This document was too large to scan as a whole document,
therefore it required breaking into smaller sections.

Document number: SD-WM-DP-247

Section 1 of 2

Title: Task 241-T-203, Core 190 Analytical
Results for the Final Report

Date: 8/5/97 Revision: 0

Originator: Steven J. H.

Co: WMH

Recipient: _____

Co: _____

References: EDT-620414

Sh 4. (2)

AUG 05 1997 ENGINEERING DATA TRANSMITTAL

Page 1 of 1
1. EDT 620414

2. To: (Receiving Organization) Distribution		3. From: (Originating Organization) Production Planning and Control		4. Related EDT No.: N/A	
5. Proj./Prog./Dept./Div.: Tank 241-T-203/Waste Management/PPC/AS		6. Design Authority/ Design Agent/Cog. Engr.: Franciska 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-T-203	
11. Receiver Remarks: For release.		11A. Design Baseline Document? ☐ Yes ☒ No		12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: 08/08/97	

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-SD-WM-DP-247	N/A	0	Tank 241-T-203, Core 190 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 2. Release 3. Information	4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment	4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
		Design Authority									
		Design Agent									
2	1	Cog.Eng. F. H. Steen	<i>F. H. Steen</i>	08/05/97							
2	1	Cog. Mgr. A. D. Rice	<i>A. D. Rice</i>	8-5-97							
2	1	QA T. L. Tung	<i>T. L. Tung</i>	8/5/97							
		Safety									
		Env.									

18. M. T. Ellsworth <i>M. T. Ellsworth</i> 8-5-97 Signature of EDT Originator		19. N/A Authorized Representative Date for Receiving Organization		20. A. D. Rice <i>A. D. Rice</i> 8-5-97 Design Authority/ Cognizant Manager		21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	

Tank 241-T-203, Core 190 Analytical Results for the Final Report

Franciska H. Steen

Waste Management of Hanford, Inc., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: EDT-620414

UC: 2070

Org Code: 7576B

Charge Code: MD378

B&R Code: EW 3120074

Total Pages: 687

Key Words: Tank 241-T-203, 241-T-203, T-203, Core 190, Analytical Results, Final Report

Abstract: N/A

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: Document Control Services, P.O. Box 950, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

Release Approval

8/5/97
Date

Approved for Public Release

HNF-SD-WM-DP-247, REV. 0

ANALYTICAL SERVICES

**TANK 241-T-203, CORE 190
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
Waste Management of Hanford, Inc.
P.O. Box 700
Richland, Washington**

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

Narrative	1
T-203 Sample Breakdown (Attachment 1)	14
Correspondence (Attachment 2)	28
Sample Data Summary	38
Composite Worksheets	75
Chain of Custody Forms	85
Photographs	98
Sample Handling	111
Extrusion Worklist # 17690 (582)	113
Extrusion Worklist # 17700 (583)	114
Extrusion Worklist # 17702 (584)	115
Extrusion Worklist # 17703 (597)	116
Extrusion Worklist # 17705 (598)	117
Extrusion Worklist # 17707 (586)	118
Extrusion Worklist # 17708 (585)	119
Extrusion Worklist # 17709 (599)	120
Extrusion Worklist # 17710 (600)	121
Extrusion Worklist # 17727 (601)	122
Extrusion Worklist # 17728 (602)	123
Sample Preparations	124
Fusion Digestion Worklist # 17877 (735, 737, 759)	126
Fusion Digestion Worklist # 17878 (738, 757, 760)	127
Fusion Digestion Worklist # 17879 (739, 740, 761)	128
Fusion Digestion Worklist # 17880 (741, 762, 763)	129
Fusion Digestion Worklist # 17881 (742, 743, 764)	130
Fusion Digestion Worklist # 17882 (744, 765, 766)	131
Fusion Digestion Worklist # 17883 (745, 767)	132
Fusion Digestion Worklist # 18196 (1015)	133
Fusion Digestion Worklist # 19251 (1734)	134
Water Digestion Worklist # 17884 (736, 746, 768)	135
Water Digestion Worklist # 17885 (747, 758, 769)	136
Water Digestion Worklist # 17886 (748, 749, 770)	137
Water Digestion Worklist # 17887 (750, 771, 772)	138
Water Digestion Worklist # 17888 (751, 752, 773)	139

TABLE OF CONTENTS (Continued)

Water Digestion Worklist # 17889 (753, 774, 775)	140
Water Digestion Worklist # 17890 (754, 776)	141
Water Digestion Worklist # 18198 (1016)	142
Acid Digestion Worklist # 18197 (1017)	143
T-203 Bulk Density Worksheets	144
Inorganic Analysis	157
Differential Scanning Calorimetry (DSC)	
DSC Worklist # 18004 (733)	159
DSC Worklist # 18014 (664, 665)	164
DSC Worklist # 18015 (666, 667)	171
DSC Worklist # 18016 (669, 670)	179
DSC Worklist # 18017 (705, 711)	186
DSC Worklist # 18045 (731)	193
DSC Worklist # 18047 (668, 671)	199
DSC Worklist # 18048 (706, 707)	206
DSC Worklist # 18049 (708, 709)	213
DSC Worklist # 18053 (710, 712)	220
DSC Worklist # 18054 (713, 714)	227
DSC Worklist # 18055 (715, 716)	234
DSC Worklist # 18422 (731, 733)	241
DSC Worklist # 18423 (664, 665, 666, 667, 668, 669, 670, 671, 705)	242
DSC Worklist # 18424 (707, 708, 709, 710, 711, 712, 713, 714, 715)	244
DSC Worklist # 18776 (1013)	246
DSC Worklist # 19451 (1013)	250
Thermogravimetric Analysis (TGA)	
TGA Worklist # 18013 (781, 733)	251
TGA Worklist # 18018 (664, 665)	256
TGA Worklist # 18019 (666, 667)	263
TGA Worklist # 18020 (669, 670)	270
TGA Worklist # 18021 (705, 711)	277
TGA Worklist # 18038 (731)	284
TGA Worklist # 18039 (668, 671)	289
TGA Worklist # 18040 (706, 707)	296
TGA Worklist # 18041 (708, 709)	303
TGA Worklist # 18042 (710, 712)	310
TGA Worklist # 18043 (713, 714)	317
TGA Worklist # 18044 (715, 716)	324
TGA Worklist # 18779 (1013)	331
Specific Gravity Analysis (SpG)	
SpG Worklist # 17965 (733)	335
SpG Worklist # 18056 (731)	339

TABLE OF CONTENTS (Continued)

Ion chromatographic Analysis (IC)	
IC Worklist # 18000 (733)	342
IC Worklist # 18034 (731)	350
IC Worklist # 18063 (736)	356
IC Worklist # 18064 (758)	364
IC Worklist # 18065 (748, 749, 770)	374
IC Worklist # 18033 (750, 771, 772)	386
IC Worklist # 18088 (751, 752, 773)	398
IC Worklist # 18089 (753, 774, 775)	410
IC Worklist # 18128 (747, 769)	422
IC Worklist # 18149 (754, 776)	433
IC Worklist # 18215 (748, 749, 770)	446
IC Worklist # 18291 (746, 768)	457
IC Worklist # 18959 (1016)	467
Inductively Coupled Plasma Spectroscopy Analysis (ICP)	
ICP Worklist # 18006 (733)	476
ICP Worklist # 18080 (731)	482
ICP Worklist # 18122 (757, 738, 760)	486
ICP Worklist # 18123 (735, 737, 759)	493
ICP Worklist # 18150 (739, 740, 761, 741, 762, 763)	501
ICP Worklist # 18163 (742, 743, 764, 744, 765, 766)	510
ICP Worklist # 18222 (745, 767)	519
ICP Worklist # 19537 (1017)	556
Total Inorganic/Total Organic Analysis (TICTOC)	
TICTOC Worklist # 18810 (1013)	567
Radiochemical Analysis	586
Total Alpha Analysis (AT)	
AT Worklist # 17970 (733)	588
AT Worklist # 18037 (731)	595
AT Worklist # 18052 (762)	601
AT Worklist # 18062 (764)	607
AT Worklist # 18097 (765, 766)	613
AT Worklist # 18126 (761)	621
AT Worklist # 18138 (767)	628
AT Worklist # 18162 (757, 760)	634
AT Worklist # 18210 (759)	643
AT Worklist # 18211 (763)	649

TABLE OF CONTENTS (Continued)

Gamma Energy Analysis (GEA)	
GEA Worklist # 19354 (1734)	655
Strontium Analysis (Sr-90)	
Sr-90 Worklist # 19271 (1734)	674

This document consists of pages 1 through 680. Pages ii, 2, 15, 29, 39, 76, 86, 99, 112, 125, 145, 158 and 587 were intentionally left blank.

TRADEMARKS:

Perkin-Elmer is a Registered Trademark of Research and Manufacturing Company, Inc. Mettler is a Registered Trademark of Mettler Electronics

HNF-SD-WM-DP-247, REV. 0

NARRATIVE

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

222-S ANALYTICAL SERVICES

TANK 241-T-203, CORE 190,
ANALYTICAL RESULTS FOR THE FINAL REPORT

This document is the analytical laboratory report for tank 241-T-203 push mode core segments collected on April 17, 1997 and April 18, 1997. The segments were subsampled and analyzed in accordance with the *Tank 241-T-203 Push Mode Core Sampling and Analysis Plan (TSAP)* (Schreiber, 1997a), the *Safety Screening Data Quality Objective (DQO)* (Dukelow, et al., 1995) and *Letter of Instruction for Core Sample Analysis of Tanks 241-T-201, 241-T-202, 241-T-203, and 241-T-204 (LOI)* (Hall, 1997). The analytical results are included in the data summary report (Table 1).

None of the samples submitted for Differential Scanning Calorimetry (DSC), Total Alpha Activity (AT) and Total Organic Carbon (TOC) exceeded notification limits as stated in the TSAP (Schreiber, 1997a). The statistical results of the 95% confidence interval on the mean calculations are provided by the Tank Waste Remediation Systems (TWRS) Technical Basis Group in accordance with the Memorandum of Understanding (Schreiber, 1997b) and not considered in this report.

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. The diagram for the core composite is also included.

Core 190

Ten push mode core segments were removed from tank 241-T-203 riser 3 on April 17, 1997 and April 18, 1997. Segments were received by the 222-S Laboratory between April 18, 1997 and April 22, 1997.

The TSAP (Schreiber, 1997a) states 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. Table 2 summarizes the extrusion information.

HNF-SD-WM-DP-247, REV.0

Field Blank

A field blank was provided to the 222-S laboratory with core 190. It underwent the same analysis as the drainable liquid as instructed by the TSAP (Schreiber, 1997a).

Core Composite

One core composite was created and analyzed in accordance with the LOI (Hall, 1997). The composite preparation worksheets are included in this document.

Table 2. Sample Receipt and Extrusion Information for 241-T-203 Core 190.

Reference Number	Segment	Date Sampled	Date Recovered	Exposure Date	Exposure Time	Exposure Location	Exposure Duration (h)	Exposure Volume (L)	Exposure Concentration (g/L)	Exposure Description
190-01	1R	4/18/97	4/18/97	4/23/97	18.0	0.0	17.0-4-Upper Half	155.4-Lower Half	The solids were black in color and resembled a wet sludge.	
190-02	2	4/17/97	4/18/97	4/23/97	19.0	0.0	189.1-Upper Half	167.3-Lower Half	The solids were black in color and resembled a wet sludge.	
190-03	3	4/17/97	4/22/97	4/28/97	16.0	0.0	138.4-Upper Half	130.3-Lower Half	The solids were black in color and resembled a wet sludge.	
190-4	4	4/17/97	4/18/97	4/23/97	19.0	0.0	176.3-Upper Half	182.4-Lower Half	The solids were black in color and resembled a wet sludge.	
190-5	5	4/17/97	4/18/97	4/23/97	19.0	0.0	191.4-Upper Half	171.6-Lower Half	The solids were black in color and resembled a dry sludge.	
190-06	6	4/17/97	4/22/97	4/29/97	19.0	0.0	169.8-Upper Half	183.7-Lower Half	The solids were black in color and resembled a wet sludge.	
190-07	7	4/17/97	4/22/97	4/29/97	19.0	0.0	183.6-Upper Half	158.1-Lower Half	The solids were black in color and resembled a wet sludge.	
190-08	8	4/17/97	4/22/97	4/29/97	19.0	0.0	168.1-Upper Half	175.0-Lower Half	The solids were black in color and resembled a wet sludge.	
190-09	9	4/18/97	4/22/97	4/29/97	19.0	0.0	169.2-Upper Half	185.0-Lower Half	The solids were black in color and resembled a wet sludge.	
Blank	Field	4/18/97	4/18/97	4/23/97	0.0	145.1-Drainable	n/a	The liquid was colorless and clear. Collected 270 mL of liquid. No organic layer was observed.		

Analytical Results Summary

The data summary report (Table 1) compiles the analytical results that satisfy all applicable DQOs.

Inorganic Analyses

Differential Scanning Calorimetry (DSC)

The DSC analyses were performed in duplicate on direct subsamples. The exothermic energy based on dry weight of subsample was calculated for all subsamples. The average of the TGA results for each subsample was used in the dry weight correction for that subsample.

Relative percent differences (RPDs) greater than 30% were reported for two of the twenty-three subsamples submitted for analysis. The nonhomogeneous material and small sample size required for this analysis made it difficult to obtain reproducible results. No reruns were requested. The standard recoveries for this analysis were within the required limits.

Thermogravimetric Analysis (TGA)

The TGA analyses were performed in duplicate on direct subsamples. The TGA results were determined by summing the weight loss steps which occurred below 250°C; weight loss steps above this were not used to determine the result. More information may be obtained by examining the raw data.

The standard recoveries and RPDs for this analysis were within the required limits.

Density

Bulk density was performed on the solid subsamples as required by the TSAP (Schreiber, 1997a). The results of the bulk density test ranged from 1.14 g/mL to 1.39 g/mL. The bulk density results were less than the 1.5 g/mL used to determine the solid total alpha activity notification limit stated in the TSAP (Schreiber, 1997a), therefore, no corrections were required. There were no quality control (QC) parameters stated in the TSAP (Schreiber, 1997a) for these samples.

Specific gravity analyses were performed on the liquid subsamples. The results are provided in Table 1. The standard recoveries and RPDs for this analysis were within the required limits.

Ion Chromatography (IC)

The IC analyses were performed on direct subsamples of liquid samples as indicated by a blank in the aliquot class (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 results for all IC analytes are included in Table 1. However, the QC review discussed in this report is limited to Br for the half segment subsamples. All other analyte results presented 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, RPDs and spike recoveries for the Br analysis were within the required limits.

The analytes required for the core composite subsample were F, Cl, NO₂, NO₃, SO₄, PO₄ and Oxalate. A high RPD (>20%) was reported for PO₄ and was attributed to sample inhomogeneity. This method is temporarily out of service while instrumentation is moved in the lab (Rice, 1997). A reanalysis will only be performed at the request of the TWRS technical Basis Group.

The standard recoveries and spike recoveries for these analytes were within the required limits.

Inductively Coupled Plasma Spectrophotometry (ICP)

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 both an acid digest as indicated by an "A" and a fusion as indicated by an "F" in the A# column in table 1.

The results for all ICP analytes are included in Table 1. However the QC review discussed in this report is limited to Li for the half segment subsamples. All other analyte results presented 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, RPDs and spike recoveries for the Li analysis were within the required limits.

The analytes required for the core composite subsamples were Al, Ba, Bi, Ca, Cr, Fe, La, Mn, Ni, P, K, Si, S, Na, Sr and U. Matrix spike recoveries outside of the required range (75% - 125%) were reported for Bi, Cr, Fe, K, La, Mn, P and Na. These spike failures were attributed to the high concentration of these analytes in the samples with respect to the amount of spike standard added. Therefore, the matrix spike recovery results for these analytes should not be used as a means to determine the accuracy of the results.

HNF-SD-WM-DP-247, REV.0

A post digestion spike analysis was performed for each analyte that failed the matrix spike analysis as an instrument performance check. The post digestion spike recoveries were all within the required limits (75% to 125%). The results were as follows: Bi 95.6%, Cr 99.75%, Fe 93.4%, K 103.4%, La 100.5%, Mn 103.6%, P 100.1% and Na 97.8%. More information may be obtained by examining the raw data.

In addition to the matrix spike and post digestion spike analyses, a serial dilution analysis was performed by diluting the sample an additional five-fold. The serial dilution provides information about the accuracy of the analysis when the sample concentration is more than four times the concentration of the matrix spike standard added. For acceptable performance the percent difference between the serial dilution and the undiluted results must be ≤ 10 percent.

Table 3 shows a comparison of the result of the sample with that of the serial dilution for those required analytes that had a matrix spike recovery outside of the requested limits. The results presented in this table have not been corrected for the acid digestion factor, and are therefore reported as $\mu\text{g/mL}$. The serial dilution results may be found in the raw data and are identified by an "L" at the end of the sample number. The results provided in Table 3 indicate that the accuracy of the analysis was acceptable, with the exception of Mn.

The percent difference between the sample and serial dilution results for Mn was 15.1%. This was likely the result of the high concentration of Fe in the sample. Iron is known to interfere with the determination of Mn. Although the interelement correction factor normally used is sufficient for compensating for this spectral interference, it did not adequately correct for the high concentration of Fe found in this particular sample. Therefore, the sample results may be biased high.

A high RPD was reported for Fe and the sample was reanalyzed. The results of the reanalyses showed no improvement in the RPD. Since Fe was the only analyte that failed the precision requirements, no redigestion was requested. Sample inhomogeneity may have been a contributing factor to the RPD failure. An ICP analysis was performed on the fusion digestion portion as an additional check for sample inhomogeneity, the resultant RPD was 34.6%. For informational purposes the raw data from the first acid digest ICP analysis and the fusion digest ICP analysis have been included in this document and marked as "data not used".

The standard recoveries for this analysis were within the required limits.

Table 3. ICP Serial Dilution Raw Results for Tank 241-T-203

Sample ID	Analyte	Sample Result Undiluted (ug/mL)	Serial Dilution Result (ug/mL)	% Difference
S97T001017	Bi	248.10	262.60	5.8
S97T001017	Na	177.00	183.30	3.6
S97T001017	Mn	82.31	69.88	15.1
S97T001017	La	59.59	60.58	1.7
S97T001017	K	34.85	35.04	0.5
S97T001017	Cr	19.39	20.30	4.7
S97T001017	P	12.10	12.48	3.1
S97T001017	Fe	18.14	19.00	4.7

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

HNF-SD-WM-DP-247, REV.0

TIC/TOC - Total Inorganic/Organic Carbon Persulfate

TIC/TOC analyses by persulfate oxidation/coulometry were performed in duplicate on direct subsamples of the core composite. None of the results exceeded the TOC notification limit of 30,000 $\mu\text{gC/g}$.

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 is not used in the final calculations and has 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.

The standard recoveries, RPDs and spike recoveries for this analysis were within the required limits.

Radionuclide Analyses

Total Alpha (AT)

The total alpha (AT) analyses were performed in duplicate on direct subsamples for the liquids as indicated by a blank in the A# column in Table 1. 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.

All liquid AT results were below the total alpha activity action limit of 61.5 $\mu\text{Ci/mL}$. All solid AT results were below the total alpha activity limit of 41 $\mu\text{Ci/g}$.

High RPDs (>20%) were reported for three of the twelve subsamples submitted for analyses. Selected samples were reanalyzed. The results of the reanalyses showed little improvement in the RPDs. No additional reruns were requested due to the low alpha activity in the samples. The standard recoveries and spike recoveries for this analysis were within the required limits.

Strontium 90 (^{90}Sr)

^{90}Sr analyses were performed on the core composite subsamples. The solid subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion preparation is indicated with an "F" in A# column in Table 1. The standard recoveries, spike recoveries and RPDs for this analysis were within the required limits.

HNF-SD-WM-DP-247, REV.0

Gamma Energy Analysis (GEA)

GEA analyses were performed on the core composite subsamples. The solid core composite subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion preparation is indicated with an "F" in A# column in Table 1.

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

Procedures

Table 4 lists the analytical procedures used for performing the sample analyses. Abbreviations for analyses are defined in the table notes.

Table 4. Analytical Procedures			
Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
DSC	Solid/Liquid	N/A	LA-514-114 Rev. D-0
TGA	Solid/Liquid	N/A	LA-514-114 Rev. D-0
Bulk Density	Solid	N/A	LO-160-103 Rev. B-0
Sp.G.	Liquid	N/A	LA-510-112 Rev. D-0 LA-510-112 Rev. D-1
IC	Solid Liquid	LA-504-101 Rev. E-0 N/A	LA-533-105 Rev. D-1

HNF-SD-WM-DP-247, REV.0

Table 4. Analytical Procedures

Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
ICP	Solid	LA-505-159 Rev. D-0 LA-549-141 Rev. F-0	LA-505-151 Rev. E-1 LA-505-161 Rev. C-1
	Liquid	N/A	
TICTOC	Solid/Liquid	N/A	LA-342-100 Rev. E-0
AT	Solid	LA-549-101 Rev. F-0	LA-508-101 Rev. G-0
	Liquid	N/A	
⁹⁰ Sr	Solid	LA-549-141 Rev. F-0	LA-220-101 Rev. E-1
GEA	Solid	LA-549-101 Rev. F-0	LA-548-121 Rev. F-0

Abbreviations:

N/A = not applicable (these are direct samples)
 DSC = differential scanning calorimetry
 TGA = thermogravimetric analysis
 Sp.G. = specific gravity
 IC = ion chromatography
 ICP = inductively coupled plasma
 TOC = total organic carbon
 TIC = total inorganic carbon
 AT = total alpha
⁹⁰Sr = strontium 90
 GEA = gamma energy analysis

HNF-SD-WM-DP-247, REV.0

References

- Schreiber, R. D. 1997a, *Tank 241-T-203 Push Mode Core Sampling and Analysis Plan*, HNF-SD-WM-TSAP-135, Rev. 0-A, Lockheed Martin Hanford Corporation, Richland, WA 99352.
- Dukelow, G. T., J. W. Hunt, H. Babad, and J. E. Meacham, 1995, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, WA 99352
- Schreiber, R. D., 1997b, *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
- Meznarich, H. K., 1995, *222-S Laboratory Quality Assurance Plan*, WHC-SD-CP-QAPP-016, Rev. 1-A, Westinghouse Hanford Company, Richland, WA 99352
- Rice, A. D., 1997, *Closure of Laboratory Room 4D*, (letter WMH-9756544 to Distribution, dated June 24), Waste Management Hanford, Incorporated, Richland, WA 99352. (Included in Attachment 2, Correspondences)
- Hall, K. M., 1997, *Letter of Instruction for Core Sample Analysis of Tanks 241-T-201, 241-T-202, 241-T-203, and 241-T-204*, (interoffice memo 74620-97-195 to A. D. Rice, May 8), Lockheed Martin Hanford Company, Richland, WA 99352. (Included in Attachment 2, Correspondences)

HNH-SD-WM-DP-247, REV. 0

ATTACHMENT 1

T-203 SAMPLE BREAKDOWN

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

T-203
Core:190
Seg: 1
S97T000583

Attachment 1

HNF-SD-WM-DP-247, REV. 0

T-203
Core:190
Seg: 1R
S97T000597

Attachment 1

HNF-SD-WM-DP-247, REV. 0

T-203
Core:190
Seg: 2
S97T000584

Attachment 1

HNF-SD-MM-DP-247, REV. 0

T-203
Core:190
Seg: 3
S97T000598

Attachment 1

HNF-SD-WM-DP-247, REV. 0

T-203
Core:190
Seg: 4
S97T000585

Attachment 1

HNF-SD-WM-DP-247, REV. 0

Upper
Half

S97T000659

Lower
Half

BULK DENSITY

S97T000662

DSC
TGA

S97T000667

ARCHIVE

S97T000675

DSC
TGA

S97T000670

ARCHIVE

S97T000678

FUSION
ICP

S97T000740

H2O
DIGEST
IC-ANIONS

S97T000749

FUSION
ICP
ALPHA

S97T000762

H2O
DIGEST
IC-ANIONS

S97T000771

T-203
Core:190
Seg: 5
S97T000586

Attachment 1

HNF-SD-WM-DP-247, REV. 0

Upper
Half

S97T000660

Lower
Half

BULK DENSITY

S97T000663

DSC
TGA

S97T000668

ARCHIVE

S97T000676

DSC
TGA

S97T000671

ARCHIVE

S97T000679

FUSION
ICP

S97T000741

H2O
DIGEST
IC-ANIONS

S97T000750

FUSION
ICP
ALPHA

S97T000763

H2O
DIGEST
IC-ANIONS

S97T000772

T-203
Core:190
Seg: 6
S97T000599

Attachment 1

HNF-SD-MM-DP-247, REV. 0

T-203
Core:190
Seg: 7
S97T000600

Attachment 1

HNF-SD-WM-DP-247, REV.0

T-203
Core:190
Seg: 8
S97T000601

Attachment 1

HNF-SD-WM-DP-247, REV. 0

T-203
Core:190
Seg: 9
S97T000602

Attachment 1

HNF-SD-WM-DP-247, REV. 0

Upper
Half

S97T000698

Lower
Half

BULK DENSITY

S97T000704

DSC
TGA

S97T000710

ARCHIVE

S97T000722

DSC
TGA

S97T000716

ARCHIVE

S97T000728

FUSION
ICP

S97T000745

H2O
DIGEST
IC-ANIONS

S97T000754

FUSION
ICP
ALPHA

S97T000767

H2O
DIGEST
IC-ANIONS

S97T000776

25

T-203
Core:190
Seg: FB
S97T000582

Attachment 1

HNF-SD-WM-DP-247, REV. 0

Composited:

Segment Grams:

1	UH	5.0
1	LH	5.0
1R	UH	5.0
1R	LH	5.0
2	UH	5.0
2	LH	5.0
3	UH	5.0
3	LH	5.0
4	UH	5.0
4	LH	5.0
5	UH	5.0
5	LH	5.0
6	UH	5.0
6	LH	5.0
7	UH	5.0
7	LH	5.0
8	UH	5.0
8	LH	5.0
9	UH	5.0
9	LH	5.0

T-203

Core:190

Composite:

Whole Core

S97T001012

S97T001013

S97T001014

S97T001734

S97T001017

S97T001016

Attachment 1

HNF-SD-WM-DP-247, REV. 0

HNF-SD-WM-DP-247, REV. 0

ATTACHMENT 2
CORRESPONDENCE

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

INTEROFFICE MEMO

LOCKHEED MARTIN

From: Data Assessment and Interpretation 74620-97-195
Phone: 376-5029 R2-12
Date: May 8, 1997
Subject: LETTER OF INSTRUCTION FOR CORE SAMPLE ANALYSIS OF TANKS 241-T-201,
241-T-202, 241-T-203, AND 241-T-204

To: A. D. Rice T6-06

cc: K. E. Bell R2-12
J. G. Kristofzski R2-12
J. E. Meacham S7-14
L. F. Perkins T6-14
C. M. Seidel T6-14
KMH File/LB R2-12

The attached letter of instruction (LOI) covers the creation and analysis of core composites from tanks 241-T-201, 241-T-202, 241-T-203, and 241-T-204.

This LOI directs the 222-S Laboratory to provide Process Engineering with additional necessary analyses on waste samples from the four T-200 series tanks. These additional data will then be available to the appropriate personnel so that the statistical evaluation requirements for the T-200 series tanks can be met and accurate best basis inventories can be calculated.

If you have any questions on this LOI, please contact Dr. K. E. Bell on 373-1629 or Ms. K. M. Hall on 376-5029.

K. M. Hall
Manager

klh

Attachment

Letter of Instruction for Core Sample Analysis of Tanks
241-T-201, 241-T-202, 241-T-203, and 241-T-204

1. Subject

This letter of instruction covers the creation and analysis of core composites from tanks 241-T-201, 241-T-202, 241-T-203, and 241-T-204.

2. References

- [1] B. C. Simpson and D. J. McCain, 1997, *Historical Model Evaluation Data Requirements*, HNF-SD-WM-DQO-018, Rev. 2, Lockheed Martin Hanford Corporation, Richland, Washington.
- [2] T. A. Hu, 1997, *Tank 241-T-201 Push Mode Core Sampling and Analysis Plan*, HNF-SD-WM-TSAP-130, Rev. 0, Lockheed Martin Hanford Corporation, Richland, Washington.
- [3] K. E. Bell, 1997, *Tank 241-T-202 Push Mode Core Sampling and Analysis Plan*, HNF-SD-WM-TSAP-121, Rev. 0, Lockheed Martin Hanford Corporation, Richland, Washington.
- [4] R. D. Schreiber, 1997, *Tank 241-T-203 Push Mode Core Sampling and Analysis Plan*, HNF-SD-WM-TSAP-515, Rev. 0, Lockheed Martin Hanford Corporation, Richland, Washington.
- [5] W. D. Winkleman, 1997, *Tank 241-T-204 Push Mode Core Sampling and Analysis Plan*, HNF-SD-WM-TSAP-119, Rev. 0, Lockheed Martin Hanford Corporation, Richland, Washington.

3. Task Objective

This letter of instruction (LOI) will allow the 222-S Laboratory to provide Process Engineering with additional necessary analyses on waste samples from the four T-200 series tanks. These additional data will then be available to the appropriate personnel so that the statistical evaluation requirements for the T-200 series tanks can be met and accurate best basis inventories can be calculated.

4. Introduction and Overall Scope

The T-200 tanks are not currently in the scope of the historical data quality objectives (DQO) document (Reference 1). In the vein of the historical DQO, the goal of the additional work is to determine if information from the previously sampled B-200 series tanks sufficiently quantifies the contents of

the T-200 series tanks, within established uncertainty levels. Furthermore, the additional data is important in calculating an accurate tank inventory.

5. Functional Requirements

All four of the T-200 series tanks have approved tank sampling and analysis plans (TSAPs), shown respectively in References 2-5. The requirements in each TSAP should be followed as written. This LOI requests additional analytes on one core composite from each of the four T-200 series tanks.

After subsampling to meet the requirements of each respective TSAP, a core composite shall be created for each of the T-200 series tanks by combining an equal mass of each subsample collected. Drainable liquid samples shall not be used in creating the core composites. Each core composite shall be homogenized before aliquots are removed for analysis or sample preparation.

Each core composite shall be analyzed in accordance with Table 1. As shown, analyses shall be measured directly or following water, acid, or fusion digestion.

Table 1. Core Composite Analytes of the T-200 Series Tanks.

Method	Sample Preparation	Analyte
ICP	Acid	Al, Ba, Bi, Ca, Cr, Fe, La, Mn, Ni, P, K, Si, S, Na, Sr, U
IC	Water	F ⁻ , Cl ⁻ , NO ₂ ⁻ , NO ₃ ⁻ , SO ₄ ²⁻ , PO ₄ ³⁻ , Oxalate
GEA	Fusion	¹³⁷ Cs, ²⁴¹ Am
Separation/ β counting	Fusion	⁹⁰ Sr
Coulometry	None	TOC, TIC
DSC	None	Energetics
TGA	None	Percent water
Gravimetry	None	Bulk density

Notes:

ICP = inductively coupled plasma
 IC = ion chromatography
 GEA = gamma energy analysis
 DSC = differential scanning calorimetry
 TGA = thermal gravimetric analysis
 TOC = total organic carbon
 TIC = total inorganic carbon

quality control requirements for the additional analyses are listed in Table 2. All analyses shall be performed in duplicate. All ICP and IC analyses require spikes or serial dilutions. Spikes are required for the ⁹⁰Sr analyses.

Table 2. T-200 Series Core Composite Quality Control Precision and Accuracy Requirements.

Method or Analyte	Duplicate Criteria (RPD) ^a	Spike Criteria (% recovery)	Blank Criteria	LCS Criteria ^b
ICP	≤ 20	75 - 125	<EQI	80 - 120%
IC	≤ 20	75 - 125	<EQI	80 - 120%
GEA	≤ 20	N/A	<MDA	80 - 120%
⁹⁰ Sr	≤ 20	75 - 125	<MDA	80 - 120%
TOC	≤ 20	75 - 125	<EQI	80 - 120%
TIC	≤ 20	75 - 125	<EQI	80 - 120%
DSC	≤ 30	N/A	N/A	80 - 120%
TGA	≤ 30	N/A	N/A	80 - 120%
Bulk Density	≤ 30	N/A	N/A	N/A

Notes:

N/A = not applicable
MDA = Minimum Detectable Activity
EQI = Estimated Quantitation Limit
LCS = Laboratory Control Standard

^aFor the calculation of the relative percent difference, both the sample and the duplicate results must exceed the EQI or MDA. Failures are permissible if the requirements in Item 13 are followed.
^bThese criteria are recommended. Failures are permissible if the requirements in Item 13 are followed.

When a blank exceeds the EQI or MDA, sample results that exceed the contribution from the blank twenty-fold or more are reportable. Also see the quality assurance sections of the TSAPs.
^cFor some analyses, this could be a method spike or a blank spike. Ranges are percent recovery of theoretical.

6. Schedule

The data shall be reported in the same format IV data package, within the same time, and downloaded into the Tank Characterization Database, as required in the respective T-200 TSAPs.

7. Cost

The costs for this activity shall be covered under Characterization Project's 222-S Laboratory Support.

8. Procurement

N/A

9. Permits

N/A

10. Specific Services and Special Instructions

N/A

11. Deliverables

These are covered in item 6.

12. Meetings, Reports, and Activities

N/A

13. Quality Assurance Requirements

Quality assurance requirements for the additional work shall be identical to those identified in each respective T-200 series TSAP.

14. Safety Requirements

No special safety requirements are required to perform the additional work described herein.

15. Task Management

The list of key personnel is provided in Table 3.

Table 3. Key Personnel

Individual and Phone Number	Organization	Responsibility
K. E. Bell; 373-1629	TWRS Process Engineering (LMHC)	Tank 241-T-202 Tank Coordinator
B. C. Simpson; 373-5915	TWRS Process Engineering (LMHC)	Best Basis Inventory Task Leader
A. D. Rice; 373-5878	Analytical Services	Team Leader, 222-S Laboratory Production
K. M. Hall; 376-5029	TWRS Process Engineering (LMHC)	Manager, Data Assessment and Interpretation

16. Other

N/A

17. Approvals

K. E. Bell, tank 241-T-202 Tank Coordinator
LMHC TWRS Process Engineering

K. M. Hall, Manager
LMHC TWRS Process Engineering: Data Assessment and Interpretation

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
A. D. Rice	Distribution	WMH-9756544

Subject: CLOSURE OF LABORATORY ROOM 4D

DISTRIBUTION

Approval	Date	Name	Location	W/att

Correspondence Control A3-01

Bechtel Hanford, Inc.

J. H. Kessner B1-35

Numatec Hanford Corporation

D. L. Herting T6-07

B&W Hanford Company

E. R. Hafla S6-60

F. M. Simmons S6-60

A. G. Westra S6-60

Lockheed Martin Hanford Corp.

K. M. Hall R2-12

Waste Management of Hanford, Inc.

M. J. La Barge T3-28

L. T. Blackford T4-05

J. E. Hyatt T6-04

E. Q. Le S6-72

L. P. Marke1 T6-16

N. K. Myers T3-28

L. F. Perkins T6-14

J. R. Prilucik T6-20

A. D. Rice T6-06

C. M. Seidel T6-14

B. H. Von Bargaen S6-72

Waste Management Federal Services of Hanford, Inc.

P.O. Box 700
Richland, WA 99352

July 24, 1997

WMH-9756544

Distribution

Dear Ladies and Gentlemen:

CLOSURE OF LABORATORY ROOM 4D

Adverse environmental conditions specific to room 4D of the 222-S analytical laboratory have resulted in the suspension of all analytical operations in room 4D. Room 4D currently houses the 222-S Laboratory's ion chromatography (IC) and differential scanning calorimetry/thermal gravimetric analysis (DSC/TGA) capability. The analytical equipment in 4D will be moved to other locations in the 222-S laboratory and room 4D will be closed indefinitely. Relocation of the instrumentation has begun and is expected to take several weeks to accomplish. During this time no anion IC and DSC/TGA analyses will be performed.

This letter is being provided to customers that may be impacted by this loss of analytical capability. The laboratory staff is expending every effort to minimize the downtime of the IC and DSC/TGA instruments. You will be provided a weekly status of developments and any known or expected impacts to analytical commitments.

Should you desire further assistance, please contact me at 373-5878.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Andrew D. Rice'.

Andrew D. Rice, Team Lead
Production Planning and Control
222-S Laboratory

mte

HNF-SD-WM-DP-247, REV. 0

SAMPLE DATA SUMMARY

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000664			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000664			DSC Exotherm on Perkin Elmer	Joules/g	102.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000664			% Water by TGA on Perkin Elmer	%	98.28	n/a	77.76	76.74	77.25	1.32	n/a	n/a	n/a
S97T000735	F		Silver -ICP-Fusion	ug/g	96.00	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	80.90	195.0	n/a
S97T000735	F		Aluminum -ICP-Fusion	ug/g	96.60	<5.00e-02	<9.75e+02	<9.84e2	n/a	n/a	96.10	976.0	n/a
S97T000735	F		Arsenic -ICP-Fusion	ug/g	102.0	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	101.0	1.95e+03	n/a
S97T000735	F		Boron -ICP-Fusion	ug/g	98.20	<5.00e-02	<9.75e+02	<9.84e2	n/a	n/a	95.60	976.0	n/a
S97T000735	F		Barium -ICP-Fusion	ug/g	96.80	<5.00e-02	<9.75e+02	<9.84e2	n/a	n/a	94.70	976.0	n/a
S97T000735	F		Beryllium -ICP-Fusion	ug/g	100.4	<5.00e-03	<97.50	<9.84e1	n/a	n/a	97.80	97.60	n/a
S97T000735	F		Bismuth -ICP-Fusion	ug/g	99.60	<1.00e-01	<2.90e+04	2.71e+04	2.80e+04	6.77	95.30	1.95e+03	n/a
S97T000735	F		Calcium -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	100.0	1.95e+03	n/a
S97T000735	F		Cadmium -ICP-Fusion	ug/g	98.60	<5.00e-03	<97.50	<9.84e1	n/a	n/a	97.50	97.60	n/a
S97T000735	F		Cerium -ICP-Fusion	ug/g	96.80	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	95.30	1.95e+03	n/a
S97T000735	F		Cobalt -ICP-Fusion	ug/g	99.80	<2.00e-02	<3.90e+02	<3.93e2	n/a	n/a	98.30	390.0	n/a
S97T000735	F		Chromium -ICP-Fusion	ug/g	97.60	<1.00e-02	<2.67e+03	2.64e+03	2.66e+03	1.13	96.60	195.0	n/a
S97T000735	F		Copper -ICP-Fusion	ug/g	97.60	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	96.30	195.0	n/a
S97T000735	F		Iron -ICP-Fusion	ug/g	91.60	<5.00e-02	<1.96e+03	1.78e+03	1.87e+03	9.63	91.50	976.0	n/a
S97T000735	F		Lanthanum -ICP-Fusion	ug/g	98.60	<5.00e-02	<8.68e+03	8.63e+03	8.66e+03	0.58	97.10	976.0	n/a
S97T000735	F		Lithium -ICP-Fusion	ug/g	97.20	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	94.10	195.0	n/a
S97T000735	F		Magnesium -ICP-Fusion	ug/g	99.00	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	96.90	1.95e+03	n/a
S97T000735	F		Manganese -ICP-Fusion	ug/g	96.20	<1.00e-01	<9.23e+03	9.08e+03	9.16e+03	1.64	93.70	195.0	n/a
S97T000735	F		Molybdenum -ICP-Fusion	ug/g	99.20	<5.00e-02	<9.75e+02	<9.84e2	n/a	n/a	98.00	976.0	n/a
S97T000735	F		Sodium -ICP-Fusion	ug/g	100.4	<1.00e-01	<3.66e+04	3.69e+04	3.68e+04	0.82	100.0	1.95e+03	n/a
S97T000735	F		Neodymium -ICP-Fusion	ug/g	98.20	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	96.30	1.95e+03	n/a
S97T000735	F		Phosphorus -ICP-Fusion	ug/g	99.60	<2.00e-01	<3.90e+03	<3.93e3	n/a	n/a	111.0	3.90e+03	n/a
S97T000735	F		Lead -ICP-Fusion	ug/g	96.20	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	94.90	1.95e+03	n/a
S97T000735	F		Sulfur -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	96.60	1.95e+03	n/a
S97T000735	F		Antimony -ICP-Fusion	ug/g	94.40	<6.00e-02	<1.17e+03	<1.18e3	n/a	n/a	92.80	1.17e+03	n/a
S97T000735	F		Selenium -ICP-Fusion	ug/g	93.20	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	93.50	1.95e+03	n/a
S97T000735	F		Silicon -ICP-Fusion	ug/g	99.00	<5.00e-02	<9.75e+02	1.05e+03	n/a	n/a	103.0	976.0	n/a
S97T000735	F		Samarium -ICP-Fusion	ug/g	97.00	<1.00e-01	<1.95e+03	<1.97e3	n/a	n/a	95.10	1.95e+03	n/a
S97T000735	F		Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<4.09e+02	4.12.0	4.10.5	0.73	95.30	195.0	n/a
S97T000735	F		Titanium-ICP-Fusion	ug/g	96.20	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	95.20	195.0	n/a
S97T000735	F		Thallium -ICP-Fusion	ug/g	94.60	<2.00e-01	<3.90e+03	<3.93e3	n/a	n/a	93.10	3.90e+03	n/a
S97T000735	F		Uranium -ICP-Fusion	ug/g	94.50	<5.00e-01	<9.75e+03	<9.84e3	n/a	n/a	90.50	9.76e+03	n/a
S97T000735	F		Vanadium -ICP-Fusion	ug/g	99.20	<5.00e-02	<9.75e+02	<9.84e2	n/a	n/a	98.10	976.0	n/a
S97T000735	F		Zinc -ICP-Fusion	ug/g	94.40	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	92.80	195.0	n/a
S97T000735	F		Zirconium -ICP-Fusion	ug/g	97.20	<1.00e-02	<1.95e+02	<1.97e2	n/a	n/a	95.50	195.0	n/a
S97T000736	W		Fluoride-IC-Dionex 4000/4500	ug/g	93.39	<1.20e-02	7.19e+03	6.90e+03	7.05e+03	4.12	n/a	25.08	n/a
S97T000736	W		Chloride-IC-Dionex 4000/4500	ug/g	93.42	4.50e-02	6.59e+02	642.0	650.7	2.61	n/a	35.52	n/a
S97T000736	W		Nitrite-IC - Dionex 4000/4500	ug/g	97.06	<1.08e-01	4.97e+02	489.0	492.9	1.62	n/a	225.7	n/a
S97T000736	W		Bromide by Ion Chromatograph	ug/g	95.59	<1.25e-01	<2.61e+02	<2.60e2	n/a	n/a	n/a	261.2	n/a
S97T000736	W		Nitrate by IC-Dionex 4000/4500	ug/g	98.32	2.46e-01	6.36e+04	6.29e+04	6.33e+04	1.11	n/a	290.5	n/a
S97T000736	W		Phosphate-IC-Dionex 4000/4500	ug/g	98.90	<1.20e-01	2.88e+03	2.90e+03	2.89e+03	0.69	n/a	250.8	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000736		Sulfate by IC-Dionex 4000/4500	ug/g	96.99	<1.38e-01	6.07e+02	613.0	610.0	0.98	n/a	288.4	n/a
S97T000736		Oxalate-IC-Dionex 4000/4500	ug/g	94.92	<1.05e-01	<2.19e+02	<2.19e2	n/a	n/a	n/a	219.4	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000657		Bulk Density of Sample	g/mL	n/a	n/a	1.210	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000665		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000665		DSC Exotherm on Perkin Elmer	Joules/g	102.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	2.08e+03	n/a
S97T000665		% Water by TGA on Perkin Elmer	%	98.28	n/a	74.09	75.61	74.85	2.03	n/a	n/a	n/a
S97T000759	F	Silver -ICP-Fusion	ug/g	96.00	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Aluminum -ICP-Fusion	ug/g	96.60	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Arsenic -ICP-Fusion	ug/g	102.0	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Boron -ICP-Fusion	ug/g	98.20	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Barium -ICP-Fusion	ug/g	96.80	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Beryllium -ICP-Fusion	ug/g	100.4	<5.00e-03	<1.04e+02	<1.03e2	n/a	n/a	n/a	104.0	n/a
S97T000759	F	Bismuth -ICP-Fusion	ug/g	99.60	<1.00e-01	3.63e+04	3.41e+04	3.52e+04	6.25	n/a	2.08e+03	n/a
S97T000759	F	Calcium -ICP-Fusion	ug/g	96.60	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Cadmium -ICP-Fusion	ug/g	98.60	<5.00e-03	<1.04e+02	<1.03e2	n/a	n/a	n/a	104.0	n/a
S97T000759	F	Cerium -ICP-Fusion	ug/g	96.80	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Cobalt -ICP-Fusion	ug/g	99.80	<2.00e-02	<4.15e+02	<4.12e2	n/a	n/a	n/a	414.0	n/a
S97T000759	F	Chromium -ICP-Fusion	ug/g	97.60	<1.00e-02	2.53e+03	2.61e+03	2.57e+03	3.11	n/a	208.0	n/a
S97T000759	F	Copper -ICP-Fusion	ug/g	97.60	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Iron -ICP-Fusion	ug/g	91.60	<5.00e-02	2.21e+03	2.04e+03	2.12e+03	8.00	n/a	1.04e+03	n/a
S97T000759	F	Lanthanum -ICP-Fusion	ug/g	98.60	<5.00e-02	9.63e+03	9.89e+03	9.76e+03	2.66	n/a	1.04e+03	n/a
S97T000759	F	Lithium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Magnesium -ICP-Fusion	ug/g	99.00	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Manganese -ICP-Fusion	ug/g	96.20	<1.00e-02	1.07e+04	1.08e+04	1.08e+04	0.93	n/a	208.0	n/a
S97T000759	F	Molybdenum -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Sodium -ICP-Fusion	ug/g	100.4	<1.00e-01	3.60e+04	3.69e+04	3.64e+04	2.47	n/a	2.08e+03	n/a
S97T000759	F	Neodymium -ICP-Fusion	ug/g	98.20	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Phosphorus -ICP-Fusion	ug/g	99.60	<2.00e-01	<4.15e+03	<4.12e3	n/a	n/a	n/a	4.14e+03	n/a
S97T000759	F	Lead -ICP-Fusion	ug/g	96.20	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Sulfur -ICP-Fusion	ug/g	96.60	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Antimony -ICP-Fusion	ug/g	94.40	<6.00e-02	<1.25e+03	<1.24e3	n/a	n/a	n/a	1.25e+03	n/a
S97T000759	F	Selenium -ICP-Fusion	ug/g	93.20	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Silicon -ICP-Fusion	ug/g	99.00	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Samarium -ICP-Fusion	ug/g	97.00	<1.00e-01	<2.08e+03	<2.06e3	n/a	n/a	n/a	2.08e+03	n/a
S97T000759	F	Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	4.37e+02	4.78.0	457.5	8.96	n/a	208.0	n/a
S97T000759	F	Titanium -ICP-Fusion	ug/g	96.60	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Thallium -ICP-Fusion	ug/g	94.60	<2.00e-01	<4.15e+03	<4.12e3	n/a	n/a	n/a	4.14e+03	n/a
S97T000759	F	Uranium -ICP-Fusion	ug/g	94.50	<5.00e-01	<1.04e+04	<1.03e4	n/a	n/a	n/a	1.04e+04	n/a
S97T000759	F	Vanadium -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.04e+03	<1.03e3	n/a	n/a	n/a	1.04e+03	n/a
S97T000759	F	Zinc -ICP-Fusion	ug/g	94.40	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Zirconium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.08e+02	<2.06e2	n/a	n/a	n/a	208.0	n/a
S97T000759	F	Alpha of Digested Solid	ug/g	90.50	<5.33e-03	2.30e-01	2.49e-01	2.39e-01	7.93	n/a	7.00e-03	1.04e+01
S97T000768		Fluoride-IC-Dionex 4000/4500	ug/g	95.42	<1.20e-02	6.22e+03	6.44e+03	6.33e+03	3.48	n/a	25.84	n/a
S97T000768		Chloride-IC-Dionex 4000/4500	ug/g	95.32	2.40e-02	5.77e+02	632.0	604.6	9.10	n/a	36.60	n/a
S97T000768		Nitrite-IC - Dionex 4000/4500	ug/g	95.22	<1.08e-01	3.22e+02	309.0	315.7	4.12	n/a	232.5	n/a
S97T000768		Bromide by Ion Chromatograph	ug/g	93.21	<1.25e-01	<2.69e+02	<2.65e2	n/a	n/a	n/a	269.2	n/a
S97T000768		Nitrate by IC-Dionex 4000/4500	ug/g	92.93	<1.39e-01	6.27e+04	6.27e+04	6.27e+04	0.00	n/a	299.3	n/a

Sample#	R A#	Analvte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000768	W	Phosphate-IC-Dionex 4000/4500	ug/g	95.60	<1.20e-01	2.28e+03	2.32e+03	2.30e+03	1.74	N/A	259.4	N/A
S97T000768	W	Sulfate by IC-Dionex 4000/4500	ug/g	95.25	<1.38e-01	4.32e+02	4.50+0	44.0	4.08	N/A	297.1	N/A
S97T000768	W	Oxalate-IC-Dionex 4000/4500	ug/g	97.37	<1.08e-01	5.46e+02	554.0	550.0	1.45	N/A	226.1	N/A

Table 1. Data Summary Report

1-203

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
9S71000705		DSC Exotherm on Perkin Elmer	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
9S71000705		DSC Exotherm by TGA on Perkin Elmer %	Joules/g	n/a	n/a	96.10	96.10	96.10	0.00	n/a	n/a	n/a
9S71000705		Silver - ICP-Fusion		96.00	96.00	<2.01e-02	<2.00e-02	80.92	n/a	n/a	201.0	n/a
9S71000737		Aluminum - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Arsecnic - ICP-Fusion		102.0	102.0	<1.00e-02	<1.00e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Boron - ICP-Fusion		96.20	96.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Barium - ICP-Fusion		96.80	96.80	<5.00e-02	<5.00e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Beryllium - ICP-Fusion		100.4	100.4	<1.00e-03	<1.00e-03	2.55e+04	n/a	n/a	2.01e+03	n/a
9S71000737		Bismuth - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Calcium - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Cerium - ICP-Fusion		96.80	96.80	<1.01e-02	<1.01e-02	n/a	n/a	n/a	100.0	n/a
9S71000737		Cobalt - ICP-Fusion		96.80	96.80	<1.01e-02	<1.01e-02	n/a	n/a	n/a	403.0	n/a
9S71000737		Chromium - ICP-Fusion		97.60	97.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000737		Copper - ICP-Fusion		97.60	97.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Iron - ICP-Fusion		97.60	97.60	<5.00e-02	<5.00e-02	8.35e+03	n/a	n/a	1.00e+03	n/a
9S71000737		Lanthanum - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000737		Lithium - ICP-Fusion		97.20	97.20	<1.00e-02	<1.00e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Magnesium - ICP-Fusion		96.20	96.20	<1.01e-02	<1.01e-02	8.08e+03	n/a	n/a	201.0	n/a
9S71000737		Manganese - ICP-Fusion		99.00	99.00	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Molybdenum - ICP-Fusion		100.4	100.4	<1.01e-02	<1.01e-02	3.63e+04	n/a	n/a	2.01e+03	n/a
9S71000737		Sodium - ICP-Fusion		98.20	98.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Neodymium - ICP-Fusion		98.60	98.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	4.03e+03	n/a
9S71000737		Phosphorus - ICP-Fusion		96.20	96.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Lead - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Sulfur - ICP-Fusion		96.40	96.40	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Antimony - ICP-Fusion		96.20	96.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Selenium - ICP-Fusion		99.00	99.00	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+03	n/a
9S71000737		Silicon - ICP-Fusion		97.00	97.00	<1.01e-02	<1.01e-02	n/a	n/a	n/a	2.01e+03	n/a
9S71000737		Strontium - ICP-Fusion		97.60	97.60	<1.01e-02	<1.01e-02	4.13.0	n/a	n/a	201.0	n/a
9S71000737		Tantalum - ICP-Fusion		96.20	96.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000737		Thallium - ICP-Fusion		96.60	96.60	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+04	n/a
9S71000737		Uranium - ICP-Fusion		96.50	96.50	<1.01e-02	<1.01e-02	n/a	n/a	n/a	1.00e+04	n/a
9S71000737		Vanadium - ICP-Fusion		97.20	97.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000737		Zinc - ICP-Fusion		96.40	96.40	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000737		Zirconium - ICP-Fusion		97.20	97.20	<1.01e-02	<1.01e-02	n/a	n/a	n/a	201.0	n/a
9S71000746		Aluminum - ICP-Fusion		95.42	95.42	<1.20e-02	<1.20e-02	6.60e+03	n/a	n/a	26.66	n/a
9S71000746		Chlorine - ICP-Fusion		95.32	95.32	<2.40e-02	<2.40e-02	6.02e+02	n/a	n/a	37.77	n/a
9S71000746		Fluoride - ICP-Fusion		95.22	95.22	<1.00e-01	<1.00e-01	3.36e+02	n/a	n/a	239.9	n/a
9S71000746		Hydrogen - ICP-Fusion		93.21	93.21	<1.25e-01	<1.25e-01	2.71e+02	n/a	n/a	277.8	n/a
9S71000746		Bromide by Ion Chromatograph		92.93	92.93	<1.35e-01	<1.35e-01	6.18e+04	n/a	n/a	308.9	n/a
9S71000746		Nitrate by Ion Chromatograph		95.60	95.60	<1.20e-01	<1.20e-01	2.66e+03	n/a	n/a	266.6	n/a

43

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec	Det Limit	Count	Err%
S97T000766			Sulfate by IC-Dionex 4000/4500	ug/g	95.25	<1.38e-01	3.37e+02	<2.99e2	n/a	n/a	n/a	306.6	n/a	n/a
S97T000766			Oxalate-IC-Dionex 4000/4500	ug/g	97.37	<1.05e-01	3.02e+02	265.0	283.3	13.1	n/a	233.3	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec	Det Limit	Count	Err%
S97T000699			Bulk Density of Sample	g/mL	n/a	n/a	1.190	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S97T000711			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000711			DSC Exotherm on Perkin Elmer	Joules/g	96.10	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000711			% Water by TGA on Perkin Elmer	%	98.92	n/a	83.80	82.90	83.35	1.08	n/a	n/a	n/a	n/a
S97T000760	F		Silver -ICP-Fusion	ug/g	98.00	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Aluminum -ICP-Fusion	ug/g	97.20	<5.00e-02	2.23e+03	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Boron -ICP-Fusion	ug/g	99.00	<5.00e-02	<9.83e+02	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<9.83e+02	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Beryllium -ICP-Fusion	ug/g	100.4	<5.00e-03	<98.30	<9.29e1	n/a	n/a	n/a	98.40	n/a	n/a
S97T000760	F		Bismuth -ICP-Fusion	ug/g	100.8	<1.00e-01	2.93e+04	3.11e+04	3.02e+04	5.96	n/a	1.97e+03	n/a	n/a
S97T000760	F		Calcium -ICP-Fusion	ug/g	100.0	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Cadmium -ICP-Fusion	ug/g	100.4	<5.00e-01	<98.30	<9.29e1	n/a	n/a	n/a	98.40	n/a	n/a
S97T000760	F		Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Cobalt -ICP-Fusion	ug/g	101.8	<2.00e-02	<3.93e+02	<3.72e2	n/a	n/a	n/a	394.0	n/a	n/a
S97T000760	F		Chromium -ICP-Fusion	ug/g	99.80	<1.00e-02	3.09e+03	3.06e+03	3.08e+03	0.98	n/a	197.0	n/a	n/a
S97T000760	F		Copper -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Iron -ICP-Fusion	ug/g	95.00	<5.00e-02	2.11e+03	1.80e+03	1.96e+03	15.9	n/a	984.0	n/a	n/a
S97T000760	F		Lanthanum -ICP-Fusion	ug/g	99.00	<5.00e-02	7.09e+03	7.50e+03	7.30e+03	5.62	n/a	984.0	n/a	n/a
S97T000760	F		Lithium -ICP-Fusion	ug/g	96.60	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Magnesium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Manganese -ICP-Fusion	ug/g	98.60	<1.00e-02	7.94e+03	8.18e+03	8.06e+03	2.98	n/a	197.0	n/a	n/a
S97T000760	F		Molybdenum -ICP-Fusion	ug/g	101.0	<5.00e-02	<9.83e+02	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Sodium -ICP-Fusion	ug/g	100.8	<1.00e-01	3.67e+04	3.64e+04	3.66e+04	0.82	n/a	1.97e+03	n/a	n/a
S97T000760	F		Neodymium -ICP-Fusion	ug/g	99.00	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	<3.93e+03	<3.72e3	n/a	n/a	n/a	3.94e+03	n/a	n/a
S97T000760	F		Lead -ICP-Fusion	ug/g	98.80	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Lead -ICP-Fusion	ug/g	99.00	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Sulfur -ICP-Fusion	ug/g	95.40	<6.00e-02	<1.18e+03	<1.11e3	n/a	n/a	n/a	1.18e+03	n/a	n/a
S97T000760	F		Antimony -ICP-Fusion	ug/g	93.80	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Selenium -ICP-Fusion	ug/g	100.8	<5.00e-02	6.27e+03	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Silicon -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.97e+03	<1.86e3	n/a	n/a	n/a	1.97e+03	n/a	n/a
S97T000760	F		Samarium -ICP-Fusion	ug/g	98.00	<1.00e-02	2.55e+02	284.0	269.5	10.8	n/a	197.0	n/a	n/a
S97T000760	F		Strontium -ICP-Fusion	ug/g	96.60	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Titanium -ICP-Fusion	ug/g	97.60	<2.00e-01	<3.93e+03	<3.72e3	n/a	n/a	n/a	3.94e+03	n/a	n/a
S97T000760	F		Thallium -ICP-Fusion	ug/g	94.70	<5.00e-01	<9.83e+03	<9.29e3	n/a	n/a	n/a	9.84e+03	n/a	n/a
S97T000760	F		Uranium -ICP-Fusion	ug/g	100.6	<5.00e-02	<9.83e+02	<9.29e2	n/a	n/a	n/a	984.0	n/a	n/a
S97T000760	F		Vanadium -ICP-Fusion	ug/g	96.80	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Zinc -ICP-Fusion	ug/g	98.20	<1.00e-02	<1.97e+02	<1.86e2	n/a	n/a	n/a	197.0	n/a	n/a
S97T000760	F		Zirconium -ICP-Fusion	ug/g	85.00	4.00e-03	1.79e-01	1.69e-01	1.74e-01	5.75	n/a	8.00e-03	1.18e+01	n/a
S97T000760	F		Alpha of Digested Solid	ug/g	92.37	<1.20e-02	6.46e+03	6.11e+03	6.29e+03	5.57	n/a	21.99	n/a	n/a
S97T000769			Fluoride-IC-Dionex 4000/4500	ug/g	97.34	<1.70e-02	6.53e+02	618.0	635.5	5.51	n/a	31.15	n/a	n/a
S97T000769			Chloride-IC-Dionex 4000/4500	ug/g	92.28	<1.08e-01	2.67e+02	253.0	260.1	5.38	n/a	197.9	n/a	n/a
S97T000769			Nitrite-IC - Dionex 4000/4500	ug/g	94.57	<1.25e-01	<2.29e+02	<2.25e2	n/a	n/a	n/a	229.1	n/a	n/a
S97T000769			Bromide by Ion Chromatograph	ug/g	95.29	<1.39e-01	6.63e+04	6.27e+04	6.45e+04	5.58	n/a	254.8	n/a	n/a
S97T000769			Nitrate by IC-Dionex 4000/4500	ug/g										

HNFS-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000769		W	Phosphate-IC-Dionex 4000/4500	ug/g	95.05	<1.20e-01	2.19e+03	1.81e+03	2.00e+03	19.0	n/a	219.9	n/a
S97T000769		W	Sulfate by IC-Dionex 4000/4500	ug/g	95.40	<1.38e-01	3.88e+02	294.0	341.1	27.6	n/a	252.9	n/a
S97T000769		W	Oxalate-IC-Dionex 4000/4500	ug/g	99.25	<1.05e-01	7.50e+02	757.0	753.5	0.93	n/a	192.4	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000733			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000733			DSC Exotherm on Perkin Elmer	Joules/g	92.65	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000733			Specific Gravity	Sp.G.	99.25	n/a	1.087	1.084	1.086	0.28	n/a	1.00e-03	n/a
S97T000733			% Water by TGA on Perkin Elmer	%	98.43	n/a	85.30	85.23	85.27	0.08	n/a	n/a	n/a
S97T000733		D	Silver-ICP-Acid Dil.	ug/mL	97.00	<1.00e-02	2.950	2.910	2.950	1.37	n/a	87.30	1.010
S97T000733		D	Aluminum-ICP-Acid Dil.	ug/mL	97.00	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	95.80	5.050
S97T000733		D	Arsenic-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	103.0	10.10
S97T000733		D	Boron-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	99.50	5.050
S97T000733		D	Barium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	97.50	5.050
S97T000733		D	Beryllium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	n/a	97.60	5.05e-01
S97T000733		D	Bismuth-ICP-Acid Dil.	ug/mL	100.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	106.0	10.10
S97T000733		D	Calcium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	98.10	10.10
S97T000733		D	Cadmium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	n/a	97.10	5.05e-01
S97T000733		D	Cerium-ICP-Acid Dil.	ug/mL	97.20	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	96.50	10.10
S97T000733		D	Cobalt-ICP-Acid Dil.	ug/mL	100.8	<2.00e-02	< 2.020	<2.020	n/a	n/a	n/a	98.90	2.020
S97T000733		D	Chromium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	97.60	1.010
S97T000733		D	Chromium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	97.10	1.010
S97T000733		D	Copper-ICP-Acid Dil.	ug/mL	91.80	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	90.40	5.050
S97T000733		D	Iron-ICP-Acid Dil.	ug/mL	103.6	<5.00e-01	8.37e+03	8.40e+03	8.38e+03	0.36	n/a	205.0	50.50
S97T000733		D	Potassium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	98.70	5.050
S97T000733		D	Lanthanum-ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	98.40	1.010
S97T000733		D	Lithium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	94.50	10.10
S97T000733		D	Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	93.70	1.010
S97T000733		D	Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	99.90	5.050
S97T000733		D	Sodium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	4.11e+04	4.12e+04	4.12e+04	0.24	n/a	604.0	10.10
S97T000733		D	Neodymium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	98.50	10.10
S97T000733		D	Nickel-ICP-Acid Dil.	ug/mL	99.00	<2.00e-02	< 2.020	<2.020	n/a	n/a	n/a	95.10	2.020
S97T000733		D	Phosphorus-ICP-Acid Dil.	ug/mL	100.2	<2.00e-01	7.45e+02	754.0	749.5	1.20	n/a	88.80	20.20
S97T000733		D	Lead-ICP-Acid Dil.	ug/mL	96.80	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	97.90	10.10
S97T000733		D	Sulfur-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	1.25e+02	125.0	125.0	0.00	n/a	96.70	10.10
S97T000733		D	Antimony-ICP-Acid Dil.	ug/mL	95.00	<6.00e-02	< 6.060	<6.060	n/a	n/a	n/a	94.00	6.060
S97T000733		D	Selenium-ICP-Acid Dil.	ug/mL	92.40	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	104.0	10.10
S97T000733		D	Silicon-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	49.80	53.90	51.85	7.91	n/a	104.0	5.050
S97T000733		D	Samarium-ICP-Acid Dil.	ug/mL	96.60	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	96.20	10.10
S97T000733		D	Strontium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	97.20	1.010
S97T000733		D	Titanium-ICP-Acid Dil.	ug/mL	96.60	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	96.00	1.010
S97T000733		D	Thallium-ICP-Acid Dil.	ug/mL	95.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	n/a	97.00	20.20
S97T000733		D	Uranium-ICP-Acid Dil.	ug/mL	95.30	<5.00e-01	< 50.50	<5.05e1	n/a	n/a	n/a	100.5	50.50
S97T000733		D	Vanadium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 5.050	<5.050	n/a	n/a	n/a	99.40	5.050
S97T000733		D	Zinc-ICP-Acid Dil.	ug/mL	95.80	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	95.30	1.010
S97T000733		D	Zirconium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-02	< 10.10	<1.01e1	n/a	n/a	n/a	97.30	1.010
S97T000733			Fluoride-IC-Dionex 4000/4500	ug/mL	104.9	<1.20e-02	7.10e+03	6.94e+03	7.02e+03	2.28	n/a	176.3	25.45
S97T000733			Chloride-IC-Dionex 4000/4500	ug/mL	109.0	<1.70e-02	6.95e+02	722.0	707.4	4.10	n/a	121.5	36.06
S97T000733			Nitrite-IC - Dionex 4000/4500	ug/mL	103.1	<1.08e-01	3.48e+02	359.0	353.4	3.11	n/a	106.1	229.1

45

HNFS-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000733			Bromide by Ion Chromatograph	ug/mL	97.28	<1.25e-01	<2.65e-02	<2.65e2	n/a	n/a	88.12	265.1	n/a
S97T000733			Nitrate by IC-Dionex 4000/4500	ug/mL	97.81	<1.39e-01	7.37e-04	7.38e+04	7.37e+04	0.14	167.7	294.8	n/a
S97T000733			Phosphate-IC-Dionex 4000/4500	ug/mL	102.2	<1.20e-01	1.87e+03	1.92e+03	1.90e+03	2.64	109.0	254.5	n/a
S97T000733			Sulfate by IC-Dionex 4000/4500	ug/mL	98.10	<1.38e-01	4.30e+02	507.0	468.6	16.4	104.1	292.7	n/a
S97T000733			Oxalate-IC-Dionex 4000/450	ug/mL	104.9	<1.05e-01	<2.23e+02	<2.23e2	n/a	n/a	112.4	222.7	n/a
S97T000733			Alpha in Liquid Samples	uCi/mL	91.50	3.71e-05	<8.48e-05	<5.50E-5	n/a	n/a	90.49	6.70e-05	2.94E+02

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000666		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000666		DSC Exotherm on Perkin Elmer	Joules/g	93.43	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000666		% Water by TGA on Perkin Elmer	%	98.72	n/a	76.29	75.18	75.74	1.47	n/a	n/a	n/a	n/a
S97T000738	F	Silver -ICP-Fusion	ug/g	98.00	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000738	F	Aluminum -ICP-Fusion	ug/g	97.20	<5.00e-02	<9.76e+02	<9.99e2	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Boron -ICP-Fusion	ug/g	99.00	<5.00e-02	<9.76e+02	<9.99e2	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<9.76e+02	<9.99e2	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Beryllium -ICP-Fusion	ug/g	100.8	<5.00e-03	< 97.60	<9.99e1	n/a	n/a	n/a	n/a	97.60	n/a
S97T000738	F	Bismuth -ICP-Fusion	ug/g	100.0	<1.00e-01	2.55e+04	2.90e+04	2.72e+04	12.8	n/a	n/a	1.95e+03	n/a
S97T000738	F	Calcium -ICP-Fusion	ug/g	100.0	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Cadmium -ICP-Fusion	ug/g	100.4	<1.00e-03	< 97.60	<9.99e1	n/a	n/a	n/a	n/a	97.60	n/a
S97T000738	F	Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Cobalt -ICP-Fusion	ug/g	101.8	<2.00e-02	<3.91e+02	<4.00e2	n/a	n/a	n/a	n/a	391.0	n/a
S97T000738	F	Chromium -ICP-Fusion	ug/g	99.80	<1.00e-02	2.90e+03	3.11e+03	3.00e+03	6.99	n/a	n/a	195.0	n/a
S97T000738	F	Copper -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000738	F	Iron -ICP-Fusion	ug/g	93.00	<5.00e-02	1.75e+04	3.13e+03	1.03e+04	139	n/a	n/a	976.0	n/a
S97T000738	F	Lanthanum -ICP-Fusion	ug/g	99.00	<5.00e-02	7.14e+03	7.87e+03	7.50e+03	9.73	n/a	n/a	976.0	n/a
S97T000738	F	Lithium -ICP-Fusion	ug/g	96.60	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000738	F	Magnesium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Manganese -ICP-Fusion	ug/g	98.60	<1.00e-02	7.90e+03	8.68e+03	8.29e+03	9.41	n/a	n/a	195.0	n/a
S97T000738	F	Molybdenum -ICP-Fusion	ug/g	101.0	<5.00e-02	<9.76e+02	<9.99e2	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Sodium -ICP-Fusion	ug/g	100.8	<1.00e-01	3.44e+04	3.53e+04	3.48e+04	2.58	n/a	n/a	1.95e+03	n/a
S97T000738	F	Neodymium -ICP-Fusion	ug/g	99.00	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	<3.91e+03	<4.00e3	n/a	n/a	n/a	n/a	3.91e+03	n/a
S97T000738	F	Lead -ICP-Fusion	ug/g	98.80	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Sulfur -ICP-Fusion	ug/g	99.00	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Antimony -ICP-Fusion	ug/g	95.40	<6.00e-02	<1.17e+03	<1.20e3	n/a	n/a	n/a	n/a	1.17e+03	n/a
S97T000738	F	Selenium -ICP-Fusion	ug/g	93.80	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Silicon -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.76e+02	1.19e+03	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Samarium -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.95e+03	<2.00e3	n/a	n/a	n/a	n/a	1.95e+03	n/a
S97T000738	F	Strontium -ICP-Fusion	ug/g	98.00	<1.00e-02	2.29e+02	240.0	234.5	4.69	n/a	n/a	195.0	n/a
S97T000738	F	Titanium-ICP-Fusion	ug/g	96.60	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000738	F	Thallium -ICP-Fusion	ug/g	97.60	<2.00e-01	<3.91e+03	<4.00e3	n/a	n/a	n/a	n/a	3.91e+03	n/a
S97T000738	F	Uranium -ICP-Fusion	ug/g	94.70	<5.00e-01	<9.76e+03	<9.99e3	n/a	n/a	n/a	n/a	9.76e+03	n/a
S97T000738	F	Vanadium -ICP-Fusion	ug/g	100.6	<5.00e-02	<9.76e+02	<9.99e2	n/a	n/a	n/a	n/a	976.0	n/a
S97T000738	F	Zinc -ICP-Fusion	ug/g	96.80	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000738	F	Zirconium -ICP-Fusion	ug/g	98.20	<1.00e-02	<1.95e+02	<2.00e2	n/a	n/a	n/a	n/a	195.0	n/a
S97T000747	W	Fluoride-IC-Dionex 4000/4500	ug/g	92.37	<1.00e-02	6.38e+03	6.50e+03	6.44e+03	1.86	79.49	25.12	n/a	n/a
S97T000747	W	Chloride-IC-Dionex 4000/4500	ug/g	97.34	<1.70e-02	5.99e+02	641.0	620.2	6.77	102.4	35.60	n/a	n/a
S97T000747	W	Nitrite-IC - Dionex 4000/4500	ug/g	92.28	<1.08e-01	3.00e+02	295.0	297.6	1.68	91.18	226.2	n/a	n/a
S97T000747	W	Bromide by Ion Chromatograph	ug/g	94.57	<1.25e-01	<2.62e+02	<2.59e2	n/a	n/a	84.55	261.7	n/a	n/a
S97T000747	W	Nitrate by IC-Dionex 4000/4500	ug/g	95.29	<1.39e-01	6.46e+04	6.59e+04	6.52e+04	1.99	88.22	291.1	n/a	n/a
S97T000747	W	Phosphate-IC-Dionex 4000/4500	ug/g	95.05	<1.20e-01	2.14e+03	1.99e+03	2.07e+03	7.26	97.98	251.2	n/a	n/a

HNF-SD-WM-DP-247, REV. 0

A7

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000747	W		Sulfate by IC-Dionex 4000/4500	ug/g	95.40	<1.38e-01	<2.89e+02	387.0	n/a	n/a	96.35	289.0	n/a	n/a
S97T000747	W		Oxalate-IC-Dionex 4000/4500	ug/g	99.25	<1.05e-01	1.01e+03	1.04e+03	1.03e+03	2.93	97.18	219.8	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000661			Bulk Density of Sample	g/ml	n/a	n/a	1.200	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S97T000669			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000669			DSC Exotherm on Perkin Elmer	Joules/g	95.61	<1.00e-01	<9.04e+02	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000669			% Water by TGA on Perkin Elmer	%	97.96	n/a	76.78	76.32	76.55	0.60	n/a	n/a	n/a	n/a
S97T000757	F		Silver - ICP-Fusion	ug/g	98.00	<1.00e-02	<1.81e+03	<1.76e2	n/a	n/a	42.60	181.0	n/a	n/a
S97T000757	F		Aluminum - ICP-Fusion	ug/g	97.20	<5.00e-02	<9.04e+02	<8.81e2	n/a	n/a	101.0	902.0	n/a	n/a
S97T000757	F		Arsenic - ICP-Fusion	ug/g	103.0	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	107.0	1.81e+03	n/a	n/a
S97T000757	F		Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<9.04e+02	<8.81e2	n/a	n/a	97.30	902.0	n/a	n/a
S97T000757	F		Barium - ICP-Fusion	ug/g	98.80	<5.00e-02	<9.04e+02	<8.81e2	n/a	n/a	99.00	902.0	n/a	n/a
S97T000757	F		Beryllium - ICP-Fusion	ug/g	100.4	<5.00e-03	<9.04e+02	<8.81e1	n/a	n/a	99.90	90.20	n/a	n/a
S97T000757	F		Bismuth - ICP-Fusion	ug/g	100.8	<1.00e-01	3.72e+04	3.59e+04	3.66e+04	3.56	103.0	1.81e+03	n/a	n/a
S97T000757	F		Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	103.0	1.81e+03	n/a	n/a
S97T000757	F		Cadmium - ICP-Fusion	ug/g	100.4	<5.00e-03	<9.04e+02	<8.81e1	n/a	n/a	101.0	90.20	n/a	n/a
S97T000757	F		Cerium - ICP-Fusion	ug/g	97.80	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	99.30	1.81e+03	n/a	n/a
S97T000757	F		Cobalt - ICP-Fusion	ug/g	101.8	<2.00e-02	<3.62e+02	<3.53e2	n/a	n/a	102.0	362.0	n/a	n/a
S97T000757	F		Chromium - ICP-Fusion	ug/g	99.80	<1.00e-02	3.25e+03	3.25e+03	3.25e+03	0.00	100.0	181.0	n/a	n/a
S97T000757	F		Copper - ICP-Fusion	ug/g	97.40	<1.00e-02	<1.81e+02	<1.76e2	n/a	n/a	98.40	181.0	n/a	n/a
S97T000757	F		Iron - ICP-Fusion	ug/g	93.00	<5.00e-02	2.27e+03	2.01e+03	2.14e+03	12.1	94.00	902.0	n/a	n/a
S97T000757	F		Lanthanum - ICP-Fusion	ug/g	99.00	<5.00e-02	9.75e+03	9.26e+03	9.50e+03	5.16	102.0	902.0	n/a	n/a
S97T000757	F		Lithium - ICP-Fusion	ug/g	96.60	<1.00e-02	<1.81e+02	<1.76e2	n/a	n/a	96.30	181.0	n/a	n/a
S97T000757	F		Magnesium - ICP-Fusion	ug/g	99.20	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	100.0	1.81e+03	n/a	n/a
S97T000757	F		Manganese - ICP-Fusion	ug/g	98.60	<1.00e-02	1.06e+04	1.04e+04	1.05e+04	1.90	98.60	181.0	n/a	n/a
S97T000757	F		Molybdenum - ICP-Fusion	ug/g	101.0	<5.00e-02	<9.04e+02	<8.81e2	n/a	n/a	102.0	902.0	n/a	n/a
S97T000757	F		Sodium - ICP-Fusion	ug/g	100.8	<1.00e-01	3.47e+04	3.55e+04	3.51e+04	2.28	106.0	1.81e+03	n/a	n/a
S97T000757	F		Neodymium - ICP-Fusion	ug/g	99.00	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	100.0	1.81e+03	n/a	n/a
S97T000757	F		Phosphorus - ICP-Fusion	ug/g	101.0	<2.00e-01	<3.62e+03	<3.53e3	n/a	n/a	112.0	3.62e+03	n/a	n/a
S97T000757	F		Lead - ICP-Fusion	ug/g	98.80	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	97.50	1.81e+03	n/a	n/a
S97T000757	F		Sulfur - ICP-Fusion	ug/g	99.00	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	99.40	1.81e+03	n/a	n/a
S97T000757	F		Antimony - ICP-Fusion	ug/g	95.40	<6.00e-02	<1.08e+03	<1.06e3	n/a	n/a	97.30	1.09e+03	n/a	n/a
S97T000757	F		Selenium - ICP-Fusion	ug/g	93.80	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	94.60	1.81e+03	n/a	n/a
S97T000757	F		Silicon - ICP-Fusion	ug/g	100.8	<5.00e-02	2.27e+03	1.10e+03	1.66e+03	67.1	101.0	902.0	n/a	n/a
S97T000757	F		Samarium - ICP-Fusion	ug/g	96.60	<1.00e-01	<1.81e+03	<1.76e3	n/a	n/a	97.20	1.81e+03	n/a	n/a
S97T000757	F		Strontium - ICP-Fusion	ug/g	98.00	<1.00e-02	3.42e+02	335.0	338.5	2.07	98.90	181.0	n/a	n/a
S97T000757	F		Titanium - ICP-Fusion	ug/g	96.60	<1.00e-02	<1.81e+02	<1.76e2	n/a	n/a	97.60	181.0	n/a	n/a
S97T000757	F		Thallium - ICP-Fusion	ug/g	97.60	<2.00e-01	<3.62e+03	<3.53e3	n/a	n/a	96.20	3.62e+03	n/a	n/a
S97T000757	F		Thalium - ICP-Fusion	ug/g	94.70	<5.00e-01	<9.04e+03	<8.81e3	n/a	n/a	91.50	9.02e+03	n/a	n/a
S97T000757	F		Vanadium - ICP-Fusion	ug/g	100.6	<5.00e-02	<9.04e+02	<8.81e2	n/a	n/a	101.0	902.0	n/a	n/a
S97T000757	F		Zinc - ICP-Fusion	ug/g	96.80	<1.00e-02	<1.81e+02	<1.76e2	n/a	n/a	96.60	181.0	n/a	n/a
S97T000757	F		Zirconium - ICP-Fusion	ug/g	98.20	<1.00e-02	<1.81e+02	<1.76e2	n/a	n/a	98.60	181.0	n/a	n/a
S97T000757	F		Alpha of Digested Solid	ug/l/g	85.00	4.00e-03	2.47e-01	2.06e-01	2.26e-01	18.1	85.93	8.00e-03	9.87E+00	n/a
S97T000758	W		Fluoride-IC-Dionex 4000/4500	ug/g	92.71	<1.20e-02	6.32e+03	5.86e+03	6.09e+03	7.55	123.9	26.42	n/a	n/a
S97T000758	W		Chloride-IC-Dionex 4000/4500	ug/g	99.49	<1.70e-02	6.21e+02	577.0	599.0	7.35	116.5	37.43	n/a	n/a
S97T000758	W		Nitrite-IC - Dionex 4000/4500	ug/g	99.63	1.12e-01	3.03e+02	276.0	289.4	9.33	106.6	237.8	n/a	n/a
S97T000758	W		Bromide by Ion Chromatograph	ug/g	96.44	<1.25e-01	<2.75e+02	<2.70e2	n/a	n/a	97.28	275.3	n/a	n/a
S97T000758	W		Nitrate by IC-Dionex 4000/4500	ug/g	98.99	1.71e-01	6.49e+04	5.85e+04	6.17e+04	10.4	93.77	306.1	n/a	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000758	W		Phosphate-IC-Dionex 4000/4500	ug/g	99.08	<1.20e-01	2.25e+03	1.88e+03	2.06e+03	17.9	108.6	264.2	n/a
S97T000758	W		Sulfate by IC-Dionex 4000/4500	ug/g	96.04	<1.53e-01	<3.04e+02	329.0	n/a	n/a	109.2	303.9	n/a
S97T000758	W		Oxalate-IC-Dionex 4000/4500	ug/g	102.3	<1.05e-01	1.42e+03	1.22e+03	1.32e+03	15.2	112.2	231.2	n/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000706		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000706		DSC Exotherm on Perkin Elmer	Joules/g	96.56	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000706		% Water by TGA on Perkin Elmer	%	97.07	n/a	78.10	78.34	78.22	0.31	n/a	n/a	n/a	n/a
S97T000739	F	Silver - ICP-Fusion	ug/g	97.00	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	79.50	207.0	n/a	n/a
S97T000739	F	Aluminum - ICP-Fusion	ug/g	97.00	<5.00e-02	<1.03e+03	<1.06e3	n/a	n/a	95.60	1.03e+03	n/a	n/a
S97T000739	F	Arsenic - ICP-Fusion	ug/g	103.0	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	101.0	2.07e+03	n/a	n/a
S97T000739	F	Boron - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.03e+03	<1.06e3	n/a	n/a	94.80	1.03e+03	n/a	n/a
S97T000739	F	Barium - ICP-Fusion	ug/g	98.80	<5.00e-02	<1.03e+03	<1.06e3	n/a	n/a	94.40	1.03e+03	n/a	n/a
S97T000739	F	Beryllium - ICP-Fusion	ug/g	101.0	<5.00e-03	<1.03e+02	<1.06e2	n/a	n/a	97.10	103.0	n/a	n/a
S97T000739	F	Bismuth - ICP-Fusion	ug/g	98.40	<1.00e-01	<3.62e+04	<3.39e+04	3.50e+04	6.56	105.0	2.07e+03	n/a	n/a
S97T000739	F	Calcium - ICP-Fusion	ug/g	98.60	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	104.0	2.07e+03	n/a	n/a
S97T000739	F	Cadmium - ICP-Fusion	ug/g	99.20	<5.00e-03	<1.03e+02	<1.06e2	n/a	n/a	99.90	103.0	n/a	n/a
S97T000739	F	Cerium - ICP-Fusion	ug/g	97.80	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	94.90	2.07e+03	n/a	n/a
S97T000739	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	<4.14e+02	<4.23e2	n/a	n/a	101.0	416.0	n/a	n/a
S97T000739	F	Chromium - ICP-Fusion	ug/g	98.40	<1.00e-02	<3.04e+03	<2.98e+03	3.01e+03	1.99	99.50	207.0	n/a	n/a
S97T000739	F	Copper - ICP-Fusion	ug/g	98.20	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	93.50	207.0	n/a	n/a
S97T000739	F	Iron - ICP-Fusion	ug/g	92.20	<5.00e-02	<5.70e+03	<8.05e+03	6.88e+03	34.2	92.50	1.03e+03	n/a	n/a
S97T000739	F	Lanthanum - ICP-Fusion	ug/g	99.40	<5.00e-02	<1.00e+04	<9.72e+03	9.86e+03	2.84	97.30	1.03e+03	n/a	n/a
S97T000739	F	Lithium - ICP-Fusion	ug/g	97.40	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	90.80	207.0	n/a	n/a
S97T000739	F	Magnesium - ICP-Fusion	ug/g	99.20	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	95.60	2.07e+03	n/a	n/a
S97T000739	F	Manganese - ICP-Fusion	ug/g	97.00	<1.00e-02	<1.03e+04	<9.97e+03	1.01e+04	2.28	96.70	207.0	n/a	n/a
S97T000739	F	Molybdenum - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.03e+03	<1.06e3	n/a	n/a	100.0	1.03e+03	n/a	n/a
S97T000739	F	Sodium - ICP-Fusion	ug/g	101.8	<1.00e-01	<3.18e+04	<3.24e+04	3.21e+04	1.87	101.0	2.07e+03	n/a	n/a
S97T000739	F	Neodymium - ICP-Fusion	ug/g	99.20	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	95.80	2.07e+03	n/a	n/a
S97T000739	F	Phosphorus - ICP-Fusion	ug/g	101.0	<2.00e-01	<4.14e+03	<4.23e3	n/a	n/a	108.0	4.14e+03	n/a	n/a
S97T000739	F	Lead - ICP-Fusion	ug/g	96.40	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	98.20	2.07e+03	n/a	n/a
S97T000739	F	Sulfur - ICP-Fusion	ug/g	97.80	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	97.20	2.07e+03	n/a	n/a
S97T000739	F	Antimony - ICP-Fusion	ug/g	94.60	<6.00e-02	<1.24e+03	<1.27e3	n/a	n/a	94.70	1.24e+03	n/a	n/a
S97T000739	F	Selenium - ICP-Fusion	ug/g	93.20	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	93.70	2.07e+03	n/a	n/a
S97T000739	F	Silicon - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.06e+03	<1.06e3	n/a	n/a	101.0	1.03e+03	n/a	n/a
S97T000739	F	Samarium - ICP-Fusion	ug/g	97.40	<1.00e-01	<2.07e+03	<2.11e3	n/a	n/a	96.20	2.07e+03	n/a	n/a
S97T000739	F	Strontium - ICP-Fusion	ug/g	98.20	<1.00e-02	<3.34e+02	<3.28.0	331.0	1.81	94.60	207.0	n/a	n/a
S97T000739	F	Titanium - ICP-Fusion	ug/g	97.40	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	95.50	207.0	n/a	n/a
S97T000739	F	Thallium - ICP-Fusion	ug/g	96.20	<2.00e-01	<4.14e+03	<4.23e3	n/a	n/a	91.70	4.14e+03	n/a	n/a
S97T000739	F	Uranium - ICP-Fusion	ug/g	95.30	<5.00e-01	<1.03e+04	<1.06e4	n/a	n/a	92.50	1.03e+04	n/a	n/a
S97T000739	F	Vanadium - ICP-Fusion	ug/g	100.0	<5.00e-02	<1.03e+03	<1.06e3	n/a	n/a	99.50	1.03e+03	n/a	n/a
S97T000739	F	Zinc - ICP-Fusion	ug/g	94.80	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	95.40	207.0	n/a	n/a
S97T000739	F	Zirconium - ICP-Fusion	ug/g	97.80	<1.00e-02	<2.07e+02	<2.11e2	n/a	n/a	96.00	207.0	n/a	n/a
S97T000748	W	Fluoride-IC-Dionex 4000/4500	ug/g	88.81	<1.20e-02	6.12e+03	6.17e+03	6.15e+03	0.81	n/a	25.36	n/a	n/a
S97T000748	W	Chloride-IC-Dionex 4000/4500	ug/g	95.44	<1.70e-02	5.98e+02	573.0	585.4	4.27	n/a	35.91	n/a	n/a
S97T000748	W	Nitrite-IC - Dionex 4000/4500	ug/g	99.45	<1.08e-01	2.72e+02	271.0	271.6	0.37	n/a	228.1	n/a	n/a
S97T000748	W	Bromide by Ion Chromatograph	ug/g	97.45	<1.25e-01	<2.64e+02	<2.58e2	n/a	n/a	n/a	264.1	n/a	n/a
S97T000748	W	Nitrate by IC-Dionex 4000/4500	ug/g	96.80	<1.39e-01	6.32e+04	6.09e+04	6.21e+04	3.71	n/a	293.6	n/a	n/a
S97T000748	W	Phosphate-IC-Dionex 4000/4500	ug/g	93.58	<1.20e-01	2.22e+03	2.16e+03	2.19e+03	2.74	n/a	253.6	n/a	n/a

50

HNF-SD-WM-DP-247, REV. 0

HNF-SD-WM-247, REV. 0

Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S971000748		Sulfate by IC-Dioxane 4000/4500	ug/g	95.56	< 1.38e-01	<2.29e+02	<2.84e2	n/a	n/a	n/a	291.5	n/a
S971000748		Oxalate-IC-Dioxane 4000/4500	ug/g	99.06	< 1.05e-01	1.43e+03	1.51e+03	5.44	n/a	n/a	221.9	n/a

Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S971000700		Bulk Density of Sample	g/mL	n/a	n/a	1.350	n/a	n/a	n/a	5.00e-01	n/a	n/a
S971000712		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S971000712		DSC Exotherm on Perkin Elmer	Joules/g	92.65	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S971000712		% Water by TGA on Perkin Elmer	%	98.45	n/a	75.59	72.76	8.88	n/a	n/a	n/a	n/a
S971000761		Silver - ICP-Fusion	ug/g	97.00	< 1.00e-02	<1.69e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Aluminum - ICP-Fusion	ug/g	97.00	< 1.00e-02	<9.47e+02	<9.56e2	n/a	n/a	n/a	947.0	n/a
S971000761		Arsenic - ICP-Fusion	ug/g	103.0	< 1.00e-01	<1.89e+02	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Barium - ICP-Fusion	ug/g	99.60	< 5.00e-02	<9.47e+02	<9.56e2	n/a	n/a	n/a	947.0	n/a
S971000761		Boron - ICP-Fusion	ug/g	98.80	< 5.00e-02	<9.47e+02	<9.56e2	n/a	n/a	n/a	947.0	n/a
S971000761		Bismuth - ICP-Fusion	ug/g	101.0	< 5.00e-03	< 94.70	< 94.70	10.5	n/a	n/a	1.89e+03	n/a
S971000761		Beryllium - ICP-Fusion	ug/g	98.40	< 1.00e-01	<4.37e+04	<4.14e+04	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Calcium - ICP-Fusion	ug/g	98.60	< 1.00e-01	<1.91e3	<1.91e3	n/a	n/a	n/a	94.70	n/a
S971000761		Cadmium - ICP-Fusion	ug/g	99.20	< 5.00e-03	< 94.70	< 95.61	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Cerium - ICP-Fusion	ug/g	97.80	< 1.00e-02	<1.89e+02	<1.91e3	n/a	n/a	n/a	379.0	n/a
S971000761		Cobalt - ICP-Fusion	ug/g	100.6	< 2.00e-02	<3.64e+03	<3.64e+03	0.27	n/a	n/a	189.0	n/a
S971000761		Chromium - ICP-Fusion	ug/g	98.40	< 1.00e-02	<3.64e+03	<3.64e+03	0.27	n/a	n/a	189.0	n/a
S971000761		Copper - ICP-Fusion	ug/g	98.20	< 1.00e-02	<2.52e+02	<2.48e+02	1.60	n/a	n/a	947.0	n/a
S971000761		Iron - ICP-Fusion	ug/g	92.20	< 5.00e-02	<1.18e+04	<1.18e+04	0.00	n/a	n/a	947.0	n/a
S971000761		Lanthanum - ICP-Fusion	ug/g	97.40	< 1.00e-02	<1.89e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Lithium - ICP-Fusion	ug/g	97.40	< 1.00e-02	<1.89e+02	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Magnesium - ICP-Fusion	ug/g	99.20	< 1.00e-01	<1.89e+03	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Manganese - ICP-Fusion	ug/g	97.00	< 5.00e-02	<9.47e+02	<9.56e2	n/a	n/a	n/a	947.0	n/a
S971000761		Molybdenum - ICP-Fusion	ug/g	99.80	< 5.00e-02	<3.34e+04	<3.34e+04	3.32e+04	n/a	n/a	1.89e+03	n/a
S971000761		Nickel - ICP-Fusion	ug/g	101.8	< 1.00e-01	<1.91e3	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Neodymium - ICP-Fusion	ug/g	99.20	< 1.00e-01	<3.79e+03	<3.82e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Phosphorus - ICP-Fusion	ug/g	101.0	< 2.00e-01	<3.79e+03	<3.82e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Lead - ICP-Fusion	ug/g	97.80	< 1.00e-01	<1.89e+03	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Sulfur - ICP-Fusion	ug/g	94.60	< 5.00e-02	<1.15e3	<1.15e3	n/a	n/a	n/a	1.14e+03	n/a
S971000761		Selenium - ICP-Fusion	ug/g	98.30	< 5.00e-01	<1.89e+03	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Silicon - ICP-Fusion	ug/g	99.80	< 1.00e-01	<1.89e+03	<1.91e3	n/a	n/a	n/a	1.89e+03	n/a
S971000761		Samarium - ICP-Fusion	ug/g	98.20	< 1.00e-02	<4.50e+02	<4.50e+02	452.0	n/a	n/a	189.0	n/a
S971000761		Strontium - ICP-Fusion	ug/g	97.40	< 1.00e-02	<1.89e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Tantalum-ICP-Fusion	ug/g	96.20	< 5.00e-01	<3.79e+03	<3.82e3	n/a	n/a	n/a	3.79e+03	n/a
S971000761		Thallium - ICP-Fusion	ug/g	95.30	< 5.00e-01	<9.47e+03	<9.56e3	n/a	n/a	n/a	9.47e+03	n/a
S971000761		Vanadium - ICP-Fusion	ug/g	100.0	< 5.00e-02	<9.47e+02	<9.56e2	n/a	n/a	n/a	947.0	n/a
S971000761		Uranium - ICP-Fusion	ug/g	94.80	< 1.00e-02	<1.89e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Zinc - ICP-Fusion	ug/g	97.80	< 1.00e-02	<1.89e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Zirconium - ICP-Fusion	ug/g	97.80	< 1.00e-02	<1.89e+02	<1.91e2	n/a	n/a	n/a	189.0	n/a
S971000761		Alpha of Digested Solid	ug/g	88.81	< 1.2e+03	6.12e+03	6.24e+03	6.18e+03	1.94	n/a	22.04	n/a
S971000770		Fluoride by IC-Dioxane 4000/4500	ug/g	88.81	< 1.2e+03	6.12e+03	6.24e+03	6.18e+03	1.94	n/a	22.04	n/a
S971000770		Chloride-IC-Dioxane 4000/4500	ug/g	95.44	< 1.70e-02	6.09e+02	6.09e+02	656.0	4.34	n/a	31.25	n/a
S971000770		Nitrate by IC-Dioxane 4000/4500	ug/g	97.45	< 1.06e-01	2.39e+0	2.42e3	2.89	n/a	n/a	229.6	n/a
S971000770		Bromide by Ion Chromatograph	ug/g	96.80	< 1.39e-01	6.26e+04	6.37e+04	6.30e+04	2.06	n/a	255.3	n/a

Sample#	Rt #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S971000770	H	Phosphate-IC-Dionex 4000/4500	ug/g	93.58	<1.20e-01	2.40e+03	2.85e+03	2.61e+03	16.4	N/a	220.4	N/a
S971000770	H	Sulfate by IC-Dionex 4000/4500	ug/g	95.56	<1.38e-01	3.66e+02	<2.56e+02	N/a	N/a	N/a	253.4	N/a
S971000770	H	Oxalate-IC-Dionex 4000/4500	ug/g	99.06	<1.05e-01	1.62e+03	1.69e+03	1.66e+03	4.23	N/a	192.8	N/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000667			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000667			DSC Exotherm on Perkin Elmer	Joules/g	93.43	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000667			% Water by TGA on Perkin Elmer	%	98.72	n/a	74.75	75.93	75.34	1.57	n/a	n/a	n/a
S97T000740	F		Silver -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.86e+02	<1.89e2	n/a	n/a	n/a	186.0	n/a
S97T000740	F		Aluminium -ICP-Fusion	ug/g	97.00	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Boron -ICP-Fusion	ug/g	99.60	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<9.31e+02	<9.45e2	n/a	n/a	n/a	93.10	n/a
S97T000740	F		Bismuth -ICP-Fusion	ug/g	98.40	<1.00e-01	4.11e+04	3.78e+04	3.94e+04	8.37	n/a	1.86e+03	n/a
S97T000740	F		Calcium -ICP-Fusion	ug/g	98.80	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Cadmium -ICP-Fusion	ug/g	99.20	<5.00e-03	<9.31e+02	<9.45e2	n/a	n/a	n/a	93.10	n/a
S97T000740	F		Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Cobalt -ICP-Fusion	ug/g	100.6	<2.00e-02	<3.72e+03	<3.78e2	n/a	n/a	n/a	372.0	n/a
S97T000740	F		Chromium -ICP-Fusion	ug/g	98.40	<1.00e-02	<1.86e+03	<1.89e2	3.92e+03	2.30	n/a	186.0	n/a
S97T000740	F		Copper -ICP-Fusion	ug/g	98.20	<1.00e-02	<1.86e+03	<1.89e2	3.46e+03	43.6	n/a	931.0	n/a
S97T000740	F		Iron -ICP-Fusion	ug/g	92.20	<5.00e-02	2.71e+03	9.27e+03	9.50e+03	4.84	n/a	931.0	n/a
S97T000740	F		Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	<1.86e+03	<1.89e2	n/a	n/a	n/a	186.0	n/a
S97T000740	F		Lithium -ICP-Fusion	ug/g	97.40	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Magnesium -ICP-Fusion	ug/g	99.20	<1.00e-02	1.10e+04	1.04e+04	1.07e+04	5.61	n/a	186.0	n/a
S97T000740	F		Manganese -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Molybdenum -ICP-Fusion	ug/g	101.8	<1.00e-01	3.31e+04	3.29e+04	3.30e+04	0.61	n/a	1.86e+03	n/a
S97T000740	F		Sodium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Neodymium -ICP-Fusion	ug/g	101.0	<2.00e-01	<3.72e+03	<3.78e3	n/a	n/a	n/a	3.72e+03	n/a
S97T000740	F		Phosphorus -ICP-Fusion	ug/g	96.40	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Lead -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Sulfur -ICP-Fusion	ug/g	94.60	<6.00e-02	<1.12e+03	<1.13e3	n/a	n/a	n/a	1.12e+03	n/a
S97T000740	F		Antimony -ICP-Fusion	ug/g	93.20	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Selenium -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Silicon -ICP-Fusion	ug/g	97.40	<1.00e-01	<1.86e+03	<1.89e3	n/a	n/a	n/a	1.86e+03	n/a
S97T000740	F		Samarium -ICP-Fusion	ug/g	98.20	<1.00e-02	3.58e+02	340.0	349.0	5.16	n/a	186.0	n/a
S97T000740	F		Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.86e+02	<1.89e2	n/a	n/a	n/a	186.0	n/a
S97T000740	F		Titanium -ICP-Fusion	ug/g	96.20	<2.00e-01	<3.72e+03	<3.78e3	n/a	n/a	n/a	3.72e+03	n/a
S97T000740	F		Thallium -ICP-Fusion	ug/g	95.30	<5.00e-01	<9.31e+03	<9.45e3	n/a	n/a	n/a	9.31e+03	n/a
S97T000740	F		Uranium -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.31e+02	<9.45e2	n/a	n/a	n/a	931.0	n/a
S97T000740	F		Vanadium -ICP-Fusion	ug/g	94.80	<1.00e-02	<1.86e+02	<1.89e2	n/a	n/a	n/a	186.0	n/a
S97T000740	F		Zinc -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.86e+02	<1.89e2	n/a	n/a	n/a	186.0	n/a
S97T000740	F		Zirconium -ICP-Fusion	ug/g	88.81	<1.20e-02	6.31e+03	6.35e+03	6.35e+03	0.63	n/a	24.61	n/a
S97T000749	W		Fluoride-IC-Dionex 4000/4500	ug/g	95.44	<1.70e-02	6.18e+02	596.0	607.2	3.62	n/a	34.86	n/a
S97T000749	W		Chloride-IC-Dionex 4000/4500	ug/g	99.45	<1.08e-01	2.60e+02	248.0	253.8	4.72	n/a	221.4	n/a
S97T000749	W		Nitrite-IC - Dionex 4000/4500	ug/g	97.45	<1.25e-01	<2.56e+02	<2.46e2	n/a	n/a	n/a	256.3	n/a
S97T000749	W		Bromide by Ion Chromatograph	ug/g	96.80	<1.39e-01	6.25e+04	5.96e+04	6.10e+04	4.75	n/a	285.0	n/a
S97T000749	W		Nitrate by IC-Dionex 4000/4500	ug/g	93.58	<1.20e-01	2.29e+03	2.22e+03	2.25e+03	3.10	n/a	246.1	n/a
S97T000749	W		Phosphate-IC-Dionex 4000/4500	ug/g									

HNF-SD-WM-DP-247, REV. 0

53

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000749	W	Sulfate by IC-Dionex 4000/4500	ug/g	99.56	<1.39e-01	<2.83e+02	<2.72e2	n/a	n/a	n/a	283.0	n/a
S97T000749	W	Oxalate-IC-Dionex 4000/4500	ug/g	99.06	<1.05e-01	1.55e+03	1.50e+03	1.53e+03	3.28	n/a	215.3	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000662		Bulk Density of Sample	g/mL	n/a	n/a	1.220	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000670		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000670		DSC Exotherm on Perkin Elmer	Joules/g	95.61	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000670		% Water by TGA on Perkin Elmer	%	97.96	n/a	75.69	72.97	74.33	3.66	n/a	n/a	n/a
S97T000762	F	Silver -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Aluminum -ICP-Fusion	ug/g	97.00	<5.00e-02	<9.89e+02	<9.81e2	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Boron -ICP-Fusion	ug/g	99.60	<5.00e-02	<9.89e+02	<9.81e2	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<9.89e+02	<9.81e2	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	< 98.90	<9.81e1	n/a	n/a	n/a	98.80	n/a
S97T000762	F	Bismuth -ICP-Fusion	ug/g	98.40	<1.00e-01	4.11e+04	3.34e+04	3.72e+04	20.7	n/a	1.98e+03	n/a
S97T000762	F	Calcium -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Cadmium -ICP-Fusion	ug/g	99.20	<5.00e-03	< 98.90	<9.81e1	n/a	n/a	n/a	98.80	n/a
S97T000762	F	Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Cobalt -ICP-Fusion	ug/g	100.6	<2.00e-02	<3.96e+02	<3.92e2	n/a	n/a	n/a	396.0	n/a
S97T000762	F	Chromium -ICP-Fusion	ug/g	98.40	<1.00e-02	4.29e+03	3.55e+03	3.92e+03	18.9	n/a	198.0	n/a
S97T000762	F	Copper -ICP-Fusion	ug/g	98.20	<1.00e-02	<1.98e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Iron -ICP-Fusion	ug/g	92.20	<5.00e-02	2.44e+03	2.10e+03	2.27e+03	15.0	n/a	988.0	n/a
S97T000762	F	Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	1.13e+04	1.12e+04	1.12e+04	0.89	n/a	988.0	n/a
S97T000762	F	Lithium -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.98e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Magnesium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Manganese -ICP-Fusion	ug/g	97.00	<1.00e-02	1.18e+04	1.13e+04	1.16e+04	4.33	n/a	198.0	n/a
S97T000762	F	Molybdenum -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.89e+02	<9.81e2	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Sodium -ICP-Fusion	ug/g	101.8	<1.00e-01	3.52e+04	2.98e+04	3.25e+04	16.6	n/a	1.98e+03	n/a
S97T000762	F	Neodymium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	<3.96e+03	<3.92e3	n/a	n/a	n/a	3.96e+03	n/a
S97T000762	F	Lead -ICP-Fusion	ug/g	96.40	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Sulfur -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Antimony -ICP-Fusion	ug/g	94.60	<6.00e-02	<1.19e+03	<1.18e3	n/a	n/a	n/a	1.19e+03	n/a
S97T000762	F	Selenium -ICP-Fusion	ug/g	93.20	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Silicon -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.89e+02	1.31e+03	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Samarium -ICP-Fusion	ug/g	97.40	<1.00e-01	<1.98e+03	<1.96e3	n/a	n/a	n/a	1.98e+03	n/a
S97T000762	F	Strontium -ICP-Fusion	ug/g	98.20	<1.00e-02	6.39e+02	4.87.0	563.0	27.0	n/a	198.0	n/a
S97T000762	F	Titanium-ICP-Fusion	ug/g	97.40	<1.00e-02	<1.98e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Thallium -ICP-Fusion	ug/g	96.20	<2.00e-01	<3.96e+03	<3.92e3	n/a	n/a	n/a	3.96e+03	n/a
S97T000762	F	Uranium -ICP-Fusion	ug/g	95.30	<5.00e-01	<9.89e+03	<9.81e3	n/a	n/a	n/a	9.88e+03	n/a
S97T000762	F	Vanadium -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.89e+02	<9.81e2	n/a	n/a	n/a	988.0	n/a
S97T000762	F	Zinc -ICP-Fusion	ug/g	94.80	<1.00e-02	<1.98e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Zirconium -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.98e+02	<1.96e2	n/a	n/a	n/a	198.0	n/a
S97T000762	F	Alpha of Digested Solid	uCi/g	87.00	<1.08e-03	2.01e-01	1.81e-01	1.91e-01	10.5	n/a	3.00e-03	7.59E+00
S97T000771	W	Fluoride-IC-Dionex 4000/4500	ug/g	89.66	<1.20e-02	6.26e+03	6.47e+03	6.36e+03	3.30	n/a	25.39	n/a
S97T000771	W	Chloride-IC-Dionex 4000/4500	ug/g	89.49	2.90e+02	6.07e+02	618.0	612.5	1.80	n/a	35.96	n/a
S97T000771	W	Nitrite-IC - Dionex 4000/4500	ug/g	89.34	2.22e-01	3.98e+02	405.0	401.6	1.74	n/a	228.5	n/a
S97T000771	W	Bromide by Ion Chromatograph	ug/g	88.28	<1.25e-01	<2.64e+02	<2.67e2	n/a	n/a	n/a	264.4	n/a
S97T000771	W	Nitrate by IC-Dionex 4000/4500	ug/g	89.56	1.88e-01	5.46e+04	5.54e+04	5.50e+04	1.45	n/a	294.0	n/a

HNE-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000771		W	Phosphate-IC-Dionex 4000/4500	ug/g	91.38	<1.20e-01	2.20e+03	2.28e+03	2.24e+03	3.57	n/a	253.9		n/a
S97T000771		W	Sulfate by IC-Dionex 4000/4500	ug/g	92.23	<1.38e-01	5.67e+02	610.0	588.4	7.31	n/a	291.9		n/a
S97T000771		W	Oxalate-IC-Dionex 4000/4500	ug/g	88.72	<1.05e-01	1.15e+03	1.16e+03	1.15e+03	0.87	n/a	222.1		n/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000568		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000568		DSC Exotherm on Perkin Elmer	Joules/g	96.10	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000568		% Water by TGA on Perkin Elmer	%	98.92	n/a	77.82	77.81	77.77	0.40	n/a	n/a	n/a
S97T000741	F	Silver -ICP-Fusion	ug/g	97.00	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000741	F	Aluminum -ICP-Fusion	ug/g	97.00	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Boron -ICP-Fusion	ug/g	99.60	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<1.02e+02	<1.01e2	n/a	n/a	n/a	102.0	n/a
S97T000741	F	Bismuth -ICP-Fusion	ug/g	98.40	<1.00e-01	3.49e+04	3.81e+04	3.65e+04	8.77	n/a	2.05e+03	n/a
S97T000741	F	Calcium -ICP-Fusion	ug/g	98.60	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Cadmium -ICP-Fusion	ug/g	99.20	<5.00e-03	<1.02e+02	<1.01e2	n/a	n/a	n/a	102.0	n/a
S97T000741	F	Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Cobalt -ICP-Fusion	ug/g	100.6	<2.00e-02	<4.09e+02	<4.05e2	n/a	n/a	n/a	409.0	n/a
S97T000741	F	Copper -ICP-Fusion	ug/g	98.40	<1.00e-02	3.36e+03	3.44e+03	3.40e+03	2.35	n/a	205.0	n/a
S97T000741	F	Chromium -ICP-Fusion	ug/g	98.20	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000741	F	Copper -ICP-Fusion	ug/g	99.20	<5.00e-02	1.86e+03	1.93e+03	1.90e+03	3.69	n/a	1.02e+03	n/a
S97T000741	F	Iron -ICP-Fusion	ug/g	99.40	<5.00e-02	9.85e+03	1.01e+04	9.98e+03	2.51	n/a	1.02e+03	n/a
S97T000741	F	Lanthanum -ICP-Fusion	ug/g	97.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000741	F	Lithium -ICP-Fusion	ug/g	99.20	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Magnesium -ICP-Fusion	ug/g	97.00	<1.00e-02	1.07e+04	1.09e+04	1.08e+04	1.85	n/a	205.0	n/a
S97T000741	F	Manganese -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Molybdenum -ICP-Fusion	ug/g	101.8	<1.00e-01	3.38e+04	3.35e+04	3.36e+04	0.89	n/a	2.05e+03	n/a
S97T000741	F	Sodium -ICP-Fusion	ug/g	99.20	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Neodymium -ICP-Fusion	ug/g	101.0	<2.00e-01	<4.09e+03	<4.05e3	n/a	n/a	n/a	4.09e+03	n/a
S97T000741	F	Phosphorus -ICP-Fusion	ug/g	96.40	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Lead -ICP-Fusion	ug/g	97.80	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Antimony -ICP-Fusion	ug/g	94.60	<6.00e-02	<1.23e+03	<1.22e3	n/a	n/a	n/a	1.23e+03	n/a
S97T000741	F	Selenium -ICP-Fusion	ug/g	93.20	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Silicon -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Samarium -ICP-Fusion	ug/g	97.40	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000741	F	Strontium -ICP-Fusion	ug/g	98.20	<1.00e-02	5.15e+02	529.0	522.0	2.68	n/a	205.0	n/a
S97T000741	F	Titanium-ICP-Fusion	ug/g	97.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000741	F	Thallium -ICP-Fusion	ug/g	96.20	<2.00e-01	<4.09e+03	<4.05e3	n/a	n/a	n/a	4.09e+03	n/a
S97T000741	F	Uranium -ICP-Fusion	ug/g	95.30	<5.00e-01	<1.02e+04	<1.01e4	n/a	n/a	n/a	1.02e+04	n/a
S97T000741	F	Vanadium -ICP-Fusion	ug/g	100.0	<5.00e-02	<1.02e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000741	F	Zinc -ICP-Fusion	ug/g	94.80	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000741	F	Zirconium -ICP-Fusion	ug/g	97.80	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a
S97T000750	W	Fluoride-IC-Dionex 4000/4500	ug/g	89.66	<1.20e-02	6.75e+03	6.86e+03	6.81e+03	1.62	n/a	25.70	n/a
S97T000750	W	Chloride-IC-Dionex 4000/4500	ug/g	89.49	2.90e-02	7.86e+02	839.0	812.4	6.52	n/a	36.41	n/a
S97T000750	W	Nitrite-IC - Dionex 4000/4500	ug/g	89.34	2.22e-01	4.18e+02	435.0	426.4	3.99	n/a	231.3	n/a
S97T000750	W	Bromide by Ion Chromatograph	ug/g	88.28	<1.25e-01	<2.68e+02	<2.74e2	n/a	n/a	n/a	267.7	n/a
S97T000750	W	Nitrate by IC-Dionex 4000/4500	ug/g	89.56	1.88e-01	5.94e+04	6.11e+04	6.02e+04	2.82	n/a	297.7	n/a
S97T000750	W	Phosphate-IC-Dionex 4000/4500	ug/g	91.38	<1.20e-01	2.42e+03	2.40e+03	2.41e+03	0.83	n/a	257.0	n/a

56

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000750	W		Sulfate by IC-Dionex 4000/4500	ug/g	92.23	<1.38e-01	6.37e+02	688.0	662.5	7.70	n/a	295.6	n/a
S97T000750	W		Oxalate-IC-Dionex 4000/4500	ug/g	88.72	<1.05e-01	1.30e+03	1.37e+03	1.33e+03	5.24	n/a	224.8	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000663			Bulk Density of Sample	g/mL	n/a	n/a	1.140	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000671			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000671			DSC Exotherm on Perkin Elmer	Joules/g	96.10	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000671			% Water by TGA on Perkin Elmer	%	98.92	n/a	76.90	76.46	76.68	0.57	n/a	n/a	n/a
S97T000763	F		Silver -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Aluminum -ICP-Fusion	ug/g	97.00	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Arsenic -ICP-Fusion	ug/g	103.0	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Boron -ICP-Fusion	ug/g	99.60	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Barium -ICP-Fusion	ug/g	98.80	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<99.50	<1.00e2	n/a	n/a	n/a	99.60	n/a
S97T000763	F		Bismuth -ICP-Fusion	ug/g	98.40	<1.00e-01	<3.82e+04	4.11e+04	3.96e+04	7.31	n/a	1.99e+03	n/a
S97T000763	F		Calcium -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Cadmium -ICP-Fusion	ug/g	99.20	<5.00e-03	<99.50	<1.00e2	n/a	n/a	n/a	99.60	n/a
S97T000763	F		Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Cobalt -ICP-Fusion	ug/g	100.6	<2.00e-02	<3.98e+02	<4.01e2	n/a	n/a	n/a	398.0	n/a
S97T000763	F		Chromium -ICP-Fusion	ug/g	98.40	<1.00e-02	<4.04e+03	4.32e+03	4.18e+03	6.70	n/a	199.0	n/a
S97T000763	F		Copper -ICP-Fusion	ug/g	98.20	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Iron -ICP-Fusion	ug/g	92.20	<5.00e-02	<2.23e+03	2.34e+03	2.28e+03	4.81	n/a	996.0	n/a
S97T000763	F		Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	<1.20e+04	1.11e+04	1.16e+04	7.79	n/a	996.0	n/a
S97T000763	F		Lithium -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Magnesium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Manganese -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.23e+04	1.15e+04	1.19e+04	6.72	n/a	199.0	n/a
S97T000763	F		Molybdenum -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Sodium -ICP-Fusion	ug/g	101.8	<1.00e-01	<3.37e+04	3.51e+04	3.44e+04	4.07	n/a	1.99e+03	n/a
S97T000763	F		Neodymium -ICP-Fusion	ug/g	99.20	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	<3.98e+03	<4.01e3	n/a	n/a	n/a	3.98e+03	n/a
S97T000763	F		Lead -ICP-Fusion	ug/g	96.40	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Sulfur -ICP-Fusion	ug/g	97.80	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Antimony -ICP-Fusion	ug/g	94.60	<6.00e-02	<1.19e+03	<1.20e3	n/a	n/a	n/a	1.19e+03	n/a
S97T000763	F		Selenium -ICP-Fusion	ug/g	93.20	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Silicon -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Samarium -ICP-Fusion	ug/g	97.40	<1.00e-01	<1.99e+03	<2.00e3	n/a	n/a	n/a	1.99e+03	n/a
S97T000763	F		Strontium -ICP-Fusion	ug/g	98.20	<1.00e-02	<5.07e+02	640.0	573.5	23.2	n/a	199.0	n/a
S97T000763	F		Titanium-ICP-Fusion	ug/g	97.40	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Thallium -ICP-Fusion	ug/g	96.20	<2.00e-01	<3.98e+03	<4.01e3	n/a	n/a	n/a	3.98e+03	n/a
S97T000763	F		Uranium -ICP-Fusion	ug/g	95.30	<5.00e-01	<9.95e+03	<1.00e4	n/a	n/a	n/a	9.96e+03	n/a
S97T000763	F		Vanadium -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.95e+02	<1.00e3	n/a	n/a	n/a	996.0	n/a
S97T000763	F		Zinc -ICP-Fusion	ug/g	94.80	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Zirconium -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.99e+02	<2.00e2	n/a	n/a	n/a	199.0	n/a
S97T000763	F		Alpha of Digested Solid	uCi/g	96.50	<2.81e-03	2.78e-01	2.78e-01	2.78e-01	0.00	n/a	7.00e-03	9.29E+00
S97T000772	W		Fluoride-IC-Dionex 4000/4500	ug/g	89.66	<1.20e-02	6.64e+03	6.55e+03	6.60e+03	1.36	n/a	25.87	n/a
S97T000772	W		Chloride-IC-Dionex 4000/4500	ug/g	89.49	2.90e+02	6.06e+02	623.0	614.4	2.77	n/a	36.65	n/a
S97T000772	W		Nitrite-IC -Dionex 4000/4500	ug/g	89.34	2.22e-01	3.99e+02	425.0	412.1	6.31	n/a	232.9	n/a
S97T000772	W		Bromide by Ion Chromatograph	ug/g	88.28	<1.25e-01	<2.70e+02	<2.66e2	n/a	n/a	n/a	269.5	n/a
S97T000772	W		Nitrate by IC-Dionex 4000/4500	ug/g	89.56	1.88e-01	5.76e+04	5.82e+04	5.79e+04	1.04	n/a	299.6	n/a

57

HNF-SD-WW-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000772	W		Phosphate-IC-Dionex 4000/4500	ug/g	91.38	<1.20e-01	2.37e+03	2.41e+03	2.39e+03	1.67	n/a	258.7	n/a
S97T000772	W		Sulfate by IC-Dionex 4000/4500	ug/g	92.23	<1.38e-01	8.16e+02	621.0	718.3	27.1	n/a	297.6	n/a
S97T000772	W		Oxalate-IC-Dionex 4000/4500	ug/g	88.72	<1.05e-01	1.34e+03	1.26e+03	1.30e+03	6.15	n/a	226.4	n/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S971000707			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S971000707			DSC Exotherm on Perkin Elmer	Joules/g	96.56	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S971000707			% Water by TGA on Perkin Elmer	%	99.07	n/a	75.60	76.16	76.38	0.58	n/a	n/a	n/a
S971000742	F		Silver - ICP-Fusion	ug/g	98.20	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	92.70	204.0	n/a
S971000742	F		Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	102.0	1.02e+03	n/a
S971000742	F		Arsenic - ICP-Fusion	ug/g	103.8	<1.00e-02	<2.04e+03	<2.06e3	n/a	n/a	106.0	2.04e+03	n/a
S971000742	F		Boron - ICP-Fusion	ug/g	101.2	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	100.0	1.02e+03	n/a
S971000742	F		Barium - ICP-Fusion	ug/g	101.8	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	101.0	1.02e+03	n/a
S971000742	F		Beryllium - ICP-Fusion	ug/g	103.0	<5.00e-03	<1.02e+02	<1.03e2	n/a	n/a	102.0	102.0	n/a
S971000742	F		Bismuth - ICP-Fusion	ug/g	100.8	<1.00e-01	4.12e+04	3.98e+04	4.05e+04	3.46	107.0	2.04e+03	n/a
S971000742	F		Calcium - ICP-Fusion	ug/g	99.80	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	103.0	2.04e+03	n/a
S971000742	F		Cadmium - ICP-Fusion	ug/g	99.40	<5.00e-03	<1.02e+02	<1.03e2	n/a	n/a	101.0	102.0	n/a
S971000742	F		Cerium - ICP-Fusion	ug/g	100.6	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	102.0	2.04e+03	n/a
S971000742	F		Cobalt - ICP-Fusion	ug/g	101.2	<2.00e-02	<4.08e+02	<4.12e2	n/a	n/a	102.0	408.0	n/a
S971000742	F		Chromium - ICP-Fusion	ug/g	99.20	<1.00e-02	4.82e+03	4.64e+03	4.73e+03	3.81	101.0	204.0	n/a
S971000742	F		Copper - ICP-Fusion	ug/g	101.2	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	101.0	204.0	n/a
S971000742	F		Iron - ICP-Fusion	ug/g	93.40	<5.00e-02	2.24e+03	2.24e+03	2.24e+03	0.00	94.40	1.02e+03	n/a
S971000742	F		Lanthanum - ICP-Fusion	ug/g	102.6	<5.00e-02	1.03e+04	1.07e+04	1.05e+04	3.81	104.0	1.02e+03	n/a
S971000742	F		Lithium - ICP-Fusion	ug/g	101.0	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	98.90	204.0	n/a
S971000742	F		Magnesium - ICP-Fusion	ug/g	101.6	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	102.0	2.04e+03	n/a
S971000742	F		Manganese - ICP-Fusion	ug/g	97.80	<1.00e-02	1.18e+04	1.20e+04	1.19e+04	1.68	98.90	204.0	n/a
S971000742	F		Molybdenum - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	102.0	1.02e+03	n/a
S971000742	F		Sodium - ICP-Fusion	ug/g	104.8	<1.00e-01	3.45e+04	3.52e+04	3.48e+04	2.01	109.0	2.04e+03	n/a
S971000742	F		Neodymium - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	103.0	2.04e+03	n/a
S971000742	F		Phosphorus - ICP-Fusion	ug/g	100.0	<2.00e-01	<4.08e+03	<4.12e3	n/a	n/a	113.0	4.08e+03	n/a
S971000742	F		Lead - ICP-Fusion	ug/g	97.00	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	99.30	2.04e+03	n/a
S971000742	F		Sulfur - ICP-Fusion	ug/g	98.40	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	98.80	2.04e+03	n/a
S971000742	F		Antimony - ICP-Fusion	ug/g	96.00	<6.00e-02	<1.22e+03	<1.24e3	n/a	n/a	96.50	1.22e+03	n/a
S971000742	F		Selenium - ICP-Fusion	ug/g	93.60	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	98.30	2.04e+03	n/a
S971000742	F		Silicon - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	106.0	1.02e+03	n/a
S971000742	F		Samarium - ICP-Fusion	ug/g	101.0	<1.00e-01	<2.04e+03	<2.06e3	n/a	n/a	100.0	2.04e+03	n/a
S971000742	F		Strontium - ICP-Fusion	ug/g	101.4	<1.00e-02	5.56e+02	560.0	558.0	0.72	101.0	204.0	n/a
S971000742	F		Titanium - ICP-Fusion	ug/g	99.60	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	100.0	204.0	n/a
S971000742	F		Thallium - ICP-Fusion	ug/g	97.40	<2.00e-01	<4.08e+03	<4.12e3	n/a	n/a	97.70	4.08e+03	n/a
S971000742	F		Uranium - ICP-Fusion	ug/g	98.60	<5.00e-01	<1.02e+04	<1.03e4	n/a	n/a	94.50	1.02e+04	n/a
S971000742	F		Vanadium - ICP-Fusion	ug/g	101.4	<5.00e-02	<1.02e+03	<1.03e3	n/a	n/a	102.0	1.02e+03	n/a
S971000742	F		Zinc - ICP-Fusion	ug/g	95.00	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	95.60	204.0	n/a
S971000742	F		Zirconium - ICP-Fusion	ug/g	99.80	<1.00e-02	<2.04e+02	<2.06e2	n/a	n/a	100.0	204.0	n/a
S971000751	W		Fluoride-IC-Dionex 4000/4500	ug/g	93.73	<1.20e-02	4.83e+03	4.84e+03	4.83e+03	0.21	n/a	49.77	n/a
S971000751	W		Chloride-IC-Dionex 4000/4500	ug/g	98.48	4.35e-01	4.61e+02	500.0	480.5	8.12	n/a	70.52	n/a
S971000751	W		Nitrite-IC - Dionex 4000/4500	ug/g	99.82	<1.08e-01	<4.48e+02	<4.54e2	n/a	n/a	n/a	447.9	n/a
S971000751	W		Bromide by Ion Chromatograph	ug/g	96.77	<1.25e-01	<5.18e+02	<5.25e2	n/a	n/a	n/a	518.5	n/a
S971000751	W		Nitrate by IC-Dionex 4000/4500	ug/g	98.32	<1.39e-01	4.51e+04	4.62e+04	4.56e+04	2.41	n/a	576.4	n/a
S971000751	W		Phosphate-IC-Dionex 4000/4500	ug/g	98.90	<1.20e-01	1.88e+03	1.78e+03	1.83e+03	5.46	n/a	497.7	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000751	W	Sulfate by IC-Dionex 4000/4500	ug/g	94.77	<1.38e-01	<5.72e+02	<5.80e2	n/a	n/a	n/a	572.5	n/a
S97T000751	W	Oxalate-IC-Dionex 4000/4500	ug/g	99.81	<1.05e-01	1.31e+03	1.28e+03	1.30e+03	2.32	n/a	435.5	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000701		Bulk Density of Sample	g/mL	n/a	n/a	1.270	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000713		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	9.986	13.83	11.91	32.3	n/a	n/a	n/a
S97T000713		DSC Exotherm on Perkin Elmer	Joules/g	91.88	n/a	2.440	3.380	2.910	32.3	n/a	n/a	n/a
S97T000713		% Water by TGA on Perkin Elmer	%	98.72	n/a	75.22	75.91	75.56	0.91	n/a	n/a	n/a
S97T000764	F	Silver -ICP-Fusion	ug/g	98.20	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Aluminum -ICP-Fusion	ug/g	99.60	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Arsenic -ICP-Fusion	ug/g	103.8	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Boron -ICP-Fusion	ug/g	101.2	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Barium -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Beryllium -ICP-Fusion	ug/g	103.0	<5.00e-03	<1.01e+02	<1.01e2	n/a	n/a	n/a	101.0	n/a
S97T000764	F	Bismuth -ICP-Fusion	ug/g	100.8	<1.00e-01	3.74e+04	3.58e+04	3.66e+04	4.37	n/a	2.01e+03	n/a
S97T000764	F	Calcium -ICP-Fusion	ug/g	99.80	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	<1.01e+02	<1.01e2	n/a	n/a	n/a	101.0	n/a
S97T000764	F	Cerium -ICP-Fusion	ug/g	100.6	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Cobalt -ICP-Fusion	ug/g	101.2	<2.00e-02	<4.03e+02	<4.05e2	n/a	n/a	n/a	403.0	n/a
S97T000764	F	Chromium -ICP-Fusion	ug/g	99.20	<1.00e-02	4.44e+03	4.34e+03	4.39e+03	2.28	n/a	201.0	n/a
S97T000764	F	Copper -ICP-Fusion	ug/g	101.2	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Iron -ICP-Fusion	ug/g	93.40	<5.00e-02	2.54e+03	2.57e+03	2.56e+03	1.17	n/a	1.01e+03	n/a
S97T000764	F	Lanthanum -ICP-Fusion	ug/g	102.6	<5.00e-02	1.00e+04	1.04e+04	1.02e+04	3.92	n/a	1.01e+03	n/a
S97T000764	F	Lithium -ICP-Fusion	ug/g	101.0	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Magnesium -ICP-Fusion	ug/g	101.6	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Manganese -ICP-Fusion	ug/g	97.80	<1.00e-02	1.16e+04	1.17e+04	1.16e+04	0.86	n/a	201.0	n/a
S97T000764	F	Molybdenum -ICP-Fusion	ug/g	100.8	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Sodium -ICP-Fusion	ug/g	104.8	<1.00e-01	3.41e+04	3.39e+04	3.40e+04	0.59	n/a	2.01e+03	n/a
S97T000764	F	Neodymium -ICP-Fusion	ug/g	102.4	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Phosphorus -ICP-Fusion	ug/g	100.0	<2.00e-01	<4.03e+03	<4.05e3	n/a	n/a	n/a	4.03e+03	n/a
S97T000764	F	Lead -ICP-Fusion	ug/g	97.00	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Sulfur -ICP-Fusion	ug/g	98.40	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Antimony -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.21e+03	<1.21e3	n/a	n/a	n/a	1.21e+03	n/a
S97T000764	F	Selenium -ICP-Fusion	ug/g	93.60	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Silicon -ICP-Fusion	ug/g	100.8	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Samarium -ICP-Fusion	ug/g	101.0	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000764	F	Strontium -ICP-Fusion	ug/g	101.4	<1.00e-02	5.87e+02	603.0	595.0	2.69	n/a	201.0	n/a
S97T000764	F	Titanium-ICP-Fusion	ug/g	99.60	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Thallium -ICP-Fusion	ug/g	97.40	<2.00e-01	<4.03e+03	<4.05e3	n/a	n/a	n/a	4.03e+03	n/a
S97T000764	F	Uranium -ICP-Fusion	ug/g	98.60	<5.00e-01	<1.01e+04	<1.01e4	n/a	n/a	n/a	1.01e+04	n/a
S97T000764	F	Vanadium -ICP-Fusion	ug/g	101.4	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000764	F	Zinc -ICP-Fusion	ug/g	95.00	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Zirconium -ICP-Fusion	ug/g	99.80	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a
S97T000764	F	Alpha of Digested Solid	uCi/g	89.50	<2.61e-04	1.29e-01	1.28e-01	1.29e-01	0.78	n/a	3.08e-04	2.81E+00
S97T000773	W	Fluoride-IC-Dionex 4000/4500	ug/g	93.73	<1.20e-02	5.84e+03	5.88e+03	5.86e+03	0.68	n/a	26.27	n/a
S97T000773	W	Chloride-IC-Dionex 4000/4500	ug/g	98.48	4.35e-01	5.46e+02	549.0	547.5	0.55	n/a	37.21	n/a
S97T000773	W	Nitrite-IC - Dionex 4000/4500	ug/g	99.82	<1.08e-01	2.92e+02	273.0	282.8	6.73	n/a	236.4	n/a
S97T000773	W	Bromide by Ion Chromatograph	ug/g	96.77	<1.25e-01	<2.74e+02	<2.70e2	n/a	n/a	n/a	273.7	n/a
S97T000773	W	Nitrate by IC-Dionex 4000/4500	ug/g	98.32	<1.39e-01	5.76e+04	5.75e+04	5.76e+04	0.17	n/a	304.3	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000773	W		Phosphate-IC-Dionex 4000/4500	ug/g	98.90	<1.20e-01	2.07e+03	2.26e+03	2.17e+03	8.78	n/a	262.7	n/a
S97T000773	W		Sulfate by IC-Dionex 4000/4500	ug/g	94.77	<1.38e-01	<3.02e+02	658.0	n/a	n/a	n/a	302.1	n/a
S97T000773	W		Oxalate-IC-Dionex 4000/4500	ug/g	99.81	<1.09e-01	1.56e+03	1.57e+03	1.57e+03	0.64	n/a	229.9	n/a

HNF-SD-WM-DP-247, REV.0

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000708		DSC Exotherm Dry	Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000708		DSC Exotherm on Perkin Elmer	Joules/g	96.56	n/a	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000708		% Water by TGA on Perkin Elmer	%	98.87	n/a	76.18	76.36	75.37	3.16	n/a	n/a	n/a
S97T000743	F	Silver - ICP-Fusion	ug/g	98.20	<1.00e-02	<2.04e-02	<2.04e-02	n/a	n/a	n/a	205.0	n/a
S97T000743	F	Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Arsenic - ICP-Fusion	ug/g	103.8	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Boron - ICP-Fusion	ug/g	101.2	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Barium - ICP-Fusion	ug/g	101.8	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Beryllium - ICP-Fusion	ug/g	103.0	<5.00e-03	<1.02e+02	<1.02e2	n/a	n/a	n/a	102.0	n/a
S97T000743	F	Bismuth - ICP-Fusion	ug/g	100.8	<1.00e-01	5.39e+04	5.25e+04	5.32e+04	2.63	n/a	2.05e+03	n/a
S97T000743	F	Calcium - ICP-Fusion	ug/g	99.80	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Cadmium - ICP-Fusion	ug/g	99.40	<5.00e-03	<1.02e+02	<1.02e2	n/a	n/a	n/a	102.0	n/a
S97T000743	F	Cerium - ICP-Fusion	ug/g	100.6	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Cobalt - ICP-Fusion	ug/g	101.2	<2.00e-02	<4.10e+02	<4.08e2	n/a	n/a	n/a	410.0	n/a
S97T000743	F	Chromium - ICP-Fusion	ug/g	99.20	<1.00e-02	3.55e+03	3.40e+03	3.48e+03	4.32	n/a	205.0	n/a
S97T000743	F	Copper - ICP-Fusion	ug/g	101.2	<1.00e-02	<2.05e+02	<2.04e2	n/a	n/a	n/a	205.0	n/a
S97T000743	F	Iron - ICP-Fusion	ug/g	93.40	<5.00e-02	3.89e+03	3.78e+03	3.84e+03	2.87	n/a	1.02e+03	n/a
S97T000743	F	Lanthanum - ICP-Fusion	ug/g	102.6	<5.00e-02	1.08e+04	1.09e+04	1.08e+04	0.92	n/a	1.02e+03	n/a
S97T000743	F	Lithium - ICP-Fusion	ug/g	101.0	<1.00e-02	<2.05e+02	<2.04e2	n/a	n/a	n/a	205.0	n/a
S97T000743	F	Magnesium - ICP-Fusion	ug/g	101.6	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Manganese - ICP-Fusion	ug/g	97.80	<1.00e-02	1.27e+04	1.28e+04	1.28e+04	0.78	n/a	205.0	n/a
S97T000743	F	Molybdenum - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Sodium - ICP-Fusion	ug/g	104.8	<1.00e-01	3.49e+04	3.50e+04	3.50e+04	0.29	n/a	2.05e+03	n/a
S97T000743	F	Neodymium - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Phosphorus - ICP-Fusion	ug/g	100.0	<2.00e-01	<4.10e+03	<4.08e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000743	F	Lead - ICP-Fusion	ug/g	97.00	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Sulfur - ICP-Fusion	ug/g	98.40	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Antimony - ICP-Fusion	ug/g	96.00	<6.00e-02	<1.23e+03	<1.22e3	n/a	n/a	n/a	1.23e+03	n/a
S97T000743	F	Selenium - ICP-Fusion	ug/g	93.60	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Silicon - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Samarium - ICP-Fusion	ug/g	101.0	<1.00e-01	<2.05e+03	<2.04e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000743	F	Strontium - ICP-Fusion	ug/g	101.4	<1.00e-02	5.83e+02	580.0	581.5	0.52	n/a	205.0	n/a
S97T000743	F	Titanium - ICP-Fusion	ug/g	99.60	<1.00e-02	<2.05e+02	<2.04e2	n/a	n/a	n/a	205.0	n/a
S97T000743	F	Thallium - ICP-Fusion	ug/g	97.40	<2.00e-01	<4.10e+03	<4.08e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000743	F	Uranium - ICP-Fusion	ug/g	98.60	<5.00e-01	<1.02e+04	<1.02e4	n/a	n/a	n/a	1.02e+04	n/a
S97T000743	F	Vanadium - ICP-Fusion	ug/g	101.4	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000743	F	Zinc - ICP-Fusion	ug/g	95.00	<1.00e-02	<2.05e+02	<2.04e2	n/a	n/a	n/a	205.0	n/a
S97T000743	F	Zirconium - ICP-Fusion	ug/g	99.80	<1.00e-02	<2.05e+02	<2.04e2	n/a	n/a	n/a	205.0	n/a
S97T000752	W	Fluoride-IC-Dionex 4000/4500	ug/g	93.73	<1.20e-02	4.54e+03	4.61e+03	4.58e+03	1.53	n/a	25.72	n/a
S97T000752	W	Chloride-IC-Dionex 4000/4500	ug/g	98.48	4.35e-01	4.22e+02	444.0	433.2	5.08	n/a	36.43	n/a
S97T000752	W	Nitrite-IC - Dionex 4000/4500	ug/g	99.82	<1.08e-01	2.55e+02	257.0	255.9	0.78	n/a	231.4	n/a
S97T000752	W	Bromide by Ion Chromatograph	ug/g	96.77	<1.25e-01	<2.68e+02	<2.72e2	n/a	n/a	n/a	267.9	n/a
S97T000752	W	Nitrate by IC-Dionex 4000/4500	ug/g	98.32	<1.39e-01	4.36e+04	4.45e+04	4.41e+04	2.04	n/a	297.9	n/a
S97T000752	W	Phosphate-IC-Dionex 4000/4500	ug/g	98.90	<1.20e-01	1.50e+03	2.33e+03	1.92e+03	43.3	n/a	257.2	n/a

62

HNF-SD-WM-DP-247, REV. 0

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000752	W	Sulfate by IC-Dionex 4000/4500	ug/g	94.77	<1.38e-01	<2.96e+02	<3.01e2	n/a	n/a	n/a	295.7	n/a
S97T000752	W	Oxalate-IC-Dionex 4000/4500	ug/g	99.81	<1.05e-01	1.25e+03	1.26e+03	1.26e+03	0.80	n/a	225.1	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000702		Bulk Density of Sample	g/mL	n/a	n/a	1.170	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000714		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	17.47	8.546	13.01	68.6	n/a	n/a	n/a
S97T000714		DSC Exotherm on Perkin Elmer	Joules/g	91.88	n/a	4.680	2.290	3.485	68.6	n/a	n/a	n/a
S97T000714		% Water by TGA on Perkin Elmer	%	98.72	n/a	74.96	71.45	73.20	4.79	n/a	n/a	n/a
S97T000765	F	Silver -ICP-Fusion	ug/g	98.20	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Aluminum -ICP-Fusion	ug/g	99.60	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Arsenic -ICP-Fusion	ug/g	103.8	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Boron -ICP-Fusion	ug/g	101.2	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Barium -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Beryllium -ICP-Fusion	ug/g	103.0	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	102.0	n/a
S97T000765	F	Bismuth -ICP-Fusion	ug/g	100.8	<1.00e-01	5.30e+04	4.40e+04	4.85e+04	18.6	n/a	2.05e+03	n/a
S97T000765	F	Calcium -ICP-Fusion	ug/g	99.80	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	102.0	n/a
S97T000765	F	Cerium -ICP-Fusion	ug/g	100.6	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Cobalt -ICP-Fusion	ug/g	101.2	<2.00e-02	<4.10e+02	<4.03e2	n/a	n/a	n/a	410.0	n/a
S97T000765	F	Chromium -ICP-Fusion	ug/g	99.20	<1.00e-02	4.54e+03	4.46e+03	4.50e+03	1.78	n/a	205.0	n/a
S97T000765	F	Copper -ICP-Fusion	ug/g	101.2	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Iron -ICP-Fusion	ug/g	93.40	<5.00e-02	3.08e+03	2.81e+03	2.94e+03	9.17	n/a	1.02e+03	n/a
S97T000765	F	Lanthanum -ICP-Fusion	ug/g	102.6	<5.00e-02	9.74e+03	9.56e+03	9.65e+03	1.87	n/a	1.02e+03	n/a
S97T000765	F	Lithium -ICP-Fusion	ug/g	101.0	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Magnesium -ICP-Fusion	ug/g	101.6	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Manganese -ICP-Fusion	ug/g	97.80	<1.00e-01	1.29e+04	1.22e+04	1.26e+04	5.58	n/a	205.0	n/a
S97T000765	F	Molybdenum -ICP-Fusion	ug/g	100.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Sodium -ICP-Fusion	ug/g	104.8	<1.00e-01	3.38e+04	3.41e+04	3.40e+04	0.88	n/a	2.05e+03	n/a
S97T000765	F	Neodymium -ICP-Fusion	ug/g	102.4	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Phosphorus -ICP-Fusion	ug/g	100.0	<2.00e-01	<4.10e+03	<4.03e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000765	F	Lead -ICP-Fusion	ug/g	97.00	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Lead -ICP-Fusion	ug/g	98.40	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Sulfur -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.23e+03	<1.21e3	n/a	n/a	n/a	1.23e+03	n/a
S97T000765	F	Antimony -ICP-Fusion	ug/g	93.60	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Selenium -ICP-Fusion	ug/g	100.8	<5.00e-02	<1.03e+03	1.08e+03	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Silicon -ICP-Fusion	ug/g	101.0	<1.00e-01	<2.05e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000765	F	Samarium -ICP-Fusion	ug/g	101.4	<1.00e-02	5.89e+02	589.0	589.0	0.00	n/a	205.0	n/a
S97T000765	F	Strontium -ICP-Fusion	ug/g	99.60	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Titanium -ICP-Fusion	ug/g	97.40	<2.00e-01	<4.10e+03	<4.03e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000765	F	Thallium -ICP-Fusion	ug/g	98.60	<5.00e-01	<1.03e+04	<1.01e4	n/a	n/a	n/a	1.02e+04	n/a
S97T000765	F	Uranium -ICP-Fusion	ug/g	101.4	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000765	F	Vanadium -ICP-Fusion	ug/g	95.00	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Zinc -ICP-Fusion	ug/g	99.80	<1.00e-02	<2.05e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000765	F	Zirconium -ICP-Fusion	ug/g	89.00	<4.06e-04	1.40e-01	1.23e-01	1.32e-01	12.9	n/a	1.00e-03	3.95e+00
S97T000765	F	Alpha of Digested Solid	uCi/g	90.51	<1.20e-02	6.71e+03	6.67e+03	6.69e+03	0.60	n/a	26.02	n/a
S97T000774	W	Fluoride-IC-Dionex 4000/4500	ug/g	93.04	3.20e2	5.96e+02	615.0	605.3	3.14	n/a	36.85	n/a
S97T000774	W	Chloride-IC-Dionex 4000/4500	ug/g	91.54	1.57e-01	4.07e+02	398.0	402.4	2.24	n/a	234.1	n/a
S97T000774	W	Nitrite-IC - Dionex 4000/4500	ug/g	90.66	<1.25e-01	<2.71e+02	<2.71e2	n/a	n/a	n/a	271.0	n/a
S97T000774	W	Bromide by Ion Chromatograph	ug/g	90.40	1.75e-01	5.76e+04	5.88e+04	5.82e+04	2.06	n/a	301.3	n/a
S97T000774	W	Nitrate by IC-Dionex 4000/4500	ug/g									

63

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000774	W		Phosphate-IC-Dionex 4000/4500	ug/g	92.11	<1.20e-01	2.31e+03	2.27e+03	2.29e+03	1.75	n/a	260.1	n/a
S97T000774	W		Sulfate by IC-Dionex 4000/4500	ug/g	91.28	<1.38e-01	3.53e+02	696.0	524.4	65.4	n/a	299.2	n/a
S97T000774	W		Oxalate-IC-Dionex 4000/4500	ug/g	89.66	<1.05e-01	1.26e+03	1.30e+03	1.28e+03	3.12	n/a	227.6	n/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000709			DSC Exotherm Dry	Calculated	Joules/g Dry	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000709			DSC Exotherm on Perkin Elmer	Joules/g	96.56	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000709			% Water by TGA on Perkin Elmer	%	98.87	n/a	75.38	76.43	75.91	1.38	n/a	n/a	n/a	n/a
S97T000744	F		Silver - ICP-Fusion	ug/g	98.20	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000744	F		Aluminum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Arsenic - ICP-Fusion	ug/g	103.8	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Boron - ICP-Fusion	ug/g	101.2	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Barium - ICP-Fusion	ug/g	101.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Beryllium - ICP-Fusion	ug/g	103.0	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	n/a	103.0	n/a
S97T000744	F		Bismuth - ICP-Fusion	ug/g	100.8	<1.00e-01	5.42e+04	5.90e+04	5.66e+04	8.48	n/a	n/a	2.07e+03	n/a
S97T000744	F		Calcium - ICP-Fusion	ug/g	99.80	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Cadmium - ICP-Fusion	ug/g	99.40	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	n/a	103.0	n/a
S97T000744	F		Cerium - ICP-Fusion	ug/g	100.6	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Cobalt - ICP-Fusion	ug/g	101.2	<2.00e-02	<4.13e+02	<4.04e2	n/a	n/a	n/a	n/a	414.0	n/a
S97T000744	F		Chromium - ICP-Fusion	ug/g	99.20	<1.00e-02	3.94e+03	4.12e+03	4.03e+03	4.47	n/a	n/a	207.0	n/a
S97T000744	F		Copper - ICP-Fusion	ug/g	101.2	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000744	F		Iron - ICP-Fusion	ug/g	93.40	<5.00e-02	3.08e+03	3.13e+03	3.10e+03	1.61	n/a	n/a	1.03e+03	n/a
S97T000744	F		Lanthanum - ICP-Fusion	ug/g	102.6	<5.00e-02	1.06e+04	1.12e+04	1.09e+04	5.50	n/a	n/a	1.03e+03	n/a
S97T000744	F		Lithium - ICP-Fusion	ug/g	101.0	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000744	F		Magnesium - ICP-Fusion	ug/g	101.6	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Manganese - ICP-Fusion	ug/g	97.80	<1.00e-02	1.26e+04	1.28e+04	1.27e+04	1.57	n/a	n/a	207.0	n/a
S97T000744	F		Molybdenum - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Sodium - ICP-Fusion	ug/g	104.8	<1.00e-01	3.41e+04	3.46e+04	3.44e+04	1.46	n/a	n/a	2.07e+03	n/a
S97T000744	F		Neodymium - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Phosphorus - ICP-Fusion	ug/g	100.0	<2.00e-01	<4.13e+03	<4.04e3	n/a	n/a	n/a	n/a	4.14e+03	n/a
S97T000744	F		Lead - ICP-Fusion	ug/g	97.00	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Sulfur - ICP-Fusion	ug/g	98.40	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Antimony - ICP-Fusion	ug/g	96.00	<6.00e-02	<1.24e+03	<1.21e3	n/a	n/a	n/a	n/a	1.24e+03	n/a
S97T000744	F		Selenium - ICP-Fusion	ug/g	93.60	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Silicon - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Samarium - ICP-Fusion	ug/g	101.0	<1.00e-01	<2.07e+03	<2.02e3	n/a	n/a	n/a	n/a	2.07e+03	n/a
S97T000744	F		Strontium - ICP-Fusion	ug/g	101.4	<1.00e-02	7.29e+02	748.0	738.5	2.57	n/a	n/a	207.0	n/a
S97T000744	F		Titanium - ICP-Fusion	ug/g	99.60	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000744	F		Thallium - ICP-Fusion	ug/g	97.40	<2.00e-01	<4.13e+03	<4.04e3	n/a	n/a	n/a	n/a	4.14e+03	n/a
S97T000744	F		Uranium - ICP-Fusion	ug/g	98.60	<5.00e-01	<1.03e+04	<1.01e4	n/a	n/a	n/a	n/a	1.03e+04	n/a
S97T000744	F		Vanadium - ICP-Fusion	ug/g	101.4	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	n/a	1.03e+03	n/a
S97T000744	F		Zinc - ICP-Fusion	ug/g	95.00	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000744	F		Zirconium - ICP-Fusion	ug/g	99.80	<1.00e-02	<2.07e+02	<2.02e2	n/a	n/a	n/a	n/a	207.0	n/a
S97T000753	W		Fluoride-IC-Dionex 4000/4500	ug/g	90.51	<1.20e-02	6.58e+03	4.71e+03	5.64e+03	33.1	n/a	n/a	26.55	n/a
S97T000753	W		Chloride-IC-Dionex 4000/4500	ug/g	93.04	3.20e-02	5.91e+02	444.0	517.5	28.4	n/a	n/a	37.61	n/a
S97T000753	W		Nitrite-IC - Dionex 4000/4500	ug/g	91.54	1.57e-01	4.10e+02	374.0	391.9	9.18	n/a	n/a	238.9	n/a
S97T000753	W		Bromide by Ion Chromatograph	ug/g	90.66	<1.25e-01	<2.76e+02	<2.70e2	n/a	n/a	n/a	n/a	276.5	n/a
S97T000753	W		Nitrate by IC-Dionex 4000/4500	ug/g	90.40	1.75e-01	5.73e+04	4.22e+04	4.98e+04	30.4	n/a	n/a	307.6	n/a
S97T000753	W		Phosphate-IC-Dionex 4000/4500	ug/g	92.11	<1.20e-01	2.00e+03	1.59e+03	1.79e+03	22.8	n/a	n/a	265.5	n/a

NHF-SD-WM-DP-227, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000753	W		Sulfate by IC-Dionex 4000/4500	ug/g	91.28	<1.35e-01	3.17e+02	582.0	449.7	59.0	n/a	305.4	n/a
S97T000753	W		Oxalate-IC-Dionex 4000/4500	ug/g	89.66	<1.05e-01	1.30e+03	865.0	1.08e+03	40.2	n/a	232.3	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000703			Bulk Density of Sample	g/mL	n/a	n/a	1.150	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000715			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000715			DSC Exotherm on Perkin Elmer	Joules/g	96.10	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000715			% Water by TGA on Perkin Elmer	%	99.14	n/a	75.76	75.86	75.81	0.13	n/a	n/a	n/a
S97T000766	F		Silver -ICP-Fusion	ug/g	98.20	<1.00e-02	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Aluminium -ICP-Fusion	ug/g	99.60	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Arsenic -ICP-Fusion	ug/g	103.8	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Boron -ICP-Fusion	ug/g	101.2	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Barium -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Beryllium -ICP-Fusion	ug/g	103.0	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	103.0	n/a
S97T000766	F		Bismuth -ICP-Fusion	ug/g	100.8	<1.00e-01	5.30e+04	6.31e+04	5.80e+04	17.4	n/a	2.05e+03	n/a
S97T000766	F		Calcium -ICP-Fusion	ug/g	99.80	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	<1.03e+02	<1.01e2	n/a	n/a	n/a	103.0	n/a
S97T000766	F		Cerium -ICP-Fusion	ug/g	100.6	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Cobalt -ICP-Fusion	ug/g	101.2	<2.00e-02	<6.11e+02	<4.05e2	n/a	n/a	n/a	410.0	n/a
S97T000766	F		Chromium -ICP-Fusion	ug/g	99.20	<1.00e-02	3.98e+03	3.95e+03	3.96e+03	0.76	n/a	205.0	n/a
S97T000766	F		Copper -ICP-Fusion	ug/g	101.2	<1.00e-02	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Iron -ICP-Fusion	ug/g	93.40	<5.00e-02	2.91e+03	2.68e+03	2.80e+03	8.23	n/a	1.03e+03	n/a
S97T000766	F		Lanthanum -ICP-Fusion	ug/g	102.6	<5.00e-02	1.19e+04	1.39e+04	1.29e+04	15.5	n/a	1.03e+03	n/a
S97T000766	F		Lithium -ICP-Fusion	ug/g	101.0	<1.00e-01	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Magnesium -ICP-Fusion	ug/g	97.86	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Manganese -ICP-Fusion	ug/g	101.80	<1.00e-02	1.31e+04	1.40e+04	1.36e+04	6.64	n/a	205.0	n/a
S97T000766	F		Molybdenum -ICP-Fusion	ug/g	100.8	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Sodium -ICP-Fusion	ug/g	104.8	<1.00e-01	3.46e+04	3.44e+04	3.45e+04	0.58	n/a	2.05e+03	n/a
S97T000766	F		Neodymium -ICP-Fusion	ug/g	102.4	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Phosphorus -ICP-Fusion	ug/g	100.0	<2.00e-01	<6.11e+03	<4.05e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000766	F		Lead -ICP-Fusion	ug/g	97.00	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Sulfur -ICP-Fusion	ug/g	98.40	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Antimony -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.23e+03	<1.21e3	n/a	n/a	n/a	1.23e+03	n/a
S97T000766	F		Selenium -ICP-Fusion	ug/g	93.60	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Silicon -ICP-Fusion	ug/g	100.8	<5.00e-02	1.10e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Samarium -ICP-Fusion	ug/g	101.0	<1.00e-01	<2.06e+03	<2.02e3	n/a	n/a	n/a	2.05e+03	n/a
S97T000766	F		Strontium -ICP-Fusion	ug/g	101.4	<1.00e-02	6.71e+02	780.0	725.5	15.0	n/a	205.0	n/a
S97T000766	F		Titanium-ICP-Fusion	ug/g	99.60	<1.00e-02	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Thallium -ICP-Fusion	ug/g	97.40	<2.00e-01	<6.11e+03	<4.05e3	n/a	n/a	n/a	4.10e+03	n/a
S97T000766	F		Uranium -ICP-Fusion	ug/g	98.60	<5.00e-01	<1.03e+04	<1.01e4	n/a	n/a	n/a	1.03e+04	n/a
S97T000766	F		Vanadium -ICP-Fusion	ug/g	101.4	<5.00e-02	<1.03e+03	<1.01e3	n/a	n/a	n/a	1.03e+03	n/a
S97T000766	F		Zinc -ICP-Fusion	ug/g	95.00	<1.00e-02	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Zirconium -ICP-Fusion	ug/g	99.80	<1.00e-02	<2.06e+02	<2.02e2	n/a	n/a	n/a	205.0	n/a
S97T000766	F		Alpha of Digested Solid	uCi/g	89.00	<4.06e-04	1.54e-01	1.80e-01	1.67e-01	15.6	n/a	1.00e-03	5.28e+00
S97T000775	W		Fluoride-IC-Dionex 4000/4500	ug/g	90.51	<1.20e-02	6.39e+03	6.63e+03	6.51e+03	3.69	n/a	26.41	n/a
S97T000775	W		Chloride-IC-Dionex 4000/4500	ug/g	93.04	3.20e-02	6.14e+02	607.0	610.7	1.15	n/a	37.41	n/a
S97T000775	W		Nitrite-IC - Dionex 4000/4500	ug/g	91.54	1.57e-01	4.18e+02	412.0	415.0	1.45	n/a	237.7	n/a
S97T000775	W		Bromide by Ion Chromatograph	ug/g	90.66	<1.25e-01	<2.75e+02	<2.79e2	n/a	n/a	n/a	275.1	n/a
S97T000775	W		Nitrate by IC-Dionex 4000/4500	ug/g	90.40	1.75e-01	5.71e+04	5.77e+04	5.76e+04	1.05	n/a	305.9	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000775		W	Phosphate-IC-Dionex 4000/4500	ug/g	92.11	<1.20e-01	2.08e+03	1.93e+03	2.00e+03	7.48	n/a	264.1	n/a
S97T000775		W	Sulfate by IC-Dionex 4000/4500	ug/g	91.28	<1.38e-01	3.52e+02	733.0	542.2	70.2	n/a	303.7	n/a
S97T000775		W	Oxalate-IC-Dionex 4000/4500	ug/g	89.66	<1.05e-01	1.24e+03	1.22e+03	1.23e+03	1.63	n/a	231.1	n/a

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000710		DSC Exotherm Dry	Calculated	Joules/g Dry	n/a	n/a	16.14	17.17	16.66	6.18	n/a	n/a	n/a
S97T000710		DSC Exotherm on Perkin Elmer	Calculated	Joules/g	92.65	n/a	4.390	4.670	4.530	6.18	n/a	n/a	n/a
S97T000710		% Water by TGA on Perkin Elmer	%		98.43	n/a	74.32	71.29	72.81	4.16	n/a	n/a	n/a
S97T000745	F	Silver - ICP-Fusion	ug/g	97.20	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000745	F	Aluminum - ICP-Fusion	ug/g	97.20	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Arsenic - ICP-Fusion	ug/g	102.8	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Barium - ICP-Fusion	ug/g	98.40	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Beryllium - ICP-Fusion	ug/g	101.4	<5.00e-03	<1.02e+02	<1.02e2	n/a	n/a	n/a	102.0	n/a	n/a
S97T000745	F	Bismuth - ICP-Fusion	ug/g	100.8	<1.00e-01	3.19e+04	2.86e+04	3.02e+04	10.9	n/a	2.05e+03	n/a	n/a
S97T000745	F	Calcium - ICP-Fusion	ug/g	99.40	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.02e+02	<1.02e2	n/a	n/a	n/a	102.0	n/a	n/a
S97T000745	F	Cerium - ICP-Fusion	ug/g	97.80	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Cobalt - ICP-Fusion	ug/g	100.8	<2.00e-02	<4.06e+02	<4.06e2	n/a	n/a	n/a	409.0	n/a	n/a
S97T000745	F	Chromium - ICP-Fusion	ug/g	98.60	<1.00e-02	3.75e+03	3.50e+03	3.62e+03	6.90	n/a	205.0	n/a	n/a
S97T000745	F	Copper - ICP-Fusion	ug/g	98.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000745	F	Iron - ICP-Fusion	ug/g	92.40	<5.00e-02	2.15e+03	1.66e+03	1.90e+03	25.7	n/a	1.02e+03	n/a	n/a
S97T000745	F	Lanthanum - ICP-Fusion	ug/g	99.40	<5.00e-02	9.29e+03	9.76e+03	9.52e+03	4.93	n/a	1.02e+03	n/a	n/a
S97T000745	F	Lithium - ICP-Fusion	ug/g	97.20	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000745	F	Magnesium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Manganese - ICP-Fusion	ug/g	97.00	<1.00e-02	1.08e+04	6.15e+03	8.48e+03	54.9	n/a	205.0	n/a	n/a
S97T000745	F	Molybdenum - ICP-Fusion	ug/g	100.2	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Sodium - ICP-Fusion	ug/g	101.4	<1.00e-01	3.43e+04	3.49e+04	3.46e+04	1.73	n/a	2.05e+03	n/a	n/a
S97T000745	F	Neodymium - ICP-Fusion	ug/g	99.00	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Phosphorus - ICP-Fusion	ug/g	99.60	<2.00e-01	<4.09e+03	<4.06e3	n/a	n/a	n/a	4.09e+03	n/a	n/a
S97T000745	F	Lead - ICP-Fusion	ug/g	97.00	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Sulfur - ICP-Fusion	ug/g	98.20	1.44e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Antimony - ICP-Fusion	ug/g	95.80	<6.00e-02	<1.23e+03	<1.22e3	n/a	n/a	n/a	1.23e+03	n/a	n/a
S97T000745	F	Selenium - ICP-Fusion	ug/g	94.80	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Silicon - ICP-Fusion	ug/g	98.80	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Samarium - ICP-Fusion	ug/g	97.20	<1.00e-01	<2.05e+03	<2.03e3	n/a	n/a	n/a	2.05e+03	n/a	n/a
S97T000745	F	Strontium - ICP-Fusion	ug/g	98.40	<1.00e-02	6.39e+02	676.0	657.5	5.63	n/a	205.0	n/a	n/a
S97T000745	F	Titanium - ICP-Fusion	ug/g	98.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000745	F	Thallium - ICP-Fusion	ug/g	94.00	<2.00e-01	<4.09e+03	<4.06e3	n/a	n/a	n/a	4.09e+03	n/a	n/a
S97T000745	F	Uranium - ICP-Fusion	ug/g	96.00	<5.00e-01	<1.02e+04	<1.02e4	n/a	n/a	n/a	1.02e+04	n/a	n/a
S97T000745	F	Vanadium - ICP-Fusion	ug/g	100.6	<5.00e-02	<1.02e+03	<1.02e3	n/a	n/a	n/a	1.02e+03	n/a	n/a
S97T000745	F	Zinc - ICP-Fusion	ug/g	95.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000745	F	Zirconium - ICP-Fusion	ug/g	98.40	<1.00e-02	<2.05e+02	<2.03e2	n/a	n/a	n/a	205.0	n/a	n/a
S97T000754	W	Fluoride-IC-Dionex 4000/4500	ug/g	91.69	<1.20e-02	6.22e+03	6.09e+03	6.16e+03	2.11	n/a	25.19	n/a	n/a
S97T000754	W	Chloride-IC-Dionex 4000/4500	ug/g	100.6	<1.70e-02	5.80e+02	556.0	568.1	4.23	n/a	35.68	n/a	n/a
S97T000754	W	Nitrite-IC - Dionex 4000/4500	ug/g	102.4	1.59e-01	2.10e+02	207.0	208.3	1.44	n/a	123.7	n/a	n/a
S97T000754	W	Bromide by Ion Chromatograph	ug/g	98.98	<1.25e-01	<2.62e+02	<2.67e2	n/a	n/a	n/a	262.4	n/a	n/a
S97T000754	W	Nitrate by IC-Dionex 4000/4500	ug/g	97.98	1.49e-01	6.22e+04	5.95e+04	6.08e+04	4.44	n/a	291.8	n/a	n/a
S97T000754	W	Phosphate-IC-Dionex 4000/4500	ug/g	99.45	<1.20e-01	2.50e+03	3.16e+03	2.83e+03	23.3	n/a	251.9	n/a	n/a

HN-SD-WM-DP-247, REV. 0

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000754	W	Sulfate by IC-Dionex 4000/4500	ug/g	98.73	<1.38e-01	3.68e+02	371.0	369.3	0.81	n/a	289.7	n/a
S97T000754	W	Oxalate-IC-Dionex 4000/4500	ug/g	101.1	<1.05e-01	1.60e+03	1.59e+03	1.59e+03	0.63	n/a	220.4	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000704		Bulk Density of Sample	g/mL	n/a	n/a	1.290	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000716		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000716		DSC Exotherm on Perkin Elmer	Joules/g	96.10	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000716		% Water by TGA on Perkin Elmer	%	99.14	n/a	76.59	76.13	76.36	0.60	n/a	n/a	n/a
S97T000767	F	Silver -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Aluminum -ICP-Fusion	ug/g	97.20	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Arsenic -ICP-Fusion	ug/g	102.8	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Boron -ICP-Fusion	ug/g	99.00	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Barium -ICP-Fusion	ug/g	98.40	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Beryllium -ICP-Fusion	ug/g	101.4	<5.00e-03	<1.01e+02	<1.01e2	n/a	n/a	n/a	101.0	n/a
S97T000767	F	Bismuth -ICP-Fusion	ug/g	100.8	<1.00e-01	3.47e+04	3.09e+04	3.28e+04	11.6	n/a	2.01e+03	n/a
S97T000767	F	Calcium -ICP-Fusion	ug/g	99.40	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Cadmium -ICP-Fusion	ug/g	98.80	<5.00e-03	<1.01e+02	<1.01e2	n/a	n/a	n/a	101.0	n/a
S97T000767	F	Cerium -ICP-Fusion	ug/g	97.80	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Cobalt -ICP-Fusion	ug/g	100.8	<2.00e-02	<4.03e+02	<4.06e2	n/a	n/a	n/a	403.0	n/a
S97T000767	F	Chromium -ICP-Fusion	ug/g	98.60	<1.00e-02	3.75e+03	3.83e+03	3.79e+03	2.11	n/a	201.0	n/a
S97T000767	F	Copper -ICP-Fusion	ug/g	98.40	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Iron -ICP-Fusion	ug/g	99.40	<5.00e-02	2.32e+03	2.20e+03	2.26e+03	5.31	n/a	1.01e+03	n/a
S97T000767	F	Lanthanum -ICP-Fusion	ug/g	97.20	<1.00e-02	1.04e+04	9.91e+03	1.02e+04	4.83	n/a	1.01e+03	n/a
S97T000767	F	Lithium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Magnesium -ICP-Fusion	ug/g	100.0	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Manganese -ICP-Fusion	ug/g	97.00	<1.00e-02	8.18e+03	7.28e+03	7.73e+03	11.6	n/a	201.0	n/a
S97T000767	F	Molybdenum -ICP-Fusion	ug/g	100.2	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Sodium -ICP-Fusion	ug/g	101.4	<1.00e-01	3.41e+04	3.40e+04	3.40e+04	0.29	n/a	2.01e+03	n/a
S97T000767	F	Neodymium -ICP-Fusion	ug/g	99.00	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Phosphorus -ICP-Fusion	ug/g	99.60	<2.00e-02	<4.03e+03	<4.06e3	n/a	n/a	n/a	4.03e+03	n/a
S97T000767	F	Lead -ICP-Fusion	ug/g	97.00	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Sulfur -ICP-Fusion	ug/g	98.20	1.44e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Antimony -ICP-Fusion	ug/g	95.80	<6.00e-02	<1.21e+03	<1.22e3	n/a	n/a	n/a	1.21e+03	n/a
S97T000767	F	Selenium -ICP-Fusion	ug/g	94.80	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Silicon -ICP-Fusion	ug/g	98.80	<5.00e-02	1.28e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Samarium -ICP-Fusion	ug/g	97.20	<1.00e-01	<2.01e+03	<2.03e3	n/a	n/a	n/a	2.01e+03	n/a
S97T000767	F	Strontium -ICP-Fusion	ug/g	98.40	<1.00e-02	6.96e+02	683.0	689.5	1.89	n/a	201.0	n/a
S97T000767	F	Titanium -ICP-Fusion	ug/g	98.40	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Thallium -ICP-Fusion	ug/g	94.00	<2.00e-01	<4.03e+03	<4.06e3	n/a	n/a	n/a	4.03e+03	n/a
S97T000767	F	Uranium -ICP-Fusion	ug/g	96.00	<5.00e-01	<1.01e+04	<1.01e4	n/a	n/a	n/a	1.01e+04	n/a
S97T000767	F	Vanadium -ICP-Fusion	ug/g	100.6	<5.00e-02	<1.01e+03	<1.01e3	n/a	n/a	n/a	1.01e+03	n/a
S97T000767	F	Zinc -ICP-Fusion	ug/g	95.40	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Zirconium -ICP-Fusion	ug/g	98.40	<1.00e-02	<2.01e+02	<2.03e2	n/a	n/a	n/a	201.0	n/a
S97T000767	F	Alpha of Digested Solid	uCi/g	86.50	2.00e-03	1.59e-01	1.24e-01	1.42e-01	24.7	n/a	3.00e-03	8.06E+00
S97T000776	W	Fluoride-IC-Dionex 4000/4500	ug/g	91.69	<1.20e-02	6.15e+03	6.21e+03	6.18e+03	0.97	n/a	24.90	n/a
S97T000776	W	Chloride-IC-Dionex 4000/4500	ug/g	100.6	<1.70e-02	5.92e+02	596.0	594.0	0.67	n/a	35.28	n/a
S97T000776	W	Nitrite-IC -Dionex 4000/4500	ug/g	102.4	1.59e-01	2.75e+02	271.0	273.2	1.47	n/a	224.1	n/a
S97T000776	W	Bromide by Ion Chromatograph	ug/g	98.98	<1.25e-01	<2.59e+02	<2.58e2	n/a	n/a	n/a	259.4	n/a
S97T000776	W	Nitrate by IC-Dionex 4000/4500	ug/g	97.98	1.49e-01	5.93e+04	6.02e+04	5.97e+04	1.51	n/a	288.4	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000776	W		Phosphate-IC-Dionex 4000/4500	ug/g	99.45	<1.20e-01	3.62e+03	2.56e+03	3.09e+03	34.3	n/a	249.0	n/a
S97T000776	W		Sulfate by IC-Dionex 4000/4500	ug/g	98.73	<1.38e-01	4.67e+02	734.0	600.5	44.5	n/a	286.3	n/a
S97T000776	W		Oxalate-IC-Dionex 4000/4500	ug/g	101.1	<1.05e-01	1.52e+03	1.55e+03	1.54e+03	1.95	n/a	217.9	n/a

Table 1. Data Summary Report
T-203CORE NUMBER: 190
SEGMENT #: FB

SEGMENT PORTION: Field Blank

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000731			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000731			DSC Exotherm on Perkin Elmer	Joules/g	96.56	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000731			Specific Gravity	Sp.G.	99.82	n/a	1.008	9.90e-01	9.99e-01	1.80	n/a	1.00e-03	n/a
S97T000731			% Water by TGA on Perkin Elmer	%	99.07	n/a	99.55	99.68	99.62	0.13	n/a	n/a	n/a
S97T000731	D		Silver-ICP-Acid Dil.	ug/ml	96.40	<1.00e-02	<1.00e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Aluminium-ICP-Acid Dil.	ug/ml	96.80	<5.00e-02	<5.00e-02	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Arsenic-ICP-Acid Dil.	ug/ml	102.2	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Boron-ICP-Acid Dil.	ug/ml	99.60	<5.00e-02	3.09e-01	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Barium-ICP-Acid Dil.	ug/ml	98.40	<5.00e-02	<5.00e-02	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Beryllium-ICP-Acid Dil.	ug/ml	100.4	<5.00e-03	<5.00e-03	n/a	n/a	n/a	n/a	5.00e-03	n/a
S97T000731	D		Bismuth-ICP-Acid Dil.	ug/ml	99.20	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Calcium-ICP-Acid Dil.	ug/ml	96.40	<1.00e-01	18.20	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Cadmium-ICP-Acid Dil.	ug/ml	98.20	<5.00e-03	<5.00e-03	n/a	n/a	n/a	n/a	5.00e-03	n/a
S97T000731	D		Cerium-ICP-Acid Dil.	ug/ml	97.20	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Cobalt-ICP-Acid Dil.	ug/ml	100.2	<2.00e-02	<2.00e-02	n/a	n/a	n/a	n/a	2.00e-02	n/a
S97T000731	D		Chromium-ICP-Acid Dil.	ug/ml	97.40	<1.00e-02	4.91e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Copper-ICP-Acid Dil.	ug/ml	99.20	<1.00e-02	<1.00e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Iron-ICP-Acid Dil.	ug/ml	91.80	<5.00e-02	2.10e-01	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Potassium-ICP-Acid Dil.	ug/ml	95.20	<5.00e-01	1.900	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000731	D		Lanthanum-ICP-Acid Dil.	ug/ml	98.80	<5.00e-02	<5.00e-02	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Lithium-ICP-Acid Dil.	ug/ml	98.80	<1.00e-02	<1.00e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Magnesium-ICP-Acid Dil.	ug/ml	99.40	<1.00e-01	3.820	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Manganese-ICP-Acid Dil.	ug/ml	96.20	<1.00e-02	4.41e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Molybdenum-ICP-Acid Dil.	ug/ml	100.0	<5.00e-02	<5.00e-02	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Sodium-ICP-Acid Dil.	ug/ml	101.6	<1.00e-01	9.090	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Neodymium-ICP-Acid Dil.	ug/ml	99.00	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Nickel-ICP-Acid Dil.	ug/ml	98.00	<2.00e-02	<2.00e-02	n/a	n/a	n/a	n/a	2.00e-02	n/a
S97T000731	D		Phosphorus-ICP-Acid Dil.	ug/ml	101.2	<2.00e-01	<2.00e-01	n/a	n/a	n/a	n/a	2.00e-01	n/a
S97T000731	D		Lead-ICP-Acid Dil.	ug/ml	96.00	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Sulfur-ICP-Acid Dil.	ug/ml	98.20	<1.00e-02	6.030	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Antimony-ICP-Acid Dil.	ug/ml	95.00	<6.00e-02	<6.00e-02	n/a	n/a	n/a	n/a	6.00e-02	n/a
S97T000731	D		Selenium-ICP-Acid Dil.	ug/ml	92.80	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Silicon-ICP-Acid Dil.	ug/ml	99.60	<5.00e-02	2.590	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Samarium-ICP-Acid Dil.	ug/ml	96.80	<1.00e-01	<1.00e-01	n/a	n/a	n/a	n/a	1.00e-01	n/a
S97T000731	D		Strontium-ICP-Acid Dil.	ug/ml	98.00	<1.00e-02	9.36e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Titanium-ICP-Acid Dil.	ug/ml	97.00	<1.00e-02	<1.00e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Thallium-ICP-Acid Dil.	ug/ml	95.00	<2.00e-01	<2.00e-01	n/a	n/a	n/a	n/a	2.00e-01	n/a
S97T000731	D		Uranium-ICP-Acid Dil.	ug/ml	95.60	<5.00e-01	<5.00e-01	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T000731	D		Vanadium-ICP-Acid Dil.	ug/ml	100.0	<5.00e-02	<5.00e-02	n/a	n/a	n/a	n/a	5.00e-02	n/a
S97T000731	D		Zinc-ICP-Acid Dil.	ug/ml	95.00	<1.00e-02	7.95e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731	D		Zirconium-ICP-Acid Dil.	ug/ml	97.80	<1.00e-02	<1.00e-02	n/a	n/a	n/a	n/a	1.00e-02	n/a
S97T000731			Fluoride-IC-Dionex 4000/4500	ug/ml	95.93	<1.20e-02	3.345	3.310	3.328	1.20	n/a	1.212	n/a
S97T000731			Chloride-IC-Dionex 4000/4500	ug/ml	100.9	<1.70e-02	6.605	6.330	6.468	4.33	n/a	1.717	n/a
S97T000731			Nitrite-IC - Dionex 4000/4500	ug/ml	104.6	<1.08e-01	< 10.91	<1.09e1	n/a	n/a	n/a	10.91	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000731			Bromide by Ion Chromatograph	ug/mL	99.66	<1.25e-01	< 12.62	<1.26e1	n/a	n/a	n/a	12.62	n/a
S97T000731			Nitrate by IC-Dionex 4000/4500	ug/mL	100.0	1.42e-01	31.19	35.70	33.45	13.5	n/a	14.04	n/a
S97T000731			Phosphate-IC-Dionex 4000/4500	ug/mL	98.17	<1.20e-01	< 12.12	<1.21e1	n/a	n/a	n/a	12.12	n/a
S97T000731			Sulfate by IC-Dionex 4000/4500	ug/mL	100.8	1.38e-01	21.05	21.90	21.48	3.72	n/a	13.94	n/a
S97T000731			Oxalate-IC-Dionex 4000/450	ug/mL	101.3	<1.05e-01	< 10.61	<1.06e1	n/a	n/a	n/a	10.61	n/a
S97T000731			Alpha in Liquid Samples	uCi/mL	84.50	<4.96e-07	4.41e-07	5.52e-07	4.97e-07	22.4	n/a	5.29e-07	1.06E+02

Table 1. Data Summary Report
T-203

CORE NUMBER: 190
SEGMENT #: Core Composite

SEGMENT PORTION: Core Composite

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T001012		Bulk Density of Sample	g/mL	n/a	n/a	1.230	n/a	n/a	n/a	n/a	5.00e-01	n/a
S97T001013		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T001013		DSC Exotherm on Perkin Elmer	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T001013		% Water by TGA on Perkin Elmer	%	99.44	n/a	69.57	72.49	71.03	4.11	n/a	n/a	n/a
S97T001013		TIC by Acid/Coulometry	ug/g	100.7	3.200	1.58e+03	1.58e+03	1.58e+03	0.00	96.20	5.000	n/a
S97T001013		TOC by Persulfate/Coulometry	ug/g	99.67	6.000	4.18e+02	423.0	420.5	1.19	89.40	40.00	n/a
S97T001016		Fluoride-IC-Dionex 4000/4500	ug/g	89.66	<1.20e-02	6.32e+03	6.35e+03	6.34e+03	0.47	103.9	28.91	n/a
S97T001016		Chloride-IC-Dionex 4000/4500	ug/g	95.32	<1.70e-02	6.89e+02	627.0	657.9	9.42	102.8	40.95	n/a
S97T001016		Nitrite-IC - Dionex 4000/4500	ug/g	95.38	<1.08e-01	2.97e+02	292.0	294.5	1.70	91.16	260.1	n/a
S97T001016		Bromide by Ion Chromatograph	ug/g	99.66	<1.25e-01	<3.01e+02	<2.92e2	n/a	n/a	84.21	301.2	n/a
S97T001016		Nitrate by IC-Dionex 4000/4500	ug/g	97.47	<1.39e-01	6.37e+04	6.52e+04	6.44e+04	2.35	85.19	334.8	n/a
S97T001016		Phosphate-IC-Dionex 4000/4500	ug/g	95.39	<1.20e-01	2.32e+03	3.53e+03	2.91e+03	42.6	91.38	289.1	n/a
S97T001016		Sulfate by IC-Dionex 4000/4500	ug/g	96.68	<1.38e-01	<3.22e+02	563.0	n/a	n/a	96.99	332.4	n/a
S97T001016		Oxalate-IC-Dionex 4000/4500	ug/g	101.3	<1.05e-01	1.40e+03	1.33e+03	1.37e+03	5.13	101.5	253.0	n/a
S97T001017		Silver -ICP-Acid Digest	ug/g	99.60	<1.00e-02	2.410	<2.00e0	n/a	n/a	94.40	2.000	n/a
S97T001017		Aluminum -ICP-Acid Digest	ug/g	98.20	9.60e-02	57.50	55.00	56.25	4.44	97.00	9.980	n/a
S97T001017		Arsenic -ICP-Acid Digest	ug/g	102.6	<1.00e-01	< 20.00	<2.00e1	n/a	n/a	100.2	20.00	n/a
S97T001017		Boron -ICP-Acid Digest	ug/g	104.2	3.93e-01	75.20	111.0	93.10	38.5	90.60	9.980	n/a
S97T001017		Barium -ICP-Acid Digest	ug/g	99.80	<5.00e-02	73.20	76.30	74.75	4.15	107.2	9.980	n/a
S97T001017		Beryllium -ICP-Acid Digest	ug/g	103.2	<5.00e-03	<9.98e-01	<9.98e-1	n/a	n/a	100.4	9.98e-01	n/a
S97T001017		Bismuth -ICP-Acid Digest	ug/g	100.4	<5.00e-01	4.95e+04	4.78e+04	4.86e+04	3.49	-5.560e2	20.00	n/a
S97T001017		Calcium -ICP-Acid Digest	ug/g	104.6	1.23e-01	3.55e+02	339.0	346.0	4.05	104.4	20.00	n/a
S97T001017		Cadmium -ICP-Acid Digest	ug/g	96.80	<5.00e-03	<9.98e-01	<9.98e-1	n/a	n/a	94.60	9.98e-01	n/a
S97T001017		Cerium -ICP-Acid Digest	ug/g	101.4	<1.00e-01	56.60	53.90	55.25	4.89	98.80	20.00	n/a
S97T001017		Cobalt -ICP-Acid Digest	ug/g	100.2	<2.00e-02	< 3.990	<3.99e0	n/a	n/a	98.40	3.990	n/a
S97T001017		Chromium -ICP-Acid Digest	ug/g	97.40	<1.00e-02	3.87e+03	3.71e+03	3.79e+03	4.22	39.20	2.000	n/a
S97T001017		Copper -ICP-Acid Digest	ug/g	89.60	<1.00e-02	< 2.000	<2.00e0	n/a	n/a	87.60	2.000	n/a
S97T001017		Iron -ICP-Acid Digest	ug/g	91.20	<5.00e-02	3.62e+03	1.00e+04	6.81e+03	95.7	4.60e+03	9.980	n/a
S97T001017		Potassium -ICP-Acid Digest	ug/g	99.80	<5.00e-01	6.96e+03	6.74e+03	6.85e+03	3.21	11.54	99.80	n/a
S97T001017		Lanthanum -ICP-Acid Digest	ug/g	102.0	<5.00e-02	1.19e+04	1.15e+04	1.17e+04	3.42	-6.380e1	9.980	n/a
S97T001017		Lithium -ICP-Acid Digest	ug/g	100.4	<1.00e-02	< 2.000	<2.00e0	n/a	n/a	99.00	2.000	n/a
S97T001017		Magnesium -ICP-Acid Digest	ug/g	97.60	<1.00e-01	77.80	80.20	79.00	3.04	95.20	20.00	n/a
S97T001017		Manganese -ICP-Acid Digest	ug/g	95.60	<1.00e-02	1.64e+04	1.57e+04	1.60e+04	4.36	-1.150e2	2.000	n/a
S97T001017		Molybdenum -ICP-Acid Digest	ug/g	95.80	<5.00e-02	< 9.980	<9.98e0	n/a	n/a	92.00	9.980	n/a
S97T001017		Sodium -ICP-Acid Digest	ug/g	105.6	5.01e-01	3.53e+04	3.43e+04	3.48e+04	2.87	-3.340e2	20.00	n/a
S97T001017		Neodymium -ICP-Acid Digest	ug/g	100.0	<1.00e-01	< 20.00	<2.00e1	n/a	n/a	98.40	20.00	n/a
S97T001017		Nickel -ICP-Acid Digest	ug/g	100.4	<2.00e-02	1.49e+02	146.0	147.5	2.03	95.60	3.990	n/a
S97T001017		Phosphorus -ICP-Acid Digest	ug/g	96.60	<2.00e-01	2.42e+03	2.35e+03	2.38e+03	2.94	72.20	39.90	n/a
S97T001017		Lead -ICP-Acid Digest	ug/g	95.80	<1.00e-01	< 20.00	21.50	n/a	n/a	148.2	20.00	n/a
S97T001017		Sulfur -ICP-Acid Digest	ug/g	97.20	1.01e-01	1.24e+02	131.0	127.5	5.49	95.80	20.00	n/a
S97T001017		Antimony -ICP-Acid Digest	ug/g	95.00	<6.00e-02	< 12.00	<1.20e1	n/a	n/a	91.40	12.00	n/a
S97T001017		Silicon -ICP-Acid Digest	ug/g	138.8	7.08e-01	1.69e+03	1.51e+03	1.60e+03	11.2	83.80	9.980	n/a
S97T001017		Samarium -ICP-Acid Digest	ug/g	98.40	<1.00e-01	< 20.00	<2.00e1	n/a	n/a	95.80	20.00	n/a
S97T001017		Strontium -ICP-Acid Digest	ug/g	98.60	<1.00e-02	5.70e+02	544.0	557.0	4.67	87.40	2.000	n/a

HNF-SD-WM-DP-247, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T001017	A		Titanium-ICP-Acid Digest	ug/g	88.80	<1.00e-02	3.200	3.340	3.270	4.28	86.60	2.000	n/a	
S97T001017	A		Thallium -ICP-Acid Digest	ug/g	93.40	<2.00e-01	< 39.90	<3.99e1	n/a	n/a	88.60	39.90	n/a	
S97T001017	A		Uranium -ICP-Acid Digest	ug/g	96.10	<5.00e-01	< 99.80	<9.98e1	n/a	n/a	100.0	99.80	n/a	
S97T001017	A		Vanadium -ICP-Acid Digest	ug/g	97.20	<5.00e-02	< 9.980	<9.98e0	n/a	n/a	96.00	9.980	n/a	
S97T001017	A		Zinc -ICP-Acid Digest	ug/g	90.60	1.90e-02	20.70	20.50	20.60	0.97	100.0	2.000	n/a	
S97T001017	A		Zirconium -ICP-Acid Digest	ug/g	98.00	<1.00e-02	< 2.000	<2.00e0	n/a	n/a	96.20	2.000	n/a	
S97T001734	F		Strontium-89/90 High Level	uci/g	96.23	<1.22e-03	2.46e-03	2.67e-03	2.57e-03	8.19	103.8	1.00e-03	4.59E+01	
S97T001734	F		Cobalt-60 by GEA	uci/g	100.7	<1.25e-02	<1.29e-02	<1.22e-2	n/a	n/a	n/a	1.30e-02	n/a	
S97T001734	F		Cesium-137 by GEA	uci/g	99.67	<1.41e-02	<1.78e-02	<1.83e-2	n/a	n/a	n/a	1.80e-02	n/a	
S97T001734	F		Europium-154 by GEA	uci/g	n/a	<4.23e-02	<4.32e-02	<3.92e-2	n/a	n/a	n/a	4.30e-02	n/a	
S97T001734	F		Europium-155 by GEA	uci/g	n/a	<3.35e-02	<3.34e-02	<3.37e-2	n/a	n/a	n/a	3.30e-02	n/a	
S97T001734	F		Americium-241 by GEA	uci/g	n/a	<1.67e-02	3.59e-02	3.59e-02	3.59e-02	0.00	n/a	n/a	44.3	

HNF-SD-WM-DP-247, REV. 0

HNH-SD-WM-DP-247, REV. 0

COMPOSITE WORKSHEETS

HNH-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

Composite Worksheet

Date: 5/20/97

Tank: T203

P.C. Steen

Phone# 372-249

Sample

ID: 597000656

Auger/

Core: 190

Segment: 14H

Jar#: 12208 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 241.4 g

Final Weight: 273.9 g

Net Weight: 7.5 g

Sample

ID: 597000657

Auger/

Core: 190

Segment: 12H

Jar#: 12207 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 254.0 g

Final Weight: 251.2 g

Net Weight: 6.8 g

Sample

ID: 597000693

Auger/

Core: 190

Segment: 1R 4H

Jar#: 12352 (floor)

Jar/Vial Size: 125 mL

Initial Weight: 140.3 g

Final Weight: 133.9 g

Net Weight: 6.4 g

Sample

ID: 597000699

Auger/

Core: 190

Segment: 1R 4H

Jar#: 12265 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 253.0 g

Final Weight: 245.9 g

Net Weight: 7.1 g

6/17/97

Start Time: 4:50
End Time: 4:55

Tests:
COMPOS
HOMEN 201
BLDEN 01

Jar#: 12377

Jar/Vial Size: 125 mL

Final Weight: 226.4 g

Initial Weight: 120.3 g

Net Weight: 106.1 g

Homogenization

Time (Min.): 5 min

(after final
subsample added)

Special Instructions: Composite using weights listed

HNF-SD-WM-DP-247, REV. 0

Composite Worksheet

Date: 5/20/97

Tank: 7203

P.C. Steen

Phone# 372-2495

Sample

ID: 59770001658

Auger/

Core: 190

Segment: 24H

Jar#: 12548 (flori)

Jar/Vial Size: 250 mL

Initial Weight: 303.7 g

Final Weight: 296.5 g

Net Weight: 7.2 g

Sample

ID: 59770001661

Auger/

Core: 190

Segment: 24H

Jar#: 12255 (flori)

Jar/Vial Size: 250 mL

Initial Weight: 270.2 g

Final Weight: 262.5 g

Net Weight: 7.7 g

Sample

ID: 59770001694

Auger/

Core: 190

Segment: 34H

Jar#: 12257 (flori)

Jar/Vial Size: 250 mL

Initial Weight: 248.2 g

Final Weight: 240.6 g

Net Weight: 7.6 g

Sample

ID: 59770001722

Auger/

Core: 190

Segment: 34H

Jar#: 12628 (Tray 13)

Jar/Vial Size: 60 mL (arch)

Initial Weight: 160.9 g

Final Weight: 151.9 g

Net Weight: 9.0 g

See Parent

Jar# 12377

on Page #1

Special Instructions: _____

Composite Worksheet

Date: 5/20/97

Tank: T203

P.C. Steen

Phone# 372-2492

Sample
ID: 597000659
Auger/
Core: 190
Segment: 4UH

Jar/Vial Size: 250 mL
Initial Weight: 289.1 g
Final Weight: 241.3 g
Net Weight: 7.8 g

Sample
ID: 597000662
Auger/
Core: 190
Segment: 4LH

Jar/Vial Size: 250 mL
Initial Weight: 270.8 g
Final Weight: 263.4 g
Net Weight: 7.4 g

Sample
ID: 597000660
Auger/
Core: 190
Segment: 5UH

Jar/Vial Size: 250 mL
Initial Weight: 295.4 g
Final Weight: 288.6 g
Net Weight: 6.8 g

Sample
ID: 597000663
Auger/
Core: 190
Segment: 5LH

Jar/Vial Size: 250 mL
Initial Weight: 286.5 g
Final Weight: 249.1 g
Net Weight: 7.1 g

See Parent
Jar# 12377
on Page #1

Special Instructions:

HNFS-D-WM-DP-247, REV. 0

Composite Worksheet

Date: 5/20/97

Tank: T203

P.C. Stear

Phone# 372-249

Sample
ID: 597000695
Auger/
Core: 190
Segment: 6UH

Sample
ID: 597000725
Auger/
Core: 190
Segment: 6UH

Sample
ID: 597000696
Auger/
Core: 190
Segment: 7UH

Sample
ID: 597000702
Auger/
Core: 190
Segment: 7UH

Jar#: 12264 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 293.9 g

Final Weight: 287.6 g

Net Weight: 6.2 g

Jar#: 12631 (Bin 132)

Jar/Vial Size: 60 mL (archive)

Initial Weight: 162.7 g

Final Weight: 156.1 g

Net Weight: 6.6 g

Jar#: 12260 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 295.2 g

Final Weight: 287.8 g

Net Weight: 7.4 g

Jar#: 12261 (floor)

Jar/Vial Size: 250 mL

Initial Weight: 246.3 g

Final Weight: 238.7 g

Net Weight: 7.5 g

See Parent
Jar# 12327
on Page #1

Special Instructions: _____

Composite Worksheet

Date: 5/20/97

Tank: 7203

P.C. Shen

Phone# 372-2469

Sample
ID: 5977000697
Auger/
Core: 190
Segment: 811H

Jar# 12262 (4000)
Jar/Vial Size: 250 mL
Initial Weight: 279.5 g
Final Weight: 272.6 g
Net Weight: 6.9 g

Sample
ID: 5977000703
Auger/
Core: 190
Segment: 82H

Jar# 12259 (4000)
Jar/Vial Size: 250 mL
Initial Weight: 274.9 g
Final Weight: 268.7 g
Net Weight: 6.2 g

Sample
ID: 5977000698
Auger/
Core: 190
Segment: 94H

Jar# 12258 (4000)
Jar/Vial Size: 250 mL
Initial Weight: 277.6 g
Final Weight: 270.7 g
Net Weight: 6.9 g

Sample
ID: 5977000704
Auger/
Core: 190
Segment: 92H

Jar# 12263 (4000)
Jar/Vial Size: 250 mL
Initial Weight: 278.8 g
Final Weight: 272.3 g
Net Weight: 6.5 g

See Parent
Jar# 12377
on Page #1

81

Special Instructions:

HNF-SD-WM-DP-247, REV. 0

HNF-SD-WM-DP-247, REV. 0

Final Composite Calculation SheetDate: 6/17/97 Technician: A HursonTotal number of jars used to build the composite: 20Composite Jar number: 12377 Jar size: 125 ml

- 1) Sample from segment jar 12208 to composite jar = 5.6 grams
- 2) Sample from segment jar 12207 to composite jar = 5.3 grams
- 3) Sample from segment jar 12352 to composite jar = 5.0 grams
- 4) Sample from segment jar 12265 to composite jar = 5.2 grams
- 5) Sample from segment jar 12548 to composite jar = 5.0 grams
- 6) Sample from segment jar 12255 to composite jar = 5.2 grams
- 7) Sample from segment jar 12257 to composite jar = 5.0 grams
- 8) Sample from segment jar 12628 to composite jar = 5.1 grams
- 9) Sample from segment jar 12256 to composite jar = 6.1 grams
- 10) Sample from segment jar 12547 to composite jar = 5.1 grams
- 11) Sample from segment jar 12268 to composite jar = 5.7 grams
- 12) Sample from segment jar 12269 to composite jar = 5.1 grams
- 13) Sample from segment jar 12264 to composite jar = 5.0 grams
- 14) Sample from segment jar 12631 to composite jar = 5.1 grams
- 15) Sample from segment jar 12260 to composite jar = 5.0 grams
- 16) Sample from segment jar 12261 to composite jar = 5.9 grams
- 17) Sample from segment jar 12262 to composite jar = 6.1 grams
- 18) Sample from segment jar 12259 to composite jar = 5.0 grams
- 19) Sample from segment jar 12254 to composite jar = 5.5 grams
- 20) Sample from segment jar 12263 to composite jar = 5.1 grams

Total grams collected in composite: 12270

HNF-SD-WM-DP-247, REV. 0

Composite % Calculation SheetDate: 6/18/97 Technician: A Hursow

- 1) Segment jar #
- 12208
- :

$$\frac{5.6 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{5.3} \%$$

- 2) Segment jar #
- 12207
- :

$$\frac{5.3 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{5.0} \%$$

- 3) Segment jar #
- 12352
- :

$$\frac{5.0 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.7} \%$$

- 4) Segment jar #
- 12265
- :

$$\frac{5.2 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.9} \%$$

- 5) Segment jar #
- 12544
- :

$$\frac{5.0 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.7} \%$$

- 6) Segment jar #
- 12255
- :

$$\frac{5.2 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.9} \%$$

- 7) Segment jar #
- 12257
- :

$$\frac{5.0 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.7} \%$$

- 8) Segment jar #
- 12628
- :

$$\frac{5.1 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.8} \%$$

- 9) Segment jar #
- 12256
- :

$$\frac{6.1 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{5.7} \%$$

- 10) Segment jar #
- 12547
- :

$$\frac{5.1 \text{ grams from segment jar to composite jar}}{106.1 \text{ Total grams in composite jar}} \times 100 = \underline{4.8} \%$$

HNF-SD-WM-DP-247, REV. 0

Composite % Calculation Sheet

Date: 6/18/97 Technician: A. HURSON

- 11) Segment jar #
- 12268
- :

$$\frac{5.7}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{5.4} \%$$

- 12) Segment jar #
- 12269
- :

$$\frac{5.1}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.8} \%$$

- 13) Segment jar #
- 12264
- :

$$\frac{5.0}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.7} \%$$

- 14) Segment jar #
- 12631
- :

$$\frac{5.1}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.8} \%$$

- 15) Segment jar #
- 12260
- :

$$\frac{5.0}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.7} \%$$

- 16) Segment jar #
- 12261
- :

$$\frac{5.9}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{5.6} \%$$

- 17) Segment jar #
- 12262
- :

$$\frac{6.1}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{5.7} \%$$

- 18) Segment jar #
- 12259
- :

$$\frac{5.0}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.7} \%$$

- 19) Segment jar #
- 12258
- :

$$\frac{5.5}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{5.2} \%$$

- 20) Segment jar #
- 12263
- :

$$\frac{5.1}{106.1} \text{ grams from segment jar to composite jar} \times 100 = \underline{4.8} \%$$

Chemist review: _____

Date: _____

HNH-SD-WM-DP-247, REV. 0

CHAIN OF CUSTODY FORMS

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number # 190-01 (3) Supervisor Daniel Meyer, Daniel Garza
 (4) Tank T-203 (5) Floor 3 (6) Segment #1 (7) Core 190 (8) Cask Serial Number C-2017

Radiation Survey Data:

(9) FIELD (33) LABORATORY
 Over Top Dose Rate < 0.5 < 0.005 mSv/hr < 0.005 mSv/hr
 Side Dose Rate < 0.005 mSv/hr < 0.005 mSv/hr
 Bottom Dose Rate < 0.005 mSv/hr < 0.005 mSv/hr
 Smearable Contamination < 0.234 Bq 4/18/97 < 1.334 Bq/LAW
< 16.7 Bq < 2.505 Bq/LAW
 (Alpha) (Alpha)
 (Beta-Gamma) (Beta-Gamma)
 RCT* 1089 RCT* 1089
 (HPT) (Signature) (HPT) (Signature)

(10) Shipment Description

A. Work Package Number WS-96-00304
 B. Cask Seal Number 12228
 C. Sampler Serial Number 96-173
 D. Date and Time Sampler Unseated 04/17/97, 0119 hr
 E. Expected Liquid Content 1070
 F. Expected Solid Content 9080
 G. Dose Rate Through Drill String 0.005 Sv
 H. Expected Sample Length 6 1/2"

(11) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

(12) Field Comments

(14) Laboratory Comments

5971000583

(13) Point of Origin

T-203

(14) Destination

222-5 Labs

(15) Sender Name (Sign and PRINT)

KEVIN E. HAMILTON for D. Garza

(16) Date/Time

4/18/97 11:50

(17) Sender Comments

1036

(18) Relinquished By (Sign and PRINT)

KEVIN E. HAMILTON

(20) Received By (Sign and PRINT)

KEVIN E. HAMILTON KE HAMILTON

(21) Date/Time

4/18/97 11:03

(22) Receiver Comments

(23) Relinquished By (Sign and PRINT)

KEVIN E. HAMILTON KE HAMILTON

(24) Received By (Sign and PRINT)

KEVIN E. HAMILTON KE HAMILTON

(25) Date/Time

4/18/97 11:50

(26) Receiver Comments

(27) Relinquished By (Sign and PRINT)

KEVIN E. HAMILTON KE HAMILTON

(28) Received By (Sign and PRINT)

KEVIN E. HAMILTON KE HAMILTON

(29) Date/Time

4/18/97 11:50

(30) Receiver Comments

(19) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

(32) Seal Data Consistent with this Record?

☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>200W-08-TF</u>		2) Sample Number <u>190-01R</u>		3) Supervisor <u>Daniel Garcia, Daniel Noya</u>	
4) Tank <u>T-203</u>		5) Riser <u>3</u>		6) Segment <u>1R</u>	
		7) Core <u>190</u>		8) Cask Serial Number <u>C-2012</u>	
adiation Survey Date:		(9) FIELD		(33) LABORATORY	
Over Top Dose Rate		<u>.005 Sv</u>		<u>.005 mSv</u>	
Side Dose Rate		<u>.005 Sv</u>		<u>.005 mSv</u>	
Bottom Dose Rate		<u>.005 Sv</u>		<u>.005 mSv</u>	
Smearable Contamination		<u><20 dpm/100 cm²</u> (Alpha)		<u><20 dpm/100 cm²</u> (Alpha)	
		<u><1000 dpm/100 cm²</u> (Beta-Gamma)		<u>4000 dpm/100 cm²</u> (Beta-Gamma)	
RCT* (HPT)		<u>[Signature]</u> (Signature)		RCT* (HPT)	
		<u>[Signature]</u> (Signature)			
(10) Shipment Description					
A. Work Package Number <u>WS-96-00304</u>					
B. Cask Seal Number <u>12226</u>					
C. Sampler Serial Number <u>96-327</u>					
D. Date and Time Sampler Unseated <u>04/17/97, 0237 hrs</u>					
E. Expected Liquid Content <u>10%</u>					
F. Expected Solid Content <u>90%</u>					
G. Dose Rate Through Drill String <u>0.005 Sv</u>					
H. Expected Sample Length <u>14 1/2"</u>					

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

2) Field Comments <u>TRUCK Relocated To obtain MORE STROKE</u>	(34) Laboratory Comments <u>597T000597</u>

3) Point of Origin <u>-203</u>	(14) Destination <u>222-S Lobs</u>	(15) Sender Name (Sign and PRINT) <u>Stan B Carter Steven B Carter</u>	(16) Date/Time <u>4-22-97 1045</u>	(17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>Stan B Carter Steven B Carter</u>		(20) Received By (Sign and PRINT) <u>James E. [Signature]</u>	(21) Date/Time <u>4-22-97 1045</u>	(22) Receiver Comments
5) Relinquished By (Sign and PRINT) <u>James E. [Signature]</u>		(24) Received By (Sign and PRINT) <u>RL Chambers RL Chambers</u>	(25) Date/Time <u>4-22-97 11:15</u>	(26) Receiver Comments
7) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Date Consistent with this Record?		
☒ Yes ☐ No	☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No Cask Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No		

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TH (2) Sample Number 190-02 (3) Supervisor Daniel Carra (4) Tank T-203 (5) Riser 3 (6) Segment # 2 (7) Core 190 (8) Cask Seal Number 67

Radiation Survey Data:		(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>< 0.005 mSv/hr</u>		<u>< 0.005 mSv/hr</u>	A. Work Package Number	<u>WS-96-00304</u>		
Side Dose Rate	<u>< 0.005 mSv/hr</u>		<u>< 0.005 mSv/hr</u>	B. Cask Seal Number	<u>12221</u>		
Bottom Dose Rate	<u>< 0.005 mSv/hr</u>		<u>< 0.005 mSv/hr</u>	C. Sampler Serial Number	<u>96-184</u>		
Spreadable Contamination	<u>< 0.34 g</u>		<u>< 0.34 Bq/LAW</u>	D. Date and Time Sampler Unopened	<u>04/17/97, 0515 hrs</u>		
			<u>< 16.7 Bq</u>	E. Expected Liquid Content	<u>10%</u>		
			<u>Bo Gamma</u>	F. Expected Solid Content	<u>90%</u>		
			<u>Bo Total</u>	G. Dose Rate Through Drill String	<u>0.005 Sv</u>		
			<u>(Signature)</u>	H. Expected Sample Length	<u>19"</u>		

(11) INFORMATION (Amount of laboratory tests to be performed.)

89

HNF-SD-WM-OP-247, REV. 0

(12) Field Comments		(14) Laboratory Comments		(16) Date/Time		(17) Sender Comments	
(12) Field Comments <u>A Small Tund at bottom of</u> <u>Sampler.</u> <u>5977000584</u>		(14) Laboratory Comments		(20) Received By (Sign and PRINT)		(21) Date/Time	
				(22) Received By (Sign and PRINT)		(23) Date/Time	
				(24) Received By (Sign and PRINT)		(25) Date/Time	
				(26) Received By (Sign and PRINT)		(27) Date/Time	
(18) Seal Intact Upon Release?		(31) Seal Intact Upon Receipt?		(19) Relinquished By (Sign and PRINT)		(22) Receiver Comments	
(19) Seal Intact Upon Receipt?		(32) Seal Date Consistent with this Receipt?		(23) Relinquished By (Sign and PRINT)		(26) Receiver Comments	
(20) Relinquished By (Sign and PRINT)		(24) Relinquished By (Sign and PRINT)		(25) Date/Time		(30) Receiver Comments	

(18) Seal Intact Upon Release? ☒ Yes ☐ No Shipment No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number <u>200W-08-TF</u>		(2) Sample Number <u>190-03</u>		(3) Supervisor <u>Daniel Balle, Daniel Dyer</u>	
Tank <u>T-203</u>		(5) Riser <u>3</u>		(6) Segment <u>3</u>	
(7) Core <u>190</u>		(8) Cask Serial Number <u>C-2000</u>			
Radiation Survey Data:		(9) FIELD		(33) LABORATORY	
Over Top Dose Rate <u>0.005 Sv</u>		<u>0.005 mSV</u>		A. Work Package Number <u>WS-96-00304</u>	
Side Dose Rate <u>0.005 Sv</u>		<u>0.005 mSV</u>		B. Cask Seal Number <u>12225</u>	
Bottom Dose Rate <u>0.005 Sv</u>		<u>0.005 mSV</u>		C. Sampler Serial Number <u>96-334</u>	
Smearable Contamination <u><200 dpm/100 cm²</u> (Alpha)		<u><200 dpm/100 cm²</u> (Alpha)		D. Date and Time Sampler Unseated <u>04/17/97, 0615 hrs</u>	
<u><1000 dpm/100 cm²</u> (Beta-Gamma)		<u><1000 dpm/100 cm²</u> (Beta-Gamma)		E. Expected Liquid Content <u>10%</u>	
RCT* <u>[Signature]</u> (HPT)		RCT* <u>[Signature]</u> (HPT)		F. Expected Solid Content <u>90%</u>	
				G. Dose Rate Through Drill String <u>0.005 Sv</u>	
				H. Expected Sample Length <u>19"</u>	

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-UP-247, REV. 0

2) Field Comments			(34) Laboratory Comments		
			<u>597T000598</u>		
3) Point of Origin <u>T-203</u>		(14) Destination <u>222-S Lobs</u>		(15) Sender Name (Sign and PRINT) <u>Steven B. Carter</u>	
9) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(20) Received By (Sign and PRINT) <u>[Signature]</u>		(16) Date/Time <u>04/22/97</u> <u>1030</u>	
3) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(24) Received By (Sign and PRINT) <u>[Signature]</u>		(21) Date/Time <u>04/22/97</u> <u>1105</u>	
7) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(28) Received By (Sign and PRINT) <u>[Signature]</u>		(25) Date/Time <u>04-22-97</u>	
				(26) Receiver Comments	
				(27) Receiver Comments	
				(28) Receiver Comments	
(18) Seal Intact Upon Release?		(31) Seal Intact Upon Receipt?		(32) Seal Data Consistent with this Record?	
☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No	
Shipment No.		Cask Seal No.		Sample No.	
☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No	

DISTRIBUTION: White - Office of Sample Management

Yellow - Recipient of Sample

Pink - Core Sampling, S6-85

Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

Apr. 22, 1997 12:24 PM WNC 222S LAB ROOM 2F BACKSIDE

No. 2270 P. 5/6

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1 Shipment Number 200W-08-TF (2) Sample Number 190-4 (3) Supervisor Hartley
 1 Tank T-203 (5) Riser 3 (6) Segment 4 (7) Core 190 (8) Cask Serial Number #61

Irradiation Survey Data:

(9) FIELD
 Over Top Dose Rate < 0.005 nSv/hr
 Side Dose Rate < 0.005 nSv/hr
 Bottom Dose Rate < 0.005 nSv/hr
 Smearable Contamination < 0.367 Bq/100cm²
 (Alpha)
< 16.7 Bq/100cm²
 (Beta-Gamma)

RCT*
(HPT)

(Signature)

(33) LABORATORY

< 0.005 mSv/hr
< 0.005 mSv/hr
< 0.005 Bq/100cm²
< 334 Bq/LAW
 (Alpha)
< 2.505 Bq/LAW
 (Beta-Gamma)

RCT*
(HPT)

(Signature)

(10) Shipment Description

A. Work Package Number WS-96-00304/0
 B. Cask Seal Number 13062
 C. Sampler Serial Number 96-333
 D. Date and Time Sampler Unseated 4-17-97, 0945
 E. Expected Liquid Content 50%
 F. Expected Solid Content 50%
 G. Dose Rate Through Drill String 1 mR/Hr, 1.0 mSv
 H. Expected Sample Length 1911

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

91

2) Field Comments

(34) Laboratory Comments

597T000585

3) Point of Origin <u>T-203</u>	14) Destination <u>2223</u>	15) Sender Name (Sign and PRINT) <u>William R. Paganik for D. Hartley</u>	16) Date/Time <u>4/18/97 0900</u>	17) Sender Comments
5) Relinquished By (Sign and PRINT) <u>William R. Paganik</u>	20) Received By (Sign and PRINT) <u>Kevin E. Hamilton KE HAMILTON</u>	21) Date/Time <u>4/18/97 0925</u>	22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>Kevin E. Hamilton KE HAMILTON</u>	24) Received By (Sign and PRINT) <u>William R. Paganik</u>	25) Date/Time <u>4/18/97 1000</u>	26) Receiver Comments	
7) Relinquished By (Sign and PRINT)	28) Received By (Sign and PRINT)	29) Date/Time	30) Receiver Comments	

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

(32) Seal Data Consistent with this Record?

☒ Yes ☐ No

☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number <u>200W-09-TP</u>	(2) Sample Number <u>190-5</u>	(3) Supervisor <u>D. Hartley</u>
Tank <u>F-203</u>	(5) Riser <u>3</u>	(6) Segment <u>5</u>
(7) Core <u>190</u>	(8) Cask Serial Number <u>C2013</u>	

Radiation Survey Data: Over Top Dose Rate <u>< 0.005 mSv/hr</u> Side Dose Rate <u>< 0.005 mSv/hr</u> Bottom Dose Rate <u>< 0.005 mSv/hr</u> Smearable Contamination <u>< 0.037 Bq/100cm²</u> (Alpha) <u>< 16.7 Bq/100cm²</u> (Beta-Gamma) RCT* <u>RE F-203</u> (HPT) (Signature)	(33) LABORATORY <u>< 0.005 mSv/hr</u> <u>< 0.005 mSv/hr</u> <u>< 0.005 mSv/hr</u> <u>2.35 Bq/LAW</u> <u>7.10 Bq/LAW</u> <u>< 2.505 Bq/LAW</u> (Beta-Gamma) <u>7.1</u> RCT* (HPT) (Signature)	(10) Shipment Description A. Work Package Number <u>WS-96-00304/C</u> B. Cask Seal Number <u>13063</u> C. Sampler Serial Number <u>96-185</u> D. Date and Time Sampler Unseated <u>4-17-97, 0945hr</u> E. Expected Liquid Content <u>50%</u> <u>50%</u> F. Expected Solid Content G. Dose Rate Through Drill String <u>< 0.5 mR/hr / 100cm</u> H. Expected Sample Length <u>19"</u>

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

2) Field Comments		(34) Laboratory Comments <u>597T000586</u>	

3) Point of Origin <u>F-203</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>KE HAMILTON</u>	(16) Date/Time <u>4/18/97/0925</u>	(17) Sender Comments
4) Relinquished By (Sign and PRINT) <u>KE HAMILTON</u>	(20) Received By (Sign and PRINT) <u>KE HAMILTON</u>	(21) Date/Time <u>4/18/97 0925</u>	(22) Receiver Comments	
5) Relinquished By (Sign and PRINT) <u>KE HAMILTON</u>	(24) Received By (Sign and PRINT) <u>KE HAMILTON</u>	(25) Date/Time <u>4/18/97 1030</u>	(26) Receiver Comments	
6) Relinquished By (Sign and PRINT) <u>KE HAMILTON</u>	(28) Received By (Sign and PRINT) <u>KE HAMILTON</u>	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Date Consistent with this Record? ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number <u>200W-08-TF</u>	(2) Sample Number <u>190-06</u>	(3) Supervisor <u>M. C. Jones</u>
Tank <u>T-203</u>	(5) Riser <u>3</u>	(6) Segment <u>6</u>
(7) Core <u>190</u>		(8) Cask Serial Number <u>SU-70</u>
Radiation Survey Date: (9) FIELD Over Top Dose Rate <u>.005 SV</u> Side Dose Rate <u>.005 SV</u> Bottom Dose Rate <u>.005 SV</u> Smearable Contamination <u>20 dpm/100cm²</u> (Alpha) <u><1000 dpm/100cm²</u> (Beta-Gamma) RCT* (HPT) <u>[Signature]</u> (Signature)		(33) LABORATORY <u>.005 mSV</u> <u>.005 mSV</u> <u>.005 mSV</u> <u>220 dpm/100cm²</u> (Alpha) <u>4000 dpm/100cm²</u> (Beta-Gamma) RCT* (HPT) <u>[Signature]</u> (Signature)
(10) Shipment Description A. Work Package Number <u>WS-96-00304</u> B. Cask Seal Number <u>12456</u> C. Sampler Serial Number <u>96-332</u> D. Date and Time Sampler Unseated <u>7-17-97/1715</u> E. Expected Liquid Content <u>50%</u> F. Expected Solid Content <u>50%</u> G. Dose Rate Through Drill String <u>2.5</u> H. Expected Sample Length <u>19"</u>		

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

2) Field Comments		(34) Laboratory Comments <u>597T000599</u>	
3) Point of Origin <u>T-203</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>Steven B. Carter</u>	(16) Date/Time <u>4-22-97</u> <u>1045</u>
3) Relinquished By (Sign and PRINT) <u>Steven B. Carter</u>	(20) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>4-22-97</u> <u>1045</u>	(17) Sender Comments
3) Relinquished By (Sign and PRINT) <u>Steven B. Carter</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>4-22-97</u> <u>11:17</u>	(22) Receiver Comments
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(26) Receiver Comments
(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Data Consistent with this Record? ☒ Yes ☐ No	
Shipment No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-TF (2) Sample Number 190-07 (3) Supervisor M.C. Jones M.C. Jones
 Tank T-203 (5) Riser 3 (6) Segment 7 (7) Core 190 (8) Cask Serial Number C-2002

(9) FIELD Jvr Top Dose Rate <u>.005 SV</u> Side Dose Rate <u>.005 SV</u> Bottom Dose Rate <u>.005 SV</u> Measurable Contamination <u>< 20 dpm/100 cm²</u> (Alpha) <u>< 1000 dpm/100 cm²</u> (Beta-Gamma) RCT* <u>[Signature]</u> (HPT) (Signature)		(33) LABORATORY Jvr Top Dose Rate <u>.005 m SV</u> Side Dose Rate <u>.005 m SV</u> Bottom Dose Rate <u>.005 m SV</u> Measurable Contamination <u>< 200 dpm/100 cm²</u> (Alpha) <u>< 1000 dpm/100 cm²</u> (Beta-Gamma) RCT* <u>[Signature]</u> (HPT) (Signature)		(10) Shipment Description A. Work Package Number <u>WS-92-00304</u> B. Cask Seal Number <u>12450</u> C. Sampler Serial Number <u>96-336</u> D. Date and Time Sampler Unseated <u>4-17-97/1815</u> E. Expected Liquid Content <u>80%</u> F. Expected Solid Content <u>20%</u> G. Dose Rate Through Drill String <u>LS</u> H. Expected Sample Length <u>19"</u>	

1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

2) Field Comments		(34) Laboratory Comments <u>597T000600</u>	

3) Point of Origin <u>203 R3</u>	(14) Destination <u>222S</u>	(15) Sender Name (Sign and PRINT) <u>STEVEN B CARTER</u>	(16) Date/Time <u>04-22-97</u> <u>1030</u>	(17) Sender Comments
3) Relinquished By (Sign and PRINT) <u>STEVEN B CARTER</u>		(20) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>04-22-97</u> <u>1035</u>	(22) Receiver Comments
3) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>04-22-97</u> <u>1100</u>	(26) Receiver Comments
7) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No

Apr. 22 1997 12:22PM WFC 222S LAB ROOM 2F BACKSIDE No. 2270 P. 3/6

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-TF (2) Sample Number 190-08 (3) Supervisor M.C. Jones
 Tank T-203 (5) Riser 3 (6) Segment 8 (7) Core 190 (8) Cask Serial Number 5N-59

(9) FIELD (10) Shipment Description		(33) LABORATORY	
(11) Top Dose Rate (12) Side Dose Rate (13) Bottom Dose Rate (14) Immearable Contamination (15) RCT* (HPT) (16) Signature		(17) Work Package Number (18) Cask Seal Number (19) Sampler Serial Number (20) Date and Time Sampler Unseated (21) Expected Liquid Content (22) Expected Solid Content (23) Dose Rate Through Drill String (24) Expected Sample Length	

(1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

(35) Field Comments	(36) Laboratory Comments

(37) Point of Origin	(38) Destination	(39) Sender Name (Sign and PRINT)	(40) Date/Time	(41) Sender Comments
T-203	222-S	STEVEN B CARTER	4-22-97	
(42) Relinquished By (Sign and PRINT)	(43) Received By (Sign and PRINT)	(44) Date/Time	(45) Receiver Comments	
STEVEN B CARTER	STEVEN B CARTER	4-22-97		
(46) Relinquished By (Sign and PRINT)	(47) Received By (Sign and PRINT)	(48) Date/Time	(49) Receiver Comments	
STEVEN B CARTER	STEVEN B CARTER	4-22-97		
(50) Relinquished By (Sign and PRINT)	(51) Received By (Sign and PRINT)	(52) Date/Time	(53) Receiver Comments	
STEVEN B CARTER	STEVEN B CARTER	4-22-97		

(54) Seal Intact Upon Release?	(55) Seal Intact Upon Receipt?	(56) Seal Date Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

APR 22 1997 12:22PM WHEC 222S LAB ROOM 2E BACKSIDE
 NO. 2270 P. 2/6

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Apr. 22. 1997 12:21PM WHC 222S LAB ROOM 2F BACKSIDE

No. 2270 P. 1/6

Shipment Number: 200W-08-TF (2) Sample Number: 190-09 (3) Supervisor: Daniel Bales, David Mays
 Tank: T-203 (5) Riser: 3 (6) Segment: 9 (7) Core: 190 (8) Cask Serial Number: 1033
 (10) Shipment Description: WS-96-00304
 A. Work Package Number: 12213
 B. Cask Seal Number: 96-196
 C. Sampler Serial Number: 4/18/97, 0235 hr
 D. Date and Time Sampler Unseated: 10%
 E. Expected Liquid Content: 90%
 F. Expected Solid Content: 0.005 SU
 G. Dose Rate Through Drill String: 19"
 H. Expected Sample Length: 19"

(33) LABORATORY

Over Top Dose Rate: 0.05 Sv
 Side Dose Rate: 0.05 Sv
 Bottom Dose Rate: 0.05 Sv
 Smearable Contamination: < 20 dpm/100cm² (Alpha)
< 1000 dpm/100cm² (Beta-Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]
 (Signature) (Signature)

3) INFORMATION (include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-247, REV. 0

(34) Laboratory Comments

2) Field Comments

5977000602

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
T-203	222-5 Lab	[Signature] Steven B. Carter	4/22/97 10:30	
Relinquished By (Sign and PRINT)		Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
[Signature] Steven B. Carter		[Signature] James K. [unclear]	04/22/97	
Relinquished By (Sign and PRINT)		Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
[Signature] James K. [unclear]		[Signature] J. C. [unclear]	04/22/97	
Relinquished By (Sign and PRINT)		Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments
[Signature] James K. [unclear]				

(32) Seal Data Consistent with the Record?

(18) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	Shipment No.	Cask Seal No.	Sample No.
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

STRICTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-309 (02/94)

APR. 18. 1997 11:23AM WHC 222S LAB ROOM 2F BACKSIDE

No. 2172 P. 2/5

HNF-SD-WM-DP-247, REV. 0

DISTRIBUTION: White - Office of Sample Management   Yellow - Recipient of Sample   Pink - Core Sampling, S6-85   Goldenrod - Tank Farm Operations, S4-43   BC-6000-309 (02/94)

HNF-SD-WM-DP-247, REV. 0

PHOTOGRAPHS

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

T-203 C190 Seg 1

7-203 C190 Seg 1R

F-203 C190 Seg 2

7-203 C190 S993

T-203 C190 Seg 4

T-203 C190 Seg 6

T-203 C190 Sog 7

T-203 C190 Seg 8

T-203 C190 Sag 9

HNF-SD-WM-DP-247, REV. 0

SAMPLE HANDLING

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

LABCORE Data Entry Template for Worklist# 17690

Analyst: CL Instrument: BA000 Book # 16-02 EENA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: T-203 C190 FIELD BLANK RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.02</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000582	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>170</u>		mL
97000299	T-203	4 SAMPLE	S97T000582	0	DLIQWT01	SOLID	<u>N/A</u>	<u>145.1</u>		g
97000299	T-203	5 SAMPLE	S97T000582	0	EST.G/ML	SOLID	<u>N/A</u>	<u>147.17.85</u>		g/mL
97000299	T-203	6 SAMPLE	S97T000582	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000582	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000582	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000582	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10 SAMPLE	S97T000582	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	11 SAMPLE	S97T000582	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000582	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17690

CL 4-29-97
Analyst Signature Date
Validated by N Lapins 4-29-97

CL 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17700

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: T-203 C190 SEGMENT 1 RISER 3 EXTRUSION

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>20.02</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>500.2</u>	<u>N/A</u>	
97000299	T-203	3	SAMPLE	S97T000583	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
97000299	T-203	4	SAMPLE	S97T000583	0		DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5	SAMPLE	S97T000583	0		EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
97000299	T-203	6	SAMPLE	S97T000583	0		EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7	SAMPLE	S97T000583	0		LLIQWT01	SOLID	<u>N/A</u>	<u><1</u>		g
97000299	T-203	8	SAMPLE	S97T000583	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9	SAMPLE	S97T000583	0		SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10	SAMPLE	S97T000583	0		SLDWT-01	SOLID	<u>N/A</u>	<u>325.8</u>		g
97000299	T-203	11	SAMPLE	S97T000583	0		APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12	SAMPLE	S97T000583	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17700

EC 4-29-97
Analyst Signature Date
Validated by N. Lapins 4-29-97

EC 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17702

Analyst: EC Instrument: BA000 Book # NH

Method: LO-160-103 Rev/Mod BO

Worklist Comment: T-203 C190 Seg.#2 Riser 3 Extrusion

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>20.02</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3	SAMPLE	S97T000584	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
97000299	T-203	4	SAMPLE	S97T000584	0		DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5	SAMPLE	S97T000584	0		EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
97000299	T-203	6	SAMPLE	S97T000584	0		EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7	SAMPLE	S97T000584	0		LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8	SAMPLE	S97T000584	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9	SAMPLE	S97T000584	0		SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10	SAMPLE	S97T000584	0		SLDWT-01	SOLID	<u>N/A</u>	<u>356.4</u>		g
97000299	T-203	11	SAMPLE	S97T000584	0		APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12	SAMPLE	S97T000584	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17702

CSL 4-29-97
Analyst Signature Date

Validated by N Lapins 4-29-97

CSL 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17703

Analyst: Ce Instrument: BA000 Book # NAMethod: LO-160-103 Rev/Mod BO

Worklist Comment: T-203 C190 Seg.#1R Riser 3 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>500.11</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000597	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>60</u>		mL
97000299	T-203	4 SAMPLE	S97T000597	0	DLIQWT01	SOLID	<u>N/A</u>	<u>55.6</u>		g
97000299	T-203	5 SAMPLE	S97T000597	0	EST.G/ML	SOLID	<u>N/A</u>	<u>93</u>		g/mL
97000299	T-203	6 SAMPLE	S97T000597	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000597	0	LLIQWT01	SOLID	<u>N/A</u>	<u><10</u>		g
97000299	T-203	8 SAMPLE	S97T000597	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000597	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10 SAMPLE	S97T000597	0	SLDWT-01	SOLID	<u>N/A</u>	<u>247.4</u>		g
97000299	T-203	11 SAMPLE	S97T000597	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000597	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17703

Analyst Signature Ce Date 4-29-97Analyst Signature Ce Date 4-29-97Validated by N Lapins 4-29-97

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# 17705

Analyst: CE Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Med B0

Worklist Comment: T-203 C190 Seg.#3 Riser 3 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>500.11</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000598	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
97000299	T-203	4 SAMPLE	S97T000598	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000598	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
97000299	T-203	6 SAMPLE	S97T000598	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000598	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000598	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>NA-30</u>		
97000299	T-203	9 SAMPLE	S97T000598	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10 SAMPLE	S97T000598	0	SLDWT-01	SOLID	<u>N/A</u>	<u>268.7</u>		g
97000299	T-203	11 SAMPLE	S97T000598	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000598	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17705

CE 4-29-97
Analyst Signature Date
Validated by N Lapins 4-29-97

CE 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17707

Analyst: CE Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod BO

Worklist Comment: T-203 C190 Seg.#5 Riser 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>2002</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000586	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
97000299	T-203	4 SAMPLE	S97T000586	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000586	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
97000299	T-203	6 SAMPLE	S97T000586	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000586	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000586	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000586	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10 SAMPLE	S97T000586	0	SLDWT-01	SOLID	<u>N/A</u>	<u>363.0</u>		g
97000299	T-203	11 SAMPLE	S97T000586	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000586	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17707

CE 4-29-97
Analyst Signature Date
Validated by N Lapins 4-29-97

CE 4-29-97
Analyst Signature Date

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 17708

Analyst: CE Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: T-203 C190 Seg.#4 Riser 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.02</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000585	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		ml
97000299	T-203	4 SAMPLE	S97T000585	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000585	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/ml
97000299	T-203	6 SAMPLE	S97T000585	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000585	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000585	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000585	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
97000299	T-203	10 SAMPLE	S97T000585	0	SLDWT-01	SOLID	<u>N/A</u>	<u>358.7</u>		g
97000299	T-203	11 SAMPLE	S97T000585	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000585	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17708

CE 4-29-97
Analyst Signature Date
Validated by N. Lapins

CE 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17709

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod BO

Worklist Comment: T-203 C190 Seg.#6 Riser 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000599	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		ml
97000299	T-203	4 SAMPLE	S97T000599	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000599	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/ml
97000299	T-203	6 SAMPLE	S97T000599	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000599	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000299	T-203	8 SAMPLE	S97T000599	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000599	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
97000299	T-203	10 SAMPLE	S97T000599	0	SLDWT-01	SOLID	<u>N/A</u>	<u>353.5</u>		g
97000299	T-203	11 SAMPLE	S97T000599	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000599	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17709

Cal J 4-29-97
Analyst Signature Date

Cal J 4-29-97
Analyst Signature Date

Validated by J Lapier 4-29-97

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 17710

Analyst: CL Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod BO

Worklist Comment: T-203 C190 Seg.#7 Riser 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>2001</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000600	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		ml
97000299	T-203	4 SAMPLE	S97T000600	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000600	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/ml
97000299	T-203	6 SAMPLE	S97T000600	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000600	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000600	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000600	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
97000299	T-203	10 SAMPLE	S97T000600	0	SLDWT-01	SOLID	<u>N/A</u>	<u>341.7</u>		g
97000299	T-203	11 SAMPLE	S97T000600	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000600	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17710

CL 4-29-97
Analyst Signature Date
Validated by N. Lapins 4-29-97

CL 4-29-97
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.

LABCORE Data Entry Template for Worklist# 17727

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: T-203 Core 190 Seg.8 Riser 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000601	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		ml
97000299	T-203	4 SAMPLE	S97T000601	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000601	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/ml
97000299	T-203	6 SAMPLE	S97T000601	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000601	0	LLIQWT01	SOLID	<u>N/A</u>	<u>25</u>		g
97000299	T-203	8 SAMPLE	S97T000601	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>NA-30</u>		
97000299	T-203	9 SAMPLE	S97T000601	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
97000299	T-203	10 SAMPLE	S97T000601	0	SLDWT-01	SOLID	<u>N/A</u>	<u>343.1</u>		g
97000299	T-203	11 SAMPLE	S97T000601	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000601	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17727

EC 4-29-97
Analyst Signature Date

EC 4-29-97
Analyst Signature Date

Validated by N Lapino 4-30-97

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 17728

Analyst: CL Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: T-203 CORE 190 Seg #9 RISER 3 Extrusion

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>2001</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.12</u>	<u>N/A</u>	
97000299	T-203	3 SAMPLE	S97T000602	0	DLTQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
97000299	T-203	4 SAMPLE	S97T000602	0	DLTQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	5 SAMPLE	S97T000602	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
97000299	T-203	6 SAMPLE	S97T000602	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	7 SAMPLE	S97T000602	0	LLTQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
97000299	T-203	8 SAMPLE	S97T000602	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-30</u>		
97000299	T-203	9 SAMPLE	S97T000602	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
97000299	T-203	10 SAMPLE	S97T000602	0	SLDWT-01	SOLID	<u>N/A</u>	<u>354.2</u>		g
97000299	T-203	11 SAMPLE	S97T000602	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000299	T-203	12 SAMPLE	S97T000602	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 17728

CL 4-29-97
Analyst Signature Date

CL 4-29-97
Analyst Signature Date

Validated by M. Lapins 4-30-97

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.

HNH-SD-WM-DP-247, REV. 0

SAMPLE PREPARATIONS

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

worklistrpt Version 2.1 05/15/95
05/06/97 09:53

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17877

Analyst: DBB Instrument: FUS01 Book # _____Method: LA-549-141 Rev/Mod F-0

Worklist Comment: T-203 FUSION DIGEST C190S1UH,LH, 1RUH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250L</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE	S97T000735 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.1036</u>		g/L
			0.5259g. →							
97000299	T-203	3 SAMPLE	S97T000735 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
97000299	T-203	4 DUP	S97T000735 0 F		FUSION01	SOLID	<u>2.1036</u>	<u>2.0840</u>	<u>N/A</u>	g/L
			0.5210g. →							
97000299	T-203	5 DUP	S97T000735 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE	S97T000737 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0372</u>		g/L
			0.5093g. →							
97000299	T-203	7 SAMPLE	S97T000737 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
97000299	T-203	8 DUP	S97T000737 0 F		FUSION01	SOLID	<u>2.0372</u>	<u>2.0476</u>	<u>N/A</u>	g/L
			0.5119g. →							
97000299	T-203	9 DUP	S97T000737 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE	S97T000759 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.9740</u>		g/L
			0.4835g. →							
97000299	T-203	11 SAMPLE	S97T000759 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
								<u>1.9740</u>	<u>5/12/97</u>	
97000299	T-203	12 DUP	S97T000759 0 F		FUSION01	SOLID	<u>1.9740</u>	<u>1.9884</u>	<u>N/A</u>	g/L
			0.4991g. →							
97000299	T-203	13 DUP	S97T000759 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17877

Analyst Signature DBB Date 5-10-97Analyst Signature Susan Bee Date 5/11/97

597T000664 → 597T000735
 597T000665 → 597T000759
 597T000705 → 597T000737

Validated by
H. Zepher 5-12-97

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.

workstrpt Version 2.1 05/15/95
05/06/97 09:54

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17878

Analyst: ADP Instrument: FUS01 Book #   Method: LA-549-141 Rev/Mod F-0

Worklist Comment: T-203 FUSION DIGEST C190S1LH, 2UH,LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE .5249g → .250g	S97T000738 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0996</u>		g/L
97000299	T-203	3 SAMPLE	S97T000738 0		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour
97000299	T-203	4 DUP .5130g → .250g	S97T000738 0 F		FUSION01	SOLID	<u>2.0996</u>	<u>2.0520</u>	<u>N/A</u>	g/L
97000299	T-203	5 DUP	S97T000738 0		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE .5670g → .250g	S97T000757 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.268</u>		g/L
97000299	T-203	7 SAMPLE	S97T000757 0		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour
97000299	T-203	8 DUP .5814g → .250g	S97T000757 0 F		FUSION01	SOLID	<u>2.268</u>	<u>2.3256</u>	<u>N/A</u>	g/L
97000299	T-203	9 DUP	S97T000757 0		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE .5211g → .250g	S97T000760 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0844</u>		g/L
97000299	T-203	11 SAMPLE	S97T000760 0		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour
97000299	T-203	12 DUP .5516g → .250g	S97T000760 0 F		FUSION01	SOLID	<u>2.0844</u>	<u>2.2064</u>	<u>N/A</u>	g/L
97000299	T-203	13 DUP	S97T000760 0		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17878

Analyst Signature Anthony Perento Date 5-10-97Analyst Signature Sumi Bue Date 5/11/97

S97T000666 → S97T000738
 S97T000669 → S97T000757
 S97T000711 → S97T000760

Validated By N. Lapins 5-12-97

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# 17879

Analyst: RK Instrument: FUS01 Book # _____

Method: LA-549-141 Rev/Mod _____

Worklist Comment: T-203 FUSION DIGEST C190S3UH,LH, 4UH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.2508</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE .4951 → .2508	S97T000739	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.9816</u>		g/L
97000299	T-203	3 SAMPLE	S97T000739	0	DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour ✓
97000299	T-203	4 DUP .4847 → .2508	S97T000739	0 F	FUSION01	SOLID	<u>1.9816</u>	<u>1.9388</u>	<u>N/A</u>	g/L
97000299	T-203	5 DUP	S97T000739	0	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE .5506 → .2508	S97T000740	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.2024</u>		g/L
97000299	T-203	7 SAMPLE	S97T000740	0	DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour ✓
97000299	T-203	8 DUP .5425 → .2508	S97T000740	0 F	FUSION01	SOLID	<u>2.2024</u>	<u>2.1700</u>	<u>N/A</u>	g/L
97000299	T-203	9 DUP	S97T000740	0	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE .5411 → .2508	S97T000761	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.1644</u>		g/L
97000299	T-203	11 SAMPLE	S97T000761	0	DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour ✓
97000299	T-203	12 DUP .5360 → .2508	S97T000761	0 F	FUSION01	SOLID	<u>2.1644</u>	<u>2.1440</u>	<u>N/A</u>	g/L
97000299	T-203	13 DUP	S97T000761	0	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17879

Nob King 5/11/97
Analyst Signature Date

Susan Bee 5/11/97
Analyst Signature Date

547T000706 → 547T000739
547T000712 → 547T000761
547T000667 → 547T000740

Validated by N. Lopez
5-12-97

Data Entry Comments:

Used 40ml of Con HNO₃ for all samples
Fwd 5/11/97 by R. King

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# 17881

Analyst: DBB Instrument: FUS01 Book # N/A

Method: LA-549-141 Rev/Mod _____

Worklist Comment: T-203 FUSION DIGEST C190S7LH,8UH,LH lad

GROUP	PROJECT	S TYPE	SAMPLE #	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP		FUSION01	SOLID	<u>1</u>	<u>250 L</u>	<u>N/A</u>	g/L
97000299	T-203	2	SAMPLE S97T00742 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0108</u>		g/L
			0.5027 g. →		250 L					
97000299	T-203	3	SAMPLE S97T00742 0		DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	4	DUP S97T00742 0 F		FUSION01	SOLID	<u>2.0108</u>	<u>1.9880</u>	<u>N/A</u>	g/L
			0.4970 g. →		250 L					
97000299	T-203	5	DUP S97T00742 0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6	SAMPLE S97T00743 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0016</u>		g/L
			0.5004 g. →		250 L					
97000299	T-203	7	SAMPLE S97T00743 0		DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	8	DUP S97T00743 0 F		FUSION01	SOLID	<u>2.0016</u>	<u>2.0092</u>	<u>N/A</u>	g/L
			0.5023 g. →		250 L					
97000299	T-203	9	DUP S97T00743 0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10	SAMPLE S97T00764 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0352</u>		g/L
			0.5083 g. →		250 L					
97000299	T-203	11	SAMPLE S97T00764 0		DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	12	DUP S97T00764 0 F		FUSION01	SOLID	<u>2.0352</u>	<u>2.0256</u>	<u>N/A</u>	g/L
			0.5064 g. →		250 L					
97000299	T-203	13	DUP S97T00764 0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17881

DBB 5-12-97
Analyst Signature Date

Janet Smith 5-13-97
Analyst Signature Date

597T000707 → 597T000742
597T000713 → 597T000764
597T000708 → 597T000743

Validated by JJ Lapins
5-13-97

Data Entry Comments:

HPT: Darrel HAINES

LABCORE Data Entry Template for Worklist# 17882

Analyst: SMF Instrument: FUS01 Book # NA

Method: LA-549-141 Rev/Mod F-D

Worklist Comment: T-203 FUSION DIGEST C190S7LH 8UH, LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE	S97T000744 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.9836</u>		g/L
		<u>.4959g</u> → <u>.250g</u>								
97000299	T-203	3 SAMPLE	S97T000744 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		mrad/hour
97000299	T-203	4 DUP	S97T000744 0 F		FUSION01	SOLID	<u>1.9836</u>	<u>2.032</u>	<u>N/A</u>	g/L
		<u>.5080g</u> → <u>.250g</u>								
97000299	T-203	5 DUP	S97T000744 0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE	S97T000765 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.9984</u>		g/L
		<u>.4996g</u> → <u>.250g</u>								
97000299	T-203	7 SAMPLE	S97T000765 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		mrad/hour
97000299	T-203	8 DUP	S97T000765 0 F		FUSION01	SOLID	<u>1.9984</u>	<u>2.0324</u>	<u>N/A</u>	g/L
		<u>.5081g</u> → <u>.250g</u>								
97000299	T-203	9 DUP	S97T000765 0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE	S97T000766 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.9948</u>		g/L
		<u>.4987g</u> → <u>.250g</u>								
97000299	T-203	11 SAMPLE	S97T000766 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		mrad/hour
		<u>.5066g</u> → <u>.250g</u>								
			S97T000766 0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17882

Shirley M. J. J. J. 5-12-97
Signature Date
Daniel J. J. J. 5-13-97
597T000709 →
597T000714 →
597T000715 →

W. J. J. 5-13-97
Signature Date
Validated by W. J. J.
5-16-97

Data Entry Comments:

HPT: Chuck Felder

worklistrpt Version 2.1 05/15/95
05/14/97 10:14

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17883

Analyst: SAK Instrument: FUS01 Book # N/AMethod: LA-549-141 Rev/Mod F.O

Worklist Comment: T-203 FUSION DIGEST C190S9UH, LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE	S97T000745	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.0048</u>		g/L
		.5012g →	.250g							
97000299	T-203	3 SAMPLE	S97T000745	0	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	4 DUP	S97T000745	0 F	FUSION01	SOLID	<u>2.0048</u>	<u>2.0192</u>	<u>N/A</u>	g/L
		.5048g →	.250g							
97000299	T-203	5 DUP	S97T000745	0	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE	S97T000767	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.0360</u>		g/L
		.5040g →	.250g							
97000299	T-203	7 SAMPLE	S97T000767	0	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	8 DUP	S97T000767	0 F	FUSION01	SOLID	<u>2.0360</u>	<u>2.0208</u>	<u>N/A</u>	g/L
		.5052g →	.250g							
97000299	T-203	9 DUP	S97T000767	0	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17883

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Added: 45 ml ^{cont.} HNO₃ & 5 ml 4M HCl. Samples have
 no solids by volume. HPT: Perm Higby container was <.5 mrad/hr
 Parent samples were black & tar-like.

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
06/25/97 09:05

Page: 1

LABCORE Data Entry Template for Worklist# 18196

Analyst: KCH

Instrument: FUS01

Book # 12/A

Method: LA-549-141 Rev/Mod

Worklist Comment: T-203 Fusion Digest C190 Core Comp lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	N/A	g/L
97000299	T-203	2 SAMPLE	S97T001015	0 F	FUSION01	SOLID	N/A	<u>2.1124</u>		g/L
		<u>.5281</u>	<u>→</u>	<u>7.250 L</u>						
97000299	T-203	3 SAMPLE	S97T001015	0	DOSE-02	SOLID	N/A	<u>< .5</u>		mrad/hour
97000299	T-203	4 DUP	S97T001015	0 F	FUSION01	SOLID	<u>2.1124</u>	<u>2.1176</u>	N/A	g/L
		<u>.5294</u>	<u>→</u>	<u>7.250 L</u>						
97000299	T-203	5 DUP	S97T001015	0	DOSE-02	SOLID		<u>< .5</u>	N/A	mrad/hour

Final page for worklist # 18196

Analyst Signature [Signature]Date 6-25-97Analyst Signature [Signature]Date 6-25-97

Data Entry Comments:

FAKED 6-25

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.

Validated by
RK Fuller
6/26/97

worklistrpt Version 2.1 05/15/95
07/10/97 14:06

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 19251

Analyst: EAL Instrument: FUS01 Book # N/AMethod: LA-549-141 Rev/Mod F.O

Worklist Comment: T-203 fusion digest C190 Core Composi lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE .5238g → .250g	S97T001734 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0952</u>		g/L
97000299	T-203	3 SAMPLE	S97T001734 0		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>		mrad/hour
97000299	T-203	4 DUP .5264g → .250g	S97T001734 0 F		FUSION01	SOLID	<u>2.0952</u>	<u>2.1056</u>	<u>N/A</u>	g/L
97000299	T-203	5 DUP	S97T001734 0		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 19251

Analyst Signature A. Lambel Date 07.10.97Analyst Signature [Signature] Date 7-11-97

Reviewed 7/12/97

[Signature]

Data Entry Comments:

5 ml 4M HCL & 15 ml Can HNO₃. & Solids. Color: Brown
 DUPLICATE COLOR-ROSE. HPT: SCOTT CORBALEY - CONTAINER DOSE RATE: <0.5mrad
 Location: Shelf 3

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
05/06/97 09:51

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17884

Analyst: D/B Instrument: H2O01 Book # _____Method: LA-504-101 Rev/Mod F-0

Worklist Comment: T-203 H2O DIGEST C190S1UH, LH, 1RUH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2O01G01	SOLID	<u>1</u>	<u>.100 L</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE	S97T000736 0 W		H2O01G01	SOLID	<u>N/A</u>	<u>5.2640</u>		g/L
			<u>0.5264 g. →</u>		<u>.100 L</u>					
97000299	T-203	3 SAMPLE	S97T000736 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
97000299	T-203	4 DUP	S97T000736 0 W		H2O01G01	SOLID	<u>5.2640</u>	<u>5.2830</u>	<u>N/A</u>	g/L
			<u>0.5283 g. →</u>		<u>.100 L</u>					
97000299	T-203	5 DUP	S97T000736 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE	S97T000746 0 W		H2O01G01	SOLID	<u>N/A</u>	<u>4.9510</u>		g/L
			<u>0.4951 g. →</u>		<u>.100 L</u>					
97000299	T-203	7 SAMPLE	S97T000746 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
97000299	T-203	8 DUP	S97T000746 0 W		H2O01G01	SOLID	<u>4.9510</u>	<u>5.0800</u>	<u>N/A</u>	g/L
			<u>0.5080 g. →</u>		<u>.100 L</u>					
97000299	T-203	9 DUP	S97T000746 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE	S97T000768 0 W		H2O01G01	SOLID	<u>N/A</u>	<u>5.1090</u>		g/L
			<u>0.5109 g. →</u>		<u>.100 L</u>					
97000299	T-203	11 SAMPLE	S97T000768 0		DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		mrad/hour ✓
97000299	T-203	12 DUP	S97T000768 0 W		H2O01G01	SOLID	<u>5.1090</u>	<u>5.1980</u>	<u>N/A</u>	g/L
			<u>0.5198 g. →</u>		<u>.100 L</u>					
97000299	T-203	13 DUP	S97T000768 0		DOSE-02	SOLID	<u>.5</u>	<u>.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17884

Analyst Signature D/B Date 5-10-97Analyst Signature Susan Bee Date 5/11/97

S97T000664 → S97T000736

S97T000665 → S97T000768

S97T000759⁶⁶ → S97T000746
705

Data Entry Comments:

Validated by H. Lapins
5-12-97

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# 17885

Analyst:

HDP

Instrument: H2001

Book #

Method: LA-504-101 Rev/Mod

FO

Worklist Comment: T-203 H2O DIGEST C190S1RLH, 2UH, LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	1	1.00	N/A	g/L
97000299	T-203	2 SAMPLE	S97T000747	0 W	H2001G01	SOLID	N/A	5.254		g/L
			.5254g → .100g							
97000299	T-203	3 SAMPLE	S97T000747	0	DOSE-02	SOLID	N/A	1.5		mrads/hour
97000299	T-203	4 DUP	S97T000747	0 W	H2001G01	SOLID	5.254	5.305	N/A	g/L
			.5305g → .100g							
97000299	T-203	5 DUP	S97T000747	0	DOSE-02	SOLID	1.5	1.5	N/A	mrads/hour
97000299	T-203	6 SAMPLE	S97T000758	0 W	H2001G01	SOLID	N/A	4.995		g/L
			.4995g → .100g							
97000299	T-203	7 SAMPLE	S97T000758	0	DOSE-02	SOLID	N/A	1.5		mrads/hour
97000299	T-203	8 DUP	S97T000758	0 W	H2001G01	SOLID	4.995	5.094	N/A	g/L
			.5094g → .100g							
97000299	T-203	9 DUP	S97T000758	0	DOSE-02	SOLID	1.5	1.5	N/A	mrads/hour
97000299	T-203	10 SAMPLE	S97T000769	0 W	H2001G01	SOLID	N/A	6.002		g/L
			.6002g → .100g							
97000299	T-203	11 SAMPLE	S97T000769	0	DOSE-02	SOLID	N/A	1.5		mrads/hour
97000299	T-203	12 DUP	S97T000769	0 W	H2001G01	SOLID	6.002	6.100	N/A	g/L
			.6100g → .100g							
97000299	T-203	13 DUP	S97T000769	0	DOSE-02	SOLID	1.5	1.5	N/A	mrads/hour

72
5-12-97
HNF

Final page for worklist # 17885

Analyst Signature

Date

5-10-97

S97T000666 → S97T000747
 S97T000669 → S97T000758
 S97T000711 → S97T000769

Data Entry Comments:

Analyst Signature

5/11/97

Date

Validated by Notopins 5-12-97

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.

05/10/97 21:41

LABCORE Data Entry Template for Worklist# 17886

Analyst: NR Instrument: H2001 Book # _____

Method: LA-504-101 Rev/Mod _____

Worklist Comment: T-203 H2O DIGEST C190S3UH,LH, 4UH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H20DIG01	SOLID	<u>1</u>	<u>1.00</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE .5207 → .100L	S97T000748 0 W		H20DIG01	SOLID	<u>N/A</u>	<u>5.207</u>		g/L
97000299	T-203	3 SAMPLE	S97T000748 0		DOSE-02	SOLID	<u>N/A</u>	<u><1.5</u>		mrad/hour
97000299	T-203	4 DUP .5336 → .100L	S97T000748 0 W		H20DIG01	SOLID	<u>5.207</u>	<u>5.336</u>	<u>N/A</u>	g/L
97000299	T-203	5 DUP	S97T000748 0		DOSE-02	SOLID	<u><1.5</u>	<u><1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6 SAMPLE .5364 → .100L	S97T000749 0 W		H20DIG01	SOLID	<u>N/A</u>	<u>5.364</u>		g/L
97000299	T-203	7 SAMPLE	S97T000749 0		DOSE-02	SOLID	<u>N/A</u>	<u><1.5</u>		mrad/hour
97000299	T-203	8 DUP .5583 → .100L	S97T000749 0 W		H20DIG01	SOLID	<u>5.364</u>	<u>5.583</u>	<u>N/A</u>	g/L
97000299	T-203	9 DUP	S97T000749 0		DOSE-02	SOLID	<u><1.5</u>	<u><1.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10 SAMPLE .5489 → .100L	S97T000770 0 W		H20DIG01	SOLID	<u>N/A</u>	<u>5.489</u>		g/L
97000299	T-203	11 SAMPLE	S97T000770 0		DOSE-02	SOLID	<u>N/A</u>	<u><1.5</u>		mrad/hour
97000299	T-203	12 DUP .5420 → .100L	S97T000770 0 W		H20DIG01	SOLID	<u>5.489</u>	<u>5.420</u>	<u>N/A</u>	g/L
97000299	T-203	13 DUP	S97T000770 0		DOSE-02	SOLID	<u><1.5</u>	<u><1.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17886

Not King
Analyst Signature Date

597T000706 → 597T000748
597T000712 → 597T000770
597T000667 → 597T000749

Susan Bu 5/11/97
Analyst Signature Date

Validated by N Lapins 5-13-97

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.

05/01/97 09:22
A-0004-1

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17887

Analyst: ADP Instrument: H2001 Book#   Method: LA-504-101 Rev/Mod F-0

Worklist Comment: T-203 H2O DIGEST C190S4LH, 5UH,LH lad

S Type	Sample#	R A Test	Matrix	Group#	Project	Actual	Found	DL	WV
1 BLNK-PREP			H2ODIG01 SOLID			<u>1</u>	<u>.100</u>	<u>NA</u>	<u>g/L</u>
2 SAMPLE	S97T000750 0 W	H2ODIG01 SOLID		97000299	T-203	<u>NA</u>	<u>5.136</u>	<u>—</u>	<u>g/L</u>
	Analytes Requested: H2ODIG01								
3 SAMPLE	S97T000750 0	DOSE-02 SOLID		97000299	T-203	<u>NA</u>	<u><0.5</u>	<u>—</u>	<u>mud</u>
	Analytes Requested: DOSE-02								
4 DUP	S97T000750 0 W	H2ODIG01 SOLID				<u>5.136</u>	<u>5.025</u>	<u>NA</u>	<u>g/L</u>
5 DUP	S97T000750 0	DOSE-02 SOLID				<u><0.5</u>	<u><0.5</u>	<u>NA</u>	<u>mud</u>
6 SAMPLE	S97T000771 0 W	H2ODIG01 SOLID		97000299	T-203	<u>NA</u>	<u>5.200</u>	<u>—</u>	<u>g/L</u>
	Analytes Requested: H2ODIG01								
7 SAMPLE	S97T000771 0	DOSE-02 SOLID		97000299	T-203	<u>NA</u>	<u><0.5</u>	<u>—</u>	<u>mud</u>
	Analytes Requested: DOSE-02								
8 DUP	S97T000771 0 W	H2ODIG01 SOLID				<u>5.200</u>	<u>5.150</u>	<u>NA</u>	<u>g/L</u>
9 DUP	S97T000771 0	DOSE-02 SOLID				<u><0.5</u>	<u><0.5</u>	<u>NA</u>	<u>mud</u>
10 SAMPLE	S97T000772 0 W	H2ODIG01 SOLID		97000299	T-203	<u>NA</u>	<u>5.102</u>	<u>—</u>	<u>g/L</u>
	Analytes Requested: H2ODIG01								
11 SAMPLE	S97T000772 0	DOSE-02 SOLID		97000299	T-203	<u>NA</u>	<u><0.5</u>	<u>—</u>	<u>mud</u>
	Analytes Requested: DOSE-02								
12 DUP	S97T000772 0 W	H2ODIG01 SOLID				<u>5.102</u>	<u>5.170</u>	<u>NA</u>	<u>g/L</u>
13 DUP	S97T000772 0	DOSE-02 SOLID				<u><0.5</u>	<u><0.5</u>	<u>NA</u>	<u>mud</u>

Final page for worklist # 17887

Anthony Punter 5-11-97Validated by N. Logans 5-13-97

Data Entry Comments:

Susan Bee 5/11/97
 597T000668 → 597T000750
 597T000670 → 597T000771
 597T000671 → 597T000772

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17888

Analyst: QBB Instrument: H2O01 Book # N/A

Method: LA-504-101 Rev/Mod _____

Worklist Comment: T-203 H2O DIGEST C190S6UH, LH 7UH lad

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				H2ODIG01	SOLID	<u>1</u>	<u>.100L</u>	<u>N/A</u>	<u>g/L</u>
97000299	T-203	2	SAMPLE	S97T000751	0	W	H2ODIG01	SOLID	<u>N/A</u>	<u>5.0630</u>		<u>g/L</u>
				<u>0.5063 g. →</u>			<u>.100L</u>					
97000299	T-203	3	SAMPLE	S97T000751	0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
97000299	T-203	4	DUP	S97T000751	0	W	H2ODIG01	SOLID	<u>5.0630</u>	<u>4.9960</u>	<u>N/A</u>	<u>g/L</u>
				<u>0.4996 g. →</u>			<u>.100L</u>					
97000299	T-203	5	DUP	S97T000751	0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000299	T-203	6	SAMPLE	S97T000752	0	W	H2ODIG01	SOLID	<u>N/A</u>	<u>5.1330</u>		<u>g/L</u>
				<u>0.5133 g. →</u>			<u>.100L</u>					
97000299	T-203	7	SAMPLE	S97T000752	0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
97000299	T-203	8	DUP	S97T000752	0	W	H2ODIG01	SOLID	<u>5.1330</u>	<u>5.0480</u>	<u>N/A</u>	<u>g/L</u>
				<u>0.5048 g. →</u>			<u>.100L</u>					
97000299	T-203	9	DUP	S97T000752	0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000299	T-203	10	SAMPLE	S97T000773	0	W	H2ODIG01	SOLID	<u>N/A</u>	<u>5.0250</u>		<u>g/L</u>
				<u>0.5025 g. →</u>			<u>.100L</u>					
97000299	T-203	11	SAMPLE	S97T000773	0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
97000299	T-203	12	DUP	S97T000773	0		DOSE-02	SOLID	<u>2.5</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 17888

AD B. Buffin 5-12-97
Signature Date
D. Scuderi 5-13-97
Signature Date
597T000707 → 597T000751 Validated by
597T000713 → 597T000773 ABiggins
597T000708 → 597T000752 5-16-97

Data Entry Comments:

HPT: Chuck Felder

LA SCORE Data Entry Template for Worklist# 17889

Analyst: SM Instrument: H2001 Book # NK

Method: LA-504-101 Rev/Mod H-0

Worklist Comment: T-203 H2O DIGEST C190S7LH, 8UH, LH lad

GROUP	PROJECT	S	TIME	SPK	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLK-PREP				H2001G01	SOLID	<u>1</u>	<u>.100</u>	<u>N/A</u>	g/L
97000299	T-203	2	SAMPLE	S97T000753	0	W	H2001G01	SOLID	<u>N/A</u>	<u>4.972</u>		g/L
			<u>.4972g</u>	<u>→ .1001</u>								
97000299	T-203	3	SAMPLE	S97T000753	0		DOSE-02	SOLID	<u>N/A</u>	<u>4.5</u>		mrad/hour
97000299	T-203	4	DUP	S97T000753	0	W	H2001G01	SOLID	<u>4.972</u>	<u>5.090</u>	<u>N/A</u>	g/L
			<u>.5090g</u>	<u>→ .1001</u>								
97000299	T-203	5	DUP	S97T000753	0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	6	SAMPLE	S97T000774	0	W	H2001G01	SOLID	<u>N/A</u>	<u>5.074</u>		g/L
			<u>.5074g</u>	<u>→ .1001</u>								
97000299	T-203	7	SAMPLE	S97T000774	0		DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	8	DUP	S97T000774	0	W	H2001G01	SOLID	<u>5.074</u>	<u>5.066</u>	<u>N/A</u>	g/L
			<u>.5066g</u>	<u>→ .1001</u>								
97000299	T-203	9	DUP	S97T000774	0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour
97000299	T-203	10	SAMPLE	S97T000775	0	W	H2001G01	SOLID	<u>N/A</u>	<u>4.998</u>		g/L
			<u>.4998g</u>	<u>→ .1001</u>								
97000299	T-203	11	SAMPLE	S97T000775	0		DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		mrad/hour
97000299	T-203	12	DUP	S97T000775	0	W	H2001G01	SOLID	<u>4.998</u>	<u>4.930</u>	<u>N/A</u>	g/L
			<u>.4930g</u>	<u>→ .1001</u>								
97000299	T-203	13	DUP	S97T000775	0		DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 17889

Luis M. Dalton 5-12-97
Analyst Signature Date

Jim Mach 5-13-97
Analyst Signature Date

597T000709 → 597T000753
597T000714 → 597T000774
597T000715 → 597T000775

Validated by W Leguis 5-13-97

Data Entry Comments:

HPT: Darrel Haines

worklistrpt Version 2.1 05/15/95
05/14/97 10:15

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 17890

Analyst: EAL

Instrument: H2001

Book # N/A

Method: LA-504-101 Rev/Mod _____

Worklist Comment: T-203 H2O DIGEST C190S9 UH, LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	<u>1</u>	<u>.100</u>	N/A	g/L
97000299	T-203	2 SAMPLE	S97T000754 0 W		H2001G01	SOLID	<u>N/A</u>	<u>5.240</u>		g/L
		<u>5240g</u> → <u>.100L</u>								
97000299	T-203	3 SAMPLE	S97T000754 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		mrad/hour
97000299	T-203	4 DUP	S97T000754 0 W		H2001G01	SOLID	<u>5.240</u>	<u>5.152</u>	N/A	g/L
		<u>5152g</u> → <u>.100L</u>								
97000299	T-203	5 DUP	S97T000754 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>	N/A	mrad/hour
97000299	T-203	6 SAMPLE	S97T000776 0 W		H2001G01	SOLID	<u>N/A</u>	<u>5.301</u>		g/L
		<u>5301g</u> → <u>.100L</u>								
97000299	T-203	7 SAMPLE	S97T000776 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		mrad/hour
97000299	T-203	8 DUP	S97T000776 0 W		H2001G01	SOLID	<u>5.301</u>	<u>5.334</u>	N/A	g/L
		<u>5334g</u> → <u>.100L</u>								
97000299	T-203	9 DUP	S97T000776 0		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>	N/A	mrad/hour

Final page for worklist # 17890

Analyst Signature EAL Date 05-14-97Analyst Signature Jim Moeck Date 5-15-97Validated by N Lapins 5-19-97

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# 18198

Analyst: DBB Instrument: H2001 Book # _____

Method: LA-504-101 Rev/Mod _____

Worklist Comment: T-203 H2O Digest C190 Core Comp lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	<u>1</u>	<u>.100</u>	<u>N/A</u>	g/L
97000299	T-203	2 SAMPLE	S97T001016 0 W		H2001G01	SOLID	<u>N/A</u>	<u>4.5660</u>		g/L
		<u>.4566g</u>	<u>→ .100 L</u>							
97000299	T-203	3 SAMPLE	S97T001016 0		DOSE-02	SOLID	<u>N/A</u>	<u>6.5 mrad</u>		mrads/hour
97000299	T-203	4 DUP	S97T001016 0 W		H2001G01	SOLID	<u>4.5660</u>	<u>4.7020</u>	<u>N/A</u>	g/L
		<u>.4702g</u>	<u>→ .100 L</u>							
97000299	T-203	5 DUP	S97T001016 0		DOSE-02	SOLID	<u>6.5 mrad</u>	<u>6.5 mrad</u>	<u>N/A</u>	mrads/hour

Final page for worklist # 18198

Analyst Signature: DBB Date: 6-25-97

Analyst Signature: Susan Bee Date: 6/25/97

Validated by H. Lapins
6-25-97

S97T001013 → S97T001016

Data Entry Comments:

Weighted by Don Buffa 6-25-97

Submitted by Don Buffa 6-25-97

labeled 6-25-97

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
06/25/97 09:08

Page: 1

LABCORE Data Entry Template for Worklist# 18197

Analyst: JK Seto Instrument: ACD01 Book # 7.5 x 15 each
4HC/A + 2 to 50 x 15
fine volumeMethod: LA-505-163 Rev/Mod A-0

Worklist Comment: T-203 Acid Digest C190 Core Comp lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD-PREP			ACIDIG01	SOLID	<u>20</u>	<u>20</u>	<u>N/A</u>	<u>g/L</u>
		2 BLNK-PREP			ACIDIG01	SOLID	<u>1</u>	<u>50</u>	<u>N/A</u>	<u>g/L</u>
97000299	T-203	3 SAMPLE	S97T001017	0 A	ACIDIG01	SOLID	<u>N/A</u>	<u>5.008</u>		<u>g/L</u>
		<u>0.1504g → .05g</u>								
97000299	T-203	4 SAMPLE	S97T001017	0	DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
97000299	T-203	5 DUP	S97T001017	0 A	ACIDIG01	SOLID	<u>5.008</u>	<u>5.012</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.1506g → .05g</u>								
97000299	T-203	6 DUP	S97T001017	0	DOSE-02	SOLID	<u>4.5</u>	<u>4.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000299	T-203	7 SPK	S97T001017	0 A	ACIDIG01	SOLID	<u>N/A</u>	<u>5.010</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.1505g → .05g</u>								
97000299	T-203	8 SPK	S97T001017	0	DOSE-02	SOLID	<u>N/A</u>	<u>4.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 18197

Analyst Signature JK Seto Date 06-25-97Analyst Signature [Signature] Date 6-25-97

Data Entry Comments:

Validated
By PK Heller
6/26/97Units 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-SD-WM-DP-247, REV. 0

T-203 BULK DENSITY WORKSHEETS

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

HNF-SD-WM-DP-247, REV.0

Bulk Density Worksheet

Date: 4/28/97

equestor STEEN

Tank: F-203

Core: 190

Seg: 1 LH

Auger: _____

Sample ID: 557 T006657

Start Time: _____

End Time: _____

Homogenization
Time (Min.): _____

Jar #: 12207

Jar/Vial Size: _____ mL

Initial Weight: _____ g

Final Weight: ~~12.41~~ g

Net Weight: _____ g

Cone #: 12207

Final Vol: 10 mL

Initial Weight: 2.44 g

Final Weight: 19.56 g

Net Weight: 12.14 g

Sample ID: _____

Appearance/Narrative: _____

Bulk Den = $12.14 / 10 = 1.21 \text{ g/mL}$

Tank: _____

Core: _____

Seg: _____

Auger: _____

Sample ID: _____

Start Time: _____

End Time: _____

Homogenization
Time (Min.): _____

Jar #: 12207

Jar/Vial Size: _____ mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone #: _____

Final Vol: _____ mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

Requestor: steen

Bulk Density Worksheet

Date: 5/6/97

Tank: T-203
Core: 190
Seg: 1R LH
Auger: ---
Sample ID: 597T000699

Start Time: ---
End Time: ---
Homogenization
Time (Min.): ---

Jar#: 12265
Jar/Vial Size: --- mL
Initial Weight: --- g
Final Weight: 106.8 g
Net Weight: 4.7 g

147

Cone#: 12265
Final Vol: 14 mL
Initial Weight: 7.43 g
Final Weight: 24.03 g
Net Weight: 16.60 g
Sample ID: 597T000699

Appearance/Narrative:

Bulk Den = $\frac{16.60}{14.0} / 1.19 =$
gm/mL

Tank: ---
Core: ---
Seg: ---
Auger: ---
Sample ID: ---

Start Time: ---
End Time: ---
Homogenization
Time (Min.): ---

Jar#: ---
Jar/Vial Size: --- mL
Initial Weight: --- g
Final Weight: --- g
Net Weight: --- g

Cone#: ---
Final Vol: --- mL
Initial Weight: --- g
Final Weight: --- g
Net Weight: --- g
Sample ID: ---

Appearance/Narrative:

HNF-SD-WM-DP-247, REV. 0

HNF-SD-WM-DP-247, REV. 0

Bulk Density Worksheet

Date: _____

Requestor: STEN

Tank: T-203

Core: 190

Seg: 2LH

Auger: _____

Sample ID: 59700656

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____

Jar/Vial Size: 125.46 ml

Initial Weight: 122.55 g

Final Weight: 43.77 g

Net Weight: _____ g

Cone#: 9B 4/297

Final Vol: 125.46 ml

Initial Weight: 7.10 g

Final Weight: 20.94 g

Net Weight: 13.84 g

Sample ID: 59700658

Appearance/Narrative: BOR on 1/15 = 1.20 g/ml

Tank: _____

Core: _____

Seg: _____

Auger: _____

Sample ID: _____

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____

Jar/Vial Size: 125.46 ml

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone#: _____

Final Vol: _____ ml

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

Bulk Density Worksheet

Date: 5-17-97

HNF-SD-WM-DP-247, REV. 0

Requestor: STEENTank: 1-203Core: 190Seg: 31HAuger: —Sample ID: 5977000700Start Time: —End Time: —Homogenization
Time (Min.): — Jar#: 12266Jar/Vial Size: — mLInitial Weight: 0.5 gFinal Weight: 4.2 gNet Weight: 3.7 g Conc#: 12266Final Vol: 13.5 mLInitial Weight: 7.47 gFinal Weight: 26.30 gNet Weight: 18.83 gSample ID: 5977000700Appearance/Narrative: 18.8318.8313.5Tank: —Core: —Seg: —Auger: —Sample ID: —Start Time: —End Time: —Homogenization
Time (Min.): — Jar#: —Jar/Vial Size: 165 mLInitial Weight: — gFinal Weight: 4.30 gNet Weight: — g Conc#: —Final Vol: — mLInitial Weight: — gFinal Weight: — gNet Weight: — gSample ID: —Appearance/Narrative: —

Bulk Density Worksheet

Requestor: STEELDate: 4/30/97Tank: 1203Core: 190Seg: 4 L.H.Auger: Sample ID: 597100662Start Time: End Time:

Homogenization

Time (Min.):   Jar#: 12547Jar/Vial Size: mLInitial Weight: gFinal Weight: gNet Weight: g Cone#: 12547Final Vol: 15.0 mLInitial Weight: 2440 gFinal Weight: 2564 gNet Weight: 18.24 gSample ID: 597100662Appearance/Narrative: Bulk Den = 12.0 122 gm/mLTank: Core: Seg: Auger: Sample ID: Start Time: End Time:

Homogenization

Time (Min.):   Jar#: AK4Jar/Vial Size: mLInitial Weight: gFinal Weight: gNet Weight: g Cone#:   Final Vol: mLInitial Weight: gFinal Weight: gNet Weight: gSample ID: Appearance/Narrative:

HNF-SD-WM-DP-247, REV. 0

Bulk Density Worksheet

Requestor: STEEN

Date: 5/7/97

Tank: I-203
Core: 190
Seg: 57H
Auger:
Sample ID: 5977000663

Start Time:
End Time:
Homogenization
Time (Min.):

Jar#: 12269
Jar/Vial Size: mL
Initial Weight: AK4 g
Final Weight: 4.30 g
Net Weight: g

Cone#: 12269
Final Vol: 10 mL mL
Initial Weight: 7.46 g
Final Weight: 18.90 g
Net Weight: 11.44 g
Sample ID:

Appearance/Narrative: 1.14 g/mL

Tank:
Core:
Seg:
Auger:
Sample ID:

Start Time:
End Time:
Homogenization
Time (Min.):

Jar#: AK4
Jar/Vial Size: mL
Initial Weight: 4.30 g
Final Weight: g
Net Weight: g

Cone#:
Final Vol: mL
Initial Weight: g
Final Weight: g
Net Weight: g
Sample ID:

Appearance/Narrative:

HNF-SD-WM-DP-247, REV. 0

Bulk Density Worksheet

Date: 5-7-97

Requestor: STEEN

Tank: 7-203
Core: 190
Seg: 6 LH
Auger:
Sample ID: 597T000701

Start Time:
End Time:
Homogenization
Time (Min.):

Jar#: 12267
Jar/Vial Size: mL
Initial Weight: g
Final Weight: g
Net Weight: g

Cone#: 12267
Final Vol: 14.0 mL
Initial Weight: 7.65 g
Final Weight: 25.6 g
Net Weight: 17.9 g
Sample ID: 597T000701

Appearance/Narrative:

$$\frac{17.9}{14.0} = 1.27$$

Tank:
Core:
Seg:
Auger:
Sample ID:

Start Time:
End Time:
Homogenization
Time (Min.):

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

Cone#:
Final Vol: mL
Initial Weight: g
Final Weight: g
Net Weight: g
Sample ID:

Appearance/Narrative:

HNF-SD-WM-DP-247, REV. 0

152

Bulk Density Worksheet

Requestor: 5222

Tank: T-203
Core: 190
Seg: 7 LH
Auger: —
Sample ID: 5971600702

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____

Jar/Vial Size: 12.26 mL
Initial Weight: 22.5 g
Final Weight: 22.13 g
Net Weight: 1.465 g

Cone#: 12261
Final Vol: 12.5 mL
Initial Weight: 22.5 g
Final Weight: 22.13 g
Net Weight: 1.465 g

Sample ID: _____

Appearance/Narrative: W. 65/12.5 = 1.17 g/mL

BLK 6401 = 1.17 g/mL

Tank: _____
Core: _____
Seg: _____
Auger: _____
Sample ID: _____

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____

Jar/Vial Size: 6 mL
Initial Weight: 43.7 g
Final Weight: 42.0 g
Net Weight: _____ g

Cone#: _____
Final Vol: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

_____
_____
_____
_____

Date: 5/8/97

Bulk Density Worksheet

Requestor: _____

Tank: 1203

Core: 190

Seg: 8 L19

Auger: —

Sample ID: _____

Start Time: _____

End Time: _____

Homogenization Time (Min.): _____

Jar#:

Jar/Vial Size: _____ mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone#: 12259

Final Vol: 14.0 mL

Initial Weight: 7.67 g

Final Weight: 19.87 g

Net Weight: 12.2 g

Sample ID: _____

Appearance/Narrative: _____

BK Den = $12^2 / 1.15 = 9 \text{ g/ml}$

Date: 5/19/97

Tank: _____

Core: _____

Seg: _____

Auger: _____

Sample ID: _____

Start Time: _____

End Time: _____

Homogenization Time (Min.): _____

Jar#:

Jar/Vial Size: _____ mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone#: 197

Final Vol: 19.7 mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

Bulk Density Worksheet

Requestor: SteinDate: 5/8/97Tank: T203Core: 90Seg: QTH

Auger: _____

Sample ID: 597760070 W

Tank: _____

Core: _____

Seg: _____

Auger: _____

Sample ID: _____

Start Time: _____

End Time: _____

Homogenization

Time (Min.): _____

Jar/Vial Size: 12263 mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone#: 12263Final Vol: 9 mLInitial Weight: 751 gFinal Weight: 19.12 gNet Weight: 11.61 g

Sample ID: _____

Appearance/Narrative: _____

11.61 g / 9 mL = 1.29 g/mL

Start Time: _____

End Time: _____

Homogenization

Time (Min.): _____

Jar/Vial Size: 12263 mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Cone#: _____

Final Vol: _____ mL

Initial Weight: _____ g

Final Weight: _____ g

Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

Requestor: Frank Shaw

Bulk Density Worksheet

Date: 6/17/97

Tank: 7-203
Core: 190
Seg: Sample 1
Auger:
Sample ID: 59TT021012

Start Time:
End Time:
Homogenization Time (Min.):

Jar#: 12377
Jar/Vial Size: 125 ml
Initial Weight: g
Final Weight: g
Net Weight: g

Cone#: 12377
Final Vol: 9.5 ml
Initial Weight: 7.47 g
Final Weight: 17.13 g
Net Weight: 11.66 g
Sample ID: 59TT021012

Appearance/Narrative:

Bulk Den = 11.66 / 9.5 = 1.23 g/ml

Tank:
Core:
Seg:
Auger:
Sample ID:

Start Time:
End Time:
Homogenization Time (Min.):

Jar#:
Jar/Vial Size: ml
Initial Weight: g
Final Weight: g
Net Weight: g

Cone#:
Final Vol: ml
Initial Weight: g
Final Weight: g
Net Weight: g
Sample ID:

Appearance/Narrative:

HNF-SD-WM-DP-247, REV. 0

INORGANIC ANALYSIS

HNF-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

LABCORE Data Entry Template for Worklist# 18004

Analyst: RDM Instrument: DSC0 3 Book # 12N148

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, AW106 GRAB1, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>26.36</u>	<u>N/A</u>	Joules/g
97000327	AW-106 GRAB1	2 SAMPLE	S97T000781	0	DSC-03	LIQUID	<u>N/A</u>	<u>93.3</u>		Joules/g
97000299	T-203	3 SAMPLE	S97T000733	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	4 DUP	S97T000733	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18004

See Attached for Signature
Analyst Signature Date

5-21-97
Analyst Signature Date

Validated 5/22/97 Brachlor

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# 18004

Analyst: Ram Instrument: DSC0 3 Book # 12N14B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T203, AW106 GRAB1, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
97000327	AW-106 GRAB1	2 SAMPLE	S97T000781	0	DSC-01	LIQUID	N/A			Joules/g
97000299	T-203	3 SAMPLE	S97T000733	0	DSC-01	LIQUID	N/A			Joules/g
97000299	T-203	4 DUP	S97T000733	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 18004

Ram 5/20/97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:
Ran samples on DSC-03. 5/20/97

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.

Curve 1: DSC

File info: IND051902 | In May 19 08:58:39 1997

Sample Weight: 10.940 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 11a1 TO 11a3.*EA Lambel 05.19.97*

N2, EXOTHERM DOWN

TEMPERATURE 149.8 °C

TIME 149.8 s

0.0 min RATE: 10.0 °C/min

EA LAMBEL

PERKIN-ELMER

7 Series Thermal Analysis System
Mon May 19 14:23:51 1997

Curve 1: DSC

File info: SAM051911 Mon May 19 22:41:52 1997

Sample Weight: 21.550 mg

S97T000733

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 00:35:22 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052001 Tue May 20 01:32:13 1997

Sample Weight: 19.250 mg

S97T000733DUP

N2 10C/min

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 01:54:52 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18014

Analyst: VL M Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>29.25</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000664	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	3 DUP	S97T000664	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000665	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	5 DUP	S97T000665	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18014

See Attached for Signature
Analyst Signature Date

5-29-97
Analyst Signature Date

Validated 6/2/97
Validated 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.

worklistrpt Version 2.1 05/15/95
05/12/97 14:39

Page: 1

LABCORE Data Entry Template for Worklist# 18014

Analyst: VLW Instrument: DSC0 03 Book # 12N14BMethod: LA-514-113 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000664	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000664	0.	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000665	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000665	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18014

Valerie Massie 05-20-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. 5/24/97

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.

Curve 1: DSC

File info: IND052002 Tue May 20 08:10:55 1997

Sample Weight: 10.760 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 116 TO 120

Valerie L. Massie

HN-SD-WM-DP-247, REV.0

B. M. M. M.

N2, EXOTHERM DOWN

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 08:15:07 1997

Curve 1: DSC

File info: SAM052003 Tue May 20 10:48:45 1997

Sample Weight: 6.970 mg

S97T000664

N2 10C/min

TEMP: 35.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 11:48:00 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC
File info: SAM052004 Tue May 20 12:56:47 1997
Sample Weight: 18.420 mg
S97T000664 DUP

N2 10C/min
TEMP: 35.0 °C
TIME: 000.0 min
RATE: 10.0 °C/min

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 13:02:35 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File Info: SAM052006 Tue May 20 15:01:34 1997

Sample Weight: 11.480 mg

S97T000665

169

HNF-SD-WM-DP-247, REV.0

N2 10C/min
TEMP: 55.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 18:13:00 1997

Curve 1: DSC

File info: SAM052007 Tue May 20 21:51:39 1997

Sample Weight: 16.820 mg

S97T000665 DUP

170

HNF-SD-WM-DP-247, REV. 0

N2 10C/min
TEMP: 50.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 22:23:48 1997

LABCORE Data Entry Template for Worklist# 18015

Analyst: ADP Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>26.58</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000666 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000666 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000667 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000667 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18015

See Attached for Signature
Analyst Signature Date
Validated 6/2/97 B. Mchelor

Jason Bu 5/22/97
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.

LABCORE Data Entry Template for Worklist# 18015

Analyst: ASP Instrument: DSC0 Book # 12014B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>26.58</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000666	0	DSC-01	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000666	0	DSC-01	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000667	0	DSC-01	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000667	0	DSC-01	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18015

ASP
Analyst Signature Date 5-21-97

Analyst Signature Date

Data Entry Comments: 597T000667 Ran in triplicate. Also Ran samples on

DSC-03. (B) 5/22/97

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.

Curve 1: DSC

File info: IND052101 Wed May 21 06:57:00 1997

Sample Weight: 10.760 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 173 TO 178.

N2, EXOTHERM DOWN

TEMP: 140.0 °C TXM1: 0.0 min RATE: 10.0 °C/min
TEMP: 180.0 °C

Curve 1: DSC

File info: SAM052105 Wed May 21 08:55:28 1997

Sample Weight: 27.460 mg

S97T000666

N2 10C/min
TEMP: 55.8 °C
TIME: 0.0 min

RATE: 10.0 °C/min

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 09:08:23 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM051208 Wed May 21 16:11:03 1997

Sample Weight: 18.280 mg

S97T000666 DUP

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER

7 Series Thermal Analysis System
Wed May 21 16:13:12 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File Info: SAM052109 Wed May 21 17:05:15 1997

Sample Weight: 35.060 mg

S97T000667 SAM

176

N2 10C/min
TEMP: 35.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 17:49:43 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052111 Wed May 21 22: 07: 31 1997

Sample Weight: 25.940 mg

S97T000867 TRIP

177

N2 10C/min
TEMP: 25.0 °C
TIME: 555.0 s

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 22: 23: 19 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC
 File Info: SAM052110 Wed May 21 18:58:00 1997
 Sample Weight: 33.250 mg
 S97T000667 DUP

LABCORE Data Entry Template for Worklist# 18016

Analyst: ADP Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>20.45</u>	<u>27.20</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000669	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000669	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000670	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000670	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18016

See Attached for Signature
Analyst Signature Date/
Validated 6/2/97 Shachlor

Guson Bu 5/27/97
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.

LABCORE Data Entry Template for Worklist# 18016

Analyst: ADD Instrument: DSC0 Book # 12N14B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2. SAMPLE	S97T000669 0		DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000669 0		DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000670 0		DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000670 0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18016

John Perreault 5-22-97
Analyst Signature Date
Rob King 5-23-97

Analyst Signature Date

Data Entry Comments:

nan samples on DSC-03. JPS 5/27/97

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.

Curve 1: DSC

File info: IND052201 Thu May 22 11:16:17 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 181 TO 185

HNF-SD-WM-DP-247, REV. 0

N2, EXOTHERM DOWN
TEMP: 140.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 11:17:20 1997

Curve 1: DSC
 File Info: SAM052205 Thu May 22 16: 48: 55 1997
 Sample Weight: 23.930 mg
 S97T000669 SAM

PJ MCCOMB
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 22 16: 42: 42 1997

N2 100/min
 TEMPERATURE 50.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min

Curve 1: DSC

File info: SAM052206 Thu May 22 19: 48: 36 1997

Sample Weight: 24.550 mg

S97T000669 DUP

HNF-SD-WM-DF-247, REV. 0

N2 10C/min
TEMP1: 35.0 °C
TEMP2: 500.0 °C
TIME1: 0.0 min
RATE1: 10.0 °C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 20: 30: 13 1997

Curve 1: DSC

File info: SAM052203 Thu May 22 21:02:43 1997

Sample Weight: 11.140 mg

S97T000670

184

N2 10C/min
TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 22:14:33 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052204 Thu May 22 22: 48: 23 1997

Sample Weight: 20.430 mg

S97T000670 DUP

HNF-SD-WM-DP-247, REV.0

N2 10C/min
TEMP1: 35.0 °C
TEMP2: 500.0 °C
TIME1: 0.0 min
RATE1: 10.0 °C/min

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 22: 56: 50 1997

LABCORE Data Entry Template for Worklist# 18017

Analyst: RDM Instrument: DSC0 3 Book # 2N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.34</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000705	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000705	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000711	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000711	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18017

See Attached for Signature
Analyst Signature   Date
Validated 6/2/97

Analyst Signature   Date 5/27/97

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 18017

Analyst: RM

Instrument: DSC0

Book # 12N140

Method: LA-514-113 Rev/Mod

Worklist Comment: T203, DSC-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000705	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000705	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000711	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000711	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18017

Analyst Signature RMDate 5/23/97

Analyst Signature

Date

Data Entry Comments:

Ran samples on DSC-03. RM 5/27/97

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-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052305 Fri May 23 10:02:07 1997

Sample Weight: 19.260 mg

S97T000705

N2 10C/min

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 12:40:58 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052306 Fri May 23 13:31:00 1997

Sample Weight: 14.030 mg

S97T000705DUP

HNF-SD-WM-DP-247, REV. 0

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 13:42:27 1997

Curve 1: DSC

File info: SAM052307 Fri May 23 14:37:31 1997

Sample Weight: 19.030 mg

S97T000711

N2 10C/min

TEMP: 35.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 14:39:58 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052308 Fri May 23 15:34:15 1997

Sample Weight: 16.700 mg

S97T000711DUP

192

HNF-SD-WM-DP-247, REV.0

N2 10C/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Fri May 23 17:40:53 1997

TEMP1: 38.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

TEMP2: 500.0 °C

LABCORE Data Entry Template for Worklist# 18045

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>27.47</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000731	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000731	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18045

See Attached for Signature

Analyst Signature Date

Susan Bee 5/27/97

Analyst Signature Date

Validated 6/2/97 DD Maclellan

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 18045

Analyst: SME Instrument: DSC0 3 Book # 12X14B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000731	0	DSC-01	LIQUID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000731	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 18045

Lucie M. Dalton 5-24-97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. Q8 5/27/97

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.

Curve 1: DSC

File info: IND052401 Sat May 24 09:37:53 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 15 TO 18

HNF-SD-WM-DP-247, REV. 0

N2, EXOTHERM DOWN
TEMP: 140.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

RO MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 17:22:19 1997

Curve 1: DSC

File info: SAM052409 Sat May 24 18:05:08 1997

Sample Weight: 10.030 mg

S97T000731

N2 10C/min

TEMP: 35.0 °C
TIME: 600.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 18:09:47 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052409 Sat May 24 18:05:08 1997

Sample Weight: 10.030 mg

S97T000731

197

N2 10C/min
TEMP: 55.8 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 18:09:47 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052410 Sat May 24 19:01:29 1997

Sample Weight: 9.780 mg

S97T000731 DUP

198

HNF-SD-WM-DP-247, REV. 0

N2 10C/min

TEMP: 38.0 °C
TIME: 655.8 s

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 19:56:33 1997

LABCORE Data Entry Template for Worklist# 18047

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.34</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000668	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000668	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000671	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000671	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18047

See Attached For Signature
Analyst Signature   Date
Validated 6/2/97

Susan Bui 5/27/97
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.

LABCORE Data Entry Template for Worklist# 18047

Analyst: SME Instrument: DSC0 3 Book # 12014-B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000668	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000668	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000671	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000671	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18047

Luis M. Dulsten 5-23-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. 5/27/97

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.

Curve 1: DSC

File info: IND052301 Fri May 23 07:23:50 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 201 TO 205

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052309 Fri May 23 18:30:52 1997

Sample Weight: 17.650 mg

S97T000668

N2 10C/min

TEMP1: 35.0 °C
TEMP2: 500.0 °C

TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 18:38:22 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052310 Fri May 23 21:09:43 1997

Sample Weight: 15.870 mg

S97T000668 DUP

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 21:46:26 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052311 Fri May 23 22:30:23 1997

Sample Weight: 32.210 mg

S97T000671

204

N2 10C/min

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 22:50:06 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File Info: SAM052312 Fri May 23 23: 41: 23 1997

Sample Weight: 15.450 mg

S97T000671 DUP

N2 10C/min

TEMP: 35.0 °C
TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 00: 11: 21 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18048

Analyst: SMF Instrument: DSC0 3 Book # 12N148

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>22.47*</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000706 0		DSC-03	SOLID	<u>N/A</u>	<u>D</u>		Joules/g
97000299	T-203	3 DUP	S97T000706 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000707 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000707 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18048

See Attached for Signature
Analyst Signature Date

Suzanne Bee 5/27/97
Analyst Signature Date

Validated 6/2/97 JP/achelor

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# 18048

Analyst: SMF Instrument: DSC0 3 Book # 12N14-B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000706 0		DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000706 0		DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000707 0		DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000707 0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18048

Laurie M. Sutton 5-25-97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. ~~5/27/97~~

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.

Curve 1: DSC

File Info: IND052401 Sat May 24 09:37:53 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 20 TO 22

N2, EXOTHERM DOWN

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 180.0 °C

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 20:11:14 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM052414 Sun May 25 01:06:08 1997

Sample Weight: 8.900 mg

S97T000706

N2 10C/min

TEMP: 35.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 01:14:12 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052415 Sun May 25 02:15:13 1997

Sample Weight: 32.620 mg

S97T000706 DUP

N2 10C/min

TEMP: 25.0 °C
TIME: 00:00

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System
Sun May 25 03:09:25 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052416 Sun May 25 03:59:17 1997

Sample Weight: 25.330 mg

S97T000707

N2 10C/min
TEMP: 35.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 27 09:59:55 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052417 Sun May 25 05:03:59 1997

Sample Weight: 17.120 mg

S97T000707 DUP

N2 10C/min

TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 07:08:37 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18049

Analyst: RDM Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.47*</u>	N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000708 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000708 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000709 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000709 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	N/A	Joules/g

Final page for worklist # 18049

See Attached for Signature
Analyst Signature Date

Sworn Bee 5/27/97
Analyst Signature Date

Validated 6/2/97 Smehlor

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# 18049

Analyst: PM Instrument: DSC0 3 Book # 12N1403

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000708	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000708	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000709	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000709	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18049

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Run samples on DSC-03. 5/27/97

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.

Curve 1: DSC

File Info: IND052401 Sat May 24 09:37:53 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 215 TO 219.

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Curve 1: DSC

File info: SAM052408 Sat May 24 13:13:51 1997

Sample Weight: 48.320 mg

S97T000708

216

HNF-SD-WM-DP-247, REV. 0

N2 10C/min
TEMP: 55.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 13:19:06 1997

Curve 1: DSC

File info: SAM052411 Sat May 24 20: 47: 02 1997

Sample Weight: 22.410 mg

S97T000708 DUP

N2 10C/min

TEMP: 25.0 °C
TIME: 000.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 20: 47: 42 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC
 File Info: SAH052412 Sat May 24 21:52:34 1997
 Sample Weight: 31.910 mg
 S97T000709

SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat May 24 22:00:21 1997

N2 10C/min
 25.0 °C
 250.0 °C
 0.0 min RATE: 10.0 °C/min
 TIME: 0.0

Curve 1: DSC
File info: SAM052413 Sat May 24 22:50:56 1997
Sample Weight: 11.590 mg
S97T000709 DUP

N2 10C/min
TEMP: 25.0 °C
TIME: 000.0 s
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 00:15:01 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18053

Analyst: EAL Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>26.36*</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000710 0		DSC-03	SOLID	<u>N/A</u>	<u>4.39</u>		Joules/g
97000299	T-203	3 DUP	S97T000710 0		DSC-03	SOLID	<u>4.39</u>	<u>4.67</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000712 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000712 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18053

See Attached for Signature

Analyst Signature Date

Validated 5/22/97 B. Pacheco

[Signature] 5-21-97
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.

LABCORE Data Entry Template for Worklist# 18053

Analyst: EAL Instrument: DSC0 3 Book # 12N14-B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000710	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000710	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000712	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000712	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18053

E. Lamber
Analyst Signature Date 05.19.97

Analyst Signature Date

Data Entry Comments:

Run samples on DSC-03. 05/18/97

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.

Curve 1: DSC

File info: IND051902 Mon May 19 05:58:39 1997

Sample Weight: 10.940 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 222 TO 226.

E. Lambel 05.19.97

HNF-SD-WM-DP-247, REV. 0

N2, EXOTHERM DOWN

TEMP: 160.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 14:23:51 1997

Curve 1: DSC

File info: SAM051905 Mon May 19 12:42:57 1997

Sample Weight: 27.110 mg

S97T000710

N2 10C/min

TEMP: 25.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 13:10:50 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM051906 Mon May 19 14:02:20 1997

Sample Weight: 23.830 mg

S97T000710DUP

224

N2 10C/min

TEMP: 50.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

EA LAMBEL

PERKIN-ELMER

7 Series Thermal Analysis System

Mon May 19 14:08:30 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM051907 Mon May 19 15:00:33 1997

Sample Weight: 28.710 mg

S97T000712

225

N2 10C/min

TEMP: 35.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 15:04:57 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM051908 Mon May 19 15:54:55 1997

Sample Weight: 13.220 mg

S97T000712DUP

922

HNF-SD-WM-DP-247, REV.0

N2 10C/min

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 15:56:16 1997

LABCORE Data Entry Template for Worklist# 18054

Analyst: EAL Instrument: DSC0 3 Book # 12N148

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>26.14</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000713	0	DSC-03	SOLID	<u>N/A</u>	<u>2.44</u>		Joules/g
97000299	T-203	3 DUP	S97T000713	0	DSC-03	SOLID	<u>2.44</u>	<u>3.38</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000714	0	DSC-03	SOLID	<u>N/A</u>	<u>4.68</u>		Joules/g
97000299	T-203	5 DUP	S97T000714	0	DSC-03	SOLID	<u>4.68</u>	<u>2.29</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18054

See Attached for Signature
Analyst Signature Date

R. Jones 5-21-97
Analyst Signature Date

Validated 5/22/97 [Signature]

Data Entry Comments:

High RPI due to sample inhomogeneities. Rerun only at customer request.

LABCORE Data Entry Template for Worklist# 18054

Analyst: gal Instrument: DSC0 3 Book # 12N14.13

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000713	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000713	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000714	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000714	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18054

gal 05.19.97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. 5/20/97

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.

Curve 1: DSC

File info: IND051902 Mon May 19 05:58:39 1997

Sample Weight: 10.940 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 229 TO 233

A. Langel 05.19.97

229

HNF-SD-WM-DP-247, REV. 0

N2, EXOTHERM DOWN
TEMP: 140.0 °C TIME: 0.0 min

RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 06:00:03 1997

Curve 1: DSC

File Info: SAM051901 Mon May 19 08:54:55 1997

Sample Weight: 24.540 mg

S97T000713

N2 10C/min
TEMP: 50.0 °C
TIME: 00:00

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 08:50:02 1997

Curve 1: DSC

File info: SAM051902 Mon May 19 09:49:32 1997

Sample Weight: 17.240 mg

S97T000713DUP

N2 10C/min

TEMP: 55.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 09:56:41 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: DSC

File info: SAM051903 Mon May 19 10:48:09 1997

Sample Weight: 12.120 mg

S97T000714

N2 10C/min

TEMP: 35.0 °C
TEMP: 300.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 10:53:44 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM051904 Mon May 19 11:46:13 1997

Sample Weight: 21.430 mg

S97T000714DUP

N2 10C/min

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 11:50:06 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18055

Analyst: SMF Instrument: DSC0 3 Book # GN 14B

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.34x</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T000715	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T000715	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000299	T-203	4 SAMPLE	S97T000716	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	5 DUP	S97T000716	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18055

See Attached for Signature
Analyst Signature Date

Susan Bee. 5/27/97
Analyst Signature Date

Validated 6/2/97 [Signature]

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 18055

Analyst: SMF Instrument: DSC0 3 Book # 12N148B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T-203 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000299	T-203	2 SAMPLE	S97T000715	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	3 DUP	S97T000715	0	DSC-01	SOLID			N/A	Joules/g
97000299	T-203	4 SAMPLE	S97T000716	0	DSC-01	SOLID	N/A			Joules/g
97000299	T-203	5 DUP	S97T000716	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18055

Surie M. Dutton 5-23-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. QB 5/23/97

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.

Curve 1: DSC

File info: IND052301 Fri May 23 07:23:50 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 236 TO 240

236

Heat Flow (mW)

HN-SD-WM-DP-247, REV.0

N2, EXOTHERM DOWN

Temperature (°C)

TEMP: 140.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 00:55:13 1997

Curve 1: DSC

File info: SAM052313 Sat May 24 01:06:13 1997

Sample Weight: 21.340 mg

S97T000715

N2 10C/min
TEMP: 25.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 01:13:50 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC
File info: SAM052314 Sat May 24 02:04:22 1997
Sample Weight: 19.010 mg
S97T000715 DUP

N2 10C/min
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 03:12:38 1997

HNF-SD-MM-DP-247, REV.0

Curve 1: DSC

File info: SAM052315 Sat May 24 03:56:29 1997

Sample Weight: 16.160 mg

S97T000716

N2 10C/min

TEMP: 35.0 °C
TIME: 500.0 s

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 03:56:51 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM052316 Sat May 24 04:48:50 1997

Sample Weight: 27.010 mg

S97T000716 DUP

240

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 09:25:43 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18422

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA-514-113 Rev/Mod 6/2/97

Worklist Comment: DSC-02 T-203 liuid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	1 SAMPLE	S97T000731	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	2 DUP	S97T000731	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	3 SAMPLE	S97T000733	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	4 DUP	S97T000733	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 18422

ppb 6/2/97
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.

LABCORE Data Entry Template for Worklist# 18423

Analyst: ppb Instrument: DSC0 2 Book # N/A

Method: LA-514-113 Rev/Mod 6/4/97

Worklist Comment: DSC-02 T-203 solid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	1 SAMPLE	S97T000664	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	2 DUP	S97T000664	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	3 SAMPLE	S97T000665	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	4 DUP	S97T000665	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	5 SAMPLE	S97T000666	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	6 DUP	S97T000666	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	7 SAMPLE	S97T000667	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	8 DUP	S97T000667	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	9 SAMPLE	S97T000668	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	10 DUP	S97T000668	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	11 SAMPLE	S97T000669	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	12 DUP	S97T000669	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	13 SAMPLE	S97T000670	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	14 DUP	S97T000670	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	15 SAMPLE	S97T000671	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	16 DUP	S97T000671	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	17 SAMPLE	S97T000705	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	18 DUP	S97T000705	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

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# 18423

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	19 SAMPLE	S97T000706	0	DSC-02	SOLID	N/A	0		Joules/g Dry
97000299	T-203	20 DUP	S97T000706	0	DSC-02	SOLID	0	0	N/A	Joules/g Dry

Final page for worklist # 18423

B. Bachelder 6/2/97
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.

LABCORE Data Entry Template for Worklist# 18424

Analyst: ppb Instrument: DSC0 2 Book # N/A

Method: LA-514-113 Rev/Mod 93 4/2/97

Worklist Comment: DSC-02 T-203 solidi. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	1 SAMPLE	S97T000707	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	2 DUP	S97T000707	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	3 SAMPLE	S97T000708	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	4 DUP	S97T000708	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	5 SAMPLE	S97T000709	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	6 DUP	S97T000709	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	7 SAMPLE	S97T000710	0	DSC-02	SOLID	<u>N/A</u>	<u>16.14</u>		Joules/g Dry
97000299	T-203	8 DUP	S97T000710	0	DSC-02	SOLID	<u>16.14</u>	<u>17.17</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	9 SAMPLE	S97T000711	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	10 DUP	S97T000711	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	11 SAMPLE	S97T000712	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	12 DUP	S97T000712	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	13 SAMPLE	S97T000713	0	DSC-02	SOLID	<u>N/A</u>	<u>9.986</u>		Joules/g Dry
97000299	T-203	14 DUP	S97T000713	0	DSC-02	SOLID	<u>9.986</u>	<u>13.83</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	15 SAMPLE	S97T000714	0	DSC-02	SOLID	<u>N/A</u>	<u>17.47</u>		Joules/g Dry
97000299	T-203	16 DUP	S97T000714	0	DSC-02	SOLID	<u>17.47</u>	<u>8.546</u>	<u>N/A</u>	Joules/g Dry
97000299	T-203	17 SAMPLE	S97T000715	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	18 DUP	S97T000715	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

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# 18424

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	19 SAMPLE	S97T000716	0	DSC-02	SOLID	N/A	0		Joules/g Dry
97000299	T-203	20 DUP	S97T000716	0	DSC-02	SOLID	0	0	N/A	Joules/g Dry

Final page for worklist # 18424

B. Bacheler 6/2/97
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.

LABCORE Data Entry Template for Worklist# 18776 Analyst: RMM Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod D-1

Worklist Comment: T203, DSC-03 Run under Nitrogen, skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.40*</u>	<u>N/A</u>	Joules/g
97000299	T-203	2 SAMPLE	S97T001013	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000299	T-203	3 DUP	S97T001013	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18776 Analyst Signature RMM Date 7/14/97Analyst Signature Susan Bee Date 7/22/97Validated 7/24/97 SS Rachel

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.

Curve 1: DSC

File info: IOND071901 Sat Jul 19 07:20:05 1997

Sample Weight: 21.590 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 247 TO 249.

Curve 1: DSC

File info: SAM071907 Sat Jul 19 08:56:07 1997

Sample Weight: 36.630 mg

997T001013

N2 10C/min

TEMP: 25.0 °C
TIME: 558.8 s

TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Jul 19 19:05:41 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: DSC

File info: SAM071908 Sat Jul 19 11:21:58 1997

Sample Weight: 23.380 mg

S97T001013DUP

N2 10C/min

TEMP: 35.0 °C
START: 50.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Jul 19 19:03:14 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 19451

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA-514-113 Rev/Mod-03 7/22/97

Worklist Comment: DSC-02 T-203 comp solid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000299	T-203	1 SAMPLE	S97T001013	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000299	T-203	2 DUP	S97T001013	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 19451

ppb 7/22/97
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.

LABCORE Data Entry Template for Worklist# 18013

Analyst: RD M Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203 AW106 GRAB1, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.4</u>	<u>58.47*</u>	<u>N/A</u>	%
97000327	AW-106 GRAB1	2 SAMPLE	S97T000781	0	TGA-03	LIQUID	<u>N/A</u>	<u>58.95</u>		%
97000299	T-203	3 SAMPLE	S97T000733	0	TGA-03	LIQUID	<u>N/A</u>	<u>85.30</u>		%
97000299	T-203	4 DUP	S97T000733	0	TGA-03	LIQUID	<u>85.30</u>	<u>85.23</u>	<u>N/A</u>	%

Final page for worklist # 18013

See Attached for Signatures
Analyst Signature Date

[Signature] 5-21-97
Analyst Signature Date

Validated 5/22/97 [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.

LABCORE Data Entry Template for Worklist# 18013

Analyst: Rm Instrument: TGA0 3 Book # 97NEA

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T203, AW106 GRAB1, TGA-01 skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
97000327	AW-106 GRAB1	2	SAMPLE	S97T000781	0		TGA-01	LIQUID	N/A			%
97000299	T-203	3	SAMPLE	S97T000733	0		TGA-01	LIQUID	N/A			%
97000299	T-203	4	DUP	S97T000733	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 18013

Rm
Analyst Signature

5/2/97
Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-01. 5/

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.

Curve 1: TGA

File info: TER051906 Mon May 19 17:38:56 1997

Sample Weight: 7.930 mg

TGA STD 97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 252 TO 255

253

N2 10C/MIN
TEMP: 350.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 17:42:02 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA
File info: SAM051911 Mon May 19 22:45:35 1997
Sample Weight: 8.609 mg
S97T000739

10C/MIN N2
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 00:42:14 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052001 Tue May 20 01:35:41 1997

Sample Weight: 13.975 mg

S97T000733DUP

10C/MIN N2

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 01:49:17 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18018

Analyst: VLM Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.38</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000664	0	TGA-03	SOLID	<u>N/A</u>	<u>77.76</u>		%
							<u>77.76</u>	<u>5/21/97</u>		
97000299	T-203	3 DUP	S97T000664	0	TGA-03	SOLID	<u>76.74</u>	<u>76.74</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000665	0	TGA-03	SOLID	<u>N/A</u>	<u>74.09</u>		%
97000299	T-203	5 DUP	S97T000665	0	TGA-03	SOLID	<u>74.09</u>	<u>75.61</u>	<u>N/A</u>	%

Final page for worklist # 18018

See Attached for Signature
Analyst Signature Date

RS Jones 5-29-97
Analyst Signature Date

Validated 6/2/97 Bachelor

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# 18018

Analyst: VLW Instrument: TGA0 03 Book # 97N8A

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
97000299	T-203	2	SAMPLE	S97T000664	0		TGA-01	SOLID	N/A			%
97000299	T-203	3	DUP	S97T000664	0		TGA-01	SOLID			N/A	%
97000299	T-203	4	SAMPLE	S97T000665	0		TGA-01	SOLID	N/A			%
97000299	T-203	5	DUP	S97T000665	0		TGA-01	SOLID			N/A	%

Final page for worklist # 18018

Valerie L. Massie 05-20-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. 05/21/97

Curve 1: TGA

File info: TER052002 Tue May 20 08:56:54 1997

Sample Weight: 13.933 mg

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 258 TO 262

Valerie L. Massie

258

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2

TEMP: 300.0 °C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 09:34:19 1997

Curve 1: TGA

File info: SAM052003 Tue May 20 10:59:09 1997

Sample Weight: 28.587 mg

S97T000664

259

Weight (Wt. %)

HNF-SD-WM-DP-247, REV.0

10C/MIN N2

TEMP: 50.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 12:50:07 1997

Curve 1: TGA

File info: SAM052004 Tue May 20 13:03:29 1997

Sample Weight: 14.061 mg

S97T000664 DUP

10C/MIN N2

TEMP1: 35.0 C TIME1: 0.0 min RATE1: / 10.0 C/min
TEMP2: 505.0 C

Temperature (°C)

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 13:09:41 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052005 Tue May 20 14:09:47 1997

Sample Weight: 8.445 mg

S97T000665

10C/MIN N2

TEMP: 25.0 °C TIMES: 0.0 min RATE: 10.0 C/min

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 14:16:42 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052006 Tue May 20 15: 19: 12 1997

Sample Weight: 11.150 mg

S97T000665 DUP

262

10C/MIN N2

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

VL MASSIE
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 20 18: 05: 07 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18019

Analyst: ADP Instrument: TGA0 3 Book # 971819Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.64</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000666	0	TGA-03	SOLID	<u>N/A</u>	<u>76.29</u>		%
97000299	T-203	3 DUP	S97T000666	0	TGA-03	SOLID	<u>76.29</u>	<u>76.10</u>	<u>75.18</u>	%
97000299	T-203	4 SAMPLE	S97T000667	0	TGA-03	SOLID	<u>N/A</u>	<u>74.75</u>		%
97000299	T-203	5 DUP	S97T000667	0	TGA-03	SOLID	<u>74.75</u>	<u>75.93</u>	<u>N/A</u>	%

Final page for worklist # 18019

See Attached for Signature
Analyst Signature ADP Date 5/22/97Susan Kim
Analyst Signature Susan Kim Date 5/22/97Validated 6/2/97 Q. Hacheler

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# 18019

Analyst: ADD Instrument: TGA0 3 Book # 97N8A

Method: LA-560-112 Rev/Mod DO

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000666	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000666	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000667	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000667	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18019

Anthony Purnell
Analyst Signature Date 5-21-97

Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. 5/21/97

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.

Curve 1: TGA

File info: TER052101 Wed May 21 07:08:54 1997

Sample Weight: 22.268 mg

97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 265 TO 269.

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052105 Wed May 21 08:49:29 1997

Sample Weight: 14.076 mg

S97T000666 SAM

966

10C/MIN N2

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 08:57:46 1997

HNF-SD-MM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052106 Wed May 21 10:00:38 1997

Sample Weight: 11.880 mg

S97T000666 DUP

10C/MIN N2
TEMP: 25.0 °C
TIME: 555.0 s

RATE: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 10:09:34 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052107 Wed May 21 11:15:48 1997

Sample Weight: 10.033 mg

S97T000667 SAM

10C/MIN N2
TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 11:56:03 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052108 Wed May 21 12:51:13 1997

Sample Weight: 21.545 mg

S97T000667 DUP

692

10C/MIN N2

TEMP: 38.0 °C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 12:51:57 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18020

Analyst: ADP Instrument: TGA0 3 Book # 97A8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.19%</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000669 0		TGA-03	SOLID	<u>N/A</u>	<u>76.78</u>		%
97000299	T-203	3 DUP	S97T000669 0		TGA-03	SOLID	<u>76.78</u>	<u>76.32</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000670 0		TGA-03	SOLID	<u>N/A</u>	<u>75.69</u>		%
97000299	T-203	5 DUP	S97T000670 0		TGA-03	SOLID	<u>75.69</u>	<u>72.97</u>	<u>N/A</u>	%

Final page for worklist # 18020

See Attached for Signature
Analyst Signature   Date
Validated 6/2/97

Susan Bee 5/27/97
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.

LABCORE Data Entry Template for Worklist# 18020

Analyst: ADP Instrument: TGA0 Book # 97N8A

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000669	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000669	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000670	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000670	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18020

Anthony Perunth 5-22-97
Analyst Signature Date
Not King 5-22-97

Analyst Signature Date

Data Entry Comments:

TGA
Ran samples on DSC-03. Q83 5/27/97

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.

Curve 1: TGA

File info: TER052201 Thu May 22 06:27:16 1997

Sample Weight: 24.197 mg

97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 276 TO 279.

HNF-SD-WM-DP-247, REV.0

10C/MIN N2

TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 06:37:53 1997

Curve 1: TGA
 File Info: SAK052212 Thu May 22 15:46:25 1997
 Sample Weight: 19.301 mg
 S97T000669 SAK

Curve 1: TGA

File info: SAM052213 Thu May 22 16:54:18 1997

Sample Weight: 16.458 mg

S97T000669 DUP

10C/MIN N2
TEMP1: 35.0 C
TEMP2: 800.0 C
TIME1: 0.0 min
RATE1: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 22 20:42:24 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA
 File info: SAM052215 Thu May 22 20:06:09 1997
 Sample Weight: 17.841 mg
 S97T000670

HNF-SD-WM-DP-247, REV.0

10C/MIN N2
 TEMP: 35.0 C TIME: 0.0 min RATE: 10.0 C/min
 TEMP: 500.0 C

Temperature (°C)

RW KING
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 22 20:36:58 1997

Curve 1: TGA
 File info: SAM052216 Thu May 22 21:12:06 1997
 Sample Weight: 6.488 mg
 S97T000670 DUP

LABCORE Data Entry Template for Worklist# 18021

Analyst: RDm Instrument: TGA0 3 Book # 97NB A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.76</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000705	0	TGA-03	SOLID	<u>N/A</u>	<u>79.81</u>		%
97000299	T-203	3 DUP	S97T000705	0	TGA-03	SOLID	<u>79.81</u>	<u>80.92</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000711	0	TGA-03	SOLID	<u>N/A</u>	<u>83.80</u>		%
97000299	T-203	5 DUP	S97T000711	0	TGA-03	SOLID	<u>83.80</u>	<u>82.90</u>	<u>N/A</u>	%

Final page for worklist # 18021

See Attached for Signature
Analyst Signature Date
Validated 6/2/97 [Signature]

Susan Bee 5/27/97
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.

LABCORE Data Entry Template for Worklist# 18021

Analyst: Instrument: TGA0 Book # 97N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: T203, TGA-01 skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
97000299	T-203	2	SAMPLE	S97T000705	0		TGA-01	SOLID	N/A			%
97000299	T-203	3	DUP	S97T000705	0		TGA-01	SOLID			N/A	%
97000299	T-203	4	SAMPLE	S97T000711	0		TGA-01	SOLID	N/A			%
97000299	T-203	5	DUP	S97T000711	0		TGA-01	SOLID			N/A	%

Final page for worklist # 18021

5/23/97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. ~~5/27/97~~ 5/27/97

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.

Curve 1: TGA

File info: TER052301 Fri May 23 07:45:20 1997

Sample Weight: 15.510 mg

97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 279 TO 283.

279

Curve 1: TGA

File info: SAM052305 Fri May 23 10:07:33 1997

Sample Weight: 7.584 mg

S97T000670 *Rev 5/13/97*
705

10C/MIN N2

TEMP: 25.0 °C RATE: 10.0 °C/min

TEMP: 500.0 °C

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 12:34:07 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA
 File info: SAM052306 Fri May 23 13:26:37 1997
 Sample Weight: 11.633 mg
 S97T000705DUP

Curve 1: TGA

File info: SAM052307 Fri May 23 14:33:53 1997

Sample Weight: 10.682 mg

S97T000711

10C/MIN N2

TEMP: 35.0 C
TEMP: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 14:34:48 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052308 Fri May 23 15:37:41 1997

Sample Weight: 8.114 mg

S97T000711DUP

10C/MIN N2

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 17:35:42 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18038

Analyst: SMF Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.4</u>	<u>58.85</u>	N/A	%
97000299	T-203	2 SAMPLE	S97T000731	0	TGA-03	LIQUID	N/A	<u>99.55</u>		%
97000299	T-203	3 DUP	S97T000731	0	TGA-03	LIQUID	<u>99.55</u>	<u>99.60</u>	N/A	%

Final page for worklist # 18038

See Attached for Signature
Analyst Signature   Date

Susan Bee 5/27/97
Analyst Signature   Date

Validated 6/2/97 @ Bachelor

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# 18038

Analyst: SMF Instrument: TGA0 3 Book # 97N8A

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
97000299	T-203	2 SAMPLE	S97T000731	0	TGA-01	LIQUID	N/A			%
97000299	T-203	3 DUP	S97T000731	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 18038

Lucy M. Tilton 5-24-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran Samples on TGA-03. 5/27/97

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.

Curve 1: TGA

File info: TER052401 Sat May 24 10:00:17 1997

Sample Weight: 23.069 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 286 TO 288

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2

TEMP: 35.0 °C
TEMP: 300.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 17:37:24 1997

Curve 1: TGA

File info: SAM052409 Sat May 24 18:06:44 1997

Sample Weight: 11.306 mg

S97T000731

10C/MIN N2
TEMP: 25.0 C
TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 18:15:18 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052410 Sat May 24 19: 15: 21 1997

Sample Weight: 10.018 mg

S97T000731 DUP

10C/MIN N2

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 20: 03: 02 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18039

Analyst: SMF Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.76</u>	<u>X</u>	<u>N/A</u> %
97000299	T-203	2 SAMPLE	S97T000668	0	TGA-03	SOLID	<u>N/A</u>	<u>78.12</u>		%
97000299	T-203	3 DUP	S97T000668	0	TGA-03	SOLID	<u>78.12</u>	<u>77.81</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000671	0	TGA-03	SOLID	<u>N/A</u>	<u>76.90</u>		%
97000299	T-203	5 DUP	S97T000671	0	TGA-03	SOLID	<u>76.90</u>	<u>76.46</u>	<u>N/A</u>	%

Final page for worklist # 18039

See Attached for Signature
Analyst Signature Date

Susan Bee 5/27/97
Analyst Signature Date

Validated 6/2/97 SMF

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# 18039

Analyst: SMF Instrument: TGA0 3 Book # 97N8-A

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000668	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000668	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000671	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000671	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18039

Susie M. Fulton 5-23-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. 5/27/97

Curve 1: TGA

File info: TER052301 Fri May 23 07: 45: 20 1997

Sample Weight: 15.510 mg

97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 291 TO 295

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2

TEMP: 35.0 C TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 09: 16: 26 1997

Curve 1: TGA

File info: SAM052309 Fri May 23 18:33:21 1997

Sample Weight: 14.123 mg

S97T000668

10C/MIN N2
TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 20:19:17 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052310 Fri May 23 21:10:52 1997

Sample Weight: 17.592 mg

S97T000668 DUP

10C/MIN N2

TEMP: 30.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 21:38:41 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052311 Fri May 23 22:31:53 1997

Sample Weight: 17.640 mg

S97T000671

10C/MIN N2

TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 23 22:56:53 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052312 Fri May 23 23: 43: 10 1997

Sample Weight: 12.627 mg

S97T000671 DUP

295

10C/MIN N2

Temperature (°C)

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 00: 16: 55 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18040

Analyst: SMF Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.85</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000706	0	TGA-03	SOLID	<u>N/A</u>	<u>78.10</u>		%
97000299	T-203	3 DUP	S97T000706	0	TGA-03	SOLID	<u>78.10</u>	<u>78.34</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000707	0	TGA-03	SOLID	<u>N/A</u>	<u>76.60</u>		%
97000299	T-203	5 DUP	S97T000707	0	TGA-03	SOLID	<u>76.60</u>	<u>76.16</u>	<u>N/A</u>	%

Final page for worklist # 18040

See Attached for Signature
Analyst Signature Date

Susan Bee 5/27/97
Analyst Signature Date

Validated 6/2/97 BS Macchior

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# 18040

Analyst: SMF Instrument: TGA0 3 Book # 97N8-A

Method: LA-560-112 Rev/Mod D0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
97000299	T-203	2	SAMPLE	S97T000706	0		TGA-01	SOLID	N/A			%
97000299	T-203	3	DUP	S97T000706	0		TGA-01	SOLID			N/A	%
97000299	T-203	4	SAMPLE	S97T000707	0		TGA-01	SOLID	N/A			%
97000299	T-203	5	DUP	S97T000707	0		TGA-01	SOLID			N/A	%

Final page for worklist # 18040

Laurie M. Daulton 5-25-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. ~~Q3~~ 5/27/97

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.

Curve 1: TGA

File info: TER052401 Sat May 24 10:00:17 1997

Sample Weight: 23.069 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 298 TO 302

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 20:24:33 1997

Curve 1: TGA

File info: SAM052414 Sun May 25 01:07:59 1997

Sample Weight: 20.608 mg

S97T000706

10C/MIN N2

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 01:24:44 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052415 Sun May 25 02:16:46 1997

Sample Weight: 14.502 mg

S97T000706 DUP

10C/MIN N2

TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 03:16:02 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052416 Sun May 25 04: 01: 23 1997

Sample Weight: 13.018 mg

S97T000707

10C/MIN N2

TEMP: 25.0 C
TEMP: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 04: 13: 48 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052417 Sun May 25 05:08:41 1997

Sample Weight: 14.287 mg

S97T000707 DUP

10C/MIN N2

TEMP: 25.0 °C
TIME: 555.8 s

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Sun May 25 07:01:40 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18041

Analyst: RDM Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod J-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.73*</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000708	0	TGA-03	SOLID	<u>N/A</u>	<u>74.18</u>		%
97000299	T-203	3 DUP	S97T000708	0	TGA-03	SOLID	<u>74.18</u>	<u>76.56</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000709	0	TGA-03	SOLID	<u>N/A</u>	<u>75.38</u>		%
97000299	T-203	5 DUP	S97T000709	0	TGA-03	SOLID	<u>75.38</u>	<u>76.43</u>	<u>N/A</u>	%

Final page for worklist # 18041

See Attached for Signature
Analyst Signature Date

David J. Hammond 5-27-97
Analyst Signature Date

Validated 6/2/97 B. Nichols

Data Entry Comments:

See GL 5/27/97

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# 18041

Analyst: RM Instrument: TGA0 3 Book # 91NBA

Method: LA-560-112 Rev/Mod D-D

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000708	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000708	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000709	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000709	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18041

Analyst Signature RM Date 5/24/97

Analyst Signature _____ Date _____

Jessie M. Dulston 5-24-97

Data Entry Comments:

Ran samples on TGA-03. RM 5/27/97

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.

Curve 1: TGA

File info: TER052401 Sat May 24 10:00:17 1997

Sample Weight: 23.069 mg

97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 305 TO 309.

305

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052408 Sat May 24 13:10:21 1997

Sample Weight: 5.914 mg

SS97T000708

10C/MIN N2
TEMP: 35.0 C
TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 13:13:50 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052411 Sat May 24 20:48:30 1997

Sample Weight: 15.153 mg

S97T000708 DUP

307

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2
TEMP: 30.0 °C
TIME: 000.0 s

TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 20:56:33 1997

Curve 1: TGA

File info: SAM052412 Sat May 24 21:54:51 1997

Sample Weight: 14.572 mg

S97T000709

10C/MIN N2
TEMP: 25.0 C
TEMP: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SW FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 22:06:10 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052413 Sat May 24 23:01:14 1997

Sample Weight: 12.963 mg

S97T000709 DUP

603

10C/MIN N2

TEMP: 25.0 C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sun May 25 00:22:55 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18042

Analyst: EAL Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	<u>59.4</u>	<u>58.49</u>	<u>N/A</u>	%
									<u>74.32</u>	<u>57.45</u>	<u>5/22/97</u>	%
97000299	T-203	2	SAMPLE	S97T000710	0		TGA-03	SOLID	<u>N/A</u>	<u>57.45</u>	<u>5/22/97</u>	%
97000299	T-203	3	DUP	S97T000710	0		TGA-03	SOLID	<u>74.32</u>	<u>71.29</u>	<u>N/A</u>	%
97000299	T-203	4	SAMPLE	S97T000712	0		TGA-03	SOLID	<u>N/A</u>	<u>69.53</u>		%
97000299	T-203	5	DUP	S97T000712	0		TGA-03	SOLID	<u>69.53</u>	<u>75.99</u>	<u>N/A</u>	%

Final page for worklist # 18042

See Attached for Signature
Analyst Signature Date

B. Machelor Validated 5/22/97

Li Jom 5-21-97
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.

LABCORE Data Entry Template for Worklist# 18042

Analyst: EDL Instrument: TGA0 3 Book # 97NBA

Method: LA-560-112 Rev/Mod 0-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000710	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000710	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000712	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000712	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18042

EDL 05.19.97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03 5/20/97

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.

Curve 1: TGA

File info: TER051903 Mon May 19 17:36:56 1997

Sample Weight: 7.930 mg

TGA STD 97NB-A

TEMPERATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 312 TO 316.

312

N2 10C/MIN
TEMP: 55.8 8

TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 17:42:02 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM051901 Mon May 19 12:20:21 1997

Sample Weight: 27.934 mg

S97T000710

10C/MIN N2

TEMP: 35.0 C
TEMP: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 13:17:00 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM051902 Mon May 19 14:10:03 1997

Sample Weight: 14.814 mg

S97T000710DUP

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 14:14:40 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM051903 Mon May 19 15:08:51 1997

Sample Weight: 18.311 mg

S97T000712

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 15:15:37 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA
File info: SAM051904 Mon May 19 16:06:56 1997
Sample Weight: 21.692 mg
S97T000712DUP

10C/MIN N2
TEMP: 30.0 C
TEMP: 500.0 C
TIMES: 0.0 min RATE: 10.0 C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon May 19 17:01:12 1997

LABCORE Data Entry Template for Worklist# 18043

Analyst: ADP Instrument: TGA0 3 Book # 97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.64x</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000713	0	TGA-03	SOLID	<u>N/A</u>	<u>75.22</u>		%
97000299	T-203	3 DUP	S97T000713	0	TGA-03	SOLID	<u>75.22</u>	<u>75.91</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000714	0	TGA-03	SOLID	<u>N/A</u>	<u>74.96</u>		%
97000299	T-203	5 DUP	S97T000714	0	TGA-03	SOLID	<u>74.96</u>	<u>71.45</u>	<u>N/A</u>	%

Final page for worklist # 18043

See Attached for Signature
Analyst Signature Date

Susan Liu 5/22/97
Analyst Signature Date

Validated 6/2/97 J. Makelov

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# 18043

Analyst: ADD Instrument: TGA0 Book # 97N 8-A

Method: LA-560-112 Rev/Mod D-O

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000713	0	TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000713	0	TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000714	0	TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000714	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18043

Analyst Signature Date 5-21-97

Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. 8/23 5/22/97

Curve 1: TGA

File info: TER052101 Wed May 21 07:08:54 1997

Sample Weight: 22.268 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 319 TO 323

HNF-SD-WM-DP-247, REV. 0

Signature 521-97

319

10C/MIN N2

TEMP: 35.0 °C
TIME: 305.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 07:51:56 1997

Curve 1: TGA

File info: SAM052109 Wed May 21 14:18:52 1997

Sample Weight: 22.586 mg

S97T000713 SAM

320

HNF-SD-WM-DP-247, REV.0

10C/MIN N2

TEMP: 25.0 C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 14:22:10 1997

Curve 1: TGA

File info: SAM052110 Wed May 21 16:02:58 1997

Sample Weight: 26.294 mg

S97T000713 DUP

10C/MIN N2

TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 16:05:27 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052111 Wed May 21 17:10:08 1997

Sample Weight: 18.562 mg

S97T000714 SAM

322

10C/MIN N2
TEMP: 35.0 C
TIME: 500.0 C

RATE: 0.0 min RATES: 10.0 C/min

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 17:42:39 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052112 Wed May 21 18:57:09 1997

Sample Weight: 13.054 mg

S97T000714 DUP

10C/MIN N2
TEMP: 25.0 C
TEMP: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 21 18:57:41 1997

HNF-SD-WM-DP-247, REV.0

LABCORE Data Entry Template for Worklist# 18044

Analyst: SMF Instrument: TGA0 3 Book # 97 N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.89x</u>	<u>N/A</u>	%
97000299	T-203	2 SAMPLE	S97T000715	0	TGA-03	SOLID	<u>N/A</u>	<u>75.76</u>		%
97000299	T-203	3 DUP	S97T000715	0	TGA-03	SOLID	<u>75.76</u>	<u>75.86</u>	<u>N/A</u>	%
97000299	T-203	4 SAMPLE	S97T000716	0	TGA-03	SOLID	<u>N/A</u>	<u>76.59</u>		%
97000299	T-203	5 DUP	S97T000716	0	TGA-03	SOLID	<u>76.59</u>	<u>76.13</u>	<u>N/A</u>	%

Final page for worklist # 18044

See Attached for Signature
Analyst Signature   Date
Validated 6/2/97 @ Michaelor

Susan Lee 5/27/97
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.

LABCORE Data Entry Template for Worklist# 18044

Analyst: SMF Instrument: TGA0 3 Book # 97NBA

Method: LA-560-112 Rev/Mod D-0

Worklist Comment: T-203 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000299	T-203	2 SAMPLE	S97T000715 0		TGA-01	SOLID	N/A			%
97000299	T-203	3 DUP	S97T000715 0		TGA-01	SOLID			N/A	%
97000299	T-203	4 SAMPLE	S97T000716 0		TGA-01	SOLID	N/A			%
97000299	T-203	5 DUP	S97T000716 0		TGA-01	SOLID			N/A	%

Final page for worklist # 18044

Lusie M. Dalton 5-23-97
Analyst Signature Date

_____
Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-03. 5/23/97

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.

Curve 1: TGA

File info: TER052301 Fri May 23 07:45:20 1997

Sample Weight: 15.510 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 32 TO 330

HNF-SD-WM-DP-247, REV. 0

10C/MIN N2
TEMP: 35.0 °C
TEMP: 300.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 00:23:02 1997

Curve 1: TGA

File info: SAM052313 Sat May 24 01:07:57 1997

Sample Weight: 14.580 mg

S97T000715

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

TEMP: 500.0 °C

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 01:19:13 1997

HNF-SD-WM-DP-247, REV.0

Curve 1: TGA

File info: SAM052314 Sat May 24 02:18:09 1997

Sample Weight: 20.674 mg

S97T000715 DUP

10C/MIN N2

TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 03:05:55 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052315 Sat May 24 03:58:07 1997

Sample Weight: 20.358 mg

S97T000716

10C/MIN N2

TEMP: 50.0 °C TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 04:02:37 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM052316 Sat May 24 05:03:09 1997

Sample Weight: 17.090 mg

S97T000716 DUP

10C/MIN N2
TEMP: 88.0 °C
TIME: 0.0 min

RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat May 24 09:19:52 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 18779 Analyst: RM Instrument: TGA0 3 Book # 103N8AMethod: LA-514-114 Rev/Mod D-1

Worklist Comment: T203, TGA-03 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.0</u>	<u>58.67*</u>	<u>N/A</u>	<u>%</u>
97000299	T-203	2 SAMPLE	S97T001013	0	TGA-03	SOLID	<u>N/A</u>	<u>69.57</u>		<u>%</u>
97000299	T-203	3 DUP	S97T001013	0	TGA-03	SOLID	<u>69.57</u>	<u>72.49</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 18779

Analyst Signature

Date

Analyst Signature

Date

Validated 7/24/97 Bachelder

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.

Curve 1: TGA

File info: TER071901 Sat Jul 19 07:31:57 1997

Sample Weight: 13.821 mg

STD 103NB-A

SIGNATURE ~~BELOW~~ REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES ~~332~~ TO ~~334~~

332

10C/MIN N2
TEMP: 38.0 C
TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

AD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Jul 19 19:40:17 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM071907 Sat Jul 19 08:50:25 1997

Sample Weight: 7.491 mg

S97T001013

10C/MIN N2

TEMP1: 35.0 °C TIME: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Jul 19 19:27:41 1997

HNF-SD-WM-DP-247, REV. 0

Curve 1: TGA

File info: SAM071908 Sat Jul 19 11:18:19 1997

Sample Weight: 6.580 mg

S97T001013DUP

334

10C/MIN N2

TEMP1: 35.0 °C
TEMP2: 500.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Jul 19 19:23:59 1997

HNF-SD-WM-DP-247, REV. 0

LABCORE Data Entry Template for Worklist# 17965

Analyst: Rm

Instrument: BA001

Book # 133N16AMethod: LA-510-112 Rev/Mod D-0Worklist Comment: T203, AW106 SPG-01 Use a cal. pipette. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.3935</u>	<u>1.387</u>	<u>N/A</u>	Sp.G.
97000327	AW-106 GRAB1	2 SAMPLE	S97T000781	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.291</u>	<u>0.01</u>	Sp.G.
97000299	T-203	3 SAMPLE	S97T000733	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.087</u>	<u>0.01</u>	Sp.G.
97000299	T-203	4 DUP	S97T000733	0	SPG-01	LIQUID	<u>1.087</u>	<u>1.084</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 17965

Analyst Signature RmDate 5/1/97Analyst Signature RWSchneidDate 5-7-97

Approved RWSchneid 5/7/97

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 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	1.9909	2.0077
Work List	Tare Weight (W1)	1.8874	1.9027
17965	Weight of Solution (W2-W1)	0.1035	0.105
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.3774	1.3974
Matrix	Specific Gravity (Average)	1.3874	
LIQUID			
Sample #			
STD			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RDM	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/07/97	v RESULT v		
Time	Specific Gravity Average =	1.387	
09:15 AM			

Data Entry by:

Date:

05/07/97

Approved by:

Date:

5/7/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9159	1.9446
Work List	Tare Weight (W1)	1.8344	1.8627
17965	Weight of Solution (W2-W1)	0.0815	0.0819
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0846	1.0900
Matrix	Specific Gravity (Average)	1.0873	
LIQUID			
Sample #			
S97T000733			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RDM	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/07/97	v RESULT v		
Time	Specific Gravity Average =	1.087	
09:15 AM			

Data Entry by:

Date:

05/07/97

Approved by:

Date:

5/7/97

int 6-12-97

HNF-SD-WM-DP-247 REV 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.9474	1.9718
Work List	Tare Weight (W1)	1.8666	1.8897
17965	Weight of Solution (W2-W1)	0.0808	0.0821
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0753	1.0926
Matrix	Specific Gravity (Average)	1.0840	
LIQUID			
Sample #			
S97T000733- RWS OK	5/7/97		
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RDM	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/07/97	ν RESULT ν		
Time	Specific Gravity Average =	1.084	
09:15 AM			

Data Entry by:	Date: 05/07/97
Approved by:	Date: 5/7/97

LABCORE Data Entry Template for Worklist# 18056

Analyst: ADP Instrument: BA001 Book # 133N16-A

Method: LA-510-112 Rev/Mod D-1

Worklist Comment: T-203 SPG. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.39755</u>	<u>1.395</u>	<u>N/A</u>	sp.g.
								<u>1.008</u>		
97000299	T-203	2 SAMPLE	S97T000731	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.0075</u>	<u>0.010</u>	sp.g. RWS 5/14/97
							<u>1.008</u>	<u>0.990</u>		
97000299	T-203	3 DUP	S97T000731	0	SPG-01	LIQUID	<u>1.0075</u>	<u>0.990</u>	<u>N/A</u>	sp.g. RWS 5/14/97

Final page for worklist # 18056

Anthony Perun 5-13-97
Analyst Signature Date

Gary J. Schmitt 5-14-97
Analyst Signature Date

RW Schroeder 5/14/97

Data Entry Comments:

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	1.9884	1.9282
Work List	Tare Weight (W1)	1.8835	1.8234
18056	Weight of Solution (W2-W1)	0.1049	0.1048
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.3961	1.3947
Matrix	Specific Gravity (Average)	1.3954	
LIQUID			
Sample #			
STD			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/13/97	v RESULT v		
Time	Specific Gravity Average =	1.395	
11:45 PM			

Data Entry by: <i>May J. Hummer</i>	Date: 05/14/97
Approved by: <i>REN Schroeder</i>	Date: 5/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9528	1.9442
Work List	Tare Weight (W1)	1.8771	1.8698
18056	Weight of Solution (W2-W1)	0.0757	0.0744
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0075	0.9902
Matrix	Specific Gravity (Average)	0.9988	
LIQUID			
Sample #			
S97T000731			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/13/97	$\checkmark$ RESULT $\checkmark$		
Time	Specific Gravity Average =	0.999	
11:45 PM			

Data Entry by:

Date:

05/14/97

Approved by:

Date:

5/14/97

LABCORE Completed Worklist Report for Worklist# 18000

Analyst: rag

Instrument: IC01

Book# 50220D

Method: 14-533-105 Rev/Mod D-1

Worklist Comment: T203, AW106 GRAB1, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	①IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	①IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	①IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	①IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	①IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	①IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	①IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	①IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	①IC-QC F	QC	5.90e01	6.19e+01	104.915 % Recovery	
2 CCV	0	①IC-QC CL	QC	7.90e01	8.61e+01	108.987 % Recovery	
2 CCV	0	①IC-QC NO2	QC	5.43e02	5.60e+02	103.131 % Recovery	
2 CCV	0	①IC-QC BR	QC	5.89e02	5.73e+02	97.284 % Recovery	
2 CCV	0	①IC-QC NO3	QC	5.94e02	5.81e+02	97.811 % Recovery	
2 CCV	0	①IC-QC PO4	QC	5.45e02	5.57e+02	102.202 % Recovery	
2 CCV	0	①IC-QC SO4	QC	6.31e02	6.19e+02	98.098 % Recovery	
2 CCV	0	①IC-QC OXALATE2	QC	5.32e02	5.58e+02	104.887 % Recovery	
3 SAMPLE	S97T000781 0	①IC-01 F-02	LIQUID	N/A	3.441e+03	122.400	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 CL-02	LIQUID	N/A	7.362e+03	173.400	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 NO2-02	LIQUID	N/A	1.358e+05	1102.000	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 BR-02	LIQUID	N/A	< 1.275e+03	1275.000	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 NO3-02	LIQUID	N/A	2.958e+05	1418.000	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 PO4-02	LIQUID	N/A	2.591e+03	1224.000	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 SO4-02	LIQUID	N/A	5.967e+03	1408.000	ug/mL
3 SAMPLE	S97T000781 0	①IC-01 OXALATE2	LIQUID	N/A	1.724e+03	1071.000	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 F-02	LIQUID	N/A	7.096e+03	25.450	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 CL-02	LIQUID	N/A	6.927e+02	36.060	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 NO2-02	LIQUID	N/A	3.479e+02	229.100	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 BR-02	LIQUID	N/A	< 2.651e+02	265.100	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 NO3-02	LIQUID	N/A	7.367e+04	294.800	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 PO4-02	LIQUID	N/A	1.871e+03	254.500	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 SO4-02	LIQUID	N/A	4.302e+02	292.700	ug/mL
4 SAMPLE	S97T000733 0	①IC-01 OXALATE2	LIQUID	N/A	< 2.227e+02	222.700	ug/mL
5 DUP	S97T000733 0	①IC-01 F-02	LIQUID	7.10e+03	6.94e+03	2.279	RPD
5 DUP	S97T000733 0	①IC-01 CL-02	LIQUID	6.93e+02	7.22e+02	4.099	RPD
5 DUP	S97T000733 0	①IC-01 NO2-02	LIQUID	3.48e+02	3.59e+02	3.112	RPD
5 DUP	S97T000733 0	①IC-01 BR-02	LIQUID	<2.65e2	<2.65e2		RPD
5 DUP	S97T000733 0	①IC-01 NO3-02	LIQUID	7.37e+04	7.38e+04	0.136	RPD
5 DUP	S97T000733 0	①IC-01 PO4-02	LIQUID	1.87e+03	1.92e+03	2.639	RPD
5 DUP	S97T000733 0	①IC-01 SO4-02	LIQUID	4.30e+02	5.07e+02	16.435	RPD
5 DUP	S97T000733 0	①IC-01 OXALATE2	LIQUID	<2.23e2	<2.23e2		RPD
6 SPK	S97T000733 0	①IC-01 F-02	LIQUID	5.90e01	1.04e+02	176.271 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18000

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	SPK	S97T000733	0		@IC-01	CL-02	LIQUID	7.90e01	9.60e+01	121.519 % Recovery
6	SPK	S97T000733	0		@IC-01	NO2-02	LIQUID	5.43e02	5.76e+02	106.077 % Recovery
6	SPK	S97T000733	0		@IC-01	BR-02	LIQUID	5.89e02	5.19e+02	88.115 % Recovery
6	SPK	S97T000733	0		@IC-01	NO3-02	LIQUID	5.94e02	9.96e+02	167.677 % Recovery
6	SPK	S97T000733	0		@IC-01	PO4-02	LIQUID	5.45e02	5.94e+02	108.991 % Recovery
6	SPK	S97T000733	0		@IC-01	SO4-02	LIQUID	6.31e02	6.57e+02	104.120 % Recovery
6	SPK	S97T000733	0		@IC-01	OXALATE2	LIQUID	5.32e02	5.98e+02	112.406 % Recovery

Final page for worklist# 18000

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

5/22/97
Reviewer Signature Date

This document was too large to scan as a whole document,
therefore it required breaking into smaller sections.

Document number: SD-WM-DP-247

Section 2 of 2

Title: Task 241-T-203, Core MO Analytical
Results for the Final Report

Date: 8/5/97 Revision: 0

Originator: Steen, J. H.

Co: WMH

Recipient: _____

Co: _____

References: EOT-620414

LABCORE Data Entry Template for Worklist# 18000

Analyst: RS Instrument: IC0 1 Book# 50N20-D

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T203, AW106 GRAB1, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	CCB		@IC-QC	QC		
2	CCV		@IC-QC	QC		
3	SAMPLE	S97T000781 0	@IC-01	LIQUID	97000327	AW-106 GRAB1
		Analytes Requested:	BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2 , PO4-02 , SO4-02			
4	SAMPLE	S97T000733 0	@IC-01	LIQUID	97000299	T-203
		Analytes Requested:	BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2 , PO4-02 , SO4-02			
5	DUP	S97T000733 0	@IC-01	LIQUID		
6	SPK	S97T000733 0	@IC-01	LIQUID		

Final page for worklist # 18000

Raelinn Green 5-12-97
Analyst Signature Date

Analyst Signature Date

uploaded 5-13-97

John Wonnell

18000MAY.CSV

Validated 5/18/97 gmtfay

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 05/12/1997 09:19:54
Data File : C:\DX\DATA\97051201.D06
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
Analyst : *g. j. m.* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject

External	1	1	3000	5Hz	0.00	10.00	30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.39		0.000	33	231	1	
2	3.23	nitrate	0.121	62	385	1	-0.72
Totals			0.121	95	616		

File: 97051201.D06 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 345 TO 349.

HNF-SD-WM-DP-247, REV.0

```

=====
Sample Name: CCV 50N20-D                      Date: 05/12/1997 08:53:10
Data File  : C:\DX\DATA\97051201.D05
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 5             Detector: CDM-1
Analyst    : Rae Ann Green                     Column: AG4A/AS4A anion column
=====

```

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 101 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	61.873	1501	11217	1	-2.98
2	1.59	chloride	86.142	2047	11259	1	0.00
3	1.87	nitrite	559.862	5968	44292	1	-2.77
4	2.75	bromide	572.993	5320	35797	1	-3.39
5	3.13	nitrate	581.046	6188	48360	1	-3.79
6	4.51	phosphate	556.560	1902	24696	1	-2.31
7	5.81	sulfate	618.834	5051	75959	1	-3.54
8	7.63	oxalate	558.364	2684	49396	1	-2.72
Totals			3595.674	30660	300977		

File: 97051201.D05 Sample: CCV 50N20-D

Sample Name: S97T000733 Date: 05/12/1997 14:08:14
 Data File : C:\DX\DATA\97051201.D08
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.05	fluoride	7096.019	10793	68894	1	-5.95
2	1.61	chloride	692.692	849	4304	1	0.84
3	1.93	nitrite	347.948	99	546	1	0.00
4	3.04	nitrate	73665.473	33678	321570	1	-6.46
5	4.53	phosphate	1871.229	284	3663	1	-1.73
6	5.92	sulfate	430.241	191	3230	1	-1.77
Totals			84103.603	45893	402206		

File: 97051201.D08 Sample: S97T000733

Sample Name: S97T000733 DUP Date: 05/12/1997 14:31:56
 Data File : C:\DX\DATA\97051201.D10
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 10 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	6940.612	10852	67219	1	-5.36
2	1.61	chloride	721.625	878	4483	1	0.84
3	1.93	nitrite	358.784	100	587	1	0.00
4	3.03	nitrate	73843.560	33866	322441	1	-6.67
5	4.53	phosphate	1917.112	285	3760	1	-1.73
6	5.92	sulfate	506.787	229	3666	1	-1.77
Totals			84288.480	46210	402155		

File: 97051201.D10 Sample: S97T000733 DUP

Data Reprocessed On 05/19/1997 08:15:52

```

=====
Sample Name: S97T00733 SPIKE                      Date: 05/12/1997 14:46:27
Data File  : F:\DATA\97051201.D11
Method     : C:\DX\METHOD\KIT.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 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.05	fluoride	9192.987	15206	92371	1	-5.95
2	1.58	chloride	2631.431	3027	16491	1	-0.84
3	1.87	nitrite	11986.300	6198	45183	1	-2.77
4	2.75	bromide	10477.229	5475	31051	1	-3.39
5	3.01	nitrate	93777.563	43961	423722	1	0.11
6	4.51	phosphate	13863.906	2460	29438	1	-2.31
7	5.81	sulfate	13701.727	5688	80116	1	-3.54
8	7.57	oxalate	12075.348	2575	50888	1	-3.40
Totals			167706.489	84590	769259		

File: 97051201.D11 Sample: S97T00733 SPIKE

LABCORE Completed Worklist Report for Worklist# 18034

Analyst: adp

Instrument: IC01

Book# 50N20D

Method: LA-533-705 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	@IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	@IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	@IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	@IC-QC NO3	QC	1	1.42e-01	0.142	ug/mL
1 CCB	0	@IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	@IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	@IC-QC F	QC	5.90e01	5.66e+01	95.932 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.97e+01	100.886 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.43e02	5.68e+02	104.604 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.87e+02	99.660 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	5.94e+02	100.000 % Recovery	
2 CCV	0	@IC-QC PO4	QC	5.45e02	5.35e+02	98.165 % Recovery	
2 CCV	0	@IC-QC SO4	QC	6.31e02	6.26e+02	100.792 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.32e02	5.39e+02	101.316 % Recovery	
3 SAMPLE	S97T000731 0	@IC-01 F-02	LIQUID	N/A	3.345e+00	1.212	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 CL-02	LIQUID	N/A	6.605e+00	1.717	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 NO2-02	LIQUID	N/A	< 1.091e+01	10.910	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 BR-02	LIQUID	N/A	< 1.262e+01	12.620	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 NO3-02	LIQUID	N/A	3.119e+01	14.040	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 PO4-02	LIQUID	N/A	< 1.212e+01	12.120	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 SO4-02	LIQUID	N/A	2.105e+01	13.940	ug/mL
3 SAMPLE	S97T000731 0	@IC-01 OXALATE2	LIQUID	N/A	< 1.061e+01	10.610	ug/mL
4 DUP	S97T000731 0	@IC-01 F-02	LIQUID	3.35e+00	3.31e+00	1.201	RPD
4 DUP	S97T000731 0	@IC-01 CL-02	LIQUID	6.61e+00	6.33e+00	4.328	RPD
4 DUP	S97T000731 0	@IC-01 NO2-02	LIQUID	<1.09e1	<1.09e1		RPD
4 DUP	S97T000731 0	@IC-01 BR-02	LIQUID	<1.26e1	<1.26e1		RPD
4 DUP	S97T000731 0	@IC-01 NO3-02	LIQUID	3.12e+01	3.57e+01	13.453	RPD
4 DUP	S97T000731 0	@IC-01 PO4-02	LIQUID	<1.21e1	<1.21e1		RPD
4 DUP	S97T000731 0	@IC-01 SO4-02	LIQUID	2.11e+01	2.19e+01	3.721	RPD
4 DUP	S97T000731 0	@IC-01 OXALATE2	LIQUID	<1.06e1	<1.06e1		RPD

Final page for worklist# 18034

Analyst Signature

Date

Analyst Signature

Date

James L. Taylor 5/15/97

LABCORE Data Entry Template for Worklist# 18034

Analyst: ADD Instrument: IC0 1 Book# 50N20-D

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	SAMPLE	S97T000731 0			@IC-01	LIQUID	97000299	T-203
					Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02			
4	DUP	S97T000731 0			@IC-01	LIQUID		

Final page for worklist # 18034

Anthony Parnis 5-13-97
Analyst Signature Date

Analyst Signature Date

uploaded 5-14-97

John Howell

18034 MAY. CSV

Validated 5/15/97 gm faye

Data Entry Comments:

Sample Name: BLANK Date: 05/13/1997 21:37:03
 Data File : C:\DX\DATA\97051311.D01
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *Joe L. Taylor* Column: AG4A/AS4A anion column
Joe L. Taylor
5/15/97

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.39		0.000	17	107	1	
2	3.25	nitrate	0.142	85	566	1	0.10
3	6.08	sulfate	0.008	59	875	1	0.88
Totals			0.150	160	1549		

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 352 TO 355

Sample Name: STD50N20-D Date: 05/13/1997 21:51:02
 Data File : C:\DX\DATA\97051311.D02
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1. System: 1 Inject#: 2 Detector: CDM-1
 Analyst : *Allen Yarns* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	56.611	1374	10199	1	-2.98
2	1.61	chloride	79.714	1974	10409	1	0.84
3	1.89	nitrite	568.299	6029	44981	1	-1.73
4	2.81	bromide	587.432	5334	36724	1	-1.52
5	3.19	nitrate	594.042	6155	49473	1	-1.95
6	4.67	phosphate	534.699	1980	23700	1	1.16
7	6.03	sulfate	635.593	5042	78030	1	0.00
8	7.89	oxalate	539.370	2340	47696	1	0.68
Totals			3595.760	30227	301212		

File: 97051311.D02 Sample: STD50N20-D

Sample Name: S97T000731 Date: 05/13/1997 22:44:31
 Data File : C:\DX\DATA\97051311.D04
 Method : C:\DX\METHOD\KIT.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	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.13	fluoride	3.345	12	42	1	1.19
2	1.42		0.000	39	309	1	
3	1.65	chloride	6.605	190	913	1	3.35
4	3.26	nitrate	31.189	274	1965	1	0.31
5	6.13	sulfate	21.048	188	3297	1	1.77
Totals			62.187	703	6525		

File: 97051311.D04 Sample: S97T000731

Sample Name: S97T000731 DUP Date: 05/13/1997 22:56:45
 Data File : C:\DX\DATA\97051311.D05
 Method : C:\DX\METHOD\KIT.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	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.13	fluoride	3.315	11	36	1	1.19
2	1.41		0.000	45	353	1	
3	1.65	chloride	6.335	190	878	1	3.35
4	3.27	nitrate	35.664	298	2337	1	0.72
5	6.13	sulfate	21.923	182	3401	1	1.77
Totals			67.237	726	7006		

File: 97051311.D05 Sample: S97T000731 DUP

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18063

Analyst: rag

Instrument: IC03

Book# 61N20A

Method: LA-535-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	01C-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	01C-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	01C-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	01C-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	01C-QC NO3	QC	1	2.07e-01	0.207	ug/mL
1 CCB	0	01C-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	01C-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	01C-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	01C-QC F	QC	5.90e01	5.51e+01	93.390 % Recovery	
2 CCV	0	01C-QC CL	QC	7.90e01	7.38e+01	93.418 % Recovery	
2 CCV	0	01C-QC NO2	QC	5.44e02	5.28e+02	97.059 % Recovery	
2 CCV	0	01C-QC BR	QC	5.89e02	5.63e+02	95.586 % Recovery	
2 CCV	0	01C-QC NO3	QC	5.94e02	5.84e+02	98.316 % Recovery	
2 CCV	0	01C-QC PO4	QC	5.45e02	5.39e+02	98.899 % Recovery	
2 CCV	0	01C-QC SO4	QC	6.31e02	6.12e+02	96.989 % Recovery	
2 CCV	0	01C-QC OXALATE2	QC	5.32e02	5.05e+02	94.925 % Recovery	
3 BLNK-PREP	0	01C-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	01C-01 CL-02	SOLID	1	4.50e-02	0.045	ug/g
3 BLNK-PREP	0	01C-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	01C-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	01C-01 NO3-02	SOLID	1	2.46e-01	0.246	ug/g
3 BLNK-PREP	0	01C-01 PO4-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	01C-01 SO4-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	01C-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S97T000736 0 W	01C-01 F-02	SOLID	N/A	7.192e+03	25.080	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 CL-02	SOLID	N/A	6.594e+02	35.520	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 NO2-02	SOLID	N/A	4.968e+02	225.700	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 BR-02	SOLID	N/A	< 2.612e+02	261.200	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 NO3-02	SOLID	N/A	6.364e+04	290.500	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 PO4-02	SOLID	N/A	2.875e+03	250.800	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 SO4-02	SOLID	N/A	6.071e+02	288.400	ug/g
4 SAMPLE	S97T000736 0 W	01C-01 OXALATE2	SOLID	N/A	< 2.194e+02	219.400	ug/g
5 DUP	S97T000736 0 W	01C-01 F-02	SOLID	7.19e+03	6.90e+03	4.116 RPD	
5 DUP	S97T000736 0 W	01C-01 CL-02	SOLID	6.59e+02	6.42e+02	2.613 RPD	
5 DUP	S97T000736 0 W	01C-01 NO2-02	SOLID	4.97e+02	4.89e+02	1.623 RPD	
5 DUP	S97T000736 0 W	01C-01 BR-02	SOLID	<2.61e2	<2.60e2	RPD	
5 DUP	S97T000736 0 W	01C-01 NO3-02	SOLID	6.36e+04	6.29e+04	1.107 RPD	
5 DUP	S97T000736 0 W	01C-01 PO4-02	SOLID	2.88e+03	2.90e+03	0.692 RPD	
5 DUP	S97T000736 0 W	01C-01 SO4-02	SOLID	6.07e+02	6.13e+02	0.984 RPD	
5 DUP	S97T000736 0 W	01C-01 OXALATE2	SOLID	<2.19e2	<2.19e2	RPD	
7 DUP	S97T000746 0 W	01C-01 F-02	SOLID	1.98e+03	7.19e+03	113.631 RPD	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18063

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
7 DUP	S97T000746 O W @IC-01	CL-02	SOLID	2.11e+02	5.94e+02	95.155	RPD
7 DUP	S97T000746 O W @IC-01	NO2-02	SOLID	3.56e+02	5.04e+02	34.419	RPD
7 DUP	S97T000746 O W @IC-01	BR-02	SOLID	<2.78e2	<2.71e2		RPD
7 DUP	S97T000746 O W @IC-01	NO3-02	SOLID	1.76e+04	5.98e+04	109.044	RPD
7 DUP	S97T000746 O W @IC-01	PO4-02	SOLID	9.12e+02	2.58e+03	98.441	RPD
7 DUP	S97T000746 O W @IC-01	SO4-02	SOLID	<3.07e2	6.30e+02		RPD
7 DUP	S97T000746 O W @IC-01	OXALATE2	SOLID	<2.33e2	<2.27e2		RPD
9 DUP	S97T000768 O W @IC-01	F-02	SOLID	3.27e+03	6.68e+03	68.543	RPD
9 DUP	S97T000768 O W @IC-01	CL-02	SOLID	<3.66e1	6.14e+02		RPD
9 DUP	S97T000768 O W @IC-01	NO2-02	SOLID	3.76e+02	4.71e+02	22.432	RPD
9 DUP	S97T000768 O W @IC-01	BR-02	SOLID	<2.69e2	<2.65e2		RPD
9 DUP	S97T000768 O W @IC-01	NO3-02	SOLID	2.86e+04	6.09e+04	72.179	RPD
9 DUP	S97T000768 O W @IC-01	PO4-02	SOLID	1.32e+03	2.51e+03	82.141	RPD
9 DUP	S97T000768 O W @IC-01	SO4-02	SOLID	3.62e+02	7.20e+02	66.174	RPD
9 DUP	S97T000768 O W @IC-01	OXALATE2	SOLID	<2.26e2	2.81e+02		RPD

Final page for worklist# 18063

Analyst Signature

Date

Analyst Signature

Date

James M. Lyle
Reviewer Signature Date 5/23/97

Reun on WKL 18291

LABCORE Data Entry Template for Worklist# 18063

Analyst: RY Instrument: IC0 2 Book# 61N20-AMethod: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
✓ 1 CCB			@IC-QC	QC		
✓ 2 CCV			@IC-QC	QC		
✓ 3 BLNK-PREP			@IC-01	SOLID		
✓ 4 SAMPLE	S97T000736 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
✓ 5 DUP	S97T000736 0 W		@IC-01	SOLID		
✓ 6 SAMPLE	S97T000746 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
✓ 7 DUP	S97T000746 0 W		@IC-01	SOLID		
✓ 8 SAMPLE	S97T000768 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
✓ 9 DUP	S97T000768 0 W		@IC-01	SOLID		

Final page for worklist # 18063

Raj Ann Green 5-20-97
 Analyst Signature Date

_____
 Analyst Signature Date

uploaded 5-21-97
John Warrall

18063MAY.CSV

Data Entry Comments:

Sample 7464 768 rejected & put out for rerun
 due to poor RPD, not validated. Rescan
 on WKL # 18291. gm Lyle

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

358

Sample Name: CCB Date: 05/20/1997 07:32:37
Data File : C:\DX\DATA\97052001.D05
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 5 Detector: CDM-1
Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	17	83	1	
2	1.39		0.000	55	348	1	
3	3.13	nitrate	0.207	126	848	1	-1.16
Totals			0.207	198	1280		

File: 97052001.D05 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 357 TO 368

Sample Name: STD 61N20-A	Date: 05/20/1997 07:03:46
Data File : C:\DX\DATA\97052001.D03	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 3	Detector: CDM-1
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	77	298	2	
2	1.03	fluoride	55.100	1909	10014	2	1.65
3	1.39		0.000	19	77	1	
4	1.54	chloride	73.828	2329	10458	1	0.00
5	1.84	nitrite	528.063	9683	51221	1	-1.43
6	2.73	bromide	563.357	5671	35243	1	-2.03
7	3.10	nitrate	584.259	6408	47697	1	-2.21
8	4.59	phosphate	538.695	1599	21083	1	2.99
9	5.92	sulfate	611.906	4066	67266	1	3.68
10	7.79	oxalate	504.534	2223	42353	1	-2.05
Totals			3459.742	33983	285711		

File: 97052001.D03 Sample: STD 61N20-A

Sample Name: ~~CCB~~ *ps 5-20-97* Date: 05/20/1997 08:26:26
 Data File : C:\DX\DATA\97052001.D06
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.24		0.000	66	644	1	
2	1.52	chloride	0.045	80	486	1	-1.30
3	3.13	nitrate	0.246	172	1169	1	-1.37
Totals			0.291	317	2298		

Data Reprocessed On 05/21/1997 14:59:47

```

=====
Sample Name:  S97T000736                      Date: 05/20/1997 09:34:17
Data File   :  E:\DATA\97052001.D11
Method      :  C:\DX\METHOD\ANIONS.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 11 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	40	144	1	
2	1.03	fluoride	37.859	13871	71045	1	1.65
3	1.53	chloride	3.471	969	4400	1	-0.43
4	1.83	nitrite	2.615	203	1047	1	-2.14
5	3.00	nitrate	334.998	32797	278414	1	0.00
6	4.61	phosphate	15.133	396	5153	1	3.59
7	5.97	sulfate	3.196	206	3013	1	4.61
8	7.84	oxalate	0.696	75	1423	1	-1.38
Totals			397.968	48556	364638		

File: 97052001.D11 Sample: S97T000736

Sample Name: S97T000736 DUP Date: 05/20/1997 09:52:05
Data File : E:\DATA\97052001.D12
Method : C:\DX\METHOD\ANIONS.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 11 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	47	166	1	
2	1.03	fluoride	36.429	13852	68002	1	1.65
3	1.53	chloride	3.393	980	4296	1	-0.43
4	1.83	nitrite	2.586	206	1021	1	-2.14
5	3.00	nitrate	332.245	33141	275833	1	0.00
6	4.61	phosphate	15.300	400	5214	1	3.59
7	5.97	sulfate	3.241	211	3057	1	4.61
8	7.84	oxalate	0.940	79	1605	1	-1.38
Totals			394.134	48916	359194		

File: 97052001.D12 Sample: S97T000736 DUP

LABCORE Completed Worklist Report for Worklist# 18064

Analyst: rag

Instrument: IC01

Book# 50N20D

Method: A-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

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	1.49e-01	0.149 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 CCV	0	0	01C-QC	F	QC	5.90e01	5.47e+01	92.712 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	7.86e+01	99.494 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.43e02	5.41e+02	99.632 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	5.68e+02	96.435 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	5.88e+02	98.990 % Recovery
2 CCV	0	0	01C-QC	PO4	QC	5.45e02	5.40e+02	99.083 % Recovery
2 CCV	0	0	01C-QC	SO4	QC	6.31e02	6.06e+02	96.038 % Recovery
2 CCV	0	0	01C-QC	OXALATE2	QC	5.32e02	5.44e+02	102.256 % Recovery
3 BLNK-PREP	0	0	01C-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	01C-01	CL-02	SOLID	1	<1.70e-2	ug/g
3 BLNK-PREP	0	0	01C-01	NO2-02	SOLID	1	1.112e-01	0.112 ug/g
3 BLNK-PREP	0	0	01C-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	01C-01	NO3-02	SOLID	1	1.71e-01	0.171 ug/g
3 BLNK-PREP	0	0	01C-01	PO4-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	01C-01	SO4-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	01C-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S97T000758	0 W	01C-01	F-02	SOLID	N/A	6.323e+03	26.420 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	CL-02	SOLID	N/A	6.210e+02	37.430 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	NO2-02	SOLID	N/A	3.027e+02	237.800 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	BR-02	SOLID	N/A	2.753e+02	275.300 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	NO3-02	SOLID	N/A	6.487e+04	306.100 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	PO4-02	SOLID	N/A	2.248e+03	264.200 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	SO4-02	SOLID	N/A	3.039e+02	303.900 ug/g
4 SAMPLE	S97T000758	0 W	01C-01	OXALATE2	SOLID	N/A	1.418e+03	231.200 ug/g
5 DUP	S97T000758	0 W	01C-01	F-02	SOLID	6.32e+03	5.86e+03	7.553 RPD
5 DUP	S97T000758	0 W	01C-01	CL-02	SOLID	6.21e+02	5.77e+02	7.346 RPD
5 DUP	S97T000758	0 W	01C-01	NO2-02	SOLID	3.03e+02	2.76e+02	9.326 RPD
5 DUP	S97T000758	0 W	01C-01	BR-02	SOLID	<2.75e2	<2.70e2	RPD
5 DUP	S97T000758	0 W	01C-01	NO3-02	SOLID	6.49e+04	5.85e+04	10.373 RPD
5 DUP	S97T000758	0 W	01C-01	PO4-02	SOLID	2.25e+03	1.88e+03	17.918 RPD
5 DUP	S97T000758	0 W	01C-01	SO4-02	SOLID	<3.04e2	3.29e+02	RPD
5 DUP	S97T000758	0 W	01C-01	OXALATE2	SOLID	1.42e+03	1.22e+03	15.152 RPD
6 SPK	S97T000758	0 W	01C-01	F-02	SOLID	5.90e01	7.31e+01	123.898 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18064

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	SPK	S97T000758	0	W	@IC-01	CL-02	SOLID	7.90e01	9.20e+01	116.456 % Recovery
6	SPK	S97T000758	0	W	@IC-01	NO2-02	SOLID	5.43e02	5.79e+02	106.630 % Recovery
6	SPK	S97T000758	0	W	@IC-01	BR-02	SOLID	5.89e02	5.73e+02	97.284 % Recovery
6	SPK	S97T000758	0	W	@IC-01	NO3-02	SOLID	5.94e02	5.57e+02	93.771 % Recovery
6	SPK	S97T000758	0	W	@IC-01	PO4-02	SOLID	5.45e02	5.92e+02	108.624 % Recovery
6	SPK	S97T000758	0	W	@IC-01	SO4-02	SOLID	6.31e02	6.89e+02	109.132 % Recovery
6	SPK	S97T000758	0	W	@IC-01	OXALATE2	SOLID	5.32e02	5.97e+02	112.218 % Recovery

Final page for worklist# 18064

Rae Ann Green 05-15-97
Analyst Signature Date

_____
Analyst Signature Date

John Leye 5/22/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18064

Analyst: rag Instrument: IC0 1 Book# SON20D

Method: LA-533-105 Rev/Mod _____

Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000758 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S97T000758 0 W		@IC-01	SOLID		
6 SPK	S97T000758 0 W		@IC-01	SOLID		

Final page for worklist # 18064

Rae Ann Green 05-15-97
Analyst Signature Date

Jim Mosh 5-15-97
Analyst Signature Date

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 18064

Analyst: RS Instrument: IC0 _____ Book# 50N20-D
 Method: LA-533-105 Rev/Mod D-1
 Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
~~1 CCB~~			@IC-QC	QC		
~~2 CCV~~			@IC-QC	QC		
~~3 BLNK PREP~~			@IC-01	SOLID		
4 SAMPLE	S97T000758 0 W	@IC-01	SOLID		97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
~~5 DUP~~	~~S97T000758 0 W~~	~~@IC-01~~	~~SOLID~~			
~~6 SRK~~	~~S97T000758 0 W~~	~~@IC-01~~	~~SOLID~~			
7 SAMPLE	S97T000747 0 W	@IC-01	SOLID		97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
8 DUP	S97T000747 0 W	@IC-01	SOLID			
9 SAMPLE	S97T000769 0 W	@IC-01	SOLID		97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
10 DUP	S97T000769 0 W	@IC-01	SOLID			

Final page for worklist # 18064

RaeAnn Green 5-14-97
 Analyst Signature Date

_____
 Analyst Signature Date

Please cut 2 WL - one with completed work above
 + another for the remaining samples - I will sign
 Data Entry Comments: Paperwork 5-15-97

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 05/14/1997 10:39:09
 Data File : C:\DX\DATA\97051321.D05
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 5 Detector: CDM-1
 Analyst : *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.41		0.000	20	127	1	
2	3.27	nitrate	0.149	94	624	1	0.72
3	6.24	sulfate	-0.030	16	414	1	3.54
Totals			0.119	129	1165		

File: 97051321.D05 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 366 TO 372

=====

Sample Name: CCV 50N20-D	Date: 05/14/1997 10:00:33
Data File : C:\DX\DATA\97051321.D02	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 2	Detector: CDM-1
Analyst : <i>Bae Ann Green</i>	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	54.722	1356	9835	1	-2.98
2	1.61	chloride	78.607	1999	10263	1	0.84
3	1.89	nitrite	540.740	5974	42733	1	-1.73
4	2.79	bromide	568.137	5273	35485	1	-1.99
5	3.17	nitrate	588.340	6150	48985	1	-2.36
6	4.67	phosphate	539.714	1954	23928	1	1.16
7	6.03	sulfate	606.322	4748	74414	1	0.00
8	7.95	oxalate	543.734	2592	48087	1	1.36
Totals			3520.316	30045	293729		

File: 97051321.D02 Sample: CCV 50N20-D

```

=====
Sample Name: PREP BLANK                      Date: 05/14/1997 11:14:14
Data File  : C:\DX\DATA\97051321.D06
Method     : C:\DX\METHOD\KIT.MET
ACT Address: 1 System: 1 Inject#: 6          Detector: CDM-1
Analyst    : Rae Ann Green                Column: AG4A/AS4A anion column
=====

```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.29		0.000	11	54	1	
2	1.66	chloride	0.012	30	230	1	4.18
3	1.97	nitrite	0.112	24	125	1	2.42
4	3.27	nitrate	0.171	117	806	1	0.72
Totals			0.295	181	1215		

File: 97051321.D06 Sample: PREP BLANK

Sample Name: S97T00758 *Dup* Date: 05/14/1997 14:59:05
 Data File : C:\DX\DATA\97051321.D09
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
 Analyst : *Rachnn Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	31.581	9372	58188	1	-4.76
2	1.63	chloride	3.102	707	3722	1	2.09
3	1.95	nitrite	1.512	59	333	1	1.38
4	3.09	nitrate	324.011	28763	267911	1	-5.03
5	4.69	phosphate	11.227	338	4283	1	1.73
6	6.19	sulfate	1.120	116	2008	1	2.65
7	8.00	oxalate	7.085	280	5506	1	2.04
Totals			379.637	39634	341952		

File: 97051321.D09 Sample: S97T00758 *Dup*

Sample Name: S97T00758 DUP Date: 05/14/1997 15:12:22
 Data File : C:\DX\DATA\97051321.D10
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 10 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	29.857	8514	54725	1	-4.76
2	1.63	chloride	2.941	667	3532	1	2.09
3	1.95	nitrite	1.407	48	256	1	1.38
4	3.09	nitrate	297.921	26547	244437	1	-4.82
5	4.69	phosphate	9.602	295	3621	1	1.73
6	6.13	sulfate	1.676	135	2620	1	1.77
7	8.00	oxalate	6.221	254	4805	1	2.04
Totals			349.625	36461	313995		

File: 97051321.D10 Sample: S97T00758 DUP

Sample Name: S97T00758 SPIKE Date: 05/14/1997 15:27:40
 Data File : C:\DX\DATA\97051321.D11
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 11 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	38.230	11437	71883	1	-4.76
2	1.59	chloride	11.462	2551	13799	1	0.00
3	1.89	nitrite	54.130	5225	39171	1	-2.08
4	2.78	bromide	52.121	4846	29751	1	-2.46
5	3.07	nitrate	374.656	34034	314620	1	-5.64
6	4.64	phosphate	65.085	2201	26571	1	0.58
7	6.03	sulfate	62.653	4832	70585	1	0.00
8	7.89	oxalate	61.331	2721	49823	1	0.68
Totals			719.669	67847	616203		

File: 97051321.D11 Sample: S97T00758 SPIKE

LABCORE Completed Worklist Report for Worklist# 18065

Analyst: eal

Instrument: IC01

Book# 61N20A

Method: 14-523-705 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	QIC-QC F	QC	1	<1.20e-2		ug/mL
1	CCB	0	QIC-QC CL	QC	1	<1.70e-2		ug/mL
1	CCB	0	QIC-QC NO2	QC	1	<1.08e-1		ug/mL
1	CCB	0	QIC-QC BR	QC	1	<1.25e-1		ug/mL
1	CCB	0	QIC-QC NO3	QC	1	1.76e-01	0.176	ug/mL
1	CCB	0	QIC-QC P04	QC	1	<1.20e-1		ug/mL
1	CCB	0	QIC-QC S04	QC	1	1.89e-01	0.189	ug/mL
1	CCB	0	QIC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV	0	QIC-QC F	QC	5.90e01	4.45e+01	75.424 %	Recovery
2	CCV	0	QIC-QC CL	QC	7.90e01	7.54e+01	95.443 %	Recovery
2	CCV	0	QIC-QC NO2	QC	5.44e02	5.41e+02	99.449 %	Recovery
2	CCV	0	QIC-QC BR	QC	5.89e02	5.74e+02	97.453 %	Recovery
2	CCV	0	QIC-QC NO3	QC	5.94e02	5.75e+02	96.801 %	Recovery
2	CCV	0	QIC-QC P04	QC	5.45e02	5.10e+02	93.578 %	Recovery
2	CCV	0	QIC-QC S04	QC	6.31e02	6.03e+02	95.563 %	Recovery
2	CCV	0	QIC-QC OXALATE2	QC	5.32e02	5.27e+02	99.060 %	Recovery
3	BLNK-PREP	0	QIC-01 F-02	SOLID	1	<1.20e-2		ug/g
3	BLNK-PREP	0	QIC-01 CL-02	SOLID	1	<1.70e-2		ug/g
3	BLNK-PREP	0	QIC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3	BLNK-PREP	0	QIC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3	BLNK-PREP	0	QIC-01 NO3-02	SOLID	1	<1.39e-1		ug/g
3	BLNK-PREP	0	QIC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3	BLNK-PREP	0	QIC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3	BLNK-PREP	0	QIC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4	SAMPLE	S97T000748	0 W QIC-01 CL-02	SOLID	N/A	5.977e+02	35.910	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 NO2-02	SOLID	N/A	2.723e+02	228.100	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 BR-02	SOLID	N/A	2.641e+02	264.100	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 NO3-02	SOLID	N/A	6.322e+04	293.600	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 P04-02	SOLID	N/A	2.220e+03	253.600	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 S04-02	SOLID	N/A	2.915e+02	291.500	ug/g
4	SAMPLE	S97T000748	0 W QIC-01 OXALATE2	SOLID	N/A	1.428e+03	221.900	ug/g
5	DUP	S97T000748	0 W QIC-01 F-02	SOLID	6.28e+03	6.05e+03	3.731	RPD
5	DUP	S97T000748	0 W QIC-01 CL-02	SOLID	5.98e+02	5.73e+02	4.270	RPD
5	DUP	S97T000748	0 W QIC-01 NO2-02	SOLID	2.72e+02	2.71e+02	0.368	RPD
5	DUP	S97T000748	0 W QIC-01 BR-02	SOLID	<2.64e2	<2.58e2		RPD
5	DUP	S97T000748	0 W QIC-01 NO3-02	SOLID	6.32e+04	6.09e+04	3.707	RPD
5	DUP	S97T000748	0 W QIC-01 P04-02	SOLID	2.22e+03	2.16e+03	2.740	RPD
5	DUP	S97T000748	0 W QIC-01 S04-02	SOLID	<2.92e2	<2.84e2		RPD
5	DUP	S97T000748	0 W QIC-01 OXALATE2	SOLID	1.43e+03	1.51e+03	5.442	RPD
6	SAMPLE	S97T000749	0 W QIC-01 CL-02	SOLID	N/A	6.184e+02	34.860	ug/g
6	SAMPLE	S97T000749	0 W QIC-01 NO2-02	SOLID	N/A	2.597e+02	221.400	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18065

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000749 0 W @IC-01	BR-02	SOLID	N/A <	2.563e+02	256.300	ug/g
6 SAMPLE	S97T000749 0 W @IC-01	NO3-02	SOLID	N/A	6.250e+04	285.000	ug/g
6 SAMPLE	S97T000749 0 W @IC-01	PO4-02	SOLID	N/A	2.289e+03	246.100	ug/g
6 SAMPLE	S97T000749 0 W @IC-01	SO4-02	SOLID	N/A <	2.830e+02	283.000	ug/g
6 SAMPLE	S97T000749 0 W @IC-01	OXALATE2	SOLID	N/A	1.552e+03	215.300	ug/g
7 DUP	S97T000749 0 W @IC-01	F-02	SOLID	6.35e+03	6.02e+03	5.335	RPD
7 DUP	S97T000749 0 W @IC-01	CL-02	SOLID	6.18e+02	5.96e+02	3.624	RPD
7 DUP	S97T000749 0 W @IC-01	NO2-02	SOLID	2.60e+02	2.48e+02	4.724	RPD
7 DUP	S97T000749 0 W @IC-01	BR-02	SOLID	<2.56e2	<2.46e2		RPD
7 DUP	S97T000749 0 W @IC-01	NO3-02	SOLID	6.25e+04	5.96e+04	4.750	RPD
7 DUP	S97T000749 0 W @IC-01	PO4-02	SOLID	2.29e+03	2.22e+03	3.104	RPD
7 DUP	S97T000749 0 W @IC-01	SO4-02	SOLID	<2.83e2	<2.72e2		RPD
7 DUP	S97T000749 0 W @IC-01	OXALATE2	SOLID	1.55e+03	1.50e+03	3.279	RPD
8 SAMPLE	S97T000770 0 W @IC-01	CL-02	SOLID	N/A	6.086e+02	31.230	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	NO2-02	SOLID	N/A	2.458e+02	198.300	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	BR-02	SOLID	N/A <	2.296e+02	229.600	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	NO3-02	SOLID	N/A	6.236e+04	255.300	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	PO4-02	SOLID	N/A	2.398e+03	220.400	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	SO4-02	SOLID	N/A	3.660e+02	253.400	ug/g
8 SAMPLE	S97T000770 0 W @IC-01	OXALATE2	SOLID	N/A	1.620e+03	192.800	ug/g
9 DUP	S97T000770 0 W @IC-01	F-02	SOLID	6.25e+03	6.39e+03	2.215	RPD
9 DUP	S97T000770 0 W @IC-01	CL-02	SOLID	6.09e+02	6.36e+02	4.337	RPD
9 DUP	S97T000770 0 W @IC-01	NO2-02	SOLID	2.46e+02	2.39e+02	2.867	RPD
9 DUP	S97T000770 0 W @IC-01	BR-02	SOLID	<2.30e2	<2.32e2		RPD
9 DUP	S97T000770 0 W @IC-01	NO3-02	SOLID	6.24e+04	6.37e+04	2.062	RPD
9 DUP	S97T000770 0 W @IC-01	PO4-02	SOLID	2.40e+03	2.83e+03	16.444	RPD
9 DUP	S97T000770 0 W @IC-01	SO4-02	SOLID	3.66e+02	<2.56e2		RPD
9 DUP	S97T000770 0 W @IC-01	OXALATE2	SOLID	1.62e+03	1.69e+03	4.230	RPD

Final page for worklist# 18065

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature *John M. Lyle* Date *5/29/97*

LABCORE Data Entry Template for Worklist# 18065

Analyst: EAL Instrument: IC0 1 Book# 6 IN 20A

Method: LA-533-105 Rev/Mod D.1

Worklist Comment: T-203 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	BLNK-PREP				@IC-01	SOLID		
4	SAMPLE	S97T000748 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested:	BR-02		CL-02	F-02	NO2-02	NO3-02
			OXALATE2		PO4-02	SO4-02		
5	DUP	S97T000748 0 W			@IC-01	SOLID		
6	SAMPLE	S97T000749 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested:	BR-02		CL-02	F-02	NO2-02	NO3-02
			OXALATE2		PO4-02	SO4-02		
7	DUP	S97T000749 0 W			@IC-01	SOLID		
8	SAMPLE	S97T000770 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested:	BR-02		CL-02	F-02	NO2-02	NO3-02
			OXALATE2		PO4-02	SO4-02		
9	DUP	S97T000770 0 W			@IC-01	SOLID		

Final page for worklist # 18065

Analyst Signature 05.19.97
Date

_____
Analyst Signature Date

uploaded 5-20-97

John Warell
18065MAY.CSV

Rejected CCV failed, rest validated 5/20/97 JMF

Data Entry Comments: Rerun on WkL# 18215. JMF

Sample Name: INST. BLANK Date: 05/19/1997 14:55:47
 Data File : C:\DX\DATA\97051901.D15
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 15 Detector: CDM-1
 Analyst : *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.67	chloride	0.002	27	98	1	4.60
2	3.33	nitrate	0.176	116	850	1	2.36
3	6.56	sulfate	0.189	69	3057	1	8.85
Totals			0.367	212	4006		

File: 97051901.D15 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 27 TO 30

HNF-SD-WM-DP-247, REV. 0

Sample Name: 61N20-A STD.	Date: 05/19/1997 15:06:38
Data File : C:\DX\DATA\97051901.D16	
Method : C:\DX\METHOD\KIT.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	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	fluoride	44.517	1230	7870	1	-1.79
2	1.62	chloride	75.416	1801	9842	1	1.67
3	1.91	nitrite	541.139	5554	42765	1	-1.04
4	2.83	bromide	574.364	5210	35885	1	-0.58
5	3.21	nitrate	575.241	5808	47864	1	-1.33
6	4.61	phosphate	510.275	1800	22588	1	0.00
7	5.97	sulfate	602.722	5224	73970	1	-0.88
8	7.84	oxalate	527.313	2568	46617	1	0.00
Totals			3450.986	29195	287401		

File: 97051901.D16 Sample: 61N20-A STD.

Sample Name: PREP. BLANK Date: 05/19/1997 15:17:56
 Data File : C:\DX\DATA\97051901.D17
 Method : C:\DX\METHOD\KIT.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	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.33		0.000	10	45	1	
2	3.33	nitrate	0.113	48	322	1	2.56
Totals			0.113	58	367		

File: 97051901.D17 Sample: PREP. BLANK

HNF-SD-WM-DP-247, REV. 0

```

=====
Sample Name: S97T000748                      Date: 05/19/1997 15:32:45
Data File  : C:\DX\DATA\97051901.D18
Method     : C:\DX\METHOD\KIT.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          11 3000 5Hz 0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	32.697	9404	60448	1	-4.76
2	1.64	chloride	3.112	700	3735	1	2.93
3	1.97	nitrite	1.418	47	264	1	2.08
4	3.12	nitrate	329.209	28385	272634	1	-4.00
5	4.64	phosphate	11.559	350	4419	1	0.58
6	6.13	sulfate	0.762	105	1616	1	1.77
7	7.89	oxalate	7.435	291	5790	1	0.68
Totals			386.193	39282	348906		

File: 97051901.D18 Sample: S97T000748

```

=====
Sample Name: S97T000748DUP      Date: 05/19/1997 15:43:32
Data File  : C:\DX\DATA\97051901.D19
Method     : C:\DX\METHOD\KIT.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          11    3000   5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	32.306	9276	59656	1	-4.76
2	1.64	chloride	3.058	695	3670	1	2.93
3	1.97	nitrite	1.446	50	284	1	2.42
4	3.12	nitrate	324.703	28160	268538	1	-4.00
5	4.64	phosphate	11.502	346	4396	1	0.58
6	6.13	sulfate	0.376	89	1192	1	1.77
7	7.89	oxalate	8.041	314	6283	1	0.68
Totals			381.432	38929	344019		

File: 97051901.D19 Sample: S97T000748DUP

Sample Name: S97T000749	Date: 05/19/1997 15:54:48
Data File : C:\DX\DATA\97051901.D20	
Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	34.043	9758	63195	1	-4.17
2	1.64	chloride	3.317	716	3978	1	2.93
3	1.97	nitrite	1.393	42	246	1	2.08
4	3.13	nitrate	335.267	28567	278158	1	-3.79
5	4.64	phosphate	12.280	364	4713	1	0.58
6	6.08	sulfate	1.516	101	2444	1	0.88
7	7.89	oxalate	8.326	326	6514	1	0.68
Totals			396.141	39873	359247		

File: 97051901.D20 Sample: S97T000749

Sample Name: S97T000749DUP Date: 05/19/1997 16:05:47
 Data File : C:\DX\DATA\97051901.D21
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 21 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	33.637	9743	62364	1	-4.17
2	1.64	chloride	3.328	726	3991	1	2.93
3	1.97	nitrite	1.384	44	239	1	2.42
4	3.12	nitrate	332.767	28551	275875	1	-4.00
5	4.64	phosphate	12.405	359	4764	1	0.58
6	6.13	sulfate	0.161	81	956	1	1.77
7	7.89	oxalate	8.390	327	6566	1	0.68
Totals			392.071	39831	354755		

File: 97051901.D21 Sample: S97T000749DUP

Sample Name: S97T000770	Date: 05/19/1997 16:17:07
Data File : C:\DX\DATA\97051901.D22	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 22	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	37.447	10967	70241	1	-4.76
2	1.63	chloride	3.645	794	4367	1	2.51
3	1.97	nitrite	1.472	56	303	1	2.42
4	3.11	nitrate	373.480	31944	313518	1	-4.41
5	4.64	phosphate	14.360	425	5563	1	0.58
6	6.13	sulfate	2.192	147	3186	1	1.77
7	7.89	oxalate	9.700	388	7629	1	0.68
Totals			442.296	44722	404807		

File: 97051901.D22 Sample: S97T000770

```

=====
Sample Name: S97T000770DUP                      Date: 05/19/1997 16:29:31
Data File  : C:\DX\DATA\97051901.D23
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00        30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	37.829	10967	71041	1	-4.76
2	1.63	chloride	3.767	822	4511	1	2.51
3	1.97	nitrite	1.414	48	261	1	2.08
4	3.11	nitrate	377.048	32060	316866	1	-4.41
5	4.64	phosphate	16.745	432	6537	1	0.58
6	6.08	sulfate	1.251	111	2153	1	0.88
7	7.89	oxalate	10.016	402	7887	1	0.68
Totals			448.069	44842	409256		

File: 97051901.D23 Sample: S97T000770DUP

LABCORE Completed Worklist Report for Worklist# 18066

Analyst: eal

Instrument: IC02

Book# 61N209

Method: 14-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	0	①IC-QC	F	QC	1	<1.20e-2	ug/mL
1	CCB	0	0	①IC-QC	CL	QC	1	<1.70e-2	ug/mL
1	CCB	0	0	①IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1	CCB	0	0	①IC-QC	BR	QC	1	<1.25e-1	ug/mL
1	CCB	0	0	①IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1	CCB	0	0	①IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1	CCB	0	0	①IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1	CCB	0	0	①IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2	CCV	0	0	①IC-QC	F	QC	5.90e01	5.29e+01	89.661 % Recovery
2	CCV	0	0	①IC-QC	CL	QC	7.90e01	7.07e+01	89.494 % Recovery
2	CCV	0	0	①IC-QC	NO2	QC	5.44e02	4.86e+02	89.338 % Recovery
2	CCV	0	0	①IC-QC	BR	QC	5.89e02	5.20e+02	88.285 % Recovery
2	CCV	0	0	①IC-QC	NO3	QC	5.94e02	5.32e+02	89.562 % Recovery
2	CCV	0	0	①IC-QC	PO4	QC	5.45e02	4.98e+02	91.376 % Recovery
2	CCV	0	0	①IC-QC	SO4	QC	6.31e02	5.82e+02	92.235 % Recovery
2	CCV	0	0	①IC-QC	OXALATE2	QC	5.32e02	4.72e+02	88.722 % Recovery
3	BLNK-PREP	0	0	①IC-01	F-02	SOLID	1	<1.20e-2	ug/g
3	BLNK-PREP	0	0	①IC-01	CL-02	SOLID	1	2.90e-02	0.029 ug/g
3	BLNK-PREP	0	0	①IC-01	NO2-02	SOLID	1	2.22e-01	0.222 ug/g
3	BLNK-PREP	0	0	①IC-01	BR-02	SOLID	1	<1.25e-1	ug/g
3	BLNK-PREP	0	0	①IC-01	NO3-02	SOLID	1	1.88e-01	0.188 ug/g
3	BLNK-PREP	0	0	①IC-01	PO4-02	SOLID	1	<1.20e-1	ug/g
3	BLNK-PREP	0	0	①IC-01	SO4-02	SOLID	1	<1.38e-1	ug/g
3	BLNK-PREP	0	0	①IC-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	F-02	SOLID	N/A	6.753e+03	25.700 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	CL-02	SOLID	N/A	7.858e+02	36.410 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	NO2-02	SOLID	N/A	4.178e+02	231.300 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	BR-02	SOLID	N/A	< 2.677e+02	267.700 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	NO3-02	SOLID	N/A	5.937e+04	297.700 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	PO4-02	SOLID	N/A	2.418e+03	257.000 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	SO4-02	SOLID	N/A	6.371e+02	295.600 ug/g
4	SAMPLE	S97T000750	0 W	①IC-01	OXALATE2	SOLID	N/A	1.295e+03	224.800 ug/g
5	DUP	S97T000750	0 W	①IC-01	F-02	SOLID	6.75e+03	6.86e+03	1.616 RPD
5	DUP	S97T000750	0 W	①IC-01	CL-02	SOLID	7.86e+02	8.39e+02	6.523 RPD
5	DUP	S97T000750	0 W	①IC-01	NO2-02	SOLID	4.18e+02	4.35e+02	3.986 RPD
5	DUP	S97T000750	0 W	①IC-01	BR-02	SOLID	<2.68e2	<2.74e2	RPD
5	DUP	S97T000750	0 W	①IC-01	NO3-02	SOLID	5.94e+04	6.11e+04	2.822 RPD
5	DUP	S97T000750	0 W	①IC-01	PO4-02	SOLID	2.42e+03	2.40e+03	0.830 RPD
5	DUP	S97T000750	0 W	①IC-01	SO4-02	SOLID	6.37e+02	6.68e+02	7.698 RPD
5	DUP	S97T000750	0 W	①IC-01	OXALATE2	SOLID	1.30e+03	1.37e+03	5.243 RPD
6	SAMPLE	S97T000771	0 W	①IC-01	F-02	SOLID	N/A	6.256e+03	25.390 ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18066

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000771	0 W	@IC-01	CL-02	SOLID	N/A	6.069e+02	35.960 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	NO2-02	SOLID	N/A	3.983e+02	228.500 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	BR-02	SOLID	N/A	2.644e+02	264.400 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	NO3-02	SOLID	N/A	5.459e+04	294.000 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	PO4-02	SOLID	N/A	2.195e+03	253.300 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	SO4-02	SOLID	N/A	5.667e+02	291.900 ug/g
6 SAMPLE	S97T000771	0 W	@IC-01	OXALATE2	SOLID	N/A	1.146e+03	222.100 ug/g
7 DUP	S97T000771	0 W	@IC-01	F-02	SOLID	6.26e+03	6.47e+03	3.299 RPD
7 DUP	S97T000771	0 W	@IC-01	CL-02	SOLID	6.07e+02	6.18e+02	1.796 RPD
7 DUP	S97T000771	0 W	@IC-01	NO2-02	SOLID	3.98e+02	4.05e+02	1.743 RPD
7 DUP	S97T000771	0 W	@IC-01	BR-02	SOLID	<2.64e2	<2.67e2	RPD
7 DUP	S97T000771	0 W	@IC-01	NO3-02	SOLID	5.46e+04	5.54e+04	1.455 RPD
7 DUP	S97T000771	0 W	@IC-01	PO4-02	SOLID	2.20e+03	2.28e+03	9.571 RPD
7 DUP	S97T000771	0 W	@IC-01	SO4-02	SOLID	5.67e+02	6.10e+02	7.307 RPD
7 DUP	S97T000771	0 W	@IC-01	OXALATE2	SOLID	1.15e+03	1.16e+03	0.866 RPD
8 SAMPLE	S97T000772	0 W	@IC-01	F-02	SOLID	N/A	6.645e+03	25.870 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	CL-02	SOLID	N/A	6.058e+02	36.650 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	NO2-02	SOLID	N/A	3.993e+02	232.900 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	BR-02	SOLID	N/A	2.695e+02	269.500 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	NO3-02	SOLID	N/A	5.756e+04	299.600 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	PO4-02	SOLID	N/A	2.270e+03	258.700 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	SO4-02	SOLID	N/A	8.156e+02	297.600 ug/g
8 SAMPLE	S97T000772	0 W	@IC-01	OXALATE2	SOLID	N/A	1.342e+03	226.400 ug/g
9 DUP	S97T000772	0 W	@IC-01	F-02	SOLID	6.64e+03	6.55e+03	1.365 RPD
9 DUP	S97T000772	0 W	@IC-01	CL-02	SOLID	6.06e+02	6.23e+02	2.766 RPD
9 DUP	S97T000772	0 W	@IC-01	NO2-02	SOLID	3.99e+02	4.25e+02	6.311 RPD
9 DUP	S97T000772	0 W	@IC-01	BR-02	SOLID	<2.70e2	<2.66e2	RPD
9 DUP	S97T000772	0 W	@IC-01	NO3-02	SOLID	5.76e+04	5.82e+04	1.036 RPD
9 DUP	S97T000772	0 W	@IC-01	PO4-02	SOLID	2.37e+03	2.41e+03	1.674 RPD
9 DUP	S97T000772	0 W	@IC-01	SO4-02	SOLID	8.16e+02	6.21e+02	27.140 RPD
9 DUP	S97T000772	0 W	@IC-01	OXALATE2	SOLID	1.34e+03	1.26e+03	6.154 RPD

Final page for worklist# 18066

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lyle 6/2/97
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 18066

Analyst: SA Instrument: IC0 2 Book# 61N20A
Method: LA-533-105 Rev/Mod D.1
Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000750 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T000750 0 W	@IC-01	SOLID			
6 SAMPLE	S97T000771 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S97T000771 0 W	@IC-01	SOLID			
8 SAMPLE	S97T000772 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9 DUP	S97T000772 0 W	@IC-01	SOLID			

Final page for worklist # 18066

Elmer Temple 05-21-97
Analyst Signature Date

Analyst Signature Date

uploaded 6-2-97

JL Howell

18066MA9.CSV

Validated 6/2/97 JM Lyle

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

=====

Sample Name: INST. BLANK	Date: 05/21/1997 10:00:56
Data File : C:\DX\DATA\97052101.D01	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 1	Detector: CDM-1
Analyst : <i>Quintana</i>	Column: AG4A/AS4A anion column

=====

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject

=====

External	1	1	3000	5Hz	0.00	10.00	50

=====

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	49	299	1	
2	1.53	chloride	0.016	20	77	1	-0.43
3	3.15	nitrate	0.138	48	283	1	-0.74
4	5.97	sulfate	0.068	46	581	1	4.61
Totals			0.223	162	1240		

=====

File: 97052101.D01 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 389 TO 397

```

=====
Sample Name: 61N20-A STD.                      Date: 05/21/1997 10:12:06
Data File  : C:\DX\DATA\97052101.D02
Method     : C:\DX\METHOD\ANIONS.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 1 101 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	108	458	2	
2	1.02	fluoride	52.897	1782	9598	2	0.99
3	1.53	chloride	70.660	2150	9998	1	-0.43
4	1.83	nitrite	486.155	8838	47038	1	-1.79
5	2.72	bromide	520.103	5199	32425	1	-2.51
6	3.09	nitrate	532.467	5805	43322	1	-2.63
7	4.61	phosphate	498.371	1527	19454	1	3.59
8	5.92	sulfate	581.783	4171	63887	1	3.68
9	7.73	oxalate	472.026	1861	39660	1	-2.73
Totals			3214.461	31440	265842		

File: 97052101.D02 Sample: 61N20-A STD.

```

=====
Sample Name: PREP. BLANK                      Date: 05/21/1997 10:24:25
Data File  : C:\DX\DATA\97052101.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	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.29		0.000	57	523	1	
2	1.55	chloride	0.029	43	253	1	0.87
3	1.84	nitrite	0.222	188	895	1	-1.43
4	3.13	nitrate	0.188	108	694	1	-1.16
Totals			0.439	397	2365		

File: 97052101.D03 Sample: PREP. BLANK

Data Reprocessed On 05/23/1997 12:56:28

```

=====
Sample Name: S97T000750                      Date: 05/21/1997 10:38:19
Data File  : E:\DATA\97052101.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	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	48	178	1	
2	1.03	fluoride	34.681	13004	64329	1	1.65
3	1.53	chloride	4.036	1106	5145	1	-0.43
4	1.83	nitrite	2.146	127	620	1	-2.14
5	3.00	nitrate	304.900	29898	250511	1	0.00
6	4.61	phosphate	12.420	322	4176	1	3.59
7	5.97	sulfate	3.272	212	3088	1	4.61
8	7.79	oxalate	6.650	292	5880	1	-2.05
Totals			368.105	45009	333927		

File: 97052101.D04 Sample: S97T000750

Sample Name: S97T000750 DUP Date: 05/21/1997 11:02:38
Data File : E:\DATA\97052101.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	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	50	179	1	
2	1.03	fluoride	34.452	12901	63853	1	1.65
3	1.53	chloride	4.216	1157	5383	1	-0.43
4	1.83	nitrite	2.187	129	658	1	-2.14
5	2.99	nitrate	307.060	30075	252491	1	0.11
6	4.64	phosphate	12.062	319	4047	1	4.19
7	5.97	sulfate	3.459	227	3274	1	4.61
8	7.79	oxalate	6.887	290	6058	1	-2.05
Totals			370.323	45149	335942		

File: 97052101.D06 Sample: S97T000750 DUP

Data Reprocessed On 05/23/1997 12:58:31

```

=====
Sample Name: S97T000751 777 Jw 6-2-97 Date: 05/21/1997 11:16:47
Data File : E:\DATA\97052101.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 11 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	47	173	1	
2	1.03	fluoride	32.530	11925	59880	1	1.65
3	1.53	chloride	3.156	873	3984	1	-0.87
4	1.82	nitrite	2.071	111	552	1	-2.50
5	3.00	nitrate	283.878	28400	231422	1	0.00
6	4.64	phosphate	11.414	303	3814	1	4.19
7	5.97	sulfate	2.947	196	2765	1	4.61
8	7.79	oxalate	5.959	263	5362	1	-2.05
Totals			341.954	42117	307951		

File: 97052101.D07 Sample: S97T000751

Data Reprocessed On 05/23/1997 12:59:16

Sample Name: S97T000751DUP 771 DUP *gs 6-2-97* Date: 05/21/1997 11:30:34
 Data File : E:\DATA\97052101.D08
 Method : C:\DX\METHOD\ANIONS.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	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	52	185	1	
2	1.03	fluoride	33.329	11884	61524	1	1.65
3	1.53	chloride	3.184	900	4021	1	-0.43
4	1.83	nitrite	2.088	116	568	1	-2.14
5	3.00	nitrate	285.186	28346	232600	1	0.00
6	4.64	phosphate	11.740	310	3931	1	4.19
7	5.97	sulfate	3.140	206	2956	1	4.61
8	7.79	oxalate	5.987	263	5383	1	-2.05
Totals			344.653	42076	311169		

File: 97052101.D08 Sample: S97T000751DUP

Data Reprocessed On 05/23/1997 13:00:42

```

=====
Sample Name: S97T000772                      Date: 05/21/1997 11:41:38
Data File  : E:\DATA\97052101.D09
Method     : C:\DX\METHOD\ANIONS.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          11    3000   5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	47	163	1	
2	1.03	fluoride	33.901	12526	62708	1	1.65
3	1.53	chloride	3.091	845	3899	1	-0.87
4	1.83	nitrite	2.037	110	521	1	-2.14
5	3.00	nitrate	293.657	29297	240262	1	0.00
6	4.64	phosphate	12.093	317	4059	1	4.19
7	5.97	sulfate	4.161	227	3973	1	4.61
8	7.79	oxalate	6.848	284	6028	1	-2.05
Totals			355.789	43653	321613		

File: 97052101.D09 Sample: S97T000772

Data Reprocessed On 05/23/1997 13:01:29

```

=====
Sample Name: S97T000772 DUP                      Date: 05/21/1997 11:57:01
Data File  : E:\DATA\97052101.D10
Method     : C:\DX\METHOD\ANIONS.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          11    3000  5Hz   0.00 10.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	48	169	1	
2	1.03	fluoride	33.856	12657	62614	1	1.65
3	1.53	chloride	3.222	876	4071	1	-0.43
4	1.83	nitrite	2.195	122	665	1	-2.14
5	2.99	nitrate	300.812	29621	246774	1	0.11
6	4.64	phosphate	12.464	327	4192	1	4.19
7	5.97	sulfate	3.211	209	3028	1	4.61
8	7.79	oxalate	6.513	280	5777	1	-2.05
Totals			362.273	44140	327290		

File: 97052101.D10 Sample: S97T000772 DUP

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18088

Analyst: eal

Instrument: IC01

Book# 6/1/2004

Method: 14-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

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	1.72e-01	0.172 ug/mL
1 CCB	0	0	01C-QC	P04	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	01C-QC	S04	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	01C-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	01C-QC	F	QC	5.90e01	5.53e+01	93.729 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	7.78e+01	98.481 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.44e02	5.43e+02	99.816 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	5.70e+02	96.774 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	5.84e+02	98.316 % Recovery
2 CCV	0	0	01C-QC	P04	QC	5.45e02	5.39e+02	98.899 % Recovery
2 CCV	0	0	01C-QC	S04	QC	6.31e02	5.98e+02	94.770 % Recovery
2 CCV	0	0	01C-QC	OXALATE2	QC	5.32e02	5.31e+02	99.812 % Recovery
3 BLNK-PREP	0	0	01C-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	01C-01	CL-02	SOLID	1	4.35e-01	0.435 ug/g
3 BLNK-PREP	0	0	01C-01	NO2-02	SOLID	1	<1.08e-1	ug/g
3 BLNK-PREP	0	0	01C-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	01C-01	NO3-02	SOLID	1	<1.39e-1	ug/g
3 BLNK-PREP	0	0	01C-01	P04-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	01C-01	S04-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	01C-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S97T000751	0 W	01C-01	F-02	SOLID	N/A	4.829e+03	49.770 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	CL-02	SOLID	N/A	4.610e+02	70.520 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	NO2-02	SOLID	N/A	4.480e+02	447.900 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	BR-02	SOLID	N/A	5.185e+02	518.500 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	NO3-02	SOLID	N/A	4.509e+04	576.400 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	P04-02	SOLID	N/A	1.883e+03	497.700 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	S04-02	SOLID	N/A	5.724e+02	572.500 ug/g
4 SAMPLE	S97T000751	0 W	01C-01	OXALATE2	SOLID	N/A	1.312e+03	435.500 ug/g
5 DUP	S97T000751	0 W	01C-01	F-02	SOLID	4.83e+03	4.84e+03	0.207 RPD
5 DUP	S97T000751	0 W	01C-01	CL-02	SOLID	4.61e+02	5.00e+02	8.117 RPD
5 DUP	S97T000751	0 W	01C-01	NO2-02	SOLID	<4.48e2	<4.54e2	RPD
5 DUP	S97T000751	0 W	01C-01	BR-02	SOLID	<5.18e2	<5.25e2	RPD
5 DUP	S97T000751	0 W	01C-01	NO3-02	SOLID	4.51e+04	4.62e+04	2.410 RPD
5 DUP	S97T000751	0 W	01C-01	P04-02	SOLID	1.88e+03	1.78e+03	5.464 RPD
5 DUP	S97T000751	0 W	01C-01	S04-02	SOLID	<5.72e2	<5.80e2	RPD
5 DUP	S97T000751	0 W	01C-01	OXALATE2	SOLID	1.31e+03	1.28e+03	2.317 RPD
6 SAMPLE	S97T000752	0 W	01C-01	F-02	SOLID	N/A	4.540e+03	25.720 ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18088

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000752	0 W	@IC-01	CL-02	SOLID	N/A	4.224e+02	36.430 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	N02-02	SOLID	N/A	2.548e+02	231.400 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	BR-02	SOLID	N/A	2.679e+02	267.900 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	N03-02	SOLID	N/A	4.361e+04	297.900 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	P04-02	SOLID	N/A	1.503e+03	257.200 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	S04-02	SOLID	N/A	2.957e+02	295.700 ug/g
6 SAMPLE	S97T000752	0 W	@IC-01	OxALATE2	SOLID	N/A	1.253e+03	225.100 ug/g
7 DUP	S97T000752	0 W	@IC-01	F-02	SOLID	4.54e+03	4.61e+03	1.530 RPD
7 DUP	S97T000752	0 W	@IC-01	CL-02	SOLID	4.22e+02	4.44e+02	5.081 RPD
7 DUP	S97T000752	0 W	@IC-01	N02-02	SOLID	2.55e+02	2.57e+02	0.781 RPD
7 DUP	S97T000752	0 W	@IC-01	BR-02	SOLID	<2.68e2	<2.72e2	RPD
7 DUP	S97T000752	0 W	@IC-01	N03-02	SOLID	4.36e+04	4.45e+04	2.043 RPD
7 DUP	S97T000752	0 W	@IC-01	P04-02	SOLID	1.50e+03	2.33e+03	43.342 RPD
7 DUP	S97T000752	0 W	@IC-01	S04-02	SOLID	<2.96e2	<3.01e2	RPD
7 DUP	S97T000752	0 W	@IC-01	OxALATE2	SOLID	1.25e+03	1.26e+03	0.797 RPD
8 SAMPLE	S97T000773	0 W	@IC-01	F-02	SOLID	N/A	5.843e+03	26.270 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	CL-02	SOLID	N/A	5.461e+02	37.210 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	N02-02	SOLID	N/A	2.925e+02	236.400 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	BR-02	SOLID	N/A	2.736e+02	273.700 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	N03-02	SOLID	N/A	5.761e+04	304.300 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	P04-02	SOLID	N/A	2.071e+03	262.700 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	S04-02	SOLID	N/A	3.021e+02	302.100 ug/g
8 SAMPLE	S97T000773	0 W	@IC-01	OxALATE2	SOLID	N/A	1.562e+03	229.900 ug/g
9 DUP	S97T000773	0 W	@IC-01	F-02	SOLID	5.84e+03	5.88e+03	0.683 RPD
9 DUP	S97T000773	0 W	@IC-01	CL-02	SOLID	5.46e+02	5.49e+02	0.548 RPD
9 DUP	S97T000773	0 W	@IC-01	N02-02	SOLID	2.92e+02	2.73e+02	6.726 RPD
9 DUP	S97T000773	0 W	@IC-01	BR-02	SOLID	<2.74e2	<2.70e2	RPD
9 DUP	S97T000773	0 W	@IC-01	N03-02	SOLID	5.76e+04	5.75e+04	0.174 RPD
9 DUP	S97T000773	0 W	@IC-01	P04-02	SOLID	2.07e+03	2.26e+03	8.776 RPD
9 DUP	S97T000773	0 W	@IC-01	S04-02	SOLID	<3.02e2	6.58e+02	RPD
9 DUP	S97T000773	0 W	@IC-01	OxALATE2	SOLID	1.56e+03	1.57e+03	0.639 RPD

Final page for worklist# 18088

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John M. Lyle
Reviewer Signature _____ Date *5/22/97*

LABCORE Data Entry Template for Worklist# 18088

Analyst: EAL Instrument: IC0 1 Book# 4/11/2001 W5-20-97

Method: LA-533-105 Rev/Mod D1 WIN20A

Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000751 0 W		@IC-01	SOLID	97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T000751 0 W		@IC-01	SOLID		
6 SAMPLE	S97T000752 0 W		@IC-01	SOLID	97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S97T000752 0 W		@IC-01	SOLID		
8 SAMPLE	S97T000773 0 W		@IC-01	SOLID	97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
9 DUP	S97T000773 0 W		@IC-01	SOLID		

Final page for worklist # 18088

A. Lambel 05.19.97
Analyst Signature Date

_____
Analyst Signature Date

uploaded 5-20-97

John Wonnell

18088MAY.CSV

Validated 5/20/97 GM Fyfe

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: INST. BLANK Date: 05/19/1997 10:42:42
 Data File : C:\DX\DATA\97051901.D01
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *John F. [Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.41		0.000	14	71	1	
2	3.27	nitrate	0.172	114	818	1	0.51
Totals			0.172	128	889		

File: 97051901.D01 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 401 TO 409

Sample Name: 61N20-A STD.	Date: 05/19/1997 11:20:04
Data File : C:\DX\DATA\97051901.D03	
Method : C:\DX\METHOD\KIT.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	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	55.342	1327	9954	1	-2.98
2	1.61	chloride	77.805	1944	10157	1	0.84
3	1.89	nitrite	542.761	5863	42897	1	-1.73
4	2.80	bromide	570.411	5257	35631	1	-1.75
5	3.17	nitrate	583.851	5953	48600	1	-2.36
6	4.61	phosphate	538.669	1933	23881	1	0.00
7	5.97	sulfate	597.609	5023	73339	1	-0.88
8	7.84	oxalate	530.944	2551	46942	1	0.00
Totals			3497.393	29851	291402		

File: 97051901.D03 Sample: 61N20-A STD.

HNF-SD-WM-DP-247, REV. 0

```

=====
Sample Name: PREP. BLANK                      Date: 05/19/1997 11:40:17
Data File : C:\DX\DATA\97051901.D05
Method    : C:\DX\METHOD\KIT.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 3000 5Hz 0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.23		0.000	113	1160	1	
2	1.31		0.000	10	38	1	
3	1.68	chloride	0.435	363	5727	1	5.44
4	3.30	nitrate	0.121	71	388	1	1.54
5	3.53		0.000	109	1490	1	
6	6.03	sulfate	-0.029	19	426	1	0.00
Totals			0.527	684	9230		

File: 97051901.D05 Sample: PREP. BLANK

HNF-SD-WM-DP-247, REV. 0

```

=====
Sample Name: S97T000751      Date: 05/19/1997 12:05:05
Data File  : C:\DX\DATA\97051901.D08
Method     : C:\DX\METHOD\KIT.MBT
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          21  3000  5Hz  0.00 10.00      30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.08	fluoride	24.449	3191	22158	1	-3.57
2	1.64	chloride	2.334	305	1504	1	2.93
3	3.15	nitrate	228.309	11021	93215	1	-2.97
4	4.67	phosphate	9.533	132	1745	1	1.16
5	6.13	sulfate	0.391	57	1004	1	1.77
6	7.95	oxalate	6.643	138	2581	1	1.36
Totals			271.659	14844	122207		

File: 97051901.D08 Sample: S97T000751

HNF-SD-WM-DP-247, REV. 0

Sample Name: S97T000751DUP	Date: 05/19/1997 12:18:37
Data File : C:\DX\DATA\97051901.D09	
Method : C:\DX\METHOD\KIT.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	21	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.08	fluoride	24.199	3109	21918	1	-3.57
2	1.64	chloride	2.498	311	1605	1	2.93
3	3.15	nitrate	230.589	10858	94180	1	-2.97
4	4.67	phosphate	8.910	132	1612	1	1.16
5	6.13	sulfate	-0.048	51	752	1	1.77
6	7.95	oxalate	6.415	134	2484	1	1.36
Totals			272.563	14595	122552		

File: 97051901.D09 Sample: S97T000751DUP

Sample Name: S97T000752 Date: 05/19/1997 12:42:34
 Data File : C:\DX\DATA\97051901.D11
 Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	23.306	6138	41867	1	-4.76
2	1.63	chloride	2.168	497	2618	1	2.51
3	1.96	nitrite	1.308	34	184	1	1.73
4	3.13	nitrate	223.867	19653	179799	1	-3.79
5	4.64	phosphate	7.716	242	2852	1	0.58
6	6.08	sulfate	0.480	70	1307	1	0.88
7	7.89	oxalate	6.434	243	4978	1	0.68
Totals			265.281	26878	233606		

File: 97051901.D11 Sample: S97T000752

```

=====
Sample Name: S97TO00752DUP          Date: 05/19/1997 12:55:17
Data File  : C:\DX\DATA\97051901.D12
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	23.270	6080	41798	1	-4.76
2	1.64	chloride	2.241	515	2704	1	2.93
3	1.96	nitrite	1.298	33	177	1	1.73
4	3.13	nitrate	224.531	19623	180366	1	-3.79
5	4.64	phosphate	11.768	260	4504	1	0.58
6	6.08	sulfate	0.618	81	1457	1	0.88
7	7.89	oxalate	6.385	243	4939	1	0.68
Totals			270.110	26834	235943		

File: 97051901.D12 Sample: S97TO00752DUP

```

=====
Sample Name: S97T000773                      Date: 05/19/1997 14:33:42
Data File  : C:\DX\DATA\97051901.D13
Method     : C:\DX\METHOD\KIT.MBT
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          11    3000  5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	29.361	8227	53735	1	-5.36
2	1.63	chloride	2.744	646	3298	1	2.09
3	1.95	nitrite	1.470	55	302	1	1.38
4	3.11	nitrate	289.470	25616	236915	1	-4.21
5	4.61	phosphate	10.409	302	3950	1	0.00
6	6.08	sulfate	0.663	94	1508	1	0.88
7	7.89	oxalate	7.851	316	6129	1	0.68
Totals			341.968	35256	305836		

File: 97051901.D13 Sample: S97T000773

HNF-SD-WM-DP-247, REV. 0

Sample Name: S97TO00773DUP Date: 05/19/1997 14:44:48
 Data File : C:\DX\DATA\97051901.D14
 Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	29.901	8278	54814	1	-4.76
2	1.63	chloride	2.793	647	3357	1	2.51
3	1.96	nitrite	1.387	46	241	1	1.73
4	3.13	nitrate	292.184	25426	239327	1	-3.79
5	4.64	phosphate	11.485	312	4389	1	0.58
6	6.13	sulfate	3.343	128	4452	1	1.77
7	7.89	oxalate	7.960	300	6217	1	0.68
Totals			349.055	35137	312796		

File: 97051901.D14 Sample: S97TO00773DUP

LABCORE Completed Worklist Report for Worklist# 18089

Analyst: krq

Instrument: IC02

Book# 61202A

Method: 6A-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	②IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	②IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	②IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	②IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	②IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	②IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	②IC-QC S04	QC	1	<1.28e-1		ug/mL
1 CCB	0	②IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	②IC-QC F	QC	5.90e01	5.34e+01	90.508 % Recovery	
2 CCV	0	②IC-QC CL	QC	7.90e01	7.35e+01	93.038 % Recovery	
2 CCV	0	②IC-QC NO2	QC	5.44e02	4.98e+02	91.544 % Recovery	
2 CCV	0	②IC-QC BR	QC	5.89e02	5.34e+02	90.662 % Recovery	
2 CCV	0	②IC-QC NO3	QC	5.94e02	5.37e+02	90.404 % Recovery	
2 CCV	0	②IC-QC P04	QC	5.45e02	5.02e+02	92.110 % Recovery	
2 CCV	0	②IC-QC S04	QC	6.31e02	5.76e+02	91.284 % Recovery	
2 CCV	0	②IC-QC OXALATE2	QC	5.32e02	4.77e+02	89.662 % Recovery	
3 BLNK-PREP	0	②IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	②IC-01 CL-02	SOLID	1	3.20e-02	0.032	ug/g
3 BLNK-PREP	0	②IC-01 NO2-02	SOLID	1	1.57e-01	0.157	ug/g
3 BLNK-PREP	0	②IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	②IC-01 NO3-02	SOLID	1	1.75e-01	0.175	ug/g
3 BLNK-PREP	0	②IC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	②IC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	②IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 F-02	SOLID	N/A	6.579e+03	26.550	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 CL-02	SOLID	N/A	5.911e+02	37.610	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 NO2-02	SOLID	N/A	4.097e+02	238.900	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 BR-02	SOLID	N/A	< 2.765e+02	276.500	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 NO3-02	SOLID	N/A	5.730e+04	307.600	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 P04-02	SOLID	N/A	1.997e+03	265.500	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 S04-02	SOLID	N/A	3.174e+02	305.400	ug/g
4 SAMPLE	S97T000753	0 W ②IC-01 OXALATE2	SOLID	N/A	1.303e+03	232.300	ug/g
5 DUP	S97T000753	0 W ②IC-01 F-02	SOLID	6.56e+03	4.71e+03	33.127	RPD
5 DUP	S97T000753	0 W ②IC-01 CL-02	SOLID	5.91e+02	4.44e+02	28.406	RPD
5 DUP	S97T000753	0 W ②IC-01 NO2-02	SOLID	4.10e+02	3.74e+02	9.184	RPD
5 DUP	S97T000753	0 W ②IC-01 BR-02	SOLID	<2.76e2	<2.70e2		RPD
5 DUP	S97T000753	0 W ②IC-01 NO3-02	SOLID	5.73e+04	4.22e+04	30.352	RPD
5 DUP	S97T000753	0 W ②IC-01 P04-02	SOLID	2.00e+03	1.59e+03	22.841	RPD
5 DUP	S97T000753	0 W ②IC-01 S04-02	SOLID	3.17e+02	5.82e+02	58.954	RPD
5 DUP	S97T000753	0 W ②IC-01 OXALATE2	SOLID	1.30e+03	8.65e+02	40.185	RPD
6 SAMPLE	S97T000774	0 W ②IC-01 F-02	SOLID	N/A	6.711e+03	26.020	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18089

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000774	0 W	QIC-01	CL-02	SOLID	N/A	5.956e+02	36.850 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	NO2-02	SOLID	N/A	4.066e+02	234.100 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	BR-02	SOLID	N/A	2.710e+02	271.000 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	NO3-02	SOLID	N/A	5.762e+04	301.300 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	PO4-02	SOLID	N/A	2.312e+03	260.100 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	SO4-02	SOLID	N/A	3.528e+02	299.200 ug/g
6 SAMPLE	S97T000774	0 W	QIC-01	OXALATE2	SOLID	N/A	1.258e+03	227.600 ug/g
7 DUP	S97T000774	0 W	QIC-01	F-02	SOLID	6.71e+03	6.67e+03	0.598 RPD
7 DUP	S97T000774	0 W	QIC-01	CL-02	SOLID	5.96e+02	6.15e+02	3.138 RPD
7 DUP	S97T000774	0 W	QIC-01	NO2-02	SOLID	4.07e+02	3.98e+02	2.236 RPD
7 DUP	S97T000774	0 W	QIC-01	BR-02	SOLID	<2.71e2	<2.71e2	RPD
7 DUP	S97T000774	0 W	QIC-01	NO3-02	SOLID	5.76e+04	5.88e+04	2.062 RPD
7 DUP	S97T000774	0 W	QIC-01	PO4-02	SOLID	2.31e+03	2.27e+03	1.747 RPD
7 DUP	S97T000774	0 W	QIC-01	SO4-02	SOLID	3.53e+02	6.96e+02	65.396 RPD
7 DUP	S97T000774	0 W	QIC-01	OXALATE2	SOLID	1.25e+03	1.30e+03	3.125 RPD
8 SAMPLE	S97T000775	0 W	QIC-01	F-02	SOLID	N/A	6.389e+03	26.410 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	CL-02	SOLID	N/A	6.144e+02	37.410 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	NO2-02	SOLID	N/A	4.180e+02	237.700 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	BR-02	SOLID	N/A	2.751e+02	275.100 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	NO3-02	SOLID	N/A	5.707e+04	305.900 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	PO4-02	SOLID	N/A	2.080e+03	264.100 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	SO4-02	SOLID	N/A	3.515e+02	303.700 ug/g
8 SAMPLE	S97T000775	0 W	QIC-01	OXALATE2	SOLID	N/A	1.236e+03	231.100 ug/g
9 DUP	S97T000775	0 W	QIC-01	F-02	SOLID	6.39e+03	6.63e+03	3.687 RPD
9 DUP	S97T000775	0 W	QIC-01	CL-02	SOLID	6.14e+02	6.07e+02	1.147 RPD
9 DUP	S97T000775	0 W	QIC-01	NO2-02	SOLID	4.18e+02	4.12e+02	1.446 RPD
9 DUP	S97T000775	0 W	QIC-01	BR-02	SOLID	<2.75e2	<2.75e2	RPD
9 DUP	S97T000775	0 W	QIC-01	NO3-02	SOLID	5.71e+04	5.77e+04	1.045 RPD
9 DUP	S97T000775	0 W	QIC-01	PO4-02	SOLID	2.08e+03	1.93e+03	7.481 RPD
9 DUP	S97T000775	0 W	QIC-01	SO4-02	SOLID	3.52e+02	7.33e+02	70.230 RPD
9 DUP	S97T000775	0 W	QIC-01	OXALATE2	SOLID	1.24e+03	1.22e+03	1.626 RPD

Final page for worklist# 18089

Analyst Signature

Date

Analyst Signature

Date

James M. Luyke
Reviewer Signature Date 5/28/97

LABCORE Data Entry Template for Worklist# 18089

Analyst: ABO Instrument: IC0 2 Book# 611120-A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000753 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S97T000753 0 W		@IC-01	SOLID		
6 SAMPLE	S97T000774 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S97T000774 0 W		@IC-01	SOLID		
8 SAMPLE	S97T000775 0 W		@IC-01	SOLID	97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
9 DUP	S97T000775 0 W		@IC-01	SOLID		

10 Spike S97T000775

Final page for worklist # 18089

Analyst Signature

Date

Analyst Signature

Date

uploaded 5-28-97

JL Worell

18089AA4.CSV

Validated 5/28/97 M. Lye

Data Entry Comments:

Ran S97T000775 twice because of the discrepancy between the sample and sample dup.

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 05/24/1997 21:15:17
 Data File : C:\DX\DATA\97052401.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 1 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.19		0.000	23	128	1	
2	0.88		0.000	41	220	1	
3	1.39		0.000	49	301	1	
Totals			0.000	113	649		

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 412 TO 421.

Sample Name: CCV 61N20-A Date: 05/24/1997 23:38:28
 Data File : C:\DX\DATA\97052411.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 1 101 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	99	441	2	
2	1.03	fluoride	53.351	1800	9684	2	1.65
3	1.53	chloride	73.476	2244	10407	1	-0.43
4	1.83	nitrite	497.606	8920	48181	1	-2.14
5	2.71	bromide	533.622	5364	33305	1	-2.99
6	3.07	nitrate	536.593	5975	43670	1	-3.26
7	4.61	phosphate	502.149	1525	19607	1	3.59
8	5.92	sulfate	575.905	3891	63229	1	3.68
9	7.79	oxalate	476.923	2122	40066	1	-2.05
Totals			3249.624	31939	268589		

File: 97052411.D01 Sample: CCV 61N20-A

Sample Name: BLANK PREP WL#18089 Date: 05/25/1997 00:03:29
Data File : C:\DX\DATA\97052421.D02
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
Analyst *KSJ* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.29		0.000	54	477	1	
2	1.55	chloride	0.032	60	296	1	0.43
3	1.83	nitrite	0.157	55	236	1	-1.79
4	3.12	nitrate	0.175	94	583	1	-1.58
Totals			0.363	263	1592		

File: 97052421.D02 Sample: BLANK PREP WL#18089

HNF-SD-WM-DP-247, REV. 0

Data Reprocessed On 05/27/1997 14:01:09

```

=====
Sample Name: S97T000753 SAMPLE                      Date: 05/25/1997 01:20:01
Data File  : E:\DATA\97052421.D08
Method     : C:\DX\METHOD\ANIONS.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          11 3000 5Hz 0.00 10.00          50
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	37	134	1	
2	1.03	fluoride	32.709	11872	60248	1	1.65
3	1.53	chloride	2.939	821	3699	1	-0.87
4	1.82	nitrite	2.037	109	521	1	-2.50
5	2.99	nitrate	284.901	28701	232343	1	-0.11
6	4.64	phosphate	9.927	277	3280	1	4.19
7	5.97	sulfate	1.578	104	1403	1	4.61
8	7.79	oxalate	6.477	280	5751	1	-2.05
Totals			340.569	42200	307379		

File: 97052421.D08 Sample: S97T000753 SAMPLE

Data Reprocessed On 05/27/1997 14:02:46

```

=====
Sample Name: S97T000753 DUP                      Date: 05/25/1997 01:08:07
Data File  : E:\DATA\97052421.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          11    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	24	80	1	
2	1.03	fluoride	23.994	8605	42895	1	1.65
3	1.53	chloride	2.260	622	2806	1	-0.43
4	1.82	nitrite	1.904	78	400	1	-2.50
5	3.01	nitrate	214.707	21438	170725	1	-0.11
6	4.64	phosphate	8.078	213	2616	1	4.19
7	5.97	sulfate	2.961	129	2779	1	4.61
8	7.84	oxalate	4.403	228	4197	1	-1.38
Totals			258.309	31336	226497		

File: 97052421.D07 Sample: S97T000753 DUP

Data Reprocessed On 05/27/1997 14:07:32

```

=====
Sample Name: S97T000774 SAMPLE                      Date: 05/25/1997 00:56:56
Data File  : E:\DATA\97052421.D06
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 6
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          11    3000  5Hz    0.00 10.00      50
=====

```

```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	41	139	1	
2	1.03	fluoride	34.051	12408	63018	1	1.65
3	1.53	chloride	3.022	846	3808	1	-0.87
4	1.82	nitrite	2.064	113	546	1	-2.50
5	2.99	nitrate	292.342	29526	239069	1	-0.11
6	4.64	phosphate	11.730	305	3928	1	4.19
7	5.97	sulfate	1.790	115	1614	1	4.61
8	7.79	oxalate	6.381	286	5679	1	-2.05
Totals			351.381	43640	317802		

File: 97052421.D06 Sample: S97T000774 SAMPLE

Data Reprocessed On 05/27/1997 14:06:30

```

=====
Sample Name: S97T000774 DUP                      Date: 05/25/1997 01:30:56
Data File  : E:\DATA\97052421.D09
Method     : C:\DX\METHOD\ANIONS.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          11    3000  5Hz   0.00 10.00          50
=====

```

```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	44	160	1	
2	1.03	fluoride	33.804	12490	62506	1	1.65
3	1.53	chloride	3.118	870	3934	1	-0.43
4	1.82	nitrite	2.018	103	503	1	-2.50
5	2.99	nitrate	297.773	29540	244004	1	-0.11
6	4.64	phosphate	11.519	307	3852	1	4.19
7	5.97	sulfate	3.528	142	3343	1	4.61
8	7.79	oxalate	6.588	286	5834	1	-2.05
Totals			358.349	43782	324137		

File: 97052421.D09 Sample: S97T000774 DUP

```

=====
Sample Name: S97T000775 SAMPLE                      Date: 05/25/1997 01:42:45
Data File  : E:\DATA\97052421.D10
Method     : C:\DX\METHOD\ANIONS.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          11    3000  5Hz   0.00 10.00          50
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	48	177	1	
2	1.03	fluoride	31.930	11886	58651	1	1.65
3	1.53	chloride	3.071	899	3873	1	-0.43
4	1.82	nitrite	2.089	116	568	1	-2.50
5	2.99	nitrate	285.239	28816	232648	1	-0.11
6	4.64	phosphate	10.394	287	3448	1	4.19
7	5.39		0.000	19	427	1	
8	5.97	sulfate	1.757	121	1581	1	4.61
9	7.79	oxalate	6.178	275	5526	1	-2.05
Totals			340.658	42467	306899		

File: 97052421.D10 Sample: S97T000775 SAMPLE

Sample Name: S97T000775 DUP Date: 05/25/1997 01:53:51
Data File : E:\DATA\97052421.D11
Method : C:\DX\METHOD\ANIONS.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 11 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	52	190	1	
2	1.03	fluoride	32.667	11669	60161	1	1.65
3	1.53	chloride	2.993	854	3769	1	-0.87
4	1.82	nitrite	2.032	109	516	1	-2.50
5	2.99	nitrate	284.520	28579	232000	1	-0.11
6	4.64	phosphate	9.525	261	3135	1	4.19
7	5.97	sulfate	3.614	181	3429	1	4.61
8	7.79	oxalate	6.015	273	5404	1	-2.05
Totals			341.366	41977	308604		

File: 97052421.D11 Sample: S97T000775 DUP

LABCORE Completed Worklist Report for Worklist# 18128

Analyst: krq

Instrument: IC01

Book# 61N20A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. lcm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	④IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	④IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	④IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	④IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	④IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	④IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	④IC-QC S04	QC	1	<1.38e-1		ug/mL
1 CCB	0	④IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	④IC-QC F	QC	5.90e01	5.45e+01	92.373 % Recovery	
2 CCV	0	④IC-QC CL	QC	7.90e01	7.69e+01	97.342 % Recovery	
2 CCV	0	④IC-QC NO2	QC	5.44e02	5.02e+02	92.279 % Recovery	
2 CCV	0	④IC-QC BR	QC	5.89e02	5.57e+02	94.567 % Recovery	
2 CCV	0	④IC-QC NO3	QC	5.94e02	5.66e+02	95.286 % Recovery	
2 CCV	0	④IC-QC P04	QC	5.45e02	5.18e+02	95.046 % Recovery	
2 CCV	0	④IC-QC S04	QC	6.31e02	6.02e+02	95.404 % Recovery	
2 CCV	0	④IC-QC OXALATE2	QC	5.32e02	5.28e+02	99.248 % Recovery	
3 BLNK-PREP	0	④IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	④IC-01 CL-02	SOLID	1	<1.70e-2		ug/g
3 BLNK-PREP	0	④IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	④IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	④IC-01 NO3-02	SOLID	1	<1.39e-1		ug/g
3 BLNK-PREP	0	④IC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	④IC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	④IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 F-02	SOLID	N/A	6.376e+03	25.120	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 CL-02	SOLID	N/A	5.994e+02	35.600	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 NO2-02	SOLID	N/A	3.003e+02	226.200	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 BR-02	SOLID	N/A	2.617e+02	261.700	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 NO3-02	SOLID	N/A	6.460e+04	291.100	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 P04-02	SOLID	N/A	2.141e+03	251.200	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 S04-02	SOLID	N/A	2.889e+02	289.000	ug/g
4 SAMPLE	S97T000747	0 W ④IC-01 OXALATE2	SOLID	N/A	1.013e+03	219.800	ug/g
5 DUP	S97T000747	0 W ④IC-01 F-02	SOLID	6.38e+03	6.50e+03	1.853	RPD
5 DUP	S97T000747	0 W ④IC-01 CL-02	SOLID	5.99e+02	6.41e+02	6.774	RPD
5 DUP	S97T000747	0 W ④IC-01 NO2-02	SOLID	3.00e+02	2.95e+02	1.681	RPD
5 DUP	S97T000747	0 W ④IC-01 BR-02	SOLID	<2.62e2	<2.59e2		RPD
5 DUP	S97T000747	0 W ④IC-01 NO3-02	SOLID	6.46e+04	6.59e+04	1.992	RPD
5 DUP	S97T000747	0 W ④IC-01 P04-02	SOLID	2.14e+03	1.99e+03	7.264	RPD
5 DUP	S97T000747	0 W ④IC-01 S04-02	SOLID	<2.89e2	3.87e+02		RPD
5 DUP	S97T000747	0 W ④IC-01 OXALATE2	SOLID	1.01e+03	1.04e+03	2.927	RPD
6 SPK	S97T000747	0 W ④IC-01 F-02	SOLID	5.90e01	4.69e+01	79.492 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18128

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S97T000747 0 W @IC-01	CL-02	SOLID	7.90e01	8.09e+01	102.405 % Recovery	
6 SPK	S97T000747 0 W @IC-01	NO2-02	SOLID	5.44e02	4.96e+02	91.176 % Recovery	
6 SPK	S97T000747 0 W @IC-01	BR-02	SOLID	5.89e02	4.98e+02	84.550 % Recovery	
6 SPK	S97T000747 0 W @IC-01	NO3-02	SOLID	5.94e02	5.24e+02	88.215 % Recovery	
6 SPK	S97T000747 0 W @IC-01	PO4-02	SOLID	5.45e02	5.34e+02	97.982 % Recovery	
6 SPK	S97T000747 0 W @IC-01	SO4-02	SOLID	6.31e02	6.08e+02	96.355 % Recovery	
6 SPK	S97T000747 0 W @IC-01	OXALATE2	SOLID	5.32e02	5.17e+02	97.180 % Recovery	
7 SAMPLE	S97T000769 0 W @IC-01	F-02	SOLID	N/A	6.462e+03	21.990 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	CL-02	SOLID	N/A	6.591e+02	31.190 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	NO2-02	SOLID	N/A	2.671e+02	197.900 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	BR-02	SOLID	N/A	2.291e+02	229.100 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	NO3-02	SOLID	N/A	6.630e+04	254.800 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	PO4-02	SOLID	N/A	2.188e+03	219.900 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	SO4-02	SOLID	N/A	3.882e+02	252.900 ug/g	
7 SAMPLE	S97T000769 0 W @IC-01	OXALATE2	SOLID	N/A	7.901e+02	192.400 ug/g	
8 DUP	S97T000769 0 W @IC-01	F-02	SOLID	6.46e+03	6.11e+03	5.569 RPD	
8 DUP	S97T000769 0 W @IC-01	CL-02	SOLID	6.53e+02	6.18e+02	5.507 RPD	
8 DUP	S97T000769 0 W @IC-01	NO2-02	SOLID	2.67e+02	2.53e+02	5.385 RPD	
8 DUP	S97T000769 0 W @IC-01	BR-02	SOLID	<2.29e2	<2.25e2	RPD	
8 DUP	S97T000769 0 W @IC-01	NO3-02	SOLID	6.63e+04	6.27e+04	5.581 RPD	
8 DUP	S97T000769 0 W @IC-01	PO4-02	SOLID	2.19e+03	1.81e+03	19.000 RPD	
8 DUP	S97T000769 0 W @IC-01	SO4-02	SOLID	3.88e+02	2.94e+02	27.566 RPD	
8 DUP	S97T000769 0 W @IC-01	OXALATE2	SOLID	7.50e+02	7.57e+02	0.923 RPD	

Final page for worklist# 18128

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John M. Lyle 5/28/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18128

Analyst: SAH Instrument: IC0 1 Book# 61N20-A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. lcm

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	BLNK-PREP				@IC-01	SOLID		
4	SAMPLE	S97T000747 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5	DUP	S97T000747 0 W			@IC-01	SOLID		
6	SPK	S97T000747 0 W			@IC-01	SOLID		
7	SAMPLE	S97T000769 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
8	DUP	S97T000769 0 W			@IC-01	SOLID		

Final page for worklist # 18128

Analyst Signature

Date

Analyst Signature

Date

uploaded 5-28-97

John Worell

18128MAY.CSV

Validated 5/24/97 JM Lye

Data Entry Comments:

Sample Name: CCB Date: 05/24/1997 23:38:52
 Data File : C:\DX\DATA\97052411.D01
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *John L. Lyle* Column: AG4A/AS4A anion column
for KRB 5/28/97

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.22	nitrate	0.099	29	203	1	-0.92
2	6.19	sulfate	-0.031	22	405	1	2.65
Totals			0.068	51	608		

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 465 TO 482

Sample Name: CCV 61N20-A Date: 05/24/1997 23:52:32
 Data File : C:\DX\DATA\97052411.D02
 Method : C:\DX\METHOD\KIT.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	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	54.451	1384	9782	1	-2.38
2	1.59	chloride	76.931	1940	10042	1	0.00
3	1.87	nitrite	502.222	5365	39595	1	-2.77
4	2.75	bromide	557.076	5233	34775	1	-3.63
5	3.11	nitrate	566.438	5968	47111	1	-4.41
6	4.59	phosphate	517.870	1826	22934	1	-0.58
7	5.92	sulfate	602.210	4782	73907	1	-1.77
8	7.79	oxalate	527.697	2569	46651	1	-0.68
Totals			3404.895	29067	284797		

File: 97052411.D02 Sample: CCV 61N20-A

Sample Name: BLANK PREP WL#18128 Date: 05/25/1997 00:05:25
Data File : C:\DX\DATA\97052411.D03
Method : C:\DX\METHOD\KIT.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 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.67	chloride	-0.003	12	36	1	4.60
2	1.97	nitrite	0.106	16	80	1	2.08
3	3.24	nitrate	0.130	71	459	1	-0.31
Totals			0.233	99	574		

File: 97052411.D03 Sample: BLANK PREP WL#18128

Sample Name: S97T000747 SAMPLE

Date: 05/25/1997 00:31:07

Data File : F:\DATA\97052411.D05

Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	33.497	9848	62080	1	-5.36
2	1.61	chloride	3.149	732	3778	1	1.26
3	1.94	nitrite	1.578	66	381	1	0.69
4	3.02	nitrate	339.396	31079	281936	1	0.00
5	4.64	phosphate	11.249	322	4292	1	0.58
6	6.08	sulfate	1.505	141	2432	1	0.88
7	7.89	oxalate	5.324	210	4077	1	0.68

Totals			395.699	42397	358977		

File: 97052411.D05 Sample: S97T000747 SAMPLE

Data Reprocessed On 05/27/1997 14:30:18

```

=====
Sample Name: S97T000747 DUP                      Date: 05/25/1997 00:41:59
Data File  : F:\DATA\97052411.D06
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00          30
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	34.457	10330	64044	1	-5.36
2	1.61	chloride	3.403	762	4080	1	1.26
3	1.94	nitrite	1.565	65	371	1	0.69
4	3.02	nitrate	349.428	32279	291158	1	0.00
5	4.64	phosphate	10.547	320	4006	1	0.58
6	6.08	sulfate	2.055	157	3035	1	0.88
7	7.89	oxalate	5.527	222	4242	1	0.68
Totals			406.982	44135	370937		

File: 97052411.D06 Sample: S97T000747 DUP

Sample Name: S97T000747 SPIKE Date: 05/25/1997 00:54:26
Data File : F:\DATA\97052411.D07
Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	38.182	11890	71781	1	-5.36
2	1.59	chloride	11.243	2516	13530	1	-0.42
3	1.87	nitrite	51.219	4913	36998	1	-2.77
4	2.73	bromide	49.801	4786	28392	1	0.12
5	3.01	nitrate	391.755	36326	330754	1	-0.11
6	4.59	phosphate	64.625	2111	26378	1	-0.58
7	5.92	sulfate	60.815	4701	68506	1	-1.77
8	7.73	oxalate	57.017	2379	46277	1	-1.36
Totals			724.657	69621	622617		

File: 97052411.D07 Sample: S97T000747 SPIKE

Sample Name: S97T000769 SAMPLE Date: 05/25/1997 01:05:24
Data File : F:\DATA\97052411.D08
Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	38.784	12098	73050	1	-5.36
2	1.61	chloride	3.920	871	4694	1	1.26
3	1.94	nitrite	1.603	72	399	1	0.69
4	3.01	nitrate	397.916	36542	336614	1	-0.11
5	4.64	phosphate	13.135	388	5062	1	0.58
6	6.08	sulfate	2.330	193	3338	1	0.88
7	7.89	oxalate	4.502	187	3410	1	0.68
Totals			462.190	50351	426566		

File: 97052411.D08 Sample: S97T000769 SAMPLE

```

=====
Sample Name: S97T000769 DUP                      Date: 05/25/1997 01:17:22
Data File  : F:\DATA\97052411.D09
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	37.280	11486	69892	1	-5.36
2	1.61	chloride	3.767	861	4511	1	0.84
3	1.93	nitrite	1.546	71	357	1	0.35
4	3.00	nitrate	382.195	35085	321710	1	0.00
5	4.64	phosphate	11.065	348	4217	1	0.58
6	6.08	sulfate	1.793	180	2748	1	0.88
7	7.84	oxalate	4.620	164	3506	1	0.00

```

-----
Totals                      442.265          48194          406941
=====
  
```

File: 97052411.D09 Sample: S97T000769 DUP

LABCORE Completed Worklist Report for Worklist# 18149

Analyst: rag

Instrument: IC01

Book# 6/1820A

Method: A-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

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-01	0.139 ug/mL
1 CCB	0	0	01C-QC	P04	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	01C-QC	S04	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	01C-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	01C-QC	F	QC	5.90e01	5.41e+01	31.635 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	7.95e+01	100.633 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.44e02	5.57e+02	102.390 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	5.83e+02	98.981 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	5.82e+02	97.980 % Recovery
2 CCV	0	0	01C-QC	P04	QC	5.45e02	5.42e+02	99.450 % Recovery
2 CCV	0	0	01C-QC	S04	QC	6.31e02	6.23e+02	98.732 % Recovery
2 CCV	0	0	01C-QC	OXALATE2	QC	5.32e02	5.38e+02	101.128 % Recovery
3 BLNK-PREP	0	0	01C-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	01C-01	CL-02	SOLID	1	<1.70e-2	ug/g
3 BLNK-PREP	0	0	01C-01	NO2-02	SOLID	1	1.59e-01	0.159 ug/g
3 BLNK-PREP	0	0	01C-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	01C-01	NO3-02	SOLID	1	1.49e-01	0.149 ug/g
3 BLNK-PREP	0	0	01C-01	P04-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	01C-01	S04-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	01C-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S97T000754	0 W	01C-01	F-02	SOLID	N/A	6.223e+03	25.190 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	CL-02	SOLID	N/A	5.802e+02	35.680 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	NO2-02	SOLID	N/A	2.097e+02	123.700 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	BR-02	SOLID	N/A	2.624e+02	262.400 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	NO3-02	SOLID	N/A	6.220e+04	291.800 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	P04-02	SOLID	N/A	2.497e+03	251.900 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	S04-02	SOLID	N/A	3.676e+02	289.700 ug/g
4 SAMPLE	S97T000754	0 W	01C-01	OXALATE2	SOLID	N/A	1.597e+03	220.400 ug/g
5 DUP	S97T000754	0 W	01C-01	F-02	SOLID	6.22e+03	6.09e+03	2.112 RPD
5 DUP	S97T000754	0 W	01C-01	CL-02	SOLID	5.80e+02	5.56e+02	4.225 RPD
5 DUP	S97T000754	0 W	01C-01	NO2-02	SOLID	2.10e+02	2.07e+02	1.439 RPD
5 DUP	S97T000754	0 W	01C-01	BR-02	SOLID	<2.62e2	<2.67e2	RPD
5 DUP	S97T000754	0 W	01C-01	NO3-02	SOLID	6.22e+04	5.95e+04	4.437 RPD
5 DUP	S97T000754	0 W	01C-01	P04-02	SOLID	2.50e+03	3.16e+03	23.322 RPD
5 DUP	S97T000754	0 W	01C-01	S04-02	SOLID	3.68e+02	3.71e+02	0.812 RPD
5 DUP	S97T000754	0 W	01C-01	OXALATE2	SOLID	1.60e+03	1.59e+03	0.627 RPD
6 SAMPLE	S97T000776	0 W	01C-01	F-02	SOLID	N/A	6.146e+03	24.900 ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-SD-WM-DP-247, REV. 0
LABCORE Completed Worklist Report for Worklist# 18149

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000776	0 W	@IC-01 CL-02	SOLID	N/A	5.920e+02	35.280	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 NO2-02	SOLID	N/A	2.754e+02	224.100	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 BR-02	SOLID	N/A	2.594e+02	253.400	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 NO3-02	SOLID	N/A	5.928e+04	288.400	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 PO4-02	SOLID	N/A	3.617e+03	249.000	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 SO4-02	SOLID	N/A	4.669e+02	286.300	ug/g
6 SAMPLE	S97T000776	0 W	@IC-01 OXALATE2	SOLID	N/A	1.523e+03	217.900	ug/g
7 DUP	S97T000776	0 W	@IC-01 F-02	SOLID	6.15e+03	6.21e+03	0.971	RPD
7 DUP	S97T000776	0 W	@IC-01 CL-02	SOLID	5.92e+02	5.96e+02	0.673	RPD
7 DUP	S97T000776	0 W	@IC-01 NO2-02	SOLID	2.75e+02	2.71e+02	1.465	RPD
7 DUP	S97T000776	0 W	@IC-01 BR-02	SOLID	<2.59e2	<2.58e2		RPD
7 DUP	S97T000776	0 W	@IC-01 NO3-02	SOLID	5.93e+04	6.02e+04	1.506	RPD
7 DUP	S97T000776	0 W	@IC-01 PO4-02	SOLID	3.62e+03	2.56e+03	34.304	RPD
7 DUP	S97T000776	0 W	@IC-01 SO4-02	SOLID	4.67e+02	7.34e+02	44.463	RPD
7 DUP	S97T000776	0 W	@IC-01 OXALATE2	SOLID	1.52e+03	1.55e+03	1.954	RPD

Final page for worklist# 18149

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lyle
Reviewer Signature _____ Date *6/5/97*

LABCORE Data Entry Template for Worklist# 18149

Analyst: RAG Instrument: IC0 1 Book# 61N204

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	BLNK-PREP				@IC-01	SOLID		
4	SAMPLE	S97T000754 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested:	BR-02		CL-02		F-02	NO2-02
			OXALATE2,	PO4-02			SO4-02	NO3-02
5	DUP	S97T000754 0 W			@IC-01	SOLID		
6	SAMPLE	S97T000776 0 W			@IC-01	SOLID	97000299	T-203
		Analytes Requested:	BR-02		CL-02		F-02	NO2-02
			OXALATE2,	PO4-02			SO4-02	NO3-02
7	DUP	S97T000776 0 W			@IC-01	SOLID		

Final page for worklist # 18149

Janey Lynn for R.A. Green 5/22/97
Analyst Signature Date
see attached for signature
uploaded 6-3-97
J.R. Howell
18149.MAY.CSV

Analyst Signature Date

Validated 6/4/97 JM Fey

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18149

Analyst: RS Instrument: IC0 / Book# 61W20-A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
✓1	CCB				@IC-QC	QC		
✓2	CCV				@IC-QC	QC		
>3	PREFBLANK							
3	SAMPLE	S97T000754	0	W	@IC-01	SOLID	97000299	T-203
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
4	DUP	S97T000754	0	W	@IC-01	SOLID		
5	SAMPLE	S97T000776	0	W	@IC-01	SOLID	97000299	T-203
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
6	DUP	S97T000776	0	W	@IC-01	SOLID		

Final page for worklist # 18149

Rae Ann Dwyer 5-20-97
Analyst Signature Date

Analyst Signature Date

This should be re-worklisted adding a prep blank
to this worklist.

Plan 2 dilutions of 11 and 6 for NO₂ on S97T754

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

```

=====
Sample Name: CCB                               Date: 05/20/1997 07:18:39
Data File  : C:\DX\DATA\97052001.D03
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 3           Detector: CDM-1
Analyst    : Rae Ann Green                Column: AG4A/AS4A anion column
=====
  
```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
External          1          1    3000 5Hz   0.00 10.00      30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.42		0.000	22	120	1	
2	3.28	nitrate	0.139	81	539	1	0.92
Totals			0.139	102	659		

File: 97052001.D03 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 427 TO 446

```

=====
Sample Name: STD 61N20-A Date: 05/20/1997 08:36:32
Data File : C:\DX\DATA\97052001.D01
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
Analyst : Rae Ann Green Column: AG4A/AS4A anion column
=====

```

```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External 1 101 3000 5Hz 0.00 10.00 30

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	54.109	1348	9716	1	-2.98
2	1.60	chloride	79.450	1972	10374	1	0.42
3	1.89	nitrite	557.250	5879	44079	1	-2.08
4	2.78	bromide	583.066	5306	36444	1	-2.46
5	3.15	nitrate	581.841	6069	48428	1	-2.97
6	4.59	phosphate	541.601	1871	24014	1	-0.58
7	5.92	sulfate	622.577	4332	76421	1	-1.77
8	7.79	oxalate	538.458	2423	47614	1	-0.68
Totals			3558.353	29200	297092		

File: 97052001.D01 Sample: STD 61N20-A

Sample Name: PREP BLANK Date: 05/20/1997 08:50:06
Data File : C:\DX\DATA\97052011.D02
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
Analyst : *Rae Ann Duns* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.95	nitrite	0.159	79	509	1	1.38
3	3.27	nitrate	0.149	95	624	1	0.72
Totals			0.309	174	1132		

=====

Sample Name: S97T000754	Date: 05/20/1997 09:17:09
Data File : C:\DX\DATA\97052011.D04	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 4	Detector: CDM-1
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.610	9718	60273	1	-5.36
2	1.62	chloride	3.040	709	3649	1	1.67
3	1.94	nitrite	1.576	68	379	1	0.69
4	3.05	nitrate	325.929	28910	269651	1	-6.05
5	4.64	phosphate	13.085	377	5042	1	0.58
6	6.08	sulfate	1.926	181	2894	1	0.88
7	7.89	oxalate	8.369	336	6549	1	0.68
Totals			386.534	40298	348436		

File: 97052011.D04 Sample: S97T000754

```

=====
Sample Name: S97T000754 DUP                      Date: 05/20/1997 09:29:39
Data File  : C:\DX\DATA\97052011.D05
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 5                Detector: CDM-1
Analyst    : RaeAnn Green Column: AG4A/AS4A anion column
=====
  
```

```

Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           11  3000  5Hz   0.00 10.00          30
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	31.366	9288	57755	1	-5.36
2	1.61	chloride	2.862	665	3438	1	1.26
3	1.94	nitrite	1.550	64	361	1	0.69
4	3.05	nitrate	306.639	28126	252238	1	-6.05
5	4.64	phosphate	16.274	390	6345	1	0.58
6	6.08	sulfate	1.913	185	2880	1	0.88
7	7.89	oxalate	8.180	330	6396	1	0.68
Totals			368.784	39049	329412		

File: 97052011.D05 Sample: S97T000754 DUP

Data Reprocessed On 05/28/1997 10:35:36

```

=====
Sample Name: S97T000754                      Date: 05/20/1997 09:03:29
Data File  : F:\DATA\97052011.D03
Method     : C:\DX\METHOD\KIT.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           6    3000  5Hz   0.00 10.00          30
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.235	19690	119092	1	-5.36
2	1.61	chloride	3.133	1299	6870	1	0.84
3	1.94	nitrite	1.099	129	699	1	0.69
4	3.01	nitrate	311.403	50052	513027	1	0.11
5	4.64	phosphate	12.714	736	9228	1	0.58
6	6.08	sulfate	1.647	266	4096	1	0.88
7	7.89	oxalate	8.026	637	11705	1	0.68
Totals			370.258	72809	664717		

File: 97052011.D03 Sample: S97T000754

Data Reprocessed On 05/28/1997 10:36:39

```

=====
Sample Name: S97T000754 DUP                      Date: 05/20/1997 09:44:33
Data File  : F:\DATA\97052011.D06
Method     : C:\DX\METHOD\KIT.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           6    3000  5Hz   0.00 10.00      30
=====

```

```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.210	20094	118983	1	-5.36
2	1.60	chloride	3.404	1422	7466	1	0.42
3	1.93	nitrite	1.064	121	652	1	0.35
4	3.00	nitrate	316.676	51489	523672	1	0.00
5	4.64	phosphate	12.853	744	9332	1	0.58
6	6.08	sulfate	1.899	286	4604	1	0.88
7	7.89	oxalate	8.272	660	12071	1	0.68
Totals			376.378	74816	676780		

File: 97052011.D06 Sample: S97T000754 DUP

=====

Sample Name: S97T000776	Date: 05/20/1997 09:57:16
Data File : C:\DX\DATA\97052011.D07	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 7	Detector: CDM-1
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.579	9645	60209	1	-5.36
2	1.61	chloride	3.138	728	3765	1	1.26
3	1.94	nitrite	1.460	55	295	1	0.69
4	3.04	nitrate	314.219	28910	259055	1	-6.46
5	4.64	phosphate	19.175	487	7532	1	0.58
6	6.08	sulfate	2.475	217	3498	1	0.88
7	7.89	oxalate	8.072	340	6308	1	0.68
Totals			381.118	40381	340662		

File: 97052011.D07 Sample: S97T000776

Sample Name: S97T000776 DUP Date: 05/20/1997 10:08:21
Data File : C:\DX\DATA\97052011.D08
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	33.117	9698	61304	1	-5.36
2	1.61	chloride	3.181	742	3816	1	1.26
3	1.93	nitrite	1.448	48	286	1	0.35
4	3.03	nitrate	320.889	29195	265081	1	-6.67
5	4.64	phosphate	13.644	405	5270	1	0.58
6	6.08	sulfate	3.914	255	5079	1	0.88
7	7.89	oxalate	8.280	340	6477	1	0.68

Totals 384.473 40683 347313

File: 97052011.D08 Sample: S97T000776 DUP

LABCORE Completed Worklist Report for Worklist# 18215

Analyst: rdm

Instrument: IC01

Book# 61N20A

Method: 64-533-105 Rev/Mod D-1

Worklist Comment: Rerun for F using DF 11. jmf

T203

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	@IC-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	@IC-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	@IC-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	@IC-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	@IC-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	@IC-QC	SO4	QC	1	<1.38e-1	ug/mL
1 CCB	0	@IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	@IC-QC	F	QC	5.90e01	5.24e+01	88.814 % Recovery
2 CCV	0	@IC-QC	CL	QC	7.90e01	7.47e+01	94.557 % Recovery
2 CCV	0	@IC-QC	NO2	QC	5.44e02	5.23e+02	96.140 % Recovery
2 CCV	0	@IC-QC	BR	QC	5.89e02	5.64e+02	95.756 % Recovery
2 CCV	0	@IC-QC	NO3	QC	5.94e02	5.72e+02	96.128 % Recovery
2 CCV	0	@IC-QC	PO4	QC	5.45e02	5.32e+02	97.615 % Recovery
2 CCV	0	@IC-QC	SO4	QC	6.31e02	6.03e+02	95.563 % Recovery
2 CCV	0	@IC-QC	OXALATE2	QC	5.32e02	5.23e+02	98.308 % Recovery
3 SAMPLE	S97T000748	0 W @IC-01	F-02	SOLID	N/A	6.122e+03	25.360 ug/g
4 DUP	S97T000748	0 W @IC-01	F-02	SOLID	6.12e+03	6.17e+03	0.814 RPD
4 DUP	S97T000748	0 W @IC-01	CL-02	SOLID	?	5.78e+02	RPD
4 DUP	S97T000748	0 W @IC-01	NO2-02	SOLID	?	2.78e+02	RPD
4 DUP	S97T000748	0 W @IC-01	BR-02	SOLID	?	<2.59e2	RPD
4 DUP	S97T000748	0 W @IC-01	NO3-02	SOLID	?	6.28e+04	RPD
4 DUP	S97T000748	0 W @IC-01	PO4-02	SOLID	?	2.38e+03	RPD
4 DUP	S97T000748	0 W @IC-01	SO4-02	SOLID	?	<2.84e2	RPD
4 DUP	S97T000748	0 W @IC-01	OXALATE2	SOLID	?	1.38e+03	RPD
5 SAMPLE	S97T000749	0 W @IC-01	F-02	SOLID	N/A	6.313e+03	24.610 ug/g
6 DUP	S97T000749	0 W @IC-01	F-02	SOLID	6.31e+03	6.35e+03	0.632 RPD
6 DUP	S97T000749	0 W @IC-01	CL-02	SOLID	?	5.84e+02	RPD
6 DUP	S97T000749	0 W @IC-01	NO2-02	SOLID	?	2.49e+02	RPD
6 DUP	S97T000749	0 W @IC-01	BR-02	SOLID	?	<2.46e2	RPD
6 DUP	S97T000749	0 W @IC-01	NO3-02	SOLID	?	6.28e+04	RPD
6 DUP	S97T000749	0 W @IC-01	PO4-02	SOLID	?	2.38e+03	RPD
6 DUP	S97T000749	0 W @IC-01	SO4-02	SOLID	?	<2.72e2	RPD
6 DUP	S97T000749	0 W @IC-01	OXALATE2	SOLID	?	1.52e+03	RPD
7 SAMPLE	S97T000770	0 W @IC-01	F-02	SOLID	N/A	6.117e+03	22.040 ug/g
8 DUP	S97T000770	0 W @IC-01	F-02	SOLID	6.12e+03	6.24e+03	1.942 RPD
8 DUP	S97T000770	0 W @IC-01	CL-02	SOLID	?	5.77e+02	RPD
8 DUP	S97T000770	0 W @IC-01	NO2-02	SOLID	?	2.41e+02	RPD
8 DUP	S97T000770	0 W @IC-01	BR-02	SOLID	?	<2.32e2	RPD
8 DUP	S97T000770	0 W @IC-01	NO3-02	SOLID	?	6.31e+04	RPD
8 DUP	S97T000770	0 W @IC-01	PO4-02	SOLID	?	2.41e+03	RPD

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18215

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
8 DUP	S97T000770 0 W @IC-01	S04-02	SOLID	?	<2.56e2		RPD
8 DUP	S97T000770 0 W @IC-01	OXALATE2	SOLID	?	1.59e+03		RPD

Final page for worklist# 18215

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/28/97

LABCORE Data Entry Template for Worklist# 18215

Analyst: PM Instrument: IC0 1 Book# 61N20A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: Rerun for F using DF 11. jmf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S97T000748 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: F-02						
4 DUP	S97T000748 0 W	@IC-01	SOLID			
5 SAMPLE	S97T000749 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: F-02						
6 DUP	S97T000749 0 W	@IC-01	SOLID			
7 SAMPLE	S97T000770 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: F-02						
8 DUP	S97T000770 0 W	@IC-01	SOLID			

Final page for worklist # 18215

Analyst Signature

Date

Analyst Signature

Date

PM 5/25/97
uploaded 5-28-97
JH Wenzel

18215 MAY.CSV

Validated 5/28/97 JM Luy

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: BLK Date: 05/25/1997 07:18:23
Data File : C:\DX\DATA\97052421.D01
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
Analyst : *Janet J. Lee* Column: AG4A/AS4A anion column
RDM 5/28/97

Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.42	0.000	19	126	1	
2	3.25 nitrate	0.115	51	338	1	-0.10
3	6.19 sulfate	-0.007	33	696	1	2.65
Totals		0.108	103	1160		

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 449 TO 456

Sample Name: 61N20-A Date: 05/25/1997 07:33:45
Data File : C:\DX\DATA\97052421.D02
Method : C:\DX\METHOD\KIT.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	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	52.351	1270	9377	1	-2.38
2	1.61	chloride	74.729	1900	9752	1	0.84
3	1.89	nitrite	522.795	5542	41270	1	-2.08
4	2.77	bromide	564.360	5327	35243	1	-2.92
5	3.13	nitrate	570.793	6014	47483	1	-3.59
6	4.64	phosphate	532.124	1899	23583	1	0.58
7	6.03	sulfate	602.535	4989	73947	1	0.00
8	7.89	oxalate	523.029	2446	46234	1	0.68
Totals			3442.716	29387	286888		

File: 97052421.D02 Sample: 61N20-A

```

=====
Sample Name: S97T000748                      Date: 05/25/1997 08:09:05
Data File  : C:\DX\DATA\97052421.D03
Method     : C:\DX\METHOD\KIT.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          11      3000 5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	31.876	9153	58785	1	-5.36
2	1.62	chloride	3.031	684	3638	1	1.67
3	1.95	nitrite	1.418	48	264	1	1.04
4	3.05	nitrate	317.933	29358	262408	1	-6.26
5	4.69	phosphate	11.392	349	4351	1	1.73
6	6.19	sulfate	1.263	132	2166	1	2.65
7	8.00	oxalate	7.251	307	5641	1	2.04
Totals			374.164	40031	337253		

File: 97052421.D03 Sample: S97T000748

```

=====
Sample Name: S97T000748DUP                      Date: 05/25/1997 08:22:51
Data File  : C:\DX\DATA\97052421.D04
Method     : C:\DX\METHOD\KIT.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          11      3000 5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.934	9740	60932	1	-5.36
2	1.62	chloride	3.083	719	3700	1	1.67
3	1.95	nitrite	1.481	54	310	1	1.04
4	3.04	nitrate	335.286	30579	278175	1	-6.46
5	4.67	phosphate	12.676	355	4875	1	1.16
6	6.19	sulfate	1.201	136	2098	1	2.65
7	7.95	oxalate	7.367	288	5735	1	1.36
Totals			394.028	41870	355825		

File: 97052421.D04 Sample: S97T000748DUP

Sample Name: S97T000749 Date: 05/25/1997 08:53:01
Data File : C:\DX\DATA\97052421.D06
Method : C:\DX\METHOD\KIT.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 11 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	33.863	10034	62826	1	-5.36
2	1.61	chloride	3.079	710	3696	1	1.26
3	1.94	nitrite	1.449	49	286	1	0.69
4	3.03	nitrate	332.785	30480	275892	1	-6.87
5	4.67	phosphate	12.151	361	4660	1	1.16
6	6.13	sulfate	1.085	110	1970	1	1.77
7	7.95	oxalate	8.114	316	6342	1	1.36

Totals 392.524 42059 355672

File: 97052421.D06 Sample: S97T000749

Data Reprocessed On 05/27/1997 14:19:06

Sample Name: S97T000749DUP	Date: 05/25/1997 10:39:18
Data File : F:\DATA\97052421.D07	
Method : C:\DX\METHOD\KIT.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	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	35.445	10831	66079	1	-5.36
2	1.61	chloride	3.262	759	3913	1	0.84
3	1.93	nitrite	1.391	45	244	1	0.00
4	3.01	nitrate	350.799	32454	292423	1	0.11
5	4.67	phosphate	13.264	403	5115	1	1.16
6	6.13	sulfate	1.083	121	1969	1	1.77
7	7.95	oxalate	8.504	354	6658	1	1.36
Totals			413.748	44966	376400		

File: 97052421.D07 Sample: S97T000749DUP

```

=====
Sample Name: S97T000770                      Date: 05/25/1997 10:52:44
Data File  : F:\DATA\97052421.D08
Method     : C:\DX\METHOD\KIT.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          11    3000   5Hz   0.00 10.00          30
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	36.633	11388	68542	1	-5.36
2	1.61	chloride	3.376	785	4048	1	0.84
3	1.93	nitrite	1.430	50	273	1	0.35
4	3.01	nitrate	368.645	33713	308994	1	0.11
5	4.67	phosphate	13.717	435	5300	1	1.16
6	6.13	sulfate	1.415	132	2333	1	1.77
7	7.95	oxalate	8.895	382	6976	1	1.36

```

-----
Totals          434.112          46883          396466
-----

```

File: 97052421.D08 Sample: S97T000770

Data Reprocessed On 05/27/1997 14:22:04

```

=====
Sample Name: S97T000770DUP                      Date: 05/25/1997 11:22:30
Data File  : F:\DATA\97052421.D09
Method     : C:\DX\METHOD\KIT.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          11    3000   5Hz   0.00 10.00          30
=====

```

```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	36.934	11482	69170	1	-5.36
2	1.61	chloride	3.417	790	4095	1	0.84
3	1.94	nitrite	1.427	52	271	1	0.69
4	3.01	nitrate	373.672	34149	313698	1	0.11
5	4.67	phosphate	14.248	423	5517	1	1.16
6	6.13	sulfate	1.144	131	2035	1	1.77
7	7.95	oxalate	9.414	392	7398	1	1.36
Totals			440.256	47418	402183		

File: 97052421.D09 Sample: S97T000770DUP

LABCORE Completed Worklist Report for Worklist# 18291

Analyst: vim

Instrument: IC01

Book# 61N204

Method: 1A-533-105 Rev/Mod D-1

Worklist Comment: T-203 IC rerun use df 11. RPDs

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB	0	②IC-QC F	QC	1	<1.20e-2		ug/mL
1	CCB	0	②IC-QC CL	QC	1	<1.70e-2		ug/mL
1	CCB	0	②IC-QC NO2	QC	1	<1.08e-1		ug/mL
1	CCB	0	②IC-QC BR	QC	1	<1.25e-1		ug/mL
1	CCB	0	②IC-QC NO3	QC	1	<1.39e-1		ug/mL
1	CCB	0	②IC-QC P04	QC	1	<1.20e-1		ug/mL
1	CCB	0	②IC-QC S04	QC	1	<1.38e-1		ug/mL
1	CCB	0	②IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV	0	②IC-QC F	QC	5.90e01	5.63e+01	95.424 % Recovery	
2	CCV	0	②IC-QC CL	QC	7.90e01	7.53e+01	95.316 % Recovery	
2	CCV	0	②IC-QC NO2	QC	5.44e02	5.19e+02	95.221 % Recovery	
2	CCV	0	②IC-QC BR	QC	5.89e02	5.49e+02	93.209 % Recovery	
2	CCV	0	②IC-QC NO3	QC	5.94e02	5.52e+02	92.929 % Recovery	
2	CCV	0	②IC-QC P04	QC	5.45e02	5.21e+02	95.596 % Recovery	
2	CCV	0	②IC-QC S04	QC	6.31e02	6.01e+02	95.246 % Recovery	
2	CCV	0	②IC-QC OXALATE2	QC	5.32e02	5.18e+02	97.368 % Recovery	
3	BLNK-PREP	0	②IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3	BLNK-PREP	0	②IC-01 CL-02	SOLID	1	2.40e-02	0.024	ug/g
3	BLNK-PREP	0	②IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3	BLNK-PREP	0	②IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3	BLNK-PREP	0	②IC-01 NO3-02	SOLID	1	<1.39e-1		ug/g
3	BLNK-PREP	0	②IC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3	BLNK-PREP	0	②IC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3	BLNK-PREP	0	②IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 F-02	SOLID	N/A	6.597e+03	26.660	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 CL-02	SOLID	N/A	6.019e+02	37.770	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 NO2-02	SOLID	N/A	3.359e+02	239.900	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 BR-02	SOLID	N/A	2.777e+02	277.800	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 NO3-02	SOLID	N/A	6.325e+04	308.900	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 P04-02	SOLID	N/A	2.624e+03	266.600	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 S04-02	SOLID	N/A	3.367e+02	306.600	ug/g
4	SAMPLE	S97T000746	0 W ②IC-01 OXALATE2	SOLID	N/A	3.016e+02	233.300	ug/g
5	DUP	S97T000746	0 W ②IC-01 F-02	SOLID	6.60e+03	6.71e+03	1.653	RPD
5	DUP	S97T000746	0 W ②IC-01 CL-02	SOLID	6.02e+02	5.92e+02	1.675	RPD
5	DUP	S97T000746	0 W ②IC-01 NO2-02	SOLID	3.36e+02	3.38e+02	0.593	RPD
5	DUP	S97T000746	0 W ②IC-01 BR-02	SOLID	<2.78e2	<2.71e2		RPD
5	DUP	S97T000746	0 W ②IC-01 NO3-02	SOLID	6.32e+04	6.18e+04	2.240	RPD
5	DUP	S97T000746	0 W ②IC-01 P04-02	SOLID	2.62e+03	2.66e+03	1.515	RPD
5	DUP	S97T000746	0 W ②IC-01 S04-02	SOLID	3.37e+02	<2.99e2		RPD
5	DUP	S97T000746	0 W ②IC-01 OXALATE2	SOLID	3.02e+02	2.65e+02	13.051	RPD
6	SAMPLE	S97T000768	0 W ②IC-01 F-02	SOLID	N/A	6.215e+03	25.840	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18291

Seq Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000768	0	W	@IC-01	CL-02	SOLID	N/A	5.772e+02	36.600 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	NO2-02	SOLID	N/A	3.224e+02	232.500 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	BR-02	SOLID	N/A	2.691e+02	269.200 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	NO3-02	SOLID	N/A	6.270e+04	299.300 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	PO4-02	SOLID	N/A	2.283e+03	258.400 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	SO4-02	SOLID	N/A	4.320e+02	297.100 ug/g
6 SAMPLE	S97T000768	0	W	@IC-01	OXALATE2	SOLID	N/A	5.459e+02	226.100 ug/g
7 DUP	S97T000768	0	W	@IC-01	F-02	SOLID	6.22e+03	6.44e+03	3.476 RPD
7 DUP	S97T000768	0	W	@IC-01	CL-02	SOLID	5.77e+02	6.32e+02	9.098 RPD
7 DUP	S97T000768	0	W	@IC-01	NO2-02	SOLID	3.22e+02	3.09e+02	4.120 RPD
7 DUP	S97T000768	0	W	@IC-01	BR-02	SOLID	<2.69e2	<2.65e2	RPD
7 DUP	S97T000768	0	W	@IC-01	NO3-02	SOLID	6.27e+04	6.27e+04	0.000 RPD
7 DUP	S97T000768	0	W	@IC-01	PO4-02	SOLID	2.28e+03	2.32e+03	1.739 RPD
7 DUP	S97T000768	0	W	@IC-01	SO4-02	SOLID	4.32e+02	4.50e+02	4.082 RPD
7 DUP	S97T000768	0	W	@IC-01	OXALATE2	SOLID	5.46e+02	5.54e+02	1.455 RPD

Final page for worklist# 18291

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Jane M. Lyle 5/29/97
 Reviewer Signature _____ Date _____

05/23/97 14:24
A-0004-1

HNF-SD-WM-DP-247, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 18291

Analyst: VLW Instrument: IC0 01 Book# 61N20-AMethod: LA-533-105 Rev/Mod D-)

Worklist Comment: T-203 IC rerun use df 11. RPD's were poor first time.jmf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000746 0 W	@IC-01	SOLID		97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S97T000746 0 W	@IC-01	SOLID			
6 SAMPLE	S97T000768 0 W	@IC-01	SOLID		97000299	T-203
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S97T000768 0 W	@IC-01	SOLID			

Final page for worklist # 18291

Valerie Massie 05-28-97
Analyst Signature Date

Analyst Signature Date

uploaded 5-29-97

John Warrill

18291MAY.CSV

Validated 5/29/97 JMT

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: BLANK Date: 05/28/1997 09:50:29
 Data File : C:\DX\DATA\97052801.D02
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
 Analyst : *Valeria Masari* Column: AG4A/AS4A anion column

05-28-97

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.21	nitrate	0.085	15	87	1	-1.33
2	6.08	sulfate	0.061	99	1514	1	0.88
Totals			0.146	114	1601		

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 460 TO 460.

Data Reprocessed On 05/28/1997 10:12:30

Sample Name: 61N20-A STD Date: 05/28/1997 10:05:17
 Data File : C:\DX\DATA\97052801.D03
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 3 Detector: CDM-1
 Analyst : *Valerie Massey* Column: AG4A/AS4A anion column

HNF-SD-WM-DP-247, REV. 0

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 101 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	56.326	1441	10144	1	-2.98
2	1.59	chloride	75.342	1893	9832	1	-0.42
3	1.86	nitrite	517.647	5665	40851	1	-3.46
4	2.73	bromide	549.477	5245	34288	1	-0.12
5	3.09	nitrate	552.427	5962	45913	1	-5.03
6	4.59	phosphate	520.803	1771	23067	1	-0.58
7	5.92	sulfate	600.840	5193	73738	1	-1.77
8	7.73	oxalate	517.607	2442	45749	1	0.04

Totals 3390.470 29612 283582

File: 97052801.D03 Sample: 61N20-A STD

Sample Name: PREP BLANK FOR WRLT # 18291 Date: 05/28/1997 12:51:28
 Data File : C:\DX\DATA\97052811.D01
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *Valerie Mason* Column: AG4A/AS4A anion column
05-28-97

HNF-SD-WM-DP-247, REV. 0

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject

External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.30		0.000	15	68	1	
2	1.65	chloride	0.024	60	382	1	3.77
3	3.25	nitrate	0.119	54	367	1	0.10
4	6.08	sulfate	0.055	83	1441	1	0.88
Totals			0.198	212	2259		

File: 97052811.D01 Sample: PREP BLANK FOR WRLT # 18291

Sample Name: S97T000746 Date: 05/28/1997 13:10:13
 Data File : C:\DX\DATA\97052811.D02
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
 Analyst *Valerie Masore* Column: AG4A/AS4A anion column
05-28-97

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	32.664	9824	60382	1	-5.36
2	1.61	chloride	2.980	686	3578	1	1.26
3	1.94	nitrite	1.663	78	442	1	0.69
4	3.04	nitrate	313.145	28927	258087	1	-6.46
5	4.64	phosphate	12.992	383	5004	1	0.58
6	6.03	sulfate	1.667	136	2610	1	0.00
7	7.89	oxalate	1.493	54	970	1	0.68

Totals 366.604 40088 331075

File: 97052811.D02 Sample: S97T000746

Sample Name: S97T000746 DUP Date: 05/28/1997 13:26:16
 Data File : C:\DX\DATA\97052811.D03
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 3 Detector: CDM-1
 Analyst : *Valeria Mossi* Column: AG4A/AS4A anion column

05-28-97

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 11 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	34.082	10164	63276	1	-5.36
2	1.61	chloride	3.005	688	3608	1	1.26
3	1.93	nitrite	1.715	82	481	1	0.35
4	3.04	nitrate	314.091	28919	258940	1	-6.46
5	4.64	phosphate	13.491	393	5208	1	0.58
6	6.08	sulfate	1.443	164	2364	1	0.88
7	7.84	oxalate	1.345	43	851	1	0.00

Totals 369.173 40452 334727

File: 97052811.D03 Sample: S97T000746 DUP

Sample Name: S97T000768 Date: 05/28/1997 13:39:11
 Data File : C:\DX\DATA\97052811.D04
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 4 Detector: CDM-1
 Analyst : *Valerie Mason* Column: AG4A/AS4A anion column

HNF-SD-WM-DP-247 REV. 0

05-28-97

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	31.752	9384	58533	1	-5.36
2	1.61	chloride	2.949	664	3542	1	1.26
3	1.94	nitrite	1.647	73	431	1	0.69
4	3.04	nitrate	320.356	29013	264599	1	-6.46
5	4.64	phosphate	11.663	359	4461	1	0.58
6	6.03	sulfate	2.207	202	3203	1	0.00
7	7.84	oxalate	2.789	103	2021	1	0.00

Totals 373.363 39798 336790

File: 97052811.D04 Sample: S97T000768

Sample Name: S97T000768 DUP Date: 05/28/1997 13:52:22
 Data File : C:\DX\DATA\97052811.D05
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 5 Detector: CDM-1
 Analyst : *Valerie Masau* Column: AG4A/AS4A anion column

05-28-97

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 11 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	33.501	9768	62087	1	-5.36
2	1.61	chloride	3.285	738	3939	1	1.26
3	1.94	nitrite	1.606	70	401	1	0.69
4	3.03	nitrate	325.761	29852	269499	1	-6.67
5	4.64	phosphate	12.057	366	4622	1	0.58
6	6.03	sulfate	2.341	187	3350	1	0.00
7	7.84	oxalate	2.880	107	2095	1	0.00

Totals 381.432 41089 345994

File: 97052811.D05 Sample: S97T000768 DUP

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed Worklist Report for Worklist# 18959

Analyst: eal

Instrument: IC01

Book# 72A/204

Method: 1A-533-105 Rev/Mod D-/

Worklist Comment: T-203 IC. RCJ

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	9.50e-02	0.095 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	1.97e-01	0.197 ug/mL
1 CCB	0	0	IC-QC	P04	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	IC-QC	S04	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	IC-QC	OxALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	IC-QC	F	QC	5.90e01	5.29e+01	89.661 % Recovery
2 CCV	0	0	IC-QC	CL	QC	7.90e01	7.53e+01	95.316 % Recovery
2 CCV	0	0	IC-QC	NO2	QC	5.43e02	5.19e+02	95.580 % Recovery
2 CCV	0	0	IC-QC	BR	QC	5.89e02	5.87e+02	99.660 % Recovery
2 CCV	0	0	IC-QC	NO3	QC	5.94e02	5.79e+02	97.475 % Recovery
2 CCV	0	0	IC-QC	P04	QC	5.45e02	5.09e+02	93.394 % Recovery
2 CCV	0	0	IC-QC	S04	QC	6.32e02	6.11e+02	96.677 % Recovery
2 CCV	0	0	IC-QC	OxALATE2	QC	5.34e02	5.41e+02	101.311 % Recovery
3 BLNK-PREP	0	0	IC-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	IC-01	CL-02	SOLID	1	<1.70e-2	ug/g
3 BLNK-PREP	0	0	IC-01	NO2-02	SOLID	1	<1.08e-1	ug/g
3 BLNK-PREP	0	0	IC-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	IC-01	NO3-02	SOLID	1	<1.39e-1	ug/g
3 BLNK-PREP	0	0	IC-01	P04-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	IC-01	S04-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	IC-01	OxALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S97T001016	0 W	IC-01	F-02	SOLID	N/A	6.320e+02	28.910 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	CL-02	SOLID	N/A	6.888e+02	40.950 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	NO2-02	SOLID	N/A	2.970e+02	260.100 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	BR-02	SOLID	N/A	3.011e+02	301.200 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	NO3-02	SOLID	N/A	6.368e+04	334.800 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	P04-02	SOLID	N/A	2.290e+03	289.100 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	S04-02	SOLID	N/A	3.325e+02	332.400 ug/g
4 SAMPLE	S97T001016	0 W	IC-01	OxALATE2	SOLID	N/A	1.405e+03	253.000 ug/g
5 DUP	S97T001016	0 W	IC-01	F-02	SOLID	6.32e+03	6.35e+03	0.474 RPD
5 DUP	S97T001016	0 W	IC-01	CL-02	SOLID	6.89e+02	6.27e+02	9.422 RPD
5 DUP	S97T001016	0 W	IC-01	NO2-02	SOLID	2.97e+02	2.92e+02	1.698 RPD
5 DUP	S97T001016	0 W	IC-01	BR-02	SOLID	<3.01e2	<2.92e2	RPD
5 DUP	S97T001016	0 W	IC-01	NO3-02	SOLID	6.37e+04	6.52e+04	2.327 RPD
5 DUP	S97T001016	0 W	IC-01	P04-02	SOLID	2.29e+03	3.53e+03	42.612 RPD
5 DUP	S97T001016	0 W	IC-01	S04-02	SOLID	<3.32e2	5.43e+02	RPD
5 DUP	S97T001016	0 W	IC-01	OxALATE2	SOLID	1.40e+03	1.33e+03	5.128 RPD
6 SPK	S97T001016	0 W	IC-01	F-02	SOLID	5.90e01	6.13e+01	103.898 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18959

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S97T001016	0 W	@IC-01	CL-02	SOLID	7.90e01	8.12e+01	102.785 % Recovery
6 SPK	S97T001016	0 W	@IC-01	NO2-02	SOLID	5.43e02	4.95e+02	91.160 % Recovery
6 SPK	S97T001016	0 W	@IC-01	BR-02	SOLID	5.68e02	4.96e+02	84.211 % Recovery
6 SPK	S97T001016	0 W	@IC-01	NO3-02	SOLID	5.94e02	5.06e+02	85.185 % Recovery
6 SPK	S97T001016	0 W	@IC-01	PO4-02	SOLID	5.45e02	4.98e+02	91.376 % Recovery
6 SPK	S97T001016	0 W	@IC-01	SO4-02	SOLID	6.32e02	6.13e+02	96.994 % Recovery
6 SPK	S97T001016	0 W	@IC-01	OXALATE2	SOLID	5.34e02	5.42e+02	101.498 % Recovery

Final page for worklist# 18959

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

7/1/97
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 18959

Analyst: EAL Instrument: IC0 1 Book# 72N20.A

Method: LA-533-105 Rev/Mod D.1

Worklist Comment: T-203 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T001016 0 W	@IC-01	SOLID		97000299	T-203
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T001016 0 W	@IC-01	SOLID			
6 SPK	S97T001016 0 W	@IC-01	SOLID			

Final page for worklist # 18959

A. Lambie *06-28-97*

Analyst Signature Date

Analyst Signature Date

uploaded 6-30-97

John Wouell

18959JUN.CSV

Validated 6/30/97 JM Fuge

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

=====

Sample Name: INST. BLANK	Date: 06/28/1997 22:21:32
Data File : C:\DX\DATA\97062801.D10	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 10	Detector: CDM-1
Analyst: <i>John Faye</i>	Column: AG4A/AS4A anion column

=====

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.25		0.000	11	43	1	
2	1.62	chloride	0.095	217	1298	1	1.67
3	3.15	nitrate	0.197	149	1025	1	-3.18
4	5.76	sulfate	0.086	127	1813	1	-4.42
Totals			0.378	504	4180		

File: 97062801.D10 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 470 TO 475

```

=====
Sample Name: 72N20-A STD.                      Date: 06/28/1997 22:33:24
Data File : C:\DX\DATA\97062801.D11
Method    : C:\DX\METHOD\KIT.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          101  3000  5Hz  0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	52.883	1335	9480	1	-2.38
2	1.58	chloride	75.264	1965	9822	1	-0.84
3	1.84	nitrite	519.163	5416	40974	1	-4.50
4	2.69	bromide	586.583	5432	36670	1	-1.59
5	3.04	nitrate	578.740	6183	48163	1	-6.46
6	4.40	phosphate	509.292	1832	22543	1	-4.62
7	5.60	sulfate	610.840	5568	74972	1	-7.08
8	7.31	oxalate	541.481	2795	47885	1	-6.80
Totals			3474.247	30525	290509		

File: 97062801.D11 Sample: 72N20-A STD.

```

=====
Sample Name: PREP. BLANK      Date: 06/28/1997 22:44:29
Data File  : C:\DX\DATA\97062801.D12
Method     : C:\DX\METHOD\KIT.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	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.34		0.000	12	52	1	
2	1.64	chloride	0.011	39	212	1	2.93
3	3.15	nitrate	0.135	79	508	1	-2.97
Totals			0.146	130	772		

File: 97062801.D12 Sample: PREP. BLANK

Data Reprocessed On 06/30/1997 13:18:03

```

=====
Sample Name: S97T001016                               Date: 06/28/1997 23:24:26
Data File  : F:\DATA\97062801.D15
Method     : C:\DX\METHOD\KIT.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 11 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	28.855	8351	52728	1	-5.36
2	1.59	chloride	3.145	680	3773	1	-0.42
3	1.90	nitrite	1.356	40	219	1	-1.38
4	2.95	nitrate	290.742	27894	238045	1	-0.11
5	4.45	phosphate	10.456	315	3969	1	-3.47
6	5.76	sulfate	1.273	159	2177	1	-4.42
7	7.41	oxalate	6.414	284	4962	1	-5.44
Totals			342.241	37723	305873		

File: 97062801.D15 Sample: S97T001016

Data Reprocessed On 06/30/1997 13:18:59

```

=====
Sample Name: S97T001016 DUP                      Date: 06/28/1997 23:35:56
Data File  : F:\DATA\97062801.D16
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00          30
=====

```

```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	29.866	8697	54743	1	-5.36
2	1.59	chloride	2.949	683	3541	1	0.00
3	1.91	nitrite	1.374	44	232	1	-1.04
4	2.95	nitrate	306.442	28947	252062	1	-0.11
5	4.45	phosphate	16.590	395	6474	1	-3.47
6	5.71	sulfate	2.551	221	3581	1	-5.31
7	7.36	oxalate	6.252	254	4831	1	-6.12
Totals			366.024	39241	325464		

File: 97062801.D16 Sample: S97T001016 DUP

Data Reprocessed On 06/30/1997 13:19:51

```

=====
Sample Name: S97T001016 SPIKE                      Date: 06/28/1997 23:46:46
Data File  : F:\DATA\97062801.D17
Method     : C:\DX\METHOD\KIT.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          11    3000  5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	34.984	10204	65128	1	-5.36
2	1.57	chloride	11.263	2659	13555	1	-1.67
3	1.83	nitrite	50.864	4974	36734	1	-4.84
4	2.67	bromide	49.636	5046	28295	1	-2.32
5	2.93	nitrate	341.350	33078	283728	1	0.11
6	4.40	phosphate	60.246	2074	24542	1	-4.62
7	5.17		0.000	26	404	1	
8	5.60	sulfate	61.338	5287	69097	1	-7.08
9	7.31	oxalate	60.605	2900	49227	1	-6.80
Totals			670.286	66249	570708		

File: 97062801.D17 Sample: S97T001016 SPIKE

LABCORE Data Entry Template for Worklist# 18006

Analyst: JK Sefto Instrument: ICPOT-2 JK 5-8-97 Book# 66548B

Method: LA-505-151/161 Rev/Mod C-1

Worklist Comment: JK 5-8-97
ICP T-203 (DIRECT)

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	S97T000733	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S97T000733	0	D	@ICP-D01	LIQUID	97000299	T-203
	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	S97T000733	0	D	@ICP-D01	LIQUID		
9	SPK	S97T000733	0	D	@ICP-D01	LIQUID		
10	ICSA	<u>Sample 1</u> <u>SPK 6x</u> <u>JK 5-8-97</u>			@ICP-QC	QC		
11	ICSAB				@ICP-QC	QC		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18006

S Type	Sample#	R A Test	Matrix	Group#	Project

Final page for worklist # 18006

Analyst Signature	Date	Analyst Signature	Date
<i>DK L</i>	05-08-97	<i>Revised by: Saul H. Pang</i>	5/8/97
5977000733-L	1-10-2-8, DF 505		
5977000733	1-10 101		
5977000733-D	1-10 101		
5977000733-Q	1-10 101, 1/2L sample + 2.02 mL SST5 + 8.08 mL HNO ₃		
5977000733-X	1-10-1-9, 1010		
5977000733-QX	1-10-1-9 1010, 1/4L sample + 1/4L each X04C 28+35 + 7/4L HNO ₃		
5977000781	025-10, DF 401		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Thu 05-08-97 11:33:24 AM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970508A	ICP2	05/08/97	10:31	DKS	Q	GONG
2	ICB	970508A	ICP2	05/08/97	10:37	DKS	Q	GONG
3	LLS	970508A	ICP2	05/08/97	10:40	DKS	Q	GONG
4	ICSA	970508A	ICP2	05/08/97	10:42	DKS	Q	GONG
5	ICSAB	970508A	ICP2	05/08/97	10:45	DKS	Q	GONG
6	S97T000733 L	970508A	ICP2	05/08/97	10:49	DKS	S	GONG
7	S97T000733	970508A	ICP2	05/08/97	10:52	DKS	S	GONG
8	S97T000733 D	970508A	ICP2	05/08/97	10:56	DKS	S	GONG
9	S97T000733 A	970508A	ICP2	05/08/97	10:59	DKS	S	GONG
10	S97T000733 X	970508A	ICP2	05/08/97	11:03	DKS	S	GONG
11	S97T000733 AX	970508A	ICP2	05/08/97	11:06	DKS	S	GONG
12	CCV	970508A	ICP2	05/08/97	11:10	DKS	Q	GONG
13	CCB	970508A	ICP2	05/08/97	11:13	DKS	Q	GONG
14	S97T000781	970508A	ICP2	05/08/97	11:17	DKS	S	GONG
15	ICSA	970508A	ICP2	05/08/97	11:21	DKS	Q	GONG
16	ICSAB	970508A	ICP2	05/08/97	11:24	DKS	Q	GONG
17	CCV 1	970508A	ICP2	05/08/97	11:27	DKS	Q	GONG
18	CCB 1	970508A	ICP2	05/08/97	11:30	DKS	Q	GONG

K 1.0

05-08-97

T-103 S97T000733

OW-106 S97T000781

Post Spike:

$$K = \frac{\left(\frac{18800}{1010}\right) - \left(\frac{8486}{1010}\right)}{10} \times 100 = 102.1\%$$

$$Na = \frac{\left(\frac{52850}{1010}\right) - \left(\frac{42740}{1010}\right)}{10} \times 100 = 100.1\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 476 TO 481

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-08-97 11:33:24 AM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.849	4.847	5.106	4.985	4.912	4.988
2	ICB	.0001	.0022	-.0032	.0077	.0000	.0000
3	LLS	.0226	.0999	.2103	.1051	.1005	.0104
4	ICSA	.0015	242.1	-.0286	-.0003	.0003	-.0000
5	ICSAB	.9569	240.2	-.0163	.0043	.4739	.4708
6	S97T000733 L	3.360	2.465	-1.140	4.601	.6607	-.0429
7	S97T000733-	2.945	.7530	.5456	2.568	.6173	-.0047
8	S97T000733 D	2.909	.1111	1.537	3.053	.6310	.0036
9	S97T000733-A	91.08	96.75	103.6	100.5	98.52	98.54
10	S97T000733-X	5.422	4.340	-2.294	5.809	.6583	-.0850
11	S97T000733-AX	9785.	9933.	10200.	10120.	10320.	10100.
12	CCV	4.916	4.883	5.153	4.989	5.026	5.043
13	CCB	.0057	.0014	-.0007	.0019	.0001	-.0000
14	S97T000781	13.88	26650.	-37.05	17.12	.1228	.4776
15	ICSA	.0030	245.0	-.0062	.0025	.0002	.0002
16	ICSAB	.9596	241.6	-.0422	.0007	.4815	.4755
17	CCV_1	4.906	4.879	5.164	4.989	5.049	5.059
18	CCB_1	.0009	-.0041	-.0093	.0019	.0001	-.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.041	4.882	4.933	4.863	5.035	4.905
2	ICB	.0260	-.0012	-.0015	-.0076	.0004	.0009
3	LLS	.1719	.2272	.0104	.2092	.0420	.0218
4	ICSA	.0136	249.5	.0013	.0129	.0014	-.0021
5	ICSAB	.0195	247.8	.9277	.0108	.4666	.4654
6	S97T000733 L	21.19	.5152	.1797	-.0059	-.3216	43.14
7	S97T000733-	6.813	.8324	.1362	-.4189	.0146	42.28
8	S97T000733 D	7.475	.6145	.0096	-.1405	-.1261	42.87
9	S97T000733-A	106.7	99.07	98.12	97.42	99.93	140.9
10	S97T000733-X	37.66	.6744	-.7715	-1.553	.3870	44.65
11	S97T000733-AX	10360.	10240.	10040.	10270.	10030.	10120.
12	CCV	5.131	5.010	4.987	4.925	5.098	4.973
13	CCB	-.0032	.0005	.0008	.0001	.0009	.0005
14	S97T000781	15.98	11.83	.6260	-1.047	1.495	346.2
15	ICSA	.0243	252.0	.0032	.0107	.0009	-.0032
16	ICSAB	.0317	250.0	.9325	.0144	.4663	.4676
17	CCV_1	5.108	5.048	4.999	4.934	5.111	4.990
18	CCB_1	.0244	.0019	-.0000	-.0003	-.0009	.0017

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.919	-.0009	4.593	5.185	4.935	4.879
2	ICB	-.0000	.0001	-.0003	-.0180	-.0003	.0002
3	LLS	.0176	.0015	.0964	Q.6461	.1033	.0216
4	ICSA	-.0101	-.0267	93.56	.1933	-.0037	.0035
5	ICSAB	.4413	-.0243	92.72	.1182	-.0037	.9931
6	S97T000733 L	.0852	.0609	-.4086	8610.	.2458	-.0001
7	S97T000733-	-.1027	.0434	-.2127	8373.	.0214	.0727
8	S97T000733 D	.0382	.0520	-.3325	8405.	.0816	.1211
9	S97T000733-A	98.02	-.0103	91.32	8580.	99.70	99.39

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-08-97 11:33:24 AM

page 3

#	Sample Name	Cu	Eu	Fe	K	La	Li
10	S97T000733 X	.6106	-.1616	.3073	8486.	.0630	.6099
11	S97T000733_AX	9386.	-2.273	9434.	18800.	10250.	10160.
12	CCV	4.964	-.0005	4.666	4.926	5.016	4.882
13	CCB	-.0003	.0010	-.0009	1.388	-.0002	.0008
14	S97T000781	.3522	.0964	6.331	11450.	.4769	.2398
15	ICSA	-.0102	-.0286	94.54	.0906	-.0038	.0027
16	ICSAB	.4466	-.0270	93.42	.1522	-.0046	.9977
17	CCV 1	4.983	-.0002	4.674	5.068	5.037	4.884
18	CCB_1	.0005	.0009	-.0005	.0419	.0006	.0011

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.946	4.850	5.015	5.092	4.937	4.948
2	ICB	-.0011	.0001	-.0013	.0021	-.0001	.0008
3	LLS	.2163	.0203	.0994	1.957	.2012	.0345
4	ICSA	254.4	-.0059	-.0116	195.5	.0018	.0008
5	ICSAB	252.2	.4403	-.0121	194.8	.0019	.9016
6	S97T000733 L	1.459	-.0185	-1.299	42400.	-.5201	3.850
7	S97T000733_	-.0101	.0234	-.1798	41140.	-.3821	.5340
8	S97T000733 D	.0918	.0347	.0454	41240.	.2288	1.554
9	S97T000733_A	95.44	94.60	100.8	41750.	99.44	96.07
10	S97T000733_X	.4538	.0015	-2.235	42740.	.3726	-3.403
11	S97T000733_AX	10520.	10050.	10050.	52850.	9990.	10050.
12	CCV	4.995	4.911	5.075	5.118	5.012	5.020
13	CCB	-.0018	.0004	-.0009	.0114	.0005	-.0035
14	S97T000781	.5056	.0050	47.05	185400.	-1.229	3.230
15	ICSA	257.5	-.0063	-.0079	198.2	.0035	.0010
16	ICSAB	253.7	.4426	-.0098	195.7	.0015	.9128
17	CCV 1	4.992	4.912	5.072	5.115	5.030	5.011
18	CCB_1	-.0061	.0002	-.0011	.0789	-.0009	.0024

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.013	4.837	4.930	4.745	4.619	5.026
2	ICB	.0093	.0049	-.0131	-.0130	-.0008	.0044
3	LLS	.4083	.2227	-.1954	.0901	.2036	.1356
4	ICSA	.0010	.0299	-.0413	-.0107	-.0427	.0088
5	ICSAB	.0284	.9945	-.0495	-.0028	-.0477	.0045
6	S97T000733 L	753.8	-4.050	120.4	-5.241	3.735	45.84
7	S97T000733_	744.7	-.1944	125.1	-.4777	3.570	49.80
8	S97T000733 D	754.3	1.251	124.8	-.3247	5.604	53.93
9	S97T000733_A	834.3	98.93	222.7	94.93	105.3	154.5
10	S97T000733_X	768.5	-5.304	124.9	-10.39	10.44	57.72
11	S97T000733_AX	10740.	10140.	9979.	10150.	9880.	10520.
12	CCV	5.024	4.891	4.944	4.800	4.684	5.072
13	CCB	-.0062	.0118	-.0004	-.0024	.0291	.0127
14	S97T000781	669.9	54.42	1254.	-3.365	11.45	45.73
15	ICSA	.0001	.0426	-.0486	-.0009	-.0226	.0086
16	ICSAB	.0145	.9944	-.0488	-.0142	-.0278	.0100
17	CCV 1	5.046	4.903	4.933	4.807	4.658	5.071
18	CCB_1	.0073	.0044	-.0094	-.0077	.0291	.0087

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-08-97 11:33:24 AM

page 4

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.827	4.877	.0152	4.831	4.756	9.526
2	ICB	.0019	.0000	.0063	.0000	-.0012	-.0036
3	LLS	.2150	.0205	.0036	.0199	.4018	.5532
4	ICSA	.0099	.0021	-.0063	.0017	.0163	.0530
5	ICSAB	.0068	.0022	-.0041	.0017	-.0003	.0528
6	S97T000733 L	-.2794	.1575	2.840	.0092	9.058	2.292
7	S97T000733-	.2465	.1569	.1254	-.0286	.6634	9.202
8	S97T000733 D	.5839	.1564	-.1904	-.0075	-.8592	14.98
9	S97T000733-A	97.20	98.12	.2847	97.00	97.98	202.8
10	S97T000733-X	-1.831	.1582	4.660	-.2293	-16.05	-5.559
11	S97T000733-AX	9954.	10190.	45.08	10130.	9970.	19450.
12	CCV	4.915	4.961	.0203	4.907	4.789	9.667
13	CCB	.0110	.0001	.0033	.0003	.0091	.0455
14	S97T000781	.0333	.0585	.2438	.0774	6.122	42.36
15	ICSA	-.0006	.0021	-.0036	.0012	.0100	.0051
16	ICSAB	.0012	.0022	-.0042	.0017	.0117	.0225
17	CCV 1	4.934	4.988	.0154	4.929	4.807	9.719
18	CCB 1	.0080	.0001	.0038	.0003	.0133	.0370

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.004	.0052	4.793	4.898
2	ICB	-.0002	.0000	.0008	-.0001
3	LLS	.1066	.0011	.0217	.0229
4	ICSA	.0009	.0072	.0057	-.0009
5	ICSAB	.4638	.0069	.9220	-.0015
6	S97T000733 L	-.1049	-.0010	-.1173	-.3959
7	S97T000733-	.0407	.0040	.1155	.0202
8	S97T000733 D	.1262	.0253	.1477	.1484
9	S97T000733-A	100.4	.0959	96.26	98.25
10	S97T000733-X	-.1894	-.0768	.7962	-.3379
11	S97T000733-AX	10010.	10.34	9399.	10060.
12	CCV	5.068	.0055	4.830	4.968
13	CCB	.0026	.0006	.0008	.0015
14	S97T000781	.0109	-.0180	12.69	1.382
15	ICSA	-.0006	.0067	.0058	-.0022
16	ICSAB	.4664	.0069	.9212	-.0019
17	CCV 1	5.084	.0057	4.833	4.984
18	CCB 1	.0020	.0005	-.0004	.0011

JK 100

05-08-97

LABCORE Data Entry Template for Worklist# 18080

Analyst: A. SATO Instrument: ICPOTBook# 668408Method: LA-505-151/161 Rev/Mod 5-12-97

Worklist Comment: T-203 (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	S97T000731 O D	@ICP-D01 LIQUID		97000299 T-203	
		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	ICSA		@ICP-QC	QC		
8	ICSAB		@ICP-QC	QC		
9	CCV		@ICP-QC	QC		
10	CCB		@ICP-QC	QC		

Final page for worklist # 18080

Analyst Signature JK LCB Date 05-12-97Revised by: Sam M. Pang Date 5/27/97
Analyst Signature _____ Date _____

S97T000731 DIRECT

Data Entry Comments:

Validated 5-19-97

HAnastor

LLS failure for SI, sample will not be
rerun unless requested.

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Mon 05-12-97 09:56:07 AM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970512A	ICP2	05/12/97	09:13	DKS	Q	CONC
2	ICB	970512A	ICP2	05/12/97	09:18	DKS	Q	CONC
3	LLS	970512A	ICP2	05/12/97	09:21	DKS	Q	CONC
4	ICSA	970512A	ICP2	05/12/97	09:24	DKS	Q	CONC
5	ICSAB	970512A	ICP2	05/12/97	09:27	DKS	Q	CONC
6	S97T000731	970512A	ICP2	05/12/97	09:36	DKS	S	CONC
7	ICSA	970512A	ICP2	05/12/97	09:39	DKS	Q	CONC
8	ICSA	970512A	ICP2	05/12/97	09:42	DKS	Q	CONC
9	ICSAB	970512A	ICP2	05/12/97	09:45	DKS	Q	CONC
10	CCV	970512A	ICP2	05/12/97	09:49	DKS	Q	CONC
11	CCB	970512A	ICP2	05/12/97	09:53	DKS	Q	CONC

Handwritten: 5-12-97

Handwritten: 05-12-97

Handwritten: T-203 597T000731

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 483 TO 485

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-12-97 09:56:07 AM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.822	4.845	5.111	4.978	4.921	5.024
2	ICB	.0006	-.0003	-.0211	.0010	.0000	-.0002
3	LLS	.0210	.1087	.2044	.1044	.0992	.0105
4	ICSA	.0015	241.2	-.0167	-.0060	.0003	.0000
5	ICSAB	.9500	238.1	-.0214	-.0038	.4650	.4708
6	S97T000731	.0009	.0088	-.0061	.3092	.0192	.0000
7	ICSA	.0012	.0239.8	.0092	-.0014	.0004	.0001
8	ICSA	.0032	237.7	.0128	-.0029	.0004	.0002
9	ICSAB	.9439	237.7	-.0258	-.0073	.4650	.4696
10	CCV	4.807	4.803	5.118	4.957	4.869	5.019
11	CCB	.0006	.0067	-.0062	.0082	.0001	.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.959	4.821	4.906	4.864	5.006	4.870
2	ICB	-.0083	.0001	-.0017	-.0019	.0003	.0006
3	LLS	.1540	.2064	.0107	.1963	.0405	.0208
4	ICSA	-.0286	248.0	.0002	.0063	-.0019	-.0014
5	ICSAB	-.0121	246.3	.9240	.0077	.4623	.4623
6	S97T000731	.0039	18.24	.0004	.0037	.0009	.00491
7	ICSA	.0140	.0247.7	.0029	.0150	.0005	.0030
8	ICSA	.0075	247.2	.0033	.0097	.0005	-.0019
9	ICSAB	-.0237	245.8	.9143	.0133	.4586	.4578
10	CCV	4.900	4.935	4.909	4.813	5.017	4.880
11	CCB	-.0109	.0014	.0011	.0057	-.0008	.0001

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.963	-.0011	4.586	4.763	4.941	4.941
2	ICB	.0009	-.0003	.0001	-.0341	.0011	-.0011
3	LLS	.0189	.0007	.0905	.4221	.1012	.0207
4	ICSA	-.0084	-.0262	93.21	.0577	-.0033	.0028
5	ICSAB	.4389	-.0249	92.16	.0091	-.0038	.9827
6	S97T000731	.0047	.0145	.2098	1.898	.0013	.0049
7	ICSA	.0084	.0281	.022.46	.1333	.0036	.0028
8	ICSA	-.0086	-.0250	92.45	.0527	-.0040	.0024
9	ICSAB	.4408	-.0244	91.83	.1619	-.0034	.9819
10	CCV	4.907	-.0004	4.589	4.763	4.890	4.862
11	CCB	.0007	.0005	.0003	-.0258	.0007	-.0001

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.966	4.809	4.997	5.083	4.951	4.899
2	ICB	.0011	-.0001	-.0000	-.0017	.0034	.0028
3	LLS	.2150	.0200	.1015	.1525	.1992	.0378
4	ICSA	.252.0	.0058	-.0083	.135.2	.0045	-.0076
5	ICSAB	.249.8	.4381	-.0081	193.5	.0012	.9044
6	S97T000731	3.822	.0441	.0012	9.087	.0071	.0068
7	ICSA	.0250.8	-.0057	-.0086	193.9	.0033	-.0052
8	ICSA	.251.3	-.0060	-.0124	195.0	.0034	-.0014

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-12-97 09:56:07 AM

page 3

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
9	ICSAB	249.1	.4346	-.0105	193.3	.0038	.8953
10	CCV	4.911	4.806	4.980	5.010	4.886	4.910
11	CCB	.0075	.0004	.0019	.0076	.0006	.0017

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.058	4.799	4.910	4.749	4.637	4.984
2	ICB	.0021	-.0130	-.0050	-.0056	.0005	.0019
3	LLS	.4085	.2019	.2004	.0952	.2120	.1467
4	ICSA	-.0066	.0409	-.0380	.0003	-.0108	.0092
5	ICSAB	-.0078	.9909	-.0542	-.0157	-.0250	.0055
6	S97T000731	.0704	.0092	6.031	-.0022	.0386	2.593
7	ICSA	.0150	.0330	-.0118	-.0012	.0087	.0141
8	ICSA	-.0001	.0314	-.0256	-.0115	-.0238	.0043
9	ICSAB	.0119	.9592	-.0170	-.0173	-.0016	.0052
10	CCV	5.028	4.787	4.943	4.754	4.637	4.986
11	CCB	-.0101	-.0076	.0008	.0006	.0245	.0087

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.844	4.901	.0219	4.855	4.745	9.564
2	ICB	-.0035	-.0000	.0006	.0007	-.0131	-.0220
3	LLS	.2065	.0204	-.0053	.0204	.3815	.5155
4	ICSA	.0097	.0022	-.0128	.0017	.0143	-.0260
5	ICSAB	.0062	.0022	-.0081	.0020	.0006	-.0222
6	S97T000731	.0126	.0936	-.0081	.0006	-.0188	.1710
7	ICSA	.0040	.0020	-.0020	.0020	.0382	-.0224
8	ICSA	.0029	.0021	-.0119	.0014	-.0025	-.0403
9	ICSAB	.0015	.0021	-.0085	.0020	.0067	-.0514
10	CCV	4.789	4.855	.0240	4.817	4.676	9.466
11	CCB	.0052	.0003	-.0041	.0002	-.0208	.0243

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.996	.0049	4.749	4.893
2	ICB	-.0011	-.0002	-.0017	-.0011
3	LLS	.1032	.0007	.0205	.0221
4	ICSA	.0009	.0068	.0047	-.0018
5	ICSAB	.4628	.0069	.9172	-.0010
6	S97T000731	.0021	.0012	.0795	.0022
7	ICSA	.0010	.0068	.0061	-.0014
8	ICSA	.0002	.0067	.0053	-.0021
9	ICSAB	.4587	.0067	.9087	-.0028
10	CCV	4.983	.0051	4.757	4.860
11	CCB	.0009	.0003	.0003	.0010

K L D
05-12-97

LABCORE Data Entry Template for Worklist# 18122

Analyst: D. SATO Instrument: ICP-AES Book# 668418Method: LA-505-151/161 Rev/Mod C-1

Worklist Comment: T-203 (SOLID FUSION 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-F01	SOLID		
7	SERDIL	S97T000757 0 F	@ICP-F01	SOLID		
8	SAMPLE	S97T000757 0 F	@ICP-F01	SOLID	97000299	T-203
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, 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						
9	DUP	S97T000757 0 F	@ICP-F01	SOLID		
10	SPK	S97T000757 0 F	@ICP-F01	SOLID		
11	CCV		@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S97T000738 0 F	@ICP-F01	SOLID	97000299	T-203
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, 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:

High RPD on Fe for S97T000738 (139%) -
sample can be rerun if requested. HLA 5.19.97

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

05/14/97 14:36
A-0004-1

Page: 2

LABCORE Data Entry Template for Worklist# 18122

S Type	Sample#	R A	Test	Matrix	Group#	Project
14 DUP	S97T000738	0 F	@ICP-F01	SOLID		
15 SAMPLE	S97T000760	0 F	@ICP-F01	SOLID	97000299	T-203
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, 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						
16 DUP	S97T000760	0 F	@ICP-F01	SOLID		
17 ICSA			@ICP-QC	QC		
18 ICSAB			@ICP-QC	QC		
19 CCV			@ICP-QC	QC		
20 CCB			@ICP-QC	QC		

Final page for worklist # 18122

JK [Signature] 05-13-97
 Analyst Signature Date

Revised by: [Signature] 5/22/97
 Analyst Signature Date

Prepbk Lit, .25-10 mL, 3F 1

S97T000737.1, .25-10-28, 3F 205

S97T000737, .25-10 41

S97T000737.2, .25-10 41

S97T000737.2, .25-10 41

S97T000737-X, .25-10-19, 3F 410

S97T000737-QX, .25-10-19 410, 1 mL sample + 1 mL conc x HCl 18.435 + 7 mL HNO₃

S97T000738, .25-10, 3F 41

S97T000738-D, .25-10 41

S97T000740, .25-10 41

S97T000740-D, .25-10 41

Data Entry Comments:

Validated 5.19.97 by H Anasts

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Tue 05-13-97 10:05:24 AM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970513A	ICP2	05/13/97	08:37	DKS	Q	CONC
2	ICB	970513A	ICP2	05/13/97	08:40	DKS	Q	CONC
3	LLS	970513A	ICP2	05/13/97	08:43	DKS	Q	CONC
4	ICSA	970513A	ICP2	05/13/97	08:46	DKS	Q	CONC
5	ICSAB	970513A	ICP2	05/13/97	08:49	DKS	Q	CONC
6	PREPLKTJA	970513A	ICP2	05/13/97	08:52	DKS	Q	CONC
7	S97T000757 L	970513A	ICP2	05/13/97	08:55	DKS	S	CONC
8	S97T000757	970513A	ICP2	05/13/97	08:58	DKS	S	CONC
9	S97T000757 D	970513A	ICP2	05/13/97	09:00	DKS	S	CONC
10	S97T000757 A	970513A	ICP2	05/13/97	09:04	DKS	S	CONC
11	S97T000757 X	970513A	ICP2	05/13/97	09:07	DKS	S	CONC
12	S97T000757 AX	970513A	ICP2	05/13/97	09:10	DKS	S	CONC
13	CCV	970513A	ICP2	05/13/97	09:31	DKS	Q	CONC
14	CCB	970513A	ICP2	05/13/97	09:34	DKS	Q	CONC
15	S97T000738	970513A	ICP2	05/13/97	09:37	DKS	S	CONC
16	S97T000738 D	970513A	ICP2	05/13/97	09:40	DKS	S	CONC
17	S97T000760	970513A	ICP2	05/13/97	09:43	DKS	S	CONC
18	S97T000760 D	970513A	ICP2	05/13/97	09:46	DKS	S	CONC
19	ICSA	970513A	ICP2	05/13/97	09:53	DKS	Q	CONC
20	ICSAB	970513A	ICP2	05/13/97	09:56	DKS	Q	CONC
21	CCV 1	970513A	ICP2	05/13/97	09:59	DKS	Q	CONC
22	CCB 1	970513A	ICP2	05/13/97	10:02	DKS	Q	CONC

05-13-97

T-203

597T000757

597T000738

597T000760

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 488 TO 492

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Tue 05-13-97 10:05:24 AM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.903	4.862	5.149	4.952	4.939	5.022
2	ICB	.0003	.0008	.0197	-.0010	.0000	.0001
3	LLS	.0211	.0985	.2256	.1038	.1013	.0105
4	ICSA	.0017	241.2	-.0102	-.0074	.0004	.0004
5	ICSAB	.9579	241.1	.0077	-.0042	.4761	.4726
6	PREPBLKTJA	-.0002	.0070	.0149	-.0010	.0002	-.0000
7	S97T000757 L	.0046	-2.004	2.977	-.5965	.0534	-.0268
8	S97T000757	-.0016	.4702	.8041	-.1385	.0560	-.0034
9	S97T000757 D	-.0013	.4345	1.420	.0609	.0559	.0055
10	S97T000757 A	17.45	41.28	44.06	39.91	40.58	40.95
11	S97T000757 X	.3566	2.803	6.363	-1.397	.0564	.0711
12	S97T000757 AX	398.4	4041.	4147.	4032	4179.	4108
13	CCV	4.922	4.912	5.205	5.021	5.002	5.078
14	CCB	.0062	.0079	.0152	.0019	.0001	.0002
15	S97T000738	.0100	.5749	.6522	.0328	.0700	.0181
16	S97T000738 D	.0229	.5003	1.002	.0220	.0726	.0037
17	S97T000760	.0235	4.650	.5771	.2210	.0620	.0055
18	S97T000760 D	.0112	.1253	.3678	-.0390	.0615	.0001
19	ICSA	.0055	241.9	.0224	-.0058	.0004	.0005
20	ICSAB	.9668	239.9	.0109	.0004	.4734	.4747
21	CCV 1	4.880	4.794	5.101	4.891	4.860	4.987
22	CCB 1	.0028	-.0145	.0083	.0029	.0002	-.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.035	5.001	5.018	4.888	5.089	4.988
2	ICB	.0030	.0035	.0006	-.0008	.0007	-.0006
3	LLS	Q.1307	.2131	.0111	.1987	.0412	.0213
4	ICSA	-.0181	248.2	.0024	.0126	.0018	-.0040
5	ICSAB	.0031	250.9	.9352	.0101	.4655	.4685
6	PREPBLKTJA	.0033	.0158	.0003	-.0023	.0018	.0003
7	S97T000757 L	85.69	2.755	-.0780	.8881	-.1207	7.454
8	S97T000757	84.44	1.268	.0364	.0792	.0761	7.381
9	S97T000757 D	83.38	.9855	.0208	.2508	.0997	7.560
10	S97T000757 A	126.8	42.30	41.32	40.71	41.95	48.54
11	S97T000757 X	80.69	2.388	-.3123	1.449	1.297	7.761
12	S97T000757 AX	4286.	4297	4152.	4170.	4115.	4184.
13	CCV	5.076	5.045	5.024	4.920	5.106	5.001
14	CCB	.0126	.0036	.0002	.0081	.0004	.0004
15	S97T000738	53.52	1.048	.0341	.0084	.1149	6.098
16	S97T000738 D	59.55	.8036	.0592	.2013	.0460	6.378
17	S97T000760	61.01	.7853	.0443	.3754	.0699	6.446
18	S97T000760 D	68.60	.8257	-.0202	.2640	.0855	6.761
19	ICSA	.0026	256.9	.0015	.0182	.0009	-.0012
20	ICSAB	-.0257	256.8	.9454	.0159	.4753	.4739
21	CCV 1	4.961	5.120	4.999	4.800	5.090	4.986
22	CCB 1	-.0043	.0096	-.0001	.0032	.0016	.0003

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Tue 05-13-97 10:05:24 AM

page 3

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.874	-.0006	4.655	4.942	4.953	4.830
2	ICB	-.0010	.0003	-.0009	-.0260	-.0004	.0006
3	LLS	.0168	.0006	.0925	.4899	.1015	.0216
4	ICSA	-.0098	-.0332	92.99	.1593	-.0048	.0025
5	ICSAB	.4391	-.0352	93.23	.2510	-.0057	.9869
6	PREPBLKTJA	-.0005	.0005	.0062	Q299.6	-.0001	.0002
7	S97T000757 L	.0444	.0908	5.420	12460.	22.68	.0985
8	S97T000757	.1831	.0268	5.157	12160.	22.11	.0100
9	S97T000757 D	.0521	.0167	4.672	12340.	21.54	.0051
10	S97T000757 A	40.33	-.0019	43.71	12440.	63.88	39.50
11	S97T000757 X	.1686	.1506	5.626	12290.	22.30	.2460
12	S97T000757 AX	3735.	-.6600	3897.	16660.	4168.	.4036.
13	CCV	4.940	-.0013	4.695	5.047	4.994	4.899
14	CCB	-.0000	.0001	.0003	.1728	.0004	-.0001
15	S97T000738	.0436	-.0068	36.84	11870.	14.99	-.0047
16	S97T000738 D	.0374	.0346	6.427	11860.	16.15	.0198
17	S97T000760	.0442	.0478	4.397	11510.	14.78	.0543
18	S97T000760 D	-.0213	.0276	3.981	11770.	16.55	.0149
19	ICSA	-.0095	-.0462	94.64	.2520	-.0043	.0034
20	ICSAB	.4330	-.0466	94.12	.1407	-.0049	.9667
21	CCV 1	4.771	.0009	4.648	4.743	4.853	4.695
22	CCB 1	-.0007	.0018	-.0013	.2532	.0001	.0016

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.962	4.930	5.048	5.039	4.951	5.012
2	ICB	.0071.	.0002	.0025	.0034	-.0024	-.0010
3	LLS	.2106	.0203	.1024	Q.1439	.2005	.0415
4	ICSA	251.7	-.0056	-.0088	195.8	.0028	-.0123
5	ICSAB	251.0	.4447	-.0065	195.7	.0012	.9084
6	PREPBLKTJA	.0128	.0016	.0007	.0461	-.0018	Q.2437
7	S97T000757 L	.8049	24.74	-.6996	71.08	-.0027	31.95
8	S97T000757 D	.4064	24.11	-.1105	78.75	.0135	25.36
9	S97T000757 A	.5363	24.14	.0059	82.53	-.0153	20.29
10	S97T000757 X	41.01	64.54	41.85	122.3	41.03	67.68
11	S97T000757 AX	3.893	24.75	.7039	57.43	.4831	24.33
12	CCV	4.275.	4187.	4110.	4158.	4041.	4181.
13	CCB	5.004	4.935	5.058	5.100	4.990	4.991
14	S97T000738	.0047	.0002	.0008	.0017	.0002	-.0042
15	S97T000738 D	.1354	16.59	.0057	72.18	-.0223	35.48
16	S97T000760	.2922	17.82	.0145	72.48	-.0235	73.08
17	S97T000760 D	.5102	16.55	-.0632	76.49	-.0942	55.16
18	S97T000760 D	.1503	18.05	.0769	80.27	-.0848	16.34
19	ICSA	253.1	-.0051	-.0088	194.2	.0026	-.0086
20	ICSAB	250.7	.4494	-.0075	192.8	.0042	.9308
21	CCV 1	4.899	4.901	5.019	4.918	4.848	4.990
22	CCB 1	.0031	.0007	.0033	-.0162	.0013	-.0112

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Tue 05-13-97 10:05:24 AM

page 4

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.052	4.940	4.949	4.773	4.692	5.039
2	ICB	.0043	.0001	-.0110	-.0070	.0016	.0109
3	LLS	.4180	.2170	.2016	.1044	.2076	.1458
4	ICSA	.0187	.0295	-.0417	.0193	-.0460	.0121
5	ICSAB	.0090	1.003	-.0370	.0011	-.0335	.0086
6	PREPLKTJA	-.0026	.0160	-.0054	-.0071	.0004	.0426
7	S97T000757 L	4.402	-2.799	-2.232	-3179	-.3938	9.555
8	S97T000757	4.138	-1416	-.2084	-.0963	.6209	5.001
9	S97T000757 D	4.516	.5077	.1459	.0046	.4929	2.560
10	S97T000757 A	46.10	39.97	40.77	39.91	38.77	46.29
11	S97T000757 X	14.48	1.196	-3.192	-1.015	6.993	9.204
12	S97T000757 AX	4123.	4201.	4003.	4132.	4031.	4290.
13	CCV	5.068	4.916	4.976	4.799	4.688	5.057
14	CCB	.0031	-.0123	-.0014	.0047	.0032	.0065
15	S97T000738	3.384	.0235	.0880	.2263	.7637	1.728
16	S97T000738 D	4.176	-.0176	-.3199	.2875	.5317	2.437
17	S97T000760	3.668	.2375	.0428	-.0474	1.663	13.08
18	S97T000760 D	4.341	-.4024	.0209	-.0803	.8491	1.811
19	ICSA	.0279	.0381	-.0367	-.0162	-.0321	.0216
20	ICSAB	.0250	1.007	-.0395	-.0048	-.0276	.0170
21	CCV 1	4.967	4.902	4.933	4.752	4.660	5.019
22	CCB 1	.0073	-.0051	-.0067	-.0069	.0364.	.0165

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.834	4.896	.0222	4.835	4.877	9.468
2	ICB	.0035	.0001	-.0017	-.0005	-.0144	.0171
3	LLS	.2069	.0206	-.0028	.0203	.4018	.5210
4	ICSA	-.0011	.0020	.0013	.0013	.0321	-.0560
5	ICSAB	-.0006	.0021	-.0096	.0012	.0351	-.0600
6	PREPLKTJA	.0060	.0003	.0043	-.0004	.0018	-.0536
7	S97T000757 L	.8742	.8171	.6993	.0537	-3.630	1.951
8	S97T000757	.0943	.7766	.1426	.0629	-1.050	-2.540
9	S97T000757 D	-.0323	.7786	.3804	.0234	-1.137	-3.243
10	S97T000757 A	39.87	41.32	.5486	40.03	39.44	74.93
11	S97T000757 X	1.578	.8381	.3131	.2028	-5.700	7.680
12	S97T000757 AX	3996.	4127.	19.53	4081.	4125.	7753.
13	CCV	4.883	4.954	.0213	4.873	4.847	9.597
14	CCB	-.0014	.0001	.0012	.0000	-.0136	.0091
15	S97T000738	-.2244	.4798	.4746	.0642	-.8213	-3.537
16	S97T000738 D	.3328	.4927	.2489	.0531	-.2807	-1.752
17	S97T000760	.4932	.5313	.1959	.0426	-.9631	-1.032
18	S97T000760 D	.1498	.6260	.1420	.0220	.4352	-1.807
19	ICSA	.0095	.0020	-.0036	.0020	.0279	-.0749
20	ICSAB	.0113	.0020	-.0028	.0018	.0628	-.0707
21	CCV 1	4.738	4.824	.0206	4.778	4.758	9.301
22	CCB 1	.0219	.0005	-.0026	-.0000	-.0097	.0967

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Tue 05-13-97 10:05:24 AM

page 5

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.035	.0057	4.842	4.912
2	ICB	.0005	.0004	.0003	.0005
3	LLS	.1037	.0007	.0201	.0214
4	ICSA	-.0004	.0067	.0068	-.0034
5	ICSAB	.4622	.0068	.9187	-.0024
6	PREPBLKTJA	.0014	.0003	-.0008	.0001
7	S97T000757 L	.1381	.0795	-.0803	.0212
8	S97T000757	.0284	.0107	-.1253	-.0088
9	S97T000757 D	-.0023	.0046	-.1268	-.0409
10	S97T000757 A	41.46	.0420	39.62	40.43
11	S97T000757 X	.3644	.1253	.0253	.1185
12	S97T000757 AX	4076	4.448	3867	4071
13	CCV	5.063	.0054	4.847	4.937
14	CCB	-.0002	.0001	-.0000	-.0001
15	S97T000738	-.0283	.0015	-.1423	-.0336
16	S97T000738 D	.0777	.0264	-.4469	.0126
17	S97T000760	.1017	.0326	-.3042	.0763
18	S97T000760 D	.0624	.0233	-.0500	.0209
19	ICSA	.0021	.0072	.0057	-.0003
20	ICSAB	.4686	.0074	.9321	-.0001
21	CCV 1	5.003	.0065	4.853	4.845
22	CCB 1	.0045	.0011	-.0007	.0027

JK SA

05-13-97

LABCORE Data Entry Template for Worklist# 18123

Analyst: D. SAND Instrument: ICP^{RF} Book# 668476
Method: LA-505-151/161 Rev/Mod C-1
5-12-97
Worklist Comment: T-203 (SOLID FUSION 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-F01	SOLID		
7	SERDIL	S97T000735	0 F	@ICP-F01	SOLID	
8	SAMPLE	S97T000735	0 F	@ICP-F01	SOLID	97000299 T-203
	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, P-F-01, PB-F-01, S-F-01, SB-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					
9	DUP	S97T000735	0 F	@ICP-F01	SOLID	
10	SPK	S97T000735	0 F	@ICP-F01	SOLID	
11	CCV		@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S97T000737	0 F	@ICP-F01	SOLID	97000299 T-203
	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, P-F-01, PB-F-01, S-F-01, SB-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:

High RPD on Fe S97T000737 (70.24%)
Can be rerun if requested- Hla 5-19-97

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

05/14/97 14:38
A-0004.1

Page: 2

LABCORE Data Entry Template for Worklist# 18123

S Type	Sample#	R A	Test	Matrix	Group#	Project
14 DUP	S97T000737	0 F	@ICP-F01	SOLID		
15 SAMPLE	S97T000759	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
16 DUP	S97T000759	0 F	@ICP-F01	SOLID		
17 ICSA			@ICP-QC	QC		
18 IC SAB			@ICP-QC	QC		
19 CCV			@ICP-QC	QC		
20 CCB			@ICP-QC	QC		

Final page for worklist # 18123

JK LdB
Analyst Signature Date 05-16-97

*Revised by:
Saul M. Pang*
Analyst Signature Date 5/27/97

PBTJA . 250ml - 10ml DE.
S97T000 735-L . 250ml - 10ml - 2ml - 5ml 205
735 . 250 - 10ml 41
735-A . 250ml - 10ml 41
735-A . 250ml - 205ml (5575) - 7.35ml 41
735-X . 250ml - 10ml - 1ml - 2ml 410
735-AX . 250ml - 10ml - 1ml - 1ml - 1ml (10X(20+25)) - 7ml 410
S97T000 737 . 250ml - 10ml 41
737-A . 250 - 1 - 10ml 41
S97T000 759 . 250ml - 10ml 41
759-A . 250 - 1 - 10ml 41

Data Entry Comments:

Validated by J. Anasto 5.19.97

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Mon 05-12-97 01:04:44 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970512B	ICP2	05/12/97	11:41	DKS	Q	CONC
2	ICB	970512B	ICP2	05/12/97	11:45	DKS	Q	CONC
3	LLS	970512B	ICP2	05/12/97	11:48	DKS	Q	CONC
4	ICSA	970512B	ICP2	05/12/97	11:51	DKS	Q	CONC
5	ICSAB	970512B	ICP2	05/12/97	11:54	DKS	Q	CONC
6	PREPBLKTJA	970512B	ICP2	05/12/97	11:57	DKS	Q	CONC
7	S97T000735_L	970512B	ICP2	05/12/97	12:00	DKS	S	CONC
8	S97T000735	970512B	ICP2	05/12/97	12:03	DKS	S	CONC
9	S97T000735_D	970512B	ICP2	05/12/97	12:06	DKS	S	CONC
10	S97T000735_A	970512B	ICP2	05/12/97	12:10	DKS	S	CONC
11	S97T000735_X	970512B	ICP2	05/12/97	12:13	DKS	S	CONC
12	S97T000735_AX	970512B	ICP2	05/12/97	12:16	DKS	S	CONC
13	CCV	970512B	ICP2	05/12/97	12:21	DKS	Q	CONC
14	CCB	970512B	ICP2	05/12/97	12:34	DKS	Q	CONC
15	S97T000737	970512B	ICP2	05/12/97	12:37	DKS	S	CONC
16	S97T000737_D	970512B	ICP2	05/12/97	12:40	DKS	S	CONC
17	S97T000759	970512B	ICP2	05/12/97	12:43	DKS	S	CONC
18	S97T000759_D	970512B	ICP2	05/12/97	12:46	DKS	S	CONC
19	ICSA	970512B	ICP2	05/12/97	12:52	DKS	Q	CONC
20	ICSAB	970512B	ICP2	05/12/97	12:54	DKS	Q	CONC
21	CCV_1	970512B	ICP2	05/12/97	12:58	DKS	Q	CONC
22	CCB_1	970512B	ICP2	05/12/97	13:02	DKS	Q	CONC

JK

597T000735

05-12-97

597T000737

T.203

597T000759

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 4910 TO 500

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-12-97 01:04:44 PM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.802	4.833	5.101	4.911	4.844	5.024
2	ICB	-.0003	.0038	.0032	-.0005	.0000	.0002
3	LLS	.0207	.0914	.2067	.0994	.0980	.0105
4	ICSA	.0025	243.3	.0019	-.0020	.0003	.0004
5	IC SAB	.9544	240.3	.0282	-.0047	.4665	.4746
6	PREPBLKTJA	.0001	.0149	.0016	.0029	.0001	.0003
7	S97T000735_L	.0386	2.342	.4164	-.1934	.2888	.0528
8	S97T000735_-	-.0172	.2287	.0218	.0404	.2848	.0019
9	S97T000735_D	.0289	.6731	-.4543	.0794	.2720	.0037
10	S97T000735_A	33.14	39.42	41.61	39.19	38.83	40.09
11	S97T000735_X	.7025	3.218	3.452	.0008	.3404	.1959
12	S97T000735_AX	3124.	3979.	4051.	4007.	4061.	4056.
13	CCV	4.902	4.847	5.122	4.919	4.857	5.004
14	CCB	.0075	.0075	.0074	-.0014	-.0000	.0003
15	S97T000737	.0402	.5517	.2632	.1671	1.233	.0107
16	S97T000737_D	.0105	.2473	.4637	.0420	1.211	.0020
17	S97T000759_-	.0505	.7706	.0193	-.0383	.0462	.0054
18	S97T000759_D	.0152	.9352	.2153	.0202	.0440	.0160
19	ICSA	.0056	242.9	.0044	.0013	.0004	.0006
20	IC SAB	.9560	240.8	-.0372	.0019	.4660	.4748
21	CCV_1	4.835	4.884	5.096	4.947	4.900	5.059
22	CCB_1	.0028	.0102	.0033	.0024	.0000	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.977	4.829	4.929	4.843	4.994	4.883
2	ICB	-.0139	.0030	.0020	-.0041	.0016	.0001
3	LLS	.1691	.2091	.0112	.1984	.0410	.0196
4	ICSA	.0091	248.2	.0042	.0166	-.0009	-.0033
5	IC SAB	-.0268	246.5	.9315	.0115	.4652	.4641
6	PREPBLKTJA	.0183	.0087	.0026	.0023	.0015	.0008
7	S97T000735_L	65.52	1.757	.3821	.1101	.3707	5.851
8	S97T000735_-	61.07	1.076	.0528	-.0314	.0525	5.625
9	S97T000735_D	51.57	.5833	.0745	.2334	.0373	5.511
10	S97T000735_A	100.1	41.09	39.97	39.07	40.31	45.22
11	S97T000735_X	59.21	3.221	.5012	-.6029	.6610	5.921
12	S97T000735_AX	4166.	4111.	4051.	4097.	4049.	4067.
13	CCV	4.980	4.933	4.948	4.837	5.024	4.923
14	CCB	.0296	.0032	.0006	-.0038	.0022	.0007
15	S97T000737	50.87	1.099	.0738	-.0030	.1387	3.598
16	S97T000737_D	53.31	.9530	.0050	-.3496	.0199	3.616
17	S97T000759_-	71.66	.6110	.0761	.0279	.0481	4.998
18	S97T000759_D	67.79	.4820	.0809	-.1297	.0871	5.184
19	ICSA	-.0240	248.0	.0035	.0161	-.0003	-.0023
20	IC SAB	.0192	245.4	.9259	.0122	.4617	.4628
21	CCV_1	4.923	4.895	4.930	4.875	5.007	4.905
22	CCB_1	-.0065	.0059	.0014	.0011	.0001	-.0003

HNF-SD-WM-DP-247, REV. 0

Mon 05-12-97 01:04:44 PM

page 3

Analysis Report

Averages

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.878	-.0003	4.580	5.063	4.927	4.856
2	ICB	-.0004	.0010	-.0017	-.0312	-.0003	.0011
3	LLS	.0167	.0014	.0885	.5080	.1010	.0222
4	ICSA	-.0096	-.0253	93.72	.0001	-.0049	.0035
5	ICSAB	.4375	-.0234	92.72	.0846	-.0044	.9832
6	PREFBLKTJA	.0004	.0006	.0007	Q263.8	.0001	.0005
7	S97T000735_L	.1413	.2515	3.894	11970.	18.65	.2462
8	S97T000735_A	.0185	.0576	4.133	11790.	18.26	.0741
9	S97T000735_D	.0569	.0444	3.715	12330.	17.99	.0494
10	S97T000735-X	39.49	.0230	41.67	11910.	58.09	38.59
11	S97T000735-X	.3105	.0710	3.389	12060.	18.59	.0492
12	S97T000735-AX	3736.	-.2179	3797.	16310.	4110.	4021.
13	CCV	4.848	.0007	4.613	4.730	4.911	4.819
14	CCB	-.0002	.0007	-.0020	-.0048	-.0001	.0005
15	S97T000737	.0521	.0380	29.49	11900.	17.05	.0198
16	S97T000737_D	.0344	.0096	61.87	11980.	17.06	.0100
17	S97T000759	.0308	.0059	4.365	11930.	19.01	.0150
18	S97T000759_D	.1023	-.0113	4.050	12040.	19.66	-.0096
19	ICSA	-.0094	-.0263	93.54	.0887	-.0037	.0035
20	ICSAB	.4402	-.0224	92.45	.1726	-.0038	.9920
21	CCV_1	4.931	-.0004	4.602	5.003	4.963	4.927
22	CCB_1	.0000	.0000	.0008	-.0934	.0008	-.0001

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.947	4.811	4.961	5.022	4.909	4.878
2	ICB	.0002	.0006	.0025	.0089	-.0021	.0047
3	LLS	.2062	.0200	.0980	.1561	.1956	.0450
4	ICSA	255.0	-.0056	-.0056	196.9	.0035	.0080
5	ICSAB	252.0	.4409	-.0088	194.5	.0027	.9219
6	PREFBLKTJA	.0034	.0012	.0020	.0315	-.0014	Q.1584
7	S97T000735_L	1.294	19.79	.3486	69.35	.3441	82.53
8	S97T000735-A	.2217	19.42	.0224	76.97	-.0436	80.85
9	S97T000735_D	.4259	18.93	.0143	76.83	-.0049	78.03
10	S97T000735-X	39.74	57.84	40.18	118.0	39.49	119.0
11	S97T000735-X	1.775	19.73	2.144	56.00	.1234	85.02
12	S97T000735-AX	4218.	4068.	4046.	4103.	3966.	4113.
13	CCV	4.974	4.861	4.979	5.013	4.879	4.905
14	CCB	-.0049	.0003	.0036	.0055	-.0014	-.0084
15	S97T000737	.2795	16.39	.1215	74.58	-.0731	76.36
16	S97T000737_D	.0007	16.60	-.0169	73.66	-.1132	92.66
17	S97T000759	.4641	21.09	.0517	71.04	-.0434	101.9
18	S97T000759_D	.1619	21.54	.0971	73.27	-.0347	122.7
19	ICSA	254.9	-.0055	-.0067	196.8	.0024	-.0044
20	ICSAB	252.9	.4387	-.0071	195.5	.0034	.9145
21	CCV_1	5.003	4.837	4.971	5.076	4.938	4.920
22	CCB_1	.0032	-.0001	.0028	.0017	-.0018	.0031

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-12-97 01:04:44 PM

page 4

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.977	4.807	4.826	4.719	4.656	4.947
2	ICB	-.0002	.0045	-.0061	-.0021	.0114	.0048
3	LLS	.3814	.2204	.1991	.0971	.1942	.1413
4	ICSA	.0012	.0416	-.0396	-.0049	-.0523	.0070
5	ICSAB	.0058	.9886	-.0237	-.0003	-.0450	.0122
6	PREPBLKTJA	.0089	.0122	-.0059	-.0009	.0031	.0120
7	S97T000735_L	4.027	1.542	.3155	.5514	-1.340	4.388
8	S97T000735_-	3.988	-.6680	.1680	.0988	-.1645	1.899
9	S97T000735_D	4.514	-.4167	.2248	-.0684	-.3590	2.179
10	S97T000735_A	45.51	38.89	39.62	38.06	38.32	42.36
11	S97T000735_X	4.182	5.689	-2.979	-.9552	-4.156	5.605
12	S97T000735_AX	4014	4094	3927	4097	3958	4213
13	CCV	4.980	4.887	4.926	4.743	4.663	4.999
14	CCB	-.0074	.0178	-.0079	-.0078	.0179	.0031
15	S97T000737	4.061	.1660	.0497	.1792	.4870	2.167
16	S97T000737_D	5.124	.0080	.2994	-.3732	-.1220	1.815
17	S97T000759_-	3.892	.0982	.2427	-.5392	-.4457	1.621
18	S97T000759_D	4.439	-.0834	-.2381	-.1997	-.1550	1.747
19	ICSA	.0066	.0311	-.0344	-.0072	-.0290	.0109
20	ICSAB	.0162	.9834	-.0255	-.0100	-.0508	.0067
21	CCV_1	4.981	4.822	4.883	4.742	4.682	4.991
22	CCB_1	-.0141	.0072	-.0114	.0025	-.0040	-.0012

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.847	4.869	.0326	4.812	4.734	9.454
2	ICB	.0136	.0001	-.0025	-.0000	.0195	.0502
3	LLS	.2169	.0203	-.0078	.0191	.4074	.5535
4	ICSA	.0065	.0022	-.0105	.0005	.0516	-.0225
5	ICSAB	.0101	.0023	-.0080	.0015	.0293	-.0231
6	PREPBLKTJA	.0094	.0003	.0056	-.0002	.0472	-.0453
7	S97T000735_L	3.404	.8947	.7000	.1033	-1.458	9.314
8	S97T000735_-	.7129	.8594	.0155	.0418	.3337	-.9252
9	S97T000735_D	.4400	.8595	.3937	.0432	-.9716	-1.626
10	S97T000735_A	38.97	39.92	.4360	39.02	38.18	74.02
11	S97T000735_X	2.339	.8952	-.0203	-.0988	.0363	3.250
12	S97T000735_AX	3969.	4054.	27.37	4077.	3973.	7748.
13	CCV	4.823	4.844	.0298	4.805	4.753	9.445
14	CCB	.0092	.0001	-.0034	-.0003	.0093	.0354
15	S97T000737	.3544	.8531	.1967	.3337	-.3106	-1.740
16	S97T000737_D	.0712	.8466	.0019	.0820	-.6529	-3.049
17	S97T000759_-	.0476	.8636	.3463	.0433	-1.164	-3.381
18	S97T000759_D	-.2583	.9511	.3626	.0534	-.7903	-4.152
19	ICSA	.0106	.0022	-.0016	.0010	-.0133	-.0258
20	ICSAB	.0078	.0023	-.0018	.0015	-.0035	-.0252
21	CCV_1	4.875	4.911	.0363	4.846	4.745	9.528
22	CCB_1	-.0009	.0000	.0031	-.0002	.0026	-.0066

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-12-97 01:04:44 PM

page 5

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.965	.0052	4.722	4.856
2	ICB	.0024	.0005	.0015	.0016
3	LLS	.1050	.0010	.0201	.0227
4	ICSA	.0019	.0070	.0068	-.0012
5	ICSAB	.4643	.0071	.9134	-.0011
6	PREPBLKTJA	.0010	.0003	.0011	.0007
7	S97T000735_L	.5923	.1085	-.2334	.3108
8	S97T000735_	.1370	.0293	-.4008	.0887
9	S97T000735_D	.1142	.0200	-.5250	.0315
10	S97T000735_A	40.20	.0553	38.06	39.16
11	S97T000735_X	.4467	.0629	-.2919	.1450
12	S97T000735_AX	4028.	4.322	3789.	4037.
13	CCV	4.983	.0059	4.772	4.854
14	CCB	.0017	.0003	.0011	.0013
15	S97T000737	.0786	.0168	-.3977	.0451
16	S97T000737_D	.0202	-.0019	-.4264	.0149
17	S97T000759_	.0074	-.0050	-.6694	.0369
18	S97T000759_D	-.0463	-.0111	-.7505	-.0383
19	ICSA	.0019	.0071	.0072	-.0015
20	ICSAB	.4622	.0070	.9116	-.0019
21	CCV 1	4.992	.0051	4.733	4.875
22	CCB_1	-.0002	-.0002	.0004	-.0006

JK LA

05-12-97

LABCORE Data Entry Template for Worklist# 18150

Analyst: D. SATO Instrument: ICP01 Book# 66846

Method: LA-505-~~151~~¹⁶¹ Rev/Mod C-1 ^{BA 5-15-97}
₅₋₁₅₋₉₇

Worklist Comment: T-203 (SOLID FUSION 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-F01	SOLID		
7	SERDIL	S97T000739 0 F	@ICP-F01	SOLID		
8	SAMPLE	S97T000739 0 F	@ICP-F01	SOLID	97000299	T-203
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 , P-F-01 , PB-F-01 , S-F-01 , SB-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						
9	DUP	S97T000739 0 F	@ICP-F01	SOLID		
10	SPK ^{1 ppm}	S97T000739 0 F	@ICP-F01	SOLID		
11	CCV ^{Subtle x} _{Spk 4x 10 ppm}	~~BA~~ 05-15-97	@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S97T000740 0 F	@ICP-F01	SOLID	97000299	T-203
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 , P-F-01 , PB-F-01 , S-F-01 , SB-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.

05/16/97 10:30
A-0004-1

LABCORE Data Entry Template for Worklist# 18150

S Type	Sample#	R A	Test	Matrix	Group#	Project
14 DUP	S97T000740	0 F	@ICP-F01	SOLID		
15 SAMPLE	S97T000761	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
16 DUP	S97T000761	0 F	@ICP-F01	SOLID		
17 CCV			@ICP-QC	QC		
18 CCB			@ICP-QC	QC		
19 PREPBLKTJA			@ICP-F01	SOLID		
20 SAMPLE	S97T000741	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
21 DUP	S97T000741	0 F	@ICP-F01	SOLID		
22 SAMPLE	S97T000762	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
23 DUP	S97T000762	0 F	@ICP-F01	SOLID		
24 SAMPLE	S97T000763	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18150

S Type	Sample#	R A	Test	Matrix	Group#	Project
			S-F-01	SB-F-01	SE-F-01	SI-F-01
			TI-F-01	TL-F-01	U-F-01	V-F-01
						SM-F-01
						SR-F-01
						ZN-F-01
						ZR-F-01
25 DUP	S97T000763	0 F	@ICP-F01	SOLID		
26 ICSA			@ICP-QC	QC		
27 ICSAB			@ICP-QC	QC		
28 CCV			@ICP-QC	QC		
29 CCB			@ICP-QC	QC		

Final page for worklist # 18150

<i>JK</i>	<i>05-15-97</i>
Analyst Signature	Date
<i>PropbllTQa</i>	<i>.25-10, DF 1</i>
<i>S97T000739-L</i>	<i>.25-10-28, DF 205</i>
<i>S97T000739</i>	<i>.25-10 41</i>
<i>S97T000734-D</i>	<i>.25-10 41</i>
<i>S97T000731-Q</i>	<i>.25-10 41</i>
<i>S97T000731-X</i>	<i>.25-10-19, DF 410</i>
<i>S97T000732-QX</i>	<i>.25-10-19 410</i>
<i>S97T000740</i>	<i>.25-10, DF 41</i>
<i>S97T000740-D</i>	<i>.25-10 41</i>
<i>S97T000761</i>	<i>.25-10 41</i>
<i>S97T000761-D</i>	<i>.25-10 41</i>
<i>PropbllTQa</i>	<i>.25-10, DF 1</i>
<i>S97T000741</i>	<i>.25-10 41</i>
<i>S97T000741-D</i>	<i>.25-10 41</i>
<i>S97T000762</i>	<i>.25-10 41</i>
<i>S97T000762-D</i>	<i>.25-10 41</i>
<i>S97T000763</i>	<i>.25-10 41</i>
<i>S97T000763-D</i>	<i>.25-10 41</i>

Revised by:
Saul M. Pang *5/27/97*
Analyst Signature Date
Validated 5/27/97
SP

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Thu 05-15-97 02:28:05 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970515A	ICP2	05/15/97	12:37	DKS	Q	CONC
2	ICB	970515A	ICP2	05/15/97	12:40	DKS	Q	CONC
3	LLS	970515A	ICP2	05/15/97	12:43	DKS	Q	CONC
4	ICSA	970515A	ICP2	05/15/97	12:46	DKS	Q	CONC
5	ICSAB	970515A	ICP2	05/15/97	12:49	DKS	Q	CONC
6	PREPBLKTJA	970515A	ICP2	05/15/97	12:52	DKS	Q	CONC
7	S97T000739 L	970515A	ICP2	05/15/97	12:56	DKS	S	CONC
8	S97T000739 D	970515A	ICP2	05/15/97	12:59	DKS	S	CONC
9	S97T000739 A	970515A	ICP2	05/15/97	13:01	DKS	S	CONC
10	S97T000739 X	970515A	ICP2	05/15/97	13:05	DKS	S	CONC
11	S97T000739 AX	970515A	ICP2	05/15/97	13:08	DKS	S	CONC
12	CCV	970515A	ICP2	05/15/97	13:15	DKS	S	CONC
13	CCB	970515A	ICP2	05/15/97	13:23	DKS	Q	CONC
14	S97T000740	970515A	ICP2	05/15/97	13:28	DKS	Q	CONC
15	S97T000740 D	970515A	ICP2	05/15/97	13:33	DKS	S	CONC
16	S97T000761	970515A	ICP2	05/15/97	13:35	DKS	S	CONC
17	S97T000761 D	970515A	ICP2	05/15/97	13:38	DKS	S	CONC
18	CCV 1	970515A	ICP2	05/15/97	13:41	DKS	S	CONC
19	CCB 1	970515A	ICP2	05/15/97	13:45	DKS	Q	CONC
20	PREPBLKTJA	970515A	ICP2	05/15/97	13:49	DKS	Q	CONC
21	S97T000741	970515A	ICP2	05/15/97	13:52	DKS	Q	CONC
22	S97T000741 D	970515A	ICP2	05/15/97	13:55	DKS	S	CONC
23	S97T000762	970515A	ICP2	05/15/97	13:58	DKS	S	CONC
24	S97T000762 D	970515A	ICP2	05/15/97	14:00	DKS	S	CONC
25	S97T000763	970515A	ICP2	05/15/97	14:03	DKS	S	CONC
26	S97T000763 D	970515A	ICP2	05/15/97	14:06	DKS	S	CONC
27	ICSA	970515A	ICP2	05/15/97	14:09	DKS	S	CONC
28	ICSAB	970515A	ICP2	05/15/97	14:14	DKS	Q	CONC
29	CCV 2	970515A	ICP2	05/15/97	14:17	DKS	Q	CONC
30	CCB 2	970515A	ICP2	05/15/97	14:21	DKS	Q	CONC
31		970515A	ICP2	05/15/97	14:25	DKS	Q	CONC

KLD

05-15-97

7-203

5977000739

5977000740

5977000741

5977000741

5977000742

5977000743

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 504 TO 509

HNF SD-WM-DP-247 REV. 0
 Thu 05-15-97 02:28:05 PM

Analysis Report

Averages

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.846	4.846	5.149	4.980	4.936	5.047
2	ICB	-.0004	-.0050	-.0023	.0000	.0000	.0000
3	LLS	.0209	.0931	.2126	.0992	.1004	.0105
4	ICSA	.0003	240.4	-.0373	-.0000	.0005	-.0001
5	ICSAB	.9494	236.7	-.0152	.0002	.4601	.4664
6	PREPBLKTJA	-.0004	.0027	.0007	.0010	.0002	.0002
7	S97T000739 L	.0106	1.027	-.0413	-.3949	.0786	.0357
8	S97T000739 A	-.0469	.1325	-.5446	-.1958	.0564	.0001
9	S97T000739 D	-.0412	-.2154	-.5173	-.1543	.0688	-.0088
10	S97T000739 X	32.61	39.20	41.57	38.88	38.69	39.80
11	S97T000739 AX	2.355	-3.476	2.926	-1872	1.081	-.0182
12	S97T000739 AX	3315	3931	4056	3988	4037	4024
13	CCV	4.885	4.905	5.185	5.025	5.013	5.101
14	CCB	.0043	.0052	-.0015	.0000	.0001	.0003
15	S97T000740	.0097	-.2241	.4337	-.0586	.0545	-.0069
16	S97T000740 D	.0099	-.0335	.6826	-.0775	.0472	.0020
17	S97T000761	.0092	.0387	.1772	-.0989	.0488	.0038
18	S97T000761 D	.0266	.3570	-.0001	-.1392	.0523	.0003
19	CCV 1	4.909	4.903	5.207	5.048	5.027	5.127
20	CCB 1	.0000	-.0123	.0073	-.0034	.0001	-.0002
21	PREPBLKTJA	.0003	-.0040	.0020	-.0015	.0002	.0001
22	S97T000741	.0093	.0688	.3334	-.2598	.0325	.0056
23	S97T000741 D	-.0080	.5220	-.0452	-.1198	.0360	.0146
24	S97T000762	.0037	.2447	-.1356	-.1591	.0435	.0056
25	S97T000762 D	-.0262	.8394	.5848	.0411	.0346	.0127
26	S97T000763	-.0141	.1829	-.1704	.0209	.0400	.0038
27	S97T000763 D	-.0195	.1103	-.1530	-.3797	.0381	.0074
28	ICSA	.0008	246.9	.0285	-.0070	.0003	.0005
29	ICSAB	.9746	245.4	-.0130	-.0071	.4873	.4868
30	CCV 2	4.937	4.924	5.238	5.055	5.060	5.146
31	CCB 2	-.0001	-.0038	-.0064	-.0020	.0000	.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.924	4.931	4.960	4.891	5.031	4.925
2	ICB	-.0257	.0021	.0006	-.0097	-.0003	.0005
3	LLS	Q.1099	.2109	.0119	.1983	.0435	.0220
4	ICSA	-.0395	250.9	.0033	.0113	.0028	-.0014
5	ICSAB	-.0285	250.1	.9319	.0124	.4627	.4667
6	PREPBLKTJA	-.0115	.0174	.0030	-.0019	.0018	.0012
7	S97T000739 L	73.03	3.474	.1883	.5933	.3822	6.445
8	S97T000739 A	71.79	1.187	.0315	.0997	-.0484	6.021
9	S97T000739 D	65.82	.8602	-.0098	.1940	-.0027	5.771
10	S97T000739 X	115.0	42.69	40.94	38.90	41.42	46.82
11	S97T000739 AX	57.52	5.986	.8055	-2.626	-.2794	5.968
12	S97T000739 AX	4178.	4182.	4060.	4034.	4034.	4083.
13	CCV	5.045	4.994	4.993	4.931	5.058	4.959
14	CCB	-.0279	.0036	.0018	-.0063	-.0016	-.0002
15	S97T000740	90.61	.9730	.0427	.0307	.0750	8.711
16	S97T000740 D	82.13	1.039	.0463	.0296	.0567	8.403
17	S97T000761	99.63	.9379	.0664	-.0310	-.0021	7.901
18	S97T000761 D	88.68	.9827	.0686	-.1118	.0421	7.801

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-15-97 02:28:05 PM

page 3

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	CCV 1	5.027	5.070	5.043	4.939	5.113	5.022
20	CCB_1	-.0302	.0048	.0010	-.0050	.0003	-.0001
21	PREPBLKTJA	-.0328	.0209	.0007	-.0047	-.0007	.0004
22	S97T000741	69.97	1.009	.0621	-.1953	-.0033	6.728
23	S97T000741_D	77.00	.9390	.0144	-.0838	.0510	6.960
24	S97T000762	85.21	.9733	.1029	-.2718	-.0369	8.895
25	S97T000762_D	69.76	1.065	.0987	-.1590	.0452	7.414
26	S97T000763	78.76	1.063	.0542	-.1098	.1116	8.326
27	S97T000763_D	84.09	.9342	.0630	-.1282	.0595	8.841
28	ICSA	-.0422	255.5	.0026	.0076	.0000	-.0017
29	ICSAB	-.0213	255.9	.9527	.0127	.4745	.4783
30	CCV 2	5.029	5.111	5.051	4.973	5.132	5.041
31	CCB_2	-.0276	.0037	.0012	-.0086	-.0001	.0002

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.908	-.0020	4.608	4.942	4.969	4.868
2	ICB	-.0002	-.0001	.0001	-.1232	-.0002	.0001
3	LLS	.0168	.0011	.0899	.3963	.1028	.0222
4	ICSA	-.0109	-.0415	93.35	.0385	-.0044	.0050
5	ICSAB	.4243	-.0414	92.33	.2373	-.0033	.9493
6	PREPBLKTJA	-.0004	.0014	.0005	Q271.8	-.0006	.0017
7	S97T000739_L	-.1407	.2928	11.27	11180.	20.37	.3972
8	S97T000739	-.0323	.0872	11.30	10900.	19.83	.0745
9	S97T000739_D	-.0072	.0795	15.61	10940.	18.84	.0745
10	S97T000739_A	38.35	.0623	49.24	11200.	59.73	37.21
11	S97T000739_X	-.2162	.7684	11.96	10980.	20.17	.8928
12	S97T000739_AX	3653.	-.9357	3798.	15180.	4051.	3920.
13	CCV	4.976	-.0022	4.658	5.050	5.020	4.951
14	CCB	.0006	-.0006	.0001	-.1841	-.0001	.0001
15	S97T000740	.0254	-.0093	5.961	11350.	21.42	.0350
16	S97T000740_D	.0181	-.0037	9.148	12180.	20.11	.0002
17	S97T000761	.0140	-.0180	5.445	11010.	25.60	.0052
18	S97T000761_D	.0391	-.0192	5.327	11030.	25.21	-.0197
19	CCV 1	4.955	-.0018	4.699	5.263	5.032	4.905
20	CCB_1	-.0007	.0004	-.0005	-.0341	-.0005	.0027
21	PREPBLKTJA	-.0003	-.0003	.0024	Q304.7	.0010	.0005
22	S97T000741	.0151	-.0091	3.736	12250.	19.74	-.0148
23	S97T000741_D	.0305	-.0164	3.913	13010.	20.44	-.0147
24	S97T000762	.0246	-.0146	5.049	12500.	23.35	-.0097
25	S97T000762_D	.0568	.0029	4.389	11050.	23.32	.0101
26	S97T000763	.0608	.0029	4.592	12160.	24.83	.0350
27	S97T000763_D	.0176	-.0149	4.783	12350.	22.64	.0201
28	ICSA	-.0100	-.0419	95.64	.1529	-.0049	.0030
29	ICSAB	.4485	-.0421	95.23	.1298	-.0043	1.002
30	CCV 2	4.988	-.0016	4.701	4.840	5.066	4.951
31	CCB_2	-.0011	-.0002	-.0001	-.2000	-.0008	.0004

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-15-97 02:28:05 PM

page 4

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.956	4.849	4.990	5.095	4.957	4.890
2	ICB	-.0003	.0000	.0030	.0051	.0027	-.0104
3	LLS	.2085	.0203	.1040	.1835	.1994	.0371
4	ICSA	252.4	-.0055	-.0025	192.2	.0044	.0029
5	ICSAB	248.7	.4402	-.0111	188.4	.0018	.9088
6	PREFBLKTJA	.0028	.0016	.0019	.0686	-.0004	Q.0962
7	S97T000739_L	-.2051	20.76	.5870	61.56	-.1034	70.59
8	S97T000739_	.3286	20.16	-.0843	62.92	-.1108	68.64
9	S97T000739_D	.2286	19.33	-.0151	62.73	-.0001	101.2
10	S97T000739_A	39.20	59.83	41.02	104.5	39.29	111.1
11	S97T000739_X	.7835	20.74	.7192	61.47	.5689	69.33
12	S97T000739_AX	4164.	4066.	4016.	4011.	3915.	4123.
13	CCV	5.014	4.891	5.025	5.165	4.998	4.997
14	CCB	-.0012	-.0001	.0013	-.0009	.0010	-.0008
15	S97T000740	.1861	24.24	.0443	72.84	.0615	131.2
16	S97T000740_D	.2692	22.63	-.0333	71.41	.0774	57.21
17	S97T000761_	.1721	25.36	.0516	71.65	.0511	55.30
18	S97T000761_D	.0564	25.15	-.0335	71.57	-.0207	170.9
19	CCV_1	5.032	4.935	5.063	5.132	5.019	5.030
20	CCB_1	.0005	.0001	.0019	.0072	-.0008	-.0002
21	PREFBLKTJA	-.0010	.0021	.0022	.0758	.0017	Q.1492
22	S97T000741	.0961	21.42	-.1105	67.79	-.0440	71.61
23	S97T000741_D	.2285	21.96	.0590	67.76	-.0061	83.28
24	S97T000762_	.1031	24.36	.0053	72.86	.0142	34.96
25	S97T000762_D	-.3041	23.61	.0369	62.28	-.0106	59.41
26	S97T000763_	-.0675	25.30	-.0023	69.37	.1169	68.28
27	S97T000763_D	.2110	23.59	-.0179	71.74	.0678	37.13
28	ICSA	258.6	-.0060	-.0093	198.8	.0030	-.0120
29	ICSAB	256.9	.4522	-.0085	197.6	.0028	.9443
30	CCV_2	5.039	4.953	5.088	5.166	5.047	5.020
31	CCB_2	.0004	-.0001	.0025	.0004	-.0009	-.0004

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.049	4.819	4.894	4.734	4.664	4.989
2	ICB	-.0053	.0092	-.0028	-.0007	.0128	.0050
3	LLS	.3989	.2272	.2052	.1058	.1939	.1456
4	ICSA	.0312	.0309	-.0402	.0098	-.0243	.0157
5	ICSAB	.0121	.9871	-.0369	.0062	-.0277	.0143
6	PREFBLKTJA	-.0037	.0069	-.0119	.0118	.0051	.0127
7	S97T000739_L	.7358	1.570	-1.717	-.8533	3.742	3.905
8	S97T000739_	3.587	-.1808	-.0831	.2134	1.204	2.099
9	S97T000739_D	3.210	-.2399	-.7548	-.0002	.5195	1.465
10	S97T000739_A	44.31	40.26	39.87	38.83	38.43	43.45
11	S97T000739_X	-1.600	-2.340	-.5301	3.110	9.339	7.398
12	S97T000739_AX	3986.	4104.	3922.	4046.	3914.	4176.
13	CCV	5.040	4.849	4.936	4.794	4.734	5.040
14	CCB	-.0216	-.0103	-.0134	.0050	-.0100	.0021
15	S97T000740	4.337	-.3326	.1336	-.0490	-.4441	1.325
16	S97T000740_D	3.918	.2425	-.2451	.2001	-.0455	1.376
17	S97T000761_	4.142	.0341	.0710	.0910	-.0128	1.386
18	S97T000761_D	4.314	.0370	-.1478	.0559	.0364	1.366

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 05-15-97 02:28:05 PM

page 5

#	Sample Name	P	Pb	S	Sb	Se	Si
19	GCV 1	5.008	4.923	4.950	4.795	4.758	5.073
20	CCB-1	-.0128	-.0117	-.0076	.0051	.0124	.0061
21	PREPBLKTJA	-.0142	-.0126	-.0041	.0006	-.0022	.0105
22	S97T000741	4.111	-.4174	-.0897	.2281	.1900	1.296
23	S97T000741 D	4.473	-.0564	-.2618	-.0924	-.0609	1.322
24	S97T000762	4.523	.0791	-.1273	.2744	.5531	1.482
25	S97T000762 D	4.495	.2695	-.2316	.1308	.5931	2.731
26	S97T000763	4.143	.6442	-.0079	.1059	.7049	1.237
27	S97T000763 D	4.361	.1012	-.3308	.2180	.1099	1.518
28	ICSA	.0017	.0414	-.0423	.0081	-.0295	.0094
29	ICSAB	.0169	.9996	-.0285	.0051	-.0194	.0055
30	CCV 2	5.091	4.918	4.952	4.818	4.720	5.088
31	CCB-2	.0028	-.0091	-.0058	.0110	-.0044	.0004

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.872	4.912	.0311	4.866	4.815	9.531
2	ICB	.0023	.0001	-.0008	.0002	-.0220	.0068
3	LLS	.2191	.0206	-.0049	.0198	.4027	.5512
4	ICSA	.0178	.0020	-.0092	.0010	-.0306	.0202
5	ICSAB	.0202	.0021	-.0028	.0013	-.0101	.0373
6	PREPBLKTJA	.0173	.0005	.0013	-.0002	-.0013	-.0060
7	S97T000739 L	3.947	.7148	.1229	-.0517	-5.050	12.65
8	S97T000739	1.208	.6616	-.3188	-.0104	-.5766	1.311
9	S97T000739 D	1.022	.6356	-.0217	.0112	-.3945	.9514
10	S97T000739-A	39.44	39.47	.2815	39.16	37.58	75.79
11	S97T000739-X	11.62	.8421	-2.033	-.0134	-5.674	44.43
12	S97T000739-AX	3905.	4006.	26.58	4021.	3969.	7588.
13	GCV	4.930	4.961	.0307	4.892	4.784	9.646
14	CCB	-.0058	.0000	.0050	-.0005	-.0133	-.0249
15	S97T000740	-.0320	.7876	.2362	.0540	.2115	-3.358
16	S97T000740 D	-.0860	.7378	.1183	.0331	-1.127	-3.669
17	S97T000761	-.2356	.9744	.2367	.0233	-1.026	-4.222
18	S97T000761 D	-.2895	.9743	.3213	.0339	-1.212	-4.444
19	CCV 1	4.936	4.981	.0374	4.906	4.817	9.674
20	CCB-1	.0082	.0001	-.0046	-.0005	-.0103	.0250
21	PREPBLKTJA	-.0001	.0003	.0036	.0003	-.0340	-.0915
22	S97T000741	-.1549	1.033	.2753	.0131	-1.122	-3.949
23	S97T000741 D	-.2472	1.070	.3000	.0341	-.3824	-4.901
24	S97T000762	-.1026	1.324	.2953	.0442	-1.229	-4.151
25	S97T000762 D	-.0118	1.018	.0523	.0223	-.3707	-3.064
26	S97T000763	-.0135	1.046	.2303	.0644	-1.644	-3.545
27	S97T000763 D	-.1045	1.308	.1629	.0230	-1.091	-3.878
28	ICSA	-.0038	.0021	-.0018	.0013	.0016	-.0428
29	ICSAB	.0036	.0022	.0037	.0020	-.0330	-.0298
30	CCV 2	4.966	5.016	.0301	4.941	4.856	9.722
31	CCB-2	-.0017	.0001	-.0005	.0000	-.0207	-.0036

HNF-SD-WM-DP-247, REV.0

Analysis Report

Averages

Thu 05-15-97 02:28:05 PM

page 6

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.999	.0049	4.744	4.892
2	ICB	.0006	.0001	-.0004	.0004
3	LLS	.1062	.0011	.0196	.0228
4	ICSA	.0023	.0074	.0051	-.0001
5	ICSAB	.4610	.0075	.9200	.0001
6	PREPBLKTJA	.0037	.0008	.0015	.0029
7	S97T000739_L	.8703	.2035	-.2731	.5091
8	S97T000739_	.2601	.0541	-.4204	.2040
9	S97T000739_D	.2438	.0510	-.6590	.1669
10	S97T000739_A	40.78	.0931	39.10	39.38
11	S97T000739_X	2.203	.5273	-.3648	1.626
12	S97T000739_AX	3991.	4.326	3789.	3981.
13	CCV	5.040	.0049	4.777	4.934
14	CCB	-.0005	-.0001	.0011	-.0011
15	S97T000740	.0218	.0046	-.8949	-.0150
16	S97T000740_D	.0387	.0016	-.3310	.0092
17	S97T000761_	-.0188	-.0046	-.3240	-.0293
18	S97T000761_D	-.0183	-.0078	-1.145	-.0351
19	CCV_1	5.080	.0054	4.825	4.960
20	CCB_1	.0013	.0003	-.0002	.0011
21	PREPBLKTJA	.0003	-.0000	-.0014	-.0006
22	S97T000741	-.0229	-.0047	-.4543	-.0475
23	S97T000741_D	-.0299	-.0140	-.5162	-.0638
24	S97T000762_	-.0175	-.0047	-.1766	-.0490
25	S97T000762_D	.0208	.0045	-.3096	.0138
26	S97T000763_	.0044	.0015	-.3907	-.0144
27	S97T000763_D	.0224	-.0048	-.1980	-.0242
28	ICSA	-.0004	.0066	.0064	-.0030
29	ICSAB	.4736	.0069	.9326	-.0017
30	CCV_2	5.105	.0054	4.833	4.989
31	CCB_2	.0000	-.0001	-.0007	-.0007

JK LLD
05-15-97

LABCORE Data Entry Template for Worklist# 18163

Analyst: D SATO Instrument: ICP⁰² Book# 6684PB

Method: LA-505-151/161 Rev/Mod C-1
5-16-97

Worklist Comment: T-203 (SOLID FUSION 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-F01	SOLID		
7 SERDIL	S97T000742	0 F	@ICP-F01	SOLID		
8 SAMPLE	S97T000742	0 F	@ICP-F01	SOLID	97000299	T-203
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 , 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						
9 DUP	S97T000742	0 F	@ICP-F01	SOLID		
10 SPK	S97T000742	0 F	@ICP-F01	SOLID		
11 CCV			@ICP-QC	QC		
12 CCB			@ICP-QC	QC		
13 SAMPLE	S97T000743	0 F	@ICP-F01	SOLID	97000299	T-203
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 , 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.

LABCORE Data Entry Template for Worklist# 18163

S Type	Sample#	R A	Test	Matrix	Group#	Project
14 DUP	S97T000743	0 F	@ICP-F01	SOLID		
15 SAMPLE	S97T000764	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
16 DUP	S97T000764	0 F	@ICP-F01	SOLID		
17 CCV			@ICP-QC	QC		
18 CCB			@ICP-QC	QC		
19 PREPBLKTJA			@ICP-F01	SOLID		
20 SAMPLE	S97T000744	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
21 DUP	S97T000744	0 F	@ICP-F01	SOLID		
22 SAMPLE	S97T000765	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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						
23 DUP	S97T000765	0 F	@ICP-F01	SOLID		
24 SAMPLE	S97T000766	0 F	@ICP-F01	SOLID	97000299	T-203
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, P-F-01, PB-F-01, S-F-01, SB-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.

LABCORE Data Entry Template for Worklist# 18163

S Type	Sample#	R A	Test	Matrix	Group#	Project
			S-F-01 , SB-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			
25 DUP	S97T000766	0 F	@ICP-F01	SOLID		
26 ICSA			@ICP-QC	QC		
27 ICSAB			@ICP-QC	QC		
28 CCV			@ICP-QC	QC		
29 CCB			@ICP-QC	QC		

Final page for worklist # 18163

<i>JK DA</i>	05-16-97
Analyst Signature	Date
Prep61KJ4	, 25-10, DF 1
S97T000744-L	, 25-10-28, DF 205
S97T000744	, 25-10 41
S97T000744-D	, 25-10 41
S97T000744-Q	, 25-10 41, 25 ml sample + 2.05 ml SST + 7.25 ml H ₂ O ₃
S97T000744-X	, 25-10-19 410
S97T000744-QX	, 25-10-19 410; 1 ml sample + 1 ml each X04C 28+35 + 7 ml H ₂ O ₃
S97T000743	, 25-10, DF 41
S97T000743-D	, 25-10 41
S97T000744	, 25-10 41
S97T000744-D	, 25-10 41
Prep61KJ4	, 25-10, DF 1
S97T000744	, 25-10, DF 41
S97T000744-D	, 25-10 41
S97T000765	, 25-10 41
S97T000765-D	, 25-10 41
S97T000766	, 25-10 41
S97T000766-D	, 25-10 41

Revised + Validated by:
Sal M. Pang 5/28/97
Analyst Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Fri 05-16-97 01:56:15 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970516B	ICP2	05/16/97	12:06	DKS	Q	CONC
2	ICB	970516B	ICP2	05/16/97	12:10	DKS	Q	CONC
3	LLS	970516B	ICP2	05/16/97	12:12	DKS	Q	CONC
4	ICSA	970516B	ICP2	05/16/97	12:15	DKS	Q	CONC
5	ICSAB	970516B	ICP2	05/16/97	12:18	DKS	Q	CONC
6	PREPBLKTJA	970516B	ICP2	05/16/97	12:22	DKS	Q	CONC
7	S97T000742 L	970516B	ICP2	05/16/97	12:25	DKS	S	CONC
8	S97T000742	970516B	ICP2	05/16/97	12:28	DKS	S	CONC
9	S97T000742 D	970516B	ICP2	05/16/97	12:31	DKS	S	CONC
10	S97T000742 A	970516B	ICP2	05/16/97	12:34	DKS	S	CONC
11	S97T000742 X	970516B	ICP2	05/16/97	12:38	DKS	S	CONC
12	S97T000742 AX	970516B	ICP2	05/16/97	12:41	DKS	S	CONC
13	CCV	970516B	ICP2	05/16/97	12:49	DKS	Q	CONC
14	CCB	970516B	ICP2	05/16/97	12:54	DKS	Q	CONC
15	S97T000743	970516B	ICP2	05/16/97	12:58	DKS	S	CONC
16	S97T000743 D	970516B	ICP2	05/16/97	13:00	DKS	S	CONC
17	S97T000764	970516B	ICP2	05/16/97	13:03	DKS	S	CONC
18	S97T000764 D	970516B	ICP2	05/16/97	13:06	DKS	S	CONC
19	CCV 1	970516B	ICP2	05/16/97	13:12	DKS	Q	CONC
20	CCB 1	970516B	ICP2	05/16/97	13:16	DKS	Q	CONC
21	PREPBLKTJA	970516B	ICP2	05/16/97	13:19	DKS	Q	CONC
22	S97T000744	970516B	ICP2	05/16/97	13:22	DKS	S	CONC
23	S97T000744 D	970516B	ICP2	05/16/97	13:24	DKS	S	CONC
24	S97T000765	970516B	ICP2	05/16/97	13:27	DKS	S	CONC
25	S97T000765 D	970516B	ICP2	05/16/97	13:30	DKS	S	CONC
26	S97T000766	970516B	ICP2	05/16/97	13:33	DKS	S	CONC
27	S97T000766 D	970516B	ICP2	05/16/97	13:35	DKS	S	CONC
28	ICSA	970516B	ICP2	05/16/97	13:42	DKS	Q	CONC
29	ICSAB	970516B	ICP2	05/16/97	13:45	DKS	Q	CONC
30	CCV 2	970516B	ICP2	05/16/97	13:48	DKS	Q	CONC
31	CCB 2	970516B	ICP2	05/16/97	13:52	DKS	Q	CONC

JK

05-16-97

T-203

S97T000742

S97T000743

S97T000744

S97T000744

S97T000765

S97T000766

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 512 TO 518

512-97

518

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Fri 05-16-97 01:56:15 PM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.914	4.979	5.185	5.065	5.094	5.153
2	ICB	.0016	.0170	-.0074	.0040	.0000	.0006
3	LLS	.0244	.1195	.2231	.1101	.1062	.0113
4	ICSA	.0036	248.6	-.0846	.0047	.0003	.0003
5	ICSAB	.9856	249.6	-.0476	.0029	.4976	.4892
6	PREPBLKTJA	.0019	.0150	-.0090	.0020	.0001	.0003
7	S97T000742_L	.3863	3.143	-4.328	.7107	.0345	.0997
8	S97T000742_	.0745	.2895	-.5378	-.0601	.0395	.0183
9	S97T000742_D	.0570	.7304	.0939	.1432	.0378	.0128
10	S97T000742_A	38.00	41.69	43.35	41.20	41.53	41.88
11	S97T000742_X	.5290	7.259	-2.148	2.844	.0504	.1993
12	S97T000742_AX	.3856	4121.	4188	4169	.4304	.4198
13	CCV	5.000	5.021	5.243	5.089	5.211	5.178
14	CCB	.0026	.0171	-.0045	.0045	.0000	.0006
15	S97T000743	.1268	.9686	-.0511	.0018	.0256	.0274
16	S97T000743_D	.1278	1.161	-.0744	.2254	.0392	.0327
17	S97T000764_	.1276	1.741	.4797	.2040	.0446	.0292
18	S97T000764_D	.0504	1.020	-.3787	.2854	.0410	.0256
19	CCV_1	4.954	5.009	5.250	5.070	5.142	5.186
20	CCB_1	.0014	.0197	-.0127	.0069	.0000	.0007
21	PREPBLKTJA	.0018	.0298	-.0096	.0030	.0002	.0009
22	S97T000744	.1036	1.556	-.5698	.2655	.0334	.0346
23	S97T000744_D	.1159	1.343	-.8718	.3267	.0392	.0255
24	S97T000765_	.0386	.6455	-.0686	.1845	.0413	.0147
25	S97T000765_D	.0862	1.298	-.2591	.2249	.0413	.0219
26	S97T000766_	.0977	.7375	-.2238	.1231	.0240	.0238
27	S97T000766_D	.0558	1.020	-.1317	.1637	.0278	.0129
28	ICSA	.0035	248.3	-.0317	.0043	.0003	.0006
29	ICSAB	.9843	248.4	-.0371	-.0015	.4962	.4892
30	CCV_2	4.964	4.983	5.209	5.064	5.130	5.178
31	CCB_2	.0014	.0165	-.0199	.0064	.0000	.0006

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.039	4.989	4.974	5.033	5.064	4.956
2	ICB	.0318	.0019	.0013	.0048	.0033	.0013
3	LLS	Q.1361	.2134	.0122	.2264	.0446	.0223
4	ICSA	-.0040	254.4	.0011	.0234	.0019	-.0021
5	ICSAB	.0158	255.1	.9458	.0210	.4763	.4789
6	PREPBLKTJA	-.0074	-.0002	.0016	.0103	.0010	.0007
7	S97T000742_L	90.12	-1.006	-.0358	2.148	.1721	9.938
8	S97T000742_	82.93	.1741	.0379	.1782	.0951	9.696
9	S97T000742_D	79.21	.0833	.0609	.2622	.1110	9.222
10	S97T000742_A	127.0	42.37	41.37	42.01	41.94	51.12
11	S97T000742_X	88.56	-2.894	.1277	4.121	.4417	9.926
12	S97T000742_AX	4307.	4241.	4130.	4289.	4127.	4168.
13	CCV	5.150	5.159	5.057	5.121	5.155	5.059
14	CCB	.0182	.0010	.0013	.0044	.0007	.0010
15	S97T000743	107.8	-.0468	.0493	.1767	.1425	7.101
16	S97T000743_D	105.4	-.0979	.0121	.4583	.0396	6.834
17	S97T000764_	76.22	-.0217	.0568	.6211	.1457	9.041
18	S97T000764_D	72.47	-.0818	-.0123	.2925	.1412	8.784

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Fri 05-16-97 01:56:15 PM

page 3

#	Sample Name	Bi	Ca	Gd	Ce	Co	Cr
19	CCV 1	5.062	5.091	5.021	5.058	5.122	5.018
20	CCB-1	.0346	.0038	.0014	.0068	.0014	.0004
21	PREPBLKTJA	.0293	-.0094	.0007	.0084	.0020	.0013
22	S97T000744	107.6	.3880	.0822	.4247	.1019	7.810
23	S97T000744_D	119.8	.8497	.0331	.7396	.0643	8.368
24	S97T000765	105.9	.1490	.0120	.2759	.0227	9.082
25	S97T000765_D	89.36	.2153	.0422	.5071	.1034	9.065
26	S97T000766	105.8	.1893	.0483	.2623	.1253	7.939
27	S97T000766_D	127.9	.1719	-.0072	.0675	.0306	8.014
28	ICSA	.0073	256.4	.0014	.0191	.0025	-.0021
29	ICSAB	.0464	257.9	.9504	.0285	.4762	.4801
30	CCV 2	5.109	5.143	5.045	5.037	5.133	5.046
31	CCB-2	.0427	.0043	.0009	.0133	-.0001	.0011

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.063	-.0035	4.666	5.094	5.132	5.048
2	ICB	.0003	-.0008	.0010	-.1976	.0007	-.0004
3	LLS	.0187	.0002	.0942	.4526	.1090	.0226
4	ICSA	-.0107	-.0433	95.39	-.0630	-.0036	.0026
5	ICSAB	.4583	-.0416	95.62	-.0659	-.0037	1.029
6	PREPBLKTJA	.0000	-.0004	.0020	Q281.9	.0013	-.0004
7	S97T000742_L	.0329	-.1071	4.329	11420.	21.16	-.0254
8	S97T000742	.0525	.0100	4.502	11220.	20.80	.0002
9	S97T000742_D	.0422	.0130	4.457	11550.	21.36	.0105
10	S97T000742_A	41.41	-.0175	43.20	11410.	63.31	40.56
11	S97T000742_X	.2501	-.1887	3.707	11490.	21.42	.0004
12	S97T000742_AX	3886.	-2.349	3900.	15420.	4307.	4200.
13	CCV	5.077	-.0031	4.760	4.809	5.202	5.040
14	CCB	-.0003	-.0002	.0003	-.1989	.0000	-.0001
15	S97T000743	.0916	-.0214	7.776	11480.	21.67	-.0101
16	S97T000743_D	.1184	-.0013	7.602	12440.	22.00	-.0153
17	S97T000764	.1370	-.0206	5.177	10700.	20.40	-.0204
18	S97T000764_D	.0988	-.0109	5.212	11020.	21.11	.0054
19	CCV 1	5.070	-.0030	4.727	4.858	5.139	5.050
20	CCB-1	.0004	-.0007	.0002	-.1081	.0010	-.0004
21	PREPBLKTJA	.0013	-.0005	.0018	Q293.6	.0005	.0000
22	S97T000744	.0739	-.0124	6.107	12100.	21.11	.0054
23	S97T000744_D	.0275	-.0036	6.361	11690.	22.75	-.0050
24	S97T000765	.0970	.0028	6.147	11780.	19.47	.0054
25	S97T000765_D	.0621	.0040	5.713	11900.	19.44	.0053
26	S97T000766	.0821	-.0082	5.806	11550.	23.82	.0054
27	S97T000766_D	.0408	-.0129	5.434	13290.	28.26	-.0049
28	ICSA	-.0100	-.0481	95.78	.1205	-.0036	.0032
29	ICSAB	.4529	-.0477	95.85	.1666	-.0036	1.018
30	CCV 2	5.038	-.0025	4.724	4.864	5.135	4.988
31	CCB-2	.0007	-.0000	.0002	-.1292	.0014	.0000

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Fri 05-16-97 01:56:15 PM

page 4

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.075	4.894	5.038	5.235	5.120	4.985
2	ICB	.0097	.0001	.0036	-.0035	.0021	.0023
3	LLS	.2290	.0208	.1009	.1989	.2103	Q.0532
4	ICSA	259.6	-.0064	-.0114	202.5	.0044	.0050
5	ICSAB	260.6	.4531	-.0084	202.8	.0030	.9573
6	PREPBLKTJA	.0102	.0012	.0001	.0750	-.0006	Q.2753
7	S97T000742 L	2.202	23.93	.0332	67.19	.2926	99.88
8	S97T000742	.2530	23.68	.0059	69.40	.0003	96.94
9	S97T000742 D	.3497	23.84	-.0797	69.92	-.0132	124.8
10	S97T000742 A	41.83	64.24	41.89	114.0	42.13	141.1
11	S97T000742 X	5.619	24.27	.4635	62.04	.4077	100.3
12	S97T000742 AX	4362.	4174.	4128.	4256.	4154.	4233.
13	CCV	5.128	4.999	5.121	5.248	5.171	5.071
14	CCB	.0077	.0001	-.0008	.0009	-.0005	.0026
15	S97T000743	.3712	25.50	.0598	69.85	.0172	19.57
16	S97T000743 D	.6509	25.66	-.0418	70.37	.0558	19.72
17	S97T000764	.7789	23.70	.0833	69.34	.0212	170.3
18	S97T000764 D	.5950	23.78	-.0795	68.58	-.0654	168.8
19	CCV 1	5.127	4.946	5.078	5.246	5.108	5.033
20	CCB 1	.0120	.0000	.0011	-.0053	.0000	.0025
21	PREPBLKTJA	.0155	.0014	-.0016	.0556	.0035	Q.1737
22	S97T000744	.9150	24.94	-.0336	67.61	.0448	171.7
23	S97T000744 D	.8252	25.96	-.0099	70.32	.0072	52.45
24	S97T000765	.3949	25.75	.0136	67.62	.0045	166.9
25	S97T000765 D	.6698	24.77	-.0799	69.23	.0283	116.3
26	S97T000766	.5260	26.22	.0755	68.93	.0479	75.30
27	S97T000766 D	.2403	28.46	-.0414	69.65	-.0160	15.32
28	ICSA	260.1	-.0059	-.0101	201.6	.0038	.0025
29	ICSAB	259.9	.4540	-.0103	200.3	.0029	.9490
30	CCV 2	5.091	4.962	5.096	5.190	5.103	5.062
31	CCB 2	.0094	.0002	.0023	.0031	.0016	.0020

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.003	4.853	4.918	4.804	4.681	5.038
2	ICB	.0010	.0109	-.0105	.0009	.0234	-.0036
3	LLS	.4003	.2372	.1947	.1042	.2213	.1409
4	ICSA	.0153	.0399	-.0498	.0103	-.0416	.0011
5	ICSAB	-.0058	1.010	-.0289	-.0066	-.0318	-.0008
6	PREPBLKTJA	.0019	.0148	-.0112	-.0118	.0166	.0012
7	S97T000742 L	3.779	3.981	-2.966	.5903	4.145	.6469
8	S97T000742	4.762	.6429	.1777	-.3698	.7862	1.128
9	S97T000742 D	4.581	.4002	-.1140	-.3378	1.353	1.781
10	S97T000742 A	46.17	40.73	40.50	39.56	40.30	43.57
11	S97T000742 X	2.179	3.909	-.6840	-.8420	6.854	.6043
12	S97T000742 AX	4076.	4156.	3993.	4171.	4045.	4266.
13	CCV	5.027	4.972	4.947	4.872	4.737	5.113
14	CCB	.0123	.0070	-.0049	-.0045	.0237	.0013
15	S97T000743	4.579	.2491	.0258	-.0350	.7898	1.082
16	S97T000743 D	4.201	.1700	-.2006	.0355	1.267	1.196
17	S97T000764	5.117	.5991	-.2334	-.3018	.9116	1.516
18	S97T000764 D	4.991	-.2114	-.4064	-.3544	1.078	1.754

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Fri 05-16-97 01:56:15 PM

page 5

#	Sample Name	F	Pb	S	Sb	Se	Si
19	CCV 1	4.979	4.921	4.974	4.858	4.768	5.095
20	CCB-1	-.0109	.0079	-.0138	-.0105	.0234	-.0014
21	PREPBLKTJA	.0086	.0101	-.0154	-.0069	.0415	.0053
22	S97T000744	4.913	.4999	-.2462	-.3972	1.256	1.241
23	S97T000744 D	5.234	.3281	.1378	-.0191	1.732	1.224
24	S97T000765	4.923	.5665	.0248	-.0997	1.375	1.381
25	S97T000765 D	4.880	.1005	-.2176	.2676	1.189	2.189
26	S97T000766	4.644	.6484	-.4976	-.0488	1.945	2.197
27	S97T000766 D	6.100	.5568	.1541	-.3319	1.510	1.881
28	ICSA	.0134	.0288	-.0464	-.0063	-.0245	.0031
29	ICSAB	.0157	1.032	-.0327	-.0069	-.0291	.0058
30	CCV 2	4.950	4.937	4.922	4.852	4.742	5.089
31	CCB-2	-.0071	.0121	-.0197	-.0060	.0338	.0001

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.046	5.074	.0308	4.980	4.872	9.864
2	ICB	-.0127	-.0001	.0048	.0003	.0299	-.0285
3	LLS	.2147	.0215	.0048	.0215	.4222	.5470
4	ICSA	-.0040	.0023	-.0044	.0017	.0281	.0334
5	ICSAB	-.0070	.0023	-.0022	.0015	.0372	.0206
6	PREPBLKTJA	-.0106	.0002	.0103	.0001	.0119	-.1068
7	S97T000742 L	-2.240	1.112	1.307	.1112	3.283	-9.340
8	S97T000742	-.1312	1.118	.5014	.0243	1.016	-3.280
9	S97T000742 D	.0024	1.113	.1660	.0440	.6941	-2.828
10	S97T000742 A	41.10	42.67	.6229	41.02	40.04	77.62
11	S97T000742 X	-4.295	1.101	3.864	.1170	3.461	-7.606
12	S97T000742 AX	4172.	4250.	26.21	4217.	4105.	8127.
13	CCV	5.107	5.133	.0323	5.030	5.006	10.00
14	CCB	-.0024	.0000	.0065	.0003	.0088	-.0062
15	S97T000743	-.6084	1.168	.5746	.0246	.5626	-4.537
16	S97T000743 D	-.3404	1.165	.6007	.0250	.3492	-4.497
17	S97T000764	-.5176	1.194	.7392	.0776	1.397	-4.413
18	S97T000764 D	-.3808	1.221	.4953	.0661	.3190	-3.770
19	CCV 1	5.052	5.084	.0267	4.987	4.968	9.902
20	CCB-1	-.0099	-.0001	.0060	.0005	.0426	-.0231
21	PREPBLKTJA	-.0097	.0000	.0114	.0006	.0172	-.0950
22	S97T000744	-.4201	1.446	.5860	.0874	-.3741	-3.895
23	S97T000744 D	-.3095	1.520	.6744	.0458	.5206	-3.566
24	S97T000765	-.2267	1.176	.3913	.0658	-.1697	-3.467
25	S97T000765 D	-.2108	1.197	.4443	.0658	.9207	-3.086
26	S97T000766	-.3807	1.338	.3519	.0343	.6816	-4.171
27	S97T000766 D	-.3813	1.581	.3531	.0029	-.0801	-4.189
28	ICSA	.0011	.0022	-.0033	.0012	.0480	.0339
29	ICSAB	.0010	.0023	-.0038	.0018	.0386	.0135
30	CCV 2	5.050	5.079	.0244	4.991	4.907	9.876
31	CCB-2	-.0058	.0000	.0070	-.0002	.0281	.0043

Analysis Report

Averages

HNF-SD-WM-DP-247, REV. 0

FRI 05-16-97 01:56:15 PM

page 6

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.073	.0044	4.749	4.994
2	ICB	-.0015	-.0003	.0014	-.0018
3	LLS	.1071	.0006	.0226	.0207
4	ICSA	-.0004	.0066	.0064	-.0027
5	ICSAB	.4755	.0066	.9289	-.0030
6	PREPBLKTJA	-.0006	-.0002	-.0014	-.0022
7	S97T000742_L	-.2819	-.0442	-.5680	-.3992
8	S97T000742_	-.0019	.0014	-.5773	-.0346
9	S97T000742_D	.0139	.0044	-.7850	.0055
10	S97T000742_A	41.99	.0409	39.18	41.11
11	S97T000742_X	-.4925	.0032	-.5320	-.7447
12	S97T000742_AX	4129.	3.904	3822.	4164.
13	CCV	5.152	.0052	4.842	5.071
14	CCB	-.0008	-.0001	.0012	-.0016
15	S97T000743	-.0733	-.0141	.0023	-.1321
16	S97T000743_D	-.0334	-.0013	-.0386	-.0877
17	S97T000764_	-.0405	-.0110	-1.098	-.0821
18	S97T000764_D	-.0173	-.0048	-1.086	-.0644
19	CCV_1	5.113	.0049	4.816	5.017
20	CCB_1	-.0011	-.0002	.0021	-.0019
21	PREPBLKTJA	-.0006	-.0002	-.0002	-.0019
22	S97T000744	-.0095	-.0016	-1.124	-.0401
23	S97T000744_D	.0046	.0015	-.2777	-.0627
24	S97T000765_	.0153	.0015	-1.092	-.0262
25	S97T000765_D	.0147	.0013	-.7158	-.0149
26	S97T000766_	-.0183	-.0046	-.4510	-.0382
27	S97T000766_D	-.0209	-.0046	-.0741	-.0537
28	ICSA	.0010	.0070	.0066	-.0021
29	ICSAB	.4776	.0069	.9346	-.0022
30	CCV_2	5.123	.0053	4.831	5.026
31	CCB_2	-.0002	.0000	.0014	-.0009

JK DA

05-16-97

LABCORE Data Entry Template for Worklist# 18222

Analyst: D. SATO Instrument: ICP⁰²OT Book# 668816

Method: LA-505-151/161 Rev/Mod C-1 5-15-97

Worklist Comment: T-203(SOLID FUSION 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-F01	SOLID		
7	SAMPLE	S97T000745	0 F	@ICP-F01	SOLID	97000299 T-203
		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 , P-F-01 , PB-F-01 , S-F-01 , SB-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	S97T000745	0 F	@ICP-F01	SOLID	
9	CCV		@ICP-QC	QC		
10	CCB		@ICP-QC	QC		
11	SAMPLE	S97T000767	0 F	@ICP-F01	SOLID	97000299 T-203
		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 , P-F-01 , PB-F-01 , S-F-01 , SB-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			
12	DUP	S97T000767	0 F	@ICP-F01	SOLID	
13	ICSA		@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18222

S Type	Sample#	R A	Test	Matrix	Group#	Project
14	ICSAB		@ICP-QC	QC		
15	CCV		@ICP-QC	QC		
16	CCB		@ICP-QC	QC		

Final page for worklist # 18222

Analyst Signature   Date 05-19-97

Revised & Validated by:
5/24/97
Analyst Signature   Date

		D.F.
PREPBUKTA	.250-10	1
597T000745	.250-10	41
745-D	.250-10	41
597T000767	.250-10	41
767-D	.250-10	41

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

SX-104

T-202

T-203

ICV

ICB

LIS

LISG

LISGB

5977000869-L, 025-15-2.8, JF 3005

5977000869, 025-15 601

5977000869-J, 025-15 601

5977000869-Q, 025-15 601, 025 ml samp/c + 12 ml H₂O₃ + 3 ml SS75

5977000869-X, 025-15-1.9 6010

5977000869-GX, 025-15-1.9 6010, 1 ml samp/c + 1 ml each xw H₂C 18 + 35 + 7 ml H₂O₃

CCV

CCB

5977000798, Direct, JF 1 } T-202

5977000798-J, Direct, 1

Propb/DQ, 25-10, JF 1

5977000745, 25-10, JF 41

5977000745-J, 25-10 41

5977000767, 25-10 41

5977000767-J, 25-10 41

ICV

ICB

LIS

LISG

CCV

CCB

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Mon 05-19-97 01:27:47 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970519A	ICP2	05/19/97	11:50	DKS	Q	CONC
2	ICB	970519A	ICP2	05/19/97	11:53	DKS	Q	CONC
3	LLS	970519A	ICP2	05/19/97	11:57	DKS	Q	CONC
4	ICSA	970519A	ICP2	05/19/97	12:00	DKS	Q	CONC
5	ICSA	970519A	ICP2	05/19/97	12:03	DKS	Q	CONC
6	S97T000869_I	970519A	ICP2	05/19/97	12:06	DKS	S	CONC
7	S97T000869_I	970519A	ICP2	05/19/97	12:10	DKS	S	CONC
8	S97T000869_D	970519A	ICP2	05/19/97	12:13	DKS	S	CONC
9	S97T000869_A	970519A	ICP2	05/19/97	12:16	DKS	S	CONC
10	S97T000869_X	970519A	ICP2	05/19/97	12:20	DKS	S	CONC
11	S97T000869_AX	970519A	ICP2	05/19/97	12:24	DKS	S	CONC
12	CCV	970519A	ICP2	05/19/97	12:29	DKS	Q	CONC
13	CCB	970519A	ICP2	05/19/97	12:33	DKS	Q	CONC
14	S97T000798	970519A	ICP2	05/19/97	12:36	DKS	S	CONC
15	S97T000798_D	970519A	ICP2	05/19/97	12:38	DKS	S	CONC
16	PREPBLKTJA	970519A	ICP2	05/19/97	12:42	DKS	Q	CONC
17	S97T000745	970519A	ICP2	05/19/97	12:50	DKS	S	CONC
18	S97T000745_D	970519A	ICP2	05/19/97	12:52	DKS	S	CONC
19	S97T000767	970519A	ICP2	05/19/97	12:56	DKS	S	CONC
20	S97T000767_D	970519A	ICP2	05/19/97	13:04	DKS	S	CONC
21	ICSA	970519A	ICP2	05/19/97	13:15	DKS	Q	CONC
22	ICSA	970519A	ICP2	05/19/97	13:17	DKS	Q	CONC
23	CCV_1	970519A	ICP2	05/19/97	13:21	DKS	Q	CONC
24	CCB_1	970519A	ICP2	05/19/97	13:24	DKS	Q	CONC

DK

5X-104 597T000869

05-19-97

T-202 597T000798

T-203 597T000745

597T000767

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 522 TO 524

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-19-97 01:27:47 PM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.861	4.857	5.140	4.945	4.919	5.072
2	ICB	-.0012	-.0006	.0025	.0049	.0001	-.0000
3	LLS	.0207	.1088	.2059	.1036	.0996	.0110
4	ICSA	.0011	240.3	.0180	.0042	.0002	.0004
5	IC SAB	.9608	241.1	-.0116	-.0016	.4697	.4789
6	S97T000869 L	14.18	31580.	-97.76	51.64	.4437	-.2661
7	S97T000869	16.65	31720.	-49.93	63.12	.0257	-.2451
8	S97T000869 D	17.51	33690.	-37.34	67.26	.0243	.2445
9	S97T000869 A	551.8	32870.	567.7	64.76	581.5	600.4
10	S97T000869 X	26.80	32330.	-14.01	70.77	-.2919	1.073
11	S97T000869 AX	56060.	90380.	60450.	59460.	.00220.	60430.
12	CCV	4.896	4.890	5.189	4.957	5.004	5.101
13	CCB	.0012	.0007	-.0034	.0069	.0000	.0001
14	S97T000798	-.0013	.0044	.0031	.3608	.0221	.0000
15	S97T000798 D	-.0006	.0064	.0063	.3584	.0221	-.0000
16	PREPBLKTJA	.0003	.0157	-.0016	.0024	.0003	.0003
17	S97T000745	.0098	.4898	-.2689	-.0393	.0334	.0075
18	S97T000745 D	-.0309	.4706	-.4812	-.0801	.0313	.0112
19	S97T000767	-.0018	.7766	-.1158	.0812	.0292	.0057
20	S97T000767 D	-.0372	.3568	-.3049	.0815	.0297	.0038
21	ICSA	.0022	243.6	-.0086	-.0087	.0002	.0005
22	IC SAB	.9705	243.6	-.0200	-.0021	.4807	.4865
23	CCV 1	4.937	4.938	5.219	5.012	5.044	5.174
24	CCB 1	-.0012	.0013	.0094	.0069	.0000	.0004

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.037	4.967	4.940	4.894	5.044	4.931
2	ICB	.0057	.0048	.0007	.0004	-.0011	-.0002
3	LLS	.2033	.2239	.0122	.2059	.0421	.0222
4	ICSA	.0001	249.6	.0021	.0147	.0000	-.0022
5	IC SAB	.0186	250.9	.9313	.0073	.4620	.4674
6	S97T000869 L	92.84	18.01	3.539	-1.084	-8.916	889.5
7	S97T000869	-3.989	14.49	.6836	-2.370	-3.268	879.3
8	S97T000869 D	11.77	6.061	-.0997	-2.594	.0023	938.7
9	S97T000869 A	617.0	613.2	586.9	586.2	599.5	1491.
10	S97T000869 X	187.7	15.75	10.35	-33.36	-2.474	897.9
11	S97T000869 AX	60800.	60700.	59270.	60160.	59240.	60400.
12	CCV	5.121	5.070	4.977	4.926	5.091	4.978
13	CCB	.0128	.0060	.0011	-.0055	-.0009	-.0006
14	S97T000798	.0161	18.62	.0009	-.0034	-.0019	.0049
15	S97T000798 D	.0106	18.58	.0007	-.0018	.0000	.0060
16	PREPBLKTJA	.0451	-.0003	.0024	.0059	-.0005	.0016
17	S97T000745	64.05	.5132	.0454	.1090	.0409	7.526
18	S97T000745 D	57.84	.4747	.0301	-.2627	.0393	7.070
19	S97T000767	70.68	.3525	-.0030	-.0680	.0810	7.630
20	S97T000767 D	62.39	.4600	.0105	-.1798	.0573	7.747
21	ICSA	.0291	252.7	.0028	.0085	-.0003	-.0022
22	IC SAB	.0125	255.8	.9437	.0146	.4706	.4749
23	CCV 1	5.090	5.135	5.016	4.981	5.134	5.028
24	CCB 1	.0147	.0049	.0013	-.0154	-.0012	.0005

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-19-97 01:27:47 PM

page 3

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.923	-.0020	4.616	4.734	4.969	4.865
2	ICB	-.0006	.0001	.0009	-.1703	-.0006	-.0001
3	LLS	.0178	.0008	.0904	.4283	.1019	.0213
4	ICSA	-.0092	-.0414	93.19	.0994	-.0047	.0026
5	ICSAB	.4401	-.0411	93.26	.1289	-.0046	.9791
6	S97T000869_L	-1.114	1.902	-5.230	2619.	-1.497	1.466
7	S97T000869_D	-.5865	-.1041	2.917	2890.	-.3093	-.0736
8	S97T000869_D	-.8325	-.1804	1.650	3091.	-.1916	-.2213
9	S97T000869_A	580.4	-.0651	549.4	3545.	596.9	584.3
10	S97T000869_X	-3.533	-2.071	-10.31	2499.	-3.485	-2.931
11	S97T000869_AX	55470.	-23.61	55720.	62430.	60150.	59990.
12	CCV	4.950	-.0020	4.668	4.878	5.011	4.894
13	CCB	-.0008	-.0001	.0001	-.1801	-.0009	-.0004
14	S97T000798	-.0005	.0131	.3055	.7390	-.0005	.0045
15	S97T000798_D	-.0001	.0127	.3017	.7682	.0001	.0048
16	PREPBLKTJA	.0010	-.0001	.0010	Q303.1	.0020	-.0004
17	S97T000745	.1052	.0059	4.317	12140.	18.63	.0151
18	S97T000745_D	.0881	-.0091	3.343	12030.	19.70	-.0148
19	S97T000767	.1133	-.0074	4.718	12210.	21.18	-.0148
20	S97T000767_D	.0943	.0005	4.442	11090.	20.02	-.0048
21	ICSA	-.0091	-.0423	94.32	.0840	-.0057	.0024
22	ICSAB	.4457	-.0453	94.70	-.0038	-.0045	.9919
23	CCV_1	5.001	-.0016	4.709	4.852	5.058	4.952
24	CCB_1	-.0006	-.0003	.0008	-.1813	-.0016	-.0005

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.995	4.854	5.013	5.073	4.946	4.927
2	ICB	-.0004	.0001	.0016	.0017	-.0047	.0013
3	LLS	.2143	.0202	.0987	.1907	.1980	.0413
4	ICSA	252.7	-.0055	-.0111	194.3	.0026	-.0006
5	ICSAB	253.7	.4437	-.0134	193.6	.0026	.9074
6	S97T000869_L	10.47	.9399	99.89	241800.	-3.243	1.184
7	S97T000869_D	1.618	.9479	99.40	239300.	-1.185	2.678
8	S97T000869_D	2.114	.9793	105.1	255200.	-.7624	-2.008
9	S97T000869_A	588.1	568.7	703.5	243000.	592.9	581.1
10	S97T000869_X	-6.823	.5462	94.61	243200.	-25.37	23.79
11	S97T000869_AX	62700.	59350.	59630.	301900.	58360.	59040.
12	CCV	5.020	4.913	5.049	5.084	4.980	4.940
13	CCB	-.0000	-.0000	.0008	.0009	-.0042	.0042
14	S97T000798	3.967	.0788	.0005	3.564	.0007	.0075
15	S97T000798_D	3.954	.0794	-.0009	3.546	.0033	.0031
16	PREPBLKTJA	.0053	.0017	-.0020	.0699	.0006	Q.1577
17	S97T000745	.2483	21.60	-.0734	68.83	-.0671	88.05
18	S97T000745_D	.0229	12.42	-.1458	70.44	-.0521	77.54
19	S97T000767	.0490	16.65	-.1144	69.35	.0282	164.5
20	S97T000767_D	.3194	14.71	-.1531	68.76	.0017	129.1
21	ICSA	256.0	-.0056	-.0096	197.4	.0015	-.0054
22	ICSAB	256.1	4.502	-.0132	195.6	.0001	.9388
23	CCV_1	5.077	4.951	5.103	5.140	5.027	4.981
24	CCB_1	-.0076	.0001	.0015	-.0013	-.0024	.0050

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-19-97 01:27:47 PM

page 4

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.977	4.848	4.911	4.786	4.737	4.937
2	ICB	-.0227	-.0080	.0048	-.0007	.0376	-.0016
3	LLS	.3873	.2170	.1995	.1027	.2414	.1310
4	ICSA	-.0081	.0318	-.0268	.0153	.0181	.0011
5	ICSA B	-.0046	.9835	-.0337	-.0087	.0074	.0034
6	S97T000869 L	1361.	-14.83	1979.	-4.792	100.2	63.25
7	S97T000869	1404.	23.98	1946.	2.333	26.37	36.87
8	S97T000869 D	1468.	14.43	2052.	-6.434	36.21	37.76
9	S97T000869 A	2044.	603.5	2585.	573.9	631.9	635.9
10	S97T000869 X	1279.	49.98	1950.	-20.52	230.7	65.62
11	S97T000869 AX	62100.	59830.	60870.	60400.	59440.	61380.
12	CCV	5.034	4.889	4.913	4.843	4.754	4.989
13	CCB	-.0113	-.0069	-.0031	-.0062	.0207	.0020
14	S97T000798	-.0153	-.0135	7.258	-.0074	.0415	2.943
15	S97T000798 D	-.0078	.0021	7.479	-.0025	.0406	2.938
16	PREPBLKTJA	-.0201	-.0056	Q.1444	.0020	.0269	.0230
17	S97T000745	3.763	-.3724	2.033	-.2700	1.424	1.857
18	S97T000745 D	3.847	-.1961	1.098	-.3500	1.252	1.478
19	S97T000767	2.414	-.3248	.9307	-.1597	1.035	2.612
20	S97T000767 D	3.247	-.6813	.8829	-.3281	1.518	1.804
21	ICSA	-.0082	.0388	-.0155	-.0065	.0014	-.0022
22	ICSA B	-.0063	1.003	-.0244	-.0111	.0215	.0012
23	CCV 1	5.133	4.931	5.040	4.868	4.801	5.025
24	CCB 1	-.0085	-.0001	.0127	-.0033	.0385	-.0025

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.865	4.920	.0347	4.915	4.697	9.602
2	ICB	.0005	.0000	.0021	-.0005	.0252	-.0062
3	LLS	.2128	.0204	-.0022	.0210	.3842	.5286
4	ICSA	.0056	.0021	.0010	.0010	.0261	-.0204
5	ICSA B	.0088	.0021	-.0048	.0013	.0517	-.0256
6	S97T000869 L	24.91	.1579	-17.45	-1.582	-58.56	35.58
7	S97T000869	-.9700	-.0009	-2.182	.1414	13.30	4.502
8	S97T000869 D	-1.906	-.0021	-3.489	.2799	7.164	21.12
9	S97T000869 A	582.4	586.7	1.317	580.6	550.9	1182.
10	S97T000869 X	-13.96	-.3162	-21.50	-3.126	55.92	-86.78
11	S97T000869 AX	58590.	59860.	445.4	60060.	58370.	114700.
12	CCV	4.920	4.957	.0382	4.920	4.740	9.685
13	CCB	.0024	.0000	-.0026	-.0003	.0151	-.0058
14	S97T000798	.0061	.1010	-.0073	-.0001	.0029	.1467
15	S97T000798 D	.0046	.1002	-.0123	.0004	.0153	.1606
16	PREPBLKTJA	.0002	.0002	.0070	-.0002	.0098	-.0880
17	S97T000745	.0265	1.281	.2060	.0338	.0657	-3.166
18	S97T000745 D	-.1346	1.365	.1948	.0237	-.2254	-4.325
19	S97T000767	-.2489	1.418	.2379	.0867	.4891	-4.795
20	S97T000767 D	.0646	1.380	.0948	.0648	.5581	-3.014
21	ICSA	-.0015	.0021	-.0040	.0013	.0620	-.0806
22	ICSA B	.0019	.0021	-.0054	.0008	.0525	-.0635
23	CCV 1	4.973	5.019	.0394	4.980	4.766	9.778
24	CCB 1	-.0043	-.0001	.0014	-.0002	.0200	-.0203

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Mon 05-19-97 01:27:47 PM

page 5

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.029	.0049	4.774	4.916
2	ICB	-.0010	-.0001	-.0004	-.0005
3	LLS	.1041	.0006	.0205	.0216
4	ICSA	.0017	.0067	.0055	-.0025
5	IC SAB	.4671	.0069	.9242	-.0019
6	S97T000869 L	-.1508	.4559	-5.102	2.318
7	S97T000869	-.8467	-.1903	.8256	-.8139
8	S97T000869 D	-.6431	-.2445	1.127	-.5059
9	S97T000869 A	599.8	.5337	574.8	589.5
10	S97T000869 X	-10.60	-.9051	-4.649	-2.895
11	S97T000869 AX	59260.	57.70	55720.	59310.
12	CCV	5.072	.0050	4.817	4.956
13	CCB	-.0014	-.0001	-.0003	-.0002
14	S97T000798	-.0011	.0006	.4222	.0003
15	S97T000798 D	-.0007	.0006	.4502	.0010
16	PREFBLKTJA	-.0010	-.0001	.0001	-.0008
17	S97T000745	.0003	.0046	-.5717	.0028
18	S97T000745 D	-.0628	-.0110	-.5175	-.0572
19	S97T000767	-.0796	-.0140	-1.088	-.0445
20	S97T000767 D	-.0168	.0045	-.8598	.0110
21	ICSA	-.0001	.0064	.0061	-.0030
22	IC SAB	.4735	.0068	.9344	-.0019
23	CCV 1	5.128	.0050	4.850	5.001
24	CCB 1	-.0021	-.0005	.0003	-.0016

JK
05-19-97

LABCORE Data Entry Template for Worklist# 18948

Analyst: JK 56/6 Instrument: ICP01 Book# 67B48Q

Method: LA-505-151/161-Rev/Mod E-1

Worklist Comment: ^{JK 6-26-97} ICP T-203 (SOLID ACID DIGEST)DATA
NOT USED

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	PREPSTDARL			@ICP-A01	SOLID		
7	PREPBLKARL			@ICP-A01	SOLID		
8	SERDIL	S97T001017	0	A	@ICP-A01	SOLID	
9	SAMPLE	S97T001017	0	A	@ICP-A01	SOLID	97000299 T-203
	Analytes Requested: AG-A-01 , AL-A-01 , AS-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 , 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 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01						
10	DUP	S97T001017	0	A	@ICP-A01	SOLID	
11	SPK-PREDIG	S97T001017	0	A	@ICP-A01	SOLID	
12	ICSA	^{sample 1} S97T001017 (10 ppm) JK 6-26-97			@ICP-QC	QC	
13	ICSAB				@ICP-QC	QC	
14	CCV				@ICP-QC	QC	
15	CCB				@ICP-QC	QC	

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18948

S Type	Sample#	R A Test	Matrix	Group#	Project

Final page for worklist # 18948

Analyst Signature _____ Date _____

Prepsta GRL, Direct, DF 1
Prepbk GRL, Direct, 1

5977001017-L, 4-4-2-8, DF 10

5977001017, 4-4, 2

5977001017-D, 4-4, 2

5977001017-S, 4-4, 2

5977001017-X, 4-4-1-9, 20

5977001017-GK, 4-4-1-9, 20, 1ml sample + 1ml each x6HC 28 + 35 + 7ml HNO₃Revised & Validated by:
Paul M. Pang 6/30/97
Analyst Signature _____ Date _____DATA
NOT USED

Port Spike

$$Cr = \frac{\left(\frac{223.130}{20}\right) - \left(\frac{20.454}{20}\right)}{10} \times 100 = 101.3\%$$

$$Fe = \frac{\left(\frac{215.189}{20}\right) - \left(\frac{18.625}{20}\right)}{10} \times 100 = 98.3\%$$

$$K = \frac{\left(\frac{230.263}{20}\right) - \left(\frac{36.252}{20}\right)}{10} \times 100 = 97.0\%$$

$$Mn = \frac{\left(\frac{389.348}{20}\right) - \left(\frac{268.489}{20}\right)}{10} \times 100 = 100.5\%$$

$$Pb = \frac{\left(\frac{203.799}{20}\right) - (0)}{10} \times 100 = 101.9\%$$

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

File # 970626 C. DGT

HNF-SD-WM-DP-247, REV. 0

DATA
NOT USED

Identity 1: ICV

Identity 2: Quality Control

1:03 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.902	4.957	5.009	4.919	4.921	5.016	5.162	4.947
S.D.	0.008	0.015	0.031	0.006	0.014	0.015	0.008	0.005
% R.S.D.	0.155	0.303	0.618	0.119	0.288	0.300	0.147	0.099
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.112	4.931	4.941	4.930	4.714	4.864	5.075	10.140
S.D.	0.007	0.008	0.006	0.018	0.005	0.007	0.037	0.038
% R.S.D.	0.146	0.165	0.121	0.356	0.115	0.145	0.727	0.378
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.797	5.132	4.965	5.001	4.882	4.812	5.115	5.133
S.D.	0.020	0.005	0.013	0.033	0.034	0.009	0.003	0.018
% R.S.D.	0.423	0.097	0.269	0.664	0.689	0.177	0.065	0.343
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	5.033	5.085	4.868	4.874	4.973	4.989	5.012	4.949
S.D.	0.022	0.003	0.048	0.011	0.004	0.007	0.049	0.004
% R.S.D.	0.440	0.065	0.995	0.221	0.088	0.150	0.982	0.080
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	4.742	5.051	5.078	5.113				
S.D.	0.003	0.002	0.007	0.041				
% R.S.D.	0.059	0.043	0.129	0.795				

K 20

06-26-97

T-204 5977001199

T-203 5977001188

T-203 5977001017

Post Spike: SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 547 TO 548

$$B_i = \left(\frac{476.70}{20} \right) - \left(\frac{269.821}{20} \right) \times 100 = 103.4\%$$

$$La = \left(\frac{288.252}{20} \right) - \left(\frac{57.580}{20} \right) \times 100 = 100.4\%$$

$$Mn = \left(\frac{268.489}{20} \right) - \left(\frac{68.016}{20} \right) \times 100 = 100.2\%$$

HNF-SD-WM-DP-247, REV. 0

Identity 1: ICB Identity 2: Quality Control

1:07 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.004	-0.000	-0.006	-0.013	0.004	0.007	0.008	-0.001
S.D.	0.001	0.000	0.008	0.003	0.006	0.002	0.000	0.000
% R.S.D.	26.186	76.376	140.607	19.594	148.274	28.916	773.377	25.001

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	-0.003	0.000	-0.002	0.002	0.001	-0.010	-0.149
S.D.	0.000	0.002	0.001	0.001	0.001	0.001	0.013	0.033
% R.S.D.	732.205	68.126	203.749	34.704	20.862	178.780	126.856	22.057

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.003	-0.033	-0.000	0.013	-0.007	0.004	0.009	-0.001
S.D.	0.009	0.004	0.000	0.002	0.002	0.000	0.002	0.004
% R.S.D.	271.266	12.803	20.785	14.565	22.427	12.008	26.362	312.210

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.001	-0.000	-0.020	-0.002	0.001	-0.003	-0.009	-0.000
S.D.	0.001	0.000	0.006	0.000	0.001	0.001	0.009	0.000
% R.S.D.	66.810	147.373	31.894	22.836	139.445	22.543	96.471	198.476

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.015	-0.000	-0.000	0.047
S.D.	0.013	0.001	0.000	0.016
% R.S.D.	84.171	319.656	1.344	35.086

1

HNF-SD-WM-DP-247, REV. 0

DATA
NOT USED

Identity 1: LLS Identity 2: Quality Control

1:09 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.018	0.019	0.199	0.119	0.089	0.050	0.019	0.019
S.D.	0.001	0.000	0.010	0.004	0.013	0.004	0.000	0.000
% R.S.D.	3.643	1.156	4.869	3.179	14.086	8.646	0.490	1.581

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.021	0.038	0.098	0.101	0.197	0.016	0.186	0.368
S.D.	0.000	0.002	0.002	0.003	0.001	0.001	0.013	0.049
% R.S.D.	1.316	5.321	2.119	2.466	0.754	3.630	7.153	13.340

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.157	0.184	0.097	0.419	0.203	0.206	0.188	0.200
S.D.	0.010	0.007	0.000	0.006	0.002	0.002	0.002	0.001
% R.S.D.	6.662	3.885	0.066	1.362	0.869	1.180	0.937	0.621

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.101	0.020	0.200	0.019	0.011	0.098	0.608	0.020
S.D.	0.001	0.000	0.006	0.000	0.001	0.001	0.010	0.000
% R.S.D.	0.892	2.115	3.160	1.234	7.083	0.901	1.699	1.832

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.085	0.103	0.010	0.475
S.D.	0.036	0.002	0.000	0.017
% R.S.D.	42.848	1.515	2.944	3.603

HNF-SD-WM-DP-247, REV. 0

DATA
NOT USED

Identity 1: ICSA Identity 2: Quality Control

1:12 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr	Sr	Bi	Si	Al	Co	Cu	Li
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Mean	-0.001	0.001	-0.025	0.028	207.554	0.005	-0.002	-0.001
S.D.	0.001	0.000	0.008	0.002	0.742	0.002	0.000	0.000
% R.S.D.	173.404	8.807	30.299	8.726	0.357	39.600	23.318	36.898

	Zn	Ni	La	Fe	Ca	Cr	Nd	U
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Mean	0.006	-0.004	0.000	99.273	103.734	0.000	0.006	-0.034
S.D.	0.000	0.002	0.001	0.192	0.333	0.001	0.009	0.038
% R.S.D.	4.981	43.393	180.345	0.193	0.321	1094.599	148.302	113.797

	Ce	Sm	Ba	P	S	Mg	As	Na
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Mean	-0.001	0.010	0.001	0.017	-0.041	96.830	-0.005	185.430
S.D.	0.011	0.006	0.000	0.010	0.007	0.283	0.005	1.465
% R.S.D.	1606.330	64.969	28.502	59.299	17.225	0.293	100.015	0.790

	Mo	Ag	Pb	Ti	Cd	B	K	Mn
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Mean	-0.003	-0.000	-0.012	-0.001	0.003	0.009	0.092	0.005
S.D.	0.002	0.001	0.022	0.000	0.000	0.000	0.012	0.001
% R.S.D.	86.672	232.158	181.005	20.929	16.111	4.482	13.333	11.059

	Sb	V	Be	Tl
	(ppm)	(ppm)	(ppm)	(ppm)
Mean	0.038	-0.001	0.002	0.011
S.D.	0.017	0.001	0.000	0.012
% R.S.D.	44.690	70.831	12.307	108.839

1

HNF-SD-WM-DP-247, REV. 0

Identity 1: ICSAB Identity 2: Quality Control

1:15 PM June 26, 1997

Task name: OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.006	0.002	0.012	0.054	206.476	0.512	0.498	0.931
S.D.	0.001	0.000	0.007	0.006	1.559	0.002	0.000	0.007
% R.S.D.	14.718	6.547	56.232	11.446	0.755	0.389	0.049	0.725

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.020	1.006	0.009	98.091	104.180	0.514	-0.012	0.430
S.D.	0.002	0.004	0.001	0.174	0.284	0.006	0.009	0.036
% R.S.D.	0.162	0.414	9.078	0.177	0.273	1.155	79.078	8.459

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.033	0.090	0.509	0.012	-0.039	97.745	-0.008	187.590
S.D.	0.008	0.006	0.000	0.003	0.003	0.527	0.005	1.146
% R.S.D.	25.599	6.335	0.096	29.740	8.913	0.539	61.282	0.611

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.000	1.071	0.983	0.002	1.015	0.010	0.058	0.512
S.D.	0.001	0.002	0.027	0.000	0.002	0.001	0.000	0.001
% R.S.D.	1024.790	0.214	2.760	12.921	0.180	14.094	0.009	0.282

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.074	0.504	0.502	0.121
S.D.	0.024	0.001	0.001	0.008
% R.S.D.	32.643	0.117	0.137	6.778

HNF-SD-WM-DP-247, REV. 0

Identity 1: Prepsdard Identity 2: acid dig, direct

2:22 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.877	5.022	5.001	7.123	5.053	5.144	4.745	5.025
S.D.	0.018	0.007	0.016	0.019	0.010	0.009	0.005	0.025
% R.S.D.	0.369	0.145	0.330	0.273	0.196	0.181	0.101	0.503
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.903	5.006	4.939	4.707	4.953	4.816	4.804	9.624
S.D.	0.015	0.013	0.025	0.035	0.017	0.004	0.041	0.025
% R.S.D.	0.304	0.266	0.504	0.745	0.343	0.091	0.851	0.260
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.360	5.020	4.976	5.059	5.071	4.915	5.221	5.366
S.D.	0.009	0.014	0.008	0.054	0.021	0.013	0.040	0.028
% R.S.D.	0.160	0.281	0.157	1.064	0.421	0.258	0.762	0.515
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	4.975	1.169	4.748	4.436	4.885	5.068	4.747	4.841
S.D.	0.010	0.012	0.034	0.010	0.016	0.018	0.017	0.022
% R.S.D.	0.200	1.008	0.719	0.219	0.327	0.346	0.348	0.449
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	4.733	4.894	5.065	4.948				
S.D.	0.016	0.018	0.015	0.050				
% R.S.D.	0.336	0.369	0.302	1.010				

HNF-SD-WM-DP-247, REV. 0

Identity 1: PREPBLK Identity 2: Quality Control

2:25 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.001	0.009	0.698	0.102	0.012	0.010	0.001
S.D.	0.001	0.000	0.001	0.000	0.005	0.002	0.000	0.000
% R.S.D.	57.347	17.347	5.619	0.030	4.698	17.168	1.091	11.114
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.017	-0.003	-0.001	0.006	0.122	-0.003	-0.002	-0.137
S.D.	0.000	0.002	0.001	0.002	0.000	0.001	0.005	0.041
% R.S.D.	1.577	46.472	81.652	33.938	0.296	32.477	227.190	29.880
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.025	-0.039	0.001	0.033	0.096	0.024	0.004	0.529
S.D.	0.013	0.009	0.000	0.001	0.001	0.000	0.003	0.002
% R.S.D.	53.926	22.503	7.418	1.700	1.502	0.850	71.921	0.469
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.002	0.142	0.016	-0.001	0.001	0.382	0.106	0.002
S.D.	0.001	0.006	0.012	0.000	0.001	0.002	0.006	0.000
% R.S.D.	51.637	4.410	76.690	40.753	44.742	0.534	5.898	12.578
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	-0.034	0.004	0.001	0.086				
S.D.	0.011	0.000	0.000	0.028				
% R.S.D.	31.331	9.917	43.450	31.978				

1

HNF-SD-WM-DP-247, REV. 0

Identity 1: S97T001017_L Identity 2: acid dig,4-4-2-8 ml

2:28 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 10.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	2.981	265.389	8.775	0.403	0.066	0.041	-0.008
S.D.	0.012	0.003	0.627	0.014	0.040	0.021	0.005	0.004
% R.S.D.	805.904	0.101	0.236	0.158	9.837	32.354	11.376	50.219
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.093	0.765	58.537	18.399	1.680	20.127	-0.042	-1.369
S.D.	0.005	0.021	0.089	0.115	0.003	0.122	0.062	0.303
% R.S.D.	4.917	2.736	0.152	0.622	0.151	0.608	148.643	22.123
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.127	-0.118	0.101	13.109	-0.082	0.290	1.120	186.565
S.D.	0.131	0.084	0.004	0.060	0.026	0.001	0.028	1.344
% R.S.D.	103.444	71.079	3.896	0.457	31.465	0.398	2.475	0.721
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.006	0.069	0.217	0.008	-0.003	0.356	35.880	67.967
S.D.	0.009	0.008	0.161	0.006	0.005	0.005	0.317	0.160
% R.S.D.	153.641	12.060	74.251	68.500	179.010	1.295	0.882	0.235
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	-0.248	-0.005	-0.002	1.812				
S.D.	0.380	0.012	0.002	0.293				
% R.S.D.	153.601	244.396	81.834	16.195				

HNF-SD-WM-DP-247, REV. 0

Identity 1: S977001017 Identity 2: acid dig, 4-4 ml

2:31 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 2.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.004	2.959	258.645	8.425	0.295	0.047	0.050	-0.000
S.D.	0.002	0.005	0.473	0.007	0.020	0.007	0.001	0.000
% R.S.D.	52.998	0.159	0.183	0.089	6.757	15.230	1.119	199.246

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.089	0.748	58.242	17.968	1.643	19.554	-0.036	-1.466
S.D.	0.001	0.006	0.077	0.037	0.002	0.039	0.015	0.050
% R.S.D.	0.854	0.813	0.132	0.203	0.133	0.199	40.879	3.407

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.316	-0.138	0.109	12.619	-0.053	0.272	1.049	180.341
S.D.	0.014	0.008	0.000	0.034	0.010	0.000	0.014	0.898
% R.S.D.	4.487	5.803	0.448	0.269	19.005	0.085	1.348	0.498

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.010	0.080	0.361	0.010	0.004	0.364	33.932	65.605
S.D.	0.004	0.003	0.029	0.001	0.001	0.004	0.148	0.068
% R.S.D.	42.424	4.282	7.993	5.336	33.262	1.006	0.438	0.104

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.052	0.015	0.000	1.450
S.D.	0.054	0.001	0.000	0.031
% R.S.D.	102.713	9.939	438.738	2.143

HNF-SD-WM-DP-247, REV. 0

Identity 1: S97T001017.D Identity 2: acid dig, 4-4 ml

2:34 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 2.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.003	2.880	252.435	7.474	0.297	0.024	0.055	-0.000
S.D.	0.003	0.005	0.562	0.028	0.007	0.005	0.000	0.000
% R.S.D.	100.954	0.169	0.223	0.377	2.216	19.158	0.821	107.684

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.089	0.738	56.851	49.777	1.604	18.993	-0.045	-1.438
S.D.	0.001	0.004	0.118	0.179	0.002	0.053	0.011	0.066
% R.S.D.	0.601	0.545	0.208	0.359	0.137	0.281	24.006	4.589

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.307	-0.122	0.137	12.627	-0.008	0.296	1.030	175.409
S.D.	0.020	0.015	0.000	0.118	0.003	0.000	0.011	1.960
% R.S.D.	6.399	12.499	0.298	0.937	38.193	0.147	1.045	1.117

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.006	0.069	0.465	0.010	0.005	0.545	32.034	63.689
S.D.	0.002	0.003	0.019	0.001	0.002	0.004	0.322	0.187
% R.S.D.	33.340	4.085	4.142	6.851	44.637	0.766	1.005	0.294

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.029	0.016	-0.003	1.401
S.D.	0.009	0.001	0.000	0.052
% R.S.D.	32.476	9.492	0.384	3.711

1

HNF-SD-WM-DP-247, REV. 0

Identity 1: S97T001017_s Identity 2: acid dig, 4-4 ml

2:37 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 2.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

DATA
NOT USED

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.946	7.593	233.218	13.015	5.493	5.039	4.908	4.917
S.D.	0.007	0.029	0.585	0.042	0.011	0.004	0.024	0.032
% R.S.D.	0.146	0.384	0.251	0.325	0.199	0.081	0.497	0.654

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.567	5.722	56.279	247.851	6.722	21.972	4.944	8.578
S.D.	0.009	0.017	0.138	0.168	0.023	0.008	0.040	0.061
% R.S.D.	0.162	0.291	0.246	0.068	0.336	0.038	0.802	0.714

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.691	4.846	5.649	16.849	5.231	5.282	6.085	161.828
S.D.	0.014	0.007	0.027	0.088	0.031	0.003	0.028	0.920
% R.S.D.	0.245	0.135	0.473	0.521	0.588	0.053	0.461	0.569

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	4.921	1.208	7.801	4.457	4.925	5.010	33.708	62.706
S.D.	0.010	0.002	0.096	0.008	0.010	0.020	0.174	0.056
% R.S.D.	0.202	0.161	1.226	0.187	0.206	0.407	0.516	0.089

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.831	4.982	5.010	6.253
S.D.	0.145	0.001	0.013	0.055
% R.S.D.	2.992	0.026	0.257	0.883

HNF-SD-WM-DP-247, REV. 0

Identity 1: S97T001017_X Identity 2: acid dig,4-4-1-9 ml

2:40 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 20.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

**DATA
NOT USED**

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.038	3.034	269.821	8.940	0.830	0.178	0.055	0.003
S.D.	0.005	0.006	0.344	0.057	0.118	0.043	0.011	0.009
% R.S.D.	13.991	0.199	0.128	0.640	14.170	24.061	19.855	304.288

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.097	0.716	57.580	18.625	1.691	20.454	0.092	-2.048
S.D.	0.008	0.030	0.140	0.363	0.007	0.061	0.075	0.613
% R.S.D.	8.165	4.216	0.243	1.949	0.410	0.298	81.881	29.950

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.556	-0.571	0.115	13.553	-0.063	0.304	1.153	188.420
S.D.	0.252	0.138	0.006	0.103	0.035	0.006	0.076	1.678
% R.S.D.	45.272	24.163	5.536	0.757	55.341	2.050	6.599	0.891

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.027	0.038	-0.095	0.003	0.018	0.353	36.252	68.016
S.D.	0.002	0.013	0.135	0.014	0.018	0.029	0.352	0.029
% R.S.D.	7.634	33.994	141.733	393.708	99.427	8.146	0.971	0.042

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.000	0.068	0.001	2.192
S.D.	0.286	0.011	0.009	0.313
% R.S.D.	28.645	16.701	1436.552	14.296

5

HNF-SD-WM-DP-247, REV. 0

DATA
NOT USED

Identity 1: S97T001017_AX Identity 2: acid dig,4-4-1-9 ml

2:44 PM June 26, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 20.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bf (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	201.861	211.725	476.760	222.966	207.180	208.878	194.168	200.813
S.D.	0.129	0.160	0.355	0.326	0.382	0.268	0.201	0.880
% R.S.D.	0.064	0.075	0.074	0.146	0.184	0.128	0.103	0.438

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	204.336	205.056	258.352	215.189	200.886	223.130	190.566	394.704
S.D.	0.098	0.385	0.599	0.513	0.265	0.205	0.888	0.276
% R.S.D.	0.048	0.188	0.232	0.239	0.132	0.092	0.466	0.070

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Hg (ppm)	As (ppm)	Na (ppm)
Mean	219.225	205.057	205.455	229.357	209.579	211.731	209.708	389.348
S.D.	0.214	0.339	0.456	0.628	0.267	0.146	0.482	1.708
% R.S.D.	0.098	0.165	0.222	0.274	0.127	0.069	0.230	0.439

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	211.040	152.629	203.799	203.469	204.689	194.324	230.263	268.489
S.D.	0.382	0.183	0.623	0.131	0.259	0.110	1.724	0.100
% R.S.D.	0.181	0.120	0.306	0.064	0.127	0.056	0.749	0.037

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	202.242	202.814	199.905	212.672
S.D.	0.874	0.152	0.086	0.280
% R.S.D.	0.432	0.075	0.043	0.132

†

HNF-SD-WM-DP-247, REV. 0

Identity 1: ICSA Identity 2: Quality Control

2:48 PM June 26, 1997

Task name: OPTIMA

Sample Weight: 1.0000 Solution Volume: 1.00

On-Peak Integrations: 3 Off-Peak Integrations: 1

**DATA
NOT USED**

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.003	0.014	0.025	210.827	0.014	-0.001	0.000
S.D.	0.001	0.000	0.007	0.002	0.184	0.000	0.000	0.000
% R.S.D.	43.821	10.461	48.985	8.635	0.087	1.696	32.247	3998.674

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.007	0.001	0.009	95.212	102.372	-0.001	-0.017	0.025
S.D.	0.000	0.001	0.001	0.123	0.136	0.001	0.012	0.008
% R.S.D.	5.022	108.471	8.349	0.129	0.133	88.547	69.383	34.046

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Hg (ppm)	As (ppm)	Na (ppm)
Mean	-0.009	-0.011	0.002	0.035	0.085	99.725	-0.049	193.906
S.D.	0.004	0.002	0.000	0.002	0.010	0.309	0.003	0.762
% R.S.D.	39.542	17.253	13.500	6.854	203.897	0.310	6.232	0.393

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.000	0.167	0.001	0.000	0.002	0.008	0.017	0.012
S.D.	0.002	0.012	0.004	0.000	0.001	0.000	0.010	0.000
% R.S.D.	695.543	7.218	375.859	200.685	47.972	6.350	57.745	0.928

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.042	-0.000	0.004	0.013
S.D.	0.049	0.000	0.001	0.002
% R.S.D.	115.830	137.538	15.208	15.419

HNF-SD-WM-DP-247, REV. 0

Identity 1: ICSAB Identity 2: Quality Control

2:51 PM June 26, 1997

Task name: OPTIMA

Sample Weight: 1.0000 Solution Volume: 1.00

On-Peak Integrations: 3 Off-Peak Integrations: 1

**DATA
NOT USED**

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.005	0.003	-0.001	0.019	205.006	0.523	0.496	0.932
S.D.	0.002	0.000	0.006	0.004	0.815	0.004	0.002	0.003
% R.S.D.	35.402	2.727	386.831	19.433	0.396	0.748	0.329	0.283
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.016	0.998	0.000	96.771	103.174	0.508	-0.002	-0.085
S.D.	0.001	0.001	0.002	0.292	0.079	0.001	0.008	0.048
% R.S.D.	0.132	0.131	12658.721	0.302	0.076	0.143	498.096	56.778
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.029	-0.015	0.513	0.008	-0.007	98.494	-0.032	188.913
S.D.	0.014	0.007	0.001	0.009	0.008	0.312	0.004	0.267
% R.S.D.	47.300	47.116	0.272	122.104	109.865	0.316	12.466	0.141
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.001	1.083	1.012	-0.001	1.008	0.009	0.082	0.509
S.D.	0.001	0.005	0.012	0.000	0.003	0.001	0.017	0.001
% R.S.D.	156.372	0.438	1.183	67.624	0.298	6.455	20.068	0.198
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	0.044	0.502	0.499	0.105				
S.D.	0.014	0.001	0.001	0.014				
% R.S.D.	31.068	0.292	0.180	13.002				

HNF-SD-WM-DP-247, REV. 0

**DATA
NOT USED**

Identity 1: CCV Identity 2: Quality Control 2:55 PM June 26, 1997
 Task name : OPTIMA
 Sample Weight : 1.0000 Solution Volume : 1.00
 On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.939	5.009	5.122	4.999	5.006	5.206	5.074	4.824
S.D.	0.003	0.004	0.011	0.014	0.008	0.015	0.010	0.036
% R.S.D.	0.058	0.086	0.211	0.271	0.161	0.289	0.200	0.747

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.276	5.016	4.922	4.983	4.677	4.978	4.943	9.728
S.D.	0.019	0.012	0.008	0.015	0.010	0.023	0.013	0.033
% R.S.D.	0.351	0.241	0.158	0.297	0.208	0.459	0.270	0.339

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.028	4.991	4.946	5.255	5.128	5.010	5.216	5.141
S.D.	0.012	0.003	0.004	0.022	0.010	0.016	0.015	0.025
% R.S.D.	0.237	0.052	0.077	0.427	0.197	0.310	0.296	0.485

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	5.213	5.038	4.905	4.906	5.041	4.974	5.036	5.008
S.D.	0.013	0.036	0.008	0.006	0.015	0.009	0.028	0.013
% R.S.D.	0.258	0.722	0.173	0.132	0.303	0.174	0.559	0.252

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.838	5.125	5.048	5.151
S.D.	0.041	0.007	0.006	0.019
% R.S.D.	0.847	0.132	0.109	0.377

HNF-SD-WM-DP-247, REV. 0

DATA
NOT USED

Identity 1: CCB Identity 2: Quality Control 3:02 PM June 26, 1997
 Task name : OPTIMA
 Sample Weight : 1.0000 Solution Volume : 1.00
 On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.003	-0.000	0.013	-0.006	0.020	0.005	-0.001	-0.001
S.D.	0.000	0.000	0.002	0.001	0.006	0.002	0.000	0.000
% R.S.D.	17.398	85.714	18.337	21.540	30.873	43.415	32.663	6.660

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	-0.006	-0.001	0.016	0.011	-0.003	-0.005	-0.064
S.D.	0.000	0.002	0.002	0.001	0.002	0.001	0.002	0.004
% R.S.D.	64.438	26.049	169.543	7.430	17.771	52.061	43.323	7.073

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.038	-0.012	-0.000	0.012	-0.003	0.011	-0.001	0.037
S.D.	0.002	0.001	0.000	0.003	0.003	0.002	0.003	0.002
% R.S.D.	4.876	7.757	24.168	27.242	114.539	18.548	491.438	6.661

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.001	0.062	-0.032	-0.001	0.001	-0.005	0.036	0.000
S.D.	0.001	0.003	0.012	0.000	0.000	0.001	0.009	0.000
% R.S.D.	139.114	5.004	37.432	5.564	19.349	13.478	25.815	88.337

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.006	-0.001	0.000	0.044
S.D.	0.055	0.001	0.000	0.013
% R.S.D.	877.002	54.998	121.024	29.865

OK
06-26-97

LABCORE Data Entry Template for Worklist# 19496

Analyst: DK 56% Instrument: ICP01-2 7-24-97 Book# 618488Method: LA-505-151/161, Rev/Mod C-1Worklist Comment: 7-24-97 ICP T-203 (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	PREPBKLTJA		@ICP-F01	SOLID		
7	SERDIL	S97T001734 0 F	@ICP-F01	SOLID		
8	SAMPLE	S97T001734 0 F	@ICP-F01	SOLID	97000299	T-203
	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 , P-F-01 , PB-F-01 , S-F-01 , SB-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					
9	DUP	S97T001734 0 F	@ICP-F01	SOLID		
10	SPK	S97T001734 0 F	@ICP-F01	SOLID		
11	ICSA	Spk of (10 ppm) 7-24-97	@ICP-QC	QC		
12	ICSAB		@ICP-QC	QC		
13	CCV		@ICP-QC	QC		
14	CCB		@ICP-QC	QC		

DATA
NOT USED

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 19496

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 19496

JK Jett 07-24-97
Analyst Signature Date

Reviewed + Validated by:
Saul M. Pang 7/24/97
Analyst Signature Date

PrepbkTJG	, 25-10			3F1			
5977001734-L	25-10-28			205			
5977001734	25-10			41			
5977001734-D	25-10			41			
5977001734-Q	25-10			41			2.25 nl sample + 2.05 nl SST5 + 7.75 nl H ₂ O ₃
5977001734-X	25-10-19			410			
5977001734-QX	25-10-19			410			1ml sample + 1ml esch x0HC 28-235 + 7ml H ₂ O ₃

**DATA
NOT USED**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Thu 07-24-97 02:30:08 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970724A	ICP2	07/24/97	10:59	DKS	Q	CONC
2	ICB	970724A	ICP2	07/24/97	11:02	DKS	Q	CONC
3	LLS	970724A	ICP2	07/24/97	11:06	DKS	Q	CONC
4	ICSA	970724A	ICP2	07/24/97	11:10	DKS	Q	CONC
5	ICSAB	970724A	ICP2	07/24/97	11:13	DKS	Q	CONC
6	PREPSTD TJJA	970724A	ICP2	07/24/97	11:17	DKS	Q	CONC
7	PREPBLKTJA	970724A	ICP2	07/24/97	11:21	DKS	Q	CONC
8	S97T001017 L	970724A	ICP2	07/24/97	11:25	DKS	S	CONC
9	S97T001017	970724A	ICP2	07/24/97	11:29	DKS	S	CONC
10	S97T001017 D	970724A	ICP2	07/24/97	11:32	DKS	S	CONC
11	S97T001017 S	970724A	ICP2	07/24/97	11:36	DKS	S	CONC
12	S97T001017 X	970724A	ICP2	07/24/97	11:41	DKS	S	CONC
13	S97T001017 AX	970724A	ICP2	07/24/97	11:44	DKS	S	CONC
14	CCV	970724A	ICP2	07/24/97	11:56	DKS	Q	CONC
15	CCB	970724A	ICP2	07/24/97	12:00	DKS	Q	CONC
16	PREPSTD TJJA	970724A	ICP2	07/24/97	12:03	DKS	Q	CONC
17	PREPBLKTJA	970724A	ICP2	07/24/97	12:07	DKS	S	CONC
18	S97T001128 L	970724A	ICP2	07/24/97	12:11	DKS	S	CONC
19	S97T001128	970724A	ICP2	07/24/97	12:14	DKS	S	CONC
20	S97T001128 D	970724A	ICP2	07/24/97	12:18	DKS	S	CONC
21	S97T001128 S	970724A	ICP2	07/24/97	12:21	DKS	S	CONC
22	S97T001128 X	970724A	ICP2	07/24/97	12:24	DKS	S	CONC
23	S97T001128 AX	970724A	ICP2	07/24/97	12:29	DKS	Q	CONC
24	CCV 1	970724A	ICP2	07/24/97	12:42	DKS	Q	CONC
25	CCV 1	970724A	ICP2	07/24/97	12:45	DKS	Q	CONC
26	PREPSTD TJJA	970724A	ICP2	07/24/97	12:48	DKS	Q	CONC
27	PREPBLKTJA	970724A	ICP2	07/24/97	12:52	DKS	S	CONC
28	S97T001805 L	970724A	ICP2	07/24/97	12:55	DKS	S	CONC
29	S97T001805	970724A	ICP2	07/24/97	12:57	DKS	S	CONC
30	S97T001805 D	970724A	ICP2	07/24/97	13:01	DKS	S	CONC
31	S97T001805 S	970724A	ICP2	07/24/97	13:04	DKS	S	CONC
32	S97T001805 X	970724A	ICP2	07/24/97	13:07	DKS	S	CONC
33	S97T001805 AX	970724A	ICP2	07/24/97	13:15	DKS	Q	CONC
34	CCV 2	970724A	ICP2	07/24/97	13:30	DKS	Q	CONC
35	CCB 2	970724A	ICP2	07/24/97	13:33	DKS	Q	CONC
36	PREPBLKTJA	970724A	ICP2	07/24/97	13:37	DKS	S	CONC
37	S97T001734 L	970724A	ICP2	07/24/97	13:40	DKS	S	CONC
38	S97T001734	970724A	ICP2	07/24/97	13:43	DKS	S	CONC
39	S97T001734 D	970724A	ICP2	07/24/97	13:46	DKS	S	CONC
40	S97T001734 A	970724A	ICP2	07/24/97	13:49	DKS	S	CONC
41	S97T001734 X	970724A	ICP2	07/24/97	13:53	DKS	S	CONC
42	S97T001734 AX	970724A	ICP2	07/24/97	14:14	DKS	Q	CONC
43	ICSA	970724A	ICP2	07/24/97	14:17	DKS	Q	CONC
44	ICSAB	970724A	ICP2	07/24/97	14:21	DKS	Q	CONC
45	CCV 3	970724A	ICP2	07/24/97	14:26	DKS	Q	CONC
46	CCB 3	970724A	ICP2	07/24/97	14:26	DKS	Q	CONC

DATA
NOT USED

 07-24-97

T-203 597T001017

T-203 597T001128

T-202 597T001805

T-203 597T001734

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 516 TO 525

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.108	4.987	5.257	5.061	5.173	5.197
2	ICB	.0001	.0033	-.0032	.0015	.0001	.0003
3	LLS	.0214	.1038	.2213	.1029	.1022	.0107
4	ICSA	.0017	242.3	-.0617	-.0001	.0002	.0001
5	ICSAB	.9705	243.8	-.0708	-.0064	.4817	.4842
6	PREPSTD TJ A	.9959	4.909	5.128	5.212	4.988	5.159
7	PREPBLKTJA	.0032	Q.0962	-.0044	Q.3934	.0006	.0002
8	S97T001017 L	.0164	.2795	.0446	.3853	.3749	-.0000
9	S97T001017	.0121	.2882	.0258	.3764	.3664	-.0002
10	S97T001017 D	.0077	.2759	.0210	.5573	.3825	-.0002
11	S97T001017 S	.9562	5.139	5.013	4.911	5.722	5.023
12	S97T001017 X	-.0080	.2187	.0449	.4258	.3790	.0009
13	S97T001017 AX	89.23	98.19	100.6	99.65	103.7	99.81
14	CCV	5.235	5.034	5.305	5.115	5.280	5.278
15	CCB	.0065	-.0013	-.0092	.0010	-.0000	.0000
16	PREPSTD TJ A	.9661	4.869	4.875	5.012	4.935	5.177
17	PREPBLKTJA	.0015	Q.1801	-.0007	Q.1906	.0014	.0004
18	S97T001128 L	.0127	.4774	.0122	.2778	6.293	.0013
19	S97T001128	.0154	.4089	.0251	.2446	6.162	-.0002
20	S97T001128 D	.0113	.4334	.0456	.4325	6.436	-.0001
21	S97T001128 S	1.631	8.640	8.836	1.185	16.29	9.041
22	S97T001128 X	.0052	.5501	.0233	.2906	6.389	.0043
23	S97T001128 AX	83.51	98.80	101.8	99.73	110.8	100.9
24	CCV 1	5.208	5.030	5.300	5.097	5.296	5.281
25	CCV 1	.0056	.0154	.0084	.0025	-.0001	.0004
26	PREPSTD TJ A	.9860	5.000	5.062	5.657	5.077	5.176
27	PREPBLKTJA	.0049	Q.1320	.0053	Q.6027	.0011	.0005
28	S97T001805 L	.0050	.4320	-.0244	.8108	6.306	.0010
29	S97T001805	.0090	.3781	.0101	.7633	6.177	.0001
30	S97T001805 D	.0122	.3374	.0157	.8021	6.342	-.0001
31	S97T001805 S	.9627	5.116	5.028	5.457	11.64	5.002
32	S97T001805 X	.0038	.5440	.0418	.8818	6.413	.0052
33	S97T001805 AX	80.18	100.8	103.5	100.1	113.3	103.3
34	CCV 2	5.234	5.064	5.324	5.105	5.304	5.325
35	CCB 2	.0060	.0165	.0116	-.0020	.0000	.0005
36	PREPBLKTJA	.0005	.0158	.0105	.0035	.0003	.0005
37	S97T001734 L	-.1097	2.495	2.003	.1056	.1765	.0904
38	S97T001734	-.0166	.9520	-.0059	-.0169	.1840	.0254
39	S97T001734 D	-.0272	.9248	.4385	.1058	.1950	.0255
40	S97T001734 A	36.58	41.53	44.13	41.19	42.63	42.70
41	S97T001734 X	1.253	7.430	2.627	-.4146	.1481	.2165
42	S97T001734 AX	2752	4098	4159	4131	4344	4167
43	ICSA	.0121	243.8	-.0596	.0016	.0002	.0007
44	ICSAB	.9766	246.4	-.0723	-.0102	.4856	.4919
45	CCV 3	5.137	5.091	5.314	5.180	5.289	5.367
46	CCB 3	.0028	.0201	.0102	.0000	-.0000	.0008

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 3

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.231	5.201	5.135	5.139	5.098	5.182
2	ICB	-.0010	-.0042	-.0009	-.0056	-.0004	.0008
3	LLS	.1978	.2098	.0110	.1939	.0420	.0214
4	ICSA	-.0102	252.7	.0014	.0054	.0013	-.0021
5	ICSAB	-.0051	255.5	.9465	.0039	.4713	.4744
6	PREPSTD TJJA	5.015	5.225	4.836	5.071	5.010	4.874
7	PREPBLKTJA	.0038	Q.1228	-.0011	-.0028	.0004	.0023
8	S97T001017 L	262.6	1.811	.0030	.2873	.0207	20.30
9	S97T001017	248.1	1.768	.0032	.2833	.0132	19.39
10	S97T001017 D	239.7	1.701	.0042	.2702	.0157	18.59
11	S97T001017 S	220.4	6.992	4.735	5.219	4.917	21.35
12	S97T001017 X	267.4	1.749	.0052	.1907	.0008	20.55
13	S97T001017 AX	363.0	104.9	99.74	102.1	99.90	120.3
14	CCV	5.269	5.303	5.184	5.170	5.150	5.229
15	CCB	-.0074	-.0025	-.0017	-.0014	.0013	.0003
16	PREPSTD TJJA	4.827	4.988	4.716	4.983	4.909	4.799
17	PREPBLKTJA	.0065	Q.1698	-.0002	-.0063	.0014	.0039
18	S97T001128 L	275.9	1.909	.0035	.3276	.0194	25.26
19	S97T001128	261.5	1.831	.0052	.3369	.0210	23.91
20	S97T001128 D	266.5	2.220	.0080	.3392	.0251	24.14
21	S97T001128 S	277.1	10.25	8.106	8.957	8.422	32.26
22	S97T001128 X	281.0	1.843	.0046	.3474	.0261	25.71
23	S97T001128 AX	377.8	107.2	101.0	102.4	101.4	127.0
24	CCV 1	5.239	5.332	5.184	5.174	5.153	5.252
25	CCV 1	.0074	-.0031	.0012	-.0048	.0017	-.0003
26	PREPSTD TJJA	4.933	5.525	4.811	5.117	5.014	4.916
27	PREPBLKTJA	-.0083	Q.4185	.0004	-.0008	.0023	.0023
28	S97T001805 L	216.7	1.664	-.0050	.2587	.0228	19.69
29	S97T001805	202.0	1.598	.0045	.2630	.0186	18.56
30	S97T001805 D	204.1	1.477	.0049	.2690	.0194	18.67
31	S97T001805 S	211.4	6.481	4.640	5.199	4.829	23.39
32	S97T001805 X	221.3	1.634	-.0009	.2801	.0234	20.00
33	S97T001805 AX	321.9	107.9	102.6	104.2	100.5	123.4
34	CCV 2	5.256	5.382	5.226	5.181	5.206	5.301
35	CCB 2	.0017	-.0019	-.0005	-.0038	.0024	.0014
36	PREPBLKTJA	-.0185	-.0068	-.0005	.0024	.0002	.0005
37	S97T001734 L	135.8	-.5219	-.0847	-1.265	.1988	10.17
38	S97T001734	127.5	.4882	-.0285	-1.229	-.0210	9.856
39	S97T001734 D	131.2	.4094	-.0041	-.2911	.0733	10.21
40	S97T001734 A	173.5	44.64	42.37	42.15	41.98	53.39
41	S97T001734 X	125.5	-3.171	-.3778	-1.562	.9484	11.00
42	S97T001734 AX	4332.	4157.	4062.	4243.	4091.	4127.
43	ICSA	-.0080	253.4	.0018	.0117	.0026	-.0014
44	ICSAB	-.0187	255.9	.9398	.0094	.4701	.4744
45	CCV 3	5.288	5.280	5.150	5.194	5.138	5.239
46	CCB 3	.0193	-.0018	.0002	.0020	.0022	.0005

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 4

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.919	.0026	4.804	5.145	5.192	5.128
2	ICB	-.0004	-.0003	-.0004	-.0000	-.0009	-.0004
3	LLS	.0170	.0007	.0926	Q.6464	.1029	.0203
4	ICSA	-.0101	-.0139	93.15	.0291	-.0049	.0027
5	ICSA B	.4450	-.0147	93.54	-.0734	-.0053	1.005
6	PREPSTD TJ A	4.483	.0022	4.564	4.990	5.097	5.022
7	PREPBLKT J A	Q.0103	-.0004	.0136	-.0655	-.0008	-.0005
8	S97T001017 L	-.0207	.0263	19.00	35.04	60.58	.0000
9	S97T001017	-.0202	.0253	18.14	34.85	59.59	.0012
10	S97T001017 D	-.0175	.0221	50.20	33.80	57.82	.0018
11	S97T001017 S	4.378	.0113	248.2	35.42	56.39	4.950
12	S97T001017 X	-.0208	.0248	19.31	34.66	61.24	-.0059
13	S97T001017 AX	91.54	.0735	112.7	138.1	161.7	99.17
14	CCV	4.986	.0022	4.873	5.007	5.250	5.175
15	CCB	-.0003	-.0001	.0003	-.0601	-.0009	.0000
16	PREPSTD TJ A	4.386	.0011	4.551	4.776	5.003	4.882
17	PREPBLKT J A	.0042	-.0011	Q.0636	-.0804	.0009	-.0008
18	S97T001128 L	-.0430	.0351	21.31	47.11	78.21	.0029
19	S97T001128	-.0448	.0324	20.19	46.07	76.51	.0035
20	S97T001128 D	-.0450	.0312	50.74	45.84	77.97	.0053
21	S97T001128 S	7.704	.0311	191.3	55.78	88.68	8.794
22	S97T001128 X	-.0463	.0396	21.66	46.63	79.06	.0082
23	S97T001128 AX	91.31	.0903	116.3	148.0	179.3	98.35
24	CCV 1	4.984	.0028	4.892	5.031	5.242	5.147
25	CCV 1	-.0001	.0002	-.0010	-.0681	-.0017	.0002
26	PREPSTD TJ A	4.500	.0017	4.662	4.837	5.134	5.013
27	PREPBLKT J A	Q.0171	-.0009	.0400	.0548	-.0011	-.0009
28	S97T001805 L	-.0324	.0252	50.82	36.13	63.46	.0041
29	S97T001805	-.0341	.0240	47.98	35.24	61.91	.0023
30	S97T001805 D	-.0298	.0254	27.45	35.53	62.54	.0030
31	S97T001805 S	4.337	.0276	56.49	40.32	68.85	4.959
32	S97T001805 X	-.0280	.0234	51.99	36.58	64.37	.0012
33	S97T001805 AX	91.32	.0855	147.6	139.0	167.5	101.1
34	CCV 2	4.989	.0028	4.932	4.981	5.251	5.154
35	CCB 2	.0009	.0003	-.0010	.0034	-.0003	.0008
36	PREPBLKT J A	.0005	-.0000	.0015	Q343.2	.0006	.0000
37	S97T001734 L	.0513	-.1592	12.59	14170.	29.85	-.1448
38	S97T001734	.0284	-.0108	12.36	13870.	29.25	.0148
39	S97T001734 D	.0449	-.0021	8.760	12810.	30.42	.0002
40	S97T001734 A	40.41	.0344	52.72	14110.	72.91	41.21
41	S97T001734 X	5.252	-.4641	12.46	14320.	30.18	-.2898
42	S97T001734 AX	3871.	1.744	3895.	18580.	4284.	4209.
43	ICSA	-.0091	-.0149	93.92	.1240	-.0044	.0022
44	ICSA B	.4516	-.0147	94.44	-.0049	-.0049	1.018
45	CCV 3	5.060	.0023	4.884	4.893	5.274	5.294
46	CCB 3	.0001	-.0009	.0005	-.1939	-.0002	-.0006

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 5

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.210	5.055	5.112	4.984	5.206	5.133
2	ICB	-.0058	.0001	.0105	-.0053	-.0014	-.0065
3	LIS	.2001	.0206	.1047	.1647	.2022	.0486
4	ICSA	252.7	-.0058	-.0063	197.0	.0002	.0018
5	ICSA	253.8	.4492	-.0103	196.9	.0015	.9408
6	PREPSTDTJA	4.883	4.783	4.795	5.283	5.003	5.023
7	PREPBLKTJA	.0165	.0009	.0054	Q.5007	.0013	.0036
8	S97T001017 L	.2797	69.88	-.0133	183.3	.0422	.8112
9	S97T001017	.3896	82.31	-.0138	177.0	.0371	.7463
10	S97T001017 D	.4018	78.85	-.0177	172.0	.0370	.7299
11	S97T001017 S	5.154	76.54	4.603	160.2	4.922	5.523
12	S97T001017 X	.1890	69.89	-.0190	185.3	.0344	.9026
13	S97T001017 AX	104.1	173.5	100.1	283.1	98.96	100.5
14	CCV	5.266	5.121	5.160	4.994	5.270	5.200
15	CCB	-.0071	.0001	.0023	-.0188	-.0022	-.0007
16	PREPSTDTJA	4.822	4.693	4.751	5.646	4.903	4.874
17	PREPBLKTJA	.0428	.0028	.0039	Q.5214	-.0004	.0008
18	S97T001128 L	.4708	82.72	-.0064	235.0	.0319	.9131
19	S97T001128	.5952	101.1	-.0149	228.0	.0459	.8735
20	S97T001128 D	.6593	103.6	-.0180	229.5	.0431	.8942
21	S97T001128 S	8.585	117.1	.8533	244.1	8.546	9.197
22	S97T001128 X	.4382	82.94	-.0278	236.6	.0172	.9035
23	S97T001128 AX	104.7	188.1	101.3	333.4	98.71	102.1
24	CCV 1	5.269	5.102	5.164	5.007	5.247	5.151
25	CCV 1	-.0086	.0003	.0004	-.0103	-.0022	-.0004
26	PREPSTDTJA	4.936	4.765	4.876	6.016	5.025	5.004
27	PREPBLKTJA	.0333	.0005	.0035	Q.7863	.0003	Q.1323
28	S97T001805 L	.4020	64.04	-.0290	183.2	.0441	.6653
29	S97T001805	.4684	72.82	-.0161	176.8	.0331	.6476
30	S97T001805 D	.4118	74.22	-.0145	178.5	.0372	.6616
31	S97T001805 S	5.154	82.35	4.726	182.4	4.887	5.428
32	S97T001805 X	.3902	64.49	.0133	186.5	.0339	.7095
33	S97T001805 AX	106.6	170.8	100.3	286.7	100.7	103.4
34	CCV 2	5.289	5.110	5.198	5.011	5.239	5.214
35	CCB 2	-.0046	.0003	-.0013	-.0103	.0016	-.0076
36	PREPBLKTJA	.0061	.0013	.0005	.0610	-.0007	Q.0379
37	S97T001734 L	-1.136	15.41	-.0445	94.80	-.2010	35.12
38	S97T001734	-.0509	15.19	-.0644	93.70	-.0243	35.34
39	S97T001734 D	-.0281	7.157	.0133	94.49	-.0081	29.94
40	S97T001734 A	42.77	56.06	42.15	135.8	42.60	78.64
41	S97T001734 X	.7365	15.60	1.298	92.44	.6174	38.65
42	S97T001734 AX	4347.	4071.	4112.	4284.	4136.	4101.
43	ICSA	254.9	-.0064	-.0120	198.3	.0024	.0097
44	ICSA	257.3	.4420	-.0092	199.5	.0013	.9381
45	CCV 3	5.333	5.010	5.156	5.122	5.269	5.150
46	CCB 3	.0011	-.0000	.0011	.0012	-.0009	.0027

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 6

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.127	5.189	5.002	4.846	4.921	4.900
2	ICB	-.0081	-.0103	.0043	-.0063	.0079	.0174
3	LLS	.4130	.2107	.2110	.0975	.2269	Q.1272
4	ICSA	.0176	.0367	-.0224	.0160	-.0019	.0204
5	ICSAB	-.0027	1.014	-.0355	-.0094	.0082	.0085
6	PREPSTDTJA	4.827	4.786	4.859	4.747	4.648	6.935
7	PREPBLKTJA	.0118	.0171	Q.1012	-.0004	.0244	Q.7082
8	S97T001017 L	12.48	-.0440	.6656	-.1614	.0378	8.900
9	S97T001017	12.10	.0194	.6191	-.1313	.0852	8.445
10	S97T001017 D	11.80	.1078	.6548	-.1169	.0657	7.549
11	S97T001017 S	15.71	7.409	5.411	4.566	4.562	12.63
12	S97T001017 X	12.79	-.1071	.6685	-.1847	.2824	9.045
13	S97T001017 AX	112.9	101.0	97.60	100.2	97.45	108.8
14	CCV	5.072	5.222	4.950	4.889	4.991	4.920
15	CCB	.0098	.0035	.0032	.0032	.0033	.0071
16	PREPSTDTJA	4.838	4.699	5.500	4.679	4.536	8.677
17	PREPBLKTJA	.0508	.0385	Q.7864	.0025	.0348	Q2.439
18	S97T001128 L	14.88	.2651	2.276	-.1768	.1826	1.125
19	S97T001128	14.67	.2389	2.097	-.1176	.0712	1.020
20	S97T001128 D	15.07	.3208	2.248	-.1142	.0707	.9376
21	S97T001128 S	16.50	8.480	3.103	.8087	8.005	11.30
22	S97T001128 X	15.29	.1852	2.221	-.2109	.3941	1.240
23	S97T001128 AX	115.5	103.0	100.1	101.6	97.81	102.1
24	CCV 1	5.147	5.249	5.000	4.879	4.997	4.917
25	CCV 1	-.0015	.0059	-.0100	.0049	.0382	.0026
26	PREPSTDTJA	4.834	4.788	4.767	4.796	4.605	8.896
27	PREPBLKTJA	.0134	.0089	Q.1171	.0015	.0249	Q1.291
28	S97T001805 L	12.30	.3586	1.569	-.1200	.1764	10.13
29	S97T001805	11.70	.4202	1.480	-.0897	.0794	9.531
30	S97T001805 D	11.96	.1534	1.509	-.0917	.0769	8.974
31	S97T001805 S	16.94	5.040	6.125	4.622	4.509	14.53
32	S97T001805 X	12.44	.3104	1.716	-.1107	.2619	10.33
33	S97T001805 AX	111.2	104.4	98.24	100.6	100.2	110.4
34	CCV 2	5.111	5.310	5.015	4.930	5.006	4.954
35	CCB 2	.0181	-.0149	.0025	-.0000	.0357	.0025
36	PREPBLKTJA	.0043	-.0033	.0034	.0089	.0297	.0166
37	S97T001734 L	2.031	-3.947	-.4752	-2.592	4.425	4.497
38	S97T001734	5.994	-.1238	-.1960	-1.280	1.119	3.297
39	S97T001734 D	5.809	.3495	-.0464	.0758	1.330	3.719
40	S97T001734 A	48.34	42.75	41.41	39.98	41.79	44.00
41	S97T001734 X	13.86	1.237	-4.133	.4599	11.78	5.654
42	S97T001734 AX	4137.	4104.	3989.	4165.	4030.	4097.
43	ICSA	.0106	.0463	-.0377	.0031	.0199	.0006
44	ICSAB	.0259	.9933	-.0408	-.0062	.0475	-.0017
45	CCV 3	5.196	5.208	5.044	4.930	5.017	4.903
46	CCB 3	-.0033	.0004	-.0036	.0009	.0375	-.0036

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 7

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.018	5.064	.0946	4.966	4.952	9.737
2	ICB	-.0062	-.0000	-.0017	-.0007	-.0093	-.0222
3	LLS	.2078	.0206	-.0019	.0200	.3945	.5168
4	ICSA	-.0032	.0019	-.0144	.0006	.0536	.1216
5	ICSAB	-.0065	.0019	-.0094	.0009	.0303	.1014
6	PREPSTD TJJA	4.922	4.934	.0843	4.442	4.665	9.613
7	PREPBLKTJA	-.0062	.0004	-.0005	.0005	-.0017	-.0300
8	S97T001017 L	-.0216	2.929	-.0107	.0144	-.3142	.0021
9	S97T001017	-.0233	2.853	.0050	.0160	-.0942	.0728
10	S97T001017 D	-.0277	2.726	.0051	.0167	-.0782	.1233
11	S97T001017 S	4.794	7.223	.0768	4.346	4.427	10.02
12	S97T001017 X	-.0704	2.965	-.0612	.0117	-.1782	-.1099
13	S97T001017 AX	98.33	104.2	1.965	100.5	97.99	192.7
14	CCV	5.076	5.145	.0933	5.044	4.908	9.888
15	CCB	-.0015	.0000	-.0018	-.0002	-.0349	-.0072
16	PREPSTD TJJA	4.829	4.857	.0902	4.417	4.468	9.466
17	PREPBLKTJA	-.0156	.0011	.0044	.0010	-.0061	-.0561
18	S97T001128 L	-.0143	3.174	-.0029	.0297	-.2872	.5290
19	S97T001128	-.0233	3.070	.0112	.0312	-.0913	.5148
20	S97T001128 D	-.0287	3.126	.0161	.0291	-.0455	.5717
21	S97T001128 S	8.382	11.71	.1351	.8831	7.634	17.41
22	S97T001128 X	.0274	3.213	.0035	.0357	.0227	.7352
23	S97T001128 AX	98.16	104.8	2.058	101.6	99.58	192.8
24	CCV 1	5.077	5.148	.0982	5.044	4.930	9.871
25	CCV 1	.0012	.0000	-.0054	-.0007	-.0102	.0070
26	PREPSTD TJJA	4.950	4.992	.1039	4.549	4.573	9.709
27	PREPBLKTJA	-.0138	.0007	.0071	.0003	-.0115	-.0578
28	S97T001805 L	-.0200	2.524	.0058	.0298	-.2568	.4828
29	S97T001805	-.0249	2.441	.0097	.0240	-.0985	.5068
30	S97T001805 D	-.0238	2.490	.0125	.0224	-.0574	.4759
31	S97T001805 S	4.778	7.394	.1102	4.455	4.349	9.964
32	S97T001805 X	-.0229	2.564	.0108	.0238	-.2025	.4416
33	S97T001805 AX	100.7	106.4	2.127	101.4	100.3	193.0
34	CCV 2	5.085	5.157	.1077	5.080	4.982	9.883
35	CCB 2	.0063	.0001	.0021	.0005	-.0123	.0255
36	PREPBLKTJA	-.0006	.0001	.0082	-.0007	-.0199	-.0768
37	S97T001734 L	-1.115	1.465	.2957	-.1426	-4.415	-11.31
38	S97T001734	-.2235	1.443	.2417	.0030	-1.107	-4.752
39	S97T001734 D	-.1296	1.464	.3120	.0423	-.0610	-3.604
40	S97T001734 A	41.31	43.32	.9584	41.39	38.63	76.53
41	S97T001734 X	-4.649	1.447	1.064	.0080	-11.89	-21.02
42	S97T001734 AX	4154.	4258.	88.51	4212.	4034.	8143.
43	ICSA	-.0112	.0019	-.0020	.0007	.0240	.0802
44	ICSAB	-.0121	.0018	-.0139	.0011	.0402	.0736
45	CCV 3	5.109	5.186	.1149	5.082	4.932	9.956
46	CCB 3	-.0070	-.0001	.0039	-.0005	.0004	-.0314

DATA
NOT USED

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 8

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.011	.0070	4.904	5.010
2	ICB	.0011	-.0002	.0012	-.0002
3	LLS	.1034	.0004	.0247	.0222
4	ICSA	-.0013	.0069	.0095	-.0012
5	ICSAB	.4684	.0069	.9490	-.0018
6	PREPSTD TJJA	4.856	.0055	4.528	4.899
7	PREPBLKTJA	-.0011	-.0005	Q.0192	.0011
8	S97T001017 L	.0230	.0012	.1192	.0084
9	S97T001017	.0218	.0011	.1037	.0072
10	S97T001017 D	.0203	.0010	.1030	.0062
11	S97T001017 S	4.801	.0084	5.102	4.810
12	S97T001017 X	.0210	.0000	.1300	.0106
13	S97T001017 AX	99.72	.1203	93.93	99.96
14	CCV	5.068	.0068	4.931	5.067
15	CCB	-.0002	-.0001	.0008	.0005
16	PREPSTD TJJA	4.775	.0053	4.400	4.867
17	PREPBLKTJA	-.0020	-.0008	Q.0264	.0032
18	S97T001128 L	.0304	.0021	.1702	.0141
19	S97T001128	.0280	.0018	.1484	.0093
20	S97T001128 D	.0253	.0016	.1696	.0111
21	S97T001128 S	8.306	.0122	7.820	.9245
22	S97T001128 X	.0460	.0044	.1890	.0220
23	S97T001128 AX	100.9	.1296	95.81	100.7
24	CCV	5.076	.0071	4.944	5.069
25	CCB	.0006	.0001	.0034	.0011
26	PREPSTD TJJA	4.892	.0054	4.516	4.976
27	PREPBLKTJA	-.0027	-.0008	Q.0564	.0002
28	S97T001805 L	.0227	.0018	.3238	.0106
29	S97T001805	.0193	.0014	.2962	.0087
30	S97T001805 D	.0205	.0013	.1407	.0090
31	S97T001805 S	4.751	.0074	4.555	4.857
32	S97T001805 X	.0182	.0006	.3375	.0136
33	S97T001805 AX	100.3	.1296	94.66	100.2
34	CCV	5.112	.0073	4.989	5.086
35	CCB	.0011	.0003	.0024	.0012
36	PREPBLKTJA	.0001	-.0001	.0014	-.0002
37	S97T001734 L	-.4188	-.0916	.3582	-.2224
38	S97T001734	-.0364	-.0108	.0893	-.0283
39	S97T001734 D	-.0009	-.0049	.1579	.0078
40	S97T001734 A	41.57	.0606	40.75	41.14
41	S97T001734 X	-.9731	-.2802	.6203	-.6212
42	S97T001734 AX	4125	4.764	3831	4163
43	ICSA	-.0015	.0067	.0106	-.0029
44	ICSAB	.4703	.0067	.9454	-.0025
45	CCV	5.086	.0067	4.915	5.062
46	CCB	-.0016	-.0005	.0037	-.0013

DATA
NOT USEDK JG
07-24-97

LABCORE Data Entry Template for Worklist# 19537

Analyst: DK Seto Instrument: ICP012 7-24-97 Book# 67848B

Method: LA-505-151/161 Rev/Mod C-1

Worklist Comment: ICP T-203 (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 TJA		@ICP-A01	SOLID		
7	PREPBLKTJA		@ICP-A01	SOLID		
8	SERDIL	S97T001017 0 A	@ICP-A01	SOLID		
9	SAMPLE	S97T001017 0 A	@ICP-A01	SOLID	97000299 T-203	
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 , 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 , S-A-01 , SB-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01						
10	DUP	S97T001017 0 A	@ICP-A01	SOLID		
11	SPK-PREDIG	S97T001017 0 A	@ICP-A01	SOLID		
12	ICSA		@ICP-QC	QC		
13	ICSAB		@ICP-QC	QC		
14	CCV		@ICP-QC	QC		
15	CCB		@ICP-QC	QC		

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 19537

S Type   Sample#   R A Test   Matrix   Group#   Project

Final page for worklist # 19537

JK *6/10* *07-24-97*
Analyst Signature   Date
 Prep H4TJQ   1 direct   1 DF 1
 Prep bK TJe   direct   1
 597700 1017_L   2-8   5
 597700 1017   direct   1
 597700 1017_D   direct   1
 597700 1017_S   direct   1
 597700 1017_X   1-9   10
 597700 1017_QX   1-9   10, 1 ml sample + 1 ml cool x04c 28 + 35 + 7 ml H₂O₃

Reviewed + Validated by:
Saul P. Pang *7/28/97*
Analyst Signature   Date

Data Entry Comments:

Post Spike:

HNF-SD-WM-DP-247, REV. 0

$$B_i = \frac{\left(\frac{363.0}{10}\right) - \left(\frac{267.4}{10}\right)}{10} \times 100 = 95.6\%$$

$$C_i = \frac{\left(\frac{120.3}{10}\right) - \left(\frac{20.58}{10}\right)}{10} \times 100 = 99.75\%$$

$$F_2 = \frac{\left(\frac{112.7}{10}\right) - \left(\frac{19.31}{10}\right)}{10} \times 100 = 93.4\%$$

$$K = \frac{\left(\frac{138.1}{10}\right) - \left(\frac{34.66}{10}\right)}{10} \times 100 = 103.4\%$$

$$L_a = \frac{\left(\frac{161.7}{10}\right) - \left(\frac{61.24}{10}\right)}{10} \times 100 = 100.5\%$$

$$M_n = \frac{\left(\frac{173.5}{10}\right) - \left(\frac{69.89}{10}\right)}{10} \times 100 = 103.6\%$$

$$N_a = \frac{\left(\frac{283.1}{10}\right) - \left(\frac{185.3}{10}\right)}{10} \times 100 = 97.8\%$$

$$P = \frac{\left(\frac{112.9}{10}\right) - \left(\frac{12.79}{10}\right)}{10} \times 100 = 100.1\%$$

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Summary

Thu 07-24-97 02:30:08 PM

page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970724A	ICP2	07/24/97	10:59	DKS	Q	CONC
2	ICB	970724A	ICP2	07/24/97	11:02	DKS	Q	CONC
3	LLS	970724A	ICP2	07/24/97	11:06	DKS	Q	CONC
4	ICSA	970724A	ICP2	07/24/97	11:10	DKS	Q	CONC
5	ICSAB	970724A	ICP2	07/24/97	11:13	DKS	Q	CONC
6	PREPSTD TJ A	970724A	ICP2	07/24/97	11:17	DKS	Q	CONC
7	PREPBLKTJ A	970724A	ICP2	07/24/97	11:21	DKS	Q	CONC
8	S97T001017 L	970724A	ICP2	07/24/97	11:25	DKS	Q	CONC
9	S97T001017 -	970724A	ICP2	07/24/97	11:29	DKS	S	CONC
10	S97T001017 D	970724A	ICP2	07/24/97	11:32	DKS	S	CONC
11	S97T001017 -S	970724A	ICP2	07/24/97	11:36	DKS	S	CONC
12	S97T001017 X	970724A	ICP2	07/24/97	11:41	DKS	S	CONC
13	S97T001017 -AX	970724A	ICP2	07/24/97	11:44	DKS	S	CONC
14	CCV	970724A	ICP2	07/24/97	11:48	DKS	Q	CONC
15	CCB	970724A	ICP2	07/24/97	11:56	DKS	Q	CONC
16	PREPSTD TJ A	970724A	ICP2	07/24/97	12:00	DKS	Q	CONC
17	PREPBLKTJ A	970724A	ICP2	07/24/97	12:03	DKS	Q	CONC
18	S97T001128 L	970724A	ICP2	07/24/97	12:07	DKS	S	CONC
19	S97T001128 -	970724A	ICP2	07/24/97	12:11	DKS	S	CONC
20	S97T001128 D	970724A	ICP2	07/24/97	12:14	DKS	S	CONC
21	S97T001128 -S	970724A	ICP2	07/24/97	12:18	DKS	S	CONC
22	S97T001128 X	970724A	ICP2	07/24/97	12:21	DKS	S	CONC
23	S97T001128 -AX	970724A	ICP2	07/24/97	12:24	DKS	S	CONC
24	CCV 1	970724A	ICP2	07/24/97	12:29	DKS	Q	CONC
25	CCV 1	970724A	ICP2	07/24/97	12:42	DKS	Q	CONC
26	PREPSTD TJ A	970724A	ICP2	07/24/97	12:45	DKS	Q	CONC
27	PREPBLKTJ A	970724A	ICP2	07/24/97	12:48	DKS	Q	CONC
28	S97T001805 L	970724A	ICP2	07/24/97	12:52	DKS	S	CONC
29	S97T001805 -	970724A	ICP2	07/24/97	12:55	DKS	S	CONC
30	S97T001805 D	970724A	ICP2	07/24/97	12:57	DKS	S	CONC
31	S97T001805 -S	970724A	ICP2	07/24/97	13:01	DKS	S	CONC
32	S97T001805 X	970724A	ICP2	07/24/97	13:04	DKS	S	CONC
33	S97T001805 -AX	970724A	ICP2	07/24/97	13:07	DKS	S	CONC
34	CCV 2	970724A	ICP2	07/24/97	13:15	DKS	Q	CONC
35	CCB-2	970724A	ICP2	07/24/97	13:30	DKS	Q	CONC
36	PREPBLKTJ A	970724A	ICP2	07/24/97	13:33	DKS	Q	CONC
37	S97T001734 L	970724A	ICP2	07/24/97	13:37	DKS	S	CONC
38	S97T001734 -	970724A	ICP2	07/24/97	13:40	DKS	S	CONC
39	S97T001734 D	970724A	ICP2	07/24/97	13:43	DKS	S	CONC
40	S97T001734 A	970724A	ICP2	07/24/97	13:46	DKS	S	CONC
41	S97T001734 -X	970724A	ICP2	07/24/97	13:49	DKS	S	CONC
42	S97T001734 -AX	970724A	ICP2	07/24/97	13:53	DKS	S	CONC
43	ICSA	970724A	ICP2	07/24/97	14:14	DKS	Q	CONC
44	ICSAB	970724A	ICP2	07/24/97	14:17	DKS	Q	CONC
45	CCV 3	970724A	ICP2	07/24/97	14:21	DKS	Q	CONC
46	CCB-3	970724A	ICP2	07/24/97	14:26	DKS	Q	CONC

JK LJO
07-24-97

T-203 597T001017
T-203 597T001128
T-202 597T001805
T-203 597T001734

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 554 TO 560.

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.108	4.987	5.257	5.061	5.173	5.197
2	ICB	.0001	.0033	-.0032	.0015	.0001	.0003
3	LLS	.0214	.1038	.2213	.1029	.1022	.0107
4	ICSA	.0017	242.3	-.0617	-.0001	.0002	.0001
5	ICSAB	.9705	243.8	-.0708	-.0064	.4817	.4842
6	ICSA	.9959	4.909	5.128	5.212	4.988	5.159
7	PREPSTD TJA	.0032	Q.0962	-.0044	Q.3934	.0006	.0002
8	PREPBLKTJA	.0164	.2795	.0446	.3853	.3749	-.0000
9	S97T001017 L	.0121	.2882	.0258	.3764	.3664	-.0002
10	S97T001017 D	.0077	.2759	.0210	.5572	.3825	-.0002
11	S97T001017 S	.9562	5.139	5.013	4.911	5.722	5.023
12	S97T001017 X	-.0080	2.187	.0449	4.258	.3790	.0009
13	S97T001017 AX	89.23	98.19	100.6	99.65	103.7	99.81
14	CCV	5.235	5.034	5.305	5.115	5.280	5.278
15	CCB	.0065	-.0013	-.0092	.0010	-.0000	.0000
16	PREPSTD TJA	.9661	4.869	4.975	5.012	4.935	5.177
17	PREPBLKTJA	.0015	Q.1801	-.0007	Q.1906	.0014	.0004
18	S97T001128 L	.0127	.4774	.0122	.2778	6.293	.0013
19	S97T001128	.0154	.4089	.0251	.2446	6.162	-.0002
20	S97T001128 D	.0113	.4334	.0456	.4325	6.436	-.0001
21	S97T001128 S	1.631	8.640	8.836	1.185	16.29	9.041
22	S97T001128 X	.0052	.5501	.0233	.2906	6.389	.0043
23	S97T001128 AX	83.51	98.80	101.8	99.73	110.8	100.9
24	CCV 1	5.208	5.030	5.300	5.097	5.296	5.281
25	CCV 1	.0056	.0154	.0084	.0025	-.0001	.0004
26	PREPSTD TJA	.9860	5.000	5.062	5.657	5.077	5.176
27	PREPBLKTJA	.0049	Q.1320	.0053	Q.6027	.0011	.0005
28	S97T001805 L	.0050	.4320	-.0244	.8108	6.306	.0010
29	S97T001805	.0090	.3781	.0101	.7633	6.177	.0001
30	S97T001805 D	.0122	.3374	.0157	.8021	6.342	-.0001
31	S97T001805 S	.9627	5.116	5.028	5.457	11.64	5.002
32	S97T001805 X	.0038	.5440	.0418	.8818	6.413	.0052
33	S97T001805 AX	80.18	100.8	103.5	100.1	113.3	103.3
34	CCV 2	5.234	5.064	5.324	5.105	5.304	5.325
35	CCB 2	.0060	.0165	.0116	-.0020	.0000	.0005
36	PREPBLKTJA	.0005	.0158	.0105	.0035	.0003	.0005
37	S97T001734 L	-.1097	2.495	2.003	.1056	.1765	.0904
38	S97T001734	-.0166	.9520	-.0059	-.0169	.1840	.0254
39	S97T001734 D	-.0272	.9248	.4385	.1058	.1950	.0255
40	S97T001734 A	36.58	41.53	44.13	41.19	42.63	42.70
41	S97T001734 X	1.253	7.430	2.627	-.4146	.1481	.2165
42	S97T001734 AX	.0121	.243.8	-.0596	.0016	.0002	.0007
43	ICSA	.9766	246.4	-.0723	-.0102	.4856	.4919
44	ICSAB	5.137	5.091	5.314	5.180	5.289	5.367
45	CCV 3	.0028	.0201	.0102	.0000	-.0000	.0008
46	CCB 3						

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 3

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.231	5.201	5.135	5.139	5.098	5.182
2	ICB	-.0010	-.0042	-.0009	-.0056	-.0004	.0008
3	ILS	.1978	.2098	.0110	.1939	.0420	.0214
4	ICSA	-.0102	252.7	.0014	.0054	.0013	-.0021
5	ICSA8	-.0051	255.5	.9465	.0039	.4713	.4744
6	PREPSTDTJA	5.015	5.225	4.836	5.071	5.010	4.874
7	PREPBLKTJA	.0038	Q.1228	-.0011	-.0028	.0004	.0023
8	S97T001017-L	262.6	1.811	.0020	.2873	.0207	20.30
9	S97T001017-	248.1	1.768	.0032	.2833	.0132	19.39
10	S97T001017-D	239.7	1.701	.0042	.2702	.0157	18.59
11	S97T001017-S	220.4	6.992	4.735	5.219	4.917	21.35
12	S97T001017-X	267.4	1.749	.0052	.1907	.0008	20.55
13	S97T001017-AX	363.0	104.9	99.74	102.1	99.90	120.3
14	CCV	5.269	5.303	5.184	5.170	5.150	5.229
15	CCB	-.0074	-.0025	-.0017	-.0014	.0013	.0003
16	PREPSTDTJA	4.827	4.988	4.716	4.983	4.909	4.799
17	PREPBLKTJA	.0065	Q.1698	-.0002	-.0063	.0014	.0039
18	S97T001128-L	275.9	1.909	.0035	.3276	.0194	25.26
19	S97T001128-	261.5	1.831	.0052	.3369	.0210	23.91
20	S97T001128-D	266.5	2.220	.0080	.3392	.0251	24.14
21	S97T001128-S	277.1	10.25	8.106	8.957	8.422	32.26
22	S97T001128-X	281.0	1.843	.0046	.3474	.0261	25.71
23	S97T001128-AX	377.8	107.2	101.0	102.4	101.4	127.0
24	CCV-1	5.239	5.332	5.184	5.174	5.153	5.252
25	CCB-1	.0074	-.0031	.0012	-.0048	.0017	-.0003
26	PREPSTDTJA	4.933	5.525	4.811	5.117	5.014	4.916
27	PREPBLKTJA	-.0083	Q.4185	.0004	-.0008	.0023	.0023
28	S97T001805-L	216.7	1.664	-.0050	.2587	.0228	19.69
29	S97T001805-	202.0	1.598	.0045	.2630	.0186	18.56
30	S97T001805-D	204.1	1.477	.0049	.2690	.0194	18.67
31	S97T001805-S	211.4	6.481	4.640	5.199	4.829	23.39
32	S97T001805-X	221.3	1.634	-.0009	.2801	.0234	20.00
33	S97T001805-AX	321.9	107.9	102.8	104.2	100.5	123.4
34	CCV-2	5.256	5.382	5.226	5.181	5.206	5.301
35	CCB-2	.0017	-.0019	-.0005	-.0038	.0024	.0014
36	PREPBLKTJA	-.0185	-.0068	-.0005	.0024	.0002	.0005
37	S97T001734-L	135.8	-.5219	-.0847	-1.265	.1988	10.17
38	S97T001734-	127.5	.4882	-.0285	-.1229	-.0210	9.856
39	S97T001734-D	131.2	.4094	-.0041	-.2911	.0733	10.21
40	S97T001734-A	173.5	44.64	42.37	42.15	41.98	53.39
41	S97T001734-X	125.5	-3.171	-.3778	-1.562	.9484	11.00
42	S97T001734-AX	4332.	4157.	4062.	4243.	4091.	4127.
43	ICSA	-.0080	253.4	.0018	.0117	.0026	-.0014
44	ICSA8	-.0187	255.9	.9398	.0094	.4701	.4744
45	CCV-3	5.288	5.280	5.150	5.194	5.138	5.239
46	CCB-3	.0193	-.0018	.0002	.0020	.0022	.0005

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 4

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.919	.0026	4.804	5.145	5.192	5.128
2	ICB	-.0004	-.0003	-.0004	-.0000	-.0009	-.0004
3	LLS	.0170	.0007	.0926	Q.6464	.1029	.0203
4	ICSA	-.0101	-.0139	93.15	.0291	-.0049	.0027
5	ICSA B	.4450	-.0147	93.54	-.0734	-.0053	1.005
6	PREPSTD TJA	4.483	.0022	4.564	4.990	5.097	5.022
7	PREPBLKTJA	Q.0103	-.0004	.0136	-.0655	-.0008	-.0005
8	S97T001017 L	-.0207	.0263	19.00	35.04	60.58	.0000
9	S97T001017-	-.0202	.0253	18.14	34.85	59.59	.0012
10	S97T001017 D	-.0175	.0221	50.20	33.80	57.82	.0015
11	S97T001017-S	4.378	.0113	24.2	35.42	56.39	4.950
12	S97T001017-X	-.0208	.0248	19.31	34.66	61.24	-.0059
13	S97T001017-AX	91.54	.0735	112.7	138.1	161.7	99.17
14	CCV	4.986	.0022	4.873	5.007	5.250	5.175
15	CCB	-.0003	-.0001	.0003	-.0601	-.0009	.0000
16	PREPSTD TJA	4.386	-.0011	4.551	4.776	5.003	4.882
17	PREPBLKTJA	.0042	-.0011	Q.0636	-.0804	.0009	-.0008
18	S97T001128 L	-.0430	.0351	21.31	47.11	78.21	.0029
19	S97T001128-	-.0448	.0324	20.19	46.07	76.51	.0035
20	S97T001128 D	-.0450	.0312	50.74	45.84	77.97	.0053
21	S97T001128-S	7.704	.0311	191.3	55.78	88.68	8.794
22	S97T001128-X	-.0463	.0396	21.66	46.63	79.06	.0082
23	S97T001128-AX	91.31	.0903	116.3	148.0	179.3	98.35
24	CCV 1	4.984	.0028	4.892	5.031	5.242	5.147
25	CCV-1	-.0001	.0002	-.0010	-.0681	-.0017	.0002
26	PREPSTD TJA	4.500	.0017	4.662	4.837	5.134	5.013
27	PREPBLKTJA	Q.0171	-.0009	.0400	.0548	-.0011	-.0009
28	S97T001805 L	-.0324	.0252	50.82	36.13	63.46	.0041
29	S97T001805-	-.0341	.0240	47.98	35.24	61.91	.0023
30	S97T001805 D	-.0298	.0254	27.45	35.53	62.54	.0030
31	S97T001805-S	4.337	.0276	56.49	40.32	68.85	4.959
32	S97T001805-X	-.0280	.0234	51.99	36.58	64.37	.0012
33	S97T001805-AX	91.32	.0855	147.6	139.0	167.5	101.1
34	CCV 2	4.989	.0028	4.932	4.981	5.251	5.154
35	CCB-2	.0009	.0003	-.0010	.0034	-.0003	.0008
36	PREPBLKTJA	.0005	-.0000	.0015	Q343.2	.0006	.0000
37	S97T001734 L	.0513	-.1592	12.59	14170.	29.85	-.1448
38	S97T001734-	.0284	-.0108	12.36	13870.	29.25	.0148
39	S97T001734 D	.0449	-.0021	8.760	12810.	30.42	.0002
40	S97T001734-X	40.41	.0344	52.72	14110.	72.91	41.21
41	S97T001734-AX	5252	-.4641	12.46	14320.	30.18	-.2898
42	S97T001734-AX	3871.	1.744	3895.	18580.	4284.	4209.
43	ICSA	-.0091	-.0149	93.92	.1240	-.0044	.0022
44	ICSA B	.4516	-.0147	94.44	-.0449	-.0049	1.018
45	CCV 3	5.060	.0023	4.884	4.893	5.274	5.294
46	CCB-3	.0001	-.0009	.0005	-.1939	-.0002	-.0006

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 5

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.210	5.055	5.112	4.984	5.206	5.133
2	ICB	-.0058	.0001	.0105	-.0053	-.0014	-.0065
3	LLS	.2001	.0206	.1047	.1647	.2022	.0486
4	ICSA	252.7	-.0058	-.0063	197.0	.0002	.0018
5	ICSA B	253.8	.4492	-.0103	196.9	.0015	.9408
6	PREPSTD TJA	4.883	4.783	4.795	5.283	5.003	5.023
7	PREPBLKTJA	.0165	.0009	.0054	Q.5007	.0013	.0036
8	S97T001017 L	.2797	69.88	-.0133	183.3	.0422	.8112
9	S97T001017 S	.3896	82.31	-.0138	177.0	.0371	.7463
10	S97T001017 D	.4018	78.35	-.0177	172.0	.0370	.7299
11	S97T001017 S	5.154	76.54	4.603	160.2	4.922	5.523
12	S97T001017 X	1.890	69.89	-.0190	185.3	.0344	.9026
13	S97T001017 AX	104.1	173.5	100.1	283.1	98.96	100.5
14	CCV	5.266	5.121	5.160	4.994	5.270	5.200
15	CCB	-.0071	.0001	.0023	-.0188	-.0022	-.0007
16	PREPSTD TJA	4.822	4.693	4.751	5.646	4.903	4.874
17	PREPBLKTJA	.0428	.0028	.0039	Q.5214	-.0004	.0008
18	S97T001128 L	.4708	82.72	-.0064	235.0	.0319	.9131
19	S97T001128 D	.5952	101.1	-.0149	228.0	.0459	.8735
20	S97T001128 S	.6593	103.6	-.0180	229.5	.0431	.8942
21	S97T001128 S	8.585	117.1	.8533	244.1	8.546	9.197
22	S97T001128 X	4.382	82.94	-.0278	236.6	.0172	.9035
23	S97T001128 AX	104.7	188.1	101.3	333.4	98.71	102.1
24	CCV 1	5.269	5.102	5.164	5.007	5.247	5.151
25	CCV-1	-.0086	.0003	.0004	-.0103	-.0022	-.0004
26	PREPSTD TJA	4.936	4.765	4.876	Q.7863	5.025	5.004
27	PREPBLKTJA	.0333	.0005	.0035	Q.7863	.0003	Q.1323
28	S97T001805 L	.4020	64.04	-.0290	183.2	.0441	.6653
29	S97T001805 S	.4684	72.82	-.0161	176.8	.0331	.6476
30	S97T001805 D	.4118	74.22	-.0145	178.5	.0372	.6616
31	S97T001805 X	5.154	82.35	4.726	182.4	4.887	5.428
32	S97T001805 AX	.3902	64.49	.0133	186.5	.0339	.7095
33	S97T001805 S	106.6	170.8	100.3	286.7	100.7	103.4
34	CCV 2	5.289	5.110	5.198	5.011	5.239	5.214
35	CCB-2	-.0046	.0003	-.0013	-.0103	.0016	-.0076
36	PREPBLKTJA	.0061	.0013	.0005	.0610	-.0007	Q.0379
37	S97T001734 L	-1.136	15.41	-.0445	94.80	-.2010	35.12
38	S97T001734 S	-.0509	15.19	-.0644	93.70	-.0243	35.34
39	S97T001734 D	-.0281	7.157	.0133	94.49	-.0081	29.94
40	S97T001734 A	42.77	56.06	42.15	135.8	42.60	78.64
41	S97T001734 X	-.7365	15.60	1.298	92.44	.6174	38.65
42	S97T001734 AX	4347.	4071.	4112.	4284.	4136.	4101.
43	ICSA	254.9	-.0064	-.0120	198.3	.0024	.0097
44	ICSA B	257.3	.4420	-.0092	199.5	.0013	.9381
45	CCV 3	5.333	5.010	5.156	5.122	5.269	5.150
46	CCB-3	.0011	-.0000	.0011	.0012	-.0009	.0027

HNF-SD-WM-DP-247, REV. 0

Analysis Report

Averages

Thu 07-24-97 02:30:08 PM

page 6

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.127	5.189	5.002	4.846	4.921	4.900
2	ICB	-.0081	-.0103	.0043	-.0063	.0079	.0174
3	LLS	.4130	.2107	.2110	.0975	.2269	Q.1272
4	ICSA	.0176	.0367	-.0224	.0160	-.0019	.0204
5	ICSA	-.0027	1.014	-.0355	-.0094	.0082	.0085
6	PREPSTDTJA	4.827	4.786	4.859	4.747	4.648	6.935
7	PREPBLKTJA	.0118	.0171	Q.1012	-.0004	.0244	Q.7082
8	S97T001017 L	12.48	-.0440	.6556	-.1614	.0378	8.900
9	S97T001017	12.10	.0194	.6191	-.1313	.0852	8.445
10	S97T001017 D	11.80	.1078	.6548	-.1169	.0657	7.549
11	S97T001017 S	15.71	7.409	5.411	4.566	4.562	12.63
12	S97T001017 X	12.79	-.1071	.6685	-.1847	.2824	9.045
13	S97T001017 AX	112.9	101.0	97.60	100.2	97.45	108.8
14	CCV	5.072	5.222	4.950	4.889	4.991	4.920
15	CCB	.0098	.0035	.0057	.0032	.0033	.0071
16	PREPSTDTJA	4.838	4.699	5.500	4.679	4.536	8.677
17	PREPBLKTJA	.0508	.0385	Q.7864	.0025	.0348	Q2.439
18	S97T001128 L	14.88	.2651	2.276	-.1768	.1826	1.125
19	S97T001128	14.67	.2389	2.097	-.1176	.0712	1.020
20	S97T001128 D	15.07	.3208	2.248	-.1142	.0707	.9376
21	S97T001128 S	16.50	8.480	3.103	.8087	8.005	11.30
22	S97T001128 X	15.29	.1852	2.221	-.2109	.3941	1.240
23	S97T001128 AX	115.5	103.0	100.1	101.6	97.81	102.1
24	CCV 1	5.147	5.249	5.000	4.879	4.997	4.917
25	CCV 1	-.0015	.0059	-.0100	.0049	.0382	.0026
26	PREPSTDTJA	4.834	4.788	4.767	4.796	4.605	8.896
27	PREPBLKTJA	.0134	.0089	Q.1171	.0015	.0249	Q1.291
28	S97T001805 L	12.30	.3586	1.569	-.1200	.1764	10.13
29	S97T001805	11.70	.4202	1.480	-.0897	.0794	9.531
30	S97T001805 D	11.96	.1534	1.509	-.0917	.0769	8.974
31	S97T001805 S	16.94	5.040	6.125	4.622	4.509	14.53
32	S97T001805 X	12.44	.3104	1.716	-.1107	.2619	10.33
33	S97T001805 AX	111.2	104.4	98.24	100.6	100.2	110.4
34	CCV 2	5.111	5.310	5.015	4.930	5.006	4.954
35	CCB 2	.0181	-.0149	.0025	-.0000	.0357	.0025
36	PREPBLKTJA	.0043	-.0033	.0034	.0089	.0297	.0166
37	S97T001734 L	2.031	-3.947	-.4752	-2.592	4.425	4.497
38	S97T001734	5.994	-.1238	.1960	-.1280	1.119	3.297
39	S97T001734 D	5.809	.3495	-.0464	.0758	1.330	3.719
40	S97T001734 A	48.34	42.75	41.41	39.98	41.79	44.00
41	S97T001734 X	13.86	1.237	-4.133	.4599	11.78	5.654
42	S97T001734 AX	4137	4104	3989	4165	4030	4097
43	ICSA	.0106	.0463	-.0377	.0031	.0199	.0006
44	ICSA	.0259	.9933	-.0408	-.0062	.0475	-.0017
45	CCV 3	5.196	5.208	5.044	4.930	5.017	4.903
46	CCB 3	-.0033	.0004	-.0036	.0009	.0375	-.0036

07/24/97

13:39

509 372 2929

WESTINGHOUSE

MO-924 200W

008

HNF-SD-WM-DP-247, REV. 0

Thu 07-24-97 02:30:08 PM

page 7

Analysis Report

Averages

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.018	5.064	.0946	4.966	4.952	9.737
2	ICB	-.0062	-.0000	-.0017	-.0007	-.0093	-.0222
3	LLS	.2078	.0206	-.0019	.0200	.3945	.5168
4	ICSA	-.0032	.0019	-.0144	.0006	.0536	.1216
5	ICSA	-.0065	.0019	-.0094	.0009	.0303	.1014
6	ICSA	4.922	4.934	.0843	4.442	4.665	9.613
7	PREPSTD TJ A	-.0052	.0004	-.0005	.0005	-.0017	-.0300
8	PREPBLKTJ A	-.0216	2.929	-.0107	.0144	-.3142	.0021
9	S97T001017 L	-.0233	2.853	.0050	.0160	-.0942	.0728
10	S97T001017 D	-.0277	2.726	.0051	.0167	-.0782	.1233
11	S97T001017 S	4.794	7.223	.0768	4.346	4.427	10.02
12	S97T001017 X	-.0704	2.965	-.0612	.0117	-.1782	-.1099
13	S97T001017 AX	98.33	104.2	1.965	100.5	97.99	192.7
14	CCV	5.076	5.145	.0933	5.044	4.908	9.888
15	CCB	-.0015	.0000	-.0018	-.0002	-.0349	-.0072
16	PREPSTD TJ A	4.829	4.857	.0902	4.417	4.468	9.466
17	PREPBLKTJ A	-.0156	.0011	-.0044	.0010	-.0061	-.0561
18	S97T001128 L	-.0143	3.174	-.0029	.0297	-.2872	.5290
19	S97T001128 X	-.0233	3.070	.0112	.0312	-.0913	.5148
20	S97T001128 D	-.0287	3.126	.0161	.0291	-.0455	.5717
21	S97T001128 S	8.382	11.71	.1351	.8831	7.634	17.41
22	S97T001128 X	.0274	3.213	.0035	.0357	.0227	.7352
23	S97T001128 AX	98.16	104.8	2.058	101.6	99.58	192.8
24	CCV 1	5.077	5.148	.0982	5.044	4.930	9.871
25	CCV 1	.0012	.0000	-.0054	-.0007	-.0102	.0070
26	PREPSTD TJ A	4.950	4.992	.1039	4.549	4.573	9.709
27	PREPBLKTJ A	-.0138	.0007	.0071	.0003	-.0115	-.0578
28	S97T001805 L	-.0200	2.524	.0058	.0298	-.2568	.4828
29	S97T001805 X	-.0249	2.441	.0097	.0240	-.0985	.5068
30	S97T001805 D	-.0238	2.490	.0125	.0224	-.0574	.4759
31	S97T001805 S	4.778	7.394	.1102	4.455	4.349	9.964
32	S97T001805 X	-.0229	2.564	.0108	.0238	-.2025	.4416
33	S97T001805 AX	100.7	106.4	2.127	101.4	100.3	193.0
34	CCV 2	5.085	5.157	.1077	5.080	4.982	9.883
35	CCB 2	.0063	.0001	.0021	.0005	-.0123	.0255
36	PREPBLKTJ A	-.0006	.0001	.0082	-.0007	-.0199	-.0768
37	S97T001734 L	-1.115	1.465	.2957	-.1426	-4.415	-11.31
38	S97T001734 X	-.2235	1.443	.2417	.0030	-1.107	-4.752
39	S97T001734 D	-.1296	1.464	.3120	.0423	-.0610	-3.604
40	S97T001734 A	41.31	43.32	.9584	41.39	38.63	76.53
41	S97T001734 X	-4.649	1.447	1.064	.0080	-11.89	-21.02
42	S97T001734 AX	4154	4258	88.51	4212	4034	8143
43	ICSA	-.0112	.0019	-.0020	.0007	.0240	.0802
44	ICSA	-.0121	.0018	-.0139	.0011	.0402	.0736
45	CCV 3	5.109	5.186	.1149	5.082	4.932	9.956
46	CCB 3	-.0070	-.0001	.0039	-.0005	.0004	-.0314

HNF-SD-WM-DP-247, REV. 0

Thu 07-24-97 02:30:08 PM

page 8

Analysis Report

Averages

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.011	.0070	4.904	5.010
2	ICB	.0011	.0002	.0012	.0002
3	LLS	.1034	.0004	.0247	.0222
4	ICSA	.0013	.0069	.0095	.0012
5	ICSAB	.4684	.0069	.9490	.0018
6	PREPSTDTJA	.855	.0055	4.528	4.899
7	PREPBLKTJA	.0011	.0005	Q.0192	.0011
8	S97T001017-L	.0230	.0012	.1192	.0084
9	S97T001017-X	.0218	.0011	.1037	.0072
10	S97T001017-D	.0203	.0010	.1030	.0062
11	S97T001017-S	4.801	.0084	5.102	4.810
12	S97T001017-X	.0210	.0000	.1300	.0108
13	S97T001017-AX	99.72	.1203	93.93	99.96
14	CCV	5.068	.0068	4.931	5.067
15	CCB	.0002	.0001	.0008	.0005
16	PREPSTDTJA	4.775	.0053	4.400	4.867
17	PREPBLKTJA	.0020	.0008	Q.0264	.0032
18	S97T001128-L	.0304	.0021	.1702	.0141
19	S97T001128-D	.0280	.0018	.1484	.0093
20	S97T001128-S	.0253	.0016	.1696	.0111
21	S97T001128-X	8.306	.0122	7.820	.9245
22	S97T001128-AX	.0460	.0044	.1890	.0220
23	CCV 1	100.9	.1296	95.81	100.7
24	CCV-1	5.076	.0071	4.944	5.069
25	PREPSTDTJA	.0006	.0001	.0034	.0011
26	PREPBLKTJA	4.892	.0054	4.516	4.976
27	S97T001805-L	.0027	.0008	Q.0564	.0002
28	S97T001805-D	.0227	.0018	.3238	.0106
29	S97T001805-S	.0193	.0014	.2962	.0087
30	S97T001805-X	.0205	.0013	.1407	.0090
31	S97T001805-AX	4.751	.0074	4.555	4.857
32	CCV 2	.0182	.0006	.3375	.0136
33	CCB-2	100.3	.1296	94.66	100.2
34	PREPSTDTJA	5.112	.0073	4.989	5.086
35	PREPBLKTJA	.0011	.0003	.0024	.0012
36	S97T001734-L	.0001	.0001	.0014	.0002
37	S97T001734-D	.4188	.0916	.3582	.2224
38	S97T001734-S	.0364	.0108	.0893	.0283
39	S97T001734-X	.0009	.0049	.1579	.0078
40	S97T001734-AX	41.57	.0606	40.75	41.14
41	ICSA	.9731	.2802	.6203	.6212
42	ICSAB	4125.	4.764	3831.	4163.
43	CCV 3	.0015	.0067	.0106	.0029
44	CCB-3	.4703	.0067	.9454	.0025
45	ICV	5.086	.0067	4.915	5.062
46	ICB	.0016	.0005	.0037	.0013

IK 108

07-24-97

LABCORE Completed Worklist Report for Worklist# 18810

Analyst: krm

Instrument: CARB2

Book# 25N12B
26N12B

Method: LA 342-100 Rev/Mod E-O

Worklist Comment: T-203 TIC/TOC. RCJ

Seq Type	Sample#	RA	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK	0		@TICTOC1 TIC-02	SOLID	1	3.20E+0	3.200	ug/g
1 BLNK	0		@TICTOC1 TOC-02	SOLID	1	6.00E+0	6.000	ug/g
2 STD	0		@TICTOC1 TIC-02	SOLID	6.02E+02	6.06E+2	100.664 % Recovery	
2 STD	0		@TICTOC1 TOC-02	SOLID	3.00E+03	2.99E+3	99.667 % Recovery	
3 SAMPLE	S97T001013	0	@TICTOC1 TIC-02	SOLID	N/A	1.58E+03	5.000	ug/g
3 SAMPLE	S97T001013	0	@TICTOC1 TOC-02	SOLID	N/A	4.18E+02	40.000	ug/g
4 DUP	S97T001013	0	@TICTOC1 TIC-02	SOLID	1.58E+3	1.58E+3	9.000	RPD
4 DUP	S97T001013	0	@TICTOC1 TOC-02	SOLID	4.18E+2	4.23E+2	1.189	RPD
5 SPK	S97T001013	0	@TICTOC1 TIC-02	SOLID	1.00E+02	9.62E+01	96.200 % Recovery	
5 SPK	S97T001013	0	@TICTOC1 TOC-02	SOLID	1.00E+02	8.94E+01	89.400 % Recovery	

Final page for worklist# 18810

Analyst Signature _____ Date _____

7-19-97
Analyst Signature _____ Date _____

7/22/97
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 18810

Analyst: KRM Instrument: CARB2 Book# 254128
260128

Method: LA-342-100 Rev/Mod _____

Worklist Comment: T-203 TICTOC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK			@TICTOC1	SOLID		
2 STD			@TICTOC1	SOLID		
3 SAMPLE	S97T001013 0		@TICTOC1	SOLID	97000299	T-203
	Analytes Requested: TIC-02 , TOC-02					
4 DUP	S97T001013 0		@TICTOC1	SOLID		
5 SPK	S97T001013 0		@TICTOC1	SOLID		

Final page for worklist # 18810

[Signature]
Analyst Signature

7-19-97
Date

[Signature]
Analyst Signature

7-19-97
Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT

TICTOC REV 2.0

<<< BLANK ANALYSIS >>>

Sample: BASE1

Date: 07/18/97

Time: 21:18:16

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE1
 Blank Value = N/A

Analyst : KR MONTEITH
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	0.20	50.00
3	1.51	0.40	50.00
4	2.00	0.60	33.33
5	2.50	0.90	33.33
6	3.00	1.20	25.00
7	3.50	1.50	20.00
8	4.00	1.70	11.76
9	4.50	1.90	10.53
10	5.00	2.10	9.52
11	5.50	2.40	12.50
12	6.00	2.50	4.00
13	6.50	2.70	7.41
14	7.00	2.90	6.90
15	7.50	3.00	3.33
16	8.00	3.20	6.25
17	8.50	3.40	5.88
18	9.00	3.60	5.56
19	9.50	3.70	2.70
20	10.00	3.90	5.13
21	10.50	4.10	4.88
22	11.00	4.30	4.65

BLANK VALUE = 4.3 micrograms carbon

BLANK FACTOR = 4.3 / 10.99792 =

+3.9E-01 ug/min Carbon

Sample Run By:

KR MONTEITH

00000

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 569 TO 587

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT

TICTOC REV 2.0

<<< BLANK ANALYSIS >>>

Sample: BASE1

Date: 07/18/97

Time: 21:32:16

Sample Size = 1 uL
 Dil Factor = 1
 Blank ID # = BASE1
 Blank Value = N/A

Analyst : KR MONTEITH
 Min Readings = 22
 Max Readings = 22
 % Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.80	75.00
3	1.50	5.30	84.91
4	2.00	13.60	61.03
5	2.50	19.80	31.31
6	3.00	23.30	15.02
7	3.50	25.10	7.17
8	4.00	26.00	3.46
9	4.50	26.60	2.26
10	5.00	27.00	1.48
11	5.50	27.40	1.46
12	6.00	27.60	0.72
13	6.50	27.90	1.08
14	7.00	28.40	1.76
15	7.50	28.70	1.05
16	8.00	29.10	1.37
17	8.50	29.50	1.36
18	9.00	29.80	1.01
19	9.50	30.10	1.00
20	10.00	30.30	0.66
21	10.50	30.60	0.98
22	11.00	30.80	0.65

BLANK VALUE = 30.8 micrograms carbon

BLANK FACTOR = 30.8 / 10.9978 =

+2.80E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

KR MONTEITH

00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 07/18/97

Time: 21:45:45

Sample Size = 1000 uL

Dil Factor = 1

Blank ID # =

Blank Value = .39 ug/minute C

Analyst : KR MONTEITH

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.60	50.00
3	1.50	5.00	88.00
4	2.00	66.50	92.48
5	2.50	196.40	66.14
6	3.00	341.10	42.42
7	3.50	452.80	24.67
8	4.00	524.80	13.72
9	4.50	567.80	7.57
10	5.00	589.40	3.66
11	5.50	599.40	1.67
12	6.00	603.80	0.73
13	6.50	605.70	0.31
14	7.00	606.80	0.18
15	7.50	607.40	0.10
16	8.00	607.90	0.08
17	8.50	608.30	0.07
18	9.00	608.60	0.05
19	9.50	609.00	0.07
20	10.00	609.30	0.05
21	10.50	609.50	0.03
22	11.00	609.80	0.05

USER INPUT BLANK VALUE

BLANK VALUE = 4.289143 micrograms carbon

BLANK FACTOR = 4.289143 / 10.9978 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:

(609.8 - 4.289524) (1)/(1000)	=	+6.055E-01	g/L Carbon
(609.8 - 4.289524) (1)/(1000) (12)	=	+5.046E-02	Molar Carbon

Sample Run By:

KR MONTEITH

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD

Date: 07/18/97

Time: 22:38:13

Sample Size = 200 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.8 ug/minute C

Analyst : KR MONTEITH

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	4.70	89.36
3	1.51	67.20	93.01
4	2.00	261.20	74.27
5	2.50	467.00	44.07
6	3.00	560.50	16.68
7	3.50	599.70	6.54
8	4.00	614.40	2.39
9	4.50	620.10	0.92
10	5.00	622.70	0.42
11	5.50	624.00	0.21
12	6.00	625.00	0.16
13	6.50	625.70	0.11
14	7.00	626.30	0.10
15	7.50	626.80	0.08
16	8.00	627.30	0.08
17	8.50	627.60	0.05
18	9.00	628.10	0.08
19	9.50	628.40	0.05
20	10.00	628.80	0.06
21	10.50	629.10	0.05
22	11.00	629.40	0.05

USER INPUT BLANK VALUE

BLANK VALUE = 30.79385 micrograms carbon

BLANK FACTOR = 30.79385 / 10.9978 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(629.4 - 30.79624) (1) / (200) = +2.993E+00 g/L Carbon
 (629.4 - 30.79624) (1) / (200) (12) = +2.494E-01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

KR MONTEITH

00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK

Date: 07/18/97

Time: 22:51:02

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .39 ug/minute C

Analyst : KR MONTEITH

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	0.60	83.33
3	1.51	1.90	68.42
4	2.01	3.00	36.67
5	2.50	3.60	16.67
6	3.00	4.10	12.20
7	3.50	4.50	8.89
8	4.00	4.70	4.26
9	4.50	5.00	6.00
10	5.00	5.20	3.85
11	5.50	5.40	3.70
12	6.00	5.60	3.57
13	6.50	5.70	1.75
14	7.00	5.90	3.39
15	7.50	6.10	3.28
16	8.00	6.30	3.17
17	8.50	6.50	3.08
18	9.00	6.60	1.52
19	9.50	6.90	4.35
20	10.00	7.20	4.17
21	10.50	7.20	0.00
22	11.00	7.50	4.00

USER INPUT BLANK VALUE

BLANK VALUE = 4.289143 micrograms carbon

BLANK FACTOR = 4.289143 / 10.9978 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:

(7.5 - 4.289524) (1)/(1)	=	+3.2E+00	g/L Carbon
(7.5 - 4.289524) (1)/(1) (12)	=	+2.7E-01	Molar Carbon

Sample Run By:

KR MONTEITH

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK1

Date: 07/18/97

Time: 23:02:55

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.8 ug/minute C

Analyst : KR MONTEITH
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	1.90	84.21
4	2.00	11.10	82.88
5	2.50	21.00	47.14
6	3.00	27.20	22.79
7	3.50	30.50	10.82
8	4.00	32.10	4.98
9	4.50	33.00	2.73
10	5.00	33.60	1.79
11	5.50	34.10	1.47
12	6.00	34.30	0.58
13	6.50	34.70	1.15
14	7.00	34.90	0.57
15	7.50	35.20	0.85
16	8.00	35.40	0.56
17	8.50	35.80	1.12
18	9.00	35.90	0.28
19	9.50	36.20	0.83
20	10.00	36.40	0.55
21	10.50	36.60	0.55
22	11.00	36.80	0.54

USER INPUT BLANK VALUE

BLANK VALUE = 30.79385 micrograms carbon

BLANK FACTOR = 30.79385 / 10.9978 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(36.8 - 30.79692) (1)/(1) = +6.00E+00 g/L Carbon
 (36.8 - 30.79692) (1)/(1) (12) = +5.00E-01 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

KR MONTEITH

00000

HNF-SD-WM-DP-247, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013-1

Date: 07/18/97

Time: 23:15:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .39 ug/minute C

Analyst : KR MONTEITH

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	0.80	50.00
4	2.00	7.00	88.57
5	2.50	39.80	82.41
6	3.00	113.00	64.78
7	3.50	205.80	45.09
8	4.00	281.50	26.89
9	4.50	330.80	14.90
10	5.00	356.60	7.24
11	5.50	368.60	3.26
12	6.00	373.70	1.36
13	6.50	376.30	0.69
14	7.00	377.60	0.34
15	7.50	378.70	0.29
16	8.00	379.40	0.18
17	8.50	380.10	0.18
18	9.00	380.70	0.16
19	9.50	381.20	0.13
20	10.00	381.90	0.18
21	10.50	382.20	0.08
22	11.00	382.70	0.13

USER INPUT BLANK VALUE

BLANK VALUE = 4.289143 micrograms carbon

BLANK FACTOR = 4.289143 / 10.9978 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:

(382.7 - 4.289143) (1) / (1)	=	+3.784E+02	g/L Carbon
(382.7 - 4.289143) (1) / (1) (12)	=	+3.153E+01	Molar Carbon

Sample Run By:

KR MONTEITH

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013-1

Date: 07/18/97

Time: 23:27:14

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.8 ug/minute C

Analyst : KR MONTEITH

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference
1	0.51	0.50	0.00
2	1.01	1.20	58.33
3	1.50	12.90	90.70
4	2.00	48.70	73.51
5	2.50	73.60	33.83
6	3.00	87.40	15.79
7	3.50	95.50	8.48
8	4.00	101.30	5.73
9	4.50	106.10	4.52
10	5.00	110.30	3.81
11	5.50	113.70	2.99
12	6.00	117.00	2.82
13	6.50	119.60	2.17
14	7.00	121.90	1.89
15	7.50	123.90	1.61
16	8.00	125.60	1.35
17	8.50	127.00	1.10
18	9.00	128.20	0.94
19	9.50	129.10	0.70
20	10.00	129.70	0.46
21	10.50	130.40	0.54
22	11.03	130.70	0.23

USER INPUT BLANK VALUE

BLANK VALUE = 30.79385 micrograms carbon

BLANK FACTOR = 30.79385 / 10.9978 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(130.7 - 30.89126) (1)/(1) = +9.981E+01 g/L Carbon
 (130.7 - 30.89126) (1)/(1) (12) = +8.317E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

KR MONTEITH

00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013DUP-1

Date: 07/18/97

Time: 23:39:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .39 ug/minute C

Analyst : KR MONTEITH

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	1.30	38.46
4	2.00	5.40	75.93
5	2.50	29.70	81.82
6	3.00	89.90	66.96
7	3.50	167.10	46.20
8	4.00	233.10	28.31
9	4.50	276.10	15.57
10	5.00	297.90	7.32
11	5.50	307.90	3.25
12	6.00	312.20	1.38
13	6.50	314.50	0.73
14	7.00	315.50	0.32
15	7.50	316.40	0.28
16	8.00	317.00	0.19
17	8.50	317.50	0.16
18	9.00	318.00	0.16
19	9.50	318.40	0.13
20	10.00	318.80	0.13
21	10.50	319.20	0.13
22	11.00	319.60	0.13

USER INPUT BLANK VALUE

BLANK VALUE = 4.289143 micrograms carbon

BLANK FACTOR = 4.289143 / 10.9978 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:

(319.6 - 4.28919) (1)/(1) =

+3.153E+02 g/L Carbon

(319.6 - 4.28919) (1)/(1) (12) =

+2.628E+01 Molar Carbon

Sample Run By:

KR MONTEITH

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013DUP-1

Date: 07/19/97

Time: 01:07:23

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.8 ug/minute C

Analyst : KR MONTEITH

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	6.20	87.10
4	2.00	27.80	77.70
5	2.50	54.30	48.80
6	3.00	71.20	23.74
7	3.50	80.40	11.44
8	4.00	86.70	7.27
9	4.50	91.50	5.25
10	5.00	95.50	4.19
11	5.50	98.90	3.44
12	6.00	101.90	2.94
13	6.50	104.60	2.58
14	7.00	106.70	1.97
15	7.50	108.70	1.84
16	8.00	110.50	1.63
17	8.50	112.00	1.34
18	9.00	113.00	0.88
19	9.50	113.80	0.70
20	10.00	114.40	0.52
21	10.50	114.80	0.35
22	11.00	115.20	0.35

USER INPUT BLANK VALUE

BLANK VALUE = 30.79385 micrograms carbon

BLANK FACTOR = 30.79385 / 10.9978 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(115.2 - 30.79692) (1) / (1) = +8.440E+01 g/L Carbon
 (115.2 - 30.79692) (1) / (1) (12) = +7.034E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

KR MONTEITH

00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013SPK-1

Date: 07/19/97

Time: 01:22:35

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .39 ug/minute C

Analyst : KR MONTEITH

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	1.60	68.75
4	2.00	29.60	94.59
5	2.50	135.30	78.12
6	3.00	305.20	55.67
7	3.50	471.70	35.30
8	4.00	589.30	19.96
9	4.50	658.60	10.52
10	5.00	699.90	5.90
11	5.50	718.70	2.62
12	6.00	726.60	1.09
13	6.50	730.30	0.51
14	7.00	732.20	0.26
15	7.50	733.60	0.19
16	8.00	734.70	0.15
17	8.50	735.60	0.12
18	9.00	736.40	0.11
19	9.50	737.00	0.08
20	10.00	737.70	0.09
21	10.50	738.20	0.07
22	11.00	738.70	0.07

USER INPUT BLANK VALUE

BLANK VALUE = 4.289143 micrograms carbon

BLANK FACTOR = 4.289143 / 10.9978 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:

(738.7 - 4.28883) (1)/(1)	=	+7.344E+02	g/L Carbon
(738.7 - 4.28883) (1)/(1) (12)	=	+6.120E+01	Molar Carbon

Sample Run By:

KR MONTEITH

00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T1013SPK-1

Date: 07/19/97

Time: 01:38:58

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.8 ug/minute C

Analyst : KR MONTEITH

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
 1          0.51          0.60          0.00
 2          1.01          1.10         45.45
 3          1.50         19.30         94.30
 4          2.00         144.00        86.60
 5          2.50        282.60        49.04
 6          3.00        343.50       17.73
 7          3.50        371.90        7.64
 8          4.00        384.50        3.28
 9          4.50        392.00        1.91
10          5.00        397.20        1.31
11          5.50        401.70        1.12
12          6.00        405.20        0.86
13          6.50        408.30        0.76
14          7.00        411.00        0.66
15          7.50        413.20        0.53
16          8.00        415.10        0.46
17          8.50        416.90        0.43
18          9.00        418.40        0.36
19          9.50        419.60        0.29
20         10.00        420.50        0.21
21         10.50        421.10        0.14
22         11.00        421.60        0.12

```

USER INPUT BLANK VALUE

BLANK VALUE = 30.79385 micrograms carbon

BLANK FACTOR = 30.79385 / 10.9978 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 421.6 - 30.79395 ) (1)/(1) = +3.908E+02 g/L Carbon
( 421.6 - 30.79395 ) (1)/(1) (12) = +3.257E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

KR MONTEITH

00000

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	1.0000	1.0000
BLNK	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	7.5	36.8
18810	µg of Carbon from Baseline (C2)	4.3	30.8

Test Code

@TIC/TOC1

Matrix

SOLID

Batch Number

97002892

Rerun

0

Sample Prep

N/A

Sample #

BLNK

Instrument Code

CARB2

Prepared By

GJH

Chemist

RWS

Analyst

KRM

Date Complete

07/19/97

Analysis Date

07/19/97

Analysis Time

03:00 AM

Sample Point

T-203

µg of Carbon = |C1-C2|

Method Detection Limit in ug/g

µg of Carbon

TIC	TOC
5	40
3.20E+00	6.00E+00

Data Entered By:

Signature of Chemist:

BLANK.WB1 REV 1.0

342100ML

GJH

RW Schroeder

Date: 07/19/97

Date: 7/22/97

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (E-0)

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)	609.8	629.4
18810	μg of Carbon from Baseline (C2)	4.3	30.8
Test Code	Standard Book Number	25N12B	26N12B
@TICTOC1	Standard Value ($\mu\text{g}/\text{mL}$)	602	3000

Matrix
LIQUIDBatch Number
97002892Rerun
0Sample Prep
N/ASample #
STDInstrument Code
CARB2Prepared By
GJHChemist
RWSAnalyst
KRMDate Complete
07/19/97Analysis Date
07/19/97Analysis Time
03:00 AMSample Point
T-203QC Actual in $\mu\text{g}/\text{mL}$ = Standard Value ($\mu\text{g}/\text{mL}$)QC Found in $\mu\text{g}/\text{mL}$ = (C1 - C2) * DF / SSQC Found in $\mu\text{g}/\text{mL}$ for TIC = 5 if C1 < C2QC Found in $\mu\text{g}/\text{mL}$ for TOC = 40 if C1 < C2

% Recovery = QC Found / QC Actual * 100

		TIC	TOC
Analysis Time	Method Detection Limit in $\mu\text{g}/\text{mL}$	5	40
03:00 AM	QC Actual in $\mu\text{g}/\text{mL}$	6.02E+02	3.00E+03
Sample Point	QC Found in $\mu\text{g}/\text{mL}$	6.06E+02	2.99E+03
T-203	Percent Standard Recovery	100.6	99.8

Data Entered By:	GJH	Date:	07/19/97
Signature of Chemist:	<i>RW Schneider</i>	Date:	7/22/97

STANDARD.WB1 REV 1.0

342100ML

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.2389	0.2389
SAMPLE	Dilution Factor (DF)	1	1
Worklist	µg of Carbon in Sample (C1)	382.7	130.7
18810	µg of Carbon from Baseline (C2)	4.3	30.8
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
97002892			
Rerun	µg of Carbon/g = (C1-C2) * DF / SS		
0	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001013			
Instrument Code			
CARB2			
Prepared By			
GJH			
Chemist			
RWS			
Analyst			
KRM			
Date Complete			
07/19/97			
Analysis Date			
07/19/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
03:00 AM		5	40
Sample Point	µg of Carbon/g	1.58E+03	4.18E+02
T-203			

Data Entered By:

GJH

Date: 07/19/97

Signature of Chemist:

RW Schroeder

Date: 7/22/97

SAMPLE.WB1 REV 1.0

342100ML

583

WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.1995	0.1995
DUP	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	319.6	115.2
18810	µg of Carbon from Baseline (C2)	4.3	30.8
Test Code	Known µg of C from Original Sample	1.58E+3	4.18E+2
@TIC/TOC1			
Matrix			
SOLID			
Batch Number			
97002892			
Rerun			
0	µg of Carbon/g = (C1-C2) * DF / SS		
	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001013			
Instrument Code			
CARB2			
Prepared By			
GJH			
Chemist			
RWS			
Analyst			
KRM			
Date Complete			
07/19/97			
Analysis Date			
07/19/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
03:00 AM		5	40
Sample Point	µg of Carbon/g	1.58E+03	4.23E+02
T-203			

Data Entered By:

GJH

Date: 07/19/97

Signature of Chemist:

DN Schroeder

Date: 7/22/97

SAMPLE.WB1 REV 1.0

342100ML

584

WORKBOOK PAGE: SPIKE5

TIC/TOC : LA-342-100 (E-0)

SOLIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	0.2389	0.2389
Work List	Final Coulometer Reading in μg (C1)	382.7	130.7
18810	Spiked Vial Data		
Test Code	Sample Size in g (SPK SS)	0.2804	0.2804
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in μg (C2)	738.7	421.6
SOLID	Spike Book Number	25N12B	26N12B
Batch Number	Spike Standard Value in $\mu\text{g/mL}$ (SPK CONC)	602	3000
97002892			
Rerun			
0			
Sample Prep			
N/A			
Sample #	Percent Spike Recovery = $(C2 - C1 * (\text{SPK SS}) / \text{SS}) / ((\text{SPK CONC}) * (\text{SPK VOL})) * 1$		
S97T001013			
Instrument Code	QC Actual in $\mu\text{g/mL}$ = Spike Value ($\mu\text{g/mL}$)		
CARB2	QC Found in $\mu\text{g/mL}$ = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
GJH			
Chemist			
RWS			
Analyst			
KRM			
Date Complete			
07/19/97			
Analysis Date			
07/19/97			
Analysis Time			
03:00 AM	QC Actual in $\mu\text{g/mL}$	6.02E+02	3.00E+03
Sample Point	QC Found in $\mu\text{g/mL}$	5.79E+02	2.68E+03
T-203	Percent Spike Recovery	96.2	89.4

Data Entered By:	GJH	Date:	07/19/97
Signature of Chemist:	<i>R. J. Schroeder</i>	Date:	7/22/97

HNF-SD-WM-DP-247, REV. 0

RADIOCHEMICAL ANALYSIS

HNH-SD-WM-DP-247, REV. 0

THIS PAGE INTENTIONALLY LEFT BLANK

LABCORE Completed RadChem Report for Worklist#: 17970

Analyst: scl Instrument: AB15 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01 S.S. by Ludlum. Std: 1.0mL, Spk: 0.1mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	LIQUID	2.00E-04	1.83E-4	91.500	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	LIQUID	1.00	3.47E+00	3.470	% Ct. Error
2 BLNK	0		@ALPHA01 ALPHA01	LIQUID	1	3.71E-5	37.100e-006	uCi/mL
2 BLNK	0		@ALPHA01 ALPHA01E	LIQUID	1.00	1.20E+02	120.000	uCi/mL
3 BLNK/BKG	0		@ALPHA01 ALPHA01	LIQUID	1.00E+00	2.69E+00	2.690	BLNK/BKG
4 SAMPLE	S97T000733	0	@ALPHA01 ALPHA01	LIQUID	N/A	8.48E-05	670.0e-007	uCi/mL
4 SAMPLE	S97T000733	0	@ALPHA01 ALPHA01E	LIQUID	N/A	2.94E+02	0.0e+000	% Ct. Error
5 DUP	S97T000733	0	@ALPHA01 ALPHA01	LIQUID	<8.48E-5	<5.50E-5		RPD
5 DUP	S97T000733	0	@ALPHA01 ALPHA01E	LIQUID	1.00	2.94E+02	294.000	% Ct. Error
6 SPK	S97T000733	0	@ALPHA01 ALPHA01	LIQUID	2.63E-02	2.38E-02	90.494	% Recovery

Final page for worklist# 17970

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature

5/13/97
Date

LABCORE Data Entry Template for Worklist# 17970

Analyst: S.L Instrument: AB00 15 Book# 19856

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T203, @ALPHA01 S.S. by Ludlum. Std: 1.0mL, Spk: 0.1mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T000733 0		@ALPHA01	LIQUID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000733 0		@ALPHA01	LIQUID		
6 SPK	S97T000733 0		@ALPHA01	LIQUID		

Final page for worklist # 17970

Sue Lai 5-12-97
Analyst Signature Date

Shane L. Ludlum 5/13/97
Analyst Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) 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)	3393	3206
17970	COUNT TIME in MINUTES (CT)	30	30
A or TB ?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	112.970	106.737
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97001985	Concentration in $\mu\text{Ci/L}$ =	1.88E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	1.78E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.8320E-01	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$		
WL17970	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.83E-04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			6.64E-07 $\mu\text{Ci/mL}$
05/13/97	RELATIVE COUNTING ERROR =	3.5%	
Analysis Date			
05/12/97			
Analysis Time			
03:00 PM			
Sample Point			
T-203			

Analyst:	MCB	Date: 13-May-97
Signature of Chemist:	SLF	Date: 5/13/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	10	11
17970	COUNT TIME in MINUTES (CT)	30	30
A1 or TB?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.203	0.237
Batch Number			
97001985	Blank Concentration in $\mu\text{Ci/L}$	3.42E-02	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	3.99E-02	
0	Average Concentration in $\mu\text{Ci/L}$	3.7057E-02	
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 = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	3.71E-05	DETECTION LEVEL
Analyst			
SCL			
Date Complete			6.70E-05
05/13/97	RELATIVE COUNTING ERROR	119.8%	$\mu\text{Ci/mL}$
Analysis Date			
05/12/97			
Analysis Time			
03:00 PM			
Sample Point			
T-203			

Analyst:		Date: 13-May-97
Signature of Chemist:		Date: 5/13/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	19	6
17970	COUNT TIME in MINUTES (CT)	30	30
AT or TB?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.503	0.243
Batch Number			
97001985	Blank Concentration in $\mu\text{Ci/L}$	8.48E-02	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 4.09E-02	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 8.4781E-02	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000733	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 8.48E-05	DETECTION LEVEL
Analyst			
SCL	LESS THAN Value was Determined from R_s .		6.70E-05
Date Complete	RELATIVE COUNTING ERROR	293.7%	$\mu\text{Ci/mL}$
05/13/97			
Analysis Date			
05/12/97			
Analysis Time			
03:00 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 13-May-97
Signature of Chemist:	SLF	Date: 5/13/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	15	15
DUP	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	6
17970	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)	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.326	0.243
Batch Number			
97001985	Blank Concentration in $\mu\text{Ci/L}$	<	5.50E-02
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	<	4.09E-02
0	Maximum Concentration in $\mu\text{Ci/L}$	<	5.4978E-02
Sample Prep			
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000733	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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	<	5.50E-05
Analyst			
SCL	LESS THAN Value was Determined from Rmax.		
Date Complete			
05/13/97	RELATIVE COUNTING ERROR	293.7%	6.70E-05 $\mu\text{Ci/mL}$
Analysis Date			
05/12/97			
Analysis Time			
03:00 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 13-May-97
Signature of Chemist:	SLF	Date: 5/13/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SPK6

AT : LA-508-101 (E-1) LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	15	15
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	43159	42647
17970	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	101	101
@ALPHA01	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)	131B43	131B43
97001985	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVol)	2.6294E-02	2.6294E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2701	0.2701
0	SAMPLE + SPIKE $\mu\text{Ci/mL}$ (S+S)	2.42E-01	2.39E-01
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/mL}$ in SAMPLE	<	8.4781E-05
N/A			
Sample #			
S97T000733			
Instrument Code	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
WB26872	SAMPLE + SPIKE $\mu\text{Ci/mL}$ = $Rs * DF * DDF / (EFF * SS * 2220000 \text{ dpm}/\mu\text{Ci})$		
Prepared By	QC ACTUAL = SVol		
MCB	QC FOUND = $((S+S \mu\text{Ci/mL} - \text{SAMPLE } \mu\text{Ci/mL}) * ((SDF/SVol)/(DF*DDF/SS)))$		
Chemist	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
SLF			
Analyst			
SCL			
Date Complete	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.		
05/13/97			
Analysis Date			
05/12/97	QC ACTUAL =	2.63E-02	
Analysis Time	QC FOUND =	2.38E-02	
03:00 PM	AVG. PERCENT SPIKE RECOVERY =	90.7%	
Sample Point			
T-203			

Analyst:	MCB	Date: 13-May-97
Signature of Chemist:	SLF	Date: 5/13/97
SPIKE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18037

Analyst: scl

Instrument: AB14

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	LIQUID	2.00E-04	1.69E-4	84.500	% Recovery
1 STD	0		@ALPHA01 ALPHA01R	LIQUID	1.00	3.58E+00	3.580	% Ct. Error
2 BLNK	0		@ALPHA01 ALPHA01	LIQUID	1	<4.96E-7		uCi/mL
2 BLNK	0		@ALPHA01 ALPHA01R	LIQUID	1.00	1.80E+02	180.000	uCi/mL
3 BLNK/BKG	0		@ALPHA01 ALPHA01	LIQUID	1.00E+00	3.81E+00	3.810	BLNK/BKG
4 SAMPLE	S97T000731	0	@ALPHA01 ALPHA01	LIQUID	N/A	4.41E-07	529.0e-009	uCi/mL
4 SAMPLE	S97T000731	0	@ALPHA01 ALPHA01R	LIQUID	N/A	1.06E+02	0.0e+000	% Ct. Error
5 DUP	S97T000731	0	@ALPHA01 ALPHA01	LIQUID	4.41E-7	5.52E-7	22.356	RPD
5 DUP	S97T000731	0	@ALPHA01 ALPHA01R	LIQUID	1.00	7.97E+01	79.700	% Ct. Error

Final page for worklist# 18037

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature

5/14/97
Date

The RPD is acceptable due to low
sample alpha activity.

5/14/97

LABCORE Data Entry Template for Worklist# 18037

Analyst: S. L Instrument: AB00 14 Book# 79B56

Method: LA-508-101 Rev/Mod 9-0

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T000731 0		@ALPHA01	LIQUID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000731 0		@ALPHA01	LIQUID		

Final page for worklist # 18037

S. L 5-13-97
Analyst Signature Date

C. L. O'Brien 5/14/97
Analyst Signature Date
Luc E. Hogan 5-14-97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

Type	DETECTOR NUMBER	STANDARD	REPLICATE
STD	DISH SIZE (1, 2, or 5)	14	14
Work List	(MS)	2	2
18037	GROSS COUNTS	3061	3007
At or B?	COUNT TIME in MINUTES	30	30
AT	BACKGROUND in cpm	0.07	0.07
Test Code	SAMPLE SIZE in mL	1.000	1.000
@ALPHA01	DILUTION FACTOR	1	1
Matrix	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
LIQUID	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
Batch Number	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	101.963	100.163
97002061	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
Re-run	Concentration in $\mu\text{Ci/L}$ =	1.71E-01	
0	Replicate Concentration in $\mu\text{Ci/L}$ =	1.68E-01	
Sample Prep	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.6911E-01	
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18037	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.69E-04	DETECTION LEVEL
Analyst			
SCL			
Date Complete			5.29E-07
05/14/97	RELATIVE COUNTING ERROR =	3.6%	$\mu\text{Ci/mL}$
Analysis Date			
05/13/97			
Analysis Time			
01:06 PM			
Sample Point			
T-203			

Analyst:	CJO	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/14/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	14	14
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
WorkList	GROSS COUNTS (GC)	5	11
18037	COUNT TIME in MINUTES (CT)	30	30
AttorIB7	BACKGROUND in cpm (BKG)	0.07	0.07
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.243	0.297

Batch Number	
97002061	Blank Concentration in $\mu\text{Ci/L}$ < 4.07E-04
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ 4.96E-04
0	Maximum Concentration in $\mu\text{Ci/L}$ < 4.9641E-04

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
WL18037	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =			< 4.96E-07	DETECTION LEVEL
CJO	LESS THAN Value was Determined from Rmax.				
Chemist					5.29E-07 $\mu\text{Ci/mL}$
SLF	RELATIVE COUNTING ERROR				
Analyst	180.1%				
SCL					
Date Complete					
05/14/97					
Analysis Date					
05/13/97					
Analysis Time					
01:05 PM					
Sample Point					
T-203					

Analyst:	SCL	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/14/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5)	2	2
Work List	GROSS COUNTS	12	8
18037	COUNT TIME in MINUTES	30	30
Alpha/Beta	BACKGROUND in cpm	0.07	0.07
AT	SAMPLE SIZE in mL	1.000	1.000
Test Code	DILUTION FACTOR	1	1
@ALPHA01	DIGEST DILUTION FACTOR	1	1
Matrix	EFFICIENCY FACTOR	0.2692	0.2692
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.330	0.197
Batch Number			
97002061	Blank Concentration in $\mu\text{Ci/L}$	5.52E-04	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	3.29E-04	
0	Average Concentration in $\mu\text{Ci/L}$	4.4063E-04	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000731	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	4.41E-07	DETECTION LEVEL
Analyst			
SCL			5.29E-07
Date Complete	RELATIVE COUNTING ERROR	105.6%	$\mu\text{Ci/mL}$
05/14/97			
Analysis Date			
05/13/97			
Analysis Time			
01:05 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/14/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	14	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	13	11
18037	COUNT TIME in MINUTES (CT)	30	30
AT or TB?	BACKGROUND in cpm (BKG)	0.07	0.07
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.363	0.297
Batch Number			
97002061	Blank Concentration in $\mu\text{Ci/L}$	6.08E-04	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	4.96E-04	
0	Average Concentration in $\mu\text{Ci/L}$	5.5219E-04	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000731	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[((\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT))] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average)	=	5.52E-07
Analyst			DETECTION LEVEL
SCL			5.29E-07
Date Complete			$\mu\text{Ci/mL}$
05/14/97	RELATIVE COUNTING ERROR	79.7%	
Analysis Date			
05/13/97			
Analysis Time			
01:05 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/14/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18052

Analyst: krq Instrument: AB15 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0 mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.00E-04	1.74E-4	87.000	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.55E+00	3.550	% Ct. Error
2 BLNK-PRP	0		@ALPHA01 ALPHA01	SOLID	1	<1.0E-3		uCi/g
2 BLNK-PRP	0		@ALPHA01 ALPHA01E	SOLID	1.00	5.00E+02	500.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01	SOLID	1.00E+00	6.67E-01	0.667	BLNK/BKG
4 SAMPLE	S97T000762	0 F	@ALPHA01 ALPHA01	SOLID	N/A	2.01E-01	290.0e-005	uCi/g
4 SAMPLE	S97T000762	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	7.59E+00	0.0e+000	% Ct. Error
5 DUP	S97T000762	0 F	@ALPHA01 ALPHA01	SOLID	2.01E-1	1.81E-1	10.471	RPD
5 DUP	S97T000762	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	7.60E+00	7.600	% Ct. Error
6 SAMPLE	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	N/A	1.03E-01	291.0e-005	uCi/g
6 SAMPLE	S97T000763	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.13E+02	0.0e+000	% Ct. Error
7 DUP	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	1.03E-1	3.25E-1	103.738	RPD
7 DUP	S97T000763	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	6.95E+00	6.950	% Ct. Error

Final page for worklist# 18052

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/16/97

The RPD for 763 is out of limits. Sample will be reran.

5/16/97

Units shown for QC (BLK/BKG) may not reflect the actual units.

05/12/97 08:36
A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 18052

Analyst: KBC Instrument: AB00 15 Book# 79B56Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0 mL skm

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	S97T000762 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000762 0 F		@ALPHA01	SOLID		
6 SAMPLE	S97T000763 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T000763 0 F		@ALPHA01	SOLID		

Final page for worklist # 18052

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	15
STD	DISH SIZE (1, 2, or 5)	2
WorkList	GROSS COUNTS	3214
18052	COUNT TIME in MINUTES	30
At for TBL?	BACKGROUND in cpm	0.1
AT	SAMPLE SIZE in mL	1.000
Test Code	DILUTION FACTOR	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2701
LIQUID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	107.033
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04
97002076	Concentration in $\mu\text{Ci/L}$	1.79E-01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	1.70E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	1.7419E-01
Sample Prep		
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$	
Sample	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL} * \text{DF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$	
w18052	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
CJO		
Chemist		
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.74E-04
Analyst		
KRQ		
Date Complete		
05/16/97	RELATIVE COUNTING ERROR =	3.5%
Analysis Date		
05/15/97		
Analysis Time		
05:30 PM		
Sample Point		
T-203		

DETECTION
LEVEL6.01E-07
 $\mu\text{Ci/mL}$

Analyst:	CJO	Date: 16-May-97
Signature of Chemist:	SLF	Date: 5/16/97

STANDARD.WB1 Rev. 1.0

508101ML

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	3	1
18052	COUNT TIME in MINUTES (CT)	30	30
At or TB?	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0724	2.0724
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.135	0.135
Batch Number			
97002076	Blank Concentration in $\mu\text{Ci/g}$	< 1.08E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 1.08E-03	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 1.0841E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18052			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 1.08E-03	DETECTION LEVEL
Analyst	LESS Than Value was Determined from Lc.		
KRQ			2.90E-03
Date Complete	RELATIVE COUNTING ERROR	500.0%	$\mu\text{Ci/g}$
05/16/97			
Analysis Date			
05/16/97			
Analysis Time			
05:30 PM			
Sample Point			
T-203			

Analyst:	SR	KRQ	Date: 16-May-97
Signature of Chemist:	SLF	Date: 5/16/97	
BLANK.WB1 Rev. 1.0	508101ML		

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	676
18052	COUNT TIME in MINUTES	(CT)	30
A1 or B1	BACKGROUND in cpm	(BKG)	0.1
AT	SAMPLE SIZE in mL	(SS)	0.100
Test Code	DILUTION FACTOR	(DF)	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0724
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE		22.433

Batch Number	
97002076	Blank Concentration in $\mu\text{Ci/g}$
ReRun	Replicate Concentration in $\mu\text{Ci/g}$
0	Average Concentration in $\mu\text{Ci/g}$

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000762	
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	
CJO	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 2.01E-01
Analyst	
KRQ	
Date Complete	
05/16/97	RELATIVE COUNTING ERROR 7.6%
Analysis Date	
05/15/97	
Analysis Time	
05:30 PM	
Sample Point	
T-203	

Analyst:	KRQ	Date: 16-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML	

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
DETECTOR NUMBER		15	15
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	674	694
18052	COUNT TIME in MINUTES (CT)	30	30
At or Bk?	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0904	2.0904
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	22.367	23.033

Batch Number	
97002076	Blank Concentration in $\mu\text{Ci/g}$ 1.78E-01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 1.84E-01
0	Average Concentration in $\mu\text{Ci/g}$ 1.8110E-01

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000762	

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	
CJO	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.81E-01
Analyst	
KRQ	
Date Complete	
05/16/97	RELATIVE COUNTING ERROR 7.6%

Analysis Date	
05/15/97	
Analysis Time	
05:30 PM	
Sample Point	
T-203	

Analyst:		KRQ	Date: 16-May-97
Signature of Chemist:		SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML		

LABCORE Completed Worklist Report for Worklist# 18062

Analyst: slh Instrument: AB13 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.00E+04	1.79E+4	89.500%	Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.39E+00	3.390	% Ct. Error
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	<2.61E-4		uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01E	SOLID	1.00	2.94E+02	294.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01	SOLID	1.00E+00	2.56E+00	2.560	BLNK/BKG
4 SAMPLE	S97T000764	0 F	@ALPHA01 ALPHA01	SOLID	N/A	1.29E-01	3.06E-004	uCi/g
4 SAMPLE	S97T000764	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	2.81E+00		% Ct. Error
5 DUP	S97T000764	0 F	@ALPHA01 ALPHA01	SOLID	1.29E-1	1.28E-1	0.778	RPD
5 DUP	S97T000764	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	2.80E+00	2.800	% Ct. Error

Final page for worklist# 18062

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature

5/16/97
Date

LABCORE Data Entry Template for Worklist# 18062

Analyst: SLH Instrument: AB00 13 Book# 79 B56

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0mL skm

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	S97T000764	0 F	@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000764	0 F	@ALPHA01	SOLID		

Final page for worklist # 18062

Sandra L. Hines Boatright
Analyst Signature Date
5-14-97

M. C. Brown 5/14/97
Analyst Signature Date
C.F. O'Brien 5/15/97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	13	13
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	3360	3451
18062	COUNT TIME in MINUTES (CT)	30	30
Alpha B?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	111.870	114.903
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97002083	Concentration in $\mu\text{Ci/L}$ =	1.76E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	1.81E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.7877E-01	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18062	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})]^2 * 1.96 * 100$		
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.79E-04	
Analyst			
SLH			
Date Complete			
05/14/97	RELATIVE COUNTING ERROR =	3.4%	
Analysis Date			
05/14/97			
Analysis Time			
05:00 AM			
Sample Point			
T-203			

DETECTION
LEVEL

6.27E-07
 $\mu\text{Ci/mL}$

Analyst:	MCB	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/16/97

STANDARD.WB1 Rev. 1.0

508101ML

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

Type	DETECTOR NUMBER	BLNK-PREP	REPLICATE
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	13	13
Worklist	GROSS COUNTS (GC)	2	2
18062	COUNT TIME in MINUTES (CT)	14	6
11061157	BACKGROUND in cpm (BKG)	30	30
AT	SAMPLE SIZE in mL (SS)	0.13	0.13
18062	DILUTION FACTOR (DF)	1.000	1.000
ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	2.0352	2.0352
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.2857	0.2857
Batch Number		0.337	0.243
97002083	Blank Concentration in $\mu\text{Ci/g}$		
Return	Replicate Concentration in $\mu\text{Ci/g}$	2.61E-04	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 1.88E-04	
Sample Prep		< 2.6081E-04	
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18062	Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
Instrument Code	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
WB27810			
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 2.61E-04	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from Rs.		
SLH			3.08E-04
Date Complete	RELATIVE COUNTING ERROR	293.7%	$\mu\text{Ci/g}$
05/14/97			
Analysis Date			
05/14/97			
Analysis Time			
06:00 AM			
Sample Point			
T-203			

Analyst:

SLH

Date: 14-May-97

Signature of Chemist:

SLF

Date: 5/16/97

BLANK.WB1 Rev. 1.0

508101ML

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	13	13
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	4884	5126
18062	COUNT TIME in MINUTES (CT)	30	30
Alt Code B?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0352	2.0352
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	162.670	170.737
Batch Number			
97002083	Blank Concentration in $\mu\text{Ci/g}$	1.26E-01	
ReRun	Replicate Concentration in $\mu\text{Ci/g}$	1.32E-01	
0	Average Concentration in $\mu\text{Ci/g}$	1.2914E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000764			
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.29E-01	DETECTION LEVEL
Analyst			
SLH			
Date Complete			3.08E-04
05/14/97	RELATIVE COUNTING ERROR	2.8%	$\mu\text{Ci/g}$
Analysis Date			
05/14/97			
Analysis Time			
05:00 AM			
Sample Point			
T-203			

Analyst:	SLH	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	13	13
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	4911	4961
18062	COUNT TIME in MINUTES (CT)	30	30
ANFO000000	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
18062	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0256	2.0256
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	163.570	165.237
Batch Number			
97002083	Blank Concentration in $\mu\text{Ci/g}$	1.27E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.29E-01	
0	Average Concentration in $\mu\text{Ci/g}$	1.2797E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000764			
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.28E-01	DETECTION LEVEL
Analysis			
SLH			
Date Complete			3.10E-04 $\mu\text{Ci/g}$
05/14/97	RELATIVE COUNTING ERROR	2.8%	
Analysis Date			
05/14/97			
Analysis Time			
05:00 AM			
Sample Point			
T-203			

Analyst:	SLH	Date: 14-May-97
Signature of Chemist:	SLF	Date: 5/14/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18097

Analyst: slh

Instrument: AB15

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA-01, Deter s.s. by Ludlum. Std = 1.0mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01 SOLID		2.00E-04	1.78E-4	89.000	% Recovery
1 STD	0		@ALPHA01 ALPHA01 SOLID		1.00	3.47E+00	3.470	% Ct. Error
2 BLNK-PREP	0		@ALPHA01 ALPHA01 SOLID		1	<4.06E-4		uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01 SOLID		1.00	1.80E+02	180.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01 SOLID		1.00E+00	2.38E+00	2.380	BLNK/BKG
4 SAMPLE	S97T000765	0 F	@ALPHA01 ALPHA01 SOLID		N/A	1.40E-01	528.0e-006	uCi/g
4 SAMPLE	S97T000765	0 F	@ALPHA01 ALPHA01 SOLID		N/A	3.95E+00	0.0e+000	% Ct. Error
5 DUP	S97T000765	0 F	@ALPHA01 ALPHA01 SOLID		1.40E-1	1.23E-1	12.928	RPD
5 DUP	S97T000765	0 F	@ALPHA01 ALPHA01 SOLID		1.00	4.25E+00	4.250	% Ct. Error
6 SAMPLE	S97T000766	0 F	@ALPHA01 ALPHA01 SOLID		N/A	1.54E-01	106.0e-005	uCi/g
6 SAMPLE	S97T000766	0 F	@ALPHA01 ALPHA01 SOLID		N/A	5.28E+00	0.0e+000	% Ct. Error
7 DUP	S97T000766	0 F	@ALPHA01 ALPHA01 SOLID		1.54E-1	1.80E-1	15.569	RPD
7 DUP	S97T000766	0 F	@ALPHA01 ALPHA01 SOLID		1.00	4.91E+00	4.910	% Ct. Error

Final page for worklist# 18097

Analyst Signature _____

Date _____

Analyst Signature _____

Date _____

Reviewer Signature _____

Date 5/16/97

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 18097

Analyst: SLH Instrument: AB00 15 Book# 79856

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T203, @ALPHA-01, Deter s.s. by Ludlum. Std = 1.0mL skm

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	S97T000765 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000765 0 F		@ALPHA01	SOLID		
6 SAMPLE	S97T000766 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T000766 0 F		@ALPHA01	SOLID		

Final page for worklist # 18097

Sandra L. Hood Boatright
Analyst Signature Date
5-15-97

Luc E. Hoggan 5-15-97
Analyst Signature Date
MEB 5/16/97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT: LA-508-101 (E-1)

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) 3212	3199
18097	COUNT TIME in MINUTES	(CT) 30	30
Attorn/B?	BACKGROUND in cpm	(BKG) 0.07	0.07
AT	SAMPLE SIZE in mL	(SS) 1.000	1.000
Test Code	DILUTION FACTOR	(DF) 1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN) 79B56	79B56
Matrix	EFFICIENCY FACTOR	(EFF) 0.2701	0.2701
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	106.997	106.563
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97002116	Concentration in $\mu\text{Ci/L}$	= 1.78E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	= 1.78E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	= 1.7808E-01	

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
WL18097	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Instrument Code	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SEH	
Chemist	
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ = 1.78E-04
Analyst	
SLH	
Date Complete	
05/15/97	RELATIVE COUNTING ERROR = 3.5%
Analysis Date	
05/15/97	
Analysis Time	
03:40 AM	
Sample Point	
T-203	

Analyst:	SEH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97

STANDARD.WB1 Rev. 1.0

508101ML

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

			BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER		15	15
BLNK-PREP	DISH SIZE (1, 2, or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	5	5
18097	COUNT TIME in MINUTES	(CT)	30	30
At or LB?	BACKGROUND In cpm	(BKG)	0.07	0.07
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9984	1.9984
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.243	0.243

Batch Number	
97002116	Blank Concentration in $\mu\text{Ci/g}$ < 4.06E-04
Retun	Replicate Concentration in $\mu\text{Ci/g}$ < 4.06E-04
0	Maximum Concentration in $\mu\text{Ci/g}$ < 4.0594E-04

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$

WL18097	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
Instrument Code	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
WB26872	

Prepared By	
SEH	

Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) = < 4.06E-04
Analyst	
SLH	LESS THAN Value was Determined from Rmax.
Date Complete	
05/15/97	RELATIVE COUNTING ERROR 180.1%

Analysis Date	
05/15/97	
Analysis Time	
03:40 AM	
Sample Point	
T-203	

Analyst:	SLH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
WorkList	GROSS COUNTS (GC)	2470	2559
18097	COUNT TIME in MINUTES (CT)	30	30
Ator B	BACKGROUND in cpm (BKG)	0.07	0.07
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9984	1.9984
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	82.263	85.230
Batch Number			
97002116	Blank Concentration in $\mu\text{Ci/g}$	1.37E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.42E-01	
0	Average Concentration in $\mu\text{Ci/g}$	1.3978E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T00765			
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			
SEH			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.40E-01	DETECTION LEVEL
Analyst			
SLH			
Date Complete			5.28E-04
05/15/97	RELATIVE COUNTING ERROR	3.9%	$\mu\text{Ci/g}$
Analysis Date			
05/16/97			
Analysis Time			
03:40 AM			
Sample Point			
T-203			

(/ system exit)yes-

Analyst:	SLH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0 508101ML		

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1, 2, or 5)	(MS)	2	2
Worklist	GROSS COUNTS	(GC)	2129	2386
18097	COUNT TIME IN MINUTES	(CT)	30	30
AT FOR TBY	BACKGROUND IN cpm	(BKG)	0.07	0.07
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS OF SOLIDS / L	(Dg/L)	2.0324	2.0324
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		70.897	79.463

Batch Number	
97002116	Blank Concentration in $\mu\text{Ci/g}$
ReRun	Replicate Concentration in $\mu\text{Ci/g}$
0	Average Concentration in $\mu\text{Ci/g}$

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000765	
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	
SEH	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.23E-01
Analyst	
SLH	
Date/Complete	
05/15/97	RELATIVE COUNTING ERROR 4.3%
Analyst Date	
05/15/97	
Analyst Time	
03:40 AM	
Sample Point	
T-203	

/ system;exit;yes-

Analyst:	SLH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML	

AT : LA-508-101 (E-1)

SOLIDS

			SAMPLE	REPLICATE
DETECTOR NUMBER			15	15
SAMPLE DISH SIZE (1, 2, or 5)	(MS)		2	2
Work List GROSS COUNTS	(GC)		1387	1386
18097 COUNT TIME in MINUTES	(CT)		30	30
AT-6071B2 BACKGROUND in cpm	(BKG)		0.07	0.07
AT SAMPLE SIZE in mL	(SS)		0.250	0.250
Test Code DILUTION FACTOR	(DF)		1	1
@ALPHA01 DIGEST GRAMS of SOLIDS / L	(Dg/L)		1.9948	1.9948
Matrix EFFICIENCY FACTOR	(EFF)		0.2701	0.2701
SOLID Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			46.163	46.130

Batch Number	
97002116	Blank Concentration in $\mu\text{Ci/g}$ 1.54E-01
Re-run	Replicate Concentration in $\mu\text{Ci/g}$ 1.54E-01
0	Average Concentration in $\mu\text{Ci/g}$ 1.5432E-01

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000766	
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	
SEH	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.54E-01
Analyst	
SLH	
Date Completed	
05/15/97	RELATIVE COUNTING ERROR 5.3%
Analysis Date	
05/15/97	
Analysis Time	
03:40 AM	
Sample Point	
T-203	

/ system exit yes~

Analyst:	SLH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP7

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	15	15
DUP	DISH SIZE (1, 2, or 5)	(MS) 2	2
Work List	GROSS COUNTS	(GC) 1599	1678
18097	COUNT TIME in MINUTES	(CT) 30	30
Automatic Bk	BACKGROUND in cpm	(BKG) 0.07	0.07
AT	SAMPLE SIZE in mL	(SS) 0.250	0.250
Test Code	DILUTION FACTOR	(DF) 1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L) 2.0284	2.0284
Matrix	EFFICIENCY FACTOR	(EFF) 0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	53.230	55.863

Batch Number	
97002116	Blank Concentration in $\mu\text{Ci/g}$ 1.75E-01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 1.84E-01
0	Average Concentration in $\mu\text{Ci/g}$ 1.7957E-01

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000766	
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	
SEH	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.80E-01
Analyst	
SLH	
Date Complete	
05/15/97	RELATIVE COUNTING ERROR 4.9%
Analysis Date	
05/15/97	
Analysis Time	
03:40 AM	
Sample Point	
T-203	

DETECTION
LEVEL1.04E-03
 $\mu\text{Ci/g}$

(/ system exit) yes-

Analyst:	SLH	Date: 15-May-97
Signature of Chemist:	SLF	Date: 5/16/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18126

Analyst: scl

Instrument: AB15

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: Use 1-10-.500 mL sample size. Rerun #1. SLF

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.00E-04	1.75E-4	87.500	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.55E+00	3.550	% Ct. Error
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	<2.28E-3		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	8.33E-01	0.833	BLNK/BKG
4 SAMPLE	S97T000761	0 F	@ALPHA01 ALPHA01	SOLID	N/A	3.11E-01	610.0e-005	uCi/g
4 SAMPLE	S97T000761	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	9.38E+00	0.0e+000	% Ct. Error
5 DUP	S97T000761	0 F	@ALPHA01 ALPHA01	SOLID	3.11E-1	2.47E-1	22.939	RPD
5 DUP	S97T000761	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	9.50E+00	9.500	% Ct. Error

Final page for worklist# 18126

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

The RPD is consistent with the 1st run.
(copy attached).
No further reruns requested

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18051

Analyst: scl Instrument: AB16 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. Std: 1.0 mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01 SOLID		2.00E-04	1.70E-4	85.000 % Recovery	
1 STD	0		@ALPHA01 ALPHA01E SOLID		1.00	3.61E+00	3.610 % Ct. Error	
2 BLNK-PREP	0		@ALPHA01 ALPHA01 SOLID		1	<2.53E-3	uCi/g	
2 BLNK-PREP	0		@ALPHA01 ALPHA01E SOLID		1.00	1.65E+02	165.000 uCi/g	
3 BLNK/BKG	0		@ALPHA01 ALPHA01 SOLID		1.00E+00	2.44E+00	2.440 BLNK/BKG	
4 SAMPLE	S97T000761	0 F	@ALPHA01 ALPHA01 SOLID	N/A	2.58E-01	3.09E-003	uCi/g	
4 SAMPLE	S97T000761	0 F	@ALPHA01 ALPHA01E SOLID	N/A	6.62E+00		% Ct. Error	
5 DUP	S97T000761	0 F	@ALPHA01 ALPHA01 SOLID		2.58E-1	1.98E-1	26.316 RPD	
5 DUP	S97T000761	0 F	@ALPHA01 ALPHA01E SOLID		1.00	7.31E+00	7.310 % Ct. Error	

Final page for worklist# 18051

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/14/97

The RPD for 761 is out of limits. Batch will be rerun.

5/14/97

LABCORE Data Entry Template for Worklist# 18126

Analyst: S-L Instrument: AB00 15 Book# 19856

Method: LA-508-101 Rev/Mod G7-0

Worklist Comment: Use 1-10-.500 mL sample size. Rerun #1. SLF

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	S97T000761	0	F	@ALPHA01	SOLID	97000299	T-203
Analytes Requested: ALPHA01 , ALPHA01E								
5	DUP	S97T000761	0	F	@ALPHA01	SOLID		

Final page for worklist # 18126

Sue Lai 5-16-97
Analyst Signature Date

Sue E. Hogan 5-18-97
Analyst Signature Date
ATC 5/19/97

Data Entry Comments:

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
WorkList	GROSS COUNTS (GC)	3254	3061
18126	COUNT TIME in MINUTES (CT)	30	30
Alt or Ref	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)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	108.367	101.933
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97002147	Concentration in $\mu\text{Ci/L}$ =	1.81E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ =	1.70E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.7535E-01	
Sample Prep	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
N/A	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
Sample	ALPHA TOTAL $\mu\text{Ci/mL}$ = $ALPHA\ TOTAL\ \mu\text{Ci/L} / 1000\text{mL/L}$		
WL18126	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
Instrument Code	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
WB26872			
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.75E-04	DETECTION LEVEL
Analyst			
SCL			
Date Complete	RELATIVE COUNTING ERROR =	3.5%	6.01E-07 $\mu\text{Ci/mL}$
05/18/97			
Analysis Date			
05/16/97			
Analysis Time			
10:20 AM			
Sample Point			
T-203			

Analyst:	SEH	Date: 18-May-97
Signature of Chemist:	SLF	Date: 5/19/97

STANDARD.WB1 Rev. 1.0

508101ML

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK-PREP	DISH SIZE (1, 2, or 5)	2	2
Worklist	GROSS COUNTS	3	2
18126	COUNT TIME in MINUTES	30	30
Attorn B	BACKGROUND in cpm	0.1	0.1
AT	SAMPLE SIZE in mL	0.500	0.500
Test Code	DILUTION FACTOR	11	11
@ALPHA01	DIGEST GRAMS OF SOLIDS / L	2.1644	2.1644
Matrix	EFFICIENCY FACTOR	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.135	0.135

Batch Number	
97002147	Blank Concentration in $\mu\text{Ci/g}$ < 2.28E-03
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ < 2.28E-03
0	Maximum Concentration in $\mu\text{Ci/g}$ < 2.2837E-03

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) \cdot BKG$
Sample	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s \cdot 1000\text{mL/L} \cdot DF / (EFF \cdot SS \cdot Dg/L \cdot 2220000\text{dpm}/\mu\text{Ci})$

WL18126	
Instrument Code	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG \cdot CT) / (TC - BKG \cdot CT)] \cdot 1.96 \cdot 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By

SEH

Chemist

SLF

Analyst

SCL

Date Complete

05/18/97

Analysis Date

05/16/97

Analysis Time

10:20 AM

Sample Point

T-203

ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum)	=	< 2.28E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			6.10E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR		500.0%	

Analyst:	SCL	Date: 18-May-97
Signature of Chemist:	SLF	Date: 5/19/97
BLANK.WB1 Rev. 1.0	508101ML	

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

	SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15
SAMPLE	DISH SIZE (1, 2, or 5)	2
Worklist	GROSS COUNTS	661
18126	COUNT TIME in MINUTES	30
At Count Bkg	BACKGROUND in cpm	0.1
AT	SAMPLE SIZE in mL	0.500
Test Code	DILUTION FACTOR	11
@ALPHA01	DIGEST GRAMS OF SOLIDS / L	2.1644
Matrix	EFFICIENCY FACTOR	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	21.933

Batch Number	Blank Concentration in $\mu\text{Ci/g}$	3.72E-01
07002147	Replicate Concentration in $\mu\text{Ci/g}$	2.50E-01
Rerun	Average Concentration in $\mu\text{Ci/g}$	3.1106E-01
1		

Sample Prep	FUSION01	R_s (Sample Count Rate) = $(TC / CT) \cdot BKG$
Sample	S97T000761	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s \cdot 1000 \text{ mL/L} \cdot DF / (EFF \cdot SS \cdot \text{Dg/L} \cdot 2220000 \text{ dpm}/\mu\text{Ci})$

Instrument Code	WB26872	Relative Counting Error = $[(\text{The Square Root of } TC + BKG \cdot CT) / (TC - BKG \cdot CT)] \cdot 1.96 \cdot 100$
Prepared By	SEH	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Chemist	SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	3.11E-01	DETECTION LEVEL
Analyst	SCL				6.10E-03
Date Complete	05/18/97	RELATIVE COUNTING ERROR		9.4%	$\mu\text{Ci/g}$
Analysis Date	05/16/97				
Analysis Time	10:20 AM				
Sample Points	T-203				

/ system exit yes~

Analyst:	SCL	Date: 18-May-97
Signature of Chemist:	SLF	Date: 5/19/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1, 2, or 5)	(MS)	2	2
Work Log	GROSS COUNTS	(GC)	435	437
18126	COUNT TIME in MINUTES	(CT)	30	30
Autocal By	BACKGROUND in cpm	(BKG)	0.1	0.1
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.144	2.144
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE		14.400	14.467

Batch Number	
87002147	Blank Concentration in $\mu\text{Ci/g}$
Rerun	Replicate Concentration in $\mu\text{Ci/g}$
1	Average Concentration in $\mu\text{Ci/g}$

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) \cdot BKG$
Sample #	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$
S97T000761	

Instrument Code	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SEH	
Chemist	

SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.47E-01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			6.16E-03 $\mu\text{Ci/g}$
05/18/97	RELATIVE COUNTING ERROR	9.5%	

Analysis Date	
05/16/97	
Analysis Time	
10:20 AM	
Sample Cont	
T-203	

/ system,exit,yes~

Analyst:	SCL	Date: 18-May-97
Signature of Chemist:	SLF	Date: 5/19/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed Worklist Report for Worklist# 18138

Analyst: scl Instrument: AB13 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@ALPHA01 ALPHA01	SOLID	2.00E-04	1.73E-4	86.500 % Recovery	
1 STD	0	@ALPHA01 ALPHA01E	SOLID	1.00	3.42E+00	3.420 % Ct. Error	
2 BLNK-PREP	0	@ALPHA01 ALPHA01	SOLID	1	2.19E-3	0.002 uCi/g	
2 BLNK-PREP	0	@ALPHA01 ALPHA01E	SOLID	1.00	1.01E+02	101.000 uCi/g	
3 BLNK/BKG	0	@ALPHA01 ALPHA01	SOLID	1.00E+00	3.83E+00	3.830 BLNK/BKG	
4 SAMPLR	S97T000767	0 F @ALPHA01 ALPHA01	SOLID	N/A	1.59E-01	2.79e-003 uCi/g	
4 SAMPLE	S97T000767	0 F @ALPHA01 ALPHA01E	SOLID	N/A	8.06E+00	% Ct. Error	
5 DUP	S97T000767	0 F @ALPHA01 ALPHA01	SOLID	1.59E-1	1.24E-1	24.735 RPD	
5 DUP	S97T000767	0 F @ALPHA01 ALPHA01E	SOLID	1.00	9.61E+00	9.610 % Ct. Error	

Final page for worklist# 18138

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/19/97

Replicate data indicate that the elevated
RPD is the result of inhomogeneity.
No rerun requested

5/19/97

LABCORE Data Entry Template for Worklist# 18138

Analyst: S.L. Instrument: AB00 #13 Book# 79856

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T203, @ALPHA01, Deter s.s. by Ludlum. skm

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	S97T000767 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000767 0 F		@ALPHA01	SOLID		

Final page for worklist # 18138

Sue Lee 5-16-97
Analyst Signature Date

Sue E. Hogan 5-18-97
Analyst Signature Date
Cf. Owen 5/19/97

Data Entry Comments:

soil down

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	13
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	3315
18138	COUNT TIME in MINUTES (CT)	30
AT or TB?	BACKGROUND in cpm (BKG)	0.1
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2857
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	110.400
Batch Number	Standard Value in µCi/mL	2.00E-04
97002160	Concentration in µCi/L =	1.74E-01
Rerun	Replicate Concentration in µCi/L =	1.72E-01
0	AVERAGE CONCENTRATION in µCi/L =	1.7325E-01

Sample Prep

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

WL18138

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27810

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By

SEH

Chemist

SLF

ALPHA TOTAL CONCENTRATION in µCi/mL = 1.73E-04

Analyst

SCL

DETECTION
LEVEL

Date/Complete

05/19/97

RELATIVE COUNTING ERROR = 3.4%

5.68E-07
µCi/mL

Analysis Date

05/16/97

Analysis Time

02:45 PM

Sample Point

T-203

Analyst:

SEH

Date: 19-May-97

Signature of Chemist:

SLF

Date: 5/19/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	13	13
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	10	13
18138	COUNT TIME in MINUTES (CT)	30	30
ALPHA-2	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.036	2.036
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.233	0.333
Batch Number			
97002160	Blank Concentration in $\mu\text{Ci/g}$	1.81E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.58E-03	
0	Average Concentration in $\mu\text{Ci/g}$	2.1941E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
WL18138			
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.19E-03	DETECTION LEVEL
Analyst			
SCL			
Date Complete			2.79E-03 $\mu\text{Ci/g}$
05/19/97	RELATIVE COUNTING ERROR	101.0%	
Analysis Date			
05/16/97			
Analysis Time			
02:46 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 19-May-97
Signature of Chemist:	SLF	Date: 5/19/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	13	13
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	600	635
18138	COUNT TIME in MINUTES (CT)	30	30
At or Bkg	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.036	2.036
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	19.900	21.067
Batch Number			
97002160	Blank Concentration in $\mu\text{Ci/g}$	1.54E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.63E-01	
0	Average Concentration in $\mu\text{Ci/g}$	1.5862E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000767			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.59E-01	
Analyst			
SCL			
Date Complete			
05/19/97	RELATIVE COUNTING ERROR	8.1%	
Analysis Date			
05/16/97			
Analysis Time			
02:45 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 19-May-97
Signature of Chemist:	SLF	Date: 5/19/97
SAMPLE.WB1 Rev. 1.0 508101ML		

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	13	13
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	532	425
18138	COUNT TIME in MINUTES (CT)	30	30
Alpha Bk	BACKGROUND in cpm (BKG)	0.1	0.1
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0208	2.0208
Matrix	EFFICIENCY FACTOR (EFF)	0.2857	0.2857
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	17.633	14.067

Batch Number	
97002160	Blank Concentration in $\mu\text{Ci/g}$ 1.38E-01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 1.10E-01
0	Average Concentration in $\mu\text{Ci/g}$ 1.2366E-01

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000767	
Instrument Code	Relative Counting Error = $[((\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT))] * 1.96 * 100$
WB27810	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
SEH	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) = 1.24E-01
Analyst	
SCL	
Date Complete	
05/19/97	RELATIVE COUNTING ERROR 9.6%
Analysis Date	
05/16/97	
Analysis Time	
02:45 PM	
Sample Point	
T-203	

Analyst:	SCL	Date: 19-May-97
Signature of Chemist:	SLF	Date: 5/19/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18162

Analyst: rdm

Instrument: AB14

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: Use 1-10-.500 mL sample size. Rerun #1. SLF

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0ALPHA01 ALPHA01	SOLID	2.00E-04	1.70E-4	85.000	% Recovery
1 STD	0	0ALPHA01 ALPHA01E	SOLID	1.00	3.60E+00	3.600	% Ct. Error
2 BLNK-PREP	0	0ALPHA01 ALPHA01	SOLID	1	4.06E-3	40.600E-004	uCi/g
2 BLNK-PREP	0	0ALPHA01 ALPHA01E	SOLID	1.00	1.22E+02	122.000	uCi/g
3 BLNK/BKG	0	0ALPHA01 ALPHA01	SOLID	1.00E+00	2.25E+00	2.250	BLNK/BKG
4 SAMPLE	S97T000757	0 F 0ALPHA01 ALPHA01	SOLID	N/A	2.47E-01	766.0E-005	uCi/g
4 SAMPLE	S97T000757	0 F 0ALPHA01 ALPHA01E	SOLID	N/A	9.87E+00	0.0E+000	% Ct. Error
5 DUP	S97T000757	0 F 0ALPHA01 ALPHA01	SOLID	2.47E-1	2.06E-1	18.102	RPD
5 DUP	S97T000757	0 F 0ALPHA01 ALPHA01E	SOLID	1.00	1.04E+01	10.400	% Ct. Error
6 SPK	S97T000757	0 F 0ALPHA01 ALPHA01	SOLID	2.63E-02	2.26E-02	85.932	% Recovery
7 SAMPLE	S97T000760	0 F 0ALPHA01 ALPHA01	SOLID	N/A	1.79E-01	833.0E-005	uCi/g
7 SAMPLE	S97T000760	0 F 0ALPHA01 ALPHA01E	SOLID	N/A	1.18E+01	0.0E+000	% Ct. Error
8 DUP	S97T000760	0 F 0ALPHA01 ALPHA01	SOLID	1.79E-1	1.69E-1	5.747	RPD
8 DUP	S97T000760	0 F 0ALPHA01 ALPHA01E	SOLID	1.00	1.15E+01	11.500	% Ct. Error

Final page for worklist# 18162

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/21/97

LABCORE Data Entry Template for Worklist# 18162

Analyst: R. Ryan Instrument: AB00 14 Book# 79856

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: Use 1-10-.500 mL sample size. Rerun #1. SLF

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	S97T000757 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000757 0 F		@ALPHA01	SOLID		
6 SPK	S97T000757 0 F		@ALPHA01	SOLID		
7 SAMPLE	S97T000760 0 F		@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
8 DUP	S97T000760 0 F		@ALPHA01	SOLID		

Final page for worklist # 18162

R. Ryan 5/18/97
Analyst Signature Date

Ch. Quinn 5/20/97
Analyst Signature Date
Joe E. Hogan 5-20-97

Data Entry Comments:

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	14
STD	DISH SIZE (1, 2, or 5)	2
Work List	GROSS COUNTS	2975
18162	COUNT TIME in MINUTES	30
Atom B?	BACKGROUND in cpm	0.2
AT	SAMPLE SIZE in mL	1.000
Test Code	DILUTION FACTOR	1
@ALPHA01	STANDARD BOOK NUMBER	79B56
Matrix	EFFICIENCY FACTOR	0.2692
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	98.967
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04
97002184	Concentration in $\mu\text{Ci/L}$	1.66E-01
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	1.74E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	1.6992E-01

Sample Prep

N/A

Rs (Sample Count Rate) = $(TC / CT) - BKG$

Sample

ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$

WL18162

ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$

Instrument Code

Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$

WB27807

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared by

CJO

Chemist

SLF

ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ = 1.70E-04

Analyst

RDM

DETECTION
LEVEL

Date Complete

05/20/97

RELATIVE COUNTING ERROR = 3.6%

7.89E-07
 $\mu\text{Ci/mL}$

Analysis Date

05/18/97

Analysis Time

04:00 AM

Sample Point

T-203

Analyst:

Signature of Chemist:

STANDARD.WB1 Rev. 1.0

508101ML

CJO

SLF

Date: 20-May-97

Date: 5/21/97

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	14	14
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	14	13
18162	COUNT TIME in MINUTES (CT)	30	30
Alt or IB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.268	2.268
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.267	0.233
Batch Number			
97002184	Blank Concentration in $\mu\text{Ci/g}$	4.33E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.79E-03	
0	Average Concentration in $\mu\text{Ci/g}$	4.0578E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
WL18162			
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			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	4.06E-03	DETECTION LEVEL
Analyst			
RDM			
Date Complete			7.66E-03
05/20/97	RELATIVE COUNTING ERROR	122.0%	$\mu\text{Ci/g}$
Analysis Date			
05/18/97			
Analysis Time			
04:00 AM			
Sample Point			
T-203			

Analyst:	RDM	Date: 20-May-97
Signature of Chemist:	SLF	Date: 5/21/97
BLANK.WB1 Rev. 1.0	508101ML	

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	512	412
18162	COUNT TIME in MINUTES (CT)	30	30
Al for Bk?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.268	2.268
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	16.867	13.533
Batch Number			
97002184	Blank Concentration in $\mu\text{Ci/g}$	2.74E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.20E-01	
1	Average Concentration in $\mu\text{Ci/g}$	2.4671E-01	
Sample Prep			
FUSION01	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000757			
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			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.47E-01	DETECTION LEVEL
Analyst			
RDM			
Date Complete			7.66E-03
05/20/97	RELATIVE COUNTING ERROR	9.9%	$\mu\text{Ci/g}$
Analysis Date			
05/18/97			
Analysis Time			
04:00 AM			
Sample Point			
T-203			

Analyst:	RDM	Date: 20-May-97
Signature of Chemist:	SLF	Date: 5/21/97

SAMPLE.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	14	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	420	373
18162	COUNT TIME in MINUTES (CT)	30	30
At or TB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.3256	2.3256
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	13.800	12.233
Batch Number			
97002184	Blank Concentration in $\mu\text{Ci/g}$	2.18E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.94E-01	
1	Average Concentration in $\mu\text{Ci/g}$	2.0604E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000757			
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			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.06E-01	DETECTION LEVEL
Analyst			
RDM			
Date Complete			7.47E-03 $\mu\text{Ci/g}$
05/20/97	RELATIVE COUNTING ERROR	10.4%	
Analysis Date			
05/18/97			
Analysis Time			
04:00 AM			
Sample Point			
T-203			

Analyst:		RDM	Date: 20-May-97
Signature of Chemist:		SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML		

WORKBOOK PAGE: SPK6

AT : LA-508-101 (E-1) LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Worklist	TOTAL COUNTS (TC)	43165	38658
18162	COUNT TIME in MINUTES (CT)	30	30
Attrib	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.268	2.268
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	131B43	131B43
97002184	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	2.6294E-02	2.6294E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2692	0.2692
1	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	2.34E+01	2.09E+01
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	2.4671E-01	
FUSION01			
Sample #			
S97T000757	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	$QC \text{ FOUND} = (((S+S \mu\text{Ci/g} - SAMPLE \mu\text{Ci/g}) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))$		
CJO	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
Chemist			
SLF			
Analyst			
RDM			
Date Complete			
05/20/97			
Analysis Date			
05/18/97	QC ACTUAL =	2.63E-02	
Analysis Time	QC FOUND =	2.26E-02	
04:00 AM	AVG. PERCENT SPIKE RECOVERY =	85.8%	
Sample Point			
T-203			

Analyst:	CJO	Date: 20-May-97
Signature of Chemist:	SLF	Date: 5/21/97

SPIKE.WB1 Rev. 1.0

508101ML

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: SAM7

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	294	325
18162	COUNT TIME in MINUTES (CT)	30	30
Attor IB?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0844	2.0844
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	9.600	10.633

Batch Number	
97002184	Blank Concentration in $\mu\text{Ci/g}$ 1.70E-01
Rerun	Replicate Concentration in $\mu\text{Ci/g}$ 1.88E-01
1	Average Concentration in $\mu\text{Ci/g}$ 1.7867E-01

Sample Prep	
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$
S97T000760	

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		
CJO		
Chemist		
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.79E-01
Analyst		DETECTION LEVEL
RDM		
Date Complete		8.33E-03
05/20/97	RELATIVE COUNTING ERROR	11.8%
Analysis Date		$\mu\text{Ci/g}$
05/18/97		
Analysis Time		
04:00 AM		
Sample Point		
T-203		

Analyst:		RDM	Date: 20-May-97
Signature of Chemist:		SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML		

WORKBOOK PAGE: DUP8

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	14	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	310	309
18162	COUNT TIME in MINUTES (CT)	30	30
At or B?	BACKGROUND in cpm (BKG)	0.2	0.2
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.2064	2.2064
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	10.133	10.100
Batch Number			
97002184	Blank Concentration in $\mu\text{Ci/g}$	1.69E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.69E-01	
1	Average Concentration in $\mu\text{Ci/g}$	1.6879E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000760			
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			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.69E-01	DETECTION LEVEL
Analyst			
RDM			
Date Complete			7.87E-03 $\mu\text{Ci/g}$
05/20/97	RELATIVE COUNTING ERROR	11.5%	
Analysis Date			
05/18/97			
Analysis Time			
04:00 AM			
Sample Point			
T-203			

Analyst:		RDM	Date: 20-May-97
Signature of Chemist:		SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML		

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed RadChem Report for Worklist#: 18210

Analyst: scl

Instrument: AB16

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: Use 1-10-.5 mL sample size. Rerun #2. SLF

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.00E-04	1.81E-4	90.500	% Recovery
1 STD	0		@ALPHA01 ALPHA01E	SOLID	1.00	3.47E+00	3.470	% Ct. Erro
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	<5.33E-3		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	1.03E+00	1.030	BLNK/BKG
4 SAMPLE	S97T000759	0 F	@ALPHA01 ALPHA01	SOLID	N/A	2.30E-01	744.0e-005	uCi/g
4 SAMPLE	S97T000759	0 F	@ALPHA01 ALPHA01E	SOLID	N/A	1.04E+01	0.0e+000	% Ct. Error
5 DUP	S97T000759	0 F	@ALPHA01 ALPHA01	SOLID	2.30E-1	2.49E-1	7.933	RPD
5 DUP	S97T000759	0 F	@ALPHA01 ALPHA01E	SOLID	1.00	1.01E+01	10.100	% Ct. Erro

Final page for worklist# 18210

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 5/21/97

LABCORE Data Entry Template for Worklist# 18210

Analyst: SL Instrument: AB00 AKO Book# 77056

Method: LA-508-101 Rev/Mod G-0

Worklist Comment: Use 1-10-.5 mL sample size. Rerun #2. SLF

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	S97T000759	0 F	@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000759	0 F	@ALPHA01	SOLID		

Final page for worklist # 18210

SL 5-20-97
Analyst Signature Date

SLF 5-21-97
Analyst Signature Date
SLF E. Hogan 5-21-97

Data Entry Comments:

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Wp9	DETECTOR NUMBER	16	16
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	3289	3206
18210	COUNT TIME in MINUTES (CT)	30	30
At or Bk	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	109.503	108.703
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97002242	Concentration in $\mu\text{Ci/L}$ =	1.84E-01	
Repin	Replicate Concentration in $\mu\text{Ci/L}$ =	1.79E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.8150E-01	

Sample Prep

N/A

 Rs (Sample Count Rate) = $(TC / CT) - BKG$

Sample #

 $\text{ALPHA TOTAL } \mu\text{Ci/L} = Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$

WL18210

 $\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$

Instrument Code

 $\text{Relative Counting Error} = [(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By

MCB

Chemist

SLF

 $\text{ALPHA TOTAL CONCENTRATION in } \mu\text{Ci/mL} = 1.81\text{E-04}$ DETECTION
LEVEL

Analyst

SCL

6.68E-07
 $\mu\text{Ci/mL}$

Data Complete

06/21/97

 $\text{RELATIVE COUNTING ERROR} = 3.5\%$

Analysis Date

05/20/97

Analysis Time

02:50 PM

Sample Point

T-203

Analyst:

Signature of Chemist:

STANDARD.WB1 Rev. 1.0

508101ML

MCB

Date: 21-May-97

SLF

Date: 5/21/97

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	16	16
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Worksheet	GROSS COUNTS (GC)	1	7
18210	COUNT TIME in MINUTES (CT)	30	30
18210	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
18210	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.974	1.974
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	0.154	0.285
Batch Number			
97002242	Blank Concentration in $\mu\text{Ci/g}$	< 2.87E-03	
ReRun	Replicate Concentration in $\mu\text{Ci/g}$	< 5.33E-03	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 5.3311E-03	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
WL18210			
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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 5.33E-03	DETECTION LEVEL
Analyst	LESS Than Value was Determined from Lc.		
SCL			
Data Complete			7.44E-03 $\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	500.0%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	381	364
18210	COUNT TIME in MINUTES (CT)	30	30
AT	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.974	1.974
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	12.570	12.003
Batch Number			
97002242	Blank Concentration in $\mu\text{Ci/g}$	2.35E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.25E-01	
2	Average Concentration in $\mu\text{Ci/g}$	2.290E-01	
Sample Prep			
FUSION01	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000759			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.30E-01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			7.44E-03 $\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	10.4%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
WorkList	GROSS COUNTS (GC)	427	385
18210	COUNT TIME in MINUTES (CT)	30	30
Atom 18210	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9884	1.9884
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	14.103	12.703
Batch Number			
97002242	Blank Concentration in $\mu\text{Ci/g}$	2.62E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.36E-01	
2	Average Concentration in $\mu\text{Ci/g}$	2.4898E-01	
Sample Prep			
FUSION01	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000759			
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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.49E-01	DETECTION LEVEL
Analyst			
SCL			7.39E-03
Date Completed			$\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	10.1%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18211

Analyst: scl

Instrument: AB15

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: Use 1-10-.5 mL sample size. Rerun #2. SLF

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01	SOLID	2.00E-04	1.93E-4	96.500	% Recovery
1 STD	0		@ALPHA01 ALPHA01	SOLID	1.00	3.39E+00	3.390	% Ct. Erro
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1	<2.81E-3		uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01	SOLID	1.00	5.00E+02	500.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01	SOLID	1.00E+00	1.03E+00	1.030	BLNK/BKG
4 SAMPLE	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	N/A	2.78E-01	708.0e-005	uCi/g
4 SAMPLE	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	N/A	9.29E+00	0.0e+000	% Ct. Error
5 DUP	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	2.78E-1	2.78E-1	0.000	KPD
5 DUP	S97T000763	0 F	@ALPHA01 ALPHA01	SOLID	1.00	9.39E+00	9.390	% Ct. Erro

Final page for worklist# 18211

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 18211

Analyst: S.L. Instrument: AB00 #15 Book# 79856

Method: LA-508-101 Rev/Mod 67-0

Worklist Comment: Use 1-10-.5 mL sample size. Rerun #2. SLF

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	S97T000763	0 F	@ALPHA01	SOLID	97000299	T-203
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000763	0 F	@ALPHA01	SOLID		

Final page for worklist # 18211

Sue Lai 5-20-97
Analyst Signature Date

[Signature] 5/21/97
Analyst Signature Date
Sue E. Hogan 5-21-97

Data Entry Comments:

HNF-SD-WM-DP-247, REV. 0

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STD	DISH SIZE (1, 2, or 5)	(MS)	2
Worklist	GROSS COUNTS	(GC)	3586
18211	COUNT TIME in MINUTES	(CT)	30
AT 05/21/97	BACKGROUND in cpm	(BKG)	0.13
AT	SAMPLE SIZE in mL	(SS)	1.000
Inst Code	DILUTION FACTOR	(DF)	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	79B56
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
LIQUID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE		119.403
Batch Number	Standard Value in $\mu\text{Ci/mL}$		2.00E-04
97002243	Concentration in $\mu\text{Ci/L}$	=	1.99E-04
ReRun	Replicate Concentration in $\mu\text{Ci/L}$	=	1.86E-04
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	=	1.9271E-04

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
WL18211	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
MCB	
Chemist	
SLF	

Analyst	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.93E-04	DETECTION LEVEL
SCL			
State Complete			6.64E-07
05/21/97	RELATIVE COUNTING ERROR =	3.4%	$\mu\text{Ci/mL}$
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	MCB	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Worksheet	GROSS COUNTS (GC)	4	4
18211	COUNT TIME in MINUTES (CT)	30	30
Abundance	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0612	2.0612
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE	0.158	0.158
Batch Number			
97002243	Blank Concentration in $\mu\text{Ci/g}$	< 2.81E-03	
Regrun	Replicate Concentration in $\mu\text{Ci/g}$	< 2.81E-03	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 2.8110E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18211			
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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 2.81E-03	DETECTION LEVEL
Analyst			
SCL	LESS THAN Value was Determined from Rmax.		7.08E-03
Date Complete			$\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	500.0%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5)	(MS)	2
Worklist	GROSS COUNTS	(GC)	487
18211	COUNT TIME in MINUTES	(CT)	30
Ar or Bi?	BACKGROUND in cpm	(BKG)	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500
Test Code	DILUTION FACTOR	(DF)	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0612
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
SOLID	Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE		16.103
Batch Number			
97002243	Blank Concentration in $\mu\text{Ci/g}$	2.87E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.69E-01	
2	Average Concentration in $\mu\text{Ci/g}$	2.7774E-01	
Sample Prep			
FUSION01	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 100\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000763			
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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.78E-01	DETECTION LEVEL
Analyst			
SCL			7.08E-03
Date Complete			$\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	9.3%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	447	489
18211	COUNT TIME in MINUTES (CT)	30	30
Alpha Bk?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0452	2.0452
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	14.770	16.170
Batch Number			
97002243	Blank Concentration in $\mu\text{Ci/g}$	2.65E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	2.90E-01	
2	Average Concentration in $\mu\text{Ci/g}$	2.7752E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S977000763			
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			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	2.78E-01	DETECTION LEVEL
Analyst			
SCL			
Date Complete			7.14E-03 $\mu\text{Ci/g}$
05/21/97	RELATIVE COUNTING ERROR	9.4%	
Analysis Date			
05/20/97			
Analysis Time			
02:50 PM			
Sample Point			
T-203			

Analyst:	SCL	Date: 21-May-97
Signature of Chemist:	SLF	Date: 5/21/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 19354

Analyst: rdm

Instrument: GEA01

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, GEA, STD: 1mL SS: 5mL. Rerun(1). llf

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@GEA-02 C060-02 SOLID		6.289e-03	6.33e-03	100.652	% Recovery
1 STD	0		@GEA-02 C060-02E SOLID		1	1.57	1.570	% Ct Error
1 STD	0		@GEA-02 CS13702 SOLID		5.779e-03	5.76e-03	99.671	% Recovery
1 STD	0		@GEA-02 CS13702E SOLID		1	1.96	1.960	% Ct Error
2 BLNK-PREP	0		@GEA-02 C060-02 SOLID		1	<1.25e-2		uCi/g
2 BLNK-PREP	0		@GEA-02 CS13702 SOLID		1	<1.41e-2		uCi/g
2 BLNK-PREP	0		@GEA-02 EU15402 SOLID		1	<4.23e-2		uCi/g
2 BLNK-PREP	0		@GEA-02 EU15502 SOLID		1	<3.35e-2		uCi/g
2 BLNK-PREP	0		@GEA-02 AM24102 SOLID		1	<1.67e-2		uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 C060-02 SOLID		N/A	< 1.295e-2	129.5e-004	uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 C060-02E SOLID		N/A	n/a	0.0e+000	% Ct. Error
3 SAMPLE	S97T001734	0 F	@GEA-02 CS13702 SOLID		N/A	< 1.780e-2	178.0e-004	uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 CS13702E SOLID		N/A	n/a	0.0e+000	% Ct. Error
3 SAMPLE	S97T001734	0 F	@GEA-02 EU15402 SOLID		N/A	< 4.325e-2	432.5e-004	uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 EU15402E SOLID		N/A	n/a	0.0e+000	% Ct. Error
3 SAMPLE	S97T001734	0 F	@GEA-02 EU15502 SOLID		N/A	< 3.344e-2	334.4e-004	uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 EU15502E SOLID		N/A	n/a	0.0e+000	% Ct. Error
3 SAMPLE	S97T001734	0 F	@GEA-02 AM24102 SOLID		N/A	< 3.594e-2	0.0e+000	uCi/g
3 SAMPLE	S97T001734	0 F	@GEA-02 AM24102E SOLID		N/A	44.3	0.0e+000	% Ct. Error
4 DUP	S97T001734	0 F	@GEA-02 C060-02 SOLID		<1.29e-2	<1.22e-2		RPD
4 DUP	S97T001734	0 F	@GEA-02 C060-02E SOLID		1	n/a		% Ct. Error
4 DUP	S97T001734	0 F	@GEA-02 CS13702 SOLID		<1.78e-2	<1.83e-2		RPD
4 DUP	S97T001734	0 F	@GEA-02 CS13702E SOLID		1	n/a		% Ct. Error
4 DUP	S97T001734	0 F	@GEA-02 EU15402 SOLID		<4.32e-2	<3.92e-2		RPD
4 DUP	S97T001734	0 F	@GEA-02 EU15402E SOLID		1	n/a		% Ct. Error
4 DUP	S97T001734	0 F	@GEA-02 EU15502 SOLID		<3.34e-2	<3.37e-2		RPD
4 DUP	S97T001734	0 F	@GEA-02 EU15502E SOLID		1	n/a		% Ct. Error
4 DUP	S97T001734	0 F	@GEA-02 AM24102 SOLID		3.59e-02	3.59e-02	0.000	RPD
4 DUP	S97T001734	0 F	@GEA-02 AM24102E SOLID		1	44.3	44.300	% Ct. Error

Comments Section:

Comments for sample# S97T001734 and test @GEA-02 .

DL=0 => n/a.

DL=0 => n/a.

DL=0 => n/a.

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed RadChem Report for Worklist#: 19354

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit

Final page for worklist# 19354

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

23 Jun 97
Reviewer Signature _____ Date _____

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 19354

Analyst: RM Instrument: GEA00 / Book# 75856

Method: LA-548-121 Rev/Mod _____

Worklist Comment: T203, GEA, STD: 1mL SS: 5mL. Rerun(1). llf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-02	SOLID		
2 BLNK-PREP			@GEA-02	SOLID		
3 SAMPLE	S97T001734 0 F		@GEA-02	SOLID	97000299	T-203
Analytes Requested: AM24102 , AM24102E, CO60-02 , CO60-02E, CS13702 , CS13702E, EU15402 , EU15402E, EU15502 , EU15502E						
4 DUP	S97T001734 0 F		@GEA-02	SOLID		

Final page for worklist # 19354

RM 7/19/97
Analyst Signature Date

MAB 7/23/97
Analyst Signature Date

Data Entry Comments:

*****
 * 222-S Laboratory Counting Room 18-JUL-1997 16:40:27.84
 *****

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19354
 Sample ID: WL19354-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

[Signature]

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GE41
 File Number: dka300:[spec.GE41]lg1969.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:44.33 sec
 Dead Time: 0.5%

Verified by:

[Signature] 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

HNF-SD-WM-DP-247, REV. 0

Sample Count Time: 18-JUL-1997 14:09:06.83
 Decayed to: 18-JUL-1997 14:09:06.83
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GE41]1GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 20-MAR-1996 09:10:33.62
 Date of last efficiency calibration: 20-MAR-1996 09:10:52.48

*****

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	12.73	219	1.45	26.11	23	7	68.4			
0	31.81	2459	1.03	64.27	60	10	9.5			
0	36.40	723	0.78	73.45	70	8	23.2			
0	59.59	304	0.93	119.81	116	8	58.8			
0	661.54*	14268	1.43	1323.72	1317	14	2.0	2.03E+00	AM-241	7.021E-02
0	1172.94	10961	1.74	2346.77	2337	20	2.3		CS-137	5.76
0	1332.17	10021	1.90	2665.37	2655	20	2.2		CO-60	6.29
									CO-60	6.37

Total number of lines in spectrum 7
Number of unidentified lines 3
Number of lines tentatively identified by NID 4 57.14%

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	6.332E+00	6.332E+00	0.010E+01	1.57	
CS-137	30.00Y	1.00	5.758E+00	5.758E+00	0.113E+00	1.96	
~~AM-241~~	~~432.20Y~~	~~1.00~~	~~7.021E-02~~	~~7.021E-02~~	~~4.125E-02~~	~~58.76~~	~~7/21/97~~
Total Activity :			1.216E+01	1.216E+01			

Grand Total Activity : 1.216E+01 1.216E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report

Sample ID : WL19354-STD

Acquisition date : 18-JUL-1997 14:09:06

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	1143.	477.59	3.9276E-01
NA-22	140.	1274.53	3.5448E-02
NA-24	72.	1368.55	2.8963E-02
K-40	1791.	1460.75	1.2766E+00
CR-51	1381.	320.08	3.0948E-01
MN-54	719.	834.83	5.4276E-02
CO-56	711.	846.76	5.4722E-02
CO-57	2199.	122.06	2.3866E-02
CO-58	631.	810.78	4.9855E-02
FE-59	657.	1099.25	1.1717E-01
SE-75	1638.	264.66	4.9488E-02
SR-85	983.	514.01	4.2085E-02
Y-88	30.	1836.06	2.2888E-02
NB-94	744.	871.09	5.7389E-02
ZRNB-95	605.	724.18	1.0021E-01
RU-103	930.	497.08	4.1896E-02
RURH-106	688.	621.93	8.1616E-01
AG-108m	630.	722.94	4.9078E-02
CD-109	1959.	88.03	4.8439E-01
AG-110M	1028.	657.76	5.4875E-02
SN-113	1235.	391.69	5.5029E-02
TE-123m	2122.	159.00	2.7410E-02
SB-124	733.	602.73	4.1495E-02
SB-125	1186.	427.89	1.2722E-01
TE-125m	1986.	109.27	6.6214E+00
I-131	1238.	364.48	4.0900E-02
CS-134	736.	604.70	4.1744E-02
BA-140	769.	537.31	1.5340E-01
LA-140	38.	1596.21	2.4490E-02
CEPR-144	2169.	133.51	3.8203E-01
EU-152	94.	1408.01	1.5171E-01
EU-154	140.	1274.51	1.0297E-01
EU-155	2006.	105.31	8.5018E-02
HG-203	1479.	279.20	3.5306E-02
TL-208	1475.	277.36	4.5243E-01
BI-212	668.	727.18	6.9338E-01
PB-212	2113.	238.63	6.9401E-02
BI-214	1080.	609.31	1.1058E-01
PB-214	1519.	351.92	3.9409E-01
RA-224	1840.	240.99	7.2444E-01
RA-226	2291.	186.10	7.5323E-01
AC-228	1051.	911.21	2.6575E-01
TH-228	2112.	84.37	1.4227E+00
TH-229	1930.	88.47	7.0332E-02
PA-233	1391.	312.17	7.9407E-02
UTH-233	1587.	245.34	2.5081E+01
PA-234M	621.	1001.03	1.0063E-01
TH-234	1685.	63.29	3.5427E-01
U-235	2265.	185.71	4.5529E-02
NP-237	2008.	86.48	1.4226E-01
NP-239	2052.	106.12	8.3305E-02

Sample ID : WL19354-STD

Acquisition date : 18-JUL-1997 14:09:06

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PU-239	2203.	129.30	3.2834E+02
AM-243	2136.	74.67	2.9794E-02

HNF-SD-WM-DP-247, REV. 0

*****
 * 222-S Laboratory Counting Room 18-JUL-1997 19:16:32.86 *
 *****

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19354
 Sample ID: WL19354-BLK
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

Sue Hogan

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEAL
 File Number: dka300:[spec.GEAL]lg1970.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:33.22 sec
 Dead Time: 0.4%

Verified by:

ATB 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-JUL-1997 16:45:26.16
 Decayed to: 18-JUL-1997 16:45:26.16
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEAL]1GBACK

HNF-SD-WM-DP-247, REV. 0

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 20-MAR-1996 09:10:33.62
 Date of last efficiency calibration: 20-MAR-1996 09:10:52.48

*****

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	12.75	152	1.23	26.14	24	6	69.0			
0	16.08	259	1.14	32.81	29	8	50.2			
0	661.52*	73	1.49	1323.67	1320	10	89.3	1.32E+00	CS-137	2.964E-02
0	1730.41	34	1.21	3462.27	3455	16	62.5			

Summary of Nuclide Activity

Sample ID : WL19354-BLK

Page : 2
Acquisition date : 18-JUL-1997 16:45:26

Total number of lines in spectrum 4

Number of unidentified lines 3

Number of lines tentatively identified by NID 1

HNF-SD-WM-DP-247, REV.0

25.00%

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~~	~~2.964E-02~~	~~2.964E-02~~	~~2.647E-02~~	~~89.32~~	<del></del>
Total Activity :			2.964E-02	2.964E-02			

Handwritten:
7/21/97

Grand Total Activity : 2.964E-02

2.964E-02

Flags: "K" = Keyline not found

"E" = Manually edited

"M" = Manually accepted

"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : WL19354-BLK

Acquisition date : 18-JUL-1997 16:45:26

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	341.	477.59	2.1760E-01
NA-22	102.	1274.53	3.0508E-02
NA-24	49.	1368.55	2.4159E-02
K-40	1738.	1460.75	1.2575E+00
CR-51	617.	320.08	2.0837E-01
MN-54	178.	834.83	2.7571E-02
CO-56	169.	846.76	2.7233E-02
CO-57	1465.	122.06	1.9534E-02
CO-58	165.	810.78	2.6077E-02
FE-59	131.	1099.25	5.3824E-02
CO-60	69.	1332.50	2.6257E-02
SE-75	753.	264.66	3.3779E-02
SR-85	397.	514.01	2.7012E-02
Y-88	23.	1836.06	2.0375E-02
NB-94	137.	871.09	2.5269E-02
ZRNB-95	212.	724.18	6.0296E-02
RU-103	300.	497.08	2.4138E-02
RURH-106	235.	621.93	4.8438E-01
AG-108m	203.	722.94	2.8371E-02
CD-109	1306.	88.03	3.9667E-01
AG-110M	213.	657.76	2.5544E-02
SN-113	455.	391.69	3.3741E-02
TE-123m	1452.	159.00	2.2732E-02
SB-124	251.	602.73	2.4654E-02
SB-125	373.	427.89	7.2265E-02
TE-125m	1400.	109.27	5.5739E+00
I-131	485.	364.48	2.5853E-02
CS-134	270.	604.70	2.5652E-02
BA-140	280.	537.31	9.3846E-02
LA-140	49.	1596.21	2.7486E-02
CEFR-144	1472.	133.51	3.1558E-01
EU-152	82.	1408.01	1.4230E-01
EU-154	102.	1274.51	8.8579E-02
EU-155	1357.	105.31	7.0097E-02
HG-203	741.	279.20	2.5144E-02
TL-208	770.	277.36	3.2882E-01
BI-212	252.	727.18	4.3221E-01
PB-212	1228.	238.63	5.3109E-02
BI-214	629.	609.31	8.4825E-02
PB-214	831.	351.92	2.9266E-01
RA-224	1069.	240.99	5.5452E-01
RA-226	1311.	186.10	5.7194E-01
AC-228	371.	911.21	1.5981E-01
TH-228	1463.	84.37	1.1872E+00
TH-229	1269.	88.47	5.7202E-02
PA-233	648.	312.17	5.4558E-02
UTH-233	861.	245.34	1.8571E+01
PA-234M	151.	1001.03	5.0724E-02
TH-234	1121.	63.29	2.8991E-01
U-235	1323.	185.71	3.4927E-02
NP-237	1386.	86.48	1.1849E-01

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : WL19354-BLK

Acquisition date : 18-JUL-1997 16:45:26

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
NP-239	1327.	106.12	6.7206E-02
PU-239	1507.	129.30	2.7226E+02
AM-241	1022.	59.54	3.4962E-02
AM-243	1552.	74.67	2.5452E-02

HNF-SD-WM-DP-247, REV. 0

*****
 * 222-S Laboratory Counting Room 18-JUL-1997 22:12:09.07 *
 *****

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19354
 Sample ID: S97T001734-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

Sue Hogan

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEAL
 File Number: dka300:[spec.GEAL]1g1971.cnf
 Geometry: 4l
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:32.50 sec
 Dead Time: 0.4%

Verified by:

Jeff 7/21/97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-JUL-1997 19:40:56.04
 Decayed to: 18-JUL-1997 19:40:56.04
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: SEH
 Background Subtract: DKA300:[SPEC.GEAL]1GBACK

HNF-SD-WM-DP-247, REV. 0

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 20-MAR-1996 09:10:33.62
 Date of last efficiency calibration: 20-MAR-1996 09:10:52.48

*****

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	12.75	180	0.98	26.15	23	7	66.2			
0	15.96	138	1.28	32.58	29	7	87.8			
0	59.45	326	0.97	119.55	116	8	44.3			
0	511.15*	168	1.98	1022.90	1014	20	82.1	1.23E+00	AM-241	7.530E-02
0	661.77*	92	1.30	1324.18	1319	10	71.0		CS-137	3.727E-02
0	1460.78*	64	2.10	2922.71	2914	171	56.5		K-40	0.409

Total number of lines in spectrum 6 HNF-SD-WM-DP-247, REV. 0
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
~~K-40~~	~~1.28E+09Y~~	~~1.00~~	~~4.693E-01~~	~~4.693E-01~~	~~6.403E-01~~	~~156.46~~	
~~CS-137~~	~~30.00Y~~	~~1.00~~	~~3.727E-02~~	~~3.727E-02~~	~~2.645E-02~~	~~70.97~~	
AM-241	432.20Y	1.00	7.530E-02	7.530E-02	3.337E-02	44.32	7/21/97
Total Activity :			5.218E-01	5.218E-01			

Grand Total Activity : 5.218E-01 5.218E-01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	349.	477.59	2.1997E-01
NA-22	107.	1274.53	3.1208E-02
NA-24	50.	1368.55	2.4553E-02
CR-51	581.	320.08	2.0238E-01
MN-54	166.	834.83	2.6690E-02
CO-56	166.	846.76	2.7025E-02
CO-57	1526.	122.06	1.9931E-02
CO-58	163.	810.78	2.5888E-02
FE-59	132.	1099.25	5.3922E-02
CO-60	74.	1332.50	2.7123E-02
SE-75	768.	264.66	3.4096E-02
SR-85	347.	514.01	2.5299E-02
Y-88	29.	1836.06	2.2485E-02
NB-94	143.	871.09	2.5851E-02
ZRNB-95	194.	724.18	5.7707E-02
RU-103	286.	497.08	2.3582E-02
RURH-106	238.	621.93	4.8754E-01
AG-108m	182.	722.94	2.6917E-02
CD-109	1359.	88.03	4.0456E-01
AG-110M	208.	657.76	2.5241E-02
SN-113	509.	391.69	3.5643E-02
TE-123m	1397.	159.00	2.2305E-02
SB-124	263.	602.73	2.5209E-02
SB-125	329.	427.89	6.8039E-02
TE-125m	1384.	109.27	5.5416E+00
I-131	511.	364.48	2.6510E-02
CS-134	268.	604.70	2.5534E-02
BA-140	320.	537.31	1.0001E-01
LA-140	33.	1596.21	2.2919E-02
CEPR-144	1476.	133.51	3.1603E-01
EU-152	53.	1408.01	1.1647E-01
EU-154	107.	1274.51	9.0607E-02
EU-155	1355.	105.31	7.0072E-02
HG-203	806.	279.20	2.6201E-02
TL-208	778.	277.36	3.3048E-01
BI-212	248.	727.18	4.2849E-01
PB-212	1283.	238.63	5.4276E-02
BI-214	614.	609.31	8.3815E-02
PB-214	830.	351.92	2.9240E-01
RA-224	969.	240.99	5.2829E-01
RA-226	1325.	186.10	5.7494E-01
AC-228	375.	911.21	1.6069E-01
TH-228	1496.	84.37	1.2002E+00
TH-229	1343.	88.47	5.8825E-02
PA-233	623.	312.17	5.3555E-02
UTH-233	901.	245.34	1.8991E+01
PA-234M	163.	1001.03	5.2659E-02
TH-234	1129.	63.29	2.9088E-01
U-235	1347.	185.71	3.5232E-02
NP-237	1354.	86.48	1.1714E-01
NP-239	1365.	106.12	6.8139E-02

Minimum Detectable Activity Report (continued)

Page : 4

Sample ID : S97T001734-SAM

Acquisition date : 18-JUL-1997 19:40:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PU-239	1528.	129.30	2.7412E+02
AM-243	1563.	74.67	2.5536E-02

HNF-SD-WM-DP-247, REV. 0

Total number of lines in spectrum 5 HNF-SD-WM-DP-247, REV. 0
Number of unidentified lines 3
Number of lines tentatively identified by NID 2 40.00%

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~~	~~3.856E-02~~	~~3.856E-02~~	~~3.036E-02~~	~~78.75~~	
AM-241	432.20Y	1.00	7.559E-02	7.559E-02	3.350E-02	44.31	7/21/97
Total Activity :			1.141E-01	1.141E-01			

Grand Total Activity : 1.141E-01 1.141E-01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	336.	477.59	2.1585E-01
NA-22	88.	1274.53	2.8481E-02
NA-24	54.	1368.55	2.5392E-02
K-40	1763.	1460.75	1.2664E+00
CR-51	614.	320.08	2.0792E-01
MN-54	180.	834.83	2.7758E-02
CO-56	137.	846.76	2.4687E-02
CO-57	1438.	122.06	1.9356E-02
CO-58	173.	810.78	2.6675E-02
FE-59	125.	1099.25	5.2579E-02
CO-60	65.	1332.50	2.5636E-02
SE-75	809.	264.66	3.4977E-02
SR-85	396.	514.01	2.6998E-02
Y-88	22.	1836.06	1.9761E-02
NB-94	163.	871.09	2.7527E-02
ZRNB-95	213.	724.18	6.0437E-02
RU-103	318.	497.08	2.4829E-02
RURH-106	224.	621.93	4.7289E-01
AG-108m	205.	722.94	2.8452E-02
CD-109	1302.	88.03	3.9607E-01
AG-110M	229.	657.76	2.6443E-02
SN-113	451.	391.69	3.3610E-02
TE-123m	1405.	159.00	2.2363E-02
SB-124	267.	602.73	2.5391E-02
SB-125	407.	427.89	7.5392E-02
TE-125m	1414.	109.27	5.6004E+00
I-131	530.	364.48	2.7003E-02
CS-134	280.	604.70	2.6081E-02
BA-140	275.	537.31	9.3048E-02
LA-140	44.	1596.21	2.6069E-02
CEPR-144	1554.	133.51	3.2411E-01
EU-152	65.	1408.01	1.2768E-01
EU-154	88.	1274.51	8.2643E-02
EU-155	1388.	105.31	7.0891E-02
HG-203	748.	279.20	2.5258E-02
TL-208	738.	277.36	3.2207E-01
BI-212	242.	727.18	4.2375E-01
PB-212	1300.	238.63	5.4622E-02
BI-214	618.	609.31	8.4139E-02
PB-214	804.	351.92	2.8798E-01
RA-224	1035.	240.99	5.4578E-01
RA-226	1341.	186.10	5.7826E-01
AC-228	359.	911.21	1.5724E-01
TH-228	1486.	84.37	1.1962E+00
TH-229	1255.	88.47	5.6890E-02
PA-233	679.	312.17	5.5844E-02
UTH-233	924.	245.34	1.9230E+01
PA-234M	139.	1001.03	4.8802E-02
TH-234	1138.	63.29	2.9206E-01
U-235	1338.	185.71	3.5121E-02
NP-237	1343.	86.48	1.1669E-01

Sample ID : S97T001734-DUP

Acquisition date : 18-JUL-1997 22:24:19

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
NP-239	1391.	106.12	6.8782E-02
PU-239	1552.	129.30	2.7622E+02
AM-243	1561.	74.67	2.5526E-02

HNF-SD-WM-DP-247, REV. 0

LABCORE Completed RadChem Report for Worklist#: 19271

Analyst: jds

Instrument: AB12

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T203, @SR90-01 S.S. by Ludlum. Std:1.0mL skm

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD	0		@SR90-01 SR90-01 SOLID		2.39E-03	2.30E-3	96.234	% Recovery
1	STD	0		@SR90-01 SR90-01C SOLID		100	9.56E+01	95.600	% Recovery
1	STD	0		@SR90-01 SR90-01E SOLID		1.00	1.33E+00	1.330	% Ct. Error
2	BLNK-PREP	0		@SR90-01 SR90-01 SOLID		1	<1.22E-3		uCi/g
2	BLNK-PREP	0		@SR90-01 SR90-01C SOLID		100	9.29E+01	92.900	% Recovery
2	BLNK-PREP	0		@SR90-01 SR90-01E SOLID		1.00	1.64E+02	164.000	uCi/g
3	BLNK/BKG	0		@SR90-01 SR90-01 SOLID		1	1.30E+00	1.300	BLNK/BKG
4	SAMPLE	S97T001734	0 F	@SR90-01 SR90-01 SOLID		N/A	2.46E-03	126.0e-005	uCi/g
4	SAMPLE	S97T001734	0 F	@SR90-01 SR90-01C SOLID		N/A	9.06E+01	0.0e+000	% Recovery
4	SAMPLE	S97T001734	0 F	@SR90-01 SR90-01E SOLID		N/A	4.59E+01	0.0e+000	% Ct. Error
5	DUP	S97T001734	0 F	@SR90-01 SR90-01 SOLID		2.46E-3	2.67E-3	8.187	RPD
5	DUP	S97T001734	0 F	@SR90-01 SR90-01C SOLID		100	9.02E+01	90.200	% Recovery
5	DUP	S97T001734	0 F	@SR90-01 SR90-01E SOLID		1.00	4.30E+01	43.000	% Ct. Error
6	SPK	S97T001734	0 F	@SR90-01 SR90-01 SOLID		2.39E-03	2.48E-03	103.766	% Recovery

Final page for worklist# 19271

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# 19271

Analyst: _____ Instrument: AB00 12 Book# 86856

Method: LA-220-101 Rev/Mod E-1

Worklist Comment: T203, @SR90-01 S.S. by Ludlum. Std:1.0mL skm See SIF for spike. 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	S97T001734	0 F	@SR90-01	SOLID	97000299	T-203
Analytes Requested: SR90-01, SR90-01C, SR90-01E						
5 DUP	S97T001734	0 F	@SR90-01	SOLID		
6 SPK	S97T001734	0 F	@SR90-01	SOLID		

Final page for worklist # 19271

JA Sp 7/17/97
Analyst Signature Date

Leo Hogan 7-14-97
Analyst Signature Date
M8310 7/14/97

Data Entry Comments:

SPK = 1ml of RBBS6

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1) LIQUIDS

				STANDARD
Type	DETECTOR NUMBER	12	CARRIER ADDED in mL (CVA)	1.000
STD	TOTAL COUNTS (TC)	21784	GROSS WEIGHT (W2)	7.1388
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT (W1)	7.0432
19271	BACKGROUND in cpm (BKG)	3.7	NET WEIGHT (W3)	0.0956
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS) (DT)	5.75
@SR90-01	DILUTION FACTOR (DF)	1		
Matrix	DIGEST DILUTION FACTOR (DDF)	1		
LIQUID	SAMPLE COUNT RATE (Rs)	2174.70	SR-90 EFFICIENCY FACTO (C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)	1.16	Y-90 EFFICIENCY FACTOR (C2)	0.4660
97003383	TIME OF SEPARATION (ST)	01:30	Rmax	N/A
Rerun	DATE OF SEPARATION (SD)	07/14/97	DETECTION LIMIT (Ld)	2.41
0	TIME OF COUNT (TOC)	07:15	Sr-89/90 CONC. in $\mu\text{Ci/L}$	2.2972E+00
Sample Prep	DATE OF COUNT (DOC)	07/14/97		
N/A	STANDARD BOOK #	86B56		
Sample #	STANDARD VALUE in $\mu\text{Ci/mL}$	2.3907E-03		
WL19271				
Instrument Code				
WB27811	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)			
Prepared By	Sr-89/90 CONC in $\mu\text{Ci/mL}$ REPLACE RS WITH RMAX IF $RS \leq Lc$ AND $RS > 0$ OR REPLACE RS WITH Lc IF $RS < 0$			
SEH	$RS * DF * DDF * 1000 / ((C1 + C2) * (1 - e \text{ to the power of } ((-\text{natural log } 2) / 64.2 * DT))) * SS * REC * 2220000$			
Chemist	NOTE: $64.2 = \text{Half Life for Y-90 and Rec.} = \text{Fractional Carrier Recovery } ((W2 - W1) / (CVA * 0.1000))$			
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			
JDS	NOTE: Expected weight = CVA * 0.1			
Date Complete	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			
07/14/97	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$			
Analysis Date				DETECTION LEVEL 2.54E-06 $\mu\text{Ci/L}$
07/14/97	Sr-89/90 CONCENTRATION	2.30E-03	$\mu\text{Ci/mL}$	
Analysis Time				
05:00 AM	RELATIVE COUNTING ERROR	1.3%		
Sample Point				
T-203	PERCENT CARRIER RECOVERY	95.6%		

Analyst:	JDS	Date:	14-Jul-97
Signature of Chemist:	SAC	Date:	14 July 97

STANDARD WB1 REV 2.0

22010NML

WORKBOOK PAGE: BLANK2

LA-220-101 / D-1 Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

BLNK-PREP

Type	DETECTOR NUMBER	12	CARRIER ADDED in mL	(CVA)	1.000
BLNK-PREP	TOTAL COUNTS	(TC)	48	GROSS WEIGHT	(W2) 7.1511
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1) 7.0582
19271	BACKGROUND in cpm	(BKG)	3.7	NET WEIGHT	(W3) 0.0929
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT) 6.67
@SR90-01	DILUTION FACTOR	DF	1		
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.0952		
SOLID	SAMPLE COUNT RATE	(Rs)	1.10	SR-90 EFFICIENCY FACTOR	(C1) 0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.16	Y-90 EFFICIENCY FACTOR	(C2) 0.4660
97003383	TIME OF SEPARATION	(ST)	01:30	Rmax	2.38
Rerun	DATE OF SEPARATION	(SD)	07/14/97	DETECTION LIMIT	(Ld) 2.41
0	TIME OF COUNT	(TOC)	08:10	Sr-89/90 CONC in µCi/g	< 1.2238E-03
Sample Prep	DATE OF COUNT	(DOC)	07/14/97		
N/A					
Sample #					
WL19271					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27811	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)				
SEH	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				
JDS	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
07/14/97					
Analysis Date					
07/14/97	Sr-89/90 CONCENTRATION	< 1.22E-03	µCi/g		
Analysis Time	LESS THAN Value was Determined from Rmax.				
05:00 AM	RELATIVE COUNTING ERROR	164.3%			
Sample Point					
T-203	PERCENT CARRIER RECOVERY	92.9%			

DETECTION LEVEL
1.24E-03 µCi/g

Analyst:	JDS	Date:	14-Jul-97
Signature of Chemist:	SAC	Date:	14 Jul 97

BLANK.WB1 REV 2.0

22010NML

WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					SAMPLE	
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	84	GROSS WEIGHT	(W2)	7.1616
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.0710
19274	BACKGROUND in cpm	(BKG)	3.7	NET WEIGHT	(W3)	0.0906
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	7.12
@SR90-01	DILUTION FACTOR	DF	1			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.0952			
SOLID	SAMPLE COUNT RATE	(Rs)	4.70	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.16	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003383	TIME OF SEPARATION	(ST)	01:30	Rmax		N/A
Rerun	DATE OF SEPARATION	(SD)	07/14/97	DETECTION LIMIT	(Ld)	2.41
0	TIME OF COUNT	(TOC)	08:37	Sr-89/90 CONC in µCi/g		2.4649E-03
Sample Prep	DATE OF COUNT	(DOC)	07/14/97			
FUSION01						
Sample #						
S97T001734						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	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)					
SEH	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					
JDS	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/14/97						
Analysis Date						DETECTION LEVEL 1.26E-03 µCi/g
07/14/97	Sr-89/90 CONCENTRATION	2.46E-03	µCi/g			
Analysis Time	RELATIVE COUNTING ERROR	45.9%				
05:00 AM						
Sample Point						
T-203	PERCENT CARRIER RECOVERY	90.6%				

Analyst:	JDS	Date:	14-Jul-97
Signature of Chemist:	SAC	Date:	14 Jul 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: DUP5

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					DUP
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA) 1.000
DUP	TOTAL COUNTS	(TC)	88	GROSS WEIGHT	(W2) 7.1821
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1) 7.0919
19271	BACKGROUND in cpm	(BKG)	3.7	NET WEIGHT	(W3) 0.0902
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT) 7.42
@SR90-01	DILUTION FACTOR	DF	1		
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.1056		
SOLID	SAMPLE COUNT RATE	(Rs)	5.10	Sr-90 EFFICIENCY FACTOR	(C1) 0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.16	Y-90 EFFICIENCY FACTOR	(C2) 0.4660
97003383	TIME OF SEPARATION	(ST)	01:30	Rmax	N/A
Rerun	DATE OF SEPARATION	(SD)	07/14/97	DETECTION LIMIT	(Ld) 2.41
0	TIME OF COUNT	(TOC)	08:59	Sr-89/90 CONC in µCi/g	2.6651E-03
Sample Prep	DATE OF COUNT	(DOC)	07/14/97		
FUSION01					
Sample #					
S97T001734					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27811	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)				
SEH	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				
JDS	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
07/14/97					
Analysis Date					DETECTION LEVEL 1.26E-03 µCi/g
07/14/97	Sr-89/90 CONCENTRATION	2.67E-03	µCi/g		
Analysis Time					
05:00 AM	RELATIVE COUNTING ERROR	43.0%			
Sample Rmt					
T-203	PERCENT CARRIER RECOVERY	90.2%			

Analyst:	JDS	Date:	14-Jul-97
Signature of Chemist:	<i>John C. Carter</i>	SAC	Date: 14 Jul 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: SPIKE6

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 103 (E-2), 104 (D-1)

				SPIKE	
Type	DETECTOR NUMBER	12	CARRIER ADDED in mL	(CVA)	1.000
SPK	TOTAL COUNTS	(TC)	22986		
Worklist	COUNT TIME in MINUTES	(CT)	10	GROSS WEIGHT	(W2) 7.1089
19271	BACKGROUND in cpm	(BKG)	3.7	TARE WEIGHT	(W1) 7.0174
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	NET WEIGHT	(W3) 0.0915
@SR90-01	DILUTION FACTOR	DF	1	% CARRIER RECOVERY	(Rec) 91.5%
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.0952	SPIKE VOLUME in mL	(Spk Vol) 1.000
SOLID	TIME OF SEPARATION	(ST)	01:30	SPIKE DILUTION FACTOR	(Spk DF) 1
Batch Number	DATE OF SEPARATION	(SD)	07/14/97	SPIKE BOOK NUMBER	(Spk BN) 86B56
97003383	TIME OF COUNT	(TOC)	09:05	SPIKE VALUE in $\mu\text{Ci/mL}$	(Spk Val) 2.3907E-03
Rerun	DATE OF COUNT	(DOC)	07/14/97	SR-90 EFFICIENCY FACTOR	(C1) 0.4180
0	DELTA TIME (hours)	(DT)	7.58	Y-90 EFFICIENCY FACTOR	(C2) 0.4660
Sample Prep				Sr $\mu\text{Ci/g}$ IN SAMPLE	(Sr1) 2.46E-3
FUSION01				Sr-89/90 CONC. in $\mu\text{Ci/g}$	(Sr2) 1.1860E+00
Sample #	(Note: If there is not enough sample for an analysis type [NS in the Count Time result cell.]				
S97T001734					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27811	Sr-89/90 CONC. in $\mu\text{Ci/g}$				
Prepared By	RS*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))))*SS*Dg/L*(1L/1000mL)/(DF/SS/(Dg/L)))				
SEH	QC Actual in $\mu\text{Ci/mL}$ = Spk Val				
Chemist	QC Found in $\mu\text{Ci/mL}$ = (Sr2 - Sr1) * ((Spk DF/Spk Vol* 1000 mL/L) / (DF/SS/(Dg/L)))				
SAC	Percent Carrier Recovery = (Net Weight / Expected Weight) * 100				
Analyst	Spk val = value taken from RCTABLE and then decayed using a 1/2 life of 29.1 years				
JDS	NOTE: 64.2 = Half Life for Y-90				
Date Complete	NOTE: Expected Weight = CVA * 0.1				
07/14/97	Percent Spike Recovery = (QC Found / QC Actual) * 100				
Analysis Date	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
07/14/97					
Analysis Time					
05:00 AM	QC Actual in $\mu\text{Ci/mL}$	=	2.39E-03		
Sample Point	QC Found in $\mu\text{Ci/mL}$	=	2.48E-03		
T-203	Percent Spike Recovery	=	103.7%		

Analyst:	JDS	Date:	14-Jul-97

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control	Page 1 of 1
		Date: 08/05/97
Project Title/Work Order HNF-SD-WM-DP-247, Rev. 0 "Tank 241-T-203, Core 190 Analytical Results for the Final Report"		EDT NO.: EDT-620414
		ECN NO.: N/A

Name	MSIN	Text With all Attach	EDT/ECN ONLY	
<u>DE&S Hanford, Inc.</u>				
J. E. Meacham	S7-14	X		
<u>U.S. Department of Energy, RL</u>				
C. A. Babel	S7-54	X		
<u>Lockheed Martin Hanford Corp.</u>				
J. N. Appel	G3-21		X	
K. G. Carothers	R2-11		X	
T. J. Kelley	S7-21		X	
M. J. Kupfer	H5-49		X	
J. B. Schaffer	R2-12		X	
R. D. Schreiber	R2-12	X		
L. A. Stauffer	R2-11		X	
J. A. Voogd	H5-03		X	
A. E. Young	R1-10	X		
<u>Lockheed Martin Services, Inc.</u>				
Central Files	A3-88	1		
<u>Los Alamos Technical Associates</u>				
M. T. Ellsworth	T6-06		X*	
<u>Pacific Northwest National Laboratory</u>				
S. J. Harris	K7-22	X		
K. L. Silvers	K9-08		X	
<u>Waste Management of Hanford, Inc.</u>				
D. C. Hetzer	S6-31		X	
K. L. Powell	T6-04		X	
C. M. Seidel	T6-04	X		
F. H. Steen	T6-06	X		
LTIC	T6-03		X	
<u>SGN Eurisys Services Corp.</u>				
B. A. Higley	H5-27		X	
<u>Defense Nuclear Federal Safety Board</u>				
Rich Tontodonato		X		
625 Indiana Ave. N. W.				
Washington D.C. 20004				

* Needs only releasing paperwork, not a copy of the released document.