	Pu 238 µCi/L = [(Pu 238 dpm) * (DF) * (DDF) * (1000 mL/L)] / [(Pu-236 Tracer Recovery / 100) * (2220000 dpm/µCi) * (D g/L) * (SS)]			
Chemist	Relative Counting Error = Square Root of [(1 / (Pu 236 cpm * min)) + (1 / (Pu 238 or 239/240 cpm * min))] * 1.96 * 100			
JFR				
Analyst				
GLL				
Date Complete				
04/25/2000	Pu 239/240 µCi/mL	5.39E-04	DETECTION LEVELS in µCi/mL	
Analysis Date	Relative Counting Error =	3.5%	Pu 239/240	
04/24/2000			1.25E-04	
Analysis Time	NOTE: Pu 238 Result is a LESS THAN Value.		Pu 238	
08:45 AM	Pu 238 µCi/mL	< 1.25E-04	1.25E-04	
Sample Point	Relative Counting Error =	100.0%		
AZ-101	Pu 236 Tracer Recovery =	119.8%		

Analyst:	GLL	Date:	25-Apr-2000
Signature of Chemist:	JFR	Date:	25 Apr 00

SAMPLE.WB1 REV 1.0

943128ML

1923

04/25/2000

LABCORE Completed Worklist Report for Worklist# 33406

Analyst: ak1

Instrument: LSC03

Book#: _____

Method: LA-365-132 Rev/Mod _____

Worklist Comment: AZ-101 (2) RERUN OF WL33281 FOR @SE79-01. new

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK		0		@SE79-01 SE79-01 LIQUID		1	5.08E-5	0.000	uCi/mL
1 BLNK		0		@SE79-01 SE79-01C LIQUID		100	9.00E+01	90.000	% Recovery
1 BLNK		0		@SE79-01 SE79-01E LIQUID		1	2.38E+00	2.380	uCi/mL
2 SAMPLE	S00T000780	0		@SE79-01 SE79-01 LIQUID	N/A		1.54E-03	4.19e-005	uCi/mL
2 SAMPLE	S00T000780	0		@SE79-01 SE79-01C LIQUID	N/A		9.55E+01		% Recovery
2 SAMPLE	S00T000780	0		@SE79-01 SE79-01E LIQUID	N/A		1.37E+00		% Recovery
3 SAMPLE	S00T000783	0		@SE79-01 SE79-01 LIQUID	N/A		1.40E-03	4.18e-005	uCi/mL
3 SAMPLE	S00T000783	0		@SE79-01 SE79-01C LIQUID	N/A		9.55E+01		% Recovery
3 SAMPLE	S00T000783	0		@SE79-01 SE79-01E LIQUID	N/A		1.41E+00		% Recovery
4 SAMPLE	S00T000786	0		@SE79-01 SE79-01 LIQUID	N/A		1.46E-03	4.34e-005	uCi/mL
4 SAMPLE	S00T000786	0		@SE79-01 SE79-01C LIQUID	N/A		9.05E+01		% Recovery
4 SAMPLE	S00T000786	0		@SE79-01 SE79-01E LIQUID	N/A		1.41E+00		% Recovery

Final page for worklist# 33406

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature

Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 33406

Analyst: _____ Instrument: LSC00 _____ Book# _____

Method: LA-365-132 Rev/Mod D6

Worklist Comment: AZ-101 (2) RERUN OF WL33281 FOR @SE79-01. new

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK			@SE79-01	LIQUID		
2 SAMPLE	S00T000780 0		@SE79-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SE79-01 , SE79-01C, SE79-01E						
3 SAMPLE	S00T000783 0		@SE79-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SE79-01 , SE79-01C, SE79-01E						
4 SAMPLE	S00T000786 0		@SE79-01	LIQUID	99000438	AZ-101 (2)
Analytes Requested: SE79-01 , SE79-01C, SE79-01E						

Final page for worklist # 33406

Alita Hansen 5/4/00
Signature Date

SLHeld 5.5.00
Signature Date
MGB 5/8/00

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: BLANK1

Se-79 : LA-365-132 (D-6)

LIQUID

		BLANK
Type	Volume of Sample (SS)	0.100
BLNK	Dilution Factor (DF)	1
Work List	Digest Dilution Factor (DDF)	1
33406	DPM of Sample from Liquid Scintillation Counter (dm)	10.14
Test Code	Background CPM (BKG cpm)	141.9
@SE79-01	Background Time Counted in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.8672
LIQUID	% Counting Error	2.38
Batch Number	Gross Weight (W2)	0.7805
20001508	Tare Weight (W1)	0.7625
Rerun	Carrier Recovery Factor (Rec)	0.9
0	Detection Limit (Ld)	9.12
Sample Prep	Critical Level (Lc)	3.93
N/A	Se-79 Concentration in $\mu\text{Ci/mL}$	5.08E-05
Sample #	<p>Critical Level (Lc) = $2.33 \times \text{the square root of } ((\text{BKG cpm}) / (\text{BKG Time}))$</p> <p>Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 \times \text{Lc})) / \text{EFF}$</p> <p>Detection Level ($\mu\text{Ci/mL}$) = $(\text{Ld}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$</p> <p>Carrier Recovery Factor (Rec) = $(\text{W2} - \text{W1}) / (2 \times 0.01)$</p> <p>% Carrier Recovery = $\text{Rec} \times 100$</p> <p>Se-79 Concentration ($\mu\text{Ci/mL}$) = $(\text{dm}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$</p> <p>Detection Levels and less than values are determined from Procedure LA-508-002</p>	
WL33406-STD		
Instrument Code		
WC51586		
Prepared By		
SLH2		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
05/08/2000		
Analysis Date		
05/04/2000		
Analysis Time	Se-79 Concentration in $\mu\text{Ci/mL}$ =	5.08E-05
03:20 PM	% Counting Error =	2.4
Sample Point	% Carrier Recovery =	90.0
AZ-101 (2)	Detection Level in $\mu\text{Ci/mL}$ =	4.56E-05

Analyst:	AKL	Date: 05/08/2000
Signature of Chemist:	SAC	Date: 9/16/00

SAMPLE.WB1 REV 1.0

365132ML

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WORKBOOK PAGE: SAM2

Se-79 : LA-365-132 (D-6)

LIQUID

		SAMPLE
Type	Volume of Sample (SS)	0.100
SAMPLE	Dilution Factor (DF)	1
Work List	Digest Dilution Factor (DDF)	1
33406	DPM of Sample from Liquid Scintillation Counter (dm)	326.25
Test Code	Background CPM (BKG cpm)	141.9
@SE79-01	Background Time Counted in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.89
LIQUID	% Counting Error	1.37
Batch Number	Gross Weight (W2)	0.7913
20001508	Tare Weight (W1)	0.7722
Rerun	Carrier Recovery Factor (Rec)	0.955
0	Detection Limit (Ld)	8.88
Sample Prep	Critical Level (Lc)	3.93
N/A	Se-79 Concentration in $\mu\text{Ci/mL}$	1.54E-03
Sample #	<p> $\text{Critical Level (Lc)} = 2.33 * \text{the square root of } ((\text{BKG cpm}) / (\text{BKG Time}))$ $\text{Detection Limit (Ld)} = ((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$ $\text{Detection Level } (\mu\text{Ci/mL}) = (\text{Ld}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$ $\text{Carrier Recovery Factor (Rec)} = (\text{W2} - \text{W1}) / (2 * 0.01)$ $\% \text{ Carrier Recovery} = \text{Rec} * 100$ $\text{Se-79 Concentration } (\mu\text{Ci/mL}) = (\text{dm}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$ </p> <p>Detection Levels and less than values are determined from Procedure LA-508-002</p>	
S00T000780		
Instrument Code		
WC51586		
Prepared By		
SLH2		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
05/08/2000		
Analysis Date		
05/04/2000		
Analysis Time	Se-79 Concentration in $\mu\text{Ci/mL}$ =	1.54E-03
03:20 PM	% Counting Error =	1.4
Sample Point	% Carrier Recovery =	95.5
AZ-101 (2)	Detection Level in $\mu\text{Ci/mL}$ =	4.19E-05

Analyst:	AKL	Date: 05/08/2000
Signature of Chemist:	SAC	Date: 9/26/00

SAMPLE.WB1 REV 1.0

365132ML

1927

WORKBOOK PAGE: SAM3

Se-79 : LA-365-132 (D-6)

LIQUID

		SAMPLE
Type	Volume of Sample (SS)	0.100
SAMPLE	Dilution Factor (DF)	1
Work List	Digest Dilution Factor (DDF)	1
33406	DPM of Sample from Liquid Scintillation Counter (dm)	297.23
Test Code	Background CPM (BKG cpm)	141.9
@SE79-01	Background Time Counted in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.8928
LIQUID	% Counting Error	1.41
Batch Number	Gross Weight (W2)	0.7939
20001508	Tare Weight (W1)	0.7748
Rerun	Carrier Recovery Factor (Rec)	0.955
0	Detection Limit (Ld)	8.85
Sample Prep	Critical Level (Lc)	3.93
N/A	Se-79 Concentration in $\mu\text{Ci/mL}$	1.40E-03
Sample #	<p> $\text{Critical Level (Lc)} = 2.33 * \text{the square root of } ((\text{BKG cpm}) / (\text{BKG Time}))$ $\text{Detection Limit (Ld)} = ((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$ $\text{Detection Level } (\mu\text{Ci/mL}) = (\text{Ld}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$ $\text{Carrier Recovery Factor (Rec)} = (\text{W2} - \text{W1}) / (2 * 0.01)$ $\% \text{ Carrier Recovery} = \text{Rec} * 100$ $\text{Se-79 Concentration } (\mu\text{Ci/mL}) = (\text{dm}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$ </p> <p>Detection Levels and less than values are determined from Procedure LA-508-002</p>	
S00T000783		
Instrument Code		
WC51586		
Prepared By		
SLH2		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
05/08/2000		
Analysis Date		
05/04/2000		
Analysis Time	Se-79 Concentration in $\mu\text{Ci/mL}$ =	1.40E-03
03:20 PM	% Counting Error =	1.4
Sample Point	% Carrier Recovery =	95.5
AZ-101 (2)	Detection Level in $\mu\text{Ci/mL}$ =	4.18E-05

Analyst:	AKL	Date:	05/08/2000
Signature of Chemist:		SAC	Date:

SAMPLE.WB1 REV 1.0

365132ML

1928

WORKBOOK PAGE: SAM4

Se-79 : LA-365-132 (D-6)

LIQUID

		SAMPLE
Type	Volume of Sample (SS)	0.100
SAMPLE	Dilution Factor (DF)	1
Work List	Digest Dilution Factor (DDF)	1
33406	DPM of Sample from Liquid Scintillation Counter (dm)	293.85
Test Code	Background CPM (BKG cpm)	141.9
@SE79-01	Background Time Counted in Minutes (BKG Time)	50
Matrix	Instrument Fractional Efficiency (EFF)	0.9057
LIQUID	% Counting Error	1.41
Batch Number	Gross Weight (W2)	0.7945
20001508	Tare Weight (W1)	0.7764
Rerun	Carrier Recovery Factor (Rec)	0.905
0	Detection Limit (Ld)	8.73
Sample Prep	Critical Level (Lc)	3.93
N/A	Se-79 Concentration in $\mu\text{Ci/mL}$	1.46E-03
Sample #	<p>Critical Level (Lc) = $2.33 * \text{the square root of } ((\text{BKG cpm}) / (\text{BKG Time}))$</p> <p>Detection Limit (Ld) = $((2.72 / \text{BKG Time}) + (2 * \text{Lc})) / \text{EFF}$</p> <p>Detection Level ($\mu\text{Ci/mL}$) = $(\text{Ld}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$</p> <p>Carrier Recovery Factor (Rec) = $(\text{W2} - \text{W1}) / (2 * 0.01)$</p> <p>% Carrier Recovery = $\text{Rec} * 100$</p> <p>Se-79 Concentration ($\mu\text{Ci/mL}$) = $(\text{dm}) (\text{DF}) (\text{DDF}) / [(\text{SS}) (2.22\text{E}+6) (\text{Rec})]$</p> <p>Detection Levels and less than values are determined from Procedure LA-508-002</p>	
S00T000786		
Instrument Code		
WC51586		
Prepared By		
SLH2		
Chemist		
SAC		
Analyst		
AKL		
Date Complete		
05/08/2000		
Analysis Date		
05/04/2000		
Analysis Time	Se-79 Concentration in $\mu\text{Ci/mL}$ =	1.46E-03
03:20 PM	% Counting Error =	1.4
Sample Point	% Carrier Recovery =	90.5
AZ-101 (2)	Detection Level in $\mu\text{Ci/mL}$ =	4.34E-05

Analyst:	AKL	Date: 05/08/2000
Signature of Chemist:	SAC	Date: 05/08/2000

SAMPLE.WB1 REV 1.0

365132ML

HNF-1701 REV. 0

OPPORTUNISTIC ANALYTES

APPENDIX A

HNF-1701 REV. 0

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CORE NUMBER: 266
SEGMENT #: 1Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001832	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	8.650	7.870	8.260	9.44	n/a	4.010	n/a	n/a
S99T001832	D	Aluminum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	9.20e+03	9.15e+03	9.18e+03	0.54	n/a	20.10	n/a	n/a
S99T001832	D	Arsenic-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<2.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Boron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001832	D	Barium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001832	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001832	D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Calcium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001832	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Cobalt-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001832	D	Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	7.27e+02	719.0	723.0	1.11	n/a	4.010	n/a	n/a
S99T001832	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832	D	Iron-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001832	D	Potassium-ICP-Acid Dil.	ug/mL	109.6	<5.00e-1	4.85e+03	4.85e+03	4.85e+03	0.00	n/a	201.0	n/a	n/a
S99T001832	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001832	D	Magnesium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	94.80	93.30	94.05	1.59	n/a	20.10	n/a	n/a
S99T001832	D	Sodium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-1	1.11e+05	1.11e+05	1.11e+05	0.00	n/a	40.10	n/a	n/a
S99T001832	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Nickel-ICP-Acid Dil.	ug/mL	99.60	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001832	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.38e+02	434.0	436.0	0.92	n/a	80.20	n/a	n/a
S99T001832	D	Lead-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Sulfur-ICP-Acid Dil.	ug/mL	97.80	<1.00e-1	5.08e+03	5.01e+03	5.04e+03	1.39	n/a	40.10	n/a	n/a
S99T001832	D	Antimony-ICP-Acid Dil.	ug/mL	100.4	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a	n/a
S99T001832	D	Selenium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	86.40	64.40	75.40	29.2	n/a	20.10	n/a	n/a
S99T001832	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001832	D	Strontium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832	D	Titanium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a	n/a
S99T001832	D	Thallium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a	n/a
S99T001832	D	Uranium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001832	D	Vanadium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832	D	Zinc-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001832		Fluoride-IC-Dionex 4000/4500	ug/mL	100.8	<1.20e-2	1.87e+03	1.77e+03	1.82e+03	5.49	n/a	25.45	n/a	n/a
S99T001832		Chloride-IC-Dionex 4000/4500	ug/mL	95.22	<1.70e-2	1.58e+02	149.0	153.3	5.86	n/a	36.06	n/a	n/a
S99T001832		Nitrite-IC - Dionex 4000/4500	ug/mL	93.01	<1.08e-1	7.18e+04	7.16e+04	7.17e+04	0.28	n/a	229.1	n/a	n/a
S99T001832		Nitrate by IC-Dionex 4000/4500	ug/mL	104.3	<1.39e-1	7.33e+04	7.27e+04	7.30e+04	0.82	n/a	294.8	n/a	n/a
S99T001832		Phosphate by IC-Dionex 4000/4500	ug/mL	96.69	<1.20e-1	1.15e+03	1.26e+03	1.21e+03	9.13	n/a	254.5	n/a	n/a
S99T001832		Sulfate by IC-Dionex 4000/4500	ug/mL	98.41	<1.38e-1	1.59e+04	1.60e+04	1.60e+04	0.63	n/a	292.7	n/a	n/a
S99T001832		Oxalate-IC-Dionex 4000/450	ug/mL	103.4	<1.05e-1	2.25e+03	2.00e+03	2.13e+03	11.8	n/a	222.7	n/a	n/a

CORE NUMBER: 266
SEGMENT #: 3Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001834	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.450	7.480	7.465	0.40	n/a	4.010	n/a
S99T001834	D	Aluminum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	8.47e+03	8.54e+03	8.50e+03	0.82	n/a	20.10	n/a
S99T001834	D	Arsenic-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<2.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Boron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001834	D	Barium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001834	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001834	D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Calcium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001834	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Cobalt-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001834	D	Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	7.10e+02	7.16.0	7.13.0	0.84	n/a	4.010	n/a
S99T001834	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Iron-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001834	D	Potassium-ICP-Acid Dil.	ug/mL	109.6	<5.00e-1	4.74e+03	4.78e+03	4.76e+03	0.84	n/a	20.10	n/a
S99T001834	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001834	D	Magnesium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	91.90	92.30	92.10	0.43	n/a	40.10	n/a
S99T001834	D	Sodium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-1	1.08e+05	1.09e+05	1.09e+05	0.92	n/a	40.10	n/a
S99T001834	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Nickel-ICP-Acid Dil.	ug/mL	99.60	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001834	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	4.17e+02	4.29.0	4.23.0	2.84	n/a	80.20	n/a
S99T001834	D	Lead-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Sulfur-ICP-Acid Dil.	ug/mL	97.80	<1.00e-1	4.97e+03	5.00e+03	4.98e+03	0.60	n/a	40.10	n/a
S99T001834	D	Antimony-ICP-Acid Dil.	ug/mL	100.4	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001834	D	Selenium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	60.20	59.60	59.90	1.00	n/a	20.10	n/a
S99T001834	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001834	D	Strontium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Titanium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001834	D	Uranium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001834	D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001834	D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Zirconium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001834	D	Fluoride-IC-Dionex 4000/4500	ug/mL	100.8	<1.20e-2	1.64e+03	1.76e+03	1.70e+03	7.06	n/a	25.45	n/a
S99T001834	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.22	<1.70e-2	1.29e+02	129.0	128.9	0.00	n/a	36.06	n/a
S99T001834	D	Nitrate-IC - Dionex 4000/4500	ug/mL	93.01	<1.08e-1	6.81e+04	6.91e+04	6.88e+04	1.02	n/a	229.1	n/a
S99T001834	D	Nitrate by IC-Dionex 4000/4500	ug/mL	104.3	<1.39e-1	6.81e+04	6.88e+04	6.84e+04	1.02	n/a	294.8	n/a
S99T001834	D	Phosphate-IC-Dionex 4000/4500	ug/mL	96.69	<1.20e-1	1.17e+03	1.22e+03	1.20e+03	4.18	n/a	254.5	n/a
S99T001834	D	Sulfate by IC-Dionex 4000/4500	ug/mL	98.41	<1.38e-1	1.51e+04	1.53e+04	1.52e+04	1.32	n/a	292.7	n/a
S99T001834	D	Oxalate-IC-Dionex 4000/450	ug/mL	103.4	<1.05e-1	1.35e+03	1.25e+03	1.30e+03	7.69	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001835	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.980	7.600	7.790	4.88	n/a	4.010	n/a	n/a
S99T001835	D	Aluminum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	9.22e+03	9.32e+03	9.27e+03	1.08	n/a	20.10	n/a	n/a
S99T001835	D	Arsenic-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Boron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001835	D	Barium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001835	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001835	D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Calcium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001835	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Cobalt-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	7.31e+02	735.0	733.0	0.55	n/a	8.020	n/a	n/a
S99T001835	D	Chromium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Iron-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001835	D	Potassium-ICP-Acid Dil.	ug/mL	109.6	<5.00e-1	4.92e+03	4.96e+03	4.94e+03	0.81	n/a	201.0	n/a	n/a
S99T001835	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001835	D	Magnesium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	95.50	95.50	95.50	0.00	n/a	20.10	n/a	n/a
S99T001835	D	Sodium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-1	1.11e+05	1.12e+05	1.12e+05	0.90	n/a	40.10	n/a	n/a
S99T001835	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Nickel-ICP-Acid Dil.	ug/mL	99.60	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001835	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.41e+02	449.0	445.0	1.80	n/a	80.20	n/a	n/a
S99T001835	D	Lead-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Sulfur-ICP-Acid Dil.	ug/mL	97.80	<1.00e-1	5.10e+03	5.15e+03	5.12e+03	0.98	n/a	40.10	n/a	n/a
S99T001835	D	Antimony-ICP-Acid Dil.	ug/mL	100.4	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a	n/a
S99T001835	D	Selenium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	68.40	69.70	69.05	1.88	n/a	20.10	n/a	n/a
S99T001835	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001835	D	Strontium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Titanium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a	n/a
S99T001835	D	Uranium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a	n/a
S99T001835	D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001835	D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Zirconium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001835	D	Fluoride-IC-Dionex 4000/4500	ug/mL	107.2	<1.20e-2	1.78e+03	1.72e+03	1.75e+03	3.43	n/a	25.45	n/a	n/a
S99T001835	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.00	<1.70e-2	1.56e+02	141.0	148.5	10.1	n/a	36.06	n/a	n/a
S99T001835	D	Nitrite-IC - Dionex 4000/4500	ug/mL	84.07	<1.08e-1	6.91e+04	7.22e+04	7.06e+04	4.39	n/a	229.1	n/a	n/a
S99T001835	D	Nitrate by IC-Dionex 4000/4500	ug/mL	110.3	<1.39e-1	7.08e+04	7.27e+04	7.18e+04	2.65	n/a	294.8	n/a	n/a
S99T001835	D	Phosphate-IC-Dionex 4000/4500	ug/mL	92.76	<1.20e-1	8.29e+02	1.14e+03	984.4	31.6	n/a	254.5	n/a	n/a
S99T001835	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.68	<1.38e-1	1.55e+04	1.57e+04	1.56e+04	1.28	n/a	292.7	n/a	n/a
S99T001835	D	Oxalate-IC-Dionex 4000/450	ug/mL	102.9	<1.05e-1	1.39e+03	1.19e+03	1.29e+03	15.5	n/a	222.7	n/a	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 5

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001836	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.970	7.780	7.875	2.41	n/a	n/a	n/a
S99T001836	D	Aluminum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	8.95e+03	8.93e+03	8.94e+03	0.22	n/a	20.10	n/a
S99T001836	D	Arsenic-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Boron-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001836	D	Barium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001836	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001836	D	Bismuth-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Calcium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001836	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Cobalt-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001836	D	Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	7.28e+02	727.0	727.5	0.14	n/a	4.010	n/a
S99T001836	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Iron-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001836	D	Potassium-ICP-Acid Dil.	ug/mL	109.6	<5.00e-1	4.88e+03	4.91e+03	4.90e+03	0.61	n/a	201.0	n/a
S99T001836	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001836	D	Magnesium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	95.00	93.90	94.45	1.16	n/a	20.10	n/a
S99T001836	D	Sodium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-1	1.11e+05	1.10e+05	1.11e+05	0.90	n/a	40.10	n/a
S99T001836	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Nickel-ICP-Acid Dil.	ug/mL	99.60	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001836	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.30e+02	441.0	435.5	2.53	n/a	80.20	n/a
S99T001836	D	Lead-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Sulfur-ICP-Acid Dil.	ug/mL	97.80	<1.00e-1	5.08e+03	5.06e+03	5.07e+03	0.39	n/a	40.10	n/a
S99T001836	D	Antimony-ICP-Acid Dil.	ug/mL	100.4	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001836	D	Selenium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	97.30	98.00	97.65	0.72	n/a	20.10	n/a
S99T001836	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001836	D	Strontium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Titanium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001836	D	Uranium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001836	D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001836	D	Zinc-ICP-Acid Dil.	ug/mL	100.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Fluoride-IC-Dionex 4000/4500	ug/mL	107.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001836	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.00	<1.70e-2	1.43e+02	134.0	138.4	6.50	n/a	25.45	n/a
S99T001836	D	Nitrite-IC - Dionex 4000/4500	ug/mL	84.07	<1.39e-1	6.81e+04	7.28e+04	7.05e+04	6.67	n/a	36.06	n/a
S99T001836	D	Nitrate by IC-Dionex 4000/4500	ug/mL	110.3	<1.39e-1	6.88e+04	7.29e+04	7.08e+04	5.79	n/a	294.8	n/a
S99T001836	D	Phosphate by IC-Dionex 4000/4500	ug/mL	92.76	<1.20e-1	1.23e+03	1.05e+03	1.14e+03	15.8	n/a	254.5	n/a
S99T001836	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.68	<1.38e-1	1.53e+04	1.61e+04	1.57e+04	5.10	n/a	292.7	n/a
S99T001836	D	Oxalate-IC-Dionex 4000/4500	ug/mL	102.9	<1.05e-1	1.19e+03	1.41e+03	1.30e+03	16.9	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001837	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	7.580	8.090	7.835	6.51	82.30	4.010	n/a
S99T001837	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.43e+03	8.42e+03	8.42e+03	0.12	84.00	20.10	n/a
S99T001837	D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	96.40	40.10	n/a
S99T001837	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a
S99T001837	D	Barium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 20.10	<2.01e1	n/a	n/a	93.50	20.10	n/a
S99T001837	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	96.40	2.010	n/a
S99T001837	D	Bismuth-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	96.50	40.10	n/a
S99T001837	D	Calcium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	n/a
S99T001837	D	Cadmium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	99.80	2.010	n/a
S99T001837	D	Cerium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	97.60	40.10	n/a
S99T001837	D	Cobalt-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	99.50	8.020	n/a
S99T001837	D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	7.19e+02	7.17e0	718.0	0.28	97.70	4.010	n/a
S99T001837	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	97.30	4.010	n/a
S99T001837	D	Iron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	99.70	20.10	n/a
S99T001837	D	Potassium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-1	5.17e+03	4.80e+03	4.98e+03	7.42	98.50	2.01e+03	n/a
S99T001837	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S99T001837	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	96.50	40.10	n/a
S99T001837	D	Manganese-ICP-Acid Dil.	ug/mL	94.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	89.70	4.010	n/a
S99T001837	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	< 4.010	<4.01e0	92.80	0.43	99.40	20.10	n/a
S99T001837	D	Sodium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	1.12e+05	1.09e+05	1.11e+05	2.71	104.0	401.0	n/a
S99T001837	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	98.00	40.10	n/a
S99T001837	D	Nickel-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	97.60	8.020	n/a
S99T001837	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.24e+02	426.0	425.0	0.47	103.0	80.20	n/a
S99T001837	D	Lead-ICP-Acid Dil.	ug/mL	98.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	97.30	40.10	n/a
S99T001837	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	5.02e+03	5.00e+03	5.01e+03	0.40	83.90	40.10	n/a
S99T001837	D	Antimony-ICP-Acid Dil.	ug/mL	100.6	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	102.0	24.10	n/a
S99T001837	D	Selenium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	109.0	40.10	n/a
S99T001837	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	38.70	38.40	38.55	0.78	103.0	20.10	n/a
S99T001837	D	Samarium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.20	40.10	n/a
S99T001837	D	Strontium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	95.30	4.010	n/a
S99T001837	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	101.0	4.010	n/a
S99T001837	D	Thallium-ICP-Acid Dil.	ug/mL	98.40	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	96.20	80.20	n/a
S99T001837	D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	99.00	201.0	n/a
S99T001837	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	99.90	20.10	n/a
S99T001837	D	Zinc-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	99.10	4.010	n/a
S99T001837	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	100.0	4.010	n/a
S99T001837	D	Chloride-IC-Dionex 4000/4500	ug/mL	107.2	<1.00e-2	1.67e+03	1.80e+03	1.73e+03	7.49	94.69	25.45	n/a
S99T001837	D	Nitrite-IC - Dionex 4000/4500	ug/mL	95.00	<1.70e-2	1.75e+02	140.0	157.6	22.2	91.67	36.06	n/a
S99T001837	D	Nitrate by IC-Dionex 4000/4500	ug/mL	84.07	<1.08e-1	6.77e+04	7.05e+04	6.91e+04	4.05	104.8	229.1	n/a
S99T001837	D	Phosphate by IC-Dionex 4000/4500	ug/mL	110.3	<1.39e-1	6.76e+04	7.11e+04	6.94e+04	5.05	127.0	294.8	n/a
S99T001837	D	Sulfate by IC-Dionex 4000/4500	ug/mL	92.76	<1.20e-1	9.84e+02	1.15e+03	1.07e+03	15.6	94.80	254.5	n/a
S99T001837	D	Oxalate-IC-Dionex 4000/4500	ug/mL	97.68	<1.38e-1	1.51e+04	1.60e+04	1.55e+04	5.79	96.52	292.7	n/a
S99T001837	D		ug/mL	102.9	<1.05e-1	1.20e+03	1.22e+03	1.21e+03	1.65	97.90	222.7	n/a

CORE NUMBER: 266
SEGMENT #: 8

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001839	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	7.720	7.590	7.655	1.70	n/a	4.010	n/a
S99T001839	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.32e+03	8.30e+03	8.31e+03	0.24	n/a	20.10	n/a
S99T001839	D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<2.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001839	D	Barium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001839	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001839	D	Bismuth-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Calcium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001839	D	Cadmium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001839	D	Cerium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Cobalt-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001839	D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	7.02e+02	700.0	701.0	0.29	n/a	4.010	n/a
S99T001839	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839	D	Iron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001839	D	Potassium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-1	4.78e+03	4.64e+03	4.71e+03	2.97	n/a	201.0	n/a
S99T001839	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001839	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Manganese-ICP-Acid Dil.	ug/mL	94.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	91.40	92.50	91.95	1.20	n/a	20.10	n/a
S99T001839	D	Sodium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	1.08e+05	1.07e+05	1.08e+05	0.93	n/a	40.10	n/a
S99T001839	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Nickel-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001839	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.19e+02	419.0	419.0	0.00	n/a	80.20	n/a
S99T001839	D	Lead-ICP-Acid Dil.	ug/mL	98.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	4.92e+03	4.88e+03	4.90e+03	0.82	n/a	40.10	n/a
S99T001839	D	Antimony-ICP-Acid Dil.	ug/mL	100.6	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001839	D	Selenium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	41.30	44.20	42.75	6.78	n/a	20.10	n/a
S99T001839	D	Samarium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001839	D	Strontium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839	D	Thallium-ICP-Acid Dil.	ug/mL	98.40	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001839	D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001839	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001839	D	Zinc-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001839		Fluoride-IC-Dionex 4000/4500	ug/mL	105.2	<1.20e-2	1.72e+03	1.69e+03	1.71e+03	1.76	n/a	25.45	n/a
S99T001839		Chloride-IC-Dionex 4000/4500	ug/mL	94.78	<1.70e-2	1.43e+02	143.0	142.9	0.00	n/a	36.06	n/a
S99T001839		Nitrite-IC - Dionex 4000/4500	ug/mL	96.03	<1.08e-1	7.01e+04	7.16e+04	7.09e+04	2.12	n/a	229.1	n/a
S99T001839		Nitrate by IC-Dionex 4000/4500	ug/mL	102.2	<1.39e-1	6.97e+04	7.11e+04	7.04e+04	1.99	n/a	294.8	n/a
S99T001839		Phosphate-IC-Dionex 4000/4500	ug/mL	93.23	<1.20e-1	1.32e+03	1.04e+03	1.18e+03	23.7	n/a	254.5	n/a
S99T001839		Sulfate by IC-Dionex 4000/4500	ug/mL	97.54	<1.38e-1	1.54e+04	1.54e+04	1.54e+04	0.00	n/a	292.7	n/a
S99T001839		Oxalate-IC-Dionex 4000/4500	ug/mL	102.4	<1.05e-1	1.48e+03	1.07e+03	1.27e+03	32.2	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001840	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	7.270	7.390	7.350	1.64	n/a	4.010	n/a
S99T001840	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.51e+03	8.50e+03	8.50e+03	0.12	n/a	20.10	n/a
S99T001840	D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001840	D	Barium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001840	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001840	D	Bismuth-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Calcium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Cadmium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001840	D	Cerium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Cobalt-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001840	D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	7.21e+02	722.0	721.5	0.14	n/a	4.010	n/a
S99T001840	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Iron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001840	D	Potassium-ICP-Acid Dil.	ug/mL	103.4	<5.00e-1	4.80e+03	4.84e+03	4.82e+03	0.83	n/a	201.0	n/a
S99T001840	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001840	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Manganese-ICP-Acid Dil.	ug/mL	94.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	93.50	93.90	93.70	0.43	n/a	20.10	n/a
S99T001840	D	Sodium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	1.10e+05	1.10e+05	1.10e+05	0.00	n/a	40.10	n/a
S99T001840	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Nickel-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001840	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.23e+02	431.0	427.0	1.87	n/a	80.20	n/a
S99T001840	D	Lead-ICP-Acid Dil.	ug/mL	98.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	5.03e+03	5.04e+03	5.04e+03	0.20	n/a	40.10	n/a
S99T001840	D	Antimony-ICP-Acid Dil.	ug/mL	100.6	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001840	D	Selenium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	55.20	55.60	55.40	0.72	n/a	20.10	n/a
S99T001840	D	Samarium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001840	D	Strontium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Titanium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-1	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Thallium-ICP-Acid Dil.	ug/mL	98.40	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001840	D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001840	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001840	D	Zinc-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001840	D	Fluoride-IC-Dionex 4000/4500	ug/mL	105.2	<1.20e-2	1.76e+03	1.71e+03	1.73e+03	2.88	n/a	25.45	n/a
S99T001840	D	Chloride-IC-Dionex 4000/4500	ug/mL	94.78	<1.70e-2	1.46e+02	150.0	147.8	2.70	n/a	36.06	n/a
S99T001840	D	Nitrite-IC - Dionex 4000/4500	ug/mL	96.03	<1.89e-1	6.94e+04	6.93e+04	6.93e+04	0.14	n/a	229.1	n/a
S99T001840	D	Nitrate by IC-Dionex 4000/4500	ug/mL	102.2	<1.39e-1	6.92e+04	6.84e+04	6.88e+04	1.16	n/a	294.8	n/a
S99T001840	D	Phosphate-IC-Dionex 4000/4500	ug/mL	93.23	<1.20e-1	9.45e+02	922.0	933.5	2.46	n/a	254.5	n/a
S99T001840	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.54	<1.38e-1	1.52e+04	1.51e+04	1.51e+04	0.66	n/a	292.7	n/a
S99T001840	D	Oxalate-IC-Dionex 4000/4500	ug/mL	102.4	<1.05e-1	1.15e+03	1.23e+03	1.19e+03	6.72	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001841	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	6.760	7.370	7.065	8.63	n/a	4.010	n/a
S99T001841	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.31e+03	8.25e+03	8.28e+03	0.72	n/a	20.10	n/a
S99T001841	D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<5.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001841	D	Barium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001841	D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001841	D	Bismuth-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Calcium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Cadmium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001841	D	Cerium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Cobalt-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001841	D	Copper-ICP-Acid Dil.	ug/mL	100.4	<1.00e-2	7.04e+02	703.0	703.5	0.14	n/a	4.010	n/a
S99T001841	D	Iron-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Potassium-ICP-Acid Dil.	ug/mL	101.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001841	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.4	<5.00e-1	4.65e+03	4.68e+03	4.66e+03	0.64	n/a	201.0	n/a
S99T001841	D	Magnesium-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001841	D	Manganese-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Molybdenum-ICP-Acid Dil.	ug/mL	94.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Neodymium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	91.60	93.40	92.50	1.95	n/a	20.10	n/a
S99T001841	D	Nickel-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	1.07e+05	1.06e+05	1.07e+05	0.94	n/a	40.10	n/a
S99T001841	D	Nickel-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Phosphorus-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001841	D	Lead-ICP-Acid Dil.	ug/mL	103.2	<2.00e-1	4.20e+02	419.0	419.5	0.24	n/a	80.20	n/a
S99T001841	D	Sulfur-ICP-Acid Dil.	ug/mL	98.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Antimony-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	4.93e+03	4.90e+03	4.92e+03	0.61	n/a	40.10	n/a
S99T001841	D	Selenium-ICP-Acid Dil.	ug/mL	100.6	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001841	D	Silicon-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	48.30	49.10	48.70	1.64	n/a	20.10	n/a
S99T001841	D	Strontium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001841	D	Titanium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Thallium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Uranium-ICP-Acid Dil.	ug/mL	98.40	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001841	D	Vanadium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001841	D	Zinc-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001841	D	Zirconium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001841	D	Chloride-IC-Dionex 4000/4500	ug/mL	98.44	<1.20e-2	1.68e+03	1.61e+03	1.65e+03	4.26	n/a	25.45	n/a
S99T001841	D	Nitrite-IC - Dionex 4000/4500	ug/mL	98.67	<1.70e-2	1.39e+02	121.0	130.1	13.8	n/a	36.06	n/a
S99T001841	D	Nitrate by IC-Dionex 4000/4500	ug/mL	95.65	<1.08e-1	6.81e+04	6.88e+04	6.85e+04	1.02	n/a	229.1	n/a
S99T001841	D	Phosphate-IC-Dionex 4000/4500	ug/mL	99.13	<1.39e-1	6.75e+04	6.78e+04	6.76e+04	0.44	n/a	294.8	n/a
S99T001841	D	Sulfate by IC-Dionex 4000/4500	ug/mL	94.17	<1.20e-1	1.29e+03	1.22e+03	1.26e+03	5.58	n/a	254.5	n/a
S99T001841	D	Oxalate-IC-Dionex 4000/4500	ug/mL	96.52	<1.38e-1	1.49e+04	1.47e+04	1.48e+04	1.35	n/a	292.7	n/a
S99T001841	D		ug/mL	103.6	<1.05e-1	1.02e+03	1.34e+03	1.18e+03	27.1	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001842	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	8.260	7.610	7.935	8.19	n/a	4.010	n/a
S99T001842	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.59e+03	8.61e+03	8.60e+03	0.23	n/a	20.10	n/a
S99T001842	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Boron-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001842	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001842	D	Beryllium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001842	D	Bismuth-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Calcium-ICP-Acid Dil.	ug/mL	104.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001842	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001842	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	7.15e+02	716.0	715.5	0.14	n/a	4.010	n/a
S99T001842	D	Copper-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Iron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001842	D	Potassium-ICP-Acid Dil.	ug/mL	105.6	<5.00e-1	4.71e+03	4.80e+03	4.76e+03	1.89	n/a	201.0	n/a
S99T001842	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001842	D	Magnesium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Manganese-ICP-Acid Dil.	ug/mL	95.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.6	<5.00e-2	93.20	94.50	93.85	1.39	n/a	20.10	n/a
S99T001842	D	Sodium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-1	1.08e+05	1.09e+05	1.09e+05	0.92	n/a	40.10	n/a
S99T001842	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001842	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.0	<2.00e-1	4.25e+02	429.0	427.0	0.94	n/a	80.20	n/a
S99T001842	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	4.97e+03	4.99e+03	4.98e+03	0.40	n/a	40.10	n/a
S99T001842	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001842	D	Selenium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.08e+02	106.0	107.0	1.87	n/a	20.10	n/a
S99T001842	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001842	D	Strontium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Titanium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Thallium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001842	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001842	D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001842	D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001842	D	Fluoride-IC-Dionex 4000/4500	ug/mL	98.44	<1.20e-2	1.77e+03	1.71e+03	1.74e+03	3.45	n/a	25.45	n/a
S99T001842	D	Chloride-IC-Dionex 4000/4500	ug/mL	98.67	<1.70e-2	1.40e+02	136.0	138.2	2.90	n/a	36.06	n/a
S99T001842	D	Nitrite-IC - Dionex 4000/4500	ug/mL	95.65	<1.08e-1	6.87e+04	7.00e+04	6.93e+04	1.87	n/a	229.1	n/a
S99T001842	D	Nitrate by IC-Dionex 4000/4500	ug/mL	99.13	<1.39e-1	6.92e+04	6.94e+04	6.93e+04	0.29	n/a	294.8	n/a
S99T001842	D	Phosphate-IC-Dionex 4000/4500	ug/mL	94.17	<1.20e-1	8.70e+02	1.03e+03	950.0	16.8	n/a	254.5	n/a
S99T001842	D	Sulfate by IC-Dionex 4000/4500	ug/mL	96.52	<1.38e-1	1.52e+04	1.52e+04	1.52e+04	0.00	n/a	292.7	n/a
S99T001842	D	Oxalate-IC-Dionex 4000/450	ug/mL	103.6	<1.05e-1	1.27e+03	1.49e+03	1.38e+03	15.9	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001843	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	7.830	8.390	8.110	6.91	n/a	4.010	n/a
S99T001843	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	9.06e+03	8.89e+03	8.98e+03	1.89	n/a	20.10	n/a
S99T001843	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Boron-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Beryllium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001843	D	Bismuth-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Calcium-ICP-Acid Dil.	ug/mL	104.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001843	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001843	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	7.46e+02	739.0	742.5	0.94	n/a	4.010	n/a
S99T001843	D	Copper-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Iron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Potassium-ICP-Acid Dil.	ug/mL	105.6	<5.00e-1	5.04e+03	4.95e+03	5.00e+03	1.80	n/a	201.0	n/a
S99T001843	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Magnesium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Manganese-ICP-Acid Dil.	ug/mL	95.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.6	<5.00e-2	97.30	97.30	97.30	0.00	n/a	20.10	n/a
S99T001843	D	Sodium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-1	1.15e+05	1.12e+05	1.14e+05	2.64	n/a	40.10	n/a
S99T001843	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001843	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.0	<2.00e-1	4.43e+02	447.0	445.0	0.90	n/a	80.20	n/a
S99T001843	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	5.21e+03	5.14e+03	5.18e+03	1.35	n/a	40.10	n/a
S99T001843	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001843	D	Selenium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.02e+02	105.0	103.5	2.90	n/a	20.10	n/a
S99T001843	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001843	D	Strontium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Titanium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Thallium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001843	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001843	D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001843	D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001843	D	Fluoride-IC-Dionex 4000/4500	ug/mL	98.44	<1.20e-2	1.83e+03	1.89e+03	1.86e+03	3.23	n/a	25.45	n/a
S99T001843	D	Chloride-IC-Dionex 4000/4500	ug/mL	98.67	<1.70e-2	1.53e+02	147.0	150.1	4.00	n/a	36.06	n/a
S99T001843	D	Nitrite-IC - Dionex 4000/4500	ug/mL	95.65	<1.08e-1	7.67e+04	7.81e+04	7.74e+04	1.81	n/a	229.1	n/a
S99T001843	D	Nitrate by IC-Dionex 4000/4500	ug/mL	99.13	<1.39e-1	7.63e+04	7.79e+04	7.71e+04	2.08	n/a	294.8	n/a
S99T001843	D	Phosphate by IC-Dionex 4000/4500	ug/mL	94.17	<1.20e-1	8.70e+02	1.29e+03	1.08e+03	38.9	n/a	254.5	n/a
S99T001843	D	Sulfate by IC-Dionex 4000/4500	ug/mL	96.52	<1.38e-1	1.66e+04	1.68e+04	1.67e+04	1.20	n/a	292.7	n/a
S99T001843	D	Oxalate-IC-Dionex 4000/450	ug/mL	103.6	<1.05e-1	9.22e+02	1.16e+03	1.04e+03	22.9	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001844	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	7.640	7.850	7.745	2.71	n/a	4.010	n/a	n/a
S99T001844	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	9.24e+03	9.26e+03	9.25e+03	0.22	n/a	20.10	n/a	n/a
S99T001844	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Boron-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Beryllium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001844	D	Bismuth-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Calcium-ICP-Acid Dil.	ug/mL	104.2	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001844	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001844	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	7.35e+02	735.0	735.0	0.00	n/a	4.010	n/a	n/a
S99T001844	D	Copper-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001844	D	Iron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Potassium-ICP-Acid Dil.	ug/mL	105.6	<5.00e-1	4.84e+03	4.91e+03	4.88e+03	1.44	n/a	20.10	n/a	n/a
S99T001844	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Magnesium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Manganese-ICP-Acid Dil.	ug/mL	95.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001844	D	Molybdenum-ICP-Acid Dil.	ug/mL	103.6	<5.00e-2	96.70	96.40	96.55	0.31	n/a	20.10	n/a	n/a
S99T001844	D	Sodium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	1.11e+05	1.12e+05	1.12e+05	0.90	n/a	40.10	n/a	n/a
S99T001844	D	Neodymium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001844	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.0	<2.00e-1	4.49e+02	445.0	447.0	0.89	n/a	80.20	n/a	n/a
S99T001844	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	5.12e+03	5.11e+03	5.12e+03	0.20	n/a	40.10	n/a	n/a
S99T001844	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a	n/a
S99T001844	D	Selenium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.06e+02	105.0	105.5	0.95	n/a	20.10	n/a	n/a
S99T001844	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001844	D	Strontium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001844	D	Titanium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001844	D	Thallium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a	n/a
S99T001844	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Vanadium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001844	D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001844	D	Fluoride-IC-Dionex 4000/4500	ug/mL	98.44	<1.00e-2	1.74e+03	1.84e+03	1.79e+03	5.59	n/a	25.45	n/a	n/a
S99T001844	D	Chloride-IC-Dionex 4000/4500	ug/mL	100.8	<1.70e-2	1.56e+02	159.0	157.3	1.90	n/a	36.06	n/a	n/a
S99T001844	D	Nitrite-IC - Dionex 4000/4500	ug/mL	95.46	<1.39e-1	7.18e+04	7.28e+04	7.23e+04	1.38	n/a	229.1	n/a	n/a
S99T001844	D	Nitrate by IC-Dionex 4000/4500	ug/mL	100.6	<1.39e-1	7.32e+04	7.42e+04	7.37e+04	1.36	n/a	294.8	n/a	n/a
S99T001844	D	Phosphate by IC-Dionex 4000/4500	ug/mL	93.23	<1.20e-1	1.20e+03	1.37e+03	1.28e+03	13.2	n/a	254.5	n/a	n/a
S99T001844	D	Sulfate by IC-Dionex 4000/4500	ug/mL	98.26	<1.38e-1	1.64e+04	1.65e+04	1.64e+04	0.61	n/a	292.7	n/a	n/a
S99T001844	D	Oxalate-IC-Dionex 4000/4500	ug/mL	101.7	<1.05e-1	1.18e+03	1.18e+03	1.18e+03	0.00	n/a	222.7	n/a	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: 15

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001846	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	7.300	7.580	7.440	3.76	n/a	4.010	n/a	n/a
S99T001846	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.97e+03	9.02e+03	9.00e+03	0.56	n/a	20.10	n/a	n/a
S99T001846	D	Arsenic-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Boron-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001846	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001846	D	Beryllium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001846	D	Bismuth-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Calcium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001846	D	Cadmium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Cerium-ICP-Acid Dil.	ug/mL	101.8	<2.00e-2	7.43e+02	7.45.0	744.0	0.27	n/a	8.020	n/a	n/a
S99T001846	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001846	D	Copper-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001846	D	Iron-ICP-Acid Dil.	ug/mL	105.6	<5.00e-2	4.85e+03	4.97e+03	4.91e+03	2.44	n/a	201.0	n/a	n/a
S99T001846	D	Potassium-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001846	D	Lanthanum-ICP-Acid Dil.	ug/mL	101.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Magnesium-ICP-Acid Dil.	ug/mL	95.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001846	D	Manganese-ICP-Acid Dil.	ug/mL	100.6	<5.00e-2	97.30	97.60	97.45	0.31	n/a	20.10	n/a	n/a
S99T001846	D	Molybdenum-ICP-Acid Dil.	ug/mL	103.4	<1.00e-1	1.12e+05	1.13e+05	1.13e+05	0.89	n/a	40.10	n/a	n/a
S99T001846	D	Sodium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001846	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.0	<2.00e-1	4.46e+02	439.0	442.5	1.58	n/a	80.20	n/a	n/a
S99T001846	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	5.16e+03	5.17e+03	5.16e+03	0.19	n/a	40.10	n/a	n/a
S99T001846	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a	n/a
S99T001846	D	Selenium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.11e+02	106.0	108.5	4.61	n/a	20.10	n/a	n/a
S99T001846	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001846	D	Strontium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001846	D	Titanium-ICP-Acid Dil.	ug/mL	99.00	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a	n/a
S99T001846	D	Thallium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a	n/a
S99T001846	D	Uranium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001846	D	Vanadium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001846	D	Zinc-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001846	D	Zirconium-ICP-Acid Dil.	ug/mL	98.44	<1.20e-2	1.70e+03	1.66e+03	1.68e+03	2.38	n/a	25.45	n/a	n/a
S99T001846	D	Fluoride-IC-Dionex 4000/4500	ug/mL	100.8	<1.70e-2	1.30e+02	141.0	135.2	8.12	n/a	36.06	n/a	n/a
S99T001846	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.46	<1.08e-1	7.06e+04	7.24e+04	7.15e+04	2.52	n/a	229.1	n/a	n/a
S99T001846	D	Nitrite-IC - Dionex 4000/4500	ug/mL	100.6	<1.39e-1	7.05e+04	7.12e+04	7.08e+04	0.99	n/a	294.8	n/a	n/a
S99T001846	D	Nitrate by IC-Dionex 4000/4500	ug/mL	93.23	<1.20e-1	1.26e+03	1.03e+03	1.15e+03	20.1	n/a	254.5	n/a	n/a
S99T001846	D	Phosphate-IC-Dionex 4000/4500	ug/mL	98.26	<1.38e-1	1.55e+04	1.57e+04	1.56e+04	1.28	n/a	292.7	n/a	n/a
S99T001846	D	Sulfate by IC-Dionex 4000/4500	ug/mL	101.7	<1.05e-1	1.22e+03	1.19e+03	1.21e+03	2.49	n/a	222.7	n/a	n/a
S99T001846	D	Oxalate-IC-Dionex 4000/450	ug/mL										

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: 16

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001847	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	9.660	9.040	9.350	6.63	n/a	4.010	n/a
S99T001847	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	7.76e+03	7.77e+03	7.76e+03	0.13	n/a	20.10	n/a
S99T001847	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001847	D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001847	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001847	D	Bismuth-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Calcium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001847	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001847	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	7.84e+02	782.0	783.0	0.26	n/a	4.010	n/a
S99T001847	D	Copper-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001847	D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-1	4.88e+03	4.86e+03	4.87e+03	0.41	n/a	201.0	n/a
S99T001847	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001847	D	Magnesium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Manganese-ICP-Acid Dil.	ug/mL	94.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	1.04e+02	103.0	103.5	0.97	n/a	20.10	n/a
S99T001847	D	Sodium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	1.16e+05	1.16e+05	1.16e+05	0.00	n/a	40.10	n/a
S99T001847	D	Neodymium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001847	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	5.02e+02	504.0	503.0	0.40	n/a	80.20	n/a
S99T001847	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	5.03e+03	5.03e+03	5.03e+03	0.00	n/a	40.10	n/a
S99T001847	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001847	D	Selenium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-2	39.20	39.80	39.50	1.52	n/a	20.10	n/a
S99T001847	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001847	D	Samarium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Strontium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Titanium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001847	D	Thallium-ICP-Acid Dil.	ug/mL	99.20	<2.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001847	D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001847	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Zinc-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847	D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001847		Fluoride-IC-Dionex 4000/4500	ug/mL	101.2	<1.20e-2	1.83e+03	1.75e+03	1.79e+03	4.47	n/a	25.45	n/a
S99T001847		Chloride-IC-Dionex 4000/4500	ug/mL	95.33	<1.70e-2	1.57e+02	167.0	162.1	6.17	n/a	36.06	n/a
S99T001847		Nitrite-IC - Dionex 4000/4500	ug/mL	96.41	<1.89e-1	9.01e+04	9.21e+04	9.11e+04	2.20	n/a	229.1	n/a
S99T001847		Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	6.99e+04	7.09e+04	7.04e+04	1.42	n/a	294.8	n/a
S99T001847		Phosphate by IC-Dionex 4000/4500	ug/mL	95.75	<1.20e-1	1.45e+03	1.14e+03	1.30e+03	23.9	n/a	254.5	n/a
S99T001847		Sulfate by IC-Dionex 4000/4500	ug/mL	97.83	<1.38e-1	1.67e+04	1.67e+04	1.67e+04	0.00	n/a	292.7	n/a
S99T001847		Oxalate-IC-Dionex 4000/4500	ug/mL	102.1	<1.05e-1	1.10e+03	1.04e+03	1.07e+03	5.61	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
A2-101 (2)CORE NUMBER: 266
SEGMENT #: Core Comp Trip1

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000797	F	Silver - ICP-Fusion	ug/g	96.60	<4.10e-1	1.42e+02	127.0	134.5	11.2	81.60	83.70	n/a
S00T000797	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05e0	3.90e+04	3.88e+04	3.89e+04	0.51	75.90	418.0	n/a
S00T000797	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	95.50	837.0	n/a
S00T000797	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	1.09e+03	1.10e+03	1.10e+03	0.91	94.30	418.0	n/a
S00T000797	F	Barium - ICP-Fusion	ug/g	97.20	<2.05e0	<4.18e+02	<4.18e2	n/a	n/a	91.80	418.0	n/a
S00T000797	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05e-1	<4.180	<4.18e1	n/a	n/a	90.20	41.80	n/a
S00T000797	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	97.80	837.0	n/a
S00T000797	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10e0	2.67e+03	2.62e+03	2.64e+03	1.89	92.90	837.0	n/a
S00T000797	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05e-1	3.96e+03	3.93e+03	3.94e+03	0.76	95.90	41.80	n/a
S00T000797	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	97.50	837.0	n/a
S00T000797	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20e-1	<1.67e+02	<1.67e2	n/a	n/a	98.80	167.0	n/a
S00T000797	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10e-1	4.34e+02	400.0	417.0	8.15	96.50	83.70	n/a
S00T000797	F	Copper - ICP-Fusion	ug/g	98.80	<4.10e-1	1.96e+02	161.0	178.5	19.6	91.50	83.70	n/a
S00T000797	F	Europium - ICP-Fusion	ug/g	97.20	<2.05e0	<4.18e+02	<4.18e2	n/a	n/a	90.80	418.0	n/a
S00T000797	F	Iron - ICP-Fusion	ug/g	102.2	<2.05e0	4.47e+04	4.45e+04	4.46e+04	0.45	75.00	418.0	n/a
S00T000797	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05e0	1.18e+03	1.16e+03	1.17e+03	1.71	90.40	418.0	n/a
S00T000797	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10e-1	3.48e+02	336.0	342.0	3.51	88.40	83.70	n/a
S00T000797	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10e0	<8.37e+02	<8.37e2	1.20e+03	0.83	98.70	837.0	n/a
S00T000797	F	Manganese - ICP-Fusion	ug/g	99.20	<2.05e0	<4.18e+02	<4.18e2	1.20e+03	0.83	89.30	83.70	n/a
S00T000797	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05e0	1.37e+05	1.28e+05	1.33e+05	6.79	97.00	418.0	n/a
S00T000797	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	1.37e+05	1.28e+05	1.33e+05	6.79	99.20	8.37e+03	n/a
S00T000797	F	Neodymium - ICP-Fusion	ug/g	99.20	<4.10e0	9.79e+02	861.0	920.0	12.8	90.00	837.0	n/a
S00T000797	F	Nickel - ICP-Fusion	ug/g	100.6	1.59e+02	3.48e+05	3.45e+05	3.47e+05	0.87	93.40	1.67e+03	n/a
S00T000797	F	Phosphorus - ICP-Fusion	ug/g	102.0	<8.20e0	2.01e+03	1.85e+03	1.93e+03	8.29	95.70	1.67e+03	n/a
S00T000797	F	Lead - ICP-Fusion	ug/g	99.80	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	104.0	837.0	n/a
S00T000797	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00e0	<2.06e+04	<2.06e4	n/a	n/a	89.90	2.06e+04	n/a
S00T000797	F	Praseodymium - ICP-Fusion	ug/g	97.60	<5.00e-1	<1.03e+04	<1.03e4	n/a	n/a	94.60	1.03e+04	n/a
S00T000797	F	Rubidium - ICP-Fusion	ug/g	92.20	<2.00e0	<4.12e+04	<4.12e4	n/a	n/a	5.610	4.12e+04	n/a
S00T000797	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00e0	<2.06e+04	<2.06e4	n/a	n/a	93.20	2.06e+04	n/a
S00T000797	F	Ruthenium - ICP-Fusion	ug/g	99.20	<2.00e0	<4.12e+04	<4.12e4	n/a	n/a	99.10	4.12e+04	n/a
S00T000797	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10e0	4.23e+04	4.21e+04	4.22e+04	0.47	79.70	837.0	n/a
S00T000797	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46e0	<5.02e+02	<5.02e2	n/a	n/a	96.00	502.0	n/a
S00T000797	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	98.70	837.0	n/a
S00T000797	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	4.27e+03	4.24e+03	4.26e+03	0.71	101.0	418.0	n/a
S00T000797	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10e0	<8.37e+02	<8.37e2	n/a	n/a	95.10	837.0	n/a
S00T000797	F	Tin - ICP-Fusion	ug/g	97.60	<5.00e-1	<1.03e+04	<1.03e4	n/a	n/a	98.60	1.03e+04	n/a
S00T000797	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10e-1	3.22e+02	321.0	321.5	0.31	90.00	83.70	n/a
S00T000797	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00e-1	<1.03e+04	<1.03e4	n/a	n/a	96.40	1.03e+04	n/a
S00T000797	F	Tellurium - ICP-Fusion	ug/g	97.40	<5.00e-1	<1.03e+04	<1.03e4	n/a	n/a	95.00	1.03e+04	n/a
S00T000797	F	Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<4.18e+02	<4.18e2	n/a	n/a	99.10	418.0	n/a
S00T000797	F	Titanium - ICP-Fusion	ug/g	100.8	<4.10e-1	1.11e+02	93.30	102.2	17.3	92.50	83.70	n/a
S00T000797	F	Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.67e+03	<1.67e3	n/a	n/a	98.00	1.67e+03	n/a
S00T000797	F	Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	<4.18e+03	<4.18e3	n/a	n/a	104.0	4.18e+03	n/a
S00T000797	F	Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<4.18e+02	<4.18e2	n/a	n/a	95.30	418.0	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000797	F	Tungsten -ICP-Fusion	ug/g	96.80	<5.00e-1	<1.03e+04	<1.03e+04	n/a	n/a	95.00	1.03e+04	n/a
S00T000797	F	Yttrium -ICP-Fusion	ug/g	98.40	<2.05e0	<4.18e+02	<4.18e+02	n/a	n/a	95.60	418.0	n/a
S00T000797	F	Zinc -ICP-Fusion	ug/g	100.8	<4.10e-1	<83.70	<83.7e1	n/a	n/a	93.40	83.70	n/a
S00T000797	F	Zirconium -ICP-Fusion	ug/g	101.0	<4.10e-1	2.08e+04	2.07e+04	2.08e+04	0.48	84.30	83.70	n/a
S00T000797	F	Sodium-22 by GEA	uCi/g	n/a	<4.16e-1	<10.87	n/a	n/a	n/a	n/a	10.87	n/a
S00T000797	F	Sodium-24 by GEA	uCi/g	n/a	<3.14e-1	<4.01e-01	n/a	n/a	n/a	n/a	4.01e-01	n/a
S00T000797	F	Potassium-40 by GEA	uCi/g	n/a	<1.27e1	<12.38	n/a	n/a	n/a	n/a	12.38	n/a
S00T000797	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000797	F	Cobalt-56 by GEA	uCi/g	n/a	<3.38e-1	<6.32e-01	n/a	n/a	n/a	n/a	6.32e-01	n/a
S00T000797	F	Cobalt-57 by GEA	uCi/g	n/a	<2.27e-1	<14.52	n/a	n/a	n/a	n/a	14.52	n/a
S00T000797	F	Selenium-75 by GEA	uCi/g	n/a	<4.07e-1	<1.762	n/a	n/a	n/a	n/a	1.762	n/a
S00T000797	F	Strontium-85 by GEA	uCi/g	n/a	<3.90e-1	<1.362	n/a	n/a	n/a	n/a	1.362	n/a
S00T000797	F	Yttrium-88 by GEA	uCi/g	n/a	<3.77e-1	<3.18e-01	n/a	n/a	n/a	n/a	3.18e-01	n/a
S00T000797	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000797	F	Niobium-94 by GEA	uCi/g	n/a	<3.69e-1	<9.65e-01	n/a	n/a	n/a	n/a	9.65e-01	n/a
S00T000797	F	Zr/Nb-95 by GEA	uCi/g	n/a	<1.65e0	<27.69	n/a	n/a	n/a	n/a	27.69	n/a
S00T000797	F	Ruthenium-103 by GEA	uCi/g	n/a	<3.28e-1	<1.469	n/a	n/a	n/a	n/a	1.469	n/a
S00T000797	F	Ru/Rh-106 by GEA	uCi/g	n/a	<6.38e0	<20.49	n/a	n/a	n/a	n/a	20.49	n/a
S00T000797	F	Cadmium-109 by GEA	uCi/g	n/a	<7.28e0	<51.18	n/a	n/a	n/a	n/a	51.18	n/a
S00T000797	F	Tin-113 by GEA	uCi/g	n/a	<4.30e-1	<1.998	n/a	n/a	n/a	n/a	1.998	n/a
S00T000797	F	Iodine-131 by GEA	uCi/g	n/a	<3.22e-1	<1.498	n/a	n/a	n/a	n/a	1.498	n/a
S00T000797	F	I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000797	F	Cesium-134 by GEA	uCi/g	n/a	<3.21e-1	<1.123	n/a	n/a	n/a	n/a	1.123	n/a
S00T000797	F	Ce/Pr-144 by GEA	uCi/g	n/a	<3.48e0	<19.72	n/a	n/a	n/a	n/a	19.72	n/a
S00T000797	F	Mercury-203 by GEA	uCi/g	n/a	<2.98e-1	<1.260	n/a	n/a	n/a	n/a	1.260	n/a
S00T000797	F	Thallium-208 by GEA	uCi/g	n/a	<4.00e0	<16.33	n/a	n/a	n/a	n/a	16.33	n/a
S00T000797	F	Bismuth-212 by GEA	uCi/g	n/a	<6.30e0	<10.05	n/a	n/a	n/a	n/a	10.05	n/a
S00T000797	F	Lead-212 by GEA	uCi/g	n/a	<5.64e-1	<2.376	n/a	n/a	n/a	n/a	2.376	n/a
S00T000797	F	Bismuth-214 by GEA	uCi/g	n/a	<1.05e0	<2.439	n/a	n/a	n/a	n/a	2.439	n/a
S00T000797	F	Lead-214 by GEA	uCi/g	n/a	<3.45e0	<12.99	n/a	n/a	n/a	n/a	12.99	n/a
S00T000797	F	Radium-224 by GEA	uCi/g	n/a	<5.84e0	<26.16	n/a	n/a	n/a	n/a	26.16	n/a
S00T000797	F	Radium-226 by GEA	uCi/g	n/a	<6.10e0	<29.34	n/a	n/a	n/a	n/a	29.34	n/a
S00T000797	F	Actinium-228 by GEA	uCi/g	n/a	<1.81e0	<2.552	n/a	n/a	n/a	n/a	2.552	n/a
S00T000797	F	Thorium-228 by GEA	uCi/g	n/a	<2.30e1	<1.48e+02	n/a	n/a	n/a	n/a	147.7	n/a
S00T000797	F	Thorium-229 by GEA	uCi/g	n/a	<1.05e0	<7.028	n/a	n/a	n/a	n/a	7.028	n/a
S00T000797	F	Uranium/Thorium-233 by GEA	uCi/g	n/a	<2.05e2	<9.30e+02	n/a	n/a	n/a	n/a	930.1	n/a
S00T000797	F	U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000797	F	Protactinium-233 by GEA	uCi/g	n/a	<6.26e-1	<2.796	n/a	n/a	n/a	n/a	2.796	n/a
S00T000797	F	Protactinium-234m by GEA	uCi/g	n/a	<5.72e1	<1.13e+02	n/a	n/a	n/a	n/a	113.2	n/a
S00T000797	F	Thorium-234 by GEA	uCi/g	n/a	<1.48e1	<92.16	n/a	n/a	n/a	n/a	92.16	n/a
S00T000797	F	Uranium-235 by GEA	uCi/g	n/a	<3.65e-1	<1.780	n/a	n/a	n/a	n/a	1.780	n/a
S00T000797	F	U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000797	F	Neptunium-237 by GEA	uCi/g	n/a	<2.29e0	<1.18e+02	n/a	n/a	n/a	n/a	117.9	n/a
S00T000797	F	Neptunium-239 by GEA	uCi/g	n/a	<9.57e-1	<6.805	n/a	n/a	n/a	n/a	6.805	n/a
S00T000797	F	Plutonium-239 by GEA	uCi/g	n/a	<3.18e3	<1.72e+04	n/a	n/a	n/a	n/a	1.72e+04	n/a
S00T000797	F	Americium-241 by GEA	uCi/g	n/a	<1.96e0	<46.73	n/a	n/a	n/a	n/a	46.73	24.2
S00T000797	F	Americium-243 by GEA	uCi/g	n/a	<6.62e-1	<3.926	n/a	n/a	n/a	n/a	3.926	n/a
S00T000803	A	Sn117 ICP/MS Acid/Dig LA-505159	ug/g	102.5	<6.76e-2	20.99	n/a	n/a	n/a	n/a	7.212	n/a
S00T000803	A	Thorium-229 by ICP/MS	ug/g	n/a	<6.77e-3	<7.21e-01	n/a	n/a	n/a	n/a	7.21e-01	n/a
S00T000803	A	Thorium-230 by ICP/MS	ug/g	n/a	<2.26e-2	<2.404	n/a	n/a	n/a	n/a	2.404	n/a
S00T000803	A	Thorium-232 by ICP/MS	ug/g	97.20	<2.26e-2	1.32e+02	n/a	n/a	n/a	n/a	2.404	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000806	W		Glycolate-IC-Dionex 500 ORGACD	ug/g	104.5	<1.90e-1	<8.02e+02	n/a	n/a	n/a	108.5	802.3	n/a
S00T000806	W		Bromide-IC-Dionex 500 col	ug/g	103.1	<2.90e-1	<1.22e+03	n/a	n/a	n/a	104.2	1.22e+03	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 266
SEGMENT #: Core Comp Trip2

SEGMENT PORTION: Centrifuged Solids

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000798	F	Silver -ICP-Fusion	ug/g	96.60	<4.10e-1	1.42e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Aluminum -ICP-Fusion	ug/g	98.20	<2.05e0	4.62e+04	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Arsenic -ICP-Fusion	ug/g	101.2	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Boron -ICP-Fusion	ug/g	101.4	2.88e+00	7.03e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Barium -ICP-Fusion	ug/g	97.20	<2.05e0	4.06e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Beryllium -ICP-Fusion	ug/g	98.00	<2.05e-1	< 39.60	n/a	n/a	n/a	n/a	39.60	n/a	n/a
S00T000798	F	Bismuth -ICP-Fusion	ug/g	101.2	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Calcium -ICP-Fusion	ug/g	105.6	<4.10e0	2.10e+03	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Cadmium -ICP-Fusion	ug/g	101.6	<2.05e-1	4.40e+03	n/a	n/a	n/a	n/a	39.60	n/a	n/a
S00T000798	F	Cerium -ICP-Fusion	ug/g	99.20	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Cobalt -ICP-Fusion	ug/g	101.8	<4.10e-1	<1.58e+02	n/a	n/a	n/a	n/a	158.0	n/a	n/a
S00T000798	F	Chromium -ICP-Fusion	ug/g	100.8	<4.10e-1	4.67e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Copper -ICP-Fusion	ug/g	98.80	<4.10e-1	1.62e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Europium -ICP-Fusion	ug/g	97.20	<2.05e0	<3.96e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Iron -ICP-Fusion	ug/g	102.2	<2.05e0	5.48e+04	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Lanthanum -ICP-Fusion	ug/g	100.6	<2.05e0	1.25e+03	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Lithium -ICP-Fusion	ug/g	94.40	<4.10e-1	3.65e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Magnesium -ICP-Fusion	ug/g	100.2	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Manganese -ICP-Fusion	ug/g	95.20	<4.10e-1	7.02e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Molybdenum -ICP-Fusion	ug/g	99.60	<2.05e0	<3.96e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Sodium -ICP-Fusion	ug/g	98.40	1.47e+01	1.41e+05	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Neodymium -ICP-Fusion	ug/g	99.20	<4.10e0	1.07e+03	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Nickel -ICP-Fusion	ug/g	100.6	1.59e+02	6.39e+03	n/a	n/a	n/a	n/a	158.0	n/a	n/a
S00T000798	F	Phosphorus -ICP-Fusion	ug/g	102.0	<8.20e0	2.05e+03	n/a	n/a	n/a	n/a	1.58e+03	n/a	n/a
S00T000798	F	Lead -ICP-Fusion	ug/g	99.80	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Palladium -ICP-Fusion	ug/g	95.80	<1.00e0	<1.95e+04	n/a	n/a	n/a	n/a	1.95e+04	n/a	n/a
S00T000798	F	Praseodymium-ICP Fusion	ug/g	97.60	<5.00e-1	<9.75e+03	n/a	n/a	n/a	n/a	9.75e+03	n/a	n/a
S00T000798	F	Rubidium-ICP Fusion	ug/g	92.20	<2.00e0	<3.90e+04	n/a	n/a	n/a	n/a	3.90e+04	n/a	n/a
S00T000798	F	Rhodium -ICP-Fusion	ug/g	98.20	<1.00e0	<3.90e+04	n/a	n/a	n/a	n/a	3.90e+04	n/a	n/a
S00T000798	F	Ruthenium ICP-Fusion	ug/g	99.20	<2.00e0	<3.90e+04	n/a	n/a	n/a	n/a	3.90e+04	n/a	n/a
S00T000798	F	Sulfur -ICP-Fusion	ug/g	100.4	<2.46e0	4.51e+04	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Antimony -ICP-Fusion	ug/g	100.4	<2.46e0	<4.75e+02	n/a	n/a	n/a	n/a	475.0	n/a	n/a
S00T000798	F	Selenium -ICP-Fusion	ug/g	98.60	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Silicon -ICP-Fusion	ug/g	102.4	8.07e+00	4.60e+03	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Samarium -ICP-Fusion	ug/g	99.40	<4.10e0	<7.92e+02	n/a	n/a	n/a	n/a	792.0	n/a	n/a
S00T000798	F	Tin -ICP-Fusion	ug/g	97.60	<5.00e-1	<9.75e+03	n/a	n/a	n/a	n/a	9.75e+03	n/a	n/a
S00T000798	F	Strontium -ICP-Fusion	ug/g	96.80	<4.10e-1	3.47e+02	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Tantalum -ICP-Fusion	ug/g	97.80	<5.00e-1	<9.75e+03	n/a	n/a	n/a	n/a	9.75e+03	n/a	n/a
S00T000798	F	Tellurium-ICP-Fusion	ug/g	97.40	<5.00e-1	<9.75e+03	n/a	n/a	n/a	n/a	9.75e+03	n/a	n/a
S00T000798	F	Thorium -ICP-Fusion	ug/g	99.60	<2.05e0	<3.96e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a
S00T000798	F	Titanium-ICP-Fusion	ug/g	100.8	<4.10e-1	< 79.20	n/a	n/a	n/a	n/a	79.20	n/a	n/a
S00T000798	F	Thallium -ICP-Fusion	ug/g	98.40	<8.20e0	<1.58e+03	n/a	n/a	n/a	n/a	1.58e+03	n/a	n/a
S00T000798	F	Uranium -ICP-Fusion	ug/g	97.90	<2.05e1	<3.96e+03	n/a	n/a	n/a	n/a	3.96e+03	n/a	n/a
S00T000798	F	Vanadium -ICP-Fusion	ug/g	101.2	<2.05e0	<3.96e+02	n/a	n/a	n/a	n/a	396.0	n/a	n/a

Sample#	RI#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000798	F	Tungsten - ICP-Fusion	ug/g	96.80	<5.00e-1	<9.75e+03	n/a	n/a	n/a	n/a	9.75e+03	n/a
S00T000798	F	Yttrium - ICP-Fusion	ug/g	98.40	<2.05e0	<3.96e+02	n/a	n/a	n/a	n/a	396.0	n/a
S00T000798	F	Zinc - ICP-Fusion	ug/g	100.8	<4.10e-1	< 79.20	n/a	n/a	n/a	n/a	79.20	n/a
S00T000798	F	Zirconium - ICP-Fusion	ug/g	101.0	<4.10e-1	2.21e+04	n/a	n/a	n/a	n/a	79.20	n/a
S00T000798	F	Sodium-22 by GEA	uci/g	n/a	<4.16e-1	< 10.88	n/a	n/a	n/a	n/a	10.88	n/a
S00T000798	F	Sodium-24 by GEA	uci/g	n/a	<3.14e-1	<4.03e-01	n/a	n/a	n/a	n/a	4.03e-01	n/a
S00T000798	F	Potassium-40 by GEA	uci/g	n/a	<1.27e1	< 12.42	n/a	n/a	n/a	n/a	12.42	n/a
S00T000798	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000798	F	Cobalt-56 by GEA	uci/g	n/a	<3.38e-1	<6.20e-01	n/a	n/a	n/a	n/a	6.20e-01	n/a
S00T000798	F	Cobalt-57 by GEA	uci/g	n/a	<2.27e-1	< 16.00	n/a	n/a	n/a	n/a	16.00	n/a
S00T000798	F	Selenium-75 by GEA	uci/g	n/a	<4.07e-1	< 1.751	n/a	n/a	n/a	n/a	1.751	n/a
S00T000798	F	Strontium-85 by GEA	uci/g	n/a	<3.90e-1	< 1.358	n/a	n/a	n/a	n/a	1.358	n/a
S00T000798	F	Yttrium-88 by GEA	uci/g	n/a	<3.77e-1	<3.72e-01	n/a	n/a	n/a	n/a	3.72e-01	n/a
S00T000798	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000798	F	Niobium-94 by GEA	uci/g	n/a	<3.69e-1	<9.30e-01	n/a	n/a	n/a	n/a	9.30e-01	n/a
S00T000798	F	Zr/Nb-95 by GEA	uci/g	n/a	<1.65e0	< 30.21	n/a	n/a	n/a	n/a	30.21	n/a
S00T000798	F	Ruthenium-103 by GEA	uci/g	n/a	<3.28e-1	< 1.437	n/a	n/a	n/a	n/a	1.437	n/a
S00T000798	F	Ru/Rh-106 by GEA	uci/g	n/a	<6.38e0	< 21.54	n/a	n/a	n/a	n/a	21.54	n/a
S00T000798	F	Cadmium-109 by GEA	uci/g	n/a	<7.28e0	<3.86e+02	n/a	n/a	n/a	n/a	386.5	n/a
S00T000798	F	Tin-113 by GEA	uci/g	n/a	<4.30e-1	< 2.003	n/a	n/a	n/a	n/a	2.003	n/a
S00T000798	F	Iodine-131 by GEA	uci/g	n/a	<3.22e-1	< 1.452	n/a	n/a	n/a	n/a	1.452	n/a
S00T000798	F	I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000798	F	Cesium-134 by GEA	uci/g	n/a	<3.21e-1	< 1.113	n/a	n/a	n/a	n/a	1.113	n/a
S00T000798	F	Ce/Pr-144 by GEA	uci/g	n/a	<3.48e0	< 19.63	n/a	n/a	n/a	n/a	19.63	n/a
S00T000798	F	Mercury-203 by GEA	uci/g	n/a	<2.98e-1	< 1.278	n/a	n/a	n/a	n/a	1.278	n/a
S00T000798	F	Thallium-208 by GEA	uci/g	n/a	<4.00e0	< 16.59	n/a	n/a	n/a	n/a	16.59	n/a
S00T000798	F	Bismuth-212 by GEA	uci/g	n/a	<6.30e0	< 9.391	n/a	n/a	n/a	n/a	9.391	n/a
S00T000798	F	Lead-212 by GEA	uci/g	n/a	<5.64e-1	< 2.374	n/a	n/a	n/a	n/a	2.374	n/a
S00T000798	F	Bismuth-214 by GEA	uci/g	n/a	<1.05e0	< 2.466	n/a	n/a	n/a	n/a	2.466	n/a
S00T000798	F	Lead-214 by GEA	uci/g	n/a	<3.45e0	< 12.81	n/a	n/a	n/a	n/a	12.81	n/a
S00T000798	F	Radium-224 by GEA	uci/g	n/a	<5.84e0	< 26.20	n/a	n/a	n/a	n/a	26.20	n/a
S00T000798	F	Radium-226 by GEA	uci/g	n/a	<6.10e0	< 29.62	n/a	n/a	n/a	n/a	29.62	n/a
S00T000798	F	Actinium-228 by GEA	uci/g	n/a	<1.81e0	< 2.340	n/a	n/a	n/a	n/a	2.340	n/a
S00T000798	F	Thorium-229 by GEA	uci/g	n/a	<1.05e0	<1.50e+02	n/a	n/a	n/a	n/a	150.2	n/a
S00T000798	F	Uranium/Thorium-233 by GEA	uci/g	n/a	<2.05e2	<9.36e+02	n/a	n/a	n/a	n/a	936.4	n/a
S00T000798	F	U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000798	F	Protactinium-233 by GEA	uci/g	n/a	<6.26e-1	< 2.740	n/a	n/a	n/a	n/a	2.740	n/a
S00T000798	F	Protactinium-234m by GEA	uci/g	n/a	<5.72e1	<1.11e+02	n/a	n/a	n/a	n/a	111.1	n/a
S00T000798	F	Thorium-234 by GEA	uci/g	n/a	<1.48e1	< 93.85	n/a	n/a	n/a	n/a	93.85	n/a
S00T000798	F	Uranium-235 by GEA	uci/g	n/a	<3.65e-1	< 1.790	n/a	n/a	n/a	n/a	1.790	n/a
S00T000798	F	U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000798	F	Neptunium-237 by GEA	uci/g	n/a	<2.29e0	<1.16e+02	n/a	n/a	n/a	n/a	116.0	n/a
S00T000798	F	Neptunium-239 by GEA	uci/g	n/a	<9.57e-1	< 6.928	n/a	n/a	n/a	n/a	6.928	n/a
S00T000798	F	Plutonium-239 by GEA	uci/g	n/a	<3.18e3	<1.75e+04	n/a	n/a	n/a	n/a	1.75e+04	n/a
S00T000798	F	Americium-241 by GEA	uci/g	n/a	<1.96e0	< 52.51	n/a	n/a	n/a	n/a	52.51	n/a
S00T000798	F	Americium-243 by GEA	uci/g	n/a	<6.62e-1	< 4.007	n/a	n/a	n/a	n/a	4.007	n/a
S00T000804	A	Sn117 ICP/MS Agidig LA-505159	ug/g	102.5	<6.76e-2	< 20.09	n/a	n/a	n/a	n/a	20.09	n/a
S00T000804	A	Thorium-229 by ICP/MS	ug/g	n/a	<6.77e-3	<7.43e-01	n/a	n/a	n/a	n/a	7.43e-01	n/a
S00T000804	A	Thorium-230 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.475	n/a	n/a	n/a	n/a	2.475	n/a
S00T000804	A	Thorium-232 by ICP/MS	ug/g	97.20	<2.26e-2	< 1.36e+02	n/a	n/a	n/a	n/a	2.475	n/a

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000807	W	GLYcolate-IC-Dionex 500 ORGACD	ug/g	104.5	<1.90e-1	<7.70e+02	n/a	n/a	n/a	n/a	769.8		n/a
S00T000807	W	Bromide-IC-Dionex 500 col	ug/g	103.1	<2.90e-1	<1.18e+03	n/a	n/a	n/a	n/a	1.18e+03		n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 266
SEGMENT #: Core Comp Trip3

SEGMENT PORTION: Centrifuged Solids

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000799	F	Silver - ICP-Fusion	ug/g	96.60	<4.10e-1	1.54e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05e0	4.26e+04	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	7.26e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Barium - ICP-Fusion	ug/g	97.20	<2.05e0	<4.24e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05e-1	< 42.40	n/a	n/a	n/a	n/a	42.40	n/a	n/a
S00T000799	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10e0	2.23e+03	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05e-1	4.12e+03	n/a	n/a	n/a	n/a	42.40	n/a	n/a
S00T000799	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20e-1	<1.69e+02	n/a	n/a	n/a	n/a	169.0	n/a	n/a
S00T000799	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10e-1	4.47e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Copper - ICP-Fusion	ug/g	98.80	<4.10e-1	1.50e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Europium ICP-Fusion	ug/g	97.20	<2.05e0	<4.24e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Iron - ICP-Fusion	ug/g	102.2	<2.05e0	3.73e+04	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05e0	1.23e+03	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10e-1	3.74e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Manganese - ICP-Fusion	ug/g	95.20	<4.10e-1	8.16e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05e0	<4.24e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	1.42e+05	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Neodymium - ICP-Fusion	ug/g	99.20	<4.10e0	1.06e+03	n/a	n/a	n/a	n/a	169.0	n/a	n/a
S00T000799	F	Nickel - ICP-Fusion	ug/g	100.6	1.59e+02	1.50e+05	n/a	n/a	n/a	n/a	1.69e+03	n/a	n/a
S00T000799	F	Phosphorus - ICP-Fusion	ug/g	102.0	<8.20e0	2.12e+03	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Lead - ICP-Fusion	ug/g	99.80	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	2.09e+04	n/a	n/a
S00T000799	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00e0	<2.09e+04	n/a	n/a	n/a	n/a	1.04e+04	n/a	n/a
S00T000799	F	Praseodymium-ICP Fusion	ug/g	97.60	<5.00e-1	<1.04e+04	n/a	n/a	n/a	n/a	4.17e+04	n/a	n/a
S00T000799	F	Rubidium-ICP Fusion	ug/g	92.20	<2.00e0	<4.17e+04	n/a	n/a	n/a	n/a	2.09e+04	n/a	n/a
S00T000799	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00e0	<2.09e+04	n/a	n/a	n/a	n/a	4.17e+04	n/a	n/a
S00T000799	F	Ruthenium ICP-Fusion	ug/g	99.20	<2.00e0	<4.17e+04	n/a	n/a	n/a	n/a	4.17e+04	n/a	n/a
S00T000799	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10e0	4.81e+04	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46e0	<5.08e+02	n/a	n/a	n/a	n/a	508.0	n/a	n/a
S00T000799	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	5.28e+03	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10e0	<8.47e+02	n/a	n/a	n/a	n/a	847.0	n/a	n/a
S00T000799	F	Tin - ICP-Fusion	ug/g	97.60	<5.00e-1	<1.04e+04	n/a	n/a	n/a	n/a	1.04e+04	n/a	n/a
S00T000799	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10e-1	3.44e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00e-1	<1.04e+04	n/a	n/a	n/a	n/a	1.04e+04	n/a	n/a
S00T000799	F	Tellurium-ICP-Fusion	ug/g	97.40	<5.00e-1	<1.04e+04	n/a	n/a	n/a	n/a	424.0	n/a	n/a
S00T000799	F	Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<4.24e+02	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Titanium-ICP-Fusion	ug/g	100.8	<4.10e-1	< 84.70	n/a	n/a	n/a	n/a	84.70	n/a	n/a
S00T000799	F	Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.69e+03	n/a	n/a	n/a	n/a	1.69e+03	n/a	n/a
S00T000799	F	Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	<4.24e+03	n/a	n/a	n/a	n/a	4.24e+03	n/a	n/a
S00T000799	F	Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<4.24e+02	n/a	n/a	n/a	n/a	424.0	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000799	F	Tungsten -ICP-Fusion	ug/g	96.80	<5.00e-1	<1.04e+04	n/a	n/a	n/a	n/a	1.04e+04	n/a
S00T000799	F	Yttrium -ICP-Fusion	ug/g	98.40	<2.05e-1	<4.24e+02	n/a	n/a	n/a	n/a	424.0	n/a
S00T000799	F	Zinc -ICP-Fusion	ug/g	100.8	<4.10e-1	< 84.70	n/a	n/a	n/a	n/a	84.70	n/a
S00T000799	F	Zirconium -ICP-Fusion	ug/g	101.0	<4.10e-1	2.26e+04	n/a	n/a	n/a	n/a	84.70	n/a
S00T000799	F	Sodium-22 by GEA	uCi/g	n/a	<4.16e-1	< 12.00	n/a	n/a	n/a	n/a	12.00	n/a
S00T000799	F	Sodium-24 by GEA	uCi/g	n/a	<3.14e-1	<4.73e-01	n/a	n/a	n/a	n/a	4.73e-01	n/a
S00T000799	F	Potassium-40 by GEA	uCi/g	n/a	<1.27e-1	< 13.31	n/a	n/a	n/a	n/a	13.31	n/a
S00T000799	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000799	F	Cobalt-56 by GEA	uCi/g	n/a	<3.38e-1	<6.46e-01	n/a	n/a	n/a	n/a	6.46e-01	n/a
S00T000799	F	Cobalt-57 by GEA	uCi/g	n/a	<2.27e-1	< 14.93	n/a	n/a	n/a	n/a	14.93	n/a
S00T000799	F	Selenium-75 by GEA	uCi/g	n/a	<4.07e-1	< 1.821	n/a	n/a	n/a	n/a	1.821	n/a
S00T000799	F	Selenium-85 by GEA	uCi/g	n/a	<3.90e-1	< 1.439	n/a	n/a	n/a	n/a	1.439	n/a
S00T000799	F	Yttrium-88 by GEA	uCi/g	n/a	<3.77e-1	<3.19e-01	n/a	n/a	n/a	n/a	3.19e-01	n/a
S00T000799	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000799	F	Niobium-94 by GEA	uCi/g	n/a	<3.69e-1	<9.73e-01	n/a	n/a	n/a	n/a	9.73e-01	n/a
S00T000799	F	Zr/Nb-95 by GEA	uCi/g	n/a	<1.65e0	< 30.76	n/a	n/a	n/a	n/a	30.76	n/a
S00T000799	F	Ruthenium-103 by GEA	uCi/g	n/a	<3.28e-1	< 1.506	n/a	n/a	n/a	n/a	1.506	n/a
S00T000799	F	Ru/Rh-106 by GEA	uCi/g	n/a	<6.38e0	< 21.89	n/a	n/a	n/a	n/a	21.89	n/a
S00T000799	F	Cadmium-109 by GEA	uCi/g	n/a	<7.28e0	<4.05e+02	n/a	n/a	n/a	n/a	405.0	n/a
S00T000799	F	Tin-113 by GEA	uCi/g	n/a	<4.30e-1	< 2.118	n/a	n/a	n/a	n/a	2.118	n/a
S00T000799	F	Iodine-131 by GEA	uCi/g	n/a	<3.22e-1	< 1.573	n/a	n/a	n/a	n/a	1.573	n/a
S00T000799	F	I-131 GEA Rel % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000799	F	Cesium-134 by GEA	uCi/g	n/a	<3.21e-1	< 1.171	n/a	n/a	n/a	n/a	1.171	n/a
S00T000799	F	Ce/Pr-144 by GEA	uCi/g	n/a	<3.48e0	< 20.47	n/a	n/a	n/a	n/a	20.47	n/a
S00T000799	F	Mercury-203 by GEA	uCi/g	n/a	<2.98e-1	< 1.341	n/a	n/a	n/a	n/a	1.341	n/a
S00T000799	F	Thallium-208 by GEA	uCi/g	n/a	<4.00e0	< 17.20	n/a	n/a	n/a	n/a	17.20	n/a
S00T000799	F	Bismuth-212 by GEA	uCi/g	n/a	<6.30e0	< 9.511	n/a	n/a	n/a	n/a	9.511	n/a
S00T000799	F	Lead-212 by GEA	uCi/g	n/a	<5.64e-1	< 2.484	n/a	n/a	n/a	n/a	2.484	n/a
S00T000799	F	Bismuth-214 by GEA	uCi/g	n/a	<1.05e0	< 2.613	n/a	n/a	n/a	n/a	2.613	n/a
S00T000799	F	Lead-214 by GEA	uCi/g	n/a	<3.45e0	< 13.69	n/a	n/a	n/a	n/a	13.69	n/a
S00T000799	F	Radium-224 by GEA	uCi/g	n/a	<5.84e0	< 27.54	n/a	n/a	n/a	n/a	27.54	n/a
S00T000799	F	Radium-226 by GEA	uCi/g	n/a	<6.10e0	< 30.80	n/a	n/a	n/a	n/a	30.80	n/a
S00T000799	F	Actinium-228 by GEA	uCi/g	n/a	<1.81e0	< 2.587	n/a	n/a	n/a	n/a	2.587	n/a
S00T000799	F	Thorium-228 by GEA	uCi/g	n/a	<2.30e1	<1.55e+02	n/a	n/a	n/a	n/a	155.4	n/a
S00T000799	F	Thorium-229 by GEA	uCi/g	n/a	<1.05e0	< 7.447	n/a	n/a	n/a	n/a	7.447	n/a
S00T000799	F	Uranium/Thorium-233 by GEA	uCi/g	n/a	<2.05e2	<9.93e+02	n/a	n/a	n/a	n/a	993.4	n/a
S00T000799	F	U/Th-233 GEA Rel % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000799	F	Protactinium-233 by GEA	uCi/g	n/a	<6.26e-1	< 2.967	n/a	n/a	n/a	n/a	2.967	n/a
S00T000799	F	Protactinium-234m by GEA	uCi/g	n/a	<5.72e1	<1.10e+02	n/a	n/a	n/a	n/a	109.7	n/a
S00T000799	F	Thorium-234 by GEA	uCi/g	n/a	<1.48e1	< 96.89	n/a	n/a	n/a	n/a	96.89	n/a
S00T000799	F	Uranium-235 by GEA	uCi/g	n/a	<3.65e-1	< 1.863	n/a	n/a	n/a	n/a	1.863	n/a
S00T000799	F	U-235 GEA Rel % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000799	F	Neptunium-237 by GEA	uCi/g	n/a	<2.29e0	<1.22e+02	n/a	n/a	n/a	n/a	121.5	n/a
S00T000799	F	Neptunium-239 by GEA	uCi/g	n/a	<9.57e-1	< 7.152	n/a	n/a	n/a	n/a	7.152	n/a
S00T000799	F	Plutonium-239 by GEA	uCi/g	n/a	<3.18e3	<1.84e+04	n/a	n/a	n/a	n/a	1.84e+04	n/a
S00T000799	F	Americium-243 by GEA	uCi/g	n/a	<1.96e0	44.42	n/a	n/a	n/a	n/a	n/a	23.8
S00T000799	F	Americium-243 by GEA	uCi/g	n/a	<6.62e-1	< 4.109	n/a	n/a	n/a	n/a	4.109	n/a
S00T000805	A	Sn117 ICP/MS ActDig LA-505159	ug/g	102.5	<6.76e-2	15.24	n/a	n/a	n/a	n/a	7.635	n/a
S00T000805	A	Thorium-229 by ICP/MS	ug/g	n/a	<6.77e-3	<7.63e-01	n/a	n/a	n/a	n/a	7.63e-01	n/a
S00T000805	A	Thorium-230 by ICP/MS	ug/g	n/a	<2.26e-2	< 2.545	n/a	n/a	n/a	n/a	2.545	n/a
S00T000805	A	Thorium-232 by ICP/MS	ug/g	97.20	<2.26e-2	1.43e+02	n/a	n/a	n/a	n/a	2.545	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000808	W	Glycolate-IC-Dionex 500 ORGACD	ug/g	104.5	<1.90e-1	<6.79e+02	n/a	n/a	n/a	n/a	679.2	n/a	n/a
S00T000808	W	Bromide-IC-Dionex 500 col	ug/g	103.1	<2.90e-1	<1.04e+03	n/a	n/a	n/a	n/a	1.04e+03	n/a	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001918	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	9.860	7.550	8.705	26.5	n/a	6.010	n/a	n/a
S99T001918	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	9.27e+03	9.23e+03	9.25e+03	0.43	n/a	30.10	n/a	n/a
S99T001918	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 30.10	<6.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a	n/a
S99T001918	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Calcium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a	n/a
S99T001918	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a	n/a
S99T001918	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a	n/a
S99T001918	D	Chromium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	7.30e+02	728.0	729.0	0.27	n/a	6.010	n/a	n/a
S99T001918	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	4.99e+03	4.85e+03	4.92e+03	2.85	n/a	301.0	n/a	n/a
S99T001918	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	94.40	95.40	94.90	1.05	n/a	30.10	n/a	n/a
S99T001918	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.14e+05	1.13e+05	1.14e+05	0.88	n/a	60.10	n/a	n/a
S99T001918	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a	n/a
S99T001918	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	4.38e+02	443.0	440.5	1.14	n/a	120.0	n/a	n/a
S99T001918	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	5.05e+03	5.04e+03	5.04e+03	0.20	n/a	60.10	n/a	n/a
S99T001918	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	n/a	36.10	n/a	n/a
S99T001918	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Silicon-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	49.10	50.50	49.80	2.81	n/a	30.10	n/a	n/a
S99T001918	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a	n/a
S99T001918	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	n/a	120.0	n/a	n/a
S99T001918	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	n/a	301.0	n/a	n/a
S99T001918	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a	n/a
S99T001918	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a	n/a
S99T001918	D	Chloride-IC-Dionex 4000/4500	ug/mL	98.74	<1.00e-2	1.78e+03	1.72e+03	1.75e+03	3.43	n/a	49.69	n/a	n/a
S99T001918	D	Nitrite-IC - Dionex 4000/4500	ug/mL	94.17	<1.70e-2	1.44e+02	220.0	182.0	41.8	n/a	70.40	n/a	n/a
S99T001918	D	Nitrate by IC-Dionex 4000/4500	ug/mL	83.18	<1.08e-1	7.16e+04	7.24e+04	7.20e+04	1.11	n/a	447.2	n/a	n/a
S99T001918	D	Phosphate by IC-Dionex 4000/4500	ug/mL	109.7	<1.39e-1	7.08e+04	7.19e+04	7.14e+04	1.54	n/a	575.6	n/a	n/a
S99T001918	D	Sulfate by IC-Dionex 4000/4500	ug/mL	98.41	<1.20e-1	1.04e+03	1.12e+03	1.08e+03	7.41	n/a	496.9	n/a	n/a
S99T001918	D	Oxalate-IC-Dionex 4000/4500	ug/mL	97.06	<1.38e-1	1.58e+04	1.59e+04	1.59e+04	0.63	n/a	571.5	n/a	n/a
S99T001918	D		ug/mL	102.3	<1.05e-1	1.40e+03	1.27e+03	1.33e+03	9.74	n/a	434.8	n/a	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001920	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	8.220	8.200	8.210	0.24	n/a	6.010	n/a
S99T001920	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.26e+03	8.34e+03	8.30e+03	0.96	n/a	30.10	n/a
S99T001920	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001920	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Calcium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001920	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a
S99T001920	D	Chromium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	7.05e+02	707.0	706.0	0.28	n/a	6.010	n/a
S99T001920	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	4.83e+03	4.71e+03	4.77e+03	2.52	n/a	301.0	n/a
S99T001920	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	90.80	92.40	91.60	1.75	n/a	30.10	n/a
S99T001920	D	Nickel-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.10e+05	1.11e+05	1.11e+05	0.90	n/a	60.10	n/a
S99T001920	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a
S99T001920	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	4.19e+02	423.0	421.0	0.95	n/a	120.0	n/a
S99T001920	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	4.88e+03	4.93e+03	4.90e+03	1.02	n/a	60.10	n/a
S99T001920	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	n/a	36.10	n/a
S99T001920	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001920	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	n/a	120.0	n/a
S99T001920	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	n/a	301.0	n/a
S99T001920	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001920	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Zirconium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001920	D	Fluoride-IC-Dionex 4000/4500	ug/mL	98.74	<1.20e-2	1.64e+03	1.70e+03	1.67e+03	3.59	n/a	49.69	n/a
S99T001920	D	Chloride-IC-Dionex 4000/4500	ug/mL	94.17	<1.70e-2	1.70e+02	173.0	171.4	1.75	n/a	70.40	n/a
S99T001920	D	Nitrite-IC - Dionex 4000/4500	ug/mL	83.18	<1.08e-1	6.70e+04	6.69e+04	6.70e+04	0.15	n/a	447.2	n/a
S99T001920	D	Nitrate by IC-Dionex 4000/4500	ug/mL	109.7	<1.39e-1	6.56e+04	6.56e+04	6.56e+04	0.00	n/a	575.6	n/a
S99T001920	D	Phosphate-IC-Dionex 4000/4500	ug/mL	98.41	<1.20e-1	8.75e+02	810.0	842.4	7.72	n/a	496.9	n/a
S99T001920	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.06	<1.38e-1	1.50e+04	1.48e+04	1.49e+04	1.34	n/a	571.5	n/a
S99T001920	D	Oxalate-IC-Dionex 4000/450	ug/mL	102.3	<1.05e-1	1.39e+03	1.80e+03	1.59e+03	25.7	n/a	434.8	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001921	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	8.980	9.060	9.020	0.89	83.20	6.010	n/a
S99T001921	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.24e+03	8.22e+03	8.23e+03	0.24	103.0	30.10	n/a
S99T001921	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	< 30.10	<6.01e1	n/a	n/a	104.0	30.10	n/a
S99T001921	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	103.0	30.10	n/a
S99T001921	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	96.40	30.10	n/a
S99T001921	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	95.00	3.010	n/a
S99T001921	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	98.50	60.10	n/a
S99T001921	D	Calcium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	101.0	60.10	n/a
S99T001921	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	98.60	3.010	n/a
S99T001921	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	100.0	60.10	n/a
S99T001921	D	Cobalt-ICP-Acid Dil.	ug/mL	99.60	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	99.00	12.00	n/a
S99T001921	D	Chromium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-2	7.01e+02	698.0	699.5	0.43	98.50	6.010	n/a
S99T001921	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	99.50	6.010	n/a
S99T001921	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	99.70	30.10	n/a
S99T001921	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	4.78e+03	4.74e+03	4.76e+03	0.84	110.0	301.0	n/a
S99T001921	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	102.0	30.10	n/a
S99T001921	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	100.0	60.10	n/a
S99T001921	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	89.70	6.010	n/a
S99T001921	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	91.10	90.30	90.70	0.88	99.10	30.10	n/a
S99T001921	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.14e+05	1.15e+05	1.15e+05	0.87	107.0	601.0	n/a
S99T001921	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	99.60	60.10	n/a
S99T001921	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	98.10	12.00	n/a
S99T001921	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	4.14e+02	408.0	411.0	1.46	102.0	120.0	n/a
S99T001921	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	96.30	60.10	n/a
S99T001921	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	4.88e+03	4.86e+03	4.87e+03	0.41	98.20	60.10	n/a
S99T001921	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	101.0	36.10	n/a
S99T001921	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	107.0	60.10	n/a
S99T001921	D	Silicon-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	72.30	69.40	70.85	4.09	107.0	30.10	n/a
S99T001921	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	99.00	60.10	n/a
S99T001921	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	96.30	6.010	n/a
S99T001921	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	< 6.010	<6.01e0	n/a	n/a	101.0	6.010	n/a
S99T001921	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	97.90	120.0	n/a
S99T001921	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	97.50	301.0	n/a
S99T001921	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	99.50	30.10	n/a
S99T001921	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	98.60	6.010	n/a
S99T001921	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	100.0	6.010	n/a
S99T001921	D	Chloride-IC-Dionex 4000/4500	ug/mL	96.85	<1.20e-2	1.67e+03	1.71e+03	1.69e+03	2.37	99.84	49.69	n/a
S99T001921	D	Nitrite-IC - Dionex 4000/4500	ug/mL	99.66	<1.70e-2	1.29e+02	135.0	132.2	4.55	97.26	70.40	n/a
S99T001921	D	Nitrate by IC-Dionex 4000/4500	ug/mL	95.15	<1.80e-1	6.71e+04	6.85e+04	6.78e+04	2.06	114.0	447.2	n/a
S99T001921	D	Phosphate by IC-Dionex 4000/4500	ug/mL	98.31	<1.39e-1	6.81e+04	6.74e+04	6.77e+04	1.03	104.1	575.6	n/a
S99T001921	D	Sulfate by IC-Dionex 4000/4500	ug/mL	94.76	<1.20e-1	8.21e+02	704.0	762.6	15.3	98.25	496.9	n/a
S99T001921	D	Oxalate-IC-Dionex 4000/4500	ug/mL	95.15	<1.38e-1	1.54e+04	1.56e+04	1.55e+04	1.29	97.06	571.5	n/a
S99T001921	D		ug/mL	99.81	<1.05e-1	1.87e+03	1.31e+03	1.59e+03	35.2	97.51	434.8	n/a

CORE NUMBER: 269
SEGMENT #: 5Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001922	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	9.050	7.760	8.405	15.3	n/a	6.010	n/a
S99T001922	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.31e+03	8.39e+03	8.35e+03	0.96	n/a	30.10	n/a
S99T001922	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001922	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001922	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001922	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Calcium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001922	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Cobalt-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 12.00	<1.20e1	710.5	0.42	n/a	12.00	n/a
S99T001922	D	Chromium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	7.09e+02	712.0	710.5	0.42	n/a	6.010	n/a
S99T001922	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001922	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	4.75e+03	4.79e+03	4.77e+03	0.84	n/a	301.0	n/a
S99T001922	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001922	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	93.70	94.40	94.05	0.74	n/a	30.10	n/a
S99T001922	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.11e+05	1.13e+05	1.12e+05	1.79	n/a	60.10	n/a
S99T001922	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a
S99T001922	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	4.22e+02	424.0	423.0	0.47	n/a	120.0	n/a
S99T001922	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	4.94e+03	4.97e+03	4.96e+03	0.61	n/a	60.10	n/a
S99T001922	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	n/a	36.10	n/a
S99T001922	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Silicon-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	43.50	46.00	44.75	5.59	n/a	30.10	n/a
S99T001922	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001922	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	n/a	120.0	n/a
S99T001922	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	n/a	301.0	n/a
S99T001922	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001922	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Zirconium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001922	D	Fluoride-IC-Dionex 4000/4500	ug/mL	96.85	<1.20e-2	1.61e+03	1.63e+03	1.62e+03	1.23	n/a	49.69	n/a
S99T001922	D	Chloride-IC-Dionex 4000/4500	ug/mL	99.66	<1.70e-2	1.33e+02	150.0	141.4	12.0	n/a	70.40	n/a
S99T001922	D	Nitrate-IC - Dionex 4000/4500	ug/mL	95.15	<1.08e-1	6.90e+04	6.78e+04	6.84e+04	1.75	n/a	447.2	n/a
S99T001922	D	Nitrate by IC-Dionex 4000/4500	ug/mL	98.31	<1.39e-1	6.69e+04	6.68e+04	6.68e+04	0.15	n/a	575.6	n/a
S99T001922	D	Phosphate-IC-Dionex 4000/4500	ug/mL	94.76	<1.20e-1	8.27e+02	902.0	864.3	8.68	n/a	496.9	n/a
S99T001922	D	Sulfate by IC-Dionex 4000/4500	ug/mL	95.15	<1.38e-1	1.50e+04	1.57e+04	1.54e+04	4.56	n/a	571.5	n/a
S99T001922	D	Oxalate-IC-Dionex 4000/450	ug/mL	99.81	<1.05e-1	1.31e+03	2.03e+03	1.67e+03	43.1	n/a	434.8	n/a

CORE NUMBER: 269
SEGMENT #: 6Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

SEGMENT PORTION: Drainable Liquid

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001923	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	8.100	9.050	8.575	11.1	n/a	6.010	n/a
S99T001923	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	8.57e+03	8.50e+03	8.54e+03	0.82	n/a	30.10	n/a
S99T001923	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001923	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001923	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Calcium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001923	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 12.00	<1.20e1	708.5	0.42	n/a	12.00	n/a
S99T001923	D	Chromium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001923	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001923	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	4.75e+03	4.81e+03	4.78e+03	1.26	n/a	301.0	n/a
S99T001923	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<1.00e-2	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	92.80	92.90	92.85	0.11	n/a	30.10	n/a
S99T001923	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.12e+05	1.12e+05	1.12e+05	0.00	n/a	60.10	n/a
S99T001923	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	420.5	1.19	n/a	120.0	n/a
S99T001923	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	4.18e+02	4.23.0	4.20.5	0.41	n/a	60.10	n/a
S99T001923	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	4.94e+03	4.92e+03	4.93e+03	0.41	n/a	60.10	n/a
S99T001923	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	n/a	36.10	n/a
S99T001923	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Silicon-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	53.00	46.20	49.60	13.7	n/a	30.10	n/a
S99T001923	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001923	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	n/a	120.0	n/a
S99T001923	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	n/a	301.0	n/a
S99T001923	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001923	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923	D	Zirconium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001923		Fluoride-IC-Dionex 4000/4500	ug/mL	101.3	<1.20e-2	1.68e+03	1.64e+03	1.66e+03	2.41	n/a	49.69	n/a
S99T001923		Chloride-IC-Dionex 4000/4500	ug/mL	96.23	<1.70e-2	1.10e+02	131.0	120.5	17.4	n/a	70.40	n/a
S99T001923		Nitrate-IC - Dionex 4000/4500	ug/mL	97.39	<1.08e-1	6.91e+04	7.02e+04	6.96e+04	1.58	n/a	447.2	n/a
S99T001923		Nitrate by IC-Dionex 4000/4500	ug/mL	100.6	<1.39e-1	6.88e+04	6.92e+04	6.90e+04	0.58	n/a	575.6	n/a
S99T001923		Phosphate-IC-Dionex 4000/4500	ug/mL	95.40	<1.20e-1	1.00e+03	549.0	775.0	58.2	n/a	496.9	n/a
S99T001923		Sulfate by IC-Dionex 4000/4500	ug/mL	98.09	<1.38e-1	1.56e+04	1.55e+04	1.56e+04	0.64	n/a	571.5	n/a
S99T001923		Oxalate-IC-Dionex 4000/450	ug/mL	97.71	<1.05e-1	1.81e+03	1.49e+03	1.65e+03	19.4	n/a	434.8	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 8

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S99T001858	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.700	7.800	7.750	1.29	n/a	4.010	n/a	n/a
S99T001858	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.34e+03	8.35e+03	8.34e+03	0.12	n/a	20.10	n/a	n/a
S99T001858	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001858	D	Bismuth-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Calcium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a	n/a
S99T001858	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-2	7.05e+02	708.0	706.5	0.42	n/a	8.020	n/a	n/a
S99T001858	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Copper-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-1	4.39e+03	4.48e+03	4.44e+03	2.03	n/a	201.0	n/a	n/a
S99T001858	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Magnesium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Manganese-ICP-Acid Dil.	ug/mL	94.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	92.00	92.30	92.15	0.33	n/a	20.10	n/a	n/a
S99T001858	D	Sodium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	1.06e+05	1.06e+05	1.06e+05	0.00	n/a	40.10	n/a	n/a
S99T001858	D	Nickel-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Phosphorus-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a	n/a
S99T001858	D	Lead-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.27e+02	429.0	428.0	0.47	n/a	80.20	n/a	n/a
S99T001858	D	Sulfur-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Antimony-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	4.89e+03	4.88e+03	4.88e+03	0.20	n/a	40.10	n/a	n/a
S99T001858	D	Selenium-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a	n/a
S99T001858	D	Silicon-ICP-Acid Dil.	ug/mL	99.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	58.00	57.60	57.80	0.69	n/a	20.10	n/a	n/a
S99T001858	D	Strontium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a	n/a
S99T001858	D	Titanium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Thallium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a	n/a
S99T001858	D	Vanadium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a	n/a
S99T001858	D	Zinc-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a	n/a
S99T001858	D	Fluoride-IC-Dionex 4000/4500	ug/mL	101.2	<1.20e-2	1.64e+03	1.70e+03	1.67e+03	3.59	n/a	25.45	n/a	n/a
S99T001858	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.33	<1.70e-2	1.30e+02	157.0	143.3	18.8	n/a	36.06	n/a	n/a
S99T001858	D	Nitrite-IC - Dionex 4000/4500	ug/mL	96.41	<1.08e-1	7.05e+04	6.80e+04	6.93e+04	3.61	n/a	229.1	n/a	n/a
S99T001858	D	Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	6.91e+04	6.79e+04	6.85e+04	1.75	n/a	294.8	n/a	n/a
S99T001858	D	Phosphate-IC-Dionex 4000/4500	ug/mL	95.75	<1.20e-1	9.43e+02	1.04e+03	991.5	9.78	n/a	254.5	n/a	n/a
S99T001858	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.83	<1.38e-1	1.51e+04	1.51e+04	1.51e+04	0.00	n/a	292.7	n/a	n/a
S99T001858	D	Oxalate-IC-Dionex 4000/450	ug/mL	102.1	<1.05e-1	1.62e+03	1.24e+03	1.43e+03	26.6	n/a	222.7	n/a	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001859	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.730	7.830	7.780	1.29	n/a	4.010	n/a
S99T001859	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.29e+03	8.44e+03	8.36e+03	1.79	n/a	20.10	n/a
S99T001859	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001859	D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001859	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001859	D	Bismuth-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Calcium-ICP-Acid Dil.	ug/mL	103.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001859	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001859	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-2	8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001859	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	7.05e+02	713.0	709.0	1.13	n/a	4.010	n/a
S99T001859	D	Copper-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001859	D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-1	4.42e+03	4.48e+03	4.45e+03	1.35	n/a	201.0	n/a
S99T001859	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001859	D	Magnesium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Manganese-ICP-Acid Dil.	ug/mL	94.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	90.70	93.40	92.05	2.93	n/a	20.10	n/a
S99T001859	D	Sodium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	1.04e+05	1.07e+05	1.06e+05	2.84	n/a	40.10	n/a
S99T001859	D	Neodymium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001859	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.24e+02	429.0	426.5	1.17	n/a	80.20	n/a
S99T001859	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	4.84e+03	4.91e+03	4.88e+03	1.44	n/a	40.10	n/a
S99T001859	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001859	D	Selenium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	45.50	42.80	44.15	6.12	n/a	20.10	n/a
S99T001859	D	Samarium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001859	D	Strontium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Titanium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Thallium-ICP-Acid Dil.	ug/mL	99.20	<2.00e-1	80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001859	D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001859	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001859	D	Zinc-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001859	D	Fluoride-IC-Dionex 4000/4500	ug/mL	101.2	<1.20e-2	1.80e+03	1.89e+03	1.84e+03	4.88	n/a	25.45	n/a
S99T001859	D	Chloride-IC-Dionex 4000/4500	ug/mL	95.33	<1.70e-2	1.74e+02	176.0	175.1	1.14	n/a	36.06	n/a
S99T001859	D	Nitrite-IC - Dionex 4000/4500	ug/mL	96.41	<1.08e-1	7.43e+04	7.35e+04	7.39e+04	1.08	n/a	229.1	n/a
S99T001859	D	Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	7.42e+04	7.36e+04	7.39e+04	0.81	n/a	294.8	n/a
S99T001859	D	Phosphate-IC-Dionex 4000/4500	ug/mL	95.75	<1.20e-1	1.22e+03	1.28e+03	1.25e+03	4.80	n/a	254.5	n/a
S99T001859	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.83	<1.38e-1	1.63e+04	1.63e+04	1.63e+04	0.00	n/a	292.7	n/a
S99T001859	D	Oxalate-IC-Dionex 4000/450	ug/mL	102.1	<1.05e-1	1.09e+03	1.47e+03	1.28e+03	29.7	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001867	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	7.890	7.520	7.705	4.80	n/a	4.010	n/a
S99T001867	D	Aluminum-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	8.28e+03	8.25e+03	8.26e+03	0.36	n/a	20.10	n/a
S99T001867	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001867	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001867	D	Beryllium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001867	D	Bismuth-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Calcium-ICP-Acid Dil.	ug/mL	104.0	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001867	D	Cadmium-ICP-Acid Dil.	ug/mL	101.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001867	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	7.07e+02	7.04e0	7.05e0	0.43	n/a	8.020	n/a
S99T001867	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867	D	Copper-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001867	D	Potassium-ICP-Acid Dil.	ug/mL	97.80	<5.00e-1	4.55e+03	4.48e+03	4.52e+03	1.55	n/a	201.0	n/a
S99T001867	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001867	D	Magnesium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867	D	Molybdenum-ICP-Acid Dil.	ug/mL	101.0	<5.00e-2	93.50	92.20	92.85	1.40	n/a	20.10	n/a
S99T001867	D	Sodium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	1.06e+05	1.05e+05	1.06e+05	0.95	n/a	40.10	n/a
S99T001867	D	Neodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001867	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-1	4.29e+02	424.0	426.5	1.17	n/a	80.20	n/a
S99T001867	D	Lead-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	4.90e+03	4.88e+03	4.89e+03	0.41	n/a	40.10	n/a
S99T001867	D	Antimony-ICP-Acid Dil.	ug/mL	101.2	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001867	D	Selenium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.21e+02	116.0	118.5	4.22	n/a	20.10	n/a
S99T001867	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001867	D	Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867	D	Titanium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	< 40.10	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867	D	Thallium-ICP-Acid Dil.	ug/mL	99.60	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001867	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001867	D	Vanadium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001867	D	Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001867		Fluoride-IC-Dionex 4000/4500	ug/mL	101.9	<1.00e-2	1.76e+03	1.72e+03	1.74e+03	2.30	n/a	25.45	n/a
S99T001867		Chloride-IC-Dionex 4000/4500	ug/mL	95.33	<1.70e-2	1.37e+02	160.0	148.5	15.5	n/a	36.06	n/a
S99T001867		Nitrite-IC - Dionex 4000/4500	ug/mL	94.90	<1.89e-1	6.95e+04	7.08e+04	7.01e+04	1.85	n/a	229.1	n/a
S99T001867		Nitrate by IC-Dionex 4000/4500	ug/mL	103.3	<1.39e-1	6.90e+04	6.97e+04	6.93e+04	1.01	n/a	294.8	n/a
S99T001867		Phosphate-IC-Dionex 4000/4500	ug/mL	99.53	<1.20e-1	1.02e+03	1.11e+03	1.11e+03	16.2	n/a	254.5	n/a
S99T001867		Sulfate by IC-Dionex 4000/4500	ug/mL	96.38	<1.38e-1	1.53e+04	1.52e+04	1.53e+04	0.66	n/a	292.7	n/a
S99T001867		Oxalate-IC-Dionex 4000/450	ug/mL	103.0	<1.05e-1	1.42e+03	1.31e+03	1.37e+03	8.06	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001860	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	8.680	8.870	8.775	2.17	87.80	4.010	n/a
S99T001860	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.68e+03	8.40e+03	8.54e+03	3.28	99.20	201.0	n/a
S99T001860	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	104.0	40.10	n/a
S99T001860	D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	103.0	20.10	n/a
S99T001860	D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	95.00	20.10	n/a
S99T001860	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	95.80	2.010	n/a
S99T001860	D	Bismuth-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	98.90	40.10	n/a
S99T001860	D	Calcium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	104.0	40.10	n/a
S99T001860	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	101.0	2.010	n/a
S99T001860	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.60	40.10	n/a
S99T001860	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-2	7.03e+02	<8.02e0	n/a	n/a	100.0	8.020	n/a
S99T001860	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	< 4.010	<4.01e0	704.5	0.43	100.0	4.010	n/a
S99T001860	D	Copper-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	98.40	4.010	n/a
S99T001860	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S99T001860	D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-1	4.42e+03	4.50e+03	4.46e+03	1.79	115.0	201.0	n/a
S99T001860	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S99T001860	D	Magnesium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	98.20	40.10	n/a
S99T001860	D	Manganese-ICP-Acid Dil.	ug/mL	94.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	90.00	4.010	n/a
S99T001860	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	91.40	91.50	91.45	0.11	99.70	20.10	n/a
S99T001860	D	Sodium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	1.12e+05	1.05e+05	1.09e+05	6.45	98.30	401.0	n/a
S99T001860	D	Neodymium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.80	40.10	n/a
S99T001860	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	100.0	8.020	n/a
S99T001860	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.17e+02	427.0	422.0	2.37	104.0	80.20	n/a
S99T001860	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	98.00	40.10	n/a
S99T001860	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	4.86e+03	4.87e+03	4.86e+03	0.21	104.0	40.10	n/a
S99T001860	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	101.0	24.10	n/a
S99T001860	D	Selenium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	107.0	40.10	n/a
S99T001860	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	49.60	44.10	46.85	11.7	105.0	20.10	n/a
S99T001860	D	Samarium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.90	40.10	n/a
S99T001860	D	Strontium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	96.00	4.010	n/a
S99T001860	D	Titanium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	100.0	4.010	n/a
S99T001860	D	Thallium-ICP-Acid Dil.	ug/mL	99.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	96.90	80.20	n/a
S99T001860	D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	99.50	201.0	n/a
S99T001860	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S99T001860	D	Zinc-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	99.80	4.010	n/a
S99T001860	D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	101.0	4.010	n/a
S99T001860		Fluoride-IC-Dionex 4000/4500	ug/mL	102.0	<1.20e-2	1.94e+03	1.90e+03	1.92e+03	2.08	100.8	25.45	n/a
S99T001860		Chloride-IC-Dionex 4000/4500	ug/mL	96.56	<1.70e-2	1.61e+02	157.0	159.2	2.52	92.44	36.06	n/a
S99T001860		Nitrite-IC - Dionex 4000/4500	ug/mL	95.46	<1.98e-1	7.98e+04	8.17e+04	8.08e+04	2.35	115.7	229.1	n/a
S99T001860		Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	8.09e+04	8.17e+04	8.13e+04	0.98	110.1	294.8	n/a
S99T001860		Phosphate by IC-Dionex 4000/4500	ug/mL	98.74	<1.20e-1	1.14e+03	1.37e+03	1.25e+03	18.3	95.91	254.5	n/a
S99T001860		Sulfate by IC-Dionex 4000/4500	ug/mL	97.39	<1.38e-1	1.77e+04	1.79e+04	1.78e+04	1.12	101.7	292.7	n/a
S99T001860		Oxalate-IC-Dionex 4000/450	ug/mL	102.4	<1.05e-1	1.25e+03	1.41e+03	1.33e+03	12.0	100.9	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001861	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	7.620	8.240	7.930	7.82	n/a	4.010	n/a
S99T001861	D	Aluminum-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	8.29e+03	8.28e+03	8.28e+03	0.12	n/a	20.10	n/a
S99T001861	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<2.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Boron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001861	D	Barium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001861	D	Beryllium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001861	D	Bismuth-ICP-Acid Dil.	ug/mL	102.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Calcium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001861	D	Cerium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001861	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	7.03e+02	702.0	702.5	0.14	n/a	4.010	n/a
S99T001861	D	Copper-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001861	D	Potassium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-1	4.42e+03	4.39e+03	4.40e+03	0.68	n/a	201.0	n/a
S99T001861	D	Lanthanum-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001861	D	Magnesium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Manganese-ICP-Acid Dil.	ug/mL	94.20	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-2	91.20	91.50	91.35	0.33	n/a	20.10	n/a
S99T001861	D	Sodium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	1.06e+05	1.06e+05	1.06e+05	0.00	n/a	40.10	n/a
S99T001861	D	Neodymium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Nickel-ICP-Acid Dil.	ug/mL	100.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001861	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.4	<2.00e-1	4.20e+02	419.0	419.5	0.24	n/a	80.20	n/a
S99T001861	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-1	4.85e+03	4.84e+03	4.84e+03	0.21	n/a	40.10	n/a
S99T001861	D	Antimony-ICP-Acid Dil.	ug/mL	100.8	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001861	D	Selenium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Silicon-ICP-Acid Dil.	ug/mL	102.0	<5.00e-2	57.20	54.50	55.85	4.83	n/a	20.10	n/a
S99T001861	D	Samarium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001861	D	Strontium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Titanium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-1	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Thallium-ICP-Acid Dil.	ug/mL	99.20	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001861	D	Uranium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001861	D	Vanadium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001861	D	Zinc-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Zirconium-ICP-Acid Dil.	ug/mL	101.4	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001861	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.0	<1.20e-2	1.85e+03	1.85e+03	1.85e+03	0.00	n/a	25.45	n/a
S99T001861	D	Chloride-IC-Dionex 4000/4500	ug/mL	96.56	<1.70e-2	1.55e+02	155.0	154.8	0.00	n/a	36.06	n/a
S99T001861	D	Nitrate-IC - Dionex 4000/4500	ug/mL	95.46	<1.39e-1	7.55e+04	7.53e+04	7.59e+04	1.58	n/a	229.1	n/a
S99T001861	D	Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	7.55e+04	7.48e+04	7.51e+04	0.93	n/a	294.8	n/a
S99T001861	D	Phosphate-IC-Dionex 4000/4500	ug/mL	98.74	<1.20e-1	1.15e+03	885.0	1.02e+03	26.0	n/a	254.5	n/a
S99T001861	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.39	<1.38e-1	1.66e+04	1.64e+04	1.65e+04	1.21	n/a	292.7	n/a
S99T001861	D	Oxalate-IC-Dionex 4000/4500	ug/mL	102.4	<1.05e-1	1.30e+03	1.18e+03	1.24e+03	9.68	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001862	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	8.080	7.670	7.875	5.21	n/a	4.010	n/a
S99T001862	D	Aluminum-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	8.45e+03	8.42e+03	8.44e+03	0.36	n/a	20.10	n/a
S99T001862	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001862	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001862	D	Beryllium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001862	D	Bismuth-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Calcium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Cadmium-ICP-Acid Dil.	ug/mL	101.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	n/a	2.010	n/a
S99T001862	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001862	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	7.11e+02	708.0	709.5	0.42	n/a	4.010	n/a
S99T001862	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001862	D	Potassium-ICP-Acid Dil.	ug/mL	97.80	<5.00e-1	4.55e+03	4.59e+03	4.57e+03	0.88	n/a	20.10	n/a
S99T001862	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001862	D	Magnesium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Molybdenum-ICP-Acid Dil.	ug/mL	101.0	<5.00e-2	93.20	93.00	93.10	0.21	n/a	20.10	n/a
S99T001862	D	Sodium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	1.07e+05	1.07e+05	1.07e+05	0.00	n/a	40.10	n/a
S99T001862	D	Neodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	n/a	8.020	n/a
S99T001862	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-1	4.26e+02	427.0	426.5	0.23	n/a	80.20	n/a
S99T001862	D	Lead-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	4.95e+03	4.93e+03	4.94e+03	0.40	n/a	40.10	n/a
S99T001862	D	Antimony-ICP-Acid Dil.	ug/mL	101.2	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	n/a	24.10	n/a
S99T001862	D	Selenium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-1	1.11e+02	115.0	113.0	3.54	n/a	20.10	n/a
S99T001862	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	n/a	40.10	n/a
S99T001862	D	Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Titanium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Thallium-ICP-Acid Dil.	ug/mL	99.60	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	n/a	80.20	n/a
S99T001862	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	n/a	201.0	n/a
S99T001862	D	Vanadium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	n/a	20.10	n/a
S99T001862	D	Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	n/a	4.010	n/a
S99T001862	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.0	<1.20e-2	1.72e+03	1.69e+03	1.71e+03	1.76	n/a	25.45	n/a
S99T001862	D	Chloride-IC-Dionex 4000/4500	ug/mL	96.56	<1.70e-2	1.27e+02	164.0	145.5	25.4	n/a	36.06	n/a
S99T001862	D	Nitrite-IC - Dionex 4000/4500	ug/mL	95.46	<1.08e-1	6.95e+04	7.06e+04	7.01e+04	1.57	n/a	229.1	n/a
S99T001862	D	Nitrate by IC-Dionex 4000/4500	ug/mL	101.9	<1.39e-1	6.94e+04	6.98e+04	6.96e+04	0.57	n/a	294.8	n/a
S99T001862	D	Phosphate-IC-Dionex 4000/4500	ug/mL	98.74	<1.20e-1	1.08e+03	1.06e+03	1.07e+03	1.87	n/a	254.5	n/a
S99T001862	D	Sulfate by IC-Dionex 4000/4500	ug/mL	97.39	<1.38e-1	1.51e+04	1.52e+04	1.52e+04	0.66	n/a	292.7	n/a
S99T001862	D	Oxalate-IC-Dionex 4000/450	ug/mL	102.4	<1.05e-1	1.27e+03	1.19e+03	1.23e+03	6.50	n/a	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 15

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001868	D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	8.030	8.160	8.095	1.61	78.30	4.010	n/a
S99T001868	D	Aluminum-ICP-Acid Dil.	ug/mL	98.80	<5.00e-2	9.24e+03	9.34e+03	9.29e+03	1.08	119.0	20.10	n/a
S99T001868	D	Arsenic-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	105.0	40.10	n/a
S99T001868	D	Boron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	104.0	20.10	n/a
S99T001868	D	Barium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	95.50	20.10	n/a
S99T001868	D	Beryllium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	97.20	2.010	n/a
S99T001868	D	Bismuth-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	103.0	40.10	n/a
S99T001868	D	Calcium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	104.0	40.10	n/a
S99T001868	D	Cadmium-ICP-Acid Dil.	ug/mL	101.8	<5.00e-3	< 2.010	<2.01e0	n/a	n/a	101.0	2.010	n/a
S99T001868	D	Cerium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	98.90	40.10	n/a
S99T001868	D	Cobalt-ICP-Acid Dil.	ug/mL	101.8	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	101.0	8.020	n/a
S99T001868	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-2	7.44e+02	750.0	747.0	0.80	101.0	4.010	n/a
S99T001868	D	Copper-ICP-Acid Dil.	ug/mL	101.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	99.30	4.010	n/a
S99T001868	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a
S99T001868	D	Potassium-ICP-Acid Dil.	ug/mL	97.80	<5.00e-1	4.74e+03	4.86e+03	4.80e+03	2.50	99.40	2.01e+03	n/a
S99T001868	D	Lanthanum-ICP-Acid Dil.	ug/mL	103.0	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a
S99T001868	D	Magnesium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	97.40	40.10	n/a
S99T001868	D	Manganese-ICP-Acid Dil.	ug/mL	94.60	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	90.50	4.010	n/a
S99T001868	D	Molybdenum-ICP-Acid Dil.	ug/mL	101.0	<5.00e-2	96.80	98.20	97.50	1.44	101.0	20.10	n/a
S99T001868	D	Sodium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	1.17e+05	1.14e+05	1.16e+05	2.60	100.0	40.10	n/a
S99T001868	D	Niodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.60	40.10	n/a
S99T001868	D	Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-2	< 8.020	<8.02e0	n/a	n/a	105.0	8.020	n/a
S99T001868	D	Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-1	4.52e+02	457.0	454.5	1.10	105.0	80.20	n/a
S99T001868	D	Lead-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.20	40.10	n/a
S99T001868	D	Sulfur-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	5.20e+03	5.21e+03	5.20e+03	0.19	100.0	40.10	n/a
S99T001868	D	Antimony-ICP-Acid Dil.	ug/mL	101.2	<6.00e-2	< 24.10	<2.41e1	n/a	n/a	102.0	24.10	n/a
S99T001868	D	Selenium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	108.0	40.10	n/a
S99T001868	D	Silicon-ICP-Acid Dil.	ug/mL	102.6	<5.00e-2	1.04e+02	109.0	106.5	4.59	105.0	20.10	n/a
S99T001868	D	Samarium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-1	< 40.10	<4.01e1	n/a	n/a	99.90	40.10	n/a
S99T001868	D	Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	97.00	4.010	n/a
S99T001868	D	Titanium-ICP-Acid Dil.	ug/mL	102.8	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	102.0	4.010	n/a
S99T001868	D	Thallium-ICP-Acid Dil.	ug/mL	99.60	<2.00e-1	< 80.20	<8.02e1	n/a	n/a	101.0	80.20	n/a
S99T001868	D	Uranium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-1	<2.01e+02	<2.01e2	n/a	n/a	98.00	201.0	n/a
S99T001868	D	Vanadium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S99T001868	D	Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	100.0	4.010	n/a
S99T001868	D	Zirconium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-2	< 4.010	<4.01e0	n/a	n/a	102.0	4.010	n/a
S99T001868		Fluoride-IC-Dionex 4000/4500	ug/mL	101.9	<1.00e-2	1.86e+03	1.87e+03	1.87e+03	0.54	96.41	25.45	n/a
S99T001868		Chloride-IC-Dionex 4000/4500	ug/mL	95.33	<1.70e-2	1.66e+02	138.0	151.8	18.4	94.00	36.06	n/a
S99T001868		Nitrite-IC - Dionex 4000/4500	ug/mL	94.90	<1.08e-1	7.53e+04	7.66e+04	7.60e+04	1.71	90.36	229.1	n/a
S99T001868		Nitrate by IC-Dionex 4000/4500	ug/mL	103.3	<1.39e-1	7.47e+04	7.65e+04	7.56e+04	2.38	99.57	294.8	n/a
S99T001868		Phosphate-IC-Dionex 4000/4500	ug/mL	99.53	<1.20e-1	1.26e+03	957.0	1.11e+03	27.3	95.91	254.5	n/a
S99T001868		Sulfate by IC-Dionex 4000/4500	ug/mL	96.38	<1.38e-1	1.67e+04	1.68e+04	1.67e+04	0.60	100.9	292.7	n/a
S99T001868		Oxalate-IC-Dionex 4000/4500	ug/mL	103.0	<1.05e-1	1.29e+03	1.29e+03	1.29e+03	0.00	102.4	222.7	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)

CORE NUMBER: 269
SEGMENT #: 16

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001924	D	Silver-ICP-Acid Dil.	ug/mL	96.80	<1.00e-2	9.440	9.880	9.660	4.55	n/a	6.010	n/a
S99T001924	D	Aluminum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-2	7.38e+03	7.38e+03	7.38e+03	0.00	n/a	30.10	n/a
S99T001924	D	Arsenic-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Boron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Barium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Beryllium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001924	D	Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Calcium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Cadmium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-3	< 3.010	<3.01e0	n/a	n/a	n/a	3.010	n/a
S99T001924	D	Cerium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a
S99T001924	D	Chromium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-2	7.98e+02	801.0	799.5	0.38	n/a	6.010	n/a
S99T001924	D	Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Potassium-ICP-Acid Dil.	ug/mL	93.20	<5.00e-1	5.19e+03	5.20e+03	5.20e+03	0.19	n/a	301.0	n/a
S99T001924	D	Lanthanum-ICP-Acid Dil.	ug/mL	104.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Magnesium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Manganese-ICP-Acid Dil.	ug/mL	93.80	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Molybdenum-ICP-Acid Dil.	ug/mL	99.20	<5.00e-2	1.05e+02	105.0	105.0	0.00	n/a	30.10	n/a
S99T001924	D	Sodium-ICP-Acid Dil.	ug/mL	107.6	<1.00e-1	1.24e+05	1.24e+05	1.24e+05	0.00	n/a	60.10	n/a
S99T001924	D	Neodymium-ICP-Acid Dil.	ug/mL	103.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Nickel-ICP-Acid Dil.	ug/mL	98.80	<2.00e-2	< 12.00	<1.20e1	n/a	n/a	n/a	12.00	n/a
S99T001924	D	Phosphorus-ICP-Acid Dil.	ug/mL	101.8	<2.00e-1	5.30e+02	535.0	532.5	0.94	n/a	120.0	n/a
S99T001924	D	Lead-ICP-Acid Dil.	ug/mL	96.00	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	5.23e+03	5.23e+03	5.23e+03	0.00	n/a	60.10	n/a
S99T001924	D	Antimony-ICP-Acid Dil.	ug/mL	100.0	<6.00e-2	< 36.10	<3.61e1	n/a	n/a	n/a	36.10	n/a
S99T001924	D	Selenium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Silicon-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	84.90	89.40	87.15	5.16	n/a	30.10	n/a
S99T001924	D	Samarium-ICP-Acid Dil.	ug/mL	104.0	<1.00e-1	< 60.10	<6.01e1	n/a	n/a	n/a	60.10	n/a
S99T001924	D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Titanium-ICP-Acid Dil.	ug/mL	103.2	<1.00e-1	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Thallium-ICP-Acid Dil.	ug/mL	97.40	<2.00e-1	<1.20e+02	<1.20e2	n/a	n/a	n/a	120.0	n/a
S99T001924	D	Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-1	<3.01e+02	<3.01e2	n/a	n/a	n/a	301.0	n/a
S99T001924	D	Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-2	< 30.10	<3.01e1	n/a	n/a	n/a	30.10	n/a
S99T001924	D	Zinc-ICP-Acid Dil.	ug/mL	99.00	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Fluoride-IC-Dionex 4000/4500	ug/mL	102.2	<1.00e-2	< 6.010	<6.01e0	n/a	n/a	n/a	6.010	n/a
S99T001924	D	Chloride-IC-Dionex 4000/4500	ug/mL	101.3	<1.00e-2	1.66e+03	1.69e+03	1.68e+03	1.79	n/a	49.69	n/a
S99T001924	D	Nitrite-IC - Dionex 4000/4500	ug/mL	96.23	<1.70e-2	1.22e+02	139.0	130.7	13.0	n/a	70.40	n/a
S99T001924	D	Nitrate by IC-Dionex 4000/4500	ug/mL	97.39	<1.89e-1	8.56e+04	8.23e+04	8.40e+04	3.93	n/a	447.2	n/a
S99T001924	D	Phosphate by IC-Dionex 4000/4500	ug/mL	100.6	<1.39e-1	6.93e+04	6.75e+04	6.84e+04	2.63	n/a	575.6	n/a
S99T001924	D	Sulfate by IC-Dionex 4000/4500	ug/mL	95.40	<1.20e-1	5.70e+02	820.0	694.8	36.0	n/a	496.9	n/a
S99T001924	D	Oxalate-IC-Dionex 4000/4500	ug/mL	98.09	<1.38e-1	1.61e+04	1.63e+04	1.62e+04	1.23	n/a	571.5	n/a
S99T001924	D		ug/mL	97.71	<1.05e-1	7.39e+02	919.0	829.0	21.7	n/a	434.8	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: Core Comp Trip1

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000800	F	Silver - ICP-Fusion	ug/g	96.60	<4.10e-1	1.82e+02	152.0	167.0	18.0	81.10	79.30	n/a	n/a
S00T000800	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05e0	5.38e+04	5.28e+04	5.33e+04	1.88	104.0	397.0	n/a	n/a
S00T000800	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10e0	<7.93e+02	<7.93e2	n/a	n/a	97.70	793.0	n/a	n/a
S00T000800	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	6.11e+02	604.0	607.5	1.15	98.40	397.0	n/a	n/a
S00T000800	F	Barium - ICP-Fusion	ug/g	97.20	<2.05e0	5.36e+02	524.0	530.0	2.26	92.20	397.0	n/a	n/a
S00T000800	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05e-1	<39.70	<3.97e1	n/a	n/a	93.90	39.70	n/a	n/a
S00T000800	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10e0	<7.93e+02	<7.93e2	n/a	n/a	99.00	793.0	n/a	n/a
S00T000800	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10e0	2.11e+03	1.78e+03	1.94e+03	17.0	98.90	793.0	n/a	n/a
S00T000800	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05e-1	5.81e+03	5.78e+03	5.80e+03	0.52	99.70	39.70	n/a	n/a
S00T000800	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10e0	8.56e+02	<7.93e2	n/a	n/a	94.00	793.0	n/a	n/a
S00T000800	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20e-1	<1.59e+02	<1.59e2	n/a	n/a	101.0	159.0	n/a	n/a
S00T000800	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10e-1	4.82e+02	519.0	500.5	7.39	99.30	79.30	n/a	n/a
S00T000800	F	Copper - ICP-Fusion	ug/g	98.80	<4.10e-1	1.81e+02	211.0	196.0	15.3	96.30	79.30	n/a	n/a
S00T000800	F	Europium - ICP-Fusion	ug/g	97.20	<2.05e0	<3.97e+02	<3.97e2	n/a	n/a	95.20	397.0	n/a	n/a
S00T000800	F	Iron - ICP-Fusion	ug/g	102.2	<2.05e0	6.66e+04	6.58e+04	6.62e+04	1.21	100.0	397.0	n/a	n/a
S00T000800	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05e0	3.01e+03	2.93e+03	2.97e+03	2.69	94.90	397.0	n/a	n/a
S00T000800	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10e-1	4.94e+02	493.0	493.5	0.20	91.30	79.30	n/a	n/a
S00T000800	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10e0	8.51e+02	<7.93e2	n/a	n/a	93.40	793.0	n/a	n/a
S00T000800	F	Manganese - ICP-Fusion	ug/g	99.20	<4.10e-1	8.63e+02	857.0	860.0	0.70	92.30	79.30	n/a	n/a
S00T000800	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05e0	<3.97e+02	<3.97e2	n/a	n/a	101.0	397.0	n/a	n/a
S00T000800	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	6.93e+04	6.90e+04	6.92e+04	0.43	110.0	793.0	n/a	n/a
S00T000800	F	Neodymium - ICP-Fusion	ug/g	99.20	<4.10e0	1.71e+03	1.78e+03	1.74e+03	4.01	95.00	793.0	n/a	n/a
S00T000800	F	Nickel - ICP-Fusion	ug/g	100.6	1.59e+02	1.68e+04	1.65e+04	1.66e+04	1.80	98.40	159.0	n/a	n/a
S00T000800	F	Phosphorus - ICP-Fusion	ug/g	102.0	<8.20e0	<1.59e+03	<1.59e3	n/a	n/a	105.0	1.59e+03	n/a	n/a
S00T000800	F	Lead - ICP-Fusion	ug/g	99.80	<4.10e0	<7.93e+02	<7.93e2	n/a	n/a	103.0	793.0	n/a	n/a
S00T000800	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00e0	<1.95e+04	<1.95e4	n/a	n/a	99.10	1.95e+04	n/a	n/a
S00T000800	F	Praseodymium - ICP-Fusion	ug/g	97.60	<5.00e-1	<9.77e+03	<9.77e3	n/a	n/a	97.80	9.77e+03	n/a	n/a
S00T000800	F	Rubidium - ICP-Fusion	ug/g	92.20	<2.00e0	<3.91e+04	<3.91e4	n/a	n/a	183.0	3.91e+04	n/a	n/a
S00T000800	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00e0	<1.95e+04	<1.95e4	n/a	n/a	97.50	1.95e+04	n/a	n/a
S00T000800	F	Ruthenium - ICP-Fusion	ug/g	99.20	<2.00e0	<3.91e+04	<3.91e4	n/a	n/a	102.0	3.91e+04	n/a	n/a
S00T000800	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10e0	6.31e+03	6.22e+03	6.26e+03	1.44	101.0	793.0	n/a	n/a
S00T000800	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46e0	<4.76e+02	<4.76e2	n/a	n/a	101.0	476.0	n/a	n/a
S00T000800	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10e0	<7.93e+02	<7.93e2	n/a	n/a	101.0	793.0	n/a	n/a
S00T000800	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	4.39e+03	4.38e+03	4.38e+03	0.23	106.0	397.0	n/a	n/a
S00T000800	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10e0	<7.93e+02	<7.93e2	n/a	n/a	99.80	793.0	n/a	n/a
S00T000800	F	Tin - ICP-Fusion	ug/g	97.60	<5.00e-1	<9.77e+03	<9.77e3	n/a	n/a	102.0	9.77e+03	n/a	n/a
S00T000800	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10e-1	2.70e+02	266.0	268.0	1.49	94.30	79.30	n/a	n/a
S00T000800	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00e-1	<9.77e+03	<9.77e3	n/a	n/a	99.10	9.77e+03	n/a	n/a
S00T000800	F	Tellurium - ICP-Fusion	ug/g	97.40	<5.00e-1	<9.77e+03	<9.77e3	n/a	n/a	102.0	9.77e+03	n/a	n/a
S00T000800	F	Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<3.97e+02	<3.97e2	n/a	n/a	104.0	397.0	n/a	n/a
S00T000800	F	Titanium - ICP-Fusion	ug/g	100.8	<4.10e-1	<79.30	<7.93e1	n/a	n/a	98.00	79.30	n/a	n/a
S00T000800	F	Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.59e+03	<1.59e3	n/a	n/a	96.80	1.59e+03	n/a	n/a
S00T000800	F	Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	<3.97e+03	4.27e+03	n/a	n/a	121.0	3.97e+03	n/a	n/a
S00T000800	F	Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<3.97e+02	<3.97e2	n/a	n/a	98.90	397.0	n/a	n/a

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000800	F	Tungsten -ICP-Fusion	ug/g	96.80	<5.00e-1	<9.77e+03	<9.77e+03	n/a	n/a	97.20	9.77e+03	n/a
S00T000800	F	Yttrium -ICP-Fusion	ug/g	98.40	<2.05e0	<3.97e+02	<3.97e+02	n/a	n/a	101.0	397.0	n/a
S00T000800	F	Zinc -ICP-Fusion	ug/g	100.8	<4.10e-1	82.00	<7.93e1	n/a	n/a	101.0	79.30	n/a
S00T000800	F	Zirconium -ICP-Fusion	ug/g	101.0	<4.10e-1	2.34e+04	2.31e+04	2.32e+04	1.29	100.0	79.30	n/a
S00T000800	F	Sodium-22 by GEA	uci/g	n/a	<4.16e-1	< 16.64	n/a	n/a	n/a	n/a	16.64	n/a
S00T000800	F	Sodium-24 by GEA	uci/g	n/a	<3.14e-1	<4.63e-01	n/a	n/a	n/a	n/a	4.63e-01	n/a
S00T000800	F	Potassium-40 by GEA	uci/g	n/a	<1.27e1	< 3.456	n/a	n/a	n/a	n/a	3.456	n/a
S00T000800	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000800	F	Cobalt-56 by GEA	uci/g	n/a	<3.38e-1	<6.67e-01	n/a	n/a	n/a	n/a	6.67e-01	n/a
S00T000800	F	Cobalt-57 by GEA	uci/g	n/a	<2.27e-1	< 22.69	n/a	n/a	n/a	n/a	22.69	n/a
S00T000800	F	Selenium-75 by GEA	uci/g	n/a	<4.07e-1	< 1.846	n/a	n/a	n/a	n/a	1.846	n/a
S00T000800	F	Strontium-85 by GEA	uci/g	n/a	<3.90e-1	< 1.453	n/a	n/a	n/a	n/a	1.453	n/a
S00T000800	F	Yttrium-88 by GEA	uci/g	n/a	<3.77e-1	<3.01e-01	n/a	n/a	n/a	n/a	3.01e-01	n/a
S00T000800	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000800	F	Niobium-94 by GEA	uci/g	n/a	<3.69e-1	< 1.104	n/a	n/a	n/a	n/a	1.104	n/a
S00T000800	F	Zr/Nb-95 by GEA	uci/g	n/a	<1.65e0	< 46.36	n/a	n/a	n/a	n/a	46.36	n/a
S00T000800	F	Ruthenium-103 by GEA	uci/g	n/a	<3.28e-1	< 1.587	n/a	n/a	n/a	n/a	1.587	n/a
S00T000800	F	Ru/Rh-106 by GEA	uci/g	n/a	<6.38e0	< 22.83	n/a	n/a	n/a	n/a	22.83	n/a
S00T000800	F	Cadmium-109 by GEA	uci/g	n/a	<7.28e0	<5.38e+02	n/a	n/a	n/a	n/a	538.3	n/a
S00T000800	F	Tin-113 by GEA	uci/g	n/a	<4.30e-1	< 2.123	n/a	n/a	n/a	n/a	2.123	n/a
S00T000800	F	Iodine-131 by GEA	uci/g	n/a	<3.22e-1	< 1.591	n/a	n/a	n/a	n/a	1.591	n/a
S00T000800	F	I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000800	F	Cesium-134 by GEA	uci/g	n/a	<3.21e-1	< 1.223	n/a	n/a	n/a	n/a	1.223	n/a
S00T000800	F	Ce/Pr-144 by GEA	uci/g	n/a	<3.48e0	< 19.01	n/a	n/a	n/a	n/a	19.01	n/a
S00T000800	F	Mercury-203 by GEA	uci/g	n/a	<2.98e-1	< 1.342	n/a	n/a	n/a	n/a	1.342	n/a
S00T000800	F	Thallium-208 by GEA	uci/g	n/a	<4.00e0	< 17.09	n/a	n/a	n/a	n/a	17.09	n/a
S00T000800	F	Bismuth-212 by GEA	uci/g	n/a	<6.30e0	< 9.566	n/a	n/a	n/a	n/a	9.566	n/a
S00T000800	F	Lead-212 by GEA	uci/g	n/a	<5.64e-1	< 2.463	n/a	n/a	n/a	n/a	2.463	n/a
S00T000800	F	Bismuth-214 by GEA	uci/g	n/a	<1.05e0	< 1.627	n/a	n/a	n/a	n/a	1.627	n/a
S00T000800	F	Lead-214 by GEA	uci/g	n/a	<3.45e0	< 13.94	n/a	n/a	n/a	n/a	13.94	n/a
S00T000800	F	Radium-224 by GEA	uci/g	n/a	<5.84e0	< 27.28	n/a	n/a	n/a	n/a	27.28	n/a
S00T000800	F	Radium-226 by GEA	uci/g	n/a	<6.10e0	< 29.79	n/a	n/a	n/a	n/a	29.79	n/a
S00T000800	F	Actinium-228 by GEA	uci/g	n/a	<1.81e0	< 2.484	n/a	n/a	n/a	n/a	2.484	n/a
S00T000800	F	Thorium-228 by GEA	uci/g	n/a	<2.30e1	<1.43e+02	n/a	n/a	n/a	n/a	143.1	n/a
S00T000800	F	Thorium-229 by GEA	uci/g	n/a	<1.05e0	< 6.832	n/a	n/a	n/a	n/a	6.832	n/a
S00T000800	F	Uranium/Thorium-233 by GEA	uci/g	n/a	<2.05e2	<9.72e+02	n/a	n/a	n/a	n/a	972.1	n/a
S00T000800	F	U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000800	F	Protactinium-233 by GEA	uci/g	n/a	<6.26e-1	< 2.966	n/a	n/a	n/a	n/a	2.966	n/a
S00T000800	F	Protactinium-234m by GEA	uci/g	n/a	<5.72e1	<1.18e+02	n/a	n/a	n/a	n/a	118.5	n/a
S00T000800	F	Thorium-234 by GEA	uci/g	n/a	<1.48e1	< 88.65	n/a	n/a	n/a	n/a	88.65	n/a
S00T000800	F	Uranium-235 by GEA	uci/g	n/a	<3.65e-1	< 1.805	n/a	n/a	n/a	n/a	1.805	n/a
S00T000800	F	U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000800	F	Neptunium-237 by GEA	uci/g	n/a	<2.29e0	<1.62e+02	n/a	n/a	n/a	n/a	161.5	n/a
S00T000800	F	Neptunium-239 by GEA	uci/g	n/a	<9.57e-1	< 6.976	n/a	n/a	n/a	n/a	6.976	n/a
S00T000800	F	Plutonium-239 by GEA	uci/g	n/a	<3.18e3	<1.67e+04	n/a	n/a	n/a	n/a	1.67e+04	n/a
S00T000800	F	Americium-241 by GEA	uci/g	n/a	<1.96e0	82.01	n/a	n/a	n/a	n/a	n/a	14.8
S00T000800	F	Americium-243 by GEA	uci/g	n/a	<6.62e-1	< 3.786	n/a	n/a	n/a	n/a	3.786	n/a
S00T000809	A	Sn117 ICP/MS AcidDig LA-505159	ug/g	101.5	<6.02e-2	26.12	n/a	n/a	n/a	n/a	7.653	n/a
S00T000809	A	I129 by ICP/MS AcidDigLA505159	ug/g	n/a	n/a	?	n/a	n/a	n/a	n/a	1.91e-02	n/a
S00T000809	A	Thorium-229 by ICP/MS	ug/g	n/a	<3.02e-3	<7.65e-01	n/a	n/a	n/a	n/a	7.65e-01	n/a
S00T000809	A	Thorium-230 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.551	n/a	n/a	n/a	n/a	2.551	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000809	A	Thorium-232 by ICP/MS	ug/g	95.80	<1.01e-2	2.68e+02	n/a	n/a	n/a	86.50	2.551	n/a
S00T000812	W	Glycolate-1C-Dionex 500 ORGACD	ug/g	104.5	<1.90e-1	<7.40e+02	n/a	n/a	n/a	n/a	740.5	n/a
S00T000812	W	Bromide-1C-Dionex 500 col	ug/g	103.1	<2.90e-1	<1.13e+03	n/a	n/a	n/a	n/a	1.13e+03	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000778	D	Sn 117 by ICP/MS Acid Addition	ug/mL	96.50	<1.50e-4	4.191	n/a	n/a	n/a	91.00	1.81e-01	n/a
S00T000778	D	Thorium-229 by ICP/MS	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000778	D	Thorium-230 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000778	D	Thorium-232 by ICP/MS	ug/mL	102.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	66.00	6.03e-02	n/a
S00T000780		Sodium-22 by GEA	uCi/mL	n/a	<1.87e-2	<2.55e-02	n/a	n/a	n/a	n/a	2.55e-02	n/a
S00T000780		Sodium-24 by GEA	uCi/mL	n/a	<1.40e-2	<2.75e-02	n/a	n/a	n/a	n/a	2.75e-02	n/a
S00T000780		Potassium-40 by GEA	uCi/mL	n/a	<3.27e-1	<1.62e-01	n/a	n/a	n/a	n/a	1.62e-01	n/a
S00T000780		K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000780		Cobalt-56 by GEA	uCi/mL	n/a	<1.71e-2	<3.96e-02	n/a	n/a	n/a	n/a	3.96e-02	n/a
S00T000780		Cobalt-57 by GEA	uCi/mL	n/a	<1.10e-2	<2.52e-01	n/a	n/a	n/a	n/a	2.52e-01	n/a
S00T000780		Selenium-75 by GEA	uCi/mL	n/a	<1.85e-2	<4.82e-01	n/a	n/a	n/a	n/a	4.82e-01	n/a
S00T000780		Strontium-85 by GEA	uCi/mL	n/a	<1.76e-2	<4.06e-01	n/a	n/a	n/a	n/a	4.06e-01	n/a
S00T000780		Yttrium-88 by GEA	uCi/mL	n/a	<1.55e-2	<7.23e-03	n/a	n/a	n/a	n/a	7.23e-03	n/a
S00T000780		Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000780		Micobium-94 by GEA	uCi/mL	n/a	<1.70e-2	<3.94e-02	n/a	n/a	n/a	n/a	3.94e-02	n/a
S00T000780		Zr/Nb-95 by GEA	uCi/mL	n/a	<7.95e-2	<3.87e-01	n/a	n/a	n/a	n/a	3.87e-01	n/a
S00T000780		Ruthenium-103 by GEA	uCi/mL	n/a	<1.76e-2	<4.60e-01	n/a	n/a	n/a	n/a	4.60e-01	n/a
S00T000780		Ru/Rh-106 by GEA	uCi/mL	n/a	<3.20e-1	< 6.025	n/a	n/a	n/a	n/a	6.025	n/a
S00T000780		Cadmium-109 by GEA	uCi/mL	n/a	<3.74e-1	< 7.823	n/a	n/a	n/a	n/a	7.823	n/a
S00T000780		Tin-113 by GEA	uCi/mL	n/a	<2.13e-2	<6.25e-01	n/a	n/a	n/a	n/a	6.25e-01	n/a
S00T000780		Iodine-131 by GEA	uCi/mL	n/a	<1.66e-2	<4.47e-01	n/a	n/a	n/a	n/a	4.47e-01	n/a
S00T000780		I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000780		Cesium-134 by GEA	uCi/mL	n/a	<1.66e-2	1.170	n/a	n/a	n/a	n/a	n/a	6.83
S00T000780		Ce/Pr-144 by GEA	uCi/mL	n/a	<1.56e-1	< 3.828	n/a	n/a	n/a	n/a	3.828	n/a
S00T000780		Mercury-203 by GEA	uCi/mL	n/a	<1.41e-2	<3.54e-01	n/a	n/a	n/a	n/a	3.54e-01	n/a
S00T000780		Thallium-208 by GEA	uCi/mL	n/a	<1.86e-1	< 4.568	n/a	n/a	n/a	n/a	4.568	n/a
S00T000780		Bismuth-212 by GEA	uCi/mL	n/a	<2.55e-1	< 1.291	n/a	n/a	n/a	n/a	1.291	n/a
S00T000780		Lead-212 by GEA	uCi/mL	n/a	<2.67e-2	<6.32e-01	n/a	n/a	n/a	n/a	6.32e-01	n/a
S00T000780		Bismuth-214 by GEA	uCi/mL	n/a	<5.15e-2	<6.61e-01	n/a	n/a	n/a	n/a	6.61e-01	n/a
S00T000780		Lead-214 by GEA	uCi/mL	n/a	<1.74e-1	< 4.264	n/a	n/a	n/a	n/a	4.264	n/a
S00T000780		Radium-224 by GEA	uCi/mL	n/a	<2.76e-1	< 7.024	n/a	n/a	n/a	n/a	7.024	n/a
S00T000780		Radium-226 by GEA	uCi/mL	n/a	<3.05e-1	< 7.188	n/a	n/a	n/a	n/a	7.188	n/a
S00T000780		Actinium-228 by GEA	uCi/mL	n/a	<9.70e-2	<1.50e-01	n/a	n/a	n/a	n/a	1.50e-01	n/a
S00T000780		Thorium-228 by GEA	uCi/mL	n/a	<1.11e0	< 23.83	n/a	n/a	n/a	n/a	23.83	n/a
S00T000780		Thorium-229 by GEA	uCi/mL	n/a	<5.35e-2	< 1.134	n/a	n/a	n/a	n/a	1.134	n/a
S00T000780		Uranium/Thorium-233 by GEA	uCi/mL	n/a	<9.54e0	<2.52e+02	n/a	n/a	n/a	n/a	252.0	n/a
S00T000780		U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000780		Protactinium-233 by GEA	uCi/mL	n/a	<3.10e-2	<8.04e-01	n/a	n/a	n/a	n/a	8.04e-01	n/a
S00T000780		Protactinium-234m by GEA	uCi/mL	n/a	<2.84e0	< 4.822	n/a	n/a	n/a	n/a	4.822	n/a
S00T000780		Thorium-234 by GEA	uCi/mL	n/a	<7.49e-1	< 16.03	n/a	n/a	n/a	n/a	16.03	n/a
S00T000780		Uranium-235 by GEA	uCi/mL	n/a	<1.85e-2	<4.34e-01	n/a	n/a	n/a	n/a	4.34e-01	n/a
S00T000780		U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000780		Neptunium-237 by GEA	uCi/mL	n/a	<1.16e-1	< 2.344	n/a	n/a	n/a	n/a	2.344	n/a
S00T000780		Neptunium-239 by GEA	uCi/mL	n/a	<4.70e-2	< 1.012	n/a	n/a	n/a	n/a	1.012	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000780		Plutonium-239 by GEA	uCi/mL	n/a	<1.46e2	<3.33e+03	n/a	n/a	n/a	n/a	3.33e+03	n/a
S00T000780		Americium-241 by GEA	uCi/mL	n/a	<8.74e-2	< 2.101	n/a	n/a	n/a	n/a	2.101	n/a
S00T000780		Americium-243 by GEA	uCi/mL	n/a	<3.26e-2	<6.43e-01	n/a	n/a	n/a	n/a	6.43e-01	n/a
S00T000827		Glycolate-IC-Dionex 500 ORGACD	ug/mL	99.48	n/a	<2.11e+02	n/a	n/a	n/a	96.38	211.1	n/a
S00T000827		Bromide-IC-Dionex 500 col	ug/mL	106.9	n/a	1.11e+03	n/a	n/a	n/a	118.1	322.2	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: Core Comp Trip2

SEGMENT PORTION: Centrifuged Solids

Sample#	RA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000801	F	Silver - ICP-Fusion	ug/g	96.60	<4.10e-1	1.50e+02	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05e0	4.90e+04	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	4.84e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Barium - ICP-Fusion	ug/g	97.20	<2.05e0	4.81e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05e-1	< 39.30	n/a	n/a	n/a	n/a	39.30	n/a	n/a
S00T000801	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10e0	1.78e+03	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05e-1	5.54e+03	n/a	n/a	n/a	n/a	39.30	n/a	n/a
S00T000801	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Cobalt - ICP-Fusion	ug/g	101.8	<4.10e-1	<1.57e+02	n/a	n/a	n/a	n/a	157.0	n/a	n/a
S00T000801	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10e-1	5.40e+02	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Copper - ICP-Fusion	ug/g	98.80	<4.10e-1	2.02e+02	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Europium - ICP-Fusion	ug/g	97.20	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Iron - ICP-Fusion	ug/g	102.2	<2.05e0	5.38e+04	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05e0	2.93e+03	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10e-1	4.94e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Manganese - ICP-Fusion	ug/g	95.20	<4.10e-1	8.92e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	7.72e+04	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Neodymium - ICP-Fusion	ug/g	99.20	<4.10e0	1.70e+03	n/a	n/a	n/a	n/a	157.0	n/a	n/a
S00T000801	F	Nickel - ICP-Fusion	ug/g	100.6	1.59e+02	9.42e+04	n/a	n/a	n/a	n/a	1.57e+03	n/a	n/a
S00T000801	F	Phosphorus - ICP-Fusion	ug/g	102.0	<8.20e0	<1.57e+03	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Lead - ICP-Fusion	ug/g	99.80	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	1.93e+04	n/a	n/a
S00T000801	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00e0	<1.93e+04	n/a	n/a	n/a	n/a	9.67e+03	n/a	n/a
S00T000801	F	Praseodymium - ICP-Fusion	ug/g	97.60	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	3.87e+04	n/a	n/a
S00T000801	F	Rubidium - ICP-Fusion	ug/g	92.20	<2.00e0	<3.87e+04	n/a	n/a	n/a	n/a	1.93e+04	n/a	n/a
S00T000801	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00e0	<1.93e+04	n/a	n/a	n/a	n/a	3.87e+04	n/a	n/a
S00T000801	F	Ruthenium - ICP-Fusion	ug/g	99.20	<2.00e0	<3.87e+04	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10e0	7.38e+03	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46e0	<4.71e+02	n/a	n/a	n/a	n/a	471.0	n/a	n/a
S00T000801	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	3.75e+03	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10e0	<7.85e+02	n/a	n/a	n/a	n/a	785.0	n/a	n/a
S00T000801	F	Tin - ICP-Fusion	ug/g	97.60	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a	n/a
S00T000801	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10e-1	2.66e+02	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a	n/a
S00T000801	F	Tellurium - ICP-Fusion	ug/g	97.40	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a	n/a
S00T000801	F	Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Titanium - ICP-Fusion	ug/g	100.8	<4.10e-1	< 78.50	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.57e+03	n/a	n/a	n/a	n/a	1.57e+03	n/a	n/a
S00T000801	F	Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	3.93e+03	n/a	n/a	n/a	n/a	3.93e+03	n/a	n/a
S00T000801	F	Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S00T000801	F	Tungsten -ICP-Fusion	ug/g	96.80	<5.00e-1	<9.67e+03	n/a	n/a	n/a	n/a	9.67e+03	n/a	n/a
S00T000801	F	Yttrium -ICP-Fusion	ug/g	98.40	<2.05e0	<3.93e+02	n/a	n/a	n/a	n/a	393.0	n/a	n/a
S00T000801	F	Zinc -ICP-Fusion	ug/g	100.8	<4.10e-1	< 78.50	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Zirconium -ICP-Fusion	ug/g	101.0	<4.10e-1	1.96e+04	n/a	n/a	n/a	n/a	78.50	n/a	n/a
S00T000801	F	Sodium-22 by GEA	uCi/g	n/a	<4.16e-1	< 15.18	n/a	n/a	n/a	n/a	15.18	n/a	n/a
S00T000801	F	Sodium-24 by GEA	uCi/g	n/a	<3.14e-1	<4.39e-01	n/a	n/a	n/a	n/a	4.39e-01	n/a	n/a
S00T000801	F	Potassium-40 by GEA	uCi/g	n/a	<1.27e1	< 4.517	n/a	n/a	n/a	n/a	4.517	n/a	n/a
S00T000801	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000801	F	Cobalt-56 by GEA	uCi/g	n/a	<3.38e-1	<6.76e-01	n/a	n/a	n/a	n/a	6.76e-01	n/a	n/a
S00T000801	F	Cobalt-57 by GEA	uCi/g	n/a	<2.27e-1	< 21.97	n/a	n/a	n/a	n/a	21.97	n/a	n/a
S00T000801	F	Selenium-75 by GEA	uCi/g	n/a	<4.07e-1	< 1.874	n/a	n/a	n/a	n/a	1.874	n/a	n/a
S00T000801	F	Strontium-85 by GEA	uCi/g	n/a	<3.90e-1	< 1.520	n/a	n/a	n/a	n/a	1.520	n/a	n/a
S00T000801	F	Strontium-88 by GEA	uCi/g	n/a	<3.77e-1	<3.35e-01	n/a	n/a	n/a	n/a	3.35e-01	n/a	n/a
S00T000801	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000801	F	Niobium-94 by GEA	uCi/g	n/a	<3.69e-1	< 1.105	n/a	n/a	n/a	n/a	1.105	n/a	n/a
S00T000801	F	Zr/Nb-95 by GEA	uCi/g	n/a	<1.65e0	< 42.34	n/a	n/a	n/a	n/a	42.34	n/a	n/a
S00T000801	F	Ruthenium-103 by GEA	uCi/g	n/a	<3.28e-1	< 1.612	n/a	n/a	n/a	n/a	1.612	n/a	n/a
S00T000801	F	Ru/Rh-106 by GEA	uCi/g	n/a	<6.38e0	< 23.06	n/a	n/a	n/a	n/a	23.06	n/a	n/a
S00T000801	F	Cadmium-109 by GEA	uCi/g	n/a	<7.28e-1	<5.86e+02	n/a	n/a	n/a	n/a	586.0	n/a	n/a
S00T000801	F	Tin-113 by GEA	uCi/g	n/a	<4.30e-1	< 2.233	n/a	n/a	n/a	n/a	2.233	n/a	n/a
S00T000801	F	Iodine-131 by GEA	uCi/g	n/a	<3.22e-1	< 1.602	n/a	n/a	n/a	n/a	1.602	n/a	n/a
S00T000801	F	I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000801	F	Cesium-134 by GEA	uCi/g	n/a	<3.21e-1	< 1.218	n/a	n/a	n/a	n/a	1.218	n/a	n/a
S00T000801	F	Ce/Pr-144 by GEA	uCi/g	n/a	<3.48e0	< 19.21	n/a	n/a	n/a	n/a	19.21	n/a	n/a
S00T000801	F	Mercury-203 by GEA	uCi/g	n/a	<2.98e-1	< 1.354	n/a	n/a	n/a	n/a	1.354	n/a	n/a
S00T000801	F	Thallium-208 by GEA	uCi/g	n/a	<4.00e0	< 17.55	n/a	n/a	n/a	n/a	17.55	n/a	n/a
S00T000801	F	Bismuth-212 by GEA	uCi/g	n/a	<6.30e0	< 9.683	n/a	n/a	n/a	n/a	9.683	n/a	n/a
S00T000801	F	Lead-212 by GEA	uCi/g	n/a	<5.64e-1	< 2.476	n/a	n/a	n/a	n/a	2.476	n/a	n/a
S00T000801	F	Bismuth-214 by GEA	uCi/g	n/a	<1.05e0	< 2.739	n/a	n/a	n/a	n/a	2.739	n/a	n/a
S00T000801	F	Lead-214 by GEA	uCi/g	n/a	<3.45e0	< 14.32	n/a	n/a	n/a	n/a	14.32	n/a	n/a
S00T000801	F	Radium-224 by GEA	uCi/g	n/a	<5.84e0	< 27.89	n/a	n/a	n/a	n/a	27.89	n/a	n/a
S00T000801	F	Radium-226 by GEA	uCi/g	n/a	<6.10e0	< 30.08	n/a	n/a	n/a	n/a	30.08	n/a	n/a
S00T000801	F	Actinium-228 by GEA	uCi/g	n/a	<1.81e0	< 2.533	n/a	n/a	n/a	n/a	2.533	n/a	n/a
S00T000801	F	Thorium-228 by GEA	uCi/g	n/a	<2.30e1	<1.44e+02	n/a	n/a	n/a	n/a	144.4	n/a	n/a
S00T000801	F	Thorium-229 by GEA	uCi/g	n/a	<1.05e0	< 6.892	n/a	n/a	n/a	n/a	6.892	n/a	n/a
S00T000801	F	Uranium/Thorium-233 by GEA	uCi/g	n/a	<2.05e2	<9.98e+02	n/a	n/a	n/a	n/a	997.9	n/a	n/a
S00T000801	F	U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000801	F	Protactinium-233 by GEA	uCi/g	n/a	<6.26e-1	< 2.986	n/a	n/a	n/a	n/a	2.986	n/a	n/a
S00T000801	F	Protactinium-234m by GEA	uCi/g	n/a	<5.72e1	<1.19e+02	n/a	n/a	n/a	n/a	118.7	n/a	n/a
S00T000801	F	Thorium-234 by GEA	uCi/g	n/a	<1.48e1	< 88.60	n/a	n/a	n/a	n/a	88.60	n/a	n/a
S00T000801	F	Uranium-235 by GEA	uCi/g	n/a	<3.65e-1	< 1.826	n/a	n/a	n/a	n/a	1.826	n/a	n/a
S00T000801	F	U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000801	F	Neptunium-237 by GEA	uCi/g	n/a	<2.29e0	<1.76e+02	n/a	n/a	n/a	n/a	175.9	n/a	n/a
S00T000801	F	Neptunium-239 by GEA	uCi/g	n/a	<9.57e-1	< 6.957	n/a	n/a	n/a	n/a	6.957	n/a	n/a
S00T000801	F	Plutonium-239 by GEA	uCi/g	n/a	<3.18e3	<1.71e+04	n/a	n/a	n/a	n/a	1.71e+04	n/a	n/a
S00T000801	F	Americium-241 by GEA	uCi/g	n/a	<1.96e0	75.29	n/a	n/a	n/a	n/a	n/a	16.3	n/a
S00T000801	F	Americium-243 by GEA	uCi/g	n/a	<6.62e-1	< 3.765	n/a	n/a	n/a	n/a	3.765	n/a	n/a
S00T000810	A	Sn117 ICP/MS ActDig LA-505159	ug/g	101.5	<6.02e-2	17.51	n/a	n/a	n/a	n/a	6.812	n/a	n/a
S00T000810	A	I129 by ICP/MS ActDigLA505159	ug/g	n/a	n/a	?	n/a	n/a	n/a	n/a	1.70e-02	n/a	n/a
S00T000810	A	Thorium-229 by ICP/MS	ug/g	n/a	<3.02e-3	<6.81e-01	n/a	n/a	n/a	n/a	6.81e-01	n/a	n/a
S00T000810	A	Thorium-230 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.271	n/a	n/a	n/a	n/a	2.271	n/a	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000810	A	Thorium-232 by ICP/MS	ug/g	95.80	<1.01e-2	2.40e+02	n/a	n/a	n/a	n/a	2.271	n/a
S00T000813	W	Glycolate-1C-Dionex 500 ORGACD	ug/g	104.5	<1.90e-1	<7.35e+02	n/a	n/a	n/a	n/a	734.9	n/a
S00T000813	W	Bromide-1C-Dionex 500 col	ug/g	103.1	<2.90e-1	<1.12e+03	n/a	n/a	n/a	n/a	1.12e+03	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000781	D	Sn 117 by ICP/MS Acid Addition	ug/mL	96.50	<1.50e-4	4.307	n/a	n/a	n/a	n/a	1.81e-01	n/a
S00T000781	D	Thorium-229 by ICP/MS	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000781	D	Thorium-230 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000781	D	Thorium-232 by ICP/MS	ug/mL	102.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000782		Glycolate-1C-Dionex 500 ORGACD	ug/mL	99.48	n/a	<2.11e+02	n/a	n/a	n/a	n/a	211.1	n/a
S00T000782		Bromide-1C-Dionex 500 col	ug/mL	106.9	n/a	1.15e+03	n/a	n/a	n/a	n/a	322.2	n/a
S00T000783		Sodium-24 by GEA	uCi/mL	n/a	<1.87e-2	<2.28e-02	n/a	n/a	n/a	n/a	2.28e-02	n/a
S00T000783		Sodium-26 by GEA	uCi/mL	n/a	<1.40e-2	<2.56e-02	n/a	n/a	n/a	n/a	2.56e-02	n/a
S00T000783		Potassium-40 by GEA	uCi/mL	n/a	<3.27e-1	<3.60e-01	n/a	n/a	n/a	n/a	3.60e-01	n/a
S00T000783		K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000783		Cobalt-56 by GEA	uCi/mL	n/a	<1.71e-2	<4.04e-02	n/a	n/a	n/a	n/a	4.04e-02	n/a
S00T000783		Cobalt-57 by GEA	uCi/mL	n/a	<1.10e-2	<2.49e-01	n/a	n/a	n/a	n/a	2.49e-01	n/a
S00T000783		Selenium-75 by GEA	uCi/mL	n/a	<1.85e-2	<4.79e-01	n/a	n/a	n/a	n/a	4.79e-01	n/a
S00T000783		Strontium-85 by GEA	uCi/mL	n/a	<1.76e-2	<4.03e-01	n/a	n/a	n/a	n/a	4.03e-01	n/a
S00T000783		Yttrium-88 by GEA	uCi/mL	n/a	<1.55e-2	<1.39e-02	n/a	n/a	n/a	n/a	1.39e-02	n/a
S00T000783		Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000783		Niobium-94 by GEA	uCi/mL	n/a	<1.70e-2	<3.77e-02	n/a	n/a	n/a	n/a	3.77e-02	n/a
S00T000783		Zr/Nb-95 by GEA	uCi/mL	n/a	<7.95e-2	<3.86e-01	n/a	n/a	n/a	n/a	3.86e-01	n/a
S00T000783		Ruthenium-103 by GEA	uCi/mL	n/a	<1.76e-2	<4.56e-01	n/a	n/a	n/a	n/a	4.56e-01	n/a
S00T000783		Ru/Rh-106 by GEA	uCi/mL	n/a	<3.20e-1	<5.997	n/a	n/a	n/a	n/a	5.997	n/a
S00T000783		Cadmium-109 by GEA	uCi/mL	n/a	<3.74e-1	<7.782	n/a	n/a	n/a	n/a	7.782	n/a
S00T000783		Tin-113 by GEA	uCi/mL	n/a	<2.13e-2	<6.18e-01	n/a	n/a	n/a	n/a	6.18e-01	n/a
S00T000783		Iodine-131 by GEA	uCi/mL	n/a	<1.66e-2	<4.45e-01	n/a	n/a	n/a	n/a	4.45e-01	n/a
S00T000783		I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000783		Cesium-134 by GEA	uCi/mL	n/a	<1.66e-2	1.120	n/a	n/a	n/a	n/a	n/a	7.39
S00T000783		Ce/Pr-144 by GEA	uCi/mL	n/a	<1.56e-1	<3.797	n/a	n/a	n/a	n/a	3.797	n/a
S00T000783		Mercury-203 by GEA	uCi/mL	n/a	<1.41e-2	<3.52e-01	n/a	n/a	n/a	n/a	3.52e-01	n/a
S00T000783		Thallium-208 by GEA	uCi/mL	n/a	<1.86e-1	<4.522	n/a	n/a	n/a	n/a	4.522	n/a
S00T000783		Bismuth-212 by GEA	uCi/mL	n/a	<2.55e-1	<1.271	n/a	n/a	n/a	n/a	1.271	n/a
S00T000783		Lead-212 by GEA	uCi/mL	n/a	<2.67e-2	<6.27e-01	n/a	n/a	n/a	n/a	6.27e-01	n/a
S00T000783		Bismuth-214 by GEA	uCi/mL	n/a	<5.15e-2	<6.58e-01	n/a	n/a	n/a	n/a	6.58e-01	n/a
S00T000783		Lead-214 by GEA	uCi/mL	n/a	<1.74e-1	<4.234	n/a	n/a	n/a	n/a	4.234	n/a
S00T000783		Radium-224 by GEA	uCi/mL	n/a	<2.76e-1	<6.985	n/a	n/a	n/a	n/a	6.985	n/a
S00T000783		Radium-226 by GEA	uCi/mL	n/a	<3.05e-1	<7.151	n/a	n/a	n/a	n/a	7.151	n/a
S00T000783		Actinium-228 by GEA	uCi/mL	n/a	<9.70e-2	<1.56e-01	n/a	n/a	n/a	n/a	1.56e-01	n/a
S00T000783		Thorium-228 by GEA	uCi/mL	n/a	<1.11e0	<23.82	n/a	n/a	n/a	n/a	23.82	n/a
S00T000783		Thorium-229 by GEA	uCi/mL	n/a	<5.35e-2	<1.128	n/a	n/a	n/a	n/a	1.128	n/a
S00T000783		Uranium/Thorium-233 by GEA	uCi/mL	n/a	<9.54e0	<2.50e+02	n/a	n/a	n/a	n/a	250.5	n/a
S00T000783		U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000783		Protactinium-233 by GEA	uCi/mL	n/a	<3.10e-2	<7.99e-01	n/a	n/a	n/a	n/a	7.99e-01	n/a
S00T000783		Protactinium-234m by GEA	uCi/mL	n/a	<2.84e0	<4.964	n/a	n/a	n/a	n/a	4.964	n/a
S00T000783		Thorium-234 by GEA	uCi/mL	n/a	<7.49e-1	<15.91	n/a	n/a	n/a	n/a	15.91	n/a
S00T000783		Uranium-235 by GEA	uCi/mL	n/a	<1.85e-2	<4.33e-01	n/a	n/a	n/a	n/a	4.33e-01	n/a
S00T000783		U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000783		Neptunium-237 by GEA	uCi/mL	n/a	<1.16e-1	< 2.331	n/a	n/a	n/a	n/a	2.331	n/a
S00T000783		Neptunium-239 by GEA	uCi/mL	n/a	<4.70e-2	< 1.001	n/a	n/a	n/a	n/a	1.001	n/a
S00T000783		Plutonium-239 by GEA	uCi/mL	n/a	<1.46e2	<3.31e+03	n/a	n/a	n/a	n/a	3.31e+03	n/a
S00T000783		Americium-241 by GEA	uCi/mL	n/a	<8.74e-2	< 2.076	n/a	n/a	n/a	n/a	2.076	n/a
S00T000783		Americium-243 by GEA	uCi/mL	n/a	<3.26e-2	<6.40e-01	n/a	n/a	n/a	n/a	6.40e-01	n/a

Appendix A. Opportunistic Analyte Results.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: Core Comp Trip3

SEGMENT PORTION: Centrifuged Solids

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000802	F	Silver - ICP-Fusion	ug/g	96.60	<4.10e-1	2.08e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Aluminum - ICP-Fusion	ug/g	98.20	<2.05e0	5.93e+04	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Arsenic - ICP-Fusion	ug/g	101.2	<4.10e0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Boron - ICP-Fusion	ug/g	101.4	2.88e+00	6.75e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Barium - ICP-Fusion	ug/g	97.20	<2.05e0	5.92e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Beryllium - ICP-Fusion	ug/g	98.00	<2.05e-1	< 40.70	n/a	n/a	n/a	n/a	40.70	n/a
S00T000802	F	Bismuth - ICP-Fusion	ug/g	101.2	<4.10e0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Calcium - ICP-Fusion	ug/g	105.6	<4.10e0	2.22e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Cadmium - ICP-Fusion	ug/g	101.6	<2.05e-1	6.40e+03	n/a	n/a	n/a	n/a	40.70	n/a
S00T000802	F	Cerium - ICP-Fusion	ug/g	99.20	<4.10e0	8.50e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Cobalt - ICP-Fusion	ug/g	101.8	<8.20e-1	<1.63e+02	n/a	n/a	n/a	n/a	163.0	n/a
S00T000802	F	Chromium - ICP-Fusion	ug/g	100.8	<4.10e-1	5.44e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Copper - ICP-Fusion	ug/g	98.80	<4.10e-1	2.38e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Europium - ICP-Fusion	ug/g	97.20	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Iron - ICP-Fusion	ug/g	102.2	<2.05e0	7.20e+04	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Lanthanum - ICP-Fusion	ug/g	100.6	<2.05e0	3.33e+03	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Lithium - ICP-Fusion	ug/g	94.40	<4.10e-1	4.83e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Magnesium - ICP-Fusion	ug/g	100.2	<4.10e0	8.44e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Manganese - ICP-Fusion	ug/g	95.20	<4.10e-1	9.48e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Molybdenum - ICP-Fusion	ug/g	99.60	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Sodium - ICP-Fusion	ug/g	98.40	1.47e+01	8.14e+04	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Neodymium - ICP-Fusion	ug/g	99.20	<4.10e0	2.03e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Nickel - ICP-Fusion	ug/g	100.6	1.59e+02	1.71e+04	n/a	n/a	n/a	n/a	163.0	n/a
S00T000802	F	Phosphorus - ICP-Fusion	ug/g	102.0	<8.20e0	<1.63e+03	n/a	n/a	n/a	n/a	1.63e+03	n/a
S00T000802	F	Lead - ICP-Fusion	ug/g	99.80	<4.10e0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Palladium - ICP-Fusion	ug/g	95.80	<1.00e0	<2.00e+04	n/a	n/a	n/a	n/a	2.00e+04	n/a
S00T000802	F	Praseodymium - ICP-Fusion	ug/g	97.60	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Rubidium - ICP-Fusion	ug/g	92.20	<2.00e0	<4.01e+04	n/a	n/a	n/a	n/a	4.01e+04	n/a
S00T000802	F	Rhodium - ICP-Fusion	ug/g	98.20	<1.00e0	<2.00e+04	n/a	n/a	n/a	n/a	2.00e+04	n/a
S00T000802	F	Ruthenium - ICP-Fusion	ug/g	99.20	<2.00e0	<4.01e+04	n/a	n/a	n/a	n/a	4.01e+04	n/a
S00T000802	F	Sulfur - ICP-Fusion	ug/g	100.0	<4.10e0	8.69e+03	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Antimony - ICP-Fusion	ug/g	100.4	<2.46e0	<4.88e+02	n/a	n/a	n/a	n/a	488.0	n/a
S00T000802	F	Selenium - ICP-Fusion	ug/g	98.60	<4.10e0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Silicon - ICP-Fusion	ug/g	102.4	8.07e+00	4.19e+03	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Samarium - ICP-Fusion	ug/g	99.40	<4.10e0	<8.13e+02	n/a	n/a	n/a	n/a	813.0	n/a
S00T000802	F	Tin - ICP-Fusion	ug/g	97.60	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Strontium - ICP-Fusion	ug/g	96.80	<4.10e-1	3.05e+02	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Tantalum - ICP-Fusion	ug/g	97.80	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Tellurium - ICP-Fusion	ug/g	97.40	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Thorium - ICP-Fusion	ug/g	99.60	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Titanium - ICP-Fusion	ug/g	100.8	<4.10e-1	< 81.30	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Thallium - ICP-Fusion	ug/g	98.40	<8.20e0	<1.63e+03	n/a	n/a	n/a	n/a	1.63e+03	n/a
S00T000802	F	Uranium - ICP-Fusion	ug/g	97.90	<2.05e1	<4.07e+03	n/a	n/a	n/a	n/a	4.07e+03	n/a
S00T000802	F	Vanadium - ICP-Fusion	ug/g	101.2	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a

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Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000802	F	Tungsten -ICP-Fusion	ug/g	96.80	<5.00e-1	<1.00e+04	n/a	n/a	n/a	n/a	1.00e+04	n/a
S00T000802	F	Yttrium -ICP-Fusion	ug/g	98.40	<2.05e0	<4.07e+02	n/a	n/a	n/a	n/a	407.0	n/a
S00T000802	F	Zinc -ICP-Fusion	ug/g	100.8	<4.10e-1	82.90	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Zirconium -ICP-Fusion	ug/g	101.0	<4.10e-1	2.72e+04	n/a	n/a	n/a	n/a	81.30	n/a
S00T000802	F	Sodium-22 by GEA	uci/g	n/a	<4.16e-1	< 18.20	n/a	n/a	n/a	n/a	18.20	n/a
S00T000802	F	Sodium-24 by GEA	uci/g	n/a	<3.14e-1	<4.75e-01	n/a	n/a	n/a	n/a	4.75e-01	n/a
S00T000802	F	Potassium-40 by GEA	uci/g	n/a	<1.27e1	< 12.48	n/a	n/a	n/a	n/a	12.48	n/a
S00T000802	F	K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000802	F	Cobalt-56 by GEA	uci/g	n/a	<3.38e-1	<6.83e-01	n/a	n/a	n/a	n/a	6.83e-01	n/a
S00T000802	F	Cobalt-57 by GEA	uci/g	n/a	<2.27e-1	< 24.21	n/a	n/a	n/a	n/a	24.21	n/a
S00T000802	F	Selenium-75 by GEA	uci/g	n/a	<4.07e-1	< 1.918	n/a	n/a	n/a	n/a	1.918	n/a
S00T000802	F	Strontium-85 by GEA	uci/g	n/a	<3.90e-1	< 1.495	n/a	n/a	n/a	n/a	1.495	n/a
S00T000802	F	Yttrium-88 by GEA	uci/g	n/a	<3.77e-1	<3.93e-01	n/a	n/a	n/a	n/a	3.93e-01	n/a
S00T000802	F	Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000802	F	Niobium-94 by GEA	uci/g	n/a	<3.69e-1	< 1.213	n/a	n/a	n/a	n/a	1.213	n/a
S00T000802	F	Zr/Nb-95 by GEA	uci/g	n/a	<1.65e0	< 48.23	n/a	n/a	n/a	n/a	48.23	n/a
S00T000802	F	Ruthenium-103 by GEA	uci/g	n/a	<3.28e-1	< 1.633	n/a	n/a	n/a	n/a	1.633	n/a
S00T000802	F	Ru/Rh-106 by GEA	uci/g	n/a	<6.38e0	< 23.60	n/a	n/a	n/a	n/a	23.60	n/a
S00T000802	F	Cadmium-109 by GEA	uci/g	n/a	<7.28e0	<6.27e+02	n/a	n/a	n/a	n/a	627.0	n/a
S00T000802	F	Tin-113 by GEA	uci/g	n/a	<4.30e-1	< 2.195	n/a	n/a	n/a	n/a	2.195	n/a
S00T000802	F	Iodine-131 by GEA	uci/g	n/a	<3.22e-1	< 1.678	n/a	n/a	n/a	n/a	1.678	n/a
S00T000802	F	I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000802	F	Cesium-134 by GEA	uci/g	n/a	<3.21e-1	< 1.236	n/a	n/a	n/a	n/a	1.236	n/a
S00T000802	F	Ce/Pr-144 by GEA	uci/g	n/a	<3.48e0	< 19.90	n/a	n/a	n/a	n/a	19.90	n/a
S00T000802	F	Mercury-203 by GEA	uci/g	n/a	<2.98e-1	< 1.386	n/a	n/a	n/a	n/a	1.386	n/a
S00T000802	F	Thallium-208 by GEA	uci/g	n/a	<4.00e0	< 17.80	n/a	n/a	n/a	n/a	17.80	n/a
S00T000802	F	Bismuth-212 by GEA	uci/g	n/a	<6.30e0	< 9.998	n/a	n/a	n/a	n/a	9.998	n/a
S00T000802	F	Lead-212 by GEA	uci/g	n/a	<5.64e-1	< 2.563	n/a	n/a	n/a	n/a	2.563	n/a
S00T000802	F	Bismuth-214 by GEA	uci/g	n/a	<1.05e0	< 2.710	n/a	n/a	n/a	n/a	2.710	n/a
S00T000802	F	Lead-214 by GEA	uci/g	n/a	<3.45e0	< 14.40	n/a	n/a	n/a	n/a	14.40	n/a
S00T000802	F	Radium-224 by GEA	uci/g	n/a	<5.84e0	< 28.09	n/a	n/a	n/a	n/a	28.09	n/a
S00T000802	F	Radium-226 by GEA	uci/g	n/a	<6.10e0	< 30.65	n/a	n/a	n/a	n/a	30.65	n/a
S00T000802	F	Actinium-228 by GEA	uci/g	n/a	<1.81e0	< 2.741	n/a	n/a	n/a	n/a	2.741	n/a
S00T000802	F	Thorium-228 by GEA	uci/g	n/a	<2.30e1	<1.50e+02	n/a	n/a	n/a	n/a	149.7	n/a
S00T000802	F	Thorium-229 by GEA	uci/g	n/a	<1.05e0	< 7.284	n/a	n/a	n/a	n/a	7.284	n/a
S00T000802	F	Uranium/Thorium-233 by GEA	uci/g	n/a	<2.05e2	<1.00e+03	n/a	n/a	n/a	n/a	1.00e+03	n/a
S00T000802	F	U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000802	F	Protactinium-233 by GEA	uci/g	n/a	<6.26e-1	< 3.047	n/a	n/a	n/a	n/a	3.047	n/a
S00T000802	F	Protactinium-234m by GEA	uci/g	n/a	<5.72e1	<1.35e+02	n/a	n/a	n/a	n/a	135.0	n/a
S00T000802	F	Thorium-234 by GEA	uci/g	n/a	<1.48e1	< 93.35	n/a	n/a	n/a	n/a	93.35	n/a
S00T000802	F	Uranium-235 by GEA	uci/g	n/a	<3.65e-1	< 1.863	n/a	n/a	n/a	n/a	1.863	n/a
S00T000802	F	U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000802	F	Neptunium-237 by GEA	uci/g	n/a	<2.29e0	<1.88e+02	n/a	n/a	n/a	n/a	188.2	n/a
S00T000802	F	Neptunium-239 by GEA	uci/g	n/a	<9.57e-1	< 7.389	n/a	n/a	n/a	n/a	7.389	n/a
S00T000802	F	Plutonium-239 by GEA	uci/g	n/a	<3.18e3	<1.75e+04	n/a	n/a	n/a	n/a	1.75e+04	n/a
S00T000802	F	Americium-241 by GEA	uci/g	n/a	<1.96e0	92.06	n/a	n/a	n/a	n/a	n/a	12.6
S00T000802	F	Americium-243 by GEA	uci/g	n/a	<6.62e-1	< 3.912	n/a	n/a	n/a	n/a	3.912	n/a
S00T000811	A	Sn117 ICP/MS AcidDig LA-505159	ug/g	101.5	<6.02e-2	24.15	n/a	n/a	n/a	n/a	6.510	n/a
S00T000811	A	I129 by ICP/MS AcidDig LA-505159	ug/g	n/a	n/a	?	n/a	n/a	n/a	n/a	1.62e-02	n/a
S00T000811	A	Thorium-229 by ICP/MS	ug/g	n/a	<3.02e-3	<6.51e-01	n/a	n/a	n/a	n/a	6.51e-01	n/a
S00T000811	A	Thorium-230 by ICP/MS	ug/g	n/a	<1.01e-2	< 2.170	n/a	n/a	n/a	n/a	2.170	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000811	A	Thorium-232 by ICP/MS	ug/g	95.80	<1.01e-2	2.54e+02	n/a	n/a	n/a	n/a	2.170	n/a
S00T000814	W	Glycolate-IC-Dioxex 500 ORGACD	ug/g	104.5	<1.90e-1	<5.83e+02	n/a	n/a	n/a	n/a	582.6	n/a
S00T000814	W	Bromide-IC-Dioxex 500 col	ug/g	103.1	<2.90e-1	<8.89e+02	n/a	n/a	n/a	n/a	889.3	n/a

Drainable/Interstitial Liquid: Drainable/Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000784	D	Sn 117 by ICP/MS Acid Addition	ug/mL	96.50	<1.50e-4	4.275	n/a	n/a	n/a	n/a	1.81e-01	n/a
S00T000784	D	Thorium-229 by ICP/MS	ug/mL	n/a	<1.50e-5	<1.81e-02	n/a	n/a	n/a	n/a	1.81e-02	n/a
S00T000784	D	Thorium-230 by ICP/MS	ug/mL	n/a	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000784	D	Thorium-232 by ICP/MS	ug/mL	102.0	<5.00e-5	<6.03e-02	n/a	n/a	n/a	n/a	6.03e-02	n/a
S00T000785		Glycolate-IC-Dioxex 500 ORGACD	ug/mL	99.48	n/a	<2.11e+02	n/a	n/a	n/a	n/a	211.1	n/a
S00T000785		Bromide-IC-Dioxex 500 col	ug/mL	106.9	n/a	8.92e+02	n/a	n/a	n/a	n/a	322.2	n/a
S00T000786		Sodium-22 by GEA	uCi/mL	n/a	<1.87e-2	<2.29e-02	n/a	n/a	n/a	n/a	2.58e-02	n/a
S00T000786		Sodium-24 by GEA	uCi/mL	n/a	<1.40e-2	<2.58e-02	n/a	n/a	n/a	n/a	2.58e-02	n/a
S00T000786		Potassium-40 by GEA	uCi/mL	n/a	<3.27e-1	<6.44e-01	n/a	n/a	n/a	n/a	6.44e-01	n/a
S00T000786		K-40 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000786		Cobalt-56 by GEA	uCi/mL	n/a	<1.71e-2	<3.89e-02	n/a	n/a	n/a	n/a	3.89e-02	n/a
S00T000786		Cobalt-57 by GEA	uCi/mL	n/a	<1.10e-2	<2.43e-01	n/a	n/a	n/a	n/a	2.43e-01	n/a
S00T000786		Selenium-75 by GEA	uCi/mL	n/a	<1.85e-2	<4.67e-01	n/a	n/a	n/a	n/a	4.67e-01	n/a
S00T000786		Strontium-85 by GEA	uCi/mL	n/a	<1.76e-2	<3.91e-01	n/a	n/a	n/a	n/a	3.91e-01	n/a
S00T000786		Yttrium-88 by GEA	uCi/mL	n/a	<1.55e-2	<1.44e-02	n/a	n/a	n/a	n/a	1.44e-02	n/a
S00T000786		Y-88 GEA Rel. % Count Error	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000786		Niobium-94 by GEA	uCi/mL	n/a	<1.70e-2	<3.82e-02	n/a	n/a	n/a	n/a	3.82e-02	n/a
S00T000786		Zr/Nb-95 by GEA	uCi/mL	n/a	<7.95e-2	<3.65e-01	n/a	n/a	n/a	n/a	3.65e-01	n/a
S00T000786		Ruthenium-103 by GEA	uCi/mL	n/a	<1.76e-2	<4.44e-01	n/a	n/a	n/a	n/a	4.44e-01	n/a
S00T000786		Ru/Rh-106 by GEA	uCi/mL	n/a	<3.20e-1	< 5.830	n/a	n/a	n/a	n/a	5.830	n/a
S00T000786		Cadmium-109 by GEA	uCi/mL	n/a	<3.74e-1	< 7.550	n/a	n/a	n/a	n/a	7.550	n/a
S00T000786		Tin-113 by GEA	uCi/mL	n/a	<2.13e-2	<6.01e-01	n/a	n/a	n/a	n/a	6.01e-01	n/a
S00T000786		Iodine-131 by GEA	uCi/mL	n/a	<1.66e-2	<4.31e-01	n/a	n/a	n/a	n/a	4.31e-01	n/a
S00T000786		I-131 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000786		Cesium-134 by GEA	uCi/mL	n/a	<1.66e-2	1.120	n/a	n/a	n/a	n/a	n/a	5.90
S00T000786		Ce/Pr-144 by GEA	uCi/mL	n/a	<1.56e-1	< 3.692	n/a	n/a	n/a	n/a	3.692	n/a
S00T000786		Mercury-203 by GEA	uCi/mL	n/a	<1.41e-2	<3.42e-01	n/a	n/a	n/a	n/a	3.42e-01	n/a
S00T000786		Thallium-208 by GEA	uCi/mL	n/a	<1.86e-1	< 4.406	n/a	n/a	n/a	n/a	4.406	n/a
S00T000786		Bismuth-212 by GEA	uCi/mL	n/a	<2.55e-1	< 1.181	n/a	n/a	n/a	n/a	1.181	n/a
S00T000786		Lead-212 by GEA	uCi/mL	n/a	<2.67e-2	<6.11e-01	n/a	n/a	n/a	n/a	6.11e-01	n/a
S00T000786		Bismuth-214 by GEA	uCi/mL	n/a	<5.15e-2	<9.99e-02	n/a	n/a	n/a	n/a	9.99e-02	n/a
S00T000786		Lead-214 by GEA	uCi/mL	n/a	<1.74e-1	< 4.093	n/a	n/a	n/a	n/a	4.093	n/a
S00T000786		Radium-224 by GEA	uCi/mL	n/a	<2.76e-1	< 6.789	n/a	n/a	n/a	n/a	6.789	n/a
S00T000786		Radium-226 by GEA	uCi/mL	n/a	<3.05e-1	< 6.924	n/a	n/a	n/a	n/a	6.924	n/a
S00T000786		Actinium-228 by GEA	uCi/mL	n/a	<9.70e-2	<1.35e-01	n/a	n/a	n/a	n/a	1.35e-01	n/a
S00T000786		Thorium-228 by GEA	uCi/mL	n/a	<1.11e0	< 23.06	n/a	n/a	n/a	n/a	23.06	n/a
S00T000786		Thorium-229 by GEA	uCi/mL	n/a	<5.35e-2	< 1.097	n/a	n/a	n/a	n/a	1.097	n/a
S00T000786		Uranium/Thorium-233 by GEA	uCi/mL	n/a	<9.54e0	<2.43e+02	n/a	n/a	n/a	n/a	242.8	n/a
S00T000786		U/Th-233 GEA Rel. % Count Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S00T000786		Protactinium-233 by GEA	uCi/mL	n/a	<3.10e-2	<7.74e-01	n/a	n/a	n/a	n/a	7.74e-01	n/a
S00T000786		Protactinium-234m by GEA	uCi/mL	n/a	<2.84e0	< 4.913	n/a	n/a	n/a	n/a	4.913	n/a
S00T000786		Thorium-234 by GEA	uCi/mL	n/a	<7.49e-1	< 15.44	n/a	n/a	n/a	n/a	15.44	n/a
S00T000786		Uranium-235 by GEA	uCi/mL	n/a	<1.85e-2	<4.19e-01	n/a	n/a	n/a	n/a	4.19e-01	n/a
S00T000786		U-235 GEA Rel. % Counting Err	% Ct. Error	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sample#	RIA#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S00T000786		Neptunium-237 by GEA	uCi/mL	n/a	<1.16e-1	< 2.259	n/a	n/a	n/a	n/a	2.259	n/a
S00T000786		Neptunium-239 by GEA	uCi/mL	n/a	<4.70e-2	<9.76e-01	n/a	n/a	n/a	n/a	9.76e-01	n/a
S00T000786		Plutonium-239 by GEA	uCi/mL	n/a	<1.46e2	<3.22e+03	n/a	n/a	n/a	n/a	3.22e+03	n/a
S00T000786		Americium-241 by GEA	uCi/mL	n/a	<8.74e-2	< 2.024	n/a	n/a	n/a	n/a	2.024	n/a
S00T000786		Americium-243 by GEA	uCi/mL	n/a	<3.26e-2	<6.19e-01	n/a	n/a	n/a	n/a	6.19e-01	n/a

Appendix A. Opportunistic Analyte List.
AZ-101 (2)CORE NUMBER: 269
SEGMENT #: LIBR

SEGMENT PORTION: Hydrostatic Head Fluid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S99T001891	D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Arsenic-ICP-Acid Dil.	ug/mL	101.4	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Boron-ICP-Acid Dil.	ug/mL	102.8	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Barium-ICP-Acid Dil.	ug/mL	97.60	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Beryllium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-3	<5.00e-02	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001891	D	Bismuth-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Calcium-ICP-Acid Dil.	ug/mL	104.4	<1.00e-1	1.290	1.210	1.250	6.40	n/a	1.000	n/a
S99T001891	D	Cadmium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-3	<5.00e-02	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S99T001891	D	Cerium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Cobalt-ICP-Acid Dil.	ug/mL	101.4	<2.00e-2	<2.00e-01	<2.00e-1	n/a	n/a	n/a	2.00e-01	n/a
S99T001891	D	Chromium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Copper-ICP-Acid Dil.	ug/mL	100.2	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Iron-ICP-Acid Dil.	ug/mL	102.4	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Potassium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-1	<5.000	<5.00e0	n/a	n/a	n/a	5.000	n/a
S99T001891	D	Lanthanum-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Magnesium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Manganese-ICP-Acid Dil.	ug/mL	95.00	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Holydenum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Sodium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	6.140	6.160	6.150	0.33	n/a	1.000	n/a
S99T001891	D	Neodymium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Nickel-ICP-Acid Dil.	ug/mL	100.6	<2.00e-2	<2.00e-01	<2.00e-1	n/a	n/a	n/a	2.00e-01	n/a
S99T001891	D	Phosphorus-ICP-Acid Dil.	ug/mL	102.8	<2.00e-1	<2.000	<2.00e0	n/a	n/a	n/a	2.000	n/a
S99T001891	D	Lead-ICP-Acid Dil.	ug/mL	99.00	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Sulfur-ICP-Acid Dil.	ug/mL	97.60	<1.00e-1	1.730	1.690	1.710	2.34	n/a	1.000	n/a
S99T001891	D	Antimony-ICP-Acid Dil.	ug/mL	100.2	<6.00e-2	<6.00e-01	<6.00e-1	n/a	n/a	n/a	6.00e-01	n/a
S99T001891	D	Selenium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Silicon-ICP-Acid Dil.	ug/mL	102.2	<5.00e-2	2.860	2.780	2.820	2.84	n/a	5.00e-01	n/a
S99T001891	D	Samarium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-1	<1.000	<1.00e0	n/a	n/a	n/a	1.000	n/a
S99T001891	D	Strontium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Titanium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Thallium-ICP-Acid Dil.	ug/mL	98.80	<2.00e-1	<2.000	<2.00e0	n/a	n/a	n/a	2.000	n/a
S99T001891	D	Uranium-ICP-Acid Dil.	ug/mL	97.90	<5.00e-1	<5.000	<5.00e0	n/a	n/a	n/a	5.000	n/a
S99T001891	D	Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-2	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S99T001891	D	Zinc-ICP-Acid Dil.	ug/mL	100.8	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891	D	Zirconium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-2	<1.00e-01	<1.00e-1	n/a	n/a	n/a	1.00e-01	n/a
S99T001891		Fluoride-IC-Dionex 4000/4500	ug/mL	111.6	<1.20e-2	<1.212	<1.21e0	n/a	n/a	n/a	1.212	n/a
S99T001891		Chloride-IC-Dionex 4000/4500	ug/mL	97.67	<1.70e-2	3.041	4.010	3.526	27.5	n/a	1.717	n/a
S99T001891		Nitrite-IC - Dionex 4000/4500	ug/mL	97.73	<1.08e-1	<10.91	<1.09e1	n/a	n/a	n/a	10.91	n/a
S99T001891		Nitrate by IC-Dionex 4000/4500	ug/mL	105.9	<1.39e-1	<14.04	<1.40e1	n/a	n/a	n/a	14.04	n/a
S99T001891		Phosphate by IC-Dionex 4000/4500	ug/mL	98.58	<1.20e-1	<12.12	<1.21e1	n/a	n/a	n/a	12.12	n/a
S99T001891		Sulfate by IC-Dionex 4000/4500	ug/mL	100.3	<1.38e-1	<13.94	<1.39e1	n/a	n/a	n/a	13.94	n/a
S99T001891		Oxalate-IC-Dionex 4000/4500	ug/mL	104.5	<1.05e-1	<10.61	<1.06e1	n/a	n/a	n/a	10.61	n/a

HNF-1701 REV. 0

CONVERTED MRQ TABLES

APPENDIX B

HNF-1701 REV. 0

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AZ101 LIQUID

Analyte	Method	Corrected H&L MRQ	Corrected LAW MRQ	Units
Ag	ICP/AES	1.70E+01	1.70E+01	µg/mL
Al	ICP/AES	7.50E+01	7.50E+01	µg/mL
As	ICP/MS	2.30E+00	3.00E+00	µg/mL
B	ICP/MS	2.30E+00	2.30E+00	µg/mL
Ba	ICP/MS	2.30E+00	7.80E+01	µg/mL
Be	ICP/MS	2.30E+00	9.90E+00	µg/mL
Bi	ICP/AES	1.70E+02	1.70E+02	µg/mL
Ca	ICP/AES	1.50E+02	1.50E+02	µg/mL
Cd	ICP/AES	7.50E+00	7.50E+00	µg/mL
Ce	ICP/MS	2.30E+00	2.30E+00	µg/mL
Co	ICP/MS	2.30E+00	2.30E+00	µg/mL
Cr	ICP/AES	1.50E+01	1.50E+01	µg/mL
Cu	ICP/AES	1.70E+01	1.70E+01	µg/mL
Cs, total	ICP/MS	1.50E+00	1.50E+00	µg/mL
Eu, total	ICP/MS	6.00E+01	6.00E+01	µg/mL
Fe	ICP/AES	7.50E+01	9.90E+01	µg/mL
Hg	CVAA	1.50E+00	2.00E+00	µg/mL
K	ICP/AES	7.50E+02	7.50E+01	µg/mL
La	ICP/MS	2.30E+00	3.50E+01	µg/mL
Li	ICP/MS	2.30E+00	2.30E+00	µg/mL
Mg	ICP/AES	1.70E+02	1.50E+02	µg/mL
Mn	ICP/AES	1.70E+01	1.70E+01	µg/mL
Mo	ICP/MS	2.30E+00	9.00E+01	µg/mL
Na	ICP/AES	1.70E+02	1.70E+02	µg/mL
Nd	ICP/AES	1.70E+02	1.70E+02	µg/mL
Ni	ICP/AES	3.00E+01	3.00E+01	µg/mL
P	ICP/AES	3.30E+02	3.30E+02	µg/mL
Pb	ICP/AES	3.00E+02	3.00E+02	µg/mL
Pd	ICP/AES	3.90E+02	3.90E+02	µg/mL
Pr	ICP/MS	2.30E+00	2.30E+00	µg/mL
Rb	ICP/MS	2.30E+00	2.30E+00	µg/mL
Rh	ICP/AES	1.80E+01	1.80E+01	µg/mL
Ru	ICP/AES	3.60E+01	3.60E+01	µg/mL
S	ICP/AES	1.70E+02	1.70E+02	µg/mL
Sb	ICP/MS	2.30E+00	1.00E+02	µg/mL
Se	ICP/MS	2.30E+00	1.70E+02	µg/mL
Si	ICP/AES	9.00E+01	9.00E+01	µg/mL
Sr	ICP/AES	1.70E+01	1.70E+01	µg/mL
Ta	ICP/MS	2.30E+00	2.30E+00	µg/mL

Analyte	Method	Corrected H&L MRQ	Corrected LAW MRQ	Units
Te	ICP/MS	2.30E+00	2.30E+00	µg/mL
Th	ICP/MS	2.30E+00	2.30E+00	µg/mL
Ti	ICP/AES	1.70E+01	1.70E+01	µg/mL
Tl	ICP/MS	2.30E+00	2.30E+00	µg/mL
U	ICP/AES	7.80E+02	7.80E+02	µg/mL
V	ICP/MS	2.30E+00	9.00E+01	µg/mL
W	ICP/MS	2.30E+00	2.30E+00	µg/mL
Y (90AMU)	ICP/MS	2.30E+00	2.00E+02	µg/mL
Zn	ICP/AES	1.70E+01	1.70E+01	µg/mL
Zr	ICP/AES	1.70E+01	1.70E+01	µg/mL
3H	Liquid scint.	2.10E-02	2.10E-02	µCi/mL
14C	Liquid scint.	7.20E-04	7.20E-04	µCi/mL
60Co	GEA	2.10E-03	2.10E-03	µCi/mL
79Se	Liquid scint.	9.00E-05	9.00E-05	µCi/mL
89Sr, 90Sr	Beta counting	3.00E-02	1.50E-01	µCi/mL
99Tc (total)	ICP/MS	8.82E-02	8.82E-02	µg/mL
99Tc (per)	Liquid scint.	TBD	TBD	µCi/mL
125Sb	GEA	1.70E+00	1.70E+00	µCi/mL
126Sn	ICP/MS	2.12E-01	2.12E-01	µg/mL
129I	GEA	1.80E-05	1.10E-03	µCi/mL
137Cs	GEA	3.90E-01	9.00E+00	µCi/mL
152Eu	GEA	TBD	TBD	µCi/mL
154Eu	GEA	2.00E-02	2.00E-03	µCi/mL
155Eu	GEA	9.00E-02	9.00E-02	µCi/mL
231Pa	ICP/MS	TBD	TBD	µCi/mL
233U	ICP/MS	4.36E-02	1.87E-01	µg/mL
234U	ICP/MS	1.92E-02	1.92E-05	µg/mL
235U	ICP/MS	2.08E-02	2.08E+00	µg/mL
236U	ICP/MS	2.16E-02	2.16E-02	µg/mL
237Np	ICP/MS	5.53E-02	3.83E+01	µg/mL
238Pu	AEA	1.00E-02	9.60E-03	µCi/mL
238U	ICP/MS	2.14E-02	1.49E+00	µg/mL
239Pu	AEA	1.00E-02	9.60E-03	µCi/mL
240Pu	AEA	5.10E-02	9.60E-03	µCi/mL
241Pu	NS	NS	9.60E-03	µCi/mL
241Pu/Am	ICP/MS	1.40E+01 †	1.40E+01 †	µg/mL
242Pu	ICP/MS	7.59E+00	2.43E+00	µg/mL
241Am	AEA	3.00E-02	7.20E-04	µCi/mL
242Cm	AEA	NS	NS	µCi/mL

Analyte	Method	Corrected H&L MRQ	Corrected LAW MRQ	Units
243Am	ICP/MS	4.81E-02	4.81E-02	µg/mL
243+244Cm	AEA	1.50E-01	1.50E-01	µCi/mL
NH4/NH3	ISE	1.40E+02	1.40E+02	µg/mL
Cl	IC	3.00E+02	3.00E+02	µg/mL
CN	Distill/color	4.50E+00	4.50E+00	µg/mL
F	IC	1.50E+02	1.50E+02	µg/mL
NO2	IC	2.30E+03	2.30E+03	µg/mL
NO3	IC	3.00E+03	3.00E+03	µg/mL
OH	Titration	7.50E+04	7.50E+04	µg/mL
oxalate	IC	1.80E+03	1.80E+03	µg/mL
PO4	IC	2.30E+03	2.50E+03	µg/mL
SO4	IC	2.30E+03	2.30E+03	µg/mL
total alpha	Prop. counting	2.30E-01	2.30E-01	µCi/mL
total beta	Beta counting	TBD	TBD	µCi/mL
TIC	Persulf & furn	1.50E+02	1.50E+02	µg/mL
TOC	Persulf & furn	1.50E+03	1.50E+03	µg/mL

† - based on Am-241 specific activity

Analyte	Method	Corrected H&L MRQ	Corrected HLW MRQ	Units
Ag	ICP/AES	5.39E+02	8.39E+01	µg/g
Al	ICP/AES	2.16E+03	1.98E+02	µg/g
As	ICP/MS	3.59E+01	1.80E+01	µg/g
B	ICP/MS	1.80E+01	1.80E+00	µg/g
Ba	ICP/AES	3.59E+02	3.59E+02	µg/g
Be	ICP/MS	1.80E+01	1.80E+01	µg/g
Bi	ICP/AES	3.59E+03	3.59E+03	µg/g
Ca	ICP/AES	3.59E+03	1.08E+02	µg/g
Cd	ICP/AES	5.39E+02	6.59E+00	µg/g
Ce	ICP/MS	3.59E+00	3.59E+00	µg/g
Co	ICP/MS	3.59E+00	1.80E+00	µg/g
Cr	ICP/AES	7.19E+02	7.19E+01	µg/g
Cs	NS2	NS2	3.59E+00	µg/g
Cu	ICP/AES	3.59E+02	1.08E+01	µg/g
F	IC	4.49E+03	4.49E+03	µg/g
Fe	ICP/AES	7.19E+02	8.39E+01	µg/g
Hg	CVAA	8.99E-01	8.99E-01	µg/g
K	ICP/MS	3.59E+03	8.99E+02	µg/g
La	ICP/AES	1.80E+03	3.59E+01	µg/g
Li	ICP/MS	1.80E+01	1.80E+01	µg/g
Mg	ICP/AES	3.23E+03	3.23E+02	µg/g
Mn	ICP/AES	1.80E+02	1.80E+02	µg/g
Mo	ICP/MS	3.59E+00	3.59E+00	µg/g
Na	ICP/AES	3.23E+03	8.99E+01	µg/g
Nd	ICP/AES	1.80E+03	4.61E+01	µg/g
Ni	ICP/AES	1.08E+03	9.58E+01	µg/g
P	ICP/AES	3.59E+03	3.59E+02	µg/g
Pb	ICP/AES	2.16E+03	3.59E+02	µg/g
Pd	ICP/MS	1.80E+01	1.80E+00	µg/g
Pr	ICP/MS	3.59E+00	3.59E+00	µg/g
Pu	ICP/MS	3.59E+00	1.44E+01	µg/g
Rb	ICP/MS	3.59E+00	3.59E+00	µg/g
Rh	ICP/MS	3.59E+00	3.59E+00	µg/g
Ru	ICP/MS	7.19E+00	1.80E+00	µg/g
S	ICP/MS	#VALUE!	7.19E+01	µg/g
Sb	ICP/MS	7.19E+00	7.19E+00	µg/g
Se	ICP/MS	1.80E+02	1.80E+02	µg/g
Si	ICP/AES	1.80E+04	1.80E+03	µg/g
Sr	ICP/AES	1.80E+02	1.80E+02	µg/g

Analyte	Method	Corrected H&L MRQ	Corrected HLW MRQ	Units
Ta	ICP/MS	3.59E+00	3.59E+00	µg/g
Tc	ICP/MS	NS	3.59E+00	µg/g
Te	ICP/MS	1.08E+01	3.59E+00	µg/g
Th	ICP/MS	3.59E+00	3.59E+02	µg/g
Ti	ICP/AES	3.59E+02	8.99E+01	µg/g
Tl	ICP/MS	3.59E+00	3.59E+02	µg/g
U	NS	NS	3.59E+02	µg/g
V	ICP/MS	3.59E+00	3.59E-02	µg/g
W	ICP/MS	3.59E+00	3.59E+00	µg/g
Y	ICP/MS	3.59E+00	1.62E+02	µg/g
Zn	ICP/AES	7.19E+02	3.59E+00	µg/g
Zr	ICP/AES	3.59E+02	3.59E+02	µg/g
Cl	IC	1.35E+02	1.35E+02	µg/g
CN-	CN-analysis	1.80E+00	1.80E+00	µg/g
CO3-2	Persulf/furn	NS	1.80E+01	µg/g
NH3	ISE	3.59E+01	3.59E+01	µg/g
NO2-	IC	2.70E+02	2.70E+02	µg/g
NO3-	IC	2.70E+02	2.70E+02	µg/g
TOC	Persulf/furn	3.59E+01	3.59E+01	µg C/g
3H	NS	NS	8.99E-03	µCi/g
14C	Liquid scint.	3.59E-04	1.08E-03	µCi/g
59Ni	Sep./GEA	1.80E-02	1.80E-02	µCi/g
60Co	GEA	7.19E-02	7.19E-03	µCi/g
63Ni	Liquid scint.	3.59E-03	3.59E-03	µCi/g
90Sr	Beta counting	1.26E+01	1.26E+01	µCi/g
90Y	Beta counting	1.26E+01	1.26E+01	µCi/g
93Zr	Liquid scint.	3.59E-03	3.59E-03	µCi/g
93mNb	ICP/MS	7.19E+00 *	7.19E+00 *	µg/g
99Tc	ICP/MS	2.11E+02	2.11E+02	µg/g
121mSn	Sep./GEA	1.62E-01	1.62E-01	µCi/g
125Sb	GEA	3.59E+00	3.59E+00	µCi/g
125mTe	GEA	3.59E+00	3.59E+00	µCi/g
126mSb	Sep./GEA	1.08E-02	1.08E-02	µCi/g
126Sb	Sep./GEA	1.08E-02	1.08E-02	µCi/g
126Sn	ICP/MS	3.80E-01	1.27E+00	µg/g
129I	GEA ‡	1.80E+01	1.80E+01	µg/g
135Cs	ICP/MS	3.13E+03	3.13E+03	µg/g
137mBa	GEA	5.39E-02	5.39E-02	µCi/g
137Cs	GEA	5.39E-02	3.59E-02	µCi/g

Analyte	Method	Corrected H&L MRQ	Corrected HLW MRQ	Units
151AMU	ICP/MS	3.59E+00 *	3.59E+00 *	µg/g
152Eu	GEA	3.59E+00	1.20E+00	µCi/g
154Eu	GEA	1.80E-01	3.59E-02	µCi/g
155Eu	GEA	3.59E+00	3.59E-02	µCi/g
233U	ICP/MS	3.73E+01	3.73E+02	µg/g
234U	ICP/MS	5.75E+02	5.75E+02	µg/g
235U	ICP/MS	1.66E+06	1.66E+06	µg/g
236U	ICP/MS	5.55E+04	5.55E+04	µg/g
237Np	ICP/MS	5.10E+03	1.53E+03	µg/g
238Pu	Sep./AEA	3.59E-02	3.59E-05	µCi/g
238U	ICP/MS	1.07E+07	1.07E+07	µg/g
239Pu	Sep./AEA	3.59E-02	3.59E+00	µCi/g
240Pu	Sep./AEA	3.59E-02	3.59E-02	µCi/g
241Am	Sep./AEA	1.08E-02	7.19E-04	µCi/g
241AMU	ICP/MS	1.05E+00 †	1.05E+00 †	µg/g
242Cm10	Sep./AEA	7.19E-03	7.19E-03	µCi/g
242mAm10	Sep./AEA	7.19E-03	7.19E-03	µCi/g
242Pu	ICP/MS	9.09E+01	9.09E+01	µg/g
242Pu	Sep./AEA	3.59E-02	3.59E-02	µCi/g
243Am	ICP/MS	1.80E+01	1.80E+01	µg/g
243+244Cm	Sep./AEA	7.19E-03	3.59E-05	µCi/g
Total alpha	Alpha counting	3.59E-01	3.59E-01	µCi/g
Total beta	Beta counting	1.26E+01	1.26E+01	µCi/g

* - no specific activity available

‡ - GEA listed in Analysis table, ICP/MS listed in MRQ table in

† -based on Am-241 specific activity