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Tank 214-AW-105, Grab Samples, Analytical Results for the Final Report

Ruth A. Esch

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ANALYTICAL SERVICES

**TANK 241-AW-105, GRAB SAMPLES,
ANALYTICAL RESULTS FOR THE FINAL REPORT**

Project Coordinator: RUTH A. ESCH

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

by

**222-S Laboratory
Rust Federal Services of Hanford Inc.
P.O. Box 700
Richland, Washington**

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222-S ANALYTICAL SERVICES

**TANK 241-AW-105, GRAB SAMPLES,
5AW-96-1 THROUGH 5AW-96-20
ANALYTICAL RESULTS FOR THE FINAL REPORT**

This document is the final report for tank 241-AW-105 grab samples. Twenty grabs samples were collected from risers 10A and 15A on August 20 and 21, 1996, of which eight were designated for the K Basin sludge compatibility and mixing studies, as identified in Table 1. This document presents the analytical results for the remaining twelve samples. Analyses were performed in accordance with the *Compatibility Grab Sampling and Analysis Plan* (TSAP) (Sasaki, 1996) and the *Data Quality Objectives for Tank Farms Waste Compatibility Program* (DQO) (Fowler, 1995).

The results for the previous sampling of this tank were reported in WHC-SD-WM-DP-149, Rev. 0, *60-Day Waste Compatibility Safety Issue and Final Results for Tank 241-AW-105, Grab Samples 5AW-95-1, 5AW-95-2 and 5AW-95-3*.

Three supernate samples exceeded the TOC notification limit (30,000 µg C/g dry weight). Appropriate notifications were made. No immediate notifications were required for any other analyte.

The TSAP requested analyses for polychlorinated biphenyls (PCB) for all liquids and centrifuged solid subsamples. The PCB analysis of the liquid samples has been delayed and will be presented in a revision to this document.

Appearance and Sample Handling

Attachment 1 is provided as a cross-reference for relating the tank farm customer identification numbers with the 222-S Laboratory sample numbers and the portion of sample analyzed. Due to a field error in the requested sampling depth for sample 5AW-96-13, the tank coordinator directed the laboratory to analyze sample 5AW-96-14.

Table 1 provides the available appearance information for all twenty samples.

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Table 1: Appearance Information for Tank 241-AW-105 Grab Samples

Sample Number	Date Sampled	Date Received	Sampling Depth (m) *	% Settled Solids	Sample Description
SAW-96-1	8/20/96	8/26/96	511	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-2	8/20/96	8/27/96	529	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-3	8/20/96	8/21/96	529	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-4	8/20/96	8/27/96	548	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-5	8/20/96	8/27/96	571	~22%	Clear yellow liquid with approximately 22% settled solids. Solids were a yellow soft sludge material with some small black particulates.
SAW-96-6	8/20/96	8/26/96	588	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-7	8/20/96	8/26/96	588	~90%	Liquid color was indistinguishable. Solids were a yellow/gray soft sludge material with some small black particulates.
SAW-96-8	8/20/96	8/21/96	588	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-9	8/20/96	8/27/96	589	~90%	Liquid color was indistinguishable. Solids were a nonhomogeneous mixture of light yellow and gray soft sludge material with some small black particulates.
SAW-96-10	8/21/96	8/22/96	511	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-11	8/21/96	8/22/96	529	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-12	8/21/96	8/23/96	529	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-13	8/21/96	8/23/96	529	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-14	8/21/96	8/23/96	548	Trace	Clear yellow liquid; no organic layer; trace amount of solids
SAW-96-15	8/21/96	8/23/96	571	~90%	Liquid color was indistinguishable. Solids were a nonhomogeneous mixture of dark yellow and gray soft sludge material with some small black particulates.
SAW-96-16	8/21/96	8/23/96	593	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-17	8/21/96	8/23/96	593	~90%	Liquid color was indistinguishable. Solids were a nonhomogeneous mixture composed mostly of dark gray/black soft sludge material with some yellow sludge swirled throughout.
SAW-96-18	8/21/96	8/23/96	593	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-19	8/21/96	8/23/96	593	n/a	Sample designated for K Basin sludge mixing studies
SAW-96-20	8/21/96	8/26/96	600	~93%	Liquid color was indistinguishable. Solids were a nonhomogeneous mixture composed mostly of a somewhat even mixture of yellow and gray soft sludge material swirled together. There were some larger "chunks" of material scattered throughout - some black and some nearly white.

* Sample depth is measured from the top of the riser to the mouth of the sample bottle
n/a This information was not available

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The samples were all subsampled for analysis. For the supernates, 20-mL aliquots were created for direct analysis. After the supernate was removed, the settled sludges were centrifuged to separate the solid and liquid portions for separate analysis. The solids were designated as centrifuged solids and the liquid as interstitial liquid. Bulk density and volume percent solids data were reported for the wet sludge and were designated as sludge for the sample portion for the report.

The weights and volumes of the three separated portions of the sludge samples are presented in Table 2.

Table 2: Sludge Separation Information for Tank 241-AW-105 Grab Samples

Sample Number	Supernate Removed		Centrifuged Solids		Interstitial Liquid	
	Weight (g)	Volume (mL)	Weight (g)	Volume (mL)	Weight (g)	Volume (mL)
5AW-96-5	106.26	101.0	10.34	9.0	17.60	17.0
5AW-96-7	3.73	3.5	118.63	89.5	40.86	39.0
5AW-96-9	9.16	8.0	115.85	89.5	32.88	32.0
5AW-96-15	27.20	25.3	100.11	79.5	28.45	29.0
5AW-96-17	10.60	9.5	108.22	82.5	41.28	39.5
5AW-96-20	18.27	17.0	119.14	94.5	27.2	25.0

Analytical Results Summary

The data summary table (Table 3) included in this report compiles the analytical results that comply with the applicable DQO.

Compatibility Program Concerns

DSC - Differential Scanning Calorimetry - Energetics Decision Rule

The DSC analyses were performed in duplicate on direct subsamples. The standard recoveries for this analysis were within the required limits.

There was no exothermic energy observed in any of the supernate or interstitial liquid samples, thus the dry weight calculations were not applicable. A very small exotherm was observed for 4 of the 6 centrifuged solid samples. Exothermic energy based on the dry weight was calculated for each. The average of the thermogravimetric analysis (TGA) results for each subsample was used in the dry weight correction for that subsample. No results exceeded the notification limit.

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Two centrifuged solid sample portions had high (> 20%) relative percent differences (RPD) between sample and duplicate results. These high results were attributed to low exothermic energy and the heterogeneous nature of the sludges. No reruns were requested.

For waste compatibility energetics decision concerns, since there was no exothermic energy observed for the liquid sample portions, the exotherm/endothrm ratio calculation was not applicable. For safe waste transfers this ratio must be less than 1. For the centrifuged solid portions, since the dry weight exothermic energy was well below the notification limit and the average percent water was approximately 70 %, it follows that the exotherm/endothrm ratio will be less than 1, therefore calculations were not performed.

Nitrate (NO_3^-), Hydroxide (OH^-) and Nitrite (NO_2^-) - Corrosion Decision Rule

The results with respect to the waste compatibility corrosion rules are presented in Table 4 (pp. 57-62). These rules are only applicable to liquid sample portions. The analyses were performed on direct liquid aliquots. The table presents the NO_3^- , OH^- , and NO_2^- results in $\mu\text{g/mL}$ and molarity (M) units. The spreadsheet compares the results to the concentration ranges specified in the waste compatibility DQO. A "YES" will appear in the appropriate space for the condition that is met. Only one of three sets of conditions must be met for OH^- and NO_2^- based on the range that the NO_3^- concentration falls in. If "NO" appears in the space under a condition, that condition is not met and a notification is required. No notifications were required.

The standard recoveries, appropriate spike recoveries and RPDs for these analyses were all within the required limits with the exception of a high spike recovery (128.3%) for NO_3^- for sample 5AW-96-2 (S96T005008). This high recovery was attributed to the high sample concentration with respect to the amount of spike added. Although a small amount of NO_3^- was found in the method blank for this analysis, it was insignificant with respect to the sample results. Since the results for the sample were consistent with those obtained for the other supernate samples no rerun was requested.

Sp.G. - Specific Gravity - Flammable Gas Accumulation Decision Rule

The Sp.G. of the liquid portion of the waste is used for determination of the potential to cause an accumulation of flammable gases. The flammable gas decision rule requires that the weighted mean Sp.G. not exceed 1.41. The results ranged from 1.01 to 1.04 for the supernates, giving a weighted mean of 1.022. The bulk density was used as a close approximation of the Sp.G. for the interstitial liquids. These results ranged from 0.980 to 1.09, giving a weighted mean of 1.04. These results do not exceed the 1.41 limit to allow waste transfer. The standard recovery and RPDs for the Sp.G. analysis were within the required limits.

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^{239/240}Pu - Plutonium-239/240 - Criticality Decision Rule

^{239/240}Pu concentration is used to evaluate criticality safety for waste transfers. The analysis was performed on direct aliquots for the supernate and interstitial liquid samples. The centrifuged solids were prepared for analysis by a fusion digestion, indicated by an "F" in the aliquot class (A#) column in Table 3.

The results were all below the safety concern immediate notification limits of 61.5 $\mu\text{Ci/mL}$ for the supernate and interstitial liquid subsamples and 41 $\mu\text{Ci/g}$ for the centrifuged solid subsamples.

The results for the liquid portions were well below the criticality prevention limit of 0.80 $\mu\text{Ci/mL}$ stated in the compatibility DQO. This limit was calculated to be 0.61 $\mu\text{Ci/g}$ based on the highest bulk density determined for the centrifuged solids. All of the centrifuged solid results exceeded this limit, with the exception of sample 5AW-96-5 (S96T005052; average result = 0.453 $\mu\text{Ci/g}$). There was no immediate notification requirement for this limit violation.

The standard recoveries for this analysis were within the required limits. The RPD for all subsamples met the $\pm 20\%$ criterion, with the exception of sample 5AW-96-17 centrifuged solid portion (S96T005085) which had a RPD of 21.5% after one rerun. Because of the observed non-homogeneous nature of this sample, no further reruns were requested.

²⁴¹Am - Americium-241 - Criticality Decision Rule

²⁴¹Am analysis is also used to evaluate criticality safety for waste transfers. The analysis was performed on direct liquid portions for the supernate and interstitial liquid samples. The centrifuged solids were prepared for analysis by a fusion digestion, indicated by an "F" in the A# column in Table 3.

The results ranged from $<5.27\text{e-}6$ to $<7.94\text{e-}6$ $\mu\text{Ci/mL}$ for the supernates; from $<3.33\text{e-}5$ to $6.09\text{e-}4$ $\mu\text{Ci/mL}$ for the interstitial liquids and from $2.87\text{e-}1$ to 1.07 $\mu\text{Ci/g}$ for the centrifuged solids. The standard recoveries for this analysis were within the required limits. The RPDs for all samples met the required criterion with the exception of sample 5AW-96-17 centrifuged solid portion (S96T005085), with a RPD of 45.7% after one rerun. Because of the observed heterogeneity, the very high result of 1.07 $\mu\text{Ci/g}$ for this sample may be considered a statistical outlier. No further reruns were requested.

Inorganic Analyses

TGA - Thermogravimetric Analysis

TGA analyses were performed on direct aliquots. Standard recoveries and RPDs were within the required limits. Typically, the percent moisture of the sample is reported as the total weight loss

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that occurred below 200°C. In some cases, this weight loss occurred in more than one weight loss step. More information may be obtained by reviewing the raw data.

pH

The pH analysis was performed on direct aliquots. The results ranged from 11.66 to 12.49 for the centrifuged solids; from 13.24 to 13.55 for the interstitial liquids and from 13.38 to 13.64 for the supernates. Results for pH greater than 12.5 should be considered estimates because the highest calibration buffer available is 12.5 and pH electrode performance degrades at high pH. Standard recovery and relative percent difference (RPD) criteria were met for all samples.

OH⁻ - Hydroxide

In addition to the OH⁻ analysis on the liquid aliquots (discussed previously with respect to corrosion concerns), this analysis was also performed on water digested aliquots of the centrifuged solids. This preparation is indicated by a "W" in the A# column in Table 3. There was no free hydroxide found in these water preps. The standard recoveries met the requested criterion. RPDs are not applicable for results that are all less than the detection limit.

IC - Ion Chromatography

The ion chromatography (IC) analysis was performed on direct aliquots for the supernates and interstitial liquids. The results for the NO₂⁻ and NO₃⁻ were discussed previously with respect to the corrosion rules, the results for the remaining analytes will be discussed here. The centrifuged solids were prepared for analysis by a water digestion, indicated by an "W" in the A# column in Table 3. Bromide and oxalate results were included for informational purposes only as part of the method of analysis. Since these analytes were not requested in the TSAP, the QC results were not reviewed.

The standard recovery, spike recovery and RPDs for this analysis were all within the required limits with the exception of the RPD for fluoride (F⁻) for sample 5AW-96-1 (22.4%) and chloride (Cl⁻) for sample 5AW-96-20 centrifuged solid (29.2%). Since the reported results were consistent with those of the other samples and the RPD was not significantly higher than the requested 20%, no rerun was requested.

The phosphate results for the centrifuged solids appeared to show considerable variations with two samples giving positive results ranging from 378 to 486 µg/g, and the remaining samples reported with large "less than" values in the range of <472 to <1,117 µg/g. This variability may be due to the heterogeneous nature of the sample. However, since the reported results were near the detection limit (DL) (approximately 2 X DL) and the samples required a large dilution due to high NO₃⁻, this variability may be attributed to decreased precision near the DL.

Low concentrations of Cl⁻ and NO₃⁻ were found in the preparation blank for the centrifuged solid

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analysis. Since the levels were insignificant with respect to the sample results, no reprep was requested.

ICP - Inductively Coupled Plasma Spectrophotometry

The ICP analysis was performed on acid diluted aliquots for the supernates and the interstitial liquids. This dilution is indicated by an "D" in the A# column in Table 3. The centrifuged solids were prepared for analysis by fusion digest, indicated by an "F" in the A# column in Table 3.

Aluminum (Al), iron (Fe) and sodium (Na) were the only analytes requested in the TSAP. The other analyte results were provided as additional information as part of the method of analysis. Since these analytes were not requested in the TSAP, the QC results were not reviewed. The standard recoveries and the spike recoveries for the centrifuged solid analyses were all within the required limits.

The RPDs were all less than the required 20% with the exception of Fe in the centrifuged solid samples; 5AW-96-7 RPD = 87.9%, 5AW-96-15 RPD = 46.0% and 5AW-96-20 RPD = 45.2%. These high RPDs were attributed to the large dilution required because of the high concentration of potassium in the fusion digested samples. The tank coordinator was contacted, and no reprep or reruns were requested. The RPD for aluminum (Al) for sample 5AW-96-9 centrifuged solids was high (29.8%), but no rerun was requested because the sample results were very near the DL.

For the supernates and interstitial liquids, the sodium (Na) results were more than four times the concentration of the spike added. In some cases this caused a poor spike recovery. With analyte concentrations higher than 1000 $\mu\text{g/mL}$ it is difficult to add sufficient spike to perform a meaningful analysis. Therefore, the assessment of the accuracy of the measurement for these analytes was made by comparison of the sample results to those of a serial dilution of the sample. The serial dilution was performed by preparing and analyzing an additional 5-fold dilution of the sample. The result obtained from this analysis should be within $\pm 10\%$ of the undiluted sample result. The results of this comparison, as presented in Table 5, indicate the accuracy of these analyses was acceptable.

Sodium was detected in the preparation blank for the centrifuged solid analyses. Since the concentration was below the method DL, no reprep or reruns were requested.

TOC - Total Organic Carbon

TOC analysis was performed, on direct aliquots, by the furnace oxidation method for the supernates and interstitial liquids and by the persulfate oxidation method for the centrifuged solids. The results based on the dry weight of the sample are presented in Table 6. Three of the supernate sample results exceeded the notification limit of 30,000 $\mu\text{gC/g}$ (dry weight basis); 5AW-96-1, 5AW-96-4 and 5AW-96-10 (duplicate result only). Appropriate notifications were made.

Table 5

**ICP Serial Dilution Results for Tank 241-AW-105
Risrs 10A and 15A**

Sample ID	Analyte	Sample Result (µg/mL) Undiluted	Serial Dilution Result (µg/mL)	Percent Difference
S96T005004				
5AW-96-1	Na	1.26E+04	1.27E+04	1.0
Supernate				
S96T005005				
5AW-96-2	Na	1.27E+04	1.28E+04	0.5
Supernate				
S96T005006				
5AW-96-4	Na	1.30E+04	1.32E+04	1.5
Supernate				
S96T005010				
5AW-96-10	Na	1.27E+04	1.30E+04	2.4
Supernate				
S96T005011				
5AW-96-11	Na	1.29E+04	1.30E+04	0.8
Supernate				
S96T005012				
5AW-96-14	Na	1.87E+04	1.90E+04	1.8
Supernate				
S96T005049				
5AW-96-5	Na	2.13E+04	2.14E+04	0.5
Interstitial Liq.				
S96T005081				
5AW-96-15	Na	2.77E+04	2.79E+04	0.6
Interstitial Liq.				

$$\text{Percent Difference} = [(ABS(\text{Sample} - \text{Serial Dilution}))/\text{Sample}] \times 100$$

Table 6

Total Organic Carbon Results (dry weight)
Tank 241-AW-105

Customer ID	Segment Portion	LabCore ID	Sample Result	Duplicate Result	Triplicate Result	Mean
			$\mu\text{g C/g}$	$\mu\text{g C/g}$	$\mu\text{g C/g}$	$\mu\text{g C/g}$
5AW-96-1	Supernate	S96T005004	9.65E+04	9.99E+04		9.82E+04
5AW-96-2	Supernate	S96T005008	2.21E+03	2.30E+03		2.25E+03
5AW-96-2 1	Supernate	S96T005008 1	2.44E+03	2.25E+03		2.34E+03
5AW-96-4	Supernate	S96T005006	8.36E+04	9.25E+04		8.81E+04
5AW-96-10	Supernate	S96T005010	2.98E+04	3.02E+04		3.00E+04
5AW-96-11	Supernate	S96T005011	2.74E+04	2.70E+04		2.72E+04
5AW-96-14	Supernate	S96T005012	2.62E+04	2.68E+04		2.65E+04
			$\mu\text{g C/g}$	$\mu\text{g C/g}$	$\mu\text{g C/g}$	$\mu\text{g C/g}$
5AW-96-5	Interstitial Liq.	S96T005049	1.25E+04	7.73E+03	7.07E+03	9.09E+03
5AW-96-5 1	Interstitial Liq.	S96T005049 1	9.23E+03	9.23E+03		9.23E+03
5AW-96-7	Interstitial Liq.	S96T005050	2.14E+04	2.09E+04		2.11E+04
5AW-96-9	Interstitial Liq.	S96T005051	1.95E+04	1.90E+04		1.92E+04
5AW-96-15	Interstitial Liq.	S96T005081	1.93E+04	1.72E+04		1.82E+04
5AW-96-17	Interstitial Liq.	S96T005082	1.25E+04	1.23E+04		1.24E+04
5AW-96-20	Interstitial Liq.	S96T005083	1.71E+04	1.62E+04		1.66E+04
			$\mu\text{g C/g}$	$\mu\text{g C/g}$		$\mu\text{g C/g}$
5AW-96-5	Cent. Sol.	S96T005019	9.10E+03	8.70E+03		8.90E+03
5AW-96-7	Cent. Sol.	S96T005020	5.13E+03	4.98E+03		5.05E+03
5AW-96-9	Cent. Sol.	S96T005021	4.90E+03	5.08E+03		4.99E+03
5AW-96-15	Cent. Sol.	S96T005075	5.69E+03	5.25E+03		5.47E+03
5AW-96-17	Cent. Sol.	S96T005076	6.11E+03	6.84E+03		6.48E+03
5AW-96-20	Cent. Sol.	S96T005077	5.65E+03	4.57E+03		5.11E+03

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The standard recoveries and spike recoveries were within the required limits. Two samples had high RPDs; sample 5AW-96-20 centrifuged solid (21.2%), and 5AW-96-5 interstitial liquid (47.0%). Since the results for sample 5AW-96-20 centrifuged solid were consistent with the results obtained from the same portion of the other sludge samples and this sample was reported to be heterogeneous at the time of sample breakdown, no rerun was requested.

As a result of the high RPD, a triplicate aliquot was analyzed for sample 5AW-96-5. A replicate analysis was also performed because the results from the original analysis for this sample were much lower than those obtained for the other interstitial liquids from the same riser (10A). The results from both analyses are presented in Table 7. A comparison of the mean values from the two analyses indicates that the original results obtained were valid numbers, but the high RPD may have been due to suspended solids in the sample. The results for the replicate analysis are also presented in Table 3, denoted with a "1" following the sample number.

Table 7: TOC Results for Sample 5AW-96-5 Interstitial Liquid

Customer ID	Sample #	Result ($\mu\text{g/mL}$)	Duplicate ($\mu\text{g/mL}$)	Triplicate ($\mu\text{g/mL}$)	Mean ($\mu\text{g/mL}$)
5AW-96-5	S96T005049	951	589	539	693
5AW-96-5	S96T005049 1	704	704		704
5AW-96-5	S96T005049			Overall Mean →	697.4

The results for sample 5AW-96-2 supernate (S96T005008) were much lower (nearly fifty times lower) than the other two supernate samples from riser 10A. An additional sample and duplicate analysis was requested to verify the results. These results, denoted in Table 3 with a "1" following the sample number, indicated that the first set of results were correct.

TIC - Total Inorganic Carbon

TIC analysis was performed on direct aliquots. The standard recoveries, spike recoveries and RPDs were within the required limits.

Radionuclide Analyses

⁹⁰Sr - Strontium-90

⁹⁰Sr analysis was performed on direct aliquots for the supernates and interstitial liquids. The centrifuged solids were prepared for analysis by a fusion digestion, indicated by an "F" in the A# column in Table 3. The standard recoveries were all within the required limits.

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^{90}Sr was detected in most of the method and preparation blank analyses. However, in all cases the results were insignificant with respect to the sample concentration and no reruns or repreparation s were requested.

The RPDs for the centrifuged solid samples and five of the six supernates were within the required limit (20%). However, due to suspended solids observed in sample 5AW-96-14 supernate and all six of the interstitial liquids, it was very difficult to obtain reproducible results for these samples. Historical data indicate that ^{90}Sr forms fine solids upon cooling of the waste after sampling. Some of the observed suspended solids may be of this form thus making it difficult to obtain reproducible sample and duplicate aliquots. More than one rerun was requested for each sample. Only two of the six interstitial liquids had acceptable RPDs for the final reported results. No further reruns were requested.

GEA - Gamma Energy Analysis

GEA analysis was performed for ^{137}Cs on direct aliquots for the supernates and interstitial liquids. The centrifuged solids were prepared for analysis by a fusion digestion, indicated by an "F" in the A# column in Table 3. The results for ^{60}Co are included for information purposes as part of the method. However, since this analyte was not requested in the TSAP, the QC results were not reviewed. The standard recoveries and RPDs for ^{137}Cs were within the required limits.

^{137}Cs was reported as detected in the method blank for the analysis of sample 5AW-96-5 interstitial liquid. However, since the result was insignificant with respect to the sample result, no rerun was requested.

AT - Total Alpha Activity

AT analysis was performed on direct aliquots for the supernates and interstitial liquids. The centrifuged solids were prepared for analysis by a fusion digestion, indicated by an "F" in the A# column in Table 3. The standard recoveries were within the required limits.

The spike recoveries were within the required limits, with the exception of the following low spike recoveries: sample 5AW-96-5 centrifuged solids (66.3%); 5AW-96-7 interstitial liquid (70.75%); 5AW-96-15 interstitial liquid (73.82%); and 5AW-96-1 supernate (74.65%). The poor spike recoveries were possibly due to matrix interference from solids in the samples. The spike recoveries above 70% were within the method control limit for the standard and, therefore, were accepted with no additional reruns. Sample 5AW-96-5 was already rerun once and additional reruns would not improve the results because of the solids content of the sample.

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The RPDs were within the required limits, with the exception of three of the interstitial liquid samples: 5AW-96-9 (46.7%); 5AW-96-15 (44.2%); and 5AW-96-17 (58.0%). The high RPDs are possibly due to matrix interference from solids in the samples and low sample activity. One of the samples (5AW-96-9) was analyzed more than once, with poor results each time. It was decided that additional reruns on the remaining samples would not improve the reproducibility.

Alpha activity was detected in the preparation blank for sample 5AW-96-7 centrifuged solids, but was insignificant with respect to the sample results. Alpha activity was detected in the method blank for three of the six interstitial liquids at a concentration near that of the samples. However, the sample data indicated that there was no contamination and no rerun was requested.

Organic Analyses

PCB - Polychlorinated Biphenyls Analysis

PCB analyses were performed on direct aliquots for the centrifuged solid subsamples. The results are presented in Table 8. The samples were prepared by addition of anhydrous sodium sulfate for drying, followed by two extractions with hexane. The combined extracts from each sample were condensed to 2 mL each under a nitrogen blanket.

A decachlorobiphenyl surrogate standard was added to the method blank, samples and spikes. All recoveries were within the acceptable limits, ranging from 79% - 112%. Arochlor 1260 was added to the subsample from 5AW-96-9 (S96T005048) for the matrix spike and matrix spike duplicate analyses. The recoveries were acceptable at 95.4% and 95.2%, respectively. The duplicate analysis was performed on the subsample from 5AW-96-15 (S96T005078). Since there were no PCB results reported, the RPD calculation is not applicable (n/a). The Arochlor 1260 standard was also used for the final calibration verification analysis and met the method criteria.

No PCB patterns were observed on any of the samples. The results are reported as undetected at the method detection limit. This detection limit was calculated based on the estimated quantitation limit and the sample size used. A more detailed discussion of results may be found in the narrative included with the raw data.

Procedures

Table 9 lists the analytical procedures used for performing the safety screening analyses. Abbreviations for analyses are defined in the table notes.

Table 8

Tank 241-AW-105
Polychlorinated Biphenyls Analysis Results

Risers 10A and 15A

Sample Portion: Centrifuged Solids

Customer ID	Sample #	Units	Standard %	Blank	Result	Duplicate	%RPD	Det Lim
5AW-96-5	S96T005046	µg/g	101.7	U 0.993	U 0.993	n/a	n/a	0.993
5AW-96-7	S96T005047	µg/g	101.7	U 0.993	U 0.888	n/a	n/a	0.888
5AW-96-9	S96T005048	µg/g	101.7	U 0.993	U 0.955	n/a	n/a	0.955
5AW-96-15	S96T005078	µg/g	101.7	U 0.993	U 0.903	U 0.903	n/a	0.903
5AW-96-17	S96T005079	µg/g	101.7	U 0.993	U 0.897	n/a	n/a	0.897
5AW-96-20	S96T005080	µg/g	101.7	U 0.993	U 0.955	n/a	n/a	0.955

U = Analyte was undetected at the method detection limit based on a 500 µg/L standard.

Customer ID	Sample #	Units	Spike %	Spike Dup %	%RPD	Surrogate %
5AW-96-5	S96T005046	µg/g	n/a	n/a	n/a	103.0
5AW-96-7	S96T005047	µg/g	n/a	n/a	n/a	119.6
5AW-96-9	S96T005048	µg/g	95.4	95.2	0.18	109.6
5AW-96-15	S96T005078	µg/g	n/a	n/a	n/a	85.9
5AW-96-17	S96T005079	µg/g	n/a	n/a	n/a	100.3
5AW-96-20	S96T005080	µg/g	n/a	n/a	n/a	103.9

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Table 9: Analytical Procedures

Analysis	Preparation Procedure	Analysis Procedure
Inorganic Analyses		
DSC	Direct Analysis	LA-514-113 Rev. C-1 LA-514-114 Rev. D-0
TGA	Direct Analysis	LA-514-114 Rev. D-0 LA-560-112 Rev. C-0
pH	Direct Analysis	Liquid - LA-212-106 Rev. B-0 Solid - LA-212-105 Rev. B-0
Sp.G.	Direct Analyses	LA-510-112 Rev. C-3
OH ⁻	Direct Analysis	LA-211-102 Rev. C-0
IC	Liquid - Direct Analysis Solid - LA-504-101 Rev. E-0 +	LA-533-105 Rev. D-1
ICP	Liquid - Acid Dilution Solid - LA-549-141 Rev. F-0 ++	LA-505-161 Rev. B-1
TOC	Direct Analysis	Liquid - LA-344-105 Rev. D-1 Solid - LA-342-100 Rev. E-0
TIC	Direct Analysis	LA-342-100 Rev. E-0 *
Bulk Density	Direct Analysis	LO-160-103 Rev. B-0
Vol % Solids	Direct Analysis	Centrif. - LA-519-132 Rev. D-0 Visual - LA-519-151 Rev. F-1
Radionuclide Analyses		
Total Alpha	Liquid - Direct Analysis Solid - LA-549-141 Rev. F-0 ++	LA-508-101 Rev. E-0
GEA	Liquid - Direct Analysis Solid - LA-549-141 Rev. F-0 ++	LA-548-121 Rev. E-0
⁹⁰ Sr	Liquid - Direct Analysis Solid - LA-549-141 Rev. F-0 ++	LA-220-101 Rev. D-1
²⁴¹ Am	Liquid - Direct Analysis Solid - LA-549-141 Rev. F-0 ++	LA-953-103 Rev. B-0
^{239/240} Pu	Liquid - Direct Analysis Solid - LA-549-141 Rev. F-0 ++	LA-943-128 Rev. B-0
Organic Analyses		
PCB	Direct Analysis	LA-523-434 Rev. A-0

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Notes: * - The TIC analysis was performed by LA-342-100 rather than LA-622-102, as requested in the TSAP, because the instrumentation was unavailable to perform the requested procedure.
+ - Water digestion procedure
++ - Fusion digestion procedure

Abbreviations:

DSC	= differential scanning calorimetry	TOC	= total organic carbon
TGA	= thermogravimetric analysis	TIC	= total inorganic carbon
Sp.G.	= specific gravity	GEA	= gamma energy analysis
OH	= hydroxide	⁹⁰ Sr	= strontium 90
IC	= ion chromatography	²⁴¹ Am	= americium 241
ICP	= inductively coupled plasma	^{239/240} Pu	= plutonium 239/240
PCB	= polychlorinated biphenyls		

References

- Fowler, K.D., 1995, *Data Quality Objectives for Tank Farms Waste Compatibility Program*, WHC-SD-WM-DQO-001, Rev. 1, Westinghouse Hanford Company, Richland, WA 99352.
- Sasaki, L. M., 1996, *Compatibility Grab Sampling and Analysis Plan*, WHC-SD-TSAP-037, Rev. 2D, Westinghouse Hanford Company, Richland, WA 99352

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ATTACHMENT 1

AW-105 SAMPLE BREAKDOWN

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Attachment 1 (1 of 5)

AW-105 GRAB SAMPLE BREAKDOWN

Riser 10A

511 in.
5AW-96-1
S96T004805

S96T005004

DSC
TGA
TOC
TIC
ICP: Al, Fe, Na
IC: anions
pH
OH
Sp.G

S96T005007

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT

529 in.
5AW-96-2
S96T004806

S96T005005

DSC
TGA
ICP: Al, Fe, Na
pH

S96T005008

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT
IC: anions
TIC
TOC
OH
Sp.G

548 in.
5AW-96-4
S96T004808

S96T005006

DSC
TGA
TOC
TIC
ICP: Al, Fe, Na
IC: anions
pH
OH
Sp.G

S96T005009

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT

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Attachment 1 (2 of 5)

AW-105 GRAB SAMPLE BREAKDOWN

Riser 15A

511 in.

5AW-96-10

S96T004814

S96T005010

DSC
TGA
TOC
TIC

ICP: Al, Fe, Na
IC: anions
pH
OH
Sp.G

S96T005013

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT

529 in.

5AW-96-11

S96T004815

S96T005011

DSC
TGA
TOC
TIC

ICP: Al, Fe, Na
IC: anions
pH
OH
Sp.G

S96T005014

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT

548 in.

5AW-95-14

S96T004818

S96T005012

DSC
TGA
TOC
TIC

ICP: Al, Fe, Na
IC: anions
pH
OH
Sp.G

S96T005015

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT

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Attachment 1 (3 of 5)

AW-105 GRAB SAMPLE BREAKDOWN

Riser 10A

Attachment 1 (4 of 5)

AW-105 GRAB SAMPLE BREAKDOWN

Riser 10A

Riser 15A

Attachment 1 (5 of 5)

AW-105 GRAB SAMPLE BREAKDOWN

Riser 15A

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Sample Data Summary

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Table 3: Data Summary Report
AW-105 GRAB1

RISER: 10A
SEGMENT #: 5AW-96-1

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005004			DSC Exotherm using Mettler	Joules/g	100.2	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005004			OH- by Pot. Titration	ug/mL	98.56	<42.00	3.27e+03	3.37e+03	3.32e+03	3.01	n/a	625.0	n/a	n/a
S96T005004			pH Direct	pH	99.86	n/a	13.38	13.39	13.39	0.07	n/a	1.00e-02	n/a	n/a
S96T005004			Specific Gravity	Sp.G.	100.4	n/a	1.021	1.015	1.018	0.52	n/a	1.00e-03	n/a	n/a
S96T005004			% Water by TGA using Mettler	%	98.95	n/a	95.04	95.72	95.38	0.71	n/a	n/a	n/a	n/a
S96T005004			TIC by Acid/Coulometry	ug/mL	97.00	5.400	1.70e+02	204.0	187.0	18.2	101.1	5.000	n/a	n/a
S96T005004			Tot. Organic Carbon by Coul.	ug/mL	98.00	5.000	4.54e+03	4.70e+03	4.62e+03	3.46	115.4	55.00	n/a	n/a
S96T005004	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	9.94e-01	1.020	1.007	2.58	83.90	4.10e-01	n/a	n/a
S96T005004	D		Aluminium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	15.60	16.10	15.85	3.15	98.40	2.050	n/a	n/a
S96T005004	D		Arsenic-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	105.0	4.100	n/a	n/a
S96T005004	D		Boron-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	3.180	3.240	3.210	1.87	97.00	2.050	n/a	n/a
S96T005004	D		Barium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	96.80	2.050	n/a	n/a
S96T005004	D		Beryllium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	100.0	2.05e-01	n/a	n/a
S96T005004	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	100.0	4.100	n/a	n/a
S96T005004	D		Calcium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	108.0	4.100	n/a	n/a
S96T005004	D		Cadmium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	98.80	2.05e-01	n/a	n/a
S96T005004	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	99.30	4.100	n/a	n/a
S96T005004	D		Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	98.70	8.20e-01	n/a	n/a
S96T005004	D		Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	6.40e-01	5.73e-01	6.07e-01	11.0	99.10	4.10e-01	n/a	n/a
S96T005004	D		Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	105.0	4.10e-01	n/a	n/a
S96T005004	D		Iron-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	98.80	2.050	n/a	n/a
S96T005004	D		Potassium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	<1.25e+03	<1.25e+03	1.24e+03	2.41	140.0	20.50	n/a	n/a
S96T005004	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a	n/a
S96T005004	D		Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	103.0	4.10e-01	n/a	n/a
S96T005004	D		Magnesium-ICP-Acid Dil.	ug/mL	93.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	93.40	4.100	n/a	n/a
S96T005004	D		Manganese-ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	94.40	4.10e-01	n/a	n/a
S96T005004	D		Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a	n/a
S96T005004	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	<1.26e+04	1.27e+04	1.28e+04	0.72	543.0	4.100	n/a	n/a
S96T005004	D		Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a	n/a
S96T005004	D		Nickel-ICP-Acid Dil.	ug/mL	98.60	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	98.20	8.20e-01	n/a	n/a
S96T005004	D		Phosphorus-ICP-Acid Dil.	ug/mL	102.2	<2.00e-01	16.40	13.80	14.10	4.26	105.0	8.200	n/a	n/a
S96T005004	D		Lead-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	97.60	4.100	n/a	n/a
S96T005004	D		Sulfur-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	< 46.00	<46.50	46.25	1.08	99.60	4.100	n/a	n/a
S96T005004	D		Antimony-ICP-Acid Dil.	ug/mL	95.00	<6.00e-02	< 2.460	<2.46e0	n/a	n/a	95.80	2.460	n/a	n/a
S96T005004	D		Selenium-ICP-Acid Dil.	ug/mL	95.60	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	100.0	4.100	n/a	n/a
S96T005004	D		Silicon-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 45.60	<46.30	45.95	1.52	104.0	2.050	n/a	n/a
S96T005004	D		Samarium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	95.50	4.100	n/a	n/a
S96T005004	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	97.50	4.10e-01	n/a	n/a
S96T005004	D		Titanium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	97.70	4.10e-01	n/a	n/a
S96T005004	D		Thallium-ICP-Acid Dil.	ug/mL	96.20	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	94.10	8.200	n/a	n/a
S96T005004	D		Uranium-ICP-Acid Dil.	ug/mL	96.20	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	113.5	20.50	n/a	n/a
S96T005004	D		Vanadium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	98.60	2.050	n/a	n/a
S96T005004	D		Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	1.290	1.280	1.285	0.78	100.0	4.10e-01	n/a	n/a
S96T005004	D		Zirconium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	97.50	4.10e-01	n/a	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005004			Fluoride-IC-Dionex 4000/4500	ug/mL	103.9	<1.30e-02	1.59e+02	127.0	142.9	22.4	83.39	7.878	n/a
S96T005004			Chloride-IC-Dionex 4000/4500	ug/mL	103.8	<1.70e-02	2.22e+02	230.0	225.8	3.54	102.2	10.30	n/a
S96T005004			Nitrite-IC - Dionex 4000/4500	ug/mL	100.4	<1.07e-01	1.09e+03	1.12e+03	1.10e+03	2.71	101.5	64.84	n/a
S96T005004			Bromide by Ion Chromatograph	ug/mL	104.8	<1.26e-01	< 76.36	<7.64e1	n/a	n/a	104.6	76.36	n/a
S96T005004			Nitrate by IC-Dionex 4000/4500	ug/mL	104.2	<1.40e-01	2.39e+04	2.41e+04	2.40e+04	0.83	102.4	84.84	n/a
S96T005004			Phosphate-IC-Dionex 4000/4500	ug/mL	100.5	<1.19e-01	< 72.05	<7.21e1	n/a	n/a	100.6	72.05	n/a
S96T005004			Sulfate by IC-Dionex 4000/4500	ug/mL	103.0	<1.36e-01	1.67e+02	166.0	166.3	0.60	102.2	82.36	n/a
S96T005004			Oxalate by IC-Dionex 4000/4500	ug/mL	101.9	<1.05e-01	< 63.63	<6.36e1	n/a	n/a	104.2	63.63	n/a
S96T005007			Strontium-89/90 High Level	uCi/mL	110.0	2.51e-05	2.11e-02	2.01e-02	2.06e-02	4.85	n/a	8.37e-05	1.95E+00
S96T005007			Pu-239/240 by TRU-SPEC Resin	uCi/mL	101.3	<3.72e-06	<3.73e-06	<3.75E-6	n/a	n/a	n/a	3.73e-06	1.00E+02
S96T005007			Cobalt-60 by GEA	uCi/mL	99.32	<2.39e-05	1.08e-04	1.07e-04	1.07e-04	0.93	n/a	n/a	37.6
S96T005007			Cesium-137 by GEA	uCi/mL	102.3	<2.89e-05	7.39e-01	7.36e-01	7.38e-01	0.41	n/a	n/a	0.250
S96T005007			Am-241 by Extraction	uCi/mL	84.87	<5.57e-06	<5.27e-06	<6.08E-6	n/a	n/a	n/a	5.27e-06	1.00E+02
S96T005007			Alpha in Liquid Samples	uCi/mL	88.75	<5.40e-05	<6.59e-05	<4.09E-5	n/a	n/a	74.65	9.99e-05	5.00E+02

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Table 3: Data Summary Report
AW-105 GRAB1RISER: 10A
SEGMENT #: 5AW-96-2

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005005			DSC Exotherm using Mettler	Joules/g	100.2	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005005			pH Direct	pH	99.86	n/a	13.43	13.44	13.43	0.07	n/a	1.00e-02	n/a
S96T005005			% Water by TGA using Mettler	%	98.95	n/a	95.67	95.63	95.65	0.04	n/a	n/a	n/a
S96T005005	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.070	1.120	1.095	4.57	83.80	4.10e-01	n/a
S96T005005	D		Aluminum-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	16.50	16.90	16.70	2.40	97.90	2.050	n/a
S96T005005	D		Arsenic-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	105.0	4.100	n/a
S96T005005	D		Boron-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	5.440	5.460	5.450	0.37	96.80	2.050	n/a
S96T005005	D		Barium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	98.10	2.050	n/a
S96T005005	D		Beryllium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	100.0	2.05e-01	n/a
S96T005005	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005005	D		Calcium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	6.180	6.230	6.205	0.81	101.0	4.100	n/a
S96T005005	D		Cadmium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	100.0	2.05e-01	n/a
S96T005005	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	100.0	4.100	n/a
S96T005005	D		Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	99.80	8.20e-01	n/a
S96T005005	D		Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	6.15e-01	6.31e-01	6.23e-01	2.57	100.0	4.10e-01	n/a
S96T005005	D		Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	102.0	4.10e-01	n/a
S96T005005	D		Iron-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.60	2.050	n/a
S96T005005	D		Potassium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	1.27e+03	1.29e+03	1.28e+03	1.56	155.0	20.50	n/a
S96T005005	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a
S96T005005	D		Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	102.0	4.10e-01	n/a
S96T005005	D		Magnesium-ICP-Acid Dil.	ug/mL	93.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	93.70	4.100	n/a
S96T005005	D		Manganese-ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	95.50	4.10e-01	n/a
S96T005005	D		Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005005	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	1.27e+04	1.29e+04	1.28e+04	1.56	310.0	4.100	n/a
S96T005005	D		Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005005	D		Nickel-ICP-Acid Dil.	ug/mL	98.40	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	98.40	8.20e-01	n/a
S96T005005	D		Phosphorus-ICP-Acid Dil.	ug/mL	102.2	<2.00e-01	13.40	13.40	13.40	0.00	105.0	8.200	n/a
S96T005005	D		Lead-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005005	D		Sulfur-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	45.90	46.00	45.95	0.22	103.0	4.100	n/a
S96T005005	D		Antimony-ICP-Acid Dil.	ug/mL	95.00	<6.00e-02	< 2.460	<2.46e0	n/a	n/a	95.80	2.460	n/a
S96T005005	D		Selenium-ICP-Acid Dil.	ug/mL	95.60	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	98.60	4.100	n/a
S96T005005	D		Silicon-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	51.30	51.50	51.40	0.39	104.0	2.050	n/a
S96T005005	D		Samarium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	97.00	4.100	n/a
S96T005005	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.20	4.10e-01	n/a
S96T005005	D		Titanium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.60	4.10e-01	n/a
S96T005005	D		Thallium-ICP-Acid Dil.	ug/mL	96.20	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	94.10	8.200	n/a
S96T005005	D		Uranium-ICP-Acid Dil.	ug/mL	96.20	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	116.0	20.50	n/a
S96T005005	D		Vanadium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.60	2.050	n/a
S96T005005	D		Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	1.570	1.580	1.575	0.63	101.0	4.10e-01	n/a
S96T005005	D		Zirconium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.50	4.10e-01	n/a
S96T005008			OH- by Pot. Titration	ug/mL	95.55	<43.00	3.68e+03	3.89e+03	3.78e+03	5.55	n/a	125.0	n/a
S96T005008			Specific Gravity	Sp.G.	101.4	n/a	1.019	1.020	1.019	0.10	n/a	1.00e-03	n/a
S96T005008			TIC by Acid/Coulometry	ug/mL	97.00	5.400	1.87e+02	190.0	188.5	1.59	n/a	5.000	n/a
S96T005008			Tot. Organic Carbon by Coul.	ug/mL	90.33	4.00e-01	97.90	102.0	99.95	4.10	97.70	5.500	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005008	1		Tot. Organic Carbon by Coul.	ug/mL	98.67	6.00e-01	1.08e+02	99.60	103.8	8.09	85.50	5.500	n/a
S96T005008			Strontium-89/90 High Level	uCi/mL	110.0	2.51e-05	3.02e-02	3.12e-02	3.07e-02	3.26	n/a	5.81e-05	1.35E+00
S96T005008			Pu-239/240 by TRU-SPEC Resin	uCi/mL	101.3	<3.72e-06	<4.00e-06	<3.60E-6	n/a	n/a	n/a	4.00e-06	1.00E+02
S96T005008			Fluoride-IC-Dionex 4000/4500	ug/mL	101.7	<1.20e-02	1.55e+02	154.0	154.3	0.65	96.95	13.33	n/a
S96T005008			Chloride-IC-Dionex 4000/4500	ug/mL	96.20	<1.70e-02	2.62e+02	231.0	246.6	12.6	91.65	18.89	n/a
S96T005008			Nitrite-IC - Dionex 4000/4500	ug/mL	98.70	<1.08e-01	1.20e+03	1.13e+03	1.17e+03	6.01	97.41	120.0	n/a
S96T005008			Bromide by Ion Chromatograph	ug/mL	101.7	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	106.1	138.9	n/a
S96T005008			Nitrate by IC-Dionex 4000/4500	ug/mL	103.9	2.73e-01	2.43e+04	2.46e+04	2.45e+04	1.23	128.3	154.4	n/a
S96T005008			Phosphate-IC-Dionex 4000/4500	ug/mL	101.3	<1.20e-01	<1.33e+02	<1.33e2	n/a	n/a	103.1	133.3	n/a
S96T005008			Sulfate by IC-Dionex 4000/4500	ug/mL	101.4	<1.38e-01	2.30e+02	225.0	227.5	2.20	103.0	153.3	n/a
S96T005008			Oxalate by IC-Dionex 4000/4500	ug/mL	103.6	<1.05e-01	<1.17e+02	<1.17e2	n/a	n/a	107.2	116.7	n/a
S96T005008			Cobalt-60 by GEA	uCi/mL	99.32	<2.39e-05	1.06e-04	9.63e-05	1.01e-04	9.59	n/a	n/a	28.9
S96T005008			Cesium-137 by GEA	uCi/mL	102.3	<2.89e-05	7.55e-01	7.44e-01	7.50e-01	1.47	n/a	n/a	0.250
S96T005008			Am-241 by Extraction	uCi/mL	84.87	<5.57e-06	<7.94e-06	<6.75E-6	n/a	n/a	n/a	7.94e-06	1.00E+02
S96T005008			Alpha in Liquid Samples	uCi/mL	88.75	<5.40e-05	<8.18e-05	<4.09E-5	n/a	n/a	n/a	9.99e-05	5.00E+02

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 10A
SEGMENT #: 5AW-96-4

SEGMENT PORTION: Supernate

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005006			DSC Exotherm on Perkin Elmer	Joules/g	95.89	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005006			OH- by Pot. Titration	ug/mL	98.56	<42.00	3.27e+03	3.19e+03	3.23e+03	2.48	n/a	625.0	n/a
S96T005006			pH Direct	pH	99.86	n/a	13.47	13.48	13.48	0.07	n/a	1.00e-02	n/a
S96T005006			Specific Gravity	Sp.G.	99.17	n/a	1.012	1.010	1.011	0.20	n/a	1.00e-03	n/a
S96T005006			% Water by TGA on Perkin Elmer %	%	99.11	n/a	94.61	94.53	94.57	0.08	n/a	n/a	n/a
S96T005006			TIC by Acid/Coulometry	ug/mL	97.00	5.400	1.78e+02	193.0	185.5	8.09	n/a	5.000	n/a
S96T005006			Tot. Organic Carbon by Coul.	ug/mL	98.00	5.000	4.59e+03	5.08e+03	4.84e+03	10.1	n/a	55.00	n/a
S96T005006	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.140	1.060	1.100	7.27	83.20	4.10e-01	n/a
S96T005006	D		Aluminium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	17.40	17.00	17.20	2.33	97.10	2.050	n/a
S96T005006	D		Arsenic-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	104.0	4.100	n/a
S96T005006	D		Boron-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	2.980	2.860	2.920	4.11	96.80	2.050	n/a
S96T005006	D		Barium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	97.50	2.050	n/a
S96T005006	D		Beryllium-ICP-Acid Dil.	ug/mL	101.6	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	101.0	2.05e-01	n/a
S96T005006	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	100.0	4.100	n/a
S96T005006	D		Calcium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	109.0	4.100	n/a
S96T005006	D		Cadmium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	100.0	2.05e-01	n/a
S96T005006	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	99.40	4.100	n/a
S96T005006	D		Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	99.20	8.20e-01	n/a
S96T005006	D		Chromium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	6.51e-01	6.52e-01	6.51e-01	0.15	100.0	4.10e-01	n/a
S96T005006	D		Copper-ICP-Acid Dil.	ug/mL	103.2	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	103.0	4.10e-01	n/a
S96T005006	D		Iron-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.20	2.050	n/a
S96T005006	D		Potassium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	1.32e+03	1.32e+03	1.32e+03	0.00	92.10	20.50	n/a
S96T005006	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a
S96T005006	D		Lithium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	102.0	4.10e-01	n/a
S96T005006	D		Magnesium-ICP-Acid Dil.	ug/mL	93.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	92.50	4.100	n/a
S96T005006	D		Manganese-ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	95.20	4.10e-01	n/a
S96T005006	D		Molybdenum-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005006	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	1.30e+04	1.30e+04	1.30e+04	0.00	-1.72e02	4.100	n/a
S96T005006	D		Neodymium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005006	D		Nickel-ICP-Acid Dil.	ug/mL	98.60	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	98.80	8.20e-01	n/a
S96T005006	D		Phosphorus-ICP-Acid Dil.	ug/mL	102.2	<2.00e-01	12.90	13.70	13.30	6.02	109.0	8.200	n/a
S96T005006	D		Lead-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005006	D		Sulfur-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	46.70	46.50	46.60	0.43	99.10	4.100	n/a
S96T005006	D		Antimony-ICP-Acid Dil.	ug/mL	95.00	<6.00e-02	< 2.460	<2.46e0	n/a	n/a	97.40	2.460	n/a
S96T005006	D		Selenium-ICP-Acid Dil.	ug/mL	95.60	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	97.90	4.100	n/a
S96T005006	D		Silicon-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 4.700	<4.70e0	47.55	0.63	104.0	2.050	n/a
S96T005006	D		Samarium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	96.80	4.100	n/a
S96T005006	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	97.80	4.10e-01	n/a
S96T005006	D		Titanium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.30	4.10e-01	n/a
S96T005006	D		Thallium-ICP-Acid Dil.	ug/mL	96.20	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	95.60	8.200	n/a
S96T005006	D		Uranium-ICP-Acid Dil.	ug/mL	96.20	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	115.5	20.50	n/a
S96T005006	D		Vanadium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.40	2.050	n/a
S96T005006	D		Zinc-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	1.340	1.320	1.330	1.50	101.0	4.10e-01	n/a
S96T005006	D		Zirconium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.20	4.10e-01	n/a

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HNF-SD-WM-IDP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005006			Fluoride-IC-Dionex 4000/4500	ug/mL	103.9	<1.30e-02	1.74e+02	166.0	170.2	4.71	n/a	7.878	n/a	n/a
S96T005006			Chloride-IC-Dionex 4000/4500	ug/mL	103.8	<1.70e-02	2.21e+02	216.0	218.3	2.29	n/a	10.30	n/a	n/a
S96T005006			Nitrite-IC - Dionex 4000/4500	ug/mL	100.4	<1.07e-01	1.12e+03	1.10e+03	1.11e+03	1.80	n/a	64.84	n/a	n/a
S96T005006			Bromide by Ion Chromatograph	ug/mL	104.8	<1.26e-01	< 76.36	<7.64e1	n/a	n/a	n/a	76.36	n/a	n/a
S96T005006			Nitrate by IC-Dionex 4000/4500	ug/mL	104.2	<1.40e-01	2.41e+04	2.41e+04	2.41e+04	0.00	n/a	84.84	n/a	n/a
S96T005006			Phosphate-IC-Dionex 4000/4500	ug/mL	100.5	<1.19e-01	< 72.05	<7.21e1	n/a	n/a	n/a	72.05	n/a	n/a
S96T005006			Sulfate by IC-Dionex 4000/4500	ug/mL	103.0	<1.36e-01	1.75e+02	189.0	182.1	7.69	n/a	82.36	n/a	n/a
S96T005006			Oxalate by IC-Dionex 4000/4500	ug/mL	101.9	<1.05e-01	< 63.63	<6.36e1	n/a	n/a	n/a	63.63	n/a	n/a
S96T005009			Strontium-89/90 High Level	uCi/mL	110.0	2.51e-05	1.61e-02	1.59e-02	1.60e-02	1.25	n/a	4.99e-05	1.72E+00	
S96T005009			Pu-239/240 by TRU-SPEC Resin	uCi/mL	101.3	<3.72e-06	<4.08e-06	<3.74E-6	n/a	n/a	n/a	4.08e-06	1.00E+02	
S96T005009			Cobalt-60 by GEA	uCi/mL	99.32	<2.39e-05	<6.31e-05	1.16e-04	n/a	n/a	n/a	6.31e-05	n/a	
S96T005009			Cesium-137 by GEA	uCi/mL	102.3	<2.89e-05	7.88e-01	8.00e-01	7.94e-01	1.51	n/a	n/a	0.250	
S96T005009			Am-241 by Extraction	uCi/mL	84.87	<5.57e-06	<6.00e-06	<6.02E-6	n/a	n/a	n/a	6.00e-06	1.00E+02	
S96T005009			Alpha in Liquid Samples	uCi/mL	88.75	<5.40e-05	<5.79e-05	<6.59E-5	n/a	n/a	n/a	9.99e-05	5.00E+02	

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 10A
SEGMENT #: 5AW-96-5

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961005019			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
S961005019			DSC Exotherm on Perkin Elmer	Joules/g	97.12	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961005019			pH on SST Samples	pH	99.62	n/a	11.66	11.70	11.68	0.34	n/a	1.00e-02	n/a
S961005019			% Water by TGA on Perkin Elmer	%	100.7	n/a	80.79	79.42	80.11	1.71	n/a	n/a	n/a
S961005019			TIC by Acid/Coulometry	ug/g	100.8	7.00e-01	1.12e+03	1.09e+03	1.10e+03	2.71	102.0	5.000	n/a
S961005019			TOC by Persulfate/Coulometry	ug/g	89.67	13.50	1.81e+03	1.73e+03	1.77e+03	4.52	89.90	40.00	n/a
S961005052	F		Strontium-89/90 High Level	uCi/g	104.3	1.70e-02	19.60	19.30	19.45	1.54	n/a	4.00e-03	6.15E-01
S961005052	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	97.31	<5.09e-03	4.58e-01	4.47e-01	4.53e-01	2.43	n/a	2.20e-02	1.56E+00
S961005052	F		Silver -ICP-Fusion	ug/g	97.80	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	81.50	355.0	n/a
S961005052	F		Aluminum -ICP-Fusion	ug/g	97.00	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	97.70	1.78e+03	n/a
S961005052	F		Arsenic -ICP-Fusion	ug/g	100.8	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	97.00	3.55e+03	n/a
S961005052	F		Boron -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	95.80	1.78e+03	n/a
S961005052	F		Barium -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	96.70	1.78e+03	n/a
S961005052	F		Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<1.78e+02	<1.81e2	n/a	n/a	97.80	178.0	n/a
S961005052	F		Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	96.70	3.55e+03	n/a
S961005052	F		Calcium -ICP-Fusion	ug/g	95.40	<1.00e-03	9.41e+03	9.18e+03	9.30e+03	2.47	90.50	3.55e+03	n/a
S961005052	F		Cadmium -ICP-Fusion	ug/g	98.60	<5.00e-03	<1.78e+02	<1.81e2	n/a	n/a	96.90	178.0	n/a
S961005052	F		Cerium -ICP-Fusion	ug/g	97.60	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	94.80	3.55e+03	n/a
S961005052	F		Cobalt -ICP-Fusion	ug/g	98.60	<2.00e-02	<7.11e+02	<7.26e2	n/a	n/a	96.50	709.0	n/a
S961005052	F		Chromium -ICP-Fusion	ug/g	99.00	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	97.50	355.0	n/a
S961005052	F		Copper -ICP-Fusion	ug/g	99.40	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	97.80	355.0	n/a
S961005052	F		Iron -ICP-Fusion	ug/g	99.40	<5.00e-02	3.71e+03	3.77e+03	3.74e+03	1.60	99.70	1.78e+03	n/a
S961005052	F		Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	98.40	1.78e+03	n/a
S961005052	F		Lithium -ICP-Fusion	ug/g	97.80	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	90.70	355.0	n/a
S961005052	F		Magnesium -ICP-Fusion	ug/g	95.20	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	92.30	3.55e+03	n/a
S961005052	F		Manganese -ICP-Fusion	ug/g	98.20	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	97.60	355.0	n/a
S961005052	F		Molybdenum -ICP-Fusion	ug/g	99.00	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	96.40	1.78e+03	n/a
S961005052	F		Sodium -ICP-Fusion	ug/g	95.80	2.250	7.80e+04	7.88e+04	7.84e+04	1.02	83.70	3.55e+03	n/a
S961005052	F		Neodymium -ICP-Fusion	ug/g	101.2	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	100.0	3.55e+03	n/a
S961005052	F		Phosphorus -ICP-Fusion	ug/g	99.20	<2.00e-01	<7.11e+03	<7.26e3	n/a	n/a	107.0	7.09e+03	n/a
S961005052	F		Lead -ICP-Fusion	ug/g	98.60	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	98.50	3.55e+03	n/a
S961005052	F		Sulfur -ICP-Fusion	ug/g	98.60	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	94.50	3.55e+03	n/a
S961005052	F		Antimony -ICP-Fusion	ug/g	90.20	<6.00e-02	<2.13e+03	2.66e+03	n/a	n/a	89.50	2.13e+03	n/a
S961005052	F		Selenium -ICP-Fusion	ug/g	105.0	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	101.0	3.55e+03	n/a
S961005052	F		Silicon -ICP-Fusion	ug/g	98.40	<5.00e-02	1.83e+03	<1.81e3	n/a	n/a	97.90	1.78e+03	n/a
S961005052	F		Samarium -ICP-Fusion	ug/g	101.0	<1.00e-01	<3.55e+03	<3.63e3	n/a	n/a	97.40	3.55e+03	n/a
S961005052	F		Strontium -ICP-Fusion	ug/g	98.40	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	96.60	355.0	n/a
S961005052	F		Titanium -ICP-Fusion	ug/g	96.00	<1.00e-02	<3.55e+02	<3.63e2	n/a	n/a	93.80	355.0	n/a
S961005052	F		Thallium -ICP-Fusion	ug/g	97.20	<2.00e-01	<7.11e+03	<7.26e3	n/a	n/a	96.60	7.09e+03	n/a
S961005052	F		Uranium -ICP-Fusion	ug/g	97.10	<5.00e-01	6.17e+04	5.63e+04	5.90e+04	9.15	96.00	1.78e+04	n/a
S961005052	F		Vanadium -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.78e+03	<1.81e3	n/a	n/a	98.50	1.78e+03	n/a
S961005052	F		Zinc -ICP-Fusion	ug/g	99.40	1.60e-02	<3.55e+02	913.0	n/a	n/a	99.60	355.0	n/a
S961005052	F		Zirconium -ICP-Fusion	ug/g	98.00	<1.00e-02	5.83e+02	558.0	570.5	4.38	97.20	355.0	n/a
S961005052	F		Cobalt-60 by GEA	uCi/g	97.35	<2.77e-02	<3.55e-02	<3.81e-2	n/a	n/a	n/a	3.50e-02	n/a

HNF-SD-WM-DP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961005052	F		Cesium-137 by GEA	uCi/g	95.75	<6.17e-02	6.328	6.580	6.454	3.87	n/a	n/a	2.89
S961005052	F		Am-241 by Extraction	uCi/g	115.1	-8.33e-03	3.24e-01	2.87e-01	3.05e-01	12.1	n/a	2.90e-02	1.77e+00
S961005052	F		Alpha of Digested Solid	uCi/g	81.39	<4.70e-03	6.20e-01	5.68e-01	5.94e-01	8.75	66.30	9.00e-03	8.69e+00
S961005055	W		OH- by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	41.70	n/a
S961005055	W		Fluoride-IC-Dionex 4000/4500	ug/g	90.51	<1.20e-02	1.41e+03	1.38e+03	1.40e+03	2.15	106.1	22.11	n/a
S961005055	W		Chloride-IC-Dionex 4000/4500	ug/g	91.52	2.00e-02	2.08e+02	203.0	205.6	2.43	93.92	31.32	n/a
S961005055	W		Nitrite-IC - Dionex 4000/4500	ug/g	91.67	<1.08e-01	1.31e+03	1.26e+03	1.28e+03	3.89	93.52	198.9	n/a
S961005055	W		Bromide by Ion Chromatograph	ug/g	94.57	<1.25e-01	<2.30e+02	<2.28e2	n/a	n/a	98.13	230.3	n/a
S961005055	W		Nitrate by IC-Dionex 4000/4500	ug/g	100.0	1.79e-01	2.62e+04	2.64e+04	2.63e+04	0.76	117.2	256.1	n/a
S961005055	W		Phosphate-IC-Dionex 4000/4500	ug/g	95.78	<1.20e-01	4.45e+02	486.0	465.6	8.81	98.53	221.1	n/a
S961005055	W		Sulfate by IC-Dionex 4000/4500	ug/g	101.6	<1.38e-01	4.34e+02	415.0	424.5	4.48	104.4	254.2	n/a
S961005055	W		Oxalate by IC-Dionex 4000/4500	ug/g	99.24	<1.05e-01	<1.93e+02	<1.92e2	n/a	n/a	102.7	193.4	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961005049			Bulk Density of Sample	g/mL	n/a	n/a	1.040	n/a	n/a	n/a	n/a	5.00e-01	n/a
S961005049			DSC Exotherm on Perkin Elmer	Joules/g	92.30	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961005049			OH- by Pot. Titration	ug/mL	106.4	<42.00	5.41e+03	5.48e+03	5.44e+03	1.29	n/a	500.0	n/a
S961005049			pH Direct	pH	100.0	n/a	13.24	13.26	13.25	0.15	n/a	1.00e-02	n/a
S961005049			% Water by TGA on Perkin Elmer	%	99.27	n/a	92.61	92.74	92.67	0.14	n/a	n/a	n/a
S961005049			TIC by Acid/Coulometry	ug/mL	99.50	2.800	3.92e+02	459.0	425.5	15.7	110.8	5.000	n/a
S961005049			Tot. Organic Carbon by Coul.	ug/mL	103.0	1.200	9.51e+02	589.0	770.0	47.0	93.00	55.00	n/a
S961005049			Tot. Organic Carbon by Coul.	ug/mL	98.67	6.00e-01	7.04e+02	704.0	704.0	0.00	n/a	55.00	n/a
S961005049			Strontium-89/90 High Level	uCi/mL	118.6	6.49e-05	2.94e-01	9.60e-02	1.95e-01	102	n/a	2.86e-05	3.92e-01
S961005049			Pu-239/240 by TRU-SPEC Resin	uCi/mL	90.60	<7.39e-06	1.18e-03	1.00e-03	1.09e-03	16.5	n/a	5.79e-05	1.32e+00
S961005049	D		Silver-ICP-Acid Dil.	ug/mL	99.80	<1.00e-02	1.260	1.620	1.440	25.0	97.90	1.010	n/a
S961005049	D		Aluminum-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	1.29e+02	135.0	132.0	4.55	97.30	5.050	n/a
S961005049	D		Arsenic-ICP-Acid Dil.	ug/mL	104.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	108.0	10.10	n/a
S961005049	D		Boron-ICP-Acid Dil.	ug/mL	104.4	<5.00e-02	< 9.100	< 9.190	9.145	0.98	99.30	5.050	n/a
S961005049	D		Barium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 5.050	< 5.050	n/a	n/a	99.20	5.050	n/a
S961005049	D		Beryllium-ICP-Acid Dil.	ug/mL	106.8	<5.00e-03	<5.05e-01	<5.05e-01	n/a	n/a	103.0	5.05e-01	n/a
S961005049	D		Bismuth-ICP-Acid Dil.	ug/mL	106.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	101.0	10.10	n/a
S961005049	D		Calcium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	16.60	96.90	56.75	141	97.40	10.10	n/a
S961005049	D		Cadmium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-03	<5.05e-01	7.17e-01	n/a	n/a	102.0	5.05e-01	n/a
S961005049	D		Cerium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	101.0	10.10	n/a
S961005049	D		Cobalt-ICP-Acid Dil.	ug/mL	100.6	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	101.0	2.020	n/a
S961005049	D		Chromium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	6.720	8.540	7.630	23.9	102.0	1.010	n/a
S961005049	D		Copper-ICP-Acid Dil.	ug/mL	105.2	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	105.0	1.010	n/a
S961005049	D		Iron-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 5.050	34.90	n/a	n/a	105.0	5.050	n/a
S961005049	D		Potassium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-01	4.15e+03	4.15e+03	4.15e+03	0.00	86.90	50.50	n/a
S961005049	D		Lanthanum-ICP-Acid Dil.	ug/mL	103.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	104.0	5.050	n/a
S961005049	D		Lithium-ICP-Acid Dil.	ug/mL	103.6	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	103.0	1.010	n/a
S961005049	D		Magnesium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	96.00	10.10	n/a
S961005049	D		Manganese-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 1.010	1.510	n/a	n/a	97.50	1.010	n/a
S961005049	D		Molybdenum-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	103.0	5.050	n/a
S961005049	D		Sodium-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	2.13e+04	2.11e+04	2.12e+04	0.94	-1.890e1	10.10	n/a
S961005049	D		Neodymium-ICP-Acid Dil.	ug/mL	103.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	104.0	10.10	n/a
S961005049	D		Nickel-ICP-Acid Dil.	ug/mL	100.2	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	101.0	2.020	n/a
S961005049	D		Phosphorus-ICP-Acid Dil.	ug/mL	105.0	<2.00e-01	89.30	121.0	105.2	30.1	101.0	20.20	n/a
S961005049	D		Lead-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	101.0	10.10	n/a

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HNF-SD-WM-DP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005049	D		Sulfur-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	1.47e+02	153.0	150.0	4.00	111.0	10.10	n/a
S96T005049	D		Antimony-ICP-Acid Dil.	ug/mL	95.20	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	95.80	6.060	n/a
S96T005049	D		Selenium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	101.0	10.10	n/a
S96T005049	D		Silicon-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	94.90	113.0	104.0	17.4	102.0	5.050	n/a
S96T005049	D		Samarium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	99.20	10.10	n/a
S96T005049	D		Strontium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	101.0	1.010	n/a
S96T005049	D		Titanium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	99.10	1.010	n/a
S96T005049	D		Thallium-ICP-Acid Dil.	ug/mL	96.00	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	96.50	20.20	n/a
S96T005049	D		Uranium-ICP-Acid Dil.	ug/mL	97.50	<5.00e-01	76.70	464.0	270.4	143	91.50	50.50	n/a
S96T005049	D		Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	102.0	5.050	n/a
S96T005049	D		Zinc-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	5.880	7.050	6.465	18.1	102.0	1.010	n/a
S96T005049	D		Zirconium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	1.590	12.50	7.045	155	99.50	1.010	n/a
S96T005049			Fluoride-IC-Dionex 4000/4500	ug/mL	89.15	<1.20e-02	1.51e+03	1.49e+03	1.50e+03	1.33	93.73	13.33	n/a
S96T005049			Chloride-IC-Dionex 4000/4500	ug/mL	92.91	<1.70e-02	2.48e+02	257.0	252.3	3.56	92.03	18.89	n/a
S96T005049			Nitrite-IC - Dionex 4000/4500	ug/mL	91.67	<1.08e-01	1.52e+03	1.53e+03	1.52e+03	0.66	93.15	120.0	n/a
S96T005049			Bromide by Ion Chromatograph	ug/mL	94.40	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	91.00	138.9	n/a
S96T005049			Nitrate by IC-Dionex 4000/4500	ug/mL	100.3	2.13e-01	3.39e+04	3.35e+04	3.37e+04	1.19	96.63	154.4	n/a
S96T005049			Phosphate-IC-Dionex 4000/4500	ug/mL	95.96	<1.20e-01	<1.33e+02	<1.33e2	n/a	n/a	98.72	133.3	n/a
S96T005049			Sulfate by IC-Dionex 4000/4500	ug/mL	101.9	<1.38e-01	4.12e+02	399.0	405.2	3.21	101.4	153.3	n/a
S96T005049			Oxalate by IC-Dionex 4000/4500	ug/mL	100.0	<1.05e-01	<1.17e+02	<1.17e2	n/a	n/a	103.8	116.7	n/a
S96T005049			Cobalt-60 by GEA	uCi/mL	101.4	<2.15e-05	2.07e-03	2.11e-03	2.09e-03	1.91	n/a	n/a	12.6
S96T005049			Cesium-137 by GEA	uCi/mL	102.3	3.69e-05	6.460	6.660	6.560	3.05	n/a	n/a	0.170
S96T005049			Am-241 by Extraction	uCi/mL	90.76	<6.40e-05	<6.44e-05	7.75e-05	n/a	n/a	n/a	6.44e-05	5.67e+00
S96T005049			Alpha in Liquid Samples	uCi/mL	93.51	<4.00e-04	3.97e-03	3.90e-03	3.93e-03	1.78	n/a	1.00e-03	2.76E+01

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T004809			Bulk Density of Sample	g/mL	n/a	n/a	1.060	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004809			Volume % Solids	%	n/a	n/a	7.090	n/a	n/a	n/a	n/a	n/a	n/a

Table 3: Data Summary Report
AW-105 GRAB1

RISE: 10A
SEGMENT #: 5AW-96-7

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005020			Bulk Density of Sample	g/mL	n/a	n/a	1.320	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005020			DSC Exotherm on Perkin Elmer	Joules/g	97.12	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005020			pH on SST Samples	pH	99.62	n/a	12.26	12.25	12.25	0.08	n/a	1.00e-02	n/a
S96T005020			% Water by TGA on Perkin Elmer	%	100.7	n/a	64.68	66.26	65.47	2.41	n/a	n/a	n/a
S96T005020			TIC by Acid/Coulometry	ug/g	100.8	7.00e-01	9.69e+02	870.0	919.5	10.8	n/a	5.000	n/a
S96T005020			TOC by Persulfate/Coulometry	ug/g	89.67	13.50	1.77e+03	1.72e+03	1.74e+03	2.87	n/a	40.00	n/a
S96T005053	F		Strontium-89/90 High Level	uCi/g	104.3	1.70e-02	65.20	65.00	65.10	0.31	n/a	3.00e-03	2.54E-01
S96T005053	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	97.31	<3.09e-03	1.640	1.670	1.655	1.81	n/a	7.10e-02	1.36E+00
S96T005053	F		Silver -ICP-Fusion	ug/g	97.80	<1.00e-02	4.24e+02	366.0	395.0	14.7	n/a	194.0	n/a
S96T005053	F		Aluminium -ICP-Fusion	ug/g	97.00	<5.00e-02	1.22e+03	999.0	1.11e+03	19.9	n/a	968.0	n/a
S96T005053	F		Arsenic -ICP-Fusion	ug/g	100.8	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Boron -ICP-Fusion	ug/g	99.20	<5.00e-02	<9.69e+02	<9.70e2	n/a	n/a	n/a	968.0	n/a
S96T005053	F		Barium -ICP-Fusion	ug/g	99.20	<5.00e-02	<9.69e+02	<9.70e2	n/a	n/a	n/a	968.0	n/a
S96T005053	F		Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<96.90	<9.70e1	n/a	n/a	n/a	96.80	n/a
S96T005053	F		Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Calcium -ICP-Fusion	ug/g	95.40	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Cadmium -ICP-Fusion	ug/g	98.60	<5.00e-03	1.10e+02	<9.70e1	n/a	n/a	n/a	96.80	n/a
S96T005053	F		Cerium -ICP-Fusion	ug/g	97.60	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Cobalt -ICP-Fusion	ug/g	98.60	<2.00e-02	<3.88e+02	<3.88e2	n/a	n/a	n/a	388.0	n/a
S96T005053	F		Chromium -ICP-Fusion	ug/g	99.00	<1.00e-02	2.31e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S96T005053	F		Copper -ICP-Fusion	ug/g	99.40	<1.00e-02	<1.94e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S96T005053	F		Iron -ICP-Fusion	ug/g	99.40	<5.00e-02	1.27e+03	3.26e+03	2.26e+03	87.9	n/a	968.0	n/a
S96T005053	F		Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	1.56e+03	1.58e+03	1.57e+03	1.27	n/a	968.0	n/a
S96T005053	F		Lithium -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.94e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S96T005053	F		Magnesium -ICP-Fusion	ug/g	98.20	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Manganese -ICP-Fusion	ug/g	98.20	<1.00e-02	9.88e+02	967.0	977.5	2.15	n/a	194.0	n/a
S96T005053	F		Molybdenum -ICP-Fusion	ug/g	99.00	<5.00e-02	<9.69e+02	<9.70e2	n/a	n/a	n/a	968.0	n/a
S96T005053	F		Sodium -ICP-Fusion	ug/g	95.80	2.250	9.87e+04	9.14e+04	9.50e+04	7.68	n/a	1.94e+03	n/a
S96T005053	F		Neodymium -ICP-Fusion	ug/g	101.2	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Phosphorus -ICP-Fusion	ug/g	99.20	<2.00e-01	<3.88e+03	<3.88e3	n/a	n/a	n/a	3.88e+03	n/a
S96T005053	F		Lead -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Sulfur -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Antimony -ICP-Fusion	ug/g	90.20	<6.00e-02	<1.16e+03	1.30e+03	n/a	n/a	n/a	1.16e+03	n/a
S96T005053	F		Selenium -ICP-Fusion	ug/g	105.0	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Silicon -ICP-Fusion	ug/g	98.40	<5.00e-02	1.03e+03	1.18e+03	1.10e+03	13.6	n/a	968.0	n/a
S96T005053	F		Samarium -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.94e+03	<1.94e3	n/a	n/a	n/a	1.94e+03	n/a
S96T005053	F		Strontium -ICP-Fusion	ug/g	98.40	<1.00e-02	<1.94e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S96T005053	F		Titanium -ICP-Fusion	ug/g	96.00	<1.00e-02	<1.94e+02	<1.94e2	n/a	n/a	n/a	194.0	n/a
S96T005053	F		Thallium -ICP-Fusion	ug/g	97.20	<2.00e-01	<3.88e+03	<3.88e3	n/a	n/a	n/a	3.88e+03	n/a
S96T005053	F		Uranium -ICP-Fusion	ug/g	97.10	<5.00e-01	4.29e+04	4.47e+04	4.38e+04	4.11	n/a	9.68e+03	n/a
S96T005053	F		Vanadium -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.69e+02	<9.70e2	n/a	n/a	n/a	968.0	n/a
S96T005053	F		Zinc -ICP-Fusion	ug/g	99.40	1.60e-02	2.58e+02	403.0	330.5	43.9	n/a	194.0	n/a
S96T005053	F		Zirconium -ICP-Fusion	ug/g	98.00	<1.00e-02	8.44e+04	8.40e+04	8.42e+04	0.48	n/a	194.0	n/a
S96T005053	F		Cobalt-60 by GEA	uCi/g	97.35	<2.77e-02	9.60e-02	7.43e-02	8.51e-02	25.5	n/a	n/a	28.5

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HNF-SD-WM-DP-214, REV. D

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005053	F		Cesium-137 by GEA	uCi/g	95.75	<6.17e-02	20.66	20.60	20.63	0.48	n/a	n/a	1.65
S96T005053	F		Am-241 by Extraction	uCi/g	89.92	<5.46e-03	3.87e-01	3.81e-01	3.84e-01	1.56	n/a	5.10e-02	1.72E+00
S96T005053	F		Alpha of Digested Solid	uCi/g	88.75	3.00e-03	1.740	1.830	1.785	5.04	n/a	2.10e-02	5.55E+00
S96T005056	W	OH-	by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	41.70	n/a
S96T005056	W		Fluoride-IC-Dionex 4000/4500	ug/g	90.51	<1.20e-02	3.84e+04	3.48e+04	3.66e+04	9.84	n/a	116.3	n/a
S96T005056	W		Chloride-IC-Dionex 4000/4500	ug/g	91.52	2.00e-02	1.75e+02	<1.66e2	n/a	n/a	n/a	164.8	n/a
S96T005056	W		Nitrite-IC - Dionex 4000/4500	ug/g	91.67	<1.08e-01	3.68e+03	3.52e+03	3.60e+03	4.44	n/a	1.05e+03	n/a
S96T005056	W		Bromide by Ion Chromatograph	ug/g	94.57	<1.25e-01	<1.21e+03	<1.22e3	n/a	n/a	n/a	1.21e+03	n/a
S96T005056	W		Nitrate by IC-Dionex 4000/4500	ug/g	100.0	1.79e-01	1.86e+04	1.69e+04	1.78e+04	9.58	n/a	1.35e+03	n/a
S96T005056	W		Phosphate-IC-Dionex 4000/4500	ug/g	95.78	<1.20e-01	<1.16e+03	<1.17e3	n/a	n/a	n/a	1.16e+03	n/a
S96T005056	W		Sulfate by IC-Dionex 4000/4500	ug/g	101.6	<1.38e-01	1.54e+03	1.73e+03	1.63e+03	11.6	n/a	1.34e+03	n/a
S96T005056	W		Oxalate by IC-Dionex 4000/4500	ug/g	99.24	<1.05e-01	<1.02e+03	<1.03e3	n/a	n/a	n/a	1.02e+03	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005050			Bulk Density of Sample	g/mL	n/a	n/a	1.050	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005050			DSC Exotherm on Perkin Elmer	Joules/g	92.30	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005050			OH- by Pot. Titration	ug/mL	106.4	<42.00	8.64e+03	8.53e+03	8.58e+03	1.28	n/a	500.0	n/a
S96T005050			pH Direct	pH	100.0	n/a	13.45	13.49	13.47	0.30	n/a	1.00e-02	n/a
S96T005050			% Water by TGA on Perkin Elmer	%	99.27	n/a	88.66	88.43	88.55	0.26	n/a	n/a	n/a
S96T005050			TIC by Acid/Coulometry	ug/mL	100.2	6.00e-01	8.50e+02	841.0	845.5	1.06	n/a	5.000	n/a
S96T005050			Tot. Organic Carbon by Coul.	ug/mL	106.3	1.200	2.57e+03	2.51e+03	2.54e+03	2.36	n/a	55.00	n/a
S96T005050			Strontium-89/90 High Level	uCi/mL	97.14	5.89e-05	1.72e-03	2.32e-03	2.02e-03	29.7	n/a	1.18e-05	3.26E+00
S96T005050			Pu-239/240 by TRU-SPEC Resin	uCi/mL	90.60	<7.39e-06	1.82e-03	1.91e-03	1.86e-03	4.83	n/a	1.82e-04	1.77E+00
S96T005050	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	2.730	2.820	2.775	3.24	95.60	1.010	n/a
S96T005050	D		Aluminum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	6.96e+02	713.0	704.5	2.41	109.0	5.050	n/a
S96T005050	D		Arsenic-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	114.0	10.10	n/a
S96T005050	D		Boron-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	5.930	6.180	6.055	4.13	98.30	5.050	n/a
S96T005050	D		Barium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	101.0	5.050	n/a
S96T005050	D		Beryllium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-03	1.360	1.380	1.370	1.46	102.0	5.05e-01	n/a
S96T005050	D		Bismuth-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	100.0	10.10	n/a
S96T005050	D		Calcium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	103.0	10.10	n/a
S96T005050	D		Cadmium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	101.0	5.05e-01	n/a
S96T005050	D		Cerium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	100.0	10.10	n/a
S96T005050	D		Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	102.0	2.020	n/a
S96T005050	D		Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	28.10	28.60	28.35	1.76	103.0	1.010	n/a
S96T005050	D		Copper-ICP-Acid Dil.	ug/mL	104.0	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	105.0	1.010	n/a
S96T005050	D		Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	102.0	5.050	n/a
S96T005050	D		Potassium-ICP-Acid Dil.	ug/mL	94.40	<5.00e-01	1.08e+04	1.11e+04	1.10e+04	2.74	333.0	50.50	n/a
S96T005050	D		Lanthanum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-02	< 5.050	5.950	n/a	n/a	108.0	5.050	n/a
S96T005050	D		Lithium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	104.0	1.010	n/a
S96T005050	D		Magnesium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 10.10	<1.01e0	n/a	n/a	95.20	10.10	n/a
S96T005050	D		Manganese-ICP-Acid Dil.	ug/mL	98.00	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	97.20	1.010	n/a
S96T005050	D		Molybdenum-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	105.0	5.050	n/a
S96T005050	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	3.66e+04	3.76e+04	3.71e+04	2.70	686.0	10.10	n/a
S96T005050	D		Neodymium-ICP-Acid Dil.	ug/mL	103.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	108.0	10.10	n/a
S96T005050	D		Nickel-ICP-Acid Dil.	ug/mL	100.2	<2.00e-02	2.610	2.540	2.575	2.72	99.90	2.020	n/a
S96T005050	D		Phosphorus-ICP-Acid Dil.	ug/mL	98.60	<2.00e-01	4.43e+02	448.0	445.5	1.12	102.0	20.20	n/a
S96T005050	D		Lead-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	100.0	10.10	n/a
S96T005050	D		Sulfur-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	5.86e+02	591.0	588.5	0.85	106.0	10.10	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005050	D		Antimony-ICP-Acid Dil.	ug/mL	94.80	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	98.70	6.060	n/a
S96T005050	D		Selenium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	105.0	10.10	n/a
S96T005050	D		Silicon-ICP-Acid Dil.	ug/mL	98.80	<5.00e-02	56.90	58.60	57.75	2.94	104.0	5.050	n/a
S96T005050	D		Samarium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	101.0	10.10	n/a
S96T005050	D		Strontium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	101.0	1.010	n/a
S96T005050	D		Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	99.20	1.010	n/a
S96T005050	D		Thallium-ICP-Acid Dil.	ug/mL	97.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	97.20	20.20	n/a
S96T005050	D		Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-01	1.23e+02	151.0	137.0	20.4	103.5	50.50	n/a
S96T005050	D		Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	102.0	5.050	n/a
S96T005050	D		Zinc-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	6.970	7.180	7.075	2.97	103.0	1.010	n/a
S96T005050	D		Zirconium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	49.50	62.50	56.00	23.2	103.0	1.010	n/a
S96T005050			Fluoride-IC-Dionex 4000/4500	ug/mL	89.15	<1.20e-02	9.61e+03	9.61e+03	9.61e+03	0.00	n/a	13.33	n/a
S96T005050			Chloride-IC-Dionex 4000/4500	ug/mL	92.91	<1.70e-02	3.15e+02	312.0	313.4	0.96	n/a	18.89	n/a
S96T005050			Nitrite-IC - Dionex 4000/4500	ug/mL	91.67	<1.08e-01	4.64e+03	4.64e+03	4.64e+03	0.00	n/a	120.0	n/a
S96T005050			Bromide by Ion Chromatograph	ug/mL	94.40	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	n/a	138.9	n/a
S96T005050			Nitrate by IC-Dionex 4000/4500	ug/mL	100.3	2.13e-01	2.68e+04	2.69e+04	2.69e+04	0.37	n/a	154.4	n/a
S96T005050			Phosphate-IC-Dionex 4000/4500	ug/mL	95.96	<1.20e-01	2.89e+02	324.0	306.6	11.4	n/a	133.3	n/a
S96T005050			Sulfate by IC-Dionex 4000/4500	ug/mL	101.9	<1.38e-01	1.55e+03	1.58e+03	1.56e+03	1.92	n/a	153.3	n/a
S96T005050			Oxalate by IC-Dionex 4000/4500	ug/mL	100.0	<1.05e-01	3.20e+02	311.0	315.6	2.85	n/a	116.7	n/a
S96T005050			Cobalt-60 by GEA	uCi/mL	99.36	<2.93e-04	2.57e-02	2.59e-02	2.58e-02	0.78	n/a	n/a	5.85
S96T005050			Cesium-137 by GEA	uCi/mL	100.2	<7.59e-04	26.70	26.20	26.45	1.89	n/a	n/a	0.150
S96T005050			Am-241 by Extraction	uCi/mL	87.39	<1.54e-05	2.63e-04	2.89e-04	2.76e-04	9.42	n/a	3.25e-05	1.58e+00
S96T005050			Alpha in Liquid Samples	uCi/mL	100.0	<5.10e-04	3.03e-03	2.55e-03	2.79e-03	17.2	70.75	1.00e-03	3.24E+01

Sludge (from Liquid Grab Sample); Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T004811			Bulk Density of Sample	g/mL	n/a	n/a	1.240	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004811			Volume % Solids	%	n/a	n/a	67.80	n/a	n/a	n/a	n/a	n/a	n/a

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Table 3: Data Summary Report
AW-105 GRAB1

RISER: 10A
SEGMENT #: 5AW-96-9

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005021			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
S96T005021			DSC Exotherm using Mettler	Joules/g	96.66	n/a	14.10	0.00e+00	7.050	200	n/a	n/a	n/a
S96T005021			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	42.10	0.00e+00	21.05	200	n/a	n/a	n/a
S96T005021			pH on SST Samples	pH	99.62	n/a	12.44	12.47	12.46	0.24	n/a	1.00e-02	n/a
S96T005021			% Water by TGA using Mettler	%	99.12	n/a	66.46	66.61	66.53	0.23	n/a	n/a	n/a
S96T005021			TIC by Acid/Coulometry	ug/g	100.8	7.00e-01	9.21e+02	827.0	874.0	10.8	n/a	5.000	n/a
S96T005021			TOC by Persulfate/Coulometry	ug/g	89.67	13.50	1.64e+03	1.70e+03	1.67e+03	3.59	n/a	40.00	n/a
S96T005054	F		Strontium-89/90 High Level	uCi/g	104.3	1.70e-02	50.70	50.00	50.35	1.39	n/a	3.00e-03	3.01E-01
S96T005054	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	97.31	<3.09e-03	1.770	1.730	1.750	2.29	n/a	7.40e-02	1.63E+00
S96T005054	F		Silver -ICP-Fusion	ug/g	97.80	<1.00e-02	3.42e+02	421.0	381.5	20.7	n/a	201.0	n/a
S96T005054	F		Aluminium -ICP-Fusion	ug/g	97.00	<5.00e-02	1.03e+03	1.39e+03	1.21e+03	29.8	n/a	1.01e+03	n/a
S96T005054	F		Arsenic -ICP-Fusion	ug/g	100.8	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Boron -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.01e+03	<1.02e3	n/a	n/a	n/a	1.01e+03	n/a
S96T005054	F		Barium -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.01e+03	<1.02e3	n/a	n/a	n/a	1.01e+03	n/a
S96T005054	F		Beryllium -ICP-Fusion	ug/g	101.0	<5.00e-03	<1.01e+02	<1.02e2	n/a	n/a	n/a	101.0	n/a
S96T005054	F		Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Calcium -ICP-Fusion	ug/g	95.40	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Cadmium -ICP-Fusion	ug/g	98.60	<5.00e-03	<1.01e+02	126.0	n/a	n/a	n/a	101.0	n/a
S96T005054	F		Cerium -ICP-Fusion	ug/g	97.60	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Cobalt -ICP-Fusion	ug/g	98.60	<2.00e-02	<4.03e+02	<4.10e2	n/a	n/a	n/a	403.0	n/a
S96T005054	F		Chromium -ICP-Fusion	ug/g	99.00	<1.00e-02	<2.01e+02	267.0	n/a	n/a	n/a	201.0	n/a
S96T005054	F		Copper -ICP-Fusion	ug/g	99.40	<1.00e-02	<2.01e+02	<2.05e2	n/a	n/a	n/a	201.0	n/a
S96T005054	F		Iron -ICP-Fusion	ug/g	99.40	<5.00e-02	1.34e+03	1.35e+03	1.34e+03	0.74	n/a	1.01e+03	n/a
S96T005054	F		Lanthanum -ICP-Fusion	ug/g	99.40	<5.00e-02	1.47e+03	1.46e+03	1.46e+03	0.68	n/a	1.01e+03	n/a
S96T005054	F		Lithium -ICP-Fusion	ug/g	97.80	<1.00e-02	<2.01e+02	<2.05e2	n/a	n/a	n/a	201.0	n/a
S96T005054	F		Magnesium -ICP-Fusion	ug/g	95.20	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Manganese -ICP-Fusion	ug/g	98.20	<1.00e-02	8.29e+02	854.0	842.5	3.20	n/a	201.0	n/a
S96T005054	F		Molybdenum -ICP-Fusion	ug/g	99.00	<5.00e-02	<1.01e+03	<1.02e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Sodium -ICP-Fusion	ug/g	95.80	<2.25e0	9.14e+04	9.08e+04	9.11e+04	0.66	n/a	2.01e+03	n/a
S96T005054	F		Neodymium -ICP-Fusion	ug/g	101.2	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Phosphorus -ICP-Fusion	ug/g	99.20	<2.00e-01	<4.03e+03	<4.10e3	n/a	n/a	n/a	4.03e+03	n/a
S96T005054	F		Lead -ICP-Fusion	ug/g	98.40	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Sulfur -ICP-Fusion	ug/g	98.60	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Antimony -ICP-Fusion	ug/g	90.20	<6.00e-02	<1.21e+03	1.47e+03	n/a	n/a	n/a	1.21e+03	n/a
S96T005054	F		Selenium -ICP-Fusion	ug/g	105.0	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Silicon -ICP-Fusion	ug/g	98.40	<5.00e-02	1.01e+03	<1.02e3	n/a	n/a	n/a	1.01e+03	n/a
S96T005054	F		Samarium -ICP-Fusion	ug/g	101.0	<1.00e-01	<2.01e+03	<2.05e3	n/a	n/a	n/a	2.01e+03	n/a
S96T005054	F		Strontium -ICP-Fusion	ug/g	98.40	<1.00e-02	<2.01e+02	<2.05e2	n/a	n/a	n/a	201.0	n/a
S96T005054	F		Titanium -ICP-Fusion	ug/g	96.00	<1.00e-02	<2.01e+02	<2.05e2	n/a	n/a	n/a	201.0	n/a
S96T005054	F		Thallium -ICP-Fusion	ug/g	97.20	<2.00e-01	<4.03e+03	<4.10e3	n/a	n/a	n/a	4.03e+03	n/a
S96T005054	F		Uranium -ICP-Fusion	ug/g	97.10	<5.00e-01	5.60e+04	5.30e+04	5.45e+04	5.50	n/a	1.01e+04	n/a
S96T005054	F		Vanadium -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.01e+03	<1.02e3	n/a	n/a	n/a	1.01e+03	n/a
S96T005054	F		Zinc -ICP-Fusion	ug/g	99.40	1.60e-02	5.61e+02	258.0	409.5	74.0	n/a	201.0	n/a
S96T005054	F		Zirconium -ICP-Fusion	ug/g	98.00	<1.00e-02	6.93e+04	6.98e+04	6.96e+04	0.72	n/a	201.0	n/a

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Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005054	F	Cobalt-60 by GEA	uCi/g	97.35	<2.77e-02	7.46e-02	5.55e-02	6.51e-02	29.4	n/a	n/a	36.2
S96T005054	F	Cesium-137 by GEA	uCi/g	95.75	<6.17e-02	18.86	19.20	19.03	1.57	n/a	n/a	1.76
S96T005054	F	Am-241 by Extraction	uCi/g	89.92	<5.46e-03	3.71e-01	3.55e-01	3.63e-01	4.41	n/a	5.30e-02	1.84e+00
S96T005054	F	Alpha of Digested Solid	uCi/g	81.39	<4.70e-03	2.390	2.360	2.375	1.26	n/a	5.00e-03	3.34e+00
S96T005057	W	OH- by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	n/a	41.70
S96T005057	W	Fluoride-IC-Dionex 4000/4500	ug/g	90.68	<1.20e-02	2.82e+04	2.86e+04	2.84e+04	1.41	n/a	n/a	47.21
S96T005057	W	Chloride-IC-Dionex 4000/4500	ug/g	92.66	2.00e-02	1.86e+02	208.0	196.8	11.2	n/a	n/a	66.89
S96T005057	W	Nitrite-IC - Dionex 4000/4500	ug/g	92.96	<1.08e-01	2.99e+03	2.99e+03	2.99e+03	0.00	n/a	n/a	425.0
S96T005057	W	Bromide by Ion Chromatograph	ug/g	94.57	<1.25e-01	<4.92e+02	<4.94e2	n/a	n/a	n/a	n/a	491.8
S96T005057	W	Nitrate by IC-Dionex 4000/4500	ug/g	100.0	1.70e-01	1.83e+04	1.83e+04	1.83e+04	0.00	n/a	n/a	546.8
S96T005057	W	Phosphate-IC-Dionex 4000/4500	ug/g	95.23	<1.20e-01	<4.72e+02	<4.74e2	n/a	n/a	n/a	n/a	472.1
S96T005057	W	Sulfate by IC-Dionex 4000/4500	ug/g	101.3	<1.38e-01	1.19e+03	1.26e+03	1.22e+03	5.71	n/a	n/a	543.1
S96T005057	W	Oxalate by IC-Dionex 4000/4500	ug/g	99.81	<1.05e-01	4.46e+02	<4.15e2	n/a	n/a	n/a	n/a	413.1

Interstitial Liquid: Interstitial Liquid

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005051		Bulk Density of Sample	g/mL	n/a	n/a	1.030	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005051		DSC Exotherm on Perkin Elmer	Joules/g	93.95	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005051		OH- by Pot. Titration	ug/mL	106.4	<42.00	9.41e+03	9.50e+03	9.46e+03	0.95	n/a	500.0	n/a
S96T005051		pH Direct	pH	100.0	n/a	13.48	13.55	13.52	0.52	n/a	1.00e-02	n/a
S96T005051		% Water by TGA on Perkin Elmer	%	99.27	n/a	88.68	89.02	88.85	0.38	n/a	n/a	n/a
S96T005051		TIC by Acid/Coulometry	ug/mL	100.2	6.00e-01	7.45e+02	741.0	743.0	0.54	n/a	5.000	n/a
S96T005051		Tot. Organic Carbon by Coul.	ug/mL	106.3	1.200	2.24e+03	2.18e+03	2.21e+03	2.71	n/a	55.00	n/a
S96T005051		Strontium-89/90 High Level	uCi/mL	108.6	<1.23e-05	6.84e-01	6.23e-01	6.53e-01	9.33	n/a	2.34e-05	2.16e-01
S96T005051		Pu-239/240 by TRU-SPEC Resin	uCi/mL	90.60	<7.39e-06	5.85e-03	5.30e-03	5.58e-03	9.87	n/a	1.00e-03	1.80e+00
S96T005051	D	Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	2.610	2.620	2.615	0.38	n/a	1.010	n/a
S96T005051	D	Aluminum-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	6.60e+02	667.0	663.5	1.06	n/a	5.050	n/a
S96T005051	D	Arsenic-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Boron-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D	Barium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D	Beryllium-ICP-Acid Dil.	ug/mL	102.4	<5.00e-03	1.200	1.210	1.205	0.83	n/a	5.05e-01	n/a
S96T005051	D	Bismuth-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Calcium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Cadmium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-03	<5.05e-01	<5.05e-01	n/a	n/a	n/a	5.05e-01	n/a
S96T005051	D	Cerium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Cobalt-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	n/a	2.020	n/a
S96T005051	D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	30.40	30.50	30.45	0.33	n/a	1.010	n/a
S96T005051	D	Copper-ICP-Acid Dil.	ug/mL	104.0	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005051	D	Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D	Potassium-ICP-Acid Dil.	ug/mL	94.40	<5.00e-01	1.02e+04	1.04e+04	1.03e+04	1.94	n/a	50.50	n/a
S96T005051	D	Lanthanum-ICP-Acid Dil.	ug/mL	100.8	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D	Lithium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005051	D	Magnesium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Manganese-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005051	D	Molybdenum-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D	Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	3.71e+04	3.74e+04	3.72e+04	0.81	n/a	10.10	n/a
S96T005051	D	Neodymium-ICP-Acid Dil.	ug/mL	103.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D	Nickel-ICP-Acid Dil.	ug/mL	100.2	<2.00e-02	2.400	<2.02e0	n/a	n/a	n/a	2.020	n/a
S96T005051	D	Phosphorus-ICP-Acid Dil.	ug/mL	98.60	<2.00e-01	4.17e+02	416.0	416.5	0.24	n/a	20.20	n/a
S96T005051	D	Lead-ICP-Acid Dil.	ug/mL	99.40	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005051	D		Sulfur-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	5.40e+02	543.0	541.5	0.55	n/a	10.10	n/a
S96T005051	D		Antimony-ICP-Acid Dil.	ug/mL	94.80	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	n/a	6.060	n/a
S96T005051	D		Selenium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D		Silicon-ICP-Acid Dil.	ug/mL	98.80	<5.00e-02	52.40	55.20	53.80	5.20	n/a	5.050	n/a
S96T005051	D		Samarium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005051	D		Strontium-ICP-Acid Dil.	ug/mL	99.60	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005051	D		Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005051	D		Thallium-ICP-Acid Dil.	ug/mL	97.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	n/a	20.20	n/a
S96T005051	D		Uranium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-01	< 50.50	<5.05e1	n/a	n/a	n/a	50.50	n/a
S96T005051	D		Vanadium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005051	D		Zinc-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	10.30	10.30	10.30	0.00	n/a	1.010	n/a
S96T005051	D		Zirconium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	13.70	6.720	10.21	68.4	n/a	1.010	n/a
S96T005051			Fluoride-IC-Dionex 4000/4500	ug/mL	98.47	<1.20e-02	1.25e+04	1.26e+04	1.26e+04	0.80	92.03	25.45	n/a
S96T005051			Chloride-IC-Dionex 4000/4500	ug/mL	97.72	<1.70e-02	3.99e+02	420.0	409.4	5.13	95.57	36.06	n/a
S96T005051			Nitrite-IC - Dionex 4000/4500	ug/mL	97.96	<1.08e-01	4.70e+03	4.68e+03	4.69e+03	0.43	100.7	229.1	n/a
S96T005051			Bromide by Ion Chromatograph	ug/mL	104.1	<1.25e-01	<2.65e+02	<2.65e2	n/a	n/a	n/a	103.4	n/a
S96T005051			Nitrate by IC-Dionex 4000/4500	ug/mL	103.9	2.03e-01	2.77e+04	2.81e+04	2.79e+04	1.43	110.9	294.8	n/a
S96T005051			Phosphate-IC-Dionex 4000/4500	ug/mL	103.3	<1.20e-01	5.90e+02	599.0	594.2	1.51	102.2	254.5	n/a
S96T005051			Sulfate by IC-Dionex 4000/4500	ug/mL	102.5	<1.38e-01	1.61e+03	1.65e+03	1.63e+03	2.45	102.9	292.7	n/a
S96T005051			Oxalate by IC-Dionex 4000/4500	ug/mL	105.3	<1.05e-01	3.27e+02	<2.23e2	n/a	n/a	n/a	106.5	n/a
S96T005051			Cobalt-60 by GEA	uCi/mL	99.36	<2.93e-04	2.45e-02	2.32e-02	2.38e-02	5.45	n/a	n/a	5.94
S96T005051			Cesium-137 by GEA	uCi/mL	100.2	<7.59e-04	25.00	25.00	25.00	0.00	n/a	n/a	0.160
S96T005051			Am-241 by Extraction	uCi/mL	90.76	<6.40e-05	<6.13e-05	<5.88E-5	n/a	n/a	n/a	6.13e-05	1.00E+02
S96T005051			Alpha in Liquid Samples	uCi/mL	100.0	<5.10e-04	1.05e-03	1.69e-03	1.37e-03	46.7	n/a	1.00e-03	7.14E+01

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T004813			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
S96T004813			Volume % Solids	%	n/a	n/a	73.70	n/a	n/a	n/a	n/a	n/a	n/a

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Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-10

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005010			DSC Exotherm using Mettler	Joules/g	92.44	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005010			OH- by Pot. Titration	ug/mL	99.76	<42.00	2.90e+03	2.85e+03	2.88e+03	1.07	n/a	625.0	n/a	n/a
S96T005010			pH Direct	pH	99.86	n/a	13.41	13.42	13.41	0.74	n/a	1.00e-02	n/a	n/a
S96T005010			Specific Gravity	Sp.G.	99.60	n/a	1.016	1.027	1.022	1.08	n/a	1.00e-02	n/a	n/a
S96T005010			% Water by TGA using Mettler	%	99.64	n/a	95.10	94.98	95.04	0.13	n/a	n/a	n/a	n/a
S96T005010			TIC by Acid/Coulometry	ug/mL	106.1	2.500	4.32e+02	437.0	434.5	1.15	88.10	5.000	n/a	n/a
S96T005010			Tot. Organic Carbon by Coul.	ug/mL	103.7	1.200	1.51e+03	1.53e+03	1.52e+03	1.32	103.0	55.00	n/a	n/a
S96T005010	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.040	1.070	1.055	2.84	80.50	4.10e-01	n/a	n/a
S96T005010	D		Aluminium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	16.00	16.20	16.10	1.24	98.50	2.050	n/a	n/a
S96T005010	D		Arsenic-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	108.0	4.100	n/a	n/a
S96T005010	D		Boron-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	2.850	2.870	2.860	0.70	100.0	2.050	n/a	n/a
S96T005010	D		Barium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.80	2.050	n/a	n/a
S96T005010	D		Beryllium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	102.0	2.05e-01	n/a	n/a
S96T005010	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	107.0	4.100	n/a	n/a
S96T005010	D		Calcium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	112.0	4.100	n/a	n/a
S96T005010	D		Cadmium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	102.0	2.05e-01	n/a	n/a
S96T005010	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a	n/a
S96T005010	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	103.0	8.20e-01	n/a	n/a
S96T005010	D		Chromium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	6.10e-01	6.48e-01	6.29e-01	6.04	103.0	4.10e-01	n/a	n/a
S96T005010	D		Copper-ICP-Acid Dil.	ug/mL	105.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	105.0	4.10e-01	n/a	n/a
S96T005010	D		Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a	n/a
S96T005010	D		Potassium-ICP-Acid Dil.	ug/mL	97.40	<5.00e-01	1.27e+03	1.27e+03	1.27e+03	0.00	98.80	20.50	n/a	n/a
S96T005010	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a	n/a
S96T005010	D		Lithium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	102.0	4.10e-01	n/a	n/a
S96T005010	D		Magnesium-ICP-Acid Dil.	ug/mL	96.26	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	96.80	4.100	n/a	n/a
S96T005010	D		Manganese-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	96.90	4.10e-01	n/a	n/a
S96T005010	D		Molybdenum-ICP-Acid Dil.	ug/mL	102.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	105.0	2.050	n/a	n/a
S96T005010	D		Sodium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	1.27e+04	1.28e+04	1.28e+04	0.78	88.00	4.100	n/a	n/a
S96T005010	D		Neodymium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	102.0	4.100	n/a	n/a
S96T005010	D		Nickel-ICP-Acid Dil.	ug/mL	100.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	101.0	8.20e-01	n/a	n/a
S96T005010	D		Phosphorus-ICP-Acid Dil.	ug/mL	99.00	<2.00e-01	13.30	13.00	13.15	2.28	102.0	8.200	n/a	n/a
S96T005010	D		Lead-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	102.0	4.100	n/a	n/a
S96T005010	D		Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 46.50	45.90	46.20	1.30	101.0	4.100	n/a	n/a
S96T005010	D		Antimony-ICP-Acid Dil.	ug/mL	96.80	<6.00e-02	< 2.460	<2.46e0	n/a	n/a	98.50	2.460	n/a	n/a
S96T005010	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	4.100	n/a	n/a
S96T005010	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	39.60	40.10	39.85	1.25	105.0	2.050	n/a	n/a
S96T005010	D		Samarium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	97.50	4.100	n/a	n/a
S96T005010	D		Strontium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	99.60	4.10e-01	n/a	n/a
S96T005010	D		Titanium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	100.0	4.10e-01	n/a	n/a
S96T005010	D		Thallium-ICP-Acid Dil.	ug/mL	96.80	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	96.70	8.200	n/a	n/a
S96T005010	D		Uranium-ICP-Acid Dil.	ug/mL	97.30	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	116.5	20.50	n/a	n/a
S96T005010	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a	n/a
S96T005010	D		Zinc-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	2.610	2.670	2.640	2.27	104.0	4.10e-01	n/a	n/a
S96T005010	D		Zirconium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	101.0	4.10e-01	n/a	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005010			Fluoride-IC-Dionex 4000/4500	ug/mL	90.68	<1.20e-02	1.31e+02	129.0	129.9	1.54	86.10	13.33	n/a
S96T005010			Chloride-IC-Dionex 4000/4500	ug/mL	97.34	<1.70e-02	2.14e+02	210.0	211.8	1.89	96.33	18.89	n/a
S96T005010			Nitrite-IC - Dionex 4000/4500	ug/mL	91.85	<1.08e-01	1.09e+03	1.07e+03	1.08e+03	1.85	86.67	120.0	n/a
S96T005010			Bromide by Ion Chromatograph	ug/mL	98.98	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	87.27	138.9	n/a
S96T005010			Nitrate by IC-Dionex 4000/4500	ug/mL	101.3	<1.39e-01	2.46e+04	2.48e+04	2.47e+04	0.81	110.6	154.4	n/a
S96T005010			Phosphate-IC-Dionex 4000/4500	ug/mL	97.43	<1.20e-01	<1.33e+02	<1.33e2	n/a	n/a	90.46	133.3	n/a
S96T005010			Sulfate by IC-Dionex 4000/4500	ug/mL	102.4	<1.38e-01	2.21e+02	187.0	204.1	16.7	94.29	153.3	n/a
S96T005010			Oxalate by IC-Dionex 4000/4500	ug/mL	101.1	<1.05e-01	<1.17e+02	<1.17e2	n/a	n/a	93.84	116.7	n/a
S96T005013			Strontium-89/90 High Level	uCi/mL	106.4	1.16e-04	2.11e-02	1.93e-02	2.02e-02	8.91	n/a	2.80e-05	1.49E+00
S96T005013			Pu-239/240 by TRU-SPEC Resin	uCi/mL	100.7	<4.45e-06	<4.58e-06	<4.15E-6	n/a	n/a	n/a	4.58e-06	7.12E+00
S96T005013			Cobalt-60 by GEA	uCi/mL	98.07	<3.85e-05	1.30e-04	1.04e-04	1.17e-04	22.2	n/a	n/a	21.6
S96T005013			Cesium-137 by GEA	uCi/mL	106.6	<7.27e-05	7.19e-01	7.14e-01	7.16e-01	0.70	n/a	n/a	0.290
S96T005013			Am-241 by Extraction	uCi/mL	100.8	<6.64e-06	<6.57e-06	<5.58E-6	n/a	n/a	n/a	6.57e-06	1.00E+02
S96T005013			Alpha in Liquid Samples	uCi/mL	105.2	<7.07e-05	<7.87e-05	<7.07E-5	n/a	n/a	87.74	9.44e-05	1.62E+02

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HNF-SD-WM-DP-214, REV. 0

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-11

SEGMENT PORTION: Supernate

Sample#	R	As#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005011			DSC Exotherm using Mettler	Joules/g	92.44	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005011			OH- by Pot. Titration	ug/mL	99.76	<42.00	3.15e+03	3.37e+03	3.26e+03	6.75	n/a	625.0	n/a
S96T005011			pH Direct	pH	99.86	n/a	13.46	13.46	13.46	0.00	n/a	1.00e-02	n/a
S96T005011			Specific Gravity	Sp.G.	99.60	n/a	1.021	1.025	1.023	0.39	n/a	1.00e-02	n/a
S96T005011			% Water by TGA using Mettler	%	99.64	n/a	94.79	94.92	94.86	0.14	n/a	n/a	n/a
S96T005011			TIC by Acid/Coulometry	ug/mL	106.1	2.500	3.67e+02	398.0	382.5	8.10	n/a	5,000	n/a
S96T005011			Tot. Organic Carbon by Coul.	ug/mL	103.7	1.200	1.44e+03	1.42e+03	1.43e+03	1.40	n/a	55.00	n/a
S96T005011	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.160	1.150	1.155	0.87	81.10	4.10e-01	n/a
S96T005011	D		Aluminium-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	16.90	16.90	16.90	0.00	98.30	2.050	n/a
S96T005011	D		Arsenic-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	107.0	4.100	n/a
S96T005011	D		Boron-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	2.680	2.660	2.670	0.75	98.70	2.050	n/a
S96T005011	D		Barium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.10	2.050	n/a
S96T005011	D		Beryllium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	101.0	2.05e-01	n/a
S96T005011	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005011	D		Calcium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	4.100	n/a
S96T005011	D		Cadmium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	102.0	2.05e-01	n/a
S96T005011	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	99.50	4.100	n/a
S96T005011	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	103.0	8.20e-01	n/a
S96T005011	D		Chromium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	6.53e-01	6.43e-01	6.48e-01	1.54	102.0	4.10e-01	n/a
S96T005011	D		Copper-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	105.0	4.10e-01	n/a
S96T005011	D		Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a
S96T005011	D		Potassium-ICP-Acid Dil.	ug/mL	97.40	<5.00e-01	1.31e+03	1.31e+03	1.31e+03	0.00	86.40	20.50	n/a
S96T005011	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005011	D		Lithium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	102.0	4.10e-01	n/a
S96T005011	D		Magnesium-ICP-Acid Dil.	ug/mL	96.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	95.60	4.100	n/a
S96T005011	D		Manganese-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	96.10	4.10e-01	n/a
S96T005011	D		Molybdenum-ICP-Acid Dil.	ug/mL	102.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	105.0	2.050	n/a
S96T005011	D		Sodium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	1.29e+04	1.29e+04	1.29e+04	0.00	17.10	4.100	n/a
S96T005011	D		Neodymium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	102.0	4.100	n/a
S96T005011	D		Nickel-ICP-Acid Dil.	ug/mL	100.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	101.0	8.20e-01	n/a
S96T005011	D		Phosphorus-ICP-Acid Dil.	ug/mL	99.00	<2.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	8.200	n/a
S96T005011	D		Lead-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	4.100	n/a
S96T005011	D		Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	98.40	4.100	n/a
S96T005011	D		Antimony-ICP-Acid Dil.	ug/mL	96.80	<6.00e-02	< 2.460	<2.46e0	n/a	n/a	99.60	2.460	n/a
S96T005011	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	4.100	n/a
S96T005011	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	39.10	39.00	39.05	0.26	103.0	2.050	n/a
S96T005011	D		Samarium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	96.50	4.100	n/a
S96T005011	D		Strontium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	98.80	4.10e-01	n/a
S96T005011	D		Titanium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	99.70	4.10e-01	n/a
S96T005011	D		Thallium-ICP-Acid Dil.	ug/mL	96.80	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	95.50	8.200	n/a
S96T005011	D		Uranium-ICP-Acid Dil.	ug/mL	97.30	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	115.5	20.50	n/a
S96T005011	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005011	D		Zinc-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	2.820	2.800	2.810	0.71	103.0	4.10e-01	n/a
S96T005011	D		Zirconium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	99.90	4.10e-01	n/a

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HNF-SD-WM-DP-214, REV. D

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005011			Fluoride-IC-Dionex 4000/4500	ug/mL	90.68	<1.20e-02	1.59e+02	153.0	156.2	3.85	n/a	13.33	n/a
S96T005011			Chloride-IC-Dionex 4000/4500	ug/mL	97.34	<1.70e-02	2.52e+02	248.0	249.8	1.60	n/a	18.89	n/a
S96T005011			Nitrite-IC - Dionex 4000/4500	ug/mL	91.85	<1.08e-01	1.28e+03	1.25e+03	1.27e+03	2.37	n/a	120.0	n/a
S96T005011			Bromide by Ion Chromatograph	ug/mL	98.98	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	n/a	138.9	n/a
S96T005011			Nitrate by IC-Dionex 4000/4500	ug/mL	101.3	<1.39e-01	2.92e+04	2.85e+04	2.88e+04	2.43	n/a	154.4	n/a
S96T005011			Phosphate-IC-Dionex 4000/4500	ug/mL	97.43	<1.20e-01	<1.33e+02	<1.33e2	n/a	n/a	n/a	133.3	n/a
S96T005011			Sulfate by IC-Dionex 4000/4500	ug/mL	102.4	<1.38e-01	2.14e+02	214.0	213.8	0.00	n/a	153.3	n/a
S96T005011			Oxalate by IC-Dionex 4000/4500	ug/mL	101.1	<1.05e-01	<1.17e+02	<1.17e2	n/a	n/a	n/a	116.7	n/a
S96T005014			Strontium-89/90 High Level	uCi/mL	106.4	1.16e-04	2.41e-02	2.62e-02	2.51e-02	8.35	n/a	2.91e-05	1.42E+00
S96T005014			Pu-239/240 by TRU-SPEC Resin	uCi/mL	100.7	<4.45e-06	<4.26e-06	<4.44E-6	n/a	n/a	n/a	4.26e-06	1.00E+02
S96T005014			Cobalt-60 by GEA	uCi/mL	98.07	<3.85e-05	7.85e-05	1.14e-04	9.63e-05	36.9	n/a	n/a	37.1
S96T005014			Cesium-137 by GEA	uCi/mL	106.6	<7.27e-05	7.45e-01	7.55e-01	7.50e-01	1.33	n/a	n/a	0.280
S96T005014			Am-241 by Extraction	uCi/mL	100.8	<6.64e-06	<6.08e-06	<6.14E-6	n/a	n/a	n/a	6.08e-06	1.00E+02
S96T005014			Alpha in Liquid Samples	uCi/mL	105.2	<7.07e-05	<5.34e-05	<6.00E-5	n/a	n/a	n/a	9.44e-05	5.00E+02

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-14

SEGMENT PORTION: Supernate

Sample#	R	AF	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005012			DSC Exotherm using Mettler	Joules/g	88.93	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005012			OH- by Pot. Titration	ug/mL	99.76	<2.00	5.13e+03	5.18e+03	5.16e+03	0.97	n/a	625.0	n/a
S96T005012			pH Direct	pH	99.86	n/a	13.63	13.64	13.64	0.07	n/a	1.00e-02	n/a
S96T005012			Specific Gravity	Sp.G.	99.60	n/a	1.038	1.040	1.039	0.19	n/a	1.00e-02	n/a
S96T005012			% Water by TGA using Mettler	%	98.45	n/a	94.03	93.70	93.87	0.35	n/a	n/a	n/a
S96T005012			TIC by Acid/Coulometry	ug/mL	106.1	2,500	4.37e+02	484.0	460.5	10.2	n/a	5,000	n/a
S96T005012			Tot. Organic Carbon by Coul.	ug/mL	103.7	1,200	1.67e+03	1.71e+03	1.69e+03	2.37	n/a	55.00	n/a
S96T005012	D		Silver-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.550	1.500	1.525	3.28	80.50	4.10e-01	n/a
S96T005012	D		Aluminum-ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	88.30	89.10	88.70	0.90	101.0	2.050	n/a
S96T005012	D		Arsenic-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	109.0	4.100	n/a
S96T005012	D		Boron-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	2.680	2.830	2.755	5.44	99.50	2.050	n/a
S96T005012	D		Barium-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	99.60	2.050	n/a
S96T005012	D		Beryllium-ICP-Acid Dil.	ug/mL	102.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	101.0	2.05e-01	n/a
S96T005012	D		Bismuth-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	100.0	4.100	n/a
S96T005012	D		Calcium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	103.0	4.100	n/a
S96T005012	D		Cadmium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	<2.05e-01	<2.05e-1	n/a	n/a	102.0	2.05e-01	n/a
S96T005012	D		Cerium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	101.0	4.100	n/a
S96T005012	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	103.0	8.20e-01	n/a
S96T005012	D		Chromium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	3.990	4.050	4.020	1.49	102.0	4.10e-01	n/a
S96T005012	D		Copper-ICP-Acid Dil.	ug/mL	105.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	106.0	4.10e-01	n/a
S96T005012	D		Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	101.0	2.050	n/a
S96T005012	D		Potassium-ICP-Acid Dil.	ug/mL	97.40	<5.00e-01	3.33e+03	3.36e+03	3.34e+03	0.90	196.0	20.50	n/a
S96T005012	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.8	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005012	D		Lithium-ICP-Acid Dil.	ug/mL	101.0	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	104.0	4.10e-01	n/a
S96T005012	D		Magnesium-ICP-Acid Dil.	ug/mL	96.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	95.30	4.100	n/a
S96T005012	D		Manganese-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	96.40	4.10e-01	n/a
S96T005012	D		Molybdenum-ICP-Acid Dil.	ug/mL	102.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	106.0	2.050	n/a
S96T005012	D		Sodium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	1.87e+04	1.88e+04	1.88e+04	0.53	643.0	4.100	n/a
S96T005012	D		Neodymium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	102.0	4.100	n/a
S96T005012	D		Nickel-ICP-Acid Dil.	ug/mL	100.0	<2.00e-02	<8.20e-01	<8.20e-1	n/a	n/a	101.0	8.20e-01	n/a
S96T005012	D		Phosphorus-ICP-Acid Dil.	ug/mL	99.00	<1.00e-01	54.90	54.40	54.60	1.84	108.0	8.200	n/a
S96T005012	D		Lead-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	102.0	4.100	n/a
S96T005012	D		Sulfur-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	94.00	94.90	94.45	0.95	106.0	4.100	n/a
S96T005012	D		Antimony-ICP-Acid Dil.	ug/mL	96.80	<5.00e-02	< 2.440	<2.44e0	n/a	n/a	99.60	2.440	n/a
S96T005012	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	104.0	4.100	n/a
S96T005012	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	47.20	48.30	47.75	2.30	106.0	2.050	n/a
S96T005012	D		Samarium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	< 4.100	<4.10e0	n/a	n/a	96.90	4.100	n/a
S96T005012	D		Strontium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	99.20	4.10e-01	n/a
S96T005012	D		Titanium-ICP-Acid Dil.	ug/mL	99.40	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	99.70	4.10e-01	n/a
S96T005012	D		Thallium-ICP-Acid Dil.	ug/mL	96.80	<2.00e-01	< 8.200	<8.20e0	n/a	n/a	96.70	8.200	n/a
S96T005012	D		Uranium-ICP-Acid Dil.	ug/mL	97.30	<5.00e-01	< 20.50	<2.05e1	n/a	n/a	111.5	20.50	n/a
S96T005012	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 2.050	<2.05e0	n/a	n/a	102.0	2.050	n/a
S96T005012	D		Zinc-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	4.770	4.830	4.800	1.25	104.0	4.10e-01	n/a
S96T005012	D		Zirconium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	<4.10e-01	<4.10e-1	n/a	n/a	100.0	4.10e-01	n/a

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HN-SD-WM-DP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005012			Fluoride-IC-Dionex 4000/4500	ug/mL	97.97	<1.20e-02	1.06e+03	1.16e+03	1.11e+03	9.01	n/a	61.81	n/a
S96T005012			Chloride-IC-Dionex 4000/4500	ug/mL	100.4	<1.70e-02	3.08e+02	307.0	307.4	0.33	n/a	87.57	n/a
S96T005012			Nitrite-IC - Dionex 4000/4500	ug/mL	97.97	<1.08e-01	1.66e+03	1.76e+03	1.71e+03	5.85	n/a	556.3	n/a
S96T005012			Bromide by Ion Chromatograph	ug/mL	97.11	<1.25e-01	<6.44e+02	<6.44e2	n/a	n/a	n/a	643.9	n/a
S96T005012			Nitrate by IC-Dionex 4000/4500	ug/mL	98.82	1.40e-01	2.80e+04	3.02e+04	2.91e+04	7.56	n/a	716.0	n/a
S96T005012			Phosphate-IC-Dionex 4000/4500	ug/mL	91.74	<1.20e-01	<6.18e+02	<6.18e2	n/a	n/a	n/a	618.1	n/a
S96T005012			Sulfate by IC-Dionex 4000/4500	ug/mL	96.99	<1.38e-01	<7.11e+02	<7.11e2	n/a	n/a	n/a	710.8	n/a
S96T005012			Oxalate by IC-Dionex 4000/4500	ug/mL	100.0	<1.05e-01	<5.41e+02	<5.41e2	n/a	n/a	n/a	540.9	n/a
S96T005015			Strontium-89/90 High Level	uCi/mL	105.0	1.60e-06	7.33e-04	4.38e-04	5.86e-04	50.4	n/a	2.85e-06	2.46E+00
S96T005015			Pu-239/240 by TRU-SPEC Resin	uCi/mL	100.7	<4.45e-06	<4.80e-06	<4.28E-6	n/a	n/a	n/a	4.80e-06	1.00E+01
S96T005015			Cobalt-60 by GEA	uCi/mL	98.07	<3.85e-05	9.66e-04	1.16e-03	1.06e-03	18.3	n/a	n/a	17.2
S96T005015			Cesium-137 by GEA	uCi/mL	106.6	<7.27e-05	4.710	4.810	4.760	2.10	n/a	n/a	0.160
S96T005015			Am-241 by Extraction	uCi/mL	100.8	<6.64e-06	<6.59e-06	<6.68E-6	n/a	n/a	n/a	6.59e-06	1.00E+02
S96T005015			Alpha in Liquid Samples	uCi/mL	105.2	<7.07e-05	<1.85e-04	<3.15E-4	n/a	n/a	n/a	3.78e-04	5.00E+02

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HNF-SD-WM-DP-214, REV. D

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-15

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005075			Bulk Density of Sample	g/mL	n/a	n/a	1.260	n/a	n/a	n/a	n/a	5.00E-01	n/a
S96T005075			DSC Exotherm using Mettler	Joules/g	96.66	n/a	16.40	15.80	16.10	3.73	n/a	n/a	n/a
S96T005075			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	66.70	64.30	65.50	3.66	n/a	n/a	n/a
S96T005075			pH on SST Samples	pH	99.62	n/a	12.35	12.33	12.34	0.16	n/a	1.00E-02	n/a
S96T005075			% Water by TGA using Mettler	%	99.12	n/a	75.58	75.23	75.41	0.46	n/a	n/a	n/a
S96T005075			TIC by Acid/Coulometry	ug/g	101.8	3.000	6.30E+02	676.0	653.0	7.04	102.0	5.000	n/a
S96T005075			TOC by Persulfate/Coulometry	ug/g	97.33	2.600	1.40E+03	1.29E+03	1.34E+03	8.18	98.20	40.00	n/a
S96T005084	F		Strontium-89/90 High Level	uCi/g	80.00	1.23E-01	30.50	32.20	31.35	5.42	n/a	1.40E-02	8.14E-01
S96T005084	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	112.1	<1.61E-02	3.470	3.770	3.620	8.29	n/a	1.48E-01	1.37E+00
S96T005084	F		Silver -ICP-Fusion	ug/g	100.6	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	95.20	194.0	n/a
S96T005084	F		Aluminum -ICP-Fusion	ug/g	99.40	<5.00E-02	1.05E+03	1.15E+03	1.10E+03	9.09	99.70	968.0	n/a
S96T005084	F		Arsenic -ICP-Fusion	ug/g	104.8	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	104.0	1.94E+03	n/a
S96T005084	F		Boron -ICP-Fusion	ug/g	101.8	<5.00E-02	<9.67E+02	<1.00E3	n/a	n/a	100.0	968.0	n/a
S96T005084	F		Barium -ICP-Fusion	ug/g	102.0	<5.00E-02	<9.67E+02	<1.00E3	n/a	n/a	101.0	968.0	n/a
S96T005084	F		Beryllium -ICP-Fusion	ug/g	104.0	<5.00E-03	< 96.70	<1.00E2	n/a	n/a	103.0	96.80	n/a
S96T005084	F		Bismuth -ICP-Fusion	ug/g	103.8	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	102.0	1.94E+03	n/a
S96T005084	F		Calcium -ICP-Fusion	ug/g	100.4	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	104.0	1.94E+03	n/a
S96T005084	F		Cadmium -ICP-Fusion	ug/g	101.6	<5.00E-03	2.49E+02	262.0	255.5	5.09	102.0	96.80	n/a
S96T005084	F		Cerium -ICP-Fusion	ug/g	102.4	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	103.0	1.94E+03	n/a
S96T005084	F		Cobalt -ICP-Fusion	ug/g	102.0	<2.00E-02	<3.87E+02	<4.00E2	n/a	n/a	102.0	387.0	n/a
S96T005084	F		Chromium -ICP-Fusion	ug/g	102.0	<1.00E-02	2.02E+02	<2.00E2	n/a	n/a	102.0	194.0	n/a
S96T005084	F		Copper -ICP-Fusion	ug/g	105.8	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	105.0	194.0	n/a
S96T005084	F		Iron -ICP-Fusion	ug/g	101.6	<5.00E-02	1.81E+03	2.89E+03	2.35E+03	46.0	101.0	968.0	n/a
S96T005084	F		Lanthanum -ICP-Fusion	ug/g	103.4	<5.00E-02	1.05E+03	1.15E+03	1.10E+03	9.09	104.0	968.0	n/a
S96T005084	F		Lithium -ICP-Fusion	ug/g	104.0	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	103.0	194.0	n/a
S96T005084	F		Magnesium -ICP-Fusion	ug/g	98.00	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	85.50	1.94E+03	n/a
S96T005084	F		Manganese -ICP-Fusion	ug/g	99.60	<1.00E-02	7.52E+02	789.0	770.5	4.80	97.20	194.0	n/a
S96T005084	F		Molybdenum -ICP-Fusion	ug/g	101.8	<5.00E-02	<9.67E+02	<1.00E3	n/a	n/a	102.0	968.0	n/a
S96T005084	F		Sodium -ICP-Fusion	ug/g	100.2	1.770	6.20E+04	6.29E+04	6.24E+04	1.44	90.30	1.94E+03	n/a
S96T005084	F		Neodymium -ICP-Fusion	ug/g	103.8	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	107.0	1.94E+03	n/a
S96T005084	F		Phosphorus -ICP-Fusion	ug/g	102.0	<2.00E-01	<3.87E+03	<4.00E3	n/a	n/a	107.0	3.87E+03	n/a
S96T005084	F		Lead -ICP-Fusion	ug/g	100.2	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	100.0	1.94E+03	n/a
S96T005084	F		Sulfur -ICP-Fusion	ug/g	99.40	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	101.0	1.94E+03	n/a
S96T005084	F		Antimony -ICP-Fusion	ug/g	97.20	<6.00E-02	<1.16E+03	<1.20E3	n/a	n/a	97.50	1.16E+03	n/a
S96T005084	F		Selenium -ICP-Fusion	ug/g	98.40	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	102.0	1.94E+03	n/a
S96T005084	F		Silicon -ICP-Fusion	ug/g	99.80	<5.00E-02	<9.67E+02	<1.00E3	n/a	n/a	105.0	968.0	n/a
S96T005084	F		Samarium -ICP-Fusion	ug/g	100.4	<1.00E-01	<1.93E+03	<2.00E3	n/a	n/a	98.60	1.94E+03	n/a
S96T005084	F		Strontium -ICP-Fusion	ug/g	100.6	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	101.0	194.0	n/a
S96T005084	F		Titanium -ICP-Fusion	ug/g	99.40	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	99.60	194.0	n/a
S96T005084	F		Thallium -ICP-Fusion	ug/g	98.20	<2.00E-01	<3.87E+03	<4.00E3	n/a	n/a	101.0	3.87E+03	n/a
S96T005084	F		Uranium -ICP-Fusion	ug/g	98.20	<5.00E-01	9.27E+04	9.75E+04	9.51E+04	5.05	91.00	9.68E+03	n/a
S96T005084	F		Vanadium -ICP-Fusion	ug/g	101.8	<5.00E-02	<9.67E+02	<1.00E3	n/a	n/a	102.0	968.0	n/a
S96T005084	F		Zinc -ICP-Fusion	ug/g	101.4	<1.00E-02	<1.93E+02	<2.00E2	n/a	n/a	102.0	194.0	n/a
S96T005084	F		Zirconium -ICP-Fusion	ug/g	100.2	<1.00E-02	1.70E+04	1.63E+04	1.66E+04	4.20	99.00	194.0	n/a

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HNF-SD-WM-DP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005084	F		Cobalt-60 by GEA	uCi/g	93.56	<7.37e-03	3.63e-02	3.54e-02	3.58e-02	2.51	n/a	n/a	16.7
S96T005084	F		Cesium-137 by GEA	uCi/g	98.85	<1.29e-02	13.58	13.80	13.69	1.46	n/a	n/a	0.670
S96T005084	F		Am-241 by Extraction	uCi/g	95.80	<2.82e-02	4.54e-01	4.89e-01	4.72e-01	7.42	n/a	5.60e-02	1.78E+00
S96T005084	F		Alpha of Digested Solid	uCi/g	104.8	<5.33e-03	4.080	3.640	3.860	11.4	86.91	1.30e-02	2.59E+00
S96T005087	W		OH- by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	n/a	41.70
S96T005087	W		Fluoride-IC-Dionex 4000/4500	ug/g	90.68	<1.20e-02	4.03e+03	4.11e+03	4.07e+03	1.97	107.5	26.33	n/a
S96T005087	W		Chloride-IC-Dionex 4000/4500	ug/g	92.66	2.00e-02	2.21e+02	228.0	224.4	3.12	89.87	37.31	n/a
S96T005087	W		Nitrite-IC - Dionex 4000/4500	ug/g	92.96	<1.08e-01	2.22e+03	2.28e+03	2.25e+03	2.67	91.85	237.1	n/a
S96T005087	W		Bromide by Ion Chromatograph	ug/g	96.57	<1.25e-01	<2.74e+02	<2.78e2	n/a	n/a	n/a	95.42	274.3
S96T005087	W		Nitrate by IC-Dionex 4000/4500	ug/g	100.0	1.70e-01	2.30e+04	2.31e+04	2.30e+04	0.43	103.2	305.0	n/a
S96T005087	W		Phosphate-IC-Dionex 4000/4500	ug/g	95.23	<1.20e-01	4.11e+02	378.0	394.7	8.37	93.58	263.3	n/a
S96T005087	W		Sulfate by IC-Dionex 4000/4500	ug/g	101.3	<1.38e-01	8.80e+02	851.0	865.6	3.35	100.2	302.8	n/a
S96T005087	W		Oxalate by IC-Dionex 4000/4500	ug/g	99.81	<1.05e-01	2.36e+02	<2.33e2	n/a	n/a	97.15	230.4	n/a

Interstitial Liquids: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005081			Bulk Density of Sample	g/mL	n/a	n/a	9.80e-01	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005081			DSC Exotherm on Perkin Elmer	Joules/g	93.95	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005081			OH- by Pot. Titration	ug/mL	106.4	<42.00	7.62e+03	7.44e+03	7.53e+03	2.39	n/a	500.0	n/a
S96T005081			pH Direct	pH	100.0	n/a	13.46	13.48	13.47	0.15	n/a	1.00e-02	n/a
S96T005081			% Water by TGA on Perkin Elmer	%	99.27	n/a	90.54	90.78	90.66	0.26	n/a	n/a	n/a
S96T005081			TIC by Acid/Coulometry	ug/mL	100.2	6.00e-01	5.76e+02	586.0	581.0	1.72	103.1	5.000	n/a
S96T005081			Tot. Organic Carbon by Coul.	ug/mL	106.3	1.200	1.77e+03	1.57e+03	1.67e+03	12.0	82.50	55.00	n/a
S96T005081			Strontium-89/90 High Level	uCi/mL	97.14	5.89e-05	6.91e-04	5.30e-04	6.10e-04	26.4	n/a	1.18e-05	5.23E+00
S96T005081			Pu-239/240 by TRU-SPEC Resin	uCi/mL	89.93	<6.50e-06	4.77e-03	4.36e-03	4.56e-03	8.98	n/a	1.80e-04	1.17E+00
S96T005081	D		Silver-ICP-Acid Dil.	ug/mL	100.8	<1.00e-02	2.080	1.900	1.990	9.05	91.00	1.010	n/a
S96T005081	D		Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	4.64e+02	461.0	462.5	0.65	90.30	5.050	n/a
S96T005081	D		Arsenic-ICP-Acid Dil.	ug/mL	102.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	110.0	10.10	n/a
S96T005081	D		Boron-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	101.0	5.050	n/a
S96T005081	D		Barium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	99.00	5.050	n/a
S96T005081	D		Beryllium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	102.0	5.05e-01	n/a
S96T005081	D		Bismuth-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	104.0	10.10	n/a
S96T005081	D		Calcium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	103.0	10.10	n/a
S96T005081	D		Cadmium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	101.0	5.05e-01	n/a
S96T005081	D		Cerium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	102.0	10.10	n/a
S96T005081	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	101.0	2.020	n/a
S96T005081	D		Chromium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	15.20	15.10	15.15	0.66	104.0	1.010	n/a
S96T005081	D		Copper-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	101.0	1.010	n/a
S96T005081	D		Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	101.0	5.050	n/a
S96T005081	D		Potassium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	7.36e+03	7.36e+03	7.36e+03	0.00	-2.880e0	50.50	n/a
S96T005081	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	103.0	5.050	n/a
S96T005081	D		Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	101.0	1.010	n/a
S96T005081	D		Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	95.90	10.10	n/a
S96T005081	D		Manganese-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	96.50	1.010	n/a
S96T005081	D		Molybdenum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	103.0	5.050	n/a
S96T005081	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	2.77e+04	2.77e+04	2.77e+04	0.00	-2.620e2	10.10	n/a
S96T005081	D		Neodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	102.0	10.10	n/a
S96T005081	D		Nickel-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	101.0	2.020	n/a
S96T005081	D		Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-01	2.50e+02	267.0	268.5	1.21	101.0	20.20	n/a
S96T005081	D		Lead-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	100.0	10.10	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005081	D		Sulfur-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	3.51e+02	348.0	349.5	0.86	103.0	10.10	n/a
S96T005081	D		Antimony-ICP-Acid Dil.	ug/mL	96.60	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	97.00	6.060	n/a
S96T005081	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	100.0	10.10	n/a
S96T005081	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	31.00	35.80	33.40	14.4	112.0	5.050	n/a
S96T005081	D		Samarium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	98.40	10.10	n/a
S96T005081	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	99.00	1.010	n/a
S96T005081	D		Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	97.80	1.010	n/a
S96T005081	D		Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	98.00	20.20	n/a
S96T005081	D		Uranium-ICP-Acid Dil.	ug/mL	96.10	<5.00e-01	58.40	<5.05e1	n/a	n/a	78.50	50.50	n/a
S96T005081	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	101.0	5.050	n/a
S96T005081	D		Zinc-ICP-Acid Dil.	ug/mL	102.4	<1.00e-02	3.750	3.700	3.725	1.34	102.0	1.010	n/a
S96T005081	D		Zirconium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	4.210	2.460	3.335	52.5	96.60	1.010	n/a
S96T005081			Fluoride-IC-Dionex 4000/4500	ug/mL	90.51	<1.20e-02	4.23e+03	4.23e+03	4.23e+03	0.00	n/a	5.412	n/a
S96T005081			Chloride-IC-Dionex 4000/4500	ug/mL	90.89	<1.70e-02	3.98e+02	393.0	395.6	1.26	n/a	7.667	n/a
S96T005081			Nitrite-IC - Dionex 4000/4500	ug/mL	90.37	<1.08e-01	3.01e+03	2.93e+03	2.97e+03	2.69	n/a	48.71	n/a
S96T005081			Bromide by Ion Chromatograph	ug/mL	97.11	<1.25e-01	< 56.38	<5.64e1	n/a	n/a	n/a	56.38	n/a
S96T005081			Nitrate by IC-Dionex 4000/4500	ug/mL	100.7	<1.39e-01	2.93e+04	2.91e+04	2.92e+04	0.68	n/a	62.69	n/a
S96T005081			Phosphate-IC-Dionex 4000/4500	ug/mL	97.61	<1.20e-01	2.28e+02	223.0	225.4	2.22	n/a	54.12	n/a
S96T005081			Sulfate by IC-Dionex 4000/4500	ug/mL	101.1	<1.38e-01	9.51e+02	949.0	949.9	0.21	n/a	62.24	n/a
S96T005081			Oxalate by IC-Dionex 4000/4500	ug/mL	100.4	<1.05e-01	1.96e+02	232.0	213.9	16.8	n/a	47.35	n/a
S96T005081			Cobalt-60 by GEA	uCi/mL	99.36	<2.93e-04	1.21e-02	1.12e-02	1.17e-02	7.73	n/a	n/a	7.80
S96T005081			Cesium-137 by GEA	uCi/mL	100.2	<7.59e-04	16.40	15.40	15.90	6.29	n/a	n/a	0.190
S96T005081			Am-241 by Extraction	uCi/mL	91.60	<4.02e-05	<3.33e-05	<3.66E-5	n/a	n/a	n/a	3.33e-05	5.76E+00
S96T005081			Alpha in Liquid Samples	uCi/mL	85.71	1.00e-03	8.80e-04	1.38e-03	1.13e-03	44.2	73.82	3.52e-04	5.88E+01

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T004819			Bulk Density of Sample	g/mL	n/a	n/a	1.160	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004819			Volume % Solids	%	n/a	n/a	73.30	n/a	n/a	n/a	n/a	n/a	n/a

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HNF-SD-WM-DP-214, REV. 0

Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-17

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005076		Bulk Density of Sample	g/mL	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005076		DSC Exotherm using Mettler	Joules/g	101.9	n/a	31.60	49.50	40.55	44.1	n/a	n/a	n/a
S96T005076		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	92.80	145.0	118.9	43.9	n/a	n/a	n/a
S96T005076		pH on SST Samples	pH	99.62	n/a	12.35	12.27	12.31	0.65	n/a	1.00e-02	n/a
S96T005076		% Water by TGA using Mettler	%	99.54	n/a	65.12	66.79	65.96	2.53	n/a	n/a	n/a
S96T005076		TIC by Acid/Coulometry	ug/g	101.8	3.000	8.08e+02	812.0	810.0	0.49	n/a	5.000	n/a
S96T005076		IOC by Persulfate/Coulometry	ug/g	97.33	2.600	2.08e+03	2.33e+03	2.20e+03	11.3	n/a	40.00	n/a
S96T005085	F	Strontium-89/90 High Level	uCi/g	80.00	1.23e-01	16.10	18.60	17.35	14.4	n/a	1.50e-02	1.18E+00
S96T005085	F	Pu-239/240 by TRU-SPEC Resin	uCi/g	99.33	<8.48e-02	3.760	3.030	3.395	21.5	n/a	2.29e-01	1.51E+00
S96T005085	F	Silver -ICP-Fusion	ug/g	100.6	<1.00e-02	3.20e+02	296.0	308.0	7.79	n/a	198.0	n/a
S96T005085	F	Aluminium -ICP-Fusion	ug/g	99.40	<5.00e-02	1.69e+03	1.67e+03	1.68e+03	1.19	n/a	988.0	n/a
S96T005085	F	Arsenic -ICP-Fusion	ug/g	104.8	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Boron -ICP-Fusion	ug/g	101.8	<5.00e-02	<9.88e+02	<1.01e3	n/a	n/a	n/a	988.0	n/a
S96T005085	F	Barium -ICP-Fusion	ug/g	102.0	<5.00e-02	<9.88e+02	<1.01e3	n/a	n/a	n/a	988.0	n/a
S96T005085	F	Beryllium -ICP-Fusion	ug/g	104.0	<5.00e-03	< 98.80	<1.01e2	n/a	n/a	n/a	98.80	n/a
S96T005085	F	Bismuth -ICP-Fusion	ug/g	103.8	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Calcium -ICP-Fusion	ug/g	100.4	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Cadmium -ICP-Fusion	ug/g	101.6	<5.00e-03	1.04e+02	107.0	105.5	2.84	n/a	98.80	n/a
S96T005085	F	Cerium -ICP-Fusion	ug/g	102.4	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Cobalt -ICP-Fusion	ug/g	102.0	<2.00e-02	<3.95e+02	<4.04e2	n/a	n/a	n/a	395.0	n/a
S96T005085	F	Chromium -ICP-Fusion	ug/g	102.0	<1.00e-02	7.52e+02	712.0	732.0	5.46	n/a	198.0	n/a
S96T005085	F	Copper -ICP-Fusion	ug/g	105.8	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Iron -ICP-Fusion	ug/g	101.6	<5.00e-02	4.85e+03	4.30e+03	4.58e+03	12.0	n/a	988.0	n/a
S96T005085	F	Lanthanum -ICP-Fusion	ug/g	103.4	<5.00e-02	2.37e+03	2.20e+03	2.28e+03	7.44	n/a	988.0	n/a
S96T005085	F	Lithium -ICP-Fusion	ug/g	104.0	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Magnesium -ICP-Fusion	ug/g	98.00	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Manganese -ICP-Fusion	ug/g	99.60	<1.00e-02	4.28e+03	4.00e+03	4.14e+03	6.76	n/a	988.0	n/a
S96T005085	F	Molybdenum -ICP-Fusion	ug/g	101.8	<5.00e-02	<9.88e+02	<1.01e3	n/a	n/a	n/a	988.0	n/a
S96T005085	F	Sodium -ICP-Fusion	ug/g	100.2	1.770	8.04e+04	7.84e+04	7.96e+04	2.52	n/a	1.98e+03	n/a
S96T005085	F	Neodymium -ICP-Fusion	ug/g	103.8	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Phosphorus -ICP-Fusion	ug/g	102.0	<2.00e-01	<3.95e+03	<4.04e3	n/a	n/a	n/a	3.95e+03	n/a
S96T005085	F	Lead -ICP-Fusion	ug/g	100.2	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Sulfur -ICP-Fusion	ug/g	99.40	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Antimony -ICP-Fusion	ug/g	97.20	<6.00e-02	<1.19e+03	<1.21e3	n/a	n/a	n/a	1.18e+03	n/a
S96T005085	F	Selenium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Silicon -ICP-Fusion	ug/g	99.80	<5.00e-02	1.23e+03	1.28e+03	1.26e+03	3.98	n/a	988.0	n/a
S96T005085	F	Samarium -ICP-Fusion	ug/g	100.4	<1.00e-01	<1.98e+03	<2.02e3	n/a	n/a	n/a	1.98e+03	n/a
S96T005085	F	Titanium -ICP-Fusion	ug/g	100.6	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Strontium -ICP-Fusion	ug/g	99.40	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Titanium-ICP-Fusion	ug/g	98.20	<2.00e-01	<3.95e+03	<4.04e3	n/a	n/a	n/a	3.95e+03	n/a
S96T005085	F	Thallium -ICP-Fusion	ug/g	98.20	<5.00e-01	4.39e+04	4.18e+04	4.28e+04	4.90	n/a	9.88e+03	n/a
S96T005085	F	Uranium -ICP-Fusion	ug/g	101.8	<5.00e-02	<9.88e+02	<1.01e3	n/a	n/a	n/a	988.0	n/a
S96T005085	F	Vanadium -ICP-Fusion	ug/g	101.4	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Zinc -ICP-Fusion	ug/g	101.4	<1.00e-02	<1.98e+02	<2.02e2	n/a	n/a	n/a	198.0	n/a
S96T005085	F	Zirconium -ICP-Fusion	ug/g	100.2	<1.00e-02	7.89e+04	7.67e+04	7.78e+04	2.83	n/a	198.0	n/a

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HN-SD-WM-DP-2.4, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005085	F		Cobalt-60 by GEA	uCi/g	93.56	<7.37e-03	<1.06e-01	<1.03e-1	n/a	n/a	n/a	1.06e-01	n/a
S96T005085	F		Cesium-137 by GEA	uCi/g	98.85	<1.29e-02	20.39	20.20	20.30	0.99	n/a	n/a	1.80
S96T005085	F		Am-241 by Extraction	uCi/g	121.8	<1.31e-01	1.070	6.72e-01	8.71e-01	45.7	n/a	2.03e-01	2.36e+00
S96T005085	F		Alpha of Digested Solid	uCi/g	91.78	<6.94e-03	1.720	1.680	1.700	2.35	n/a	9.00e-03	3.88e+00
S96T005088	W		OH- by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	41.70	n/a
S96T005088	W		Fluoride-IC-Dionex 4000/4500	ug/g	99.83	<1.20e-02	2.02e+04	1.99e+04	2.00e+04	1.50	99.15	58.50	n/a
S96T005088	W		Chloride-IC-Dionex 4000/4500	ug/g	103.2	<1.70e-02	1.13e+02	120.0	116.5	6.01	111.1	66.95	n/a
S96T005088	W		Nitrite-IC - Dionex 4000/4500	ug/g	95.00	<1.08e-01	3.49e+03	3.39e+03	3.44e+03	2.91	96.67	526.5	n/a
S96T005088	W		Bromide by Ion Chromatograph	ug/g	103.1	<1.25e-01	<6.09e+02	<6.08e2	n/a	n/a	n/a	102.9	n/a
S96T005088	W		Nitrate by IC-Dionex 4000/4500	ug/g	102.7	2.13e-01	1.88e+04	1.85e+04	1.87e+04	1.61	105.4	677.6	n/a
S96T005088	W		Phosphate-IC-Dionex 4000/4500	ug/g	102.2	<1.20e-01	<5.85e+02	<5.83e2	n/a	n/a	n/a	103.7	n/a
S96T005088	W		Sulfate by IC-Dionex 4000/4500	ug/g	101.3	<1.38e-01	1.68e+03	1.69e+03	1.68e+03	0.59	100.5	672.9	n/a
S96T005088	W		Oxalate by IC-Dionex 4000/4500	ug/g	100.2	<1.05e-01	<5.12e+02	<5.10e2	n/a	n/a	n/a	105.9	n/a

Interstitial Liquids: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005082			Bulk Density of Sample	g/mL	n/a	n/a	1.040	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005082			DSC Exotherm using Mettler	Joules/g	97.01	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005082			OH- by Pot. Titration	ug/mL	106.4	<42.00	9.04e+03	9.39e+03	9.22e+03	3.80	n/a	500.0	n/a
S96T005082			pH Direct	pH	100.0	n/a	13.42	13.43	13.43	0.07	n/a	1.00e-02	n/a
S96T005082			% Water by TGA using Mettler	%	99.38	n/a	90.16	74.58	82.37	18.9	n/a	n/a	n/a
S96T005082			TIC by Acid/Coulometry	ug/mL	102.0	3.00e-01	7.75e+02	792.0	783.5	2.17	103.0	5.000	n/a
S96T005082			Tot. Organic Carbon by Coul.	ug/mL	106.0	1.200	2.29e+03	2.25e+03	2.27e+03	1.76	84.40	55.00	n/a
S96T005082			Strontium-89/90 High Level	uCi/mL	108.6	<1.23e-05	1.47e-01	1.24e-01	1.36e-01	17.0	n/a	2.36e-05	4.69e-01
S96T005082			Pu-239/240 by TRU-SPEC Resin	uCi/mL	89.93	<6.50e-06	2.86e-03	2.59e-03	2.72e-03	9.91	n/a	1.22e-04	1.19e+00
S96T005082	D		Silver-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	2.650	2.680	2.665	1.13	n/a	1.010	n/a
S96T005082	D		Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	7.02e+02	707.0	704.5	0.71	n/a	5.050	n/a
S96T005082	D		Arsenic-ICP-Acid Dil.	ug/mL	102.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Boron-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Barium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Beryllium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-03	1.030	1.040	1.035	0.97	n/a	5.05e-01	n/a
S96T005082	D		Bismuth-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Calcium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Cadmium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-03	<5.05e-01	<5.05e-01	n/a	n/a	n/a	5.05e-01	n/a
S96T005082	D		Cerium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	< 2.020	<2.02e0	n/a	n/a	n/a	2.020	n/a
S96T005082	D		Chromium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	32.60	33.30	32.95	2.12	n/a	1.010	n/a
S96T005082	D		Copper-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005082	D		Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Potassium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	1.04e+04	1.05e+04	1.04e+04	0.96	n/a	50.50	n/a
S96T005082	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005082	D		Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Manganese-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	1.090	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005082	D		Molybdenum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	3.69e+04	3.71e+04	3.70e+04	0.54	n/a	10.10	n/a
S96T005082	D		Neodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Nickel-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	3.130	3.250	3.190	3.76	n/a	2.020	n/a
S96T005082	D		Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-01	3.92e+02	392.0	392.0	0.00	n/a	20.20	n/a
S96T005082	D		Lead-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005082	D		Sulfur-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	5.31e+02	531.0	531.0	0.00	n/a	10.10	n/a
S96T005082	D		Antimony-ICP-Acid Dil.	ug/mL	96.60	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	n/a	6.060	n/a
S96T005082	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	49.20	53.00	51.10	7.44	n/a	5.050	n/a
S96T005082	D		Samarium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005082	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005082	D		Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005082	D		Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	n/a	20.20	n/a
S96T005082	D		Uranium-ICP-Acid Dil.	ug/mL	96.10	<5.00e-01	78.90	55.80	67.35	34.3	n/a	50.50	n/a
S96T005082	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005082	D		Zinc-ICP-Acid Dil.	ug/mL	102.4	<1.00e-02	3.820	3.960	3.890	3.60	n/a	1.010	n/a
S96T005082	D		Zirconium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	18.90	13.30	16.10	34.8	n/a	1.010	n/a
S96T005082			Fluoride-IC-Dionex 4000/4500	ug/mL	93.39	<1.20e-02	1.04e+04	1.05e+04	1.05e+04	0.96	94.24	25.45	n/a
S96T005082			Chloride-IC-Dionex 4000/4500	ug/mL	90.25	<1.70e-02	3.24e+02	323.0	323.6	0.31	89.37	18.89	n/a
S96T005082			Nitrite-IC - Dionex 4000/4500	ug/mL	90.74	<1.08e-01	4.71e+03	4.73e+03	4.72e+03	0.42	95.56	120.0	n/a
S96T005082			Bromide by Ion Chromatograph	ug/mL	97.45	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	92.36	138.9	n/a
S96T005082			Nitrate by IC-Dionex 4000/4500	ug/mL	99.16	1.71e-01	2.70e+04	2.69e+04	2.70e+04	0.37	106.6	294.8	n/a
S96T005082			Phosphate-IC-Dionex 4000/4500	ug/mL	97.80	<1.20e-01	3.69e+02	414.0	391.6	11.5	97.06	133.3	n/a
S96T005082			Sulfate by IC-Dionex 4000/4500	ug/mL	100.5	<1.38e-01	1.54e+03	1.49e+03	1.51e+03	3.30	101.3	153.3	n/a
S96T005082			Oxalate by IC-Dionex 4000/4500	ug/mL	100.6	<1.05e-01	3.21e+02	388.0	354.4	18.9	101.7	116.7	n/a
S96T005082			Cobalt-60 by GEA	uCi/mL	99.36	<2.93e-04	2.13e-02	2.17e-02	2.15e-02	1.86	n/a	n/a	6.28
S96T005082			Cesium-137 by GEA	uCi/mL	100.2	<7.59e-04	24.80	25.40	25.10	2.39	n/a	n/a	0.160
S96T005082			Am-241 by Extraction	uCi/mL	91.60	<4.02e-05	<4.13e-05	<4.49E-5	n/a	n/a	n/a	4.13e-05	7.24E+00
S96T005082			Alpha in Liquid Samples	uCi/mL	85.71	1.00e-03	1.78e-03	9.80e-04	1.38e-03	58.0	n/a	3.52e-04	4.08E+01

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T004821			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
S96T004821			Volume % Solids	%	n/a	n/a	67.60	n/a	n/a	n/a	n/a	n/a	n/a

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Table 3: Data Summary Report
AW-105 GRAB1

RISER: 15A
SEGMENT #: 5AW-96-20

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005077			Bulk Density of Sample	g/mL	n/a	n/a	1.260	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005077			DSC Exotherm using Mettler	Joules/g	101.9	n/a	22.20	21.50	21.85	3.20	n/a	n/a	n/a
S96T005077			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	70.90	68.70	69.80	3.15	n/a	n/a	n/a
S96T005077			pH on SST Samples	pH	99.62	n/a	12.49	12.48	12.48	0.08	n/a	1.00e-02	n/a
S96T005077			% Water by TGA using Mettler	%	99.54	n/a	66.19	71.20	68.69	7.29	n/a	n/a	n/a
S96T005077			TIC by Acid/Coulometry	ug/g	101.8	3.000	6.35e+02	766.0	700.5	18.7	n/a	5.000	n/a
S96T005077			TOC by Persulfate/Coulometry	ug/g	97.33	2.600	1.77e+03	1.43e+03	1.60e+03	21.2	n/a	40.00	n/a
S96T005086	F		Strontium-89/90 High Level	uCi/g	80.00	1.23e-01	31.40	29.50	30.45	6.24	n/a	1.50e-02	8.39E-01
S96T005086	F		Pu-239/240 by TRU-SPEC Resin	uCi/g	112.1	<1.61e-02	3.280	3.240	3.260	1.23	n/a	1.42e-01	1.36E+00
S96T005086	F		Silver -ICP-Fusion	ug/g	100.6	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Aluminum -ICP-Fusion	ug/g	99.40	<5.00e-02	1.13e+03	1.17e+03	1.15e+03	3.48	n/a	1.02e+03	n/a
S96T005086	F		Arsenic -ICP-Fusion	ug/g	104.8	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Boron -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.02e+03	<9.97e2	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Barium -ICP-Fusion	ug/g	102.0	<5.00e-02	<1.02e+03	<9.97e2	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Beryllium -ICP-Fusion	ug/g	104.0	<5.00e-03	<1.02e+02	<9.97e1	n/a	n/a	n/a	102.0	n/a
S96T005086	F		Bismuth -ICP-Fusion	ug/g	103.8	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Calcium -ICP-Fusion	ug/g	100.4	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Cadmium -ICP-Fusion	ug/g	101.6	<5.00e-03	2.38e+02	246.0	242.0	3.31	n/a	102.0	n/a
S96T005086	F		Cerium -ICP-Fusion	ug/g	102.4	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Cobalt -ICP-Fusion	ug/g	102.0	<2.00e-02	<4.07e+02	<3.99e2	n/a	n/a	n/a	407.0	n/a
S96T005086	F		Chromium -ICP-Fusion	ug/g	102.0	<1.00e-02	2.14e+02	203.0	208.5	5.28	n/a	203.0	n/a
S96T005086	F		Copper -ICP-Fusion	ug/g	105.8	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Iron -ICP-Fusion	ug/g	101.6	<5.00e-02	2.06e+03	1.30e+03	1.68e+03	45.2	n/a	1.02e+03	n/a
S96T005086	F		Lanthanum -ICP-Fusion	ug/g	103.4	<5.00e-02	1.07e+03	1.01e+03	1.04e+03	5.77	n/a	1.02e+03	n/a
S96T005086	F		Lithium -ICP-Fusion	ug/g	104.0	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Magnesium -ICP-Fusion	ug/g	98.00	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Manganese -ICP-Fusion	ug/g	99.50	<1.00e-02	7.40e+02	745.0	742.5	0.67	n/a	203.0	n/a
S96T005086	F		Molybdenum -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.02e+03	<9.97e2	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Sodium -ICP-Fusion	ug/g	100.2	1.770	6.75e+04	7.16e+04	6.96e+04	5.90	n/a	2.03e+03	n/a
S96T005086	F		Neodymium -ICP-Fusion	ug/g	103.8	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Phosphorus -ICP-Fusion	ug/g	102.0	<2.00e-01	<4.07e+03	<3.99e3	n/a	n/a	n/a	4.07e+03	n/a
S96T005086	F		Lead -ICP-Fusion	ug/g	100.2	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Sulfur -ICP-Fusion	ug/g	99.40	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Antimony -ICP-Fusion	ug/g	97.20	<6.00e-02	<1.22e+03	<1.20e3	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Selenium -ICP-Fusion	ug/g	98.40	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Silicon -ICP-Fusion	ug/g	97.80	<5.00e-02	<1.02e+03	<9.97e2	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Samarium -ICP-Fusion	ug/g	100.4	<1.00e-01	<2.03e+03	<1.99e3	n/a	n/a	n/a	2.03e+03	n/a
S96T005086	F		Strontium -ICP-Fusion	ug/g	100.6	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Titanium -ICP-Fusion	ug/g	99.40	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Thallium -ICP-Fusion	ug/g	98.20	<2.00e-01	<4.07e+03	<3.99e3	n/a	n/a	n/a	4.07e+03	n/a
S96T005086	F		Uranium -ICP-Fusion	ug/g	98.20	<5.00e-01	9.43e+04	9.46e+04	9.44e+04	0.32	n/a	1.02e+04	n/a
S96T005086	F		Vanadium -ICP-Fusion	ug/g	101.8	<5.00e-02	<1.02e+03	<9.97e2	n/a	n/a	n/a	1.02e+03	n/a
S96T005086	F		Zinc -ICP-Fusion	ug/g	101.4	<1.00e-02	<2.03e+02	<1.99e2	n/a	n/a	n/a	203.0	n/a
S96T005086	F		Zirconium -ICP-Fusion	ug/g	100.2	<1.00e-02	1.60e+04	1.83e+04	1.72e+04	13.4	n/a	203.0	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005086	F		Cobalt-60 by GEA	uCi/g	93.56	<7.37e-03	3.15e-02	3.06e-02	3.11e-02	2.90	n/a	n/a	22.9
S96T005086	F		Cesium-137 by GEA	uCi/g	98.85	<1.29e-02	13.94	14.20	14.07	2.14	n/a	n/a	0.680
S96T005086	F		Am-241 by Extraction	uCi/g	95.80	<2.82e-02	4.18e-01	4.32e-01	4.25e-01	3.29	n/a	5.20e-02	1.78E+00
S96T005086	F		Alpha of Digested Solid	uCi/g	91.78	<6.94e-03	3.690	3.480	3.585	5.86	n/a	1.00e-02	2.73E+00
S96T005089	W		OH- by Pot. Titration	ug/g	97.36	<42.00	< 42.00	<42	n/a	n/a	n/a	41.70	n/a
S96T005089	W		Fluoride-IC-Dionex 4000/4500	ug/g	99.83	<1.20e-02	4.15e+03	4.23e+03	4.19e+03	1.91	n/a	59.12	n/a
S96T005089	W		Chloride-IC-Dionex 4000/4500	ug/g	94.81	<1.70e-02	2.72e+02	365.0	318.6	29.2	n/a	83.77	n/a
S96T005089	W		Nitrite-IC - Dionex 4000/4500	ug/g	95.00	<1.08e-01	2.52e+03	2.60e+03	2.56e+03	3.12	n/a	53.22	n/a
S96T005089	W		Bromide by Ion Chromatograph	ug/g	103.1	<1.25e-01	<6.16e+02	<6.33e2	n/a	n/a	n/a	615.9	n/a
S96T005089	W		Nitrate by IC-Dionex 4000/4500	ug/g	102.7	2.13e-01	2.24e+04	2.31e+04	2.27e+04	3.08	n/a	685.1	n/a
S96T005089	W		Phosphate-IC-Dionex 4000/4500	ug/g	102.2	<1.20e-01	<5.91e+02	<6.07e2	n/a	n/a	n/a	591.2	n/a
S96T005089	W		Sulfate by IC-Dionex 4000/4500	ug/g	101.3	<1.38e-01	1.16e+03	1.31e+03	1.24e+03	12.1	n/a	680.2	n/a
S96T005089	W		Oxalate by IC-Dionex 4000/4500	ug/g	100.2	<1.05e-01	<5.17e+02	<5.31e2	n/a	n/a	n/a	517.4	n/a

Interstitial Liquid: Interstitial Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005083			Bulk Density of Sample	g/mL	n/a	n/a	1.090	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005083			DSC Exotherm using Mettler	Joules/g	97.01	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005083			OH- by Pot. Titration	ug/mL	106.4	<42.00	8.66e+03	9.07e+03	8.86e+03	4.62	n/a	500.0	n/a
S96T005083			pH Direct	pH	100.0	n/a	13.34	13.28	13.31	0.45	n/a	1.00e-02	n/a
S96T005083			% Water by TGA using Mettler	%	99.38	n/a	89.29	90.05	89.67	0.85	n/a	n/a	n/a
S96T005083			TIC by Acid/Coulometry	ug/mL	102.0	3.00e-01	6.76e+02	686.0	681.0	1.47	n/a	5.000	n/a
S96T005083			Tot. Organic Carbon by Coul.	ug/mL	106.0	1.200	1.92e+03	1.82e+03	1.87e+03	5.35	n/a	55.00	n/a
S96T005083			Strontium-89/90 High Level	uCi/mL	97.14	5.89e-05	8.28e-04	1.77e-03	1.30e-03	72.5	n/a	1.19e-05	4.78E+00
S96T005083			Pu-239/240 by TRU-SPEC Resin	uCi/mL	89.93	<6.50e-06	1.78e-03	2.13e-03	1.96e-03	17.9	n/a	8.55e-05	1.26E+00
S96T005083	D		Silver-ICP-Acid Dil.	ug/mL	100.0	<1.00e-02	2.670	2.630	2.650	1.51	n/a	1.010	n/a
S96T005083	D		Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	5.88e+02	591.0	589.5	0.51	n/a	5.050	n/a
S96T005083	D		Arsenic-ICP-Acid Dil.	ug/mL	102.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005083	D		Boron-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005083	D		Barium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.05e-01	n/a
S96T005083	D		Beryllium-ICP-Acid Dil.	ug/mL	102.0	<5.00e-03	9.95e-01	1.010	1.002	1.50	n/a	10.10	n/a
S96T005083	D		Bismuth-ICP-Acid Dil.	ug/mL	103.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a
S96T005083	D		Calcium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	5.05e-01	n/a
S96T005083	D		Cadmium-ICP-Acid Dil.	ug/mL	101.4	<5.00e-03	<5.05e-01	<5.05e-1	n/a	n/a	n/a	10.10	n/a
S96T005083	D		Cerium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	2.020	n/a
S96T005083	D		Cobalt-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	< 2.020	<2.02e0	35.50	1.13	n/a	1.010	n/a
S96T005083	D		Chromium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	< 1.010	< 1.01e0	n/a	n/a	n/a	1.010	n/a
S96T005083	D		Copper-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a
S96T005083	D		Iron-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	50.50	n/a
S96T005083	D		Potassium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	9.29e+03	9.37e+03	9.33e+03	0.86	n/a	5.050	n/a
S96T005083	D		Lanthanum-ICP-Acid Dil.	ug/mL	101.4	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	1.010	n/a
S96T005083	D		Lithium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	10.10	n/a
S96T005083	D		Magnesium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	1.010	n/a
S96T005083	D		Manganese-ICP-Acid Dil.	ug/mL	99.20	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	5.050	n/a
S96T005083	D		Molybdenum-ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	10.10	n/a
S96T005083	D		Sodium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-01	< 3.67e+04	3.68e+04	3.68e+04	0.27	n/a	10.10	n/a
S96T005083	D		Neodymium-ICP-Acid Dil.	ug/mL	101.8	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	2.020	n/a
S96T005083	D		Nickel-ICP-Acid Dil.	ug/mL	101.2	<2.00e-02	< 2.020	2.780	n/a	n/a	n/a	20.20	n/a
S96T005083	D		Phosphorus-ICP-Acid Dil.	ug/mL	103.6	<2.00e-01	3.87e+02	393.0	390.0	1.54	n/a	10.10	n/a
S96T005083	D		Lead-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a

HN-SD-WM-DP-214, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005083	D		Sulfur-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	4.57e+02	459.0	458.0	0.44	n/a	10.10	n/a	n/a
S96T005083	D		Antimony-ICP-Acid Dil.	ug/mL	96.60	<6.00e-02	< 6.060	<6.06e0	n/a	n/a	n/a	6.060	n/a	n/a
S96T005083	D		Selenium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a	n/a
S96T005083	D		Silicon-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	52.50	56.00	54.25	6.45	n/a	5.050	n/a	n/a
S96T005083	D		Samarium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-01	< 10.10	<1.01e1	n/a	n/a	n/a	10.10	n/a	n/a
S96T005083	D		Strontium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a	n/a
S96T005083	D		Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	n/a	1.010	n/a	n/a
S96T005083	D		Thallium-ICP-Acid Dil.	ug/mL	98.20	<2.00e-01	< 20.20	<2.02e1	n/a	n/a	n/a	20.20	n/a	n/a
S96T005083	D		Uranium-ICP-Acid Dil.	ug/mL	96.10	<5.00e-01	< 50.50	<5.05e1	n/a	n/a	n/a	50.50	n/a	n/a
S96T005083	D		Vanadium-ICP-Acid Dil.	ug/mL	101.2	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	n/a	5.050	n/a	n/a
S96T005083	D		Zinc-ICP-Acid Dil.	ug/mL	102.4	<1.00e-02	3.690	3.670	3.680	0.54	n/a	1.010	n/a	n/a
S96T005083	D		Zirconium-ICP-Acid Dil.	ug/mL	99.00	<1.00e-02	4.710	2.220	3.465	71.9	n/a	1.010	n/a	n/a
S96T005083			Fluoride-IC-Dionex 4000/4500	ug/mL	93.39	<1.20e-02	9.89e+03	9.81e+03	9.85e+03	0.81	n/a	13.33	n/a	n/a
S96T005083			Chloride-IC-Dionex 4000/4500	ug/mL	90.25	<1.70e-02	2.96e+02	298.0	296.8	0.67	n/a	18.89	n/a	n/a
S96T005083			Nitrite-IC - Dionex 4000/4500	ug/mL	90.74	<1.08e-01	3.94e+03	3.92e+03	3.93e+03	0.51	n/a	120.0	n/a	n/a
S96T005083			Bromide by Ion Chromatograph	ug/mL	97.45	<1.25e-01	<1.39e+02	<1.39e2	n/a	n/a	n/a	138.9	n/a	n/a
S96T005083			Nitrate by IC-Dionex 4000/4500	ug/mL	99.16	<1.71e-01	3.03e+04	3.03e+04	3.03e+04	0.00	n/a	154.4	n/a	n/a
S96T005083			Phosphate-IC-Dionex 4000/4500	ug/mL	97.80	<1.20e-01	3.93e+02	404.0	398.6	2.76	n/a	133.3	n/a	n/a
S96T005083			Sulfate by IC-Dionex 4000/4500	ug/mL	100.5	<1.38e-01	1.24e+03	1.28e+03	1.26e+03	3.17	n/a	153.3	n/a	n/a
S96T005083			Oxalate by IC-Dionex 4000/4500	ug/mL	100.6	<1.05e-01	2.72e+02	287.0	279.6	5.37	n/a	116.7	n/a	n/a
S96T005083			Cobalt-60 by GEA	uCi/mL	99.36	<2.93e-04	2.01e-02	1.94e-02	1.98e-02	3.54	n/a	n/a	5.95	n/a
S96T005083			Cesium-137 by GEA	uCi/mL	100.2	<7.59e-04	22.50	21.90	22.20	2.70	n/a	n/a	0.160	n/a
S96T005083			Am-241 by Extraction	uCi/mL	122.7	<1.18e-05	5.44e-04	6.09e-04	5.76e-04	11.3	n/a	6.82e-05	1.90E+00	n/a
S96T005083			Alpha in Liquid Samples	uCi/mL	85.71	1.00e-03	5.47e-04	6.14e-04	5.80e-04	11.5	n/a	3.52e-04	7.33E+01	n/a

Sludge (from Liquid Grab Sample): Sludge (from Liquid Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T004824			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
S96T004824			Volume % Solids	%	n/a	n/a	79.10	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 4 (1 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	$[S][NO_3]$	$[S][OH]$	$[S][NO_2]$	$[For][OH] + [NO_2]$
SAW-96-1 Supernatant DUP	NO3	2.39E+04	0.385	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [OH] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [NO_2] \leq 5.5 \text{ M}$	$[NO_3]/([OH] + [NO_2]) < 2.5?$
	OH	3.27E+03	0.192	YES	YES	YES	YES
	NO2	1.09E+03	0.024	$1.0 \text{ M} < [NO_3] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [NO_3] \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 0.4 * [NO_3]?$
				$3.0 \text{ M} < [NO_3] \leq 5.5 \text{ M?}$	$0.3 \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	$[S][NO_3]$	$[S][OH]$	$[S][NO_2]$	$[For][OH] + [NO_2]$
SAW-96-1 Supernatant DUP	NO3	2.41E+04	0.389	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [OH] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [NO_2] \leq 5.5 \text{ M}$	$[NO_3]/([OH] + [NO_2]) < 2.5?$
	OH	3.37E+03	0.198	YES	YES	YES	YES
	NO2	1.12E+03	0.024	$1.0 \text{ M} < [NO_3] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [NO_3] \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 0.4 * [NO_3]?$
				$3.0 \text{ M} < [NO_3] \leq 5.5 \text{ M?}$	$0.3 \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	$[S][NO_3]$	$[S][OH]$	$[S][NO_2]$	$[For][OH] + [NO_2]$
SAW-96-2 Supernatant DUP	NO3	2.43E+04	0.392	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [OH] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [NO_2] \leq 5.5 \text{ M}$	$[NO_3]/([OH] + [NO_2]) < 2.5?$
	OH	3.68E+03	0.216	YES	YES	YES	YES
	NO2	1.20E+03	0.026	$1.0 \text{ M} < [NO_3] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [NO_3] \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 0.4 * [NO_3]?$
				$3.0 \text{ M} < [NO_3] \leq 5.5 \text{ M?}$	$0.3 \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	$[S][NO_3]$	$[S][OH]$	$[S][NO_2]$	$[For][OH] + [NO_2]$
SAW-96-2 Supernatant DUP	NO3	2.48E+04	0.397	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [OH] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [NO_2] \leq 5.5 \text{ M}$	$[NO_3]/([OH] + [NO_2]) < 2.5?$
	OH	3.88E+03	0.229	YES	YES	YES	YES
	NO2	1.13E+03	0.025	$1.0 \text{ M} < [NO_3] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [NO_3] \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 0.4 * [NO_3]?$
				$3.0 \text{ M} < [NO_3] \leq 5.5 \text{ M?}$	$0.3 \leq [OH] < 10 \text{ M?}$		$[OH] + [NO_2] \geq 1.2 \text{ M?}$

Table 4 (2 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ≤ 1.0 M? YES	[S][OH] 0.010 M ≤ [OH] ≤ 5.0 M? YES	[S][NO2] 0.011 M ≤ [NO2] ≤ 5.5 M YES	For [OH] + [NO2] [NO3]/([OH] + [NO2]) < 2.5? YES
SAW-96-4 Supernate	NO3	2.41E+04	0.389				
	OH	3.27E+03	0.192				
	NO2	1.12E+03	0.024				
				1.0 M < [NO3] ≤ 3.0 M? 0.1 M * [NO3] ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 0.4 * [NO3]? YES
				3.0 M < [NO3] ≤ 5.5 M? 0.3 ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 1.2 M? YES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ≤ 1.0 M? YES	[S][OH] 0.010 M ≤ [OH] ≤ 5.0 M? YES	[S][NO2] 0.011 M ≤ [NO2] ≤ 5.5 M YES	For [OH] + [NO2] [NO3]/([OH] + [NO2]) < 2.5? YES
SAW-96-4 Supernate DUP	NO3	2.41E+04	0.389				
	OH	3.19E+03	0.188				
	NO2	1.10E+03	0.024				
				1.0 M < [NO3] ≤ 3.0 M? 0.1 M * [NO3] ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 0.4 * [NO3]? YES
				3.0 M < [NO3] ≤ 5.5 M? 0.3 ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 1.2 M? YES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ≤ 1.0 M? YES	[S][OH] 0.010 M ≤ [OH] ≤ 5.0 M? YES	[S][NO2] 0.011 M ≤ [NO2] ≤ 5.5 M YES	For [OH] + [NO2] [NO3]/([OH] + [NO2]) < 2.5? YES
SAW-96-5 Interstitial Liquid	NO3	3.38E+04	0.547				
	OH	5.41E+03	0.318				
	NO2	1.52E+03	0.033				
				1.0 M < [NO3] ≤ 3.0 M? 0.1 M * [NO3] ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 0.4 * [NO3]? YES
				3.0 M < [NO3] ≤ 5.5 M? 0.3 ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 1.2 M? YES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ≤ 1.0 M? YES	[S][OH] 0.010 M ≤ [OH] ≤ 5.0 M? YES	[S][NO2] 0.011 M ≤ [NO2] ≤ 5.5 M YES	For [OH] + [NO2] [NO3]/([OH] + [NO2]) < 2.5? YES
SAW-96-5 Interstitial Liquid DUP	NO3	3.38E+04	0.547				
	OH	5.41E+03	0.322				
	NO2	1.53E+03	0.033				
				1.0 M < [NO3] ≤ 3.0 M? 0.1 M * [NO3] ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 0.4 * [NO3]? YES
				3.0 M < [NO3] ≤ 5.5 M? 0.3 ≤ [OH] < 10 M?			[OH] + [NO2] ≥ 1.2 M? YES

Table 4 (3 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S] [NO3]	[S] [OH]	[S] [NO2]	[For] [OH] [NO2]
SAW-96-7 Interstitial Liquid	NO3	2.68E+04	0.432	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [\text{OH}] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [\text{NO2}] \leq 5.5 \text{ M}$	$[\text{NO3}]/([\text{OH}] + [\text{NO2}]) < 2.5?$
	OH	8.64E+03	0.508	YES	YES	YES	YES
	NO2	4.64E+03	0.101	$1.0 \text{ M} < [\text{NO3}] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [\text{NO3}] \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 0.4 * [\text{NO3}]?$
				$3.0 \text{ M} < [\text{NO3}] \leq 5.5 \text{ M?}$	$0.3 \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S] [NO3]	[S] [OH]	[S] [NO2]	[For] [OH] [NO2]
SAW-96-7 Interstitial Liquid DUP	NO3	2.68E+04	0.432	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [\text{OH}] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [\text{NO2}] \leq 5.5 \text{ M}$	$[\text{NO3}]/([\text{OH}] + [\text{NO2}]) < 2.5?$
	OH	8.53E+03	0.502	YES	YES	YES	YES
	NO2	4.64E+03	0.101	$1.0 \text{ M} < [\text{NO3}] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [\text{NO3}] \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 0.4 * [\text{NO3}]?$
				$3.0 \text{ M} < [\text{NO3}] \leq 5.5 \text{ M?}$	$0.3 \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S] [NO3]	[S] [OH]	[S] [NO2]	[For] [OH] [NO2]
SAW-96-9 Interstitial Liquid	NO3	2.77E+04	0.447	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [\text{OH}] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [\text{NO2}] \leq 5.5 \text{ M}$	$[\text{NO3}]/([\text{OH}] + [\text{NO2}]) < 2.5?$
	OH	9.41E+03	0.554	YES	YES	YES	YES
	NO2	4.70E+03	0.102	$1.0 \text{ M} < [\text{NO3}] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [\text{NO3}] \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 0.4 * [\text{NO3}]?$
				$3.0 \text{ M} < [\text{NO3}] \leq 5.5 \text{ M?}$	$0.3 \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 1.2 \text{ M?}$

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S] [NO3]	[S] [OH]	[S] [NO2]	[For] [OH] [NO2]
SAW-96-9 Interstitial Liquid DUP	NO3	2.81E+04	0.453	$\leq 1.0 \text{ M?}$	$0.010 \text{ M} \leq [\text{OH}] \leq 5.0 \text{ M?}$	$0.011 \text{ M} \leq [\text{NO2}] \leq 5.5 \text{ M}$	$[\text{NO3}]/([\text{OH}] + [\text{NO2}]) < 2.5?$
	OH	9.50E+03	0.559	YES	YES	YES	YES
	NO2	4.68E+03	0.102	$1.0 \text{ M} < [\text{NO3}] \leq 3.0 \text{ M?}$	$0.1 \text{ M} * [\text{NO3}] \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 0.4 * [\text{NO3}]?$
				$3.0 \text{ M} < [\text{NO3}] \leq 5.5 \text{ M?}$	$0.3 \leq [\text{OH}] < 10 \text{ M?}$		$[\text{OH}] + [\text{NO2}] \geq 1.2 \text{ M?}$

Table 4 (4 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3]	[S][OH]	[S][NO2]	F _{OH} [OH] + [NO2]
SAW-96-10 Supernate DUP	NO3	2.48E+04	0.397	<= 1.0 M?	0.010 M <= [OH] <= 5.0 M?	0.011 M <= [NO2] <= 5.5 M	[NO3]/([OH] + [NO2]) < 2.5?
	OH	2.90E+03	0.171	YES	YES	YES	YES
	NO2	1.09E+03	0.024	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3]	[S][OH]	[S][NO2]	F _{OH} [OH] + [NO2]
SAW-96-10 Supernate DUP	NO3	2.48E+04	0.400	<= 1.0 M?	0.010 M <= [OH] <= 5.0 M?	0.011 M <= [NO2] <= 5.5 M	[NO3]/([OH] + [NO2]) < 2.5?
	OH	2.85E+03	0.168	YES	YES	YES	YES
	NO2	1.07E+03	0.023	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3]	[S][OH]	[S][NO2]	F _{OH} [OH] + [NO2]
SAW-96-11 Supernate DUP	NO3	2.92E+04	0.471	<= 1.0 M?	0.010 M <= [OH] <= 5.0 M?	0.011 M <= [NO2] <= 5.5 M	[NO3]/([OH] + [NO2]) < 2.5?
	OH	3.15E+03	0.185	YES	YES	YES	YES
	NO2	1.28E+03	0.028	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3]	[S][OH]	[S][NO2]	F _{OH} [OH] + [NO2]
SAW-96-11 Supernate DUP	NO3	2.85E+04	0.420	<= 1.0 M?	0.010 M <= [OH] <= 5.0 M?	0.011 M <= [NO2] <= 5.5 M	[NO3]/([OH] + [NO2]) < 2.5?
	OH	3.37E+03	0.198	YES	YES	YES	YES
	NO2	1.25E+03	0.027	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Table 4 (5 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ⁻	[S][OH] ⁻	[S][NO2] ⁻	For [OH] ⁻ [NO2] ⁻
SAW-96-14 Supernate	NO3	2.80E+04	0.462	<= 1.0 M?	0.010 M <= [OH] ⁻ <= 5.0 M?	0.011 M <= [NO2] ⁻ <= 5.5 M	[NO3] ⁻ /([OH] ⁻ + [NO2] ⁻) < 2.5?
	OH	5.13E+03	0.302	YES	YES	YES	YES
	NO2	1.66E+03	0.036	1.0 M < [NO3] ⁻ <= 3.0 M?	0.1 M * [NO3] ⁻ <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 0.4 * [NO3] ⁻ ?
				3.0 M < [NO3] ⁻ <= 5.5 M?	0.3 <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ⁻	[S][OH] ⁻	[S][NO2] ⁻	For [OH] ⁻ [NO2] ⁻
SAW-96-14 Supernate DUP	NO3	3.02E+04	0.487	<= 1.0 M?	0.010 M <= [OH] ⁻ <= 5.0 M?	0.011 M <= [NO2] ⁻ <= 5.5 M	[NO3] ⁻ /([OH] ⁻ + [NO2] ⁻) < 2.5?
	OH	5.18E+03	0.305	YES	YES	YES	YES
	NO2	1.76E+03	0.038	1.0 M < [NO3] ⁻ <= 3.0 M?	0.1 M * [NO3] ⁻ <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 0.4 * [NO3] ⁻ ?
				3.0 M < [NO3] ⁻ <= 5.5 M?	0.3 <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ⁻	[S][OH] ⁻	[S][NO2] ⁻	For [OH] ⁻ [NO2] ⁻
SAW-96-15 Interstitial Liquid	NO3	2.93E+04	0.473	<= 1.0 M?	0.010 M <= [OH] ⁻ <= 5.0 M?	0.011 M <= [NO2] ⁻ <= 5.5 M	[NO3] ⁻ /([OH] ⁻ + [NO2] ⁻) < 2.5?
	OH	7.62E+03	0.448	YES	YES	YES	YES
	NO2	3.01E+03	0.065	1.0 M < [NO3] ⁻ <= 3.0 M?	0.1 M * [NO3] ⁻ <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 0.4 * [NO3] ⁻ ?
				3.0 M < [NO3] ⁻ <= 5.5 M?	0.3 <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[S][NO3] ⁻	[S][OH] ⁻	[S][NO2] ⁻	For [OH] ⁻ [NO2] ⁻
SAW-96-15 Interstitial Liquid DUP	NO3	2.97E+04	0.469	<= 1.0 M?	0.010 M <= [OH] ⁻ <= 5.0 M?	0.011 M <= [NO2] ⁻ <= 5.5 M	[NO3] ⁻ /([OH] ⁻ + [NO2] ⁻) < 2.5?
	OH	7.44E+03	0.438	YES	YES	YES	YES
	NO2	2.93E+03	0.064	1.0 M < [NO3] ⁻ <= 3.0 M?	0.1 M * [NO3] ⁻ <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 0.4 * [NO3] ⁻ ?
				3.0 M < [NO3] ⁻ <= 5.5 M?	0.3 <= [OH] ⁻ < 10 M?		[OH] ⁻ + [NO2] ⁻ >= 1.2 M?

Table 4 (6 of 6)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	Is [NO3]	Is [OH]	Is [NO2]	For [OH] + [NO2]
				<= 1.0 M? YES	0.010 M <= [OH] <= 5.0 M? YES	0.011 M <= [NO2] <= 5.5 M YES	[NO3]/([OH] + [NO2]) < 2.5? YES
5AW-96-17 Interstitial Liquid	NO3	2.70E+04	0.435				
	OH	9.04E+03	0.532				
	NO2	4.71E+03	0.102				
				1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	Is [NO3]	Is [OH]	Is [NO2]	For [OH] + [NO2]
				<= 1.0 M? YES	0.010 M <= [OH] <= 5.0 M? YES	0.011 M <= [NO2] <= 5.5 M YES	[NO3]/([OH] + [NO2]) < 2.5? YES
5AW-96-17 Interstitial Liquid DUP	NO3	2.69E+04	0.434				
	OH	9.39E+03	0.552				
	NO2	4.73E+03	0.103				
				1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	Is [NO3]	Is [OH]	Is [NO2]	For [OH] + [NO2]
				<= 1.0 M? YES	0.010 M <= [OH] <= 5.0 M? YES	0.011 M <= [NO2] <= 5.5 M YES	[NO3]/([OH] + [NO2]) < 2.5? YES
5AW-96-20 Interstitial Liquid	NO3	3.03E+04	0.489				
	OH	8.66E+03	0.509				
	NO2	3.94E+03	0.086				
				1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	Is [NO3]	Is [OH]	Is [NO2]	For [OH] + [NO2]
				<= 1.0 M? YES	0.010 M <= [OH] <= 5.0 M? YES	0.011 M <= [NO2] <= 5.5 M YES	[NO3]/([OH] + [NO2]) < 2.5? YES
5AW-96-20 Interstitial Liquid DUP	NO3	3.03E+04	0.489				
	OH	9.07E+03	0.534				
	NO2	3.92E+03	0.085				
				1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		[OH] + [NO2] >= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		[OH] + [NO2] >= 1.2 M?

HNF-SD-WM-DP-214, REV. 0

HNF-SD-WM-DP-214, REV. 0

Chain of Custody Forms

HNF-SD-WM-DP-214, REV. 0

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CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Aug. 28, 1996 - 3:30 PM WNC 2225 LAB ROOM 2F BACKSIDE

No. 4538 P. 1/20

Shipment Number 200E-08-TF (2) Sample Number 5AW-96-1 (3) Supervisor R.J. Prznzik
 Tank AW-105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003A

radiation Survey Date For Cask/PIG:

(7) FIELD

(31) LABORATORY

(8) Shipment Description

Over Top Dose Rate

20.5 m/hr

20.5 m/hr

A. Work Package Number

ES-96-00615-0

Side Dose Rate

20.5 m/hr

20.5 m/hr

B. Cask/PIG Seal Number

10547

Bottom Dose Rate

20.5 m/hr

20.5 m/hr

C. Date and Time Sample

8-20-96/1044

Smearable Contamination

<20 dpm/100cm²

<20 dpm

Removed from Tank

100%

(Alpha)

(Alpha)

D. Expected Liquid Content

0%

<1000 dpm/100cm²

<1000 dpm

E. Expected Solid Content

3.5 m R/hr

(Beta-Gamma)

(Beta-Gamma)

F. Dose Rate Through Drill String

125 ml

RCT*

RCT*

(Signature)

(Signature)

G. Expected Sample Length (Auger/Volume (GRAB))

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

HNF-SD-WM-DP-214, REV. 0

(1) Field Comments

(32) Laboratory Comments

(1) Point of Origin

(12) Destination

(13) Sender Name (Sign and PRINT)

(14) Date/Time

(15) Sender Comments

(1) Relinquished By (Sign and PRINT)

(16) Received By (Sign and PRINT)

(19) Date/Time

(20) Receiver Comments

(1) Relinquished By (Sign and PRINT)

(22) Received By (Sign and PRINT)

(23) Date/Time

(24) Receiver Comments

(1) Relinquished By (Sign and PRINT)

(26) Received By (Sign and PRINT)

(27) Date/Time

(28) Receiver Comments

(16) Seal Intact Upon Release?

(29) Seal Intact Upon Receipt?

(30) Seal Date Consistent with this Record?

Shipment No.

Seal No.

Sample No.

☒ Yes ☐ No

☒ Yes ☐ No

☐ Yes ☐ No

☒ Yes ☐ No

☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/86)

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 2008-08-TF (2) Sample Number SAW-96-2 (3) Supervisor R.J. PRANIK
 Tank WU105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003 D

(7) FIELD		(31) LABORATORY		(8) Shipment Description	
Over Top Dose Rate	<u>40.5 m/l/c</u>		<u>40.5 m/l/c</u>	A. Work Package Number	<u>ES-96-00615/0</u>
Side Dose Rate	<u>40.5 m/l/c</u>		<u>40.5 m/l/c</u>	B. Cask/PIG Seal Number	<u>10548</u>
Bottom Dose Rate	<u>40.5 m/l/c</u>		<u>40.5 m/l/c</u>	C. Date and Time Sample	<u>8-20-96 / 1048hr</u>
Smearable Contamination	<u>220 dpm/100 cm²</u>		<u>220 dpm</u>	Removed from Tank	
	(Alpha)		(Alpha)	D. Expected Liquid Content	<u>100%</u>
	<u>21000 dpm/100 cm²</u>		<u>4000 dpm</u>	E. Expected Solid Content	<u>0%</u>
	(Beta-Gamma)		(Beta-Gamma)	F. Dose Rate Through Drill String (Auger/On Contact (GRAB))	<u>4.5 mR/hr</u>
RCT* <u>[Signature]</u>	(Signature)	RCT* <u>[Signature]</u>	(Signature)	G. Expected Sample Length (Auger/Volume (GRAB))	<u>125ml</u>

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

HNF-SD-WM-DP-214, REV. D

(9) Field Comments			(32) Laboratory Comments		

(1) Point of Origin <u>WU05 W-10A</u>	(12) Destination <u>222-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sicketts</u>	(14) Date/Time <u>8-27-96</u>	(15) Sender Comments
(7) Relinquished By (Sign and PRINT) <u>James Sicketts</u>	(16) Received By (Sign and PRINT) <u>James R. Chambers</u>	(18) Date/Time <u>8-27-96</u>	(19) Date/Time <u>1002</u>	(20) Receiver Comments
(11) Relinquished By (Sign and PRINT) <u>James R. Chambers</u>	(22) Received By (Sign and PRINT) <u>PL Chambers</u>	(23) Date/Time <u>8-27-96</u>	(24) Date/Time <u>8-27-96</u>	(24) Receiver Comments
(5) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	(30) Seal Data Consistent with this Record? ☒ Yes ☐ No		

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 - 3:31 PM WNC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 2/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 2002-08-17 (2) Sample Number 5HW-96-3 (3) Supervisor R.J. REAZNIK
 Tank RMU105 (5) Hicor 10A (6) Cask/Pig Shipping Container Serial Number 6003D

Identification Survey Data for Cask/Pig:		(7) FIELD		(31) LABORATORY		(8) Shipment Description	
Over Top Dose Rate	<0.5	<0.5	<0.5	<0.5	<0.5	A. Work Package Number	<u>ES-96-00615/0</u>
Side Dose Rate	<0.5	<0.5	<0.5	<0.5	<0.5	B. Cask/Pig Seal Number	<u>10549</u>
Bottom Dose Rate	<0.5	<0.5	<0.5	<0.5	<0.5	C. Date and Time Sample	<u>8-20-96/1051 hr</u>
Removable Contamination	<15	<15	<15	<15	<15	D. Expected Liquid Content	<u>100%</u>
						E. Expected Solid Content	<u>0%</u>
						F. Dose Rate Through DRI Stripping (Auger)/Dn Contact (GRAB)	<u>3 mR/hr</u>
						G. Expected Sample Length (Auger)/ Volume (GRAB)	<u>125 ml</u>

HNF-SD-WM-DP-214, REV. 0

29

(1) Point of Origin		(12) Destination		(1) Point of Origin		(12) Destination	
RMU105 R-104	23A-S	RMU105 R-104	23A-S	RMU105 R-104	23A-S	RMU105 R-104	23A-S
(1) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(1) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(1) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(1) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)
(2) Relinquished By (Sign and PRINT)	(19) Date/Time	(2) Relinquished By (Sign and PRINT)	(19) Date/Time	(2) Relinquished By (Sign and PRINT)	(19) Date/Time	(2) Relinquished By (Sign and PRINT)	(19) Date/Time
(3) Relinquished By (Sign and PRINT)	(20) Receiver Comments	(3) Relinquished By (Sign and PRINT)	(20) Receiver Comments	(3) Relinquished By (Sign and PRINT)	(20) Receiver Comments	(3) Relinquished By (Sign and PRINT)	(20) Receiver Comments
(4) Relinquished By (Sign and PRINT)	(21) Date/Time	(4) Relinquished By (Sign and PRINT)	(21) Date/Time	(4) Relinquished By (Sign and PRINT)	(21) Date/Time	(4) Relinquished By (Sign and PRINT)	(21) Date/Time
(5) Relinquished By (Sign and PRINT)	(22) Receiver Comments	(5) Relinquished By (Sign and PRINT)	(22) Receiver Comments	(5) Relinquished By (Sign and PRINT)	(22) Receiver Comments	(5) Relinquished By (Sign and PRINT)	(22) Receiver Comments
(6) Relinquished By (Sign and PRINT)	(23) Date/Time	(6) Relinquished By (Sign and PRINT)	(23) Date/Time	(6) Relinquished By (Sign and PRINT)	(23) Date/Time	(6) Relinquished By (Sign and PRINT)	(23) Date/Time
(7) Relinquished By (Sign and PRINT)	(24) Receiver Comments	(7) Relinquished By (Sign and PRINT)	(24) Receiver Comments	(7) Relinquished By (Sign and PRINT)	(24) Receiver Comments	(7) Relinquished By (Sign and PRINT)	(24) Receiver Comments
(8) Relinquished By (Sign and PRINT)	(25) Date/Time	(8) Relinquished By (Sign and PRINT)	(25) Date/Time	(8) Relinquished By (Sign and PRINT)	(25) Date/Time	(8) Relinquished By (Sign and PRINT)	(25) Date/Time
(9) Relinquished By (Sign and PRINT)	(26) Receiver Comments	(9) Relinquished By (Sign and PRINT)	(26) Receiver Comments	(9) Relinquished By (Sign and PRINT)	(26) Receiver Comments	(9) Relinquished By (Sign and PRINT)	(26) Receiver Comments
(10) Relinquished By (Sign and PRINT)	(27) Date/Time	(10) Relinquished By (Sign and PRINT)	(27) Date/Time	(10) Relinquished By (Sign and PRINT)	(27) Date/Time	(10) Relinquished By (Sign and PRINT)	(27) Date/Time
(11) Relinquished By (Sign and PRINT)	(28) Receiver Comments	(11) Relinquished By (Sign and PRINT)	(28) Receiver Comments	(11) Relinquished By (Sign and PRINT)	(28) Receiver Comments	(11) Relinquished By (Sign and PRINT)	(28) Receiver Comments
(12) Relinquished By (Sign and PRINT)	(29) Date/Time	(12) Relinquished By (Sign and PRINT)	(29) Date/Time	(12) Relinquished By (Sign and PRINT)	(29) Date/Time	(12) Relinquished By (Sign and PRINT)	(29) Date/Time
(13) Relinquished By (Sign and PRINT)	(30) Receiver Comments	(13) Relinquished By (Sign and PRINT)	(30) Receiver Comments	(13) Relinquished By (Sign and PRINT)	(30) Receiver Comments	(13) Relinquished By (Sign and PRINT)	(30) Receiver Comments
(14) Relinquished By (Sign and PRINT)	(31) Date/Time	(14) Relinquished By (Sign and PRINT)	(31) Date/Time	(14) Relinquished By (Sign and PRINT)	(31) Date/Time	(14) Relinquished By (Sign and PRINT)	(31) Date/Time
(15) Sender Comments	(32) Laboratory Comments	(15) Sender Comments	(32) Laboratory Comments	(15) Sender Comments	(32) Laboratory Comments	(15) Sender Comments	(32) Laboratory Comments

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations
 B-C-6001-326 (01/96)

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 000E-08-TF (2) Sample Number SAW-96-4 (3) Supervisor R.J. Peznik
 Tank AW105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003B

Identification Survey Date For Cask/PIG:

(7) FIELD

(31) LABORATORY

(8) Shipment Description

Over Top Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	A. Work Package Number	<u>ES-96-00615</u>
Side Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	B. Cask/PIG Seal Number	<u>10550</u>
Bottom Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	C. Date and Time Sample	<u>8-20-96/1054</u>
Smearable Contamination	<u><20 dpm/100cm²</u> (Alpha)	<u><20 dpm</u> (Alpha)	Removed from Tank	<u>100%</u>
	<u><1000 dpm/100cm²</u> (Beta-Gamma)	<u>4000 dpm</u> (Beta-Gamma)	D. Expected Liquid Content	<u>0%</u>
RCT: <u>[Signature]</u> (Signature)		RCT: <u>[Signature]</u> (Signature)	E. Expected Solid Content	<u>4.5 m/hr</u>
			F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	<u>125 ml</u>
			G. Expected Sample Length (Auger)/ Volume (GRAB)	

Information (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-214, REV. 0

D) Field Comments

(32) Laboratory Comments

1) Point of Origin <u>W105/B-10A</u>	(12) Destination <u>222-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels</u>	(14) Date/Time <u>8-27-96</u>	(15) Sender Comments
7) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(18) Received By (Sign and PRINT) <u>James Sickels</u>	(19) Date/Time <u>8-28-96</u>	(20) Receiver Comments	
1) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(22) Received By (Sign and PRINT) <u>James Sickels</u>	(23) Date/Time <u>8-27-96</u>	(24) Receiver Comments	
5) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(26) Received By (Sign and PRINT) <u>RL Chambers</u>	(27) Date/Time <u>8-27-96</u>	(28) Receiver Comments	
(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	(30) Seal Date Consistent with this Record? ☒ Yes ☐ No		

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 - 3:32PM WEC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 4/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1 Shipment Number 200E-08-TF (2) Sample Number SAW-96-5 (3) Supervisor R.J. RAZNIK
 4 Tank AW105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003A

(7) FIELD Over Top Dose Rate <u>40.5 m/hr</u> Side Dose Rate <u>40.5 m/hr</u> Bottom Dose Rate <u>40.5 m/hr</u> Smearable Contamination <u>420 dpm/100cm²</u> (Alpha) <u>41000 dpm/100cm²</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(31) LABORATORY Over Top Dose Rate <u>40.5 m/hr</u> Side Dose Rate <u>40.5 m/hr</u> Bottom Dose Rate <u>40.5 m/hr</u> Smearable Contamination <u>420 dpm</u> (Alpha) <u>41000 dpm</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(8) Shipment Description A. Work Package Number <u>ES-96-00615/0</u> B. Cask/PIG Seal Number <u>10551</u> C. Date and Time Sample <u>8-20-96/1057</u> Removed from Tank <u>8:20-96/1057</u> D. Expected Liquid Content <u>5200 @ 90% 20%</u> E. Expected Solid Content <u>* 80%</u> F. Dose Rate Through DRI String (Auger/On Contact (GRAB)) <u>30m R/hr</u> G. Expected Sample Length (Auger/Volume (GRAB)) <u>125m/</u>	
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1 INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-214, REV. D

(9) Field Comments * Suspended Solids, MUDDY TYPE MEDIUM. 8-20-96		(32) Laboratory Comments	
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(1) Point of Origin <u>WIND R-10A</u>		(12) Destination <u>222-S</u>		(13) Sender Name (Sign and PRINT) <u>James Sickels</u>		(14) Date/Time <u>8-27-96</u>		(15) Sender Comments	
(1) Relinquished By (Sign and PRINT) <u>James Sickels</u>		(18) Received By (Sign and PRINT) <u>James Sickels</u>		(19) Date/Time <u>8-27-96</u>		(20) Receiver Comments			
(1) Relinquished By (Sign and PRINT) <u>James Sickels</u>		(22) Received By (Sign and PRINT) <u>Richard L. Chambers</u>		(23) Date/Time <u>8-27-96</u>		(24) Receiver Comments			
(5) Relinquished By (Sign and PRINT) <u>James Sickels</u>		(26) Received By (Sign and PRINT) <u>Richard L. Chambers</u>		(27) Date/Time <u>8-27-96</u>		(28) Receiver Comments			

(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No		Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 3:33PM WNC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 5/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number <u>2005-08-TF</u>		(2) Sample Number <u>5AW-96-6</u>		(3) Supervisor <u>R.J. PEZNIK</u>	
Tank <u>AW105</u>		(5) Riser <u>10A</u>		(6) Cask/PIG Shipping Container Serial Number <u>6003B</u>	
Irradiation Survey Data For Cask/PIG:		(7) FIELD		(31) LABORATORY	
Over Top Dose Rate <u>40.5 m/hr</u>		<u>40.5 m/hr</u>		<u>40.5 m/hr</u>	
Side Dose Rate <u>40.5 m/hr</u>		<u>40.5 m/hr</u>		<u>40.5 m/hr</u>	
Bottom Dose Rate <u>40.5 m/hr</u>		<u>40.5 m/hr</u>		<u>40.5 m/hr</u>	
Smearable Contamination <u>220 dpm/100cm²</u>		<u>220 dpm</u>		<u>220 dpm</u>	
(Alpha)		(Alpha)		(Alpha)	
<u>< 1000 dpm/100cm²</u>		<u>< 1000 dpm</u>		<u>< 1000 dpm</u>	
(Beta-Gamma)		(Beta-Gamma)		(Beta-Gamma)	
RCT* <u>[Signature]</u>		RCT* <u>[Signature]</u>		RCT* <u>[Signature]</u>	
(Signature)		(Signature)		(Signature)	
(8) Shipment Description					
A. Work Package Number <u>ES-96-00615/0</u>					
B. Cask/PIG Seal Number <u>10552</u>					
C. Date and Time Sample <u>8-20-96 / 1120</u>					
Removed from Tank <u>10%</u>					
D. Expected Liquid Content <u>90%</u>					
E. Expected Solid Content <u>185 mR/hr</u>					
F. Dose Rate Through Drill String (Auger/ION Contact (GRAB)) <u>125 ml</u>					
G. Expected Sample Length (Auger)/ Volume (GRAB)					

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

HNF-SD-WM-DP-214, REV. 0

(1) Field Comments			(32) Laboratory Comments		
*Superficial solids, sample medium MUDDY IN NATURE. <u>8209P</u>					
(1) Point of Origin <u>AW05 R-10A</u>	(12) Destination <u>222-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sicks</u>	(14) Date/Time <u>8-26-96</u>	(15) Sender Comments	
(16) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(17) Received By (Sign and PRINT) <u>Shelley Covey</u>	(18) Date/Time <u>8-26-96</u>	(19) Receiver Comments		
(20) Relinquished By (Sign and PRINT) <u>Shelley Covey</u>	(21) Received By (Sign and PRINT) <u>RL Chambers</u>	(22) Date/Time <u>8-26-96</u>	(23) Receiver Comments		
(24) Relinquished By (Sign and PRINT)	(25) Received By (Sign and PRINT)	(26) Date/Time	(27) Receiver Comments		
(16) Seal Intact Upon Release?		(29) Seal Intact Upon Receipt?		(30) Seal Data Consistent with this Record?	
☒ Yes ☐ No		☒ Yes ☐ No		☒ Yes ☐ No	
Shipment No. ☒ Yes ☐ No		Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 200E-08-TF (2) Sample Number 5AN-96-7 (3) Supervisor R.J. Praznik
 Tank AW105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003E

radiation Survey Data For Cask/PIG:

(7) FIELD

(31) LABORATORY

Over Top Dose Rate 20.5 m/hr
 Side Dose Rate 20.5 m/hr
 Bottom Dose Rate 20.5 m/hr
 Smearable Contamination 220 dpm/100cm²
 (Alpha)
21000 dpm/100cm²
 (Beta-Gamma)
 RCT [Signature]
 (Signature)

20.5 m/hr
20.5 m/hr
20.5 m/hr
220 dpm
 (Alpha)
21000 dpm
 (Beta-Gamma)
 RCT [Signature]
 (Signature)

(8) Shipment Description

A. Work Package Number ES-96-00615/0
 B. Cask/PIG Seal Number 10553
 C. Date and Time Sample 8-20-96/1126
 Removed from Tank 108
 D. Expected Liquid Content 908
 E. Expected Solid Content * 160 mR/hr
 F. Dose Rate Through Drill String (Auger/IG Contact (GRAB)) 125 ml
 G. Expected Sample Length (Auger/ Volume (GRAB))

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

HNF-SD-WM-DP-214, REV. 0

(1) Field Comments

* Sample medium, suspended solids (mud) in nature
 8/20/96

(32) Laboratory Comments

(1) Point of Origin <u>AW105 R-10A</u>	(12) Destination <u>222-5</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels</u>	(14) Date/Time <u>8-26-96</u>	(15) Sender Comments
(17) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(18) Received By (Sign and PRINT) <u>Shelley Covey</u>	(19) Date/Time <u>8-26-96</u>	(20) Receiver Comments	
(21) Relinquished By (Sign and PRINT) <u>Shelley Covey</u>	(22) Received By (Sign and PRINT) <u>PL Chambers</u>	(23) Date/Time <u>8-26-96</u>	(24) Receiver Comments	
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	

(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/95)

Aug. 28, 1996 3:34PM WNC 2225 LAB ROOM 2F BACKSIDE

No. 4538 P. 7/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 200E-08TF (2) Sample Number 5AW-96-B (3) Supervisor R.J. PRAZNIK
 Tank AW105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003A

(7) FIELD Over Top Dose Rate <u><0.5</u> Side Dose Rate <u><0.5</u> Bottom Dose Rate <u><0.5</u> Smearable Contamination <u><20</u> (Alpha) (Beta-Gamma) <u>1/4</u> RCT* <u>[Signature]</u> (Signature)		(31) LABORATORY Over Top Dose Rate <u><0.5</u> Side Dose Rate <u><0.5</u> Bottom Dose Rate <u><0.5</u> Smearable Contamination <u><20</u> (Alpha) (Beta-Gamma) <u>1/4</u> RCT* <u>[Signature]</u> (Signature)		(8) Shipment Description A. Work Package Number <u>ES-96-00615/0</u> B. Cask/PIG Seal Number <u>10554</u> C. Date and Time Sample <u>8-20-96/1132</u> Removed from Tank <u>10%</u> D. Expected Liquid Content <u>90%</u> E. Expected Solid Content <u>190 mkl</u> F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) <u>125 ml</u> G. Expected Sample Length (Auger/Volume (GRAB))	
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INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-214, REV. D

(1) Field Comments Sample medium muddy in nature. 8-20-96		(32) Laboratory Comments	
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(1) Point of Origin AW105 R-10A		(12) Destination 222S		(13) Sender Name (Sign and PRINT) R.J. PRAZNIK		(14) Date/Time 8-21-96/1545		(15) Sender Comments	
(7) Relinquished By (Sign and PRINT) R.J. PRAZNIK		(16) Received By (Sign and PRINT) [Signature]		(18) Date/Time 8-21-96		(19) Date/Time 8-21-96		(20) Receiver Comments	
(1) Relinquished By (Sign and PRINT) [Signature]		(22) Received By (Sign and PRINT) [Signature]		(23) Date/Time 8-21-96		(24) Date/Time 11-05		(24) Receiver Comments	
(5) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)		(27) Date/Time		(28) Date/Time		(28) Receiver Comments	

(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		(30) Seal Data Consistent with this Record? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	
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TRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-328 (01/96)

Aug 28 1996 3:35PM WNC 222S LAB ROOM 2F BACKSIDE No. 4538 P. 8/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number E 2827-96 2000-08-TF (2) Sample Number 5AN-96-9 (3) Supervisor R.J. PRZYMNIK
 Tank AW105 (5) Riser 10A (6) Cask/PIG Shipping Container Serial Number 6003E

Irradiation Survey Date For Cask/PIG:		(7) FIELD	(31) LABORATORY	(8) Shipment Description
Over Top Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	A. Work Package Number <u>ES96-00615/0</u>
Side Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	B. Cask/PIG Seal Number <u>10555</u>
Bottom Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>	C. Date and Time Sample <u>8/20/96 / 1138</u>
Smearable Contamination	<u><20 dpm/100cm²</u>	<u><20 dpm</u>	<u><20 dpm</u>	Removed from Tank <u>10%</u>
	(Alpha)	(Alpha)	(Alpha)	D. Expected Liquid Content <u>* 90%</u>
	<u><1000 dpm/100cm²</u>	<u><1000 dpm</u>	<u><1000 dpm</u>	E. Expected Solid Content <u>190 m/h</u>
	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	F. Dose Rate Through Drill String (Auger)/On Contact (GRAB) <u>125 ml</u>
RCT*	<u>[Signature]</u>	RCT*	<u>[Signature]</u>	G. Expected Sample Length (Auger)/Volume (GRAB)
	(Signature)		(Signature)	

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

HNF-SD-WM-DP-214, REV. 0

(9) Field Comments <u>* Sample medium muddy in nature @ 820.8 ft</u>	(32) Laboratory Comments
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(1) Point of Origin <u>WIDS K-10A</u>	(12) Destination <u>WDS</u>	(13) Sender Name (Sign and PRINT) <u>James Sickett</u>	(14) Date/Time <u>8-27-96</u>	(15) Sender Comments
(7) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(8) Received By (Sign and PRINT) <u>James Sickett</u>	(19) Date/Time <u>8-27-96</u>	(20) Receiver Comments	
(11) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(22) Received By (Sign and PRINT) <u>James Sickett</u>	(23) Date/Time <u>8-27-96</u>	(24) Receiver Comments	
(5) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(26) Received By (Sign and PRINT) <u>James Sickett</u>	(27) Date/Time <u>8-27-96</u>	(28) Receiver Comments	
(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		(30) Seal Data Consistent with this Record? ☒ Yes ☐ No
Shipment No. ☒ Yes ☐ No		Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-328 (01/96)

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1 Shipment Number 2006-08-TF (2) Sample Number 5AW-96-10 (3) Supervisor R.J. Prznik
 4 Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003A / B10

7 Radiation Survey Data For Cask/PIG:

(7) FIELD

(31) LABORATORY

(8) Shipment Description

Over Top Dose Rate <0.5
 Side Dose Rate <0.5
 Bottom Dose Rate <0.5
 Smearable Contamination <20
 (Alpha) <1K
 (Beta-Gamma) [Signature]
 RCT* [Signature]
 (Signature)

<0.5 mr/hr
<0.5
<0.5
<20 dpm
 (Alpha) <1K dpm
 (Beta-Gamma) [Signature]
 RCT* [Signature]
 (Signature)

A. Work Package Number ES-96-00615/6
 B. Cask/PIG Seal Number 10556
 C. Date and Time Sample 8-21-96 / 1227
 Removed from Tank 100%
 D. Expected Liquid Content 0%
 E. Expected Solid Content 3m Rm
 F. Dose Rate Through Drill String (Auger)/On Contact (GRAB) 125m/l
 G. Expected Sample Length (Auger)/Volume (GRAB)

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

HNF-SD-WM-DP-214, REV. 0

9 Field Comments

(32) Laboratory Comments

1 Point of Origin <u>ISA</u>	12 Destination <u>WMS</u>	13 Sender Name (Sign and PRINT) <u>James Sickle</u>	14 Date/Time <u>8-22-96</u>	15 Sender Comments
16 Requisitioned By (Sign and PRINT) <u>James Sickle</u>	17 Received By (Sign and PRINT) <u>[Signature]</u>	18 Received By (Sign and PRINT) <u>[Signature]</u>	19 Date/Time <u>8-22-96</u>	20 Receiver Comments
21 Requisitioned By (Sign and PRINT) <u>[Signature]</u>	22 Received By (Sign and PRINT) <u>RL Chambers</u>	23 Received By (Sign and PRINT) <u>[Signature]</u>	24 Date/Time <u>8-22-96</u>	24 Receiver Comments
25 Requisitioned By (Sign and PRINT)	26 Received By (Sign and PRINT)	27 Date/Time	28 Receiver Comments	

16 Seal Intact Upon Release? ☒ Yes ☐ No	29 Seal Intact Upon Receipt? ☒ Yes ☐ No	30 Seal Data Consistent with this Record? ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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10 DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug 28 1996 3:36PM WNC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 10/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 2006-08-11 (2) Sample Number 5AN-96-11 (3) Supervisor R.D. Przynik
 Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 40030/6-10

(7) FIELD Over Top Dose Rate <u><0.5</u> Side Dose Rate <u><0.5</u> Bottom Dose Rate <u><0.5</u> Smearable Contamination <u><20</u> (Alpha) <u><1K</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(31) LABORATORY <u><0.5 m/hr</u> <u><0.5</u> <u><0.5</u> <u><20 dpm</u> (Alpha) <u><1K dpm</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(8) Shipment Description A. Work Package Number <u>ES-96-00615/0</u> B. Cask/PIG Seal Number <u>10557</u> C. Date and Time Sample Removed from Tank <u>8-21-96/1230</u> D. Expected Liquid Content <u>100%</u> E. Expected Solid Content <u>0%</u> F. Dose Rate Through Drill String (Auger)/On Contact (GRAB) <u>3.5 m R/h</u> G. Expected Sample Length (Auger)/Volume (GRAB) <u>125m/</u>	
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(9) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-214, REV. 0

(10) Field Comments	(32) Laboratory Comments
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(1) Point of Origin <u>AW105 R-15A</u>	(12) Destination <u>W-5</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels</u>	(14) Date/Time <u>8-22-96</u>	(15) Sender Comments
(7) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(16) Received By (Sign and PRINT) <u>[Signature]</u>	(18) Date/Time <u>8-22-96</u>	(19) Date/Time <u>8-22-96</u>	(20) Receiver Comments
(1) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(22) Received By (Sign and PRINT) <u>RL Chambers</u>	(23) Date/Time <u>8-22-96</u>	(24) Date/Time <u>8-22-96</u>	(24) Receiver Comments
(5) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(26) Received By (Sign and PRINT) <u>[Signature]</u>	(27) Date/Time	(28) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		(30) Seal Date Consistent with this Record? ☒ Yes ☐ No
Shipment No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28 1996 - 3:37 PM WEC 2225 LAB ROOM 2F BACKSIDE

No. 4538 P. 11/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1 Shipment Number 200E-08-TF (2) Sample Number 5AW-96-12 (3) Supervisor R.J. RAZNIK
 4 Tank AW105 (5) Riser ISA (6) Cask/PIG Shipping Container Serial Number 6003B

Radionuclide Survey Data For Cask/PIG:

	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>
Side Dose Rate	<u><0.5 m/hr</u>	<u><0.5</u>
Bottom Dose Rate	<u><0.5 m/hr</u>	<u><0.5</u>
Smearable Contamination	<u><20 dpm/100cm²</u>	<u><20 dpm</u>
	(Alpha)	(Alpha)
	<u><1K dpm/100cm²</u>	<u><1K dpm</u>
	(Beta-Gamma)	(Beta-Gamma)
RCT*	<u>[Signature]</u>	RCT* <u>[Signature]</u>
	(Signature)	(Signature)

(8) Shipment Description

A. Work Package Number ES96-00615/0
 B. Cask/PIG Seal Number 10558
 C. Date and Time Sample 8-21-96/ 1233h
 Removed from Tank
 D. Expected Liquid Content 100%
 E. Expected Solid Content 0%
 F. Dose Rate Through Drill String (Auger)/On Contact (GRAB) 4 mR/h
 G. Expected Sample Length (Auger)/Volume (GRAB) 125ml

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

HNF-SD-WM-DP-214, REV. D

D) Field Comments

(32) Laboratory Comments

1 Point of Origin <u>AW105 R-ISA</u>	(12) Destination <u>222-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels</u>	(14) Date/Time <u>8-23-96</u>	(15) Sender Comments
7 Relinquished By (Sign and PRINT) <u>James Sickels</u>	(16) Received By (Sign and PRINT) <u>David J Keane</u>	(17) Date/Time <u>8-23-96</u>	(18) Receiver Comments	
1 Relinquished By (Sign and PRINT) <u>David J Keane</u>	(22) Received By (Sign and PRINT) <u>RL Chambers</u>	(23) Date/Time <u>8-23-96</u>	(24) Receiver Comments	
5 Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	

(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 - 3:38PM WEC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 12/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 200E-08-TF (2) Sample Number 5AN-96-13 (3) Supervisor R.J. PRAZNIK
 Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003 E

Dilatation Survey Data For Cask/PIG:		(7) FIELD	(31) LABORATORY	(8) Shipment Description
Over Top Dose Rate	<u><0.5 m/hr</u>	<u><0.5 m/hr</u>		A. Work Package Number <u>ES-96-00615/0</u>
Side Dose Rate	<u><0.5 m/hr</u>	<u><0.5</u>		B. Cask/PIG Seal Number <u>10559</u>
Bottom Dose Rate	<u><0.5 m/hr</u>	<u><0.5</u>		C. Date and Time Sample <u>1237h</u>
Smearable Contamination	<u><20 dpm/100cm²</u>	<u><20 dpm</u>		Removed from Tank <u>821-96/5m/hr</u>
	(Alpha)	(Alpha)		D. Expected Liquid Content <u>100%</u>
	<u><1K dpm/100cm²</u>	<u><1K dpm</u>		E. Expected Solid Content <u>0%</u>
	(Beta-Gamma)	(Beta-Gamma)		F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) <u>5m/hr</u>
ACT*	<u>[Signature]</u>	ACT*	<u>[Signature]</u>	G. Expected Sample Length (Auger/Volume (GRAB)) <u>125 ml.</u>
	(Signature)		(Signature)	

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

HNF-SD-WM-DP-214, REV. D

(1) Field Comments	(32) Laboratory Comments

(1) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
<u>W105 R-15A</u>	<u>222S</u>	<u>James S. Keane</u>	<u>8-23-96</u>	
(16) Relinquished By (Sign and PRINT)	(17) Received By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
<u>James S. Keane</u>	<u>David J. Keane</u>	<u>David J. Keane</u>	<u>8-23-96</u>	
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Received By (Sign and PRINT)	(24) Date/Time	(24) Receiver Comments
<u>David J. Keane</u>	<u>James S. Keane</u>	<u>James S. Keane</u>	<u>8-23-96</u>	
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	

(16) Seal Intact Upon Release?	(29) Seal Intact Upon Receipt?	Shipment No.	Seal No.	Sample No.
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/86)

Aug. 28, 1996 - 3:38PM WEC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 13/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 200E-08-TF (2) Sample Number SAW-96-14 (3) Supervisor R.J. RAZNIK
 Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003A

Radiation Survey Date For Cask/PIG:		(7) FIELD	(31) LABORATORY	(8) Shipment Description
Over Top Dose Rate	<u><0.5 mr/hr</u>	<u><0.5 mr/hr</u>		A. Work Package Number <u>ES-96-00615/0</u>
Side Dose Rate	<u><0.5 mr/hr</u>	<u><0.5</u>		B. Cask/PIG Seal Number <u>10560</u>
Bottom Dose Rate	<u><0.5 mr/hr</u>	<u><0.5</u>		C. Date and Time Sample <u>8-21-96/1240 hr</u>
Smearable Contamination	<u><20 dpm/100cm²</u>	<u><20 dpm</u>		Removed from Tank
	(Alpha) <u><1K dpm/100cm²</u>	(Alpha) <u><1K dpm</u>		D. Expected Liquid Content <u>0%</u>
	(Beta-Gamma) <u>✓</u>	(Beta-Gamma) <u>✓</u>		E. Expected Solid Content <u>30m Rm</u>
RCT* <u>✓</u>	(Signature)	RCT* <u>✓</u>	(Signature)	F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) <u>125 m/l</u>
				G. Expected Sample Length (Auger/Volume (GRAB))

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

HNF-SD-WM-DP-214, REV. D

(9) Field Comments	(32) Laboratory Comments

(1) Point of Origin <u>AW105 R-15A</u>	(12) Destination <u>202-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels</u>	(14) Date/Time <u>8-23-96</u>	(15) Sender Comments
(7) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(18) Received By (Sign and PRINT) <u>James R. Franks</u>	(19) Date/Time <u>8-23-96</u>	(20) Receiver Comments	
(11) Relinquished By (Sign and PRINT) <u>James R. Franks</u>	(22) Received By (Sign and PRINT) <u>RL Chambers</u>	(23) Date/Time <u>8-23-96</u>	(24) Receiver Comments	
(5) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	

(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	(30) Seal Data Consistent with this Record? ☒ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 - 3:39 PM WMC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 14/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1) Shipment Number 200E-08-TF (2) Sample Number SAW-96-15 (3) Supervisor R.J. RAZNIK
 1) Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003A

Radiation Survey Data For Cask/PIG: Over Top Dose Rate <u><0.5 mr/hr</u> Side Dose Rate <u><0.5 mr/hr</u> Bottom Dose Rate <u><0.5 mr/hr</u> Smearable Contamination <u><20 dpm/100 cm²</u> (Alpha) <u><1 K dpm/100 cm²</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(31) LABORATORY Over Top Dose Rate <u><0.5 mr/hr</u> Side Dose Rate <u><0.5</u> Bottom Dose Rate <u><0.5</u> Smearable Contamination <u><20 dpm</u> (Alpha) <u><1 K dpm</u> (Beta-Gamma) RCT* <u>[Signature]</u> (Signature)		(8) Shipment Description A. Work Package Number <u>ES-96-00615/0</u> B. Cask/PIG Seal Number <u>10561</u> C. Date and Time Sample Removed from Tank <u>8-21-96/1246h</u> D. Expected Liquid Content <u>10%</u> E. Expected Solid Content <u>* 90%</u> F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) <u>80 mR/h</u> G. Expected Sample Length (Auger/Volume (GRAB)) <u>125 ml.</u>	
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1) INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-214, REV. D

(1) Field Comments * Suspended Solids, muddy medium 8-21-96		(32) Laboratory Comments	
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(1) Point of Origin <u>WDS-R-15A</u>		(12) Destination <u>722-S</u>		(13) Sender Name (Sign and PRINT) <u>James Sickels James Sickels</u>		(14) Date/Time <u>8-23-96</u>		(15) Sender Comments	
(1) Relinquished By (Sign and PRINT) <u>James Sickels James Sickels</u>		(16) Received By (Sign and PRINT) <u>James Sickels James Sickels</u>		(17) Date/Time <u>8-23-96</u>		(18) Date/Time <u>8-23-96</u>		(19) Receiver Comments	
(1) Relinquished By (Sign and PRINT) <u>James Sickels James Sickels</u>		(22) Received By (Sign and PRINT) <u>RL Chambers RL Chambers</u>		(23) Date/Time <u>8-23-96</u>		(24) Date/Time <u>8-23-96</u>		(25) Receiver Comments	
(1) Relinquished By (Sign and PRINT) <u>James Sickels James Sickels</u>		(26) Received By (Sign and PRINT) <u>RL Chambers RL Chambers</u>		(27) Date/Time <u>8-23-96</u>		(28) Date/Time <u>8-23-96</u>		(29) Receiver Comments	

(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No		Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 3:39 PM WEC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 15/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

AUG 28, 1996 — 3:40 PM — WEC 2225 LAB ROOM 2B BACKSIDE — No. 4538 — P. 16/20

(1) Shipment Number 200E-08-TF (2) Sample Number 5AN-96-116 (3) Supervisor R.J. Ruznik
 (4) Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003 B

Adiation Survey Data For Cask/PIG:

(7) FIELD
 Over Top Dose Rate 20.5 mR/hr
 Side Dose Rate 20.5 mR/hr
 Bottom Dose Rate 20.5 mR/hr
 Smearable Contamination 20 dpm/100 cm²
 (Alpha)
41 K dpm/100 cm²
 (Beta-Gamma)
 RCT* [Signature]
 (Signature)

(31) LABORATORY
20.5 mR/hr
20.5
20.5
20 dpm
 (Alpha)
41 K dpm
 (Beta-Gamma)
 RCT* [Signature]
 (Signature)

(8) Shipment Description

A. Work Package Number ES96-00615/0
 B. Cask/PIG Seal Number 10562
 C. Date and Time Sample
 Removed from Tank 8-21-96 / 1308h
 D. Expected Liquid Content 10%
 E. Expected Solid Content * 90%
 F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) 240 mR/hr
 G. Expected Sample Length (Auger/Volume (GRAB)) 125 ml.

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

HNF-SD-WM-DP-214, REV. D

(10) Field Comments

* Sample medium, muddy in nature 8-21-96

(32) Laboratory Comments

1) Point of Origin <u>AW105 R-15A</u>		12) Destination <u>222-S</u>		13) Sender Name (Sign and PRINT) <u>James Sickle</u> <u>JAMES SICKLE</u>		14) Date/Time <u>8-23-96</u>		15) Sender Comments	
7) Relinquished By (Sign and PRINT) <u>James Sickle</u> <u>JAMES SICKLE</u>		8) Received By (Sign and PRINT) <u>Janie Hendry</u> <u>JANIE HENDRY</u>		19) Date/Time <u>8-23-96</u>		20) Receiver Comments			
17) Relinquished By (Sign and PRINT) <u>Janie Hendry</u> <u>JANIE HENDRY</u>		22) Received By (Sign and PRINT) <u>[Signature]</u> <u>65 GORCLE</u>		23) Date/Time <u>8-23-96</u>		24) Receiver Comments			
5) Relinquished By (Sign and PRINT)		16) Received By (Sign and PRINT)		27) Date/Time		28) Receiver Comments			
16) Seal Intact Upon Release? ☒ Yes ☐ No			29) Seal Intact Upon Receipt? ☒ Yes ☐ No			30) Seal Data Consistent with this Record? ☒ Yes ☐ No			
Shipment No. ☒ Yes ☐ No			Sample No. ☒ Yes ☐ No						

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1) Shipment Number 200E-08-TF (2) Sample Number SAW-96-17 (3) Supervisor R.J. PRAZNIL
 4) Tank AW1105 (5) Riser ISA (6) Cask/PIG Shipping Container Serial Number 6003E

Radiation Survey Data For Cask/PIG:		(7) FIELD	(31) LABORATORY	(9) Shipment Description
Over Top Dose Rate	<u><0.5 mR/hr</u>		<u><0.5 mR/hr</u>	A. Work Package Number <u>ES96-00615/6</u>
Side Dose Rate	<u><0.5 mR/hr</u>		<u><0.5</u>	B. Cask/PIG Seal Number <u>10563</u>
Bottom Dose Rate	<u><0.5 mR/hr</u>		<u><0.5</u>	C. Date and Time Sample <u>8-24-96/1313h</u>
Smearable Contamination	<u><20 dpm/100cm²</u> (Alpha)		<u><20 dpm</u> (Alpha)	Removed from Tank
	<u><1K dpm/100cm²</u> (Beta-Gamma)		<u><1K dpm</u> (Beta-Gamma)	D. Expected Liquid Content <u>10%</u>
RCT*	<u>[Signature]</u> (Signature)	RCT*	<u>[Signature]</u> (Signature)	E. Expected Solid Content <u>* 90%</u>
				F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) <u>200 mR/h</u>
				G. Expected Sample Length (Auger/Volume (GRAB)) <u>125ml</u>

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

HNF-SD-WM-DP-214, REV. D

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(1) Field Comments <u>Sample medium, muddy in nature @ 8-24-96</u>	(32) Laboratory Comments
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(1) Point of Origin <u>AW1105 R-ISA</u>	(12) Destination <u>222-S</u>	(13) Sender Name (Sign and PRINT) <u>James Sickels JAMES SICKELS</u>	(14) Date/Time <u>8-23-96</u>	(15) Sender Comments
(7) Relinquished By (Sign and PRINT) <u>James Sickels JAMES SICKELS</u>	(8) Received By (Sign and PRINT) <u>JL Hensley JL HENSLEY</u>	(16) Date/Time <u>8-23-96</u>	(19) Date/Time <u>8-23-96</u>	(20) Receiver Comments
(4) Relinquished By (Sign and PRINT) <u>JL Hensley JL HENSLEY</u>	(22) Received By (Sign and PRINT) <u>BT Goeckel BT GOECKEL</u>	(23) Date/Time <u>8-23-96</u>	(24) Date/Time <u>8-23-96</u>	(24) Receiver Comments
(5) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release? ☒ Yes ☐ No	(29) Seal Intact Upon Receipt? ☒ Yes ☐ No	(30) Seal Date Consistent with this Record? ☒ Yes ☐ No		
Shipment No. ☒ Yes ☐ No		Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-328 (01/96)

Aug. 28, 1996 - 3:41 PM WRC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 17/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

Shipment Number 200 E-08-TF (2) Sample Number 5AN-96-1B (3) Supervisor R.J. Pezchnik
 Tank AW105 (5) Riser 15A (6) Cask/PIG Shipping Container Serial Number 6003 A

Qualification Survey Data For Cask/PIG:

(7) FIELD

(31) LABORATORY

(8) Shipment Description

Over Top Dose Rate <0.5 m/h
 Side Dose Rate <0.5 m/h
 Bottom Dose Rate <0.5 m/h
 Smearable Contamination <20 dpm/100cm²
 (Alpha)
<1000 dpm/100cm²
 (Beta-Gamma)
 RCT: [Signature]
 (Signature)

<0.5 m/h
0.5 m/h
<0.5 m/h
<20 dpm
 (Alpha)
<1K dpm
 (Beta-Gamma)
 RCT: [Signature]
 (Signature)

A. Work Package Number ES-96-00615/0
 B. Cask/PIG Seal Number 10564
 C. Date and Time Sample 8/21/96 / 1318h
 Removed from Tank
 D. Expected Liquid Content 10%
 E. Expected Solid Content * 90%
 F. Dose Rate Through Drill String (Auger/On Contact (GRAB)) 220 mR/h
 G. Expected Sample Length (Auger/Volume (GRAB)) 125ml.

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

HNF-SD-WM-DP-214, REV. D

0) Field Comments

(32) Laboratory Comments

* Sample medium, muddy in nature @ 821g

1) Point of Origin <u>AW105 R-15A</u>	12) Destination <u>222-S</u>	13) Sender Name (Sign and PRINT) <u>James Sickle</u>	14) Date/Time <u>8-23-96</u>	15) Sender Comments
7) Relinquished By (Sign and PRINT) <u>James Sickle</u>	16) Received By (Sign and PRINT) <u>James Sickle</u>	17) Relinquished By (Sign and PRINT) <u>James Sickle</u>	18) Date/Time <u>8-23-96</u>	19) Receiver Comments
1) Relinquished By (Sign and PRINT) <u>James Sickle</u>	20) Received By (Sign and PRINT) <u>James Sickle</u>	21) Relinquished By (Sign and PRINT) <u>James Sickle</u>	22) Date/Time <u>8-23-96</u>	23) Receiver Comments
5) Relinquished By (Sign and PRINT) <u>James Sickle</u>	24) Received By (Sign and PRINT) <u>James Sickle</u>	25) Relinquished By (Sign and PRINT) <u>James Sickle</u>	26) Date/Time <u>8-23-96</u>	27) Receiver Comments

16) Seal Intact Upon Release? ☒ Yes ☐ No	29) Seal Intact Upon Receipt? ☒ Yes ☐ No	30) Seal Data Consistent with this Record? ☒ Yes ☐ No
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DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling Goldenrod - Tank Farm Operations.

BC-6001-326 (01/96)

Aug. 28, 1996 - 3:41PM WNC 222S LAB ROOM 2F BACKSIDE

No. 4538 P. 18/20

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

1) Shipment Number 200W-08-TF (2) Sample Number 5AW-96-19 (3) Supervisor R.D. Penzlik
 4) Tank AW105 (5) Riser ISA (6) Cask/Pig Shipping Container Serial Number 6003D

(7) FIELD
 Over Top Dose Rate < 0.5 m³/hr
 Side Dose Rate < 0.5 m³/hr
 Bottom Dose Rate < 0.5 m³/hr
 Smearable Contamination < 20 dpm/100cm²
< 1000 dpm/100cm² (Alpha)
< 1K dpm (Beta-Gamma)
 RCT: [Signature] RCT* [Signature]

(8) Shipment Description
 A. Work Package Number ES-96-0061510
 B. Cask/Pig Seal Number 10565
 C. Date and Time Sample 8/21/96 / 1323
 D. Removed from Tank 10g
 E. Expected Liquid Content * 90g
 F. Dose Rate Through Drill String (Auger/On Contact (DRAB)) 170 mR/hr
 G. Expected Sample Length (Auger)/Volume (DRAB) 125 ml.

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

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HNF-SD-WM-DP-214, REV. 0

(9) Field Comments
* Sample medium, muddying in nature @ 8-21-96

(10) Laboratory Comments
 (11) Point of Origin
 (12) Destination 222-S
 (13) Sender Name (Sign and PRINT) James Sickle James Sickle
 (14) Date/Time 8-23-96
 (15) Sender Comments
 (16) Seal Intact Upon Release? ☒ Yes ☐ No
 (17) Seal Intact Upon Receipt? ☒ Yes ☐ No
 (18) Recipient of Sample James Sickle James Sickle
 (19) Recipient of Sample (Sign and PRINT) [Signature]
 (20) Recipient of Sample (Sign and PRINT) [Signature]
 (21) Recipient of Sample (Sign and PRINT) [Signature]
 (22) Recipient of Sample (Sign and PRINT) [Signature]
 (23) Recipient of Sample (Sign and PRINT) [Signature]
 (24) Recipient of Sample (Sign and PRINT) [Signature]
 (25) Recipient of Sample (Sign and PRINT) [Signature]
 (26) Recipient of Sample (Sign and PRINT) [Signature]
 (27) Date/Time 8-23-96
 (28) Recipient of Sample (Sign and PRINT) [Signature]
 (29) Recipient of Sample (Sign and PRINT) [Signature]
 (30) Seal Data Consistent with this Record? ☒ Yes ☐ No
 (31) Laboratory Comments
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 (100) Laboratory Comments

(NON ETCHED BOTTLE)

50

200E-08-TF

(5) Riser

SA

(6) Cask/PIG Shipping Container Serial Number

(3) 0-20

(3) Supervisor

৭০০৭

K.D. Kazantse

(NON ETCHED BOTTLE)

ACT: _____

(Signature) _____

(Date - Gamma) _____

> 1000 dpm/100cm²

(Alpha) _____

> 20 dpm/100cm²

> 0.5 m²/hr

> 0.5 m²/hr

> 0.5 m²/hr

(7) FIELD _____

NAK/PJG: _____

(31) LABORATORY

⑧ Shipment Description	
A. Work Package Number	
B. Cask/PIG Seal Number	
C. Date and Time Sample	
Removed from Tank	
D. Expected Liquid Content	
E. Expected Solid Content	
F. Does Rate Through Drill String (Auger)/On Contact (GRAB)	
G. Expected Sample Length (Auger)/Volume (GRAB)	

HNF-SD-WM-DP-214, REV. 0

84

* Sample medium immediately in nature 8-24-60
* Sample bottle broke, this will be a NON-ETCHED BOTTLE, 8-21-60

* Sample medium immediately in nature 8-24-60
* Sample bottle broke, this will be a NON-ETCHED BOTTLE, 8-21-60

7/Relinquished By (Sign and PRINT)

17 Relinquished By (Sign and Print)

(5) Relinquished By (Sign and Print)

(16) Seal Intact Upon Release?

ON ☐ SOA ☒

(29) Seal intact Upon Receipt?

ON ☐ ~~SA ☒~~

Shipment No.

ON

Seal No.

ON ☐

Sample No.

ON ☐

DISTRIBUTION: White - Office of Sample Management
Yellow - Recipient of Sample
Pink - Waste Tank Sampling
Goldendred - Tank Farm Operations.

BC-6001-326 (01/96)

20/20_

HNF-SD-WM-DP-214, REV. 0

Breakdown Analysis

HNF-SD-WM-DP-214, REV. 0

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Hot Cell Workplan - Grab SamplesProject/Tank: AW-105 GRAB

Date: _____ (Date of Breakdown)

TSAP Number: WHC-5B-WM-TSAP-037 Rev. 2b

Logbook Number: _____

PC Name: Ruth Esch Telephone: 373-4314 Fax: 372-1878A. Sample Receipt and Storage

N/A 1. During Pig breakdown dose rate exceeded 7 R/hr or 25 rad/hr. Make preparations to have the sample transferred to the 11A hot cell area.

REL 2. Place pig in short term storage. Document the location of the pig/sample.

Room <u>2B</u>	Location <u>Cell 10</u>	Sample ID <u>SAW-96-5</u>	} in min. pigs
Room <u>2B</u>	Location <u>Cell 10</u>	Sample ID <u>SAW-96-7</u>	
Room <u>2B</u>	Location <u>Cell 10</u>	Sample ID <u>SAW-96-9</u>	
Room <u>2B</u>	Location <u>Cell 10</u>	Sample ID <u>SAW-96-15</u>	
Room <u>2B</u>	Location <u>Cell 10</u>	Sample ID <u>SAW-96-17</u>	
Room <u>2B</u>	Location <u>Cell 33</u>	Sample ID <u>SAW-96-20</u>	} in pig
Room _____	Location _____	Sample ID _____	
Room _____	Location _____	Sample ID _____	
Room _____	Location _____	Sample ID _____	
Room _____	Location _____	Sample ID _____	

3. Make 2 copies of the chain of custody. (Hot Cell Workplan, and Logbook).

4. Attach chain of custody to the Grab Sample workplan.

REL 5. Prepare and attach copies of the following worksheets and associated paper work if required.

a. Grab Sample Information Worksheet	☒
b. Breakdown - Grab Sample Worksheet	☒
c. Subsample - Grab Sample Worksheet	☒
d. Subsample: Liquid Worksheet	<u>N/A</u>
e. Bulk Density: Liquid Worksheet	<u>N/A</u>
f. Composite Worksheet	<u>N/A</u>

N/A 6. Transfer Grab Sample Workplan workplan to Pre-Extrusion Preparation file and contact personnel in charge of load-in and extrusions.

B. Pre-Loadin Preparation

- N/A 1. Prepare folder to consolidate papers for breakdown.
- N/A 2. Update the SAMPLER/AUGER LOG-IN/LOAD-IN SHEET.
- N/A 3. Prepare labels for pig sample if required. Labels for the pig may be loaded in through the drop chute.

C. Pig Receipt and Preparation.

- RDH 1. Receive pig from sample custodian and transfer to the 11A hot cell area.
- WV 2. Perform the following:
 a. Pig load-in (L0-161-172)
 b. Sample load-out (if required)
 c. Jar load-in (if required).
- NA 3. Record date pig was loaded in on SAMPLER/AUGER LOAD-IN SHEET.
- NA 4. Transfer hot cell work plan to Extrusion file.

D. Breakdown

- NA 1. Place chain of custody in the laboratory notebook.
- RDH 2. Update table of contents in laboratory notebook.
- RDH 3. Contact PC and inform of sample breakdown. (Contact the PC the day before breakdown)
- RDH 4. Contact Building Shift Manager for Waste Tank Volume information (Tank 101).
 a. Shift manager contacted MIKE LINDBERG
 b. Date/Time 9/25/96 08:00
- RDH 5. Record hot cell temperature and humidity
 a. Temperature 76.4°F Humidity 20%
- RDH 6. Balance check with 20 and 500 gram weights:
 a. 20 gm = 20.02 gms 500 gm = 500.36 gms
- RDH 7. Obtain the total weight of the grab sample; record on the appropriate Grab Sample Information Worksheet.

AD

8. Record appearance information on the appropriate Grab Sample Information Worksheet.

AA

9. If photography is requested by project coordinator or chemist, place the color chart next to sample.

NR

10. Take two photos of the grab samples if required by the chemist/project coordinator (Hasselblad camera):

a. Inside hot cell photography settings:

- (1) F-stop is set to 4.
- (2) Aperture is set between 11 and 8.
- (3) Wind to next available film.
- (4) Remove film plate.
- (5) Focus camera
- (6) Shoot picture

b. Record the following information:

- (1) Frame # _____
- (2) Time taken: _____

NA

11. Complete Film Frame Record sheet for each picture taken.

E. Laboratory Logbook:

AD

1. Update laboratory notebook with breakdown information.

AD

2. Update Jar notebook for jars/vials loaded in.

F. Subsampling

AD

1. Assign a vial number to each subsample on the Subsampling Worksheets.

AD

2. Breakdown and Subsample according to attached worksheets.

AD

3. After subsampling, complete calculations on each Grab Sample Information Worksheet.

AD

4. Record depleted jar numbers below:

SAW-96-7 SAW-96-15 SAW-96-20

SAW-96-9 SAW-96-17 _____

AD

5. Record jar/vials for load out on HOT CELL JAR/VIAL LOADOUT FORM.

AD

6. Place vials/jars for loadout next to transfer drawer in hot cell 11A-1B.

7. Clean up hot cell work area, spatulas, and sampling trays.
8. Update the Jars/Vials laboratory notebook (WHC-N-754) for all vials and jars created during subsampling.
9. If required, update the vial number (example: JXXXX) in the labcore I.D. for each subsample.
- (1) Standard Login
 - (2) Change Group
 - (3) Customer code TCP
 - (4) Group # 95XXXXXX
 - (5) Prior samples (F6)
 - (6) Enter Sample number
 - (7) Edit the sample i.d.
10. FAX a copy of the subsampling worksheet to the PC.
11. Place the copy of subsampling worksheet in PARADOX file.
12. Have chemist review and signoff.

G. Reporting/Labcore:

1. Under PARAMETER DATA ENTRY in labcore, complete the tests below, if generated, and sign your initials/date next to the vial on the subsampling worksheet.

@APPEAR1	(Appearance)	<u>ARCHIV01</u>	(Archive test)
SUBSMPL1	(Take a subsample)	<u>V%SLD-01</u>	(Volume % solids)
<u>BLKDENO1</u>	(Bulk Density)	FILTER01	(Filter Solids)
SAMPAMT1	(Sample Amount)	SHIP-PNL	(Ship sample to PNL)
<u>DOSE-01</u>	(Dose Rate)	DOSE-02	(Dose Rate)
<u>@BRKDOWN1</u>	(Appearance, Dose Rate, Sample Amount)		

→ Spectral data entry

RAE E. Determine bulk density of solids? Yes or No

RAE 1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 10.34 g
 b. Sum Vol. Solids for all cones 9 mL
 c. Determine bulk density of solids:

$$\frac{\text{Sum of Wgt. Solids}}{\text{Sum of Vol. Solids}} = \frac{10.34}{9} = 1.15 \text{ g/mL}$$

- d. Other Information:
 Report BLKDEN-01 for solids only as S96T005019

RAE F. Determine bulk density of liquids? Yes or No

RAE 1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for ^{Cone SA} all cones 17.60 g
 Net 1/10/96

Wgt liquids = Sum of Net Wgt - Sum of Wgt solids

- b. Vol. liquids for all cones 17 mL

Vol liquids = Sum of Total vol - Sum of Vol solids

- c. Determine bulk density of liquids:

$$\frac{\text{Wgt. Liquids}}{\text{Vol. Liquids}} = \frac{17.60}{17} = 1.04 \text{ g/mL}$$

- d. Other Information: Report BLKDEN-01 for liquids only
 as S96T005049

RAE G. Determine volume % solids by centrifugation? Yes or No

RAE 1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 9 mL
 b. Sum of Total vol for all cones 127.44 mL
 c. Determine volume % solids by centrifugation:

$$\frac{\text{Sum of Vol solids}}{\text{Sum of Total Volume}} \times 100 = \frac{9}{127.44} \times 100 = 7.09 \%$$

- d. Other Information:

Report V%SLD-01 as sample S96T004809

Breakdown: Grab Sludge Worksheet

P.C.: RA EschSample ID: 5AW-96-5Date: 9/25/96Tank/
Project: AW-105 GRAB

Sample ID: 596T004809
 Jar/Vial Size: 125 mL
 Initial Weight: 26.87 g
 Final Weight: 130.04 g
 Net Weight: 135.83 g

Small of solids
and black specks
were not transferred
to cones.

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

Labcore Entry

Initials: _____

BLK DEN01? ☒ Y or NV%SLD-01? ☒ Y or N

Small amount of
suspended solids were
transferred
15 mL cone

Cone#: 5A
 Wgt. Cone + Smp: 42.10 g
 Wgt. Cone + Sol: 24.50 g
 Wgt. Cone: 14.16 g
 Net Weight: 27.94 g
 Total Vol.: 26. mL
 Vol. Solids: 9 mL
 Wgt. Solids: 10.34 g
 Bulk dens. 1.05 g/mL

Cone#: 5B
 Wgt. Cone + Smp: 66.07 g
 Wgt. Cone + Sol: N/A g
 Wgt. Cone: 13.58 g
 Net Weight: 52.49 g
 Total Vol.: 50 mL
 Vol. Solids: N/A mL
 Wgt. Solids: N/A g
 Bulk dens. 1.05 g/mL

Cone#: 5C
 Wgt. Cone + Smp: 62.40 g
 Wgt. Cone + Sol: N/A g
 Wgt. Cone: 13.71 g
 Net Weight: 48.69 g
 Total Vol.: 46.0 mL
 Vol. Solids: N/A mL
 Wgt. Solids: N/A g
 Bulk dens. 1.06 g/mL

Cone 5D
 cone + samp 12.76 g
 cone 7.68 g
 net wgt = 5.08 g
 total vol. 5 mL
 Bulk dens = 1.02 g/mL

Appearance/Special Instructions:

Remove any liquid from above sludge layer after determination of % Settled Solids. Record volume and record this liquid in a jar in tubell - used parent jar.

Transfer sludge to 2 cones, as applicable, centrifuge for minimum of One hour.

Subsample: Grab Sludge Worksheet

Date: 9/26/96Tank/Project: AW-105 GRABP.C.: RA EschPhone#: 373-4314GROUP 96001213

Labcore Entry

Initials: _____

Archive

Bin #: _____

Parent

Sample ID: SAW-96-5596T004809

TESTS

BLKDNØ1

V% SLD-Ø1

} whole
} sample

Labcore Entry

Initials: _____

Archive

Bin #: N/AJar#: 11339 LABCORE#: 596T005018 ^{deleted ID# 9/26/96}Jar/Vial Size: 20 mLInitial Weight: 34.45 gFinal Weight: INSUFF. gNet Weight: SOLIDS FOR ARCHIVE gJar#: 11338 LABCORE#: 596T005049Jar/Vial Size: 20 mLInitial Weight: 33.52 gFinal Weight: 50.88 gNet Weight: 17.36 g

TESTS

DOSE-Ø1

BLKDNØ1

(liquid)

LABCORE#: 596T005019Jar/Vial Size: 20 mLInitial Weight: 34.84 gFinal Weight: 38.44 gNet Weight: 3.60 gJar#: 11340

Tests:

DOSE-Ø1BLKDNØ1 (solids only)LABCORE#: 596T005046Jar/Vial Size: 20 mLInitial Weight: 34.63 gFinal Weight: 39.56 gNet Weight: 4.93 gJar#: 11428

Tests:

DOSE-Ø1

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining
* - 2 solid subsamples from archive jar

Insufficient Solids for ARCHIVE

Grab Sample Information Worksheet

Sample ID: SAW-96-7
 LABCORE #: S96T004811
 Tank/Project: AW-105 GRAB

Date: 9/27/96 (Date of Breakdown)

A. Record the sampling depth off of sample tag: 588 in.

B. Obtain the total weight of the grab sample:
 Total weight of jar + sample = 306.35 grams

C. Description of Sample:

1. Color of liquid: too little liquid to determine
2. Is liquid clear or opaque: color or clarity
3. Approximate volume (Total): 125 mL
4. Are solids present: Yes or No

5. Approximate vol % settled solids 100 %
6. If there is more than 2% settled solids, determine actual volume % settled solids:

- a. Height of solids: 74 mm
- b. Height of total sample: 82 mm
- c. Volume % settled solids:

$$\frac{\text{Height of solids}}{\text{Height of Total Sample}} \times 100 = \frac{74}{82} \times 100 = \underline{89.2} \%$$

Solids are a light yellow/gray creamy mixture w/ black specks. Looks like an inner "core" of

7. Is there an organic layer: Yes or No solid up to cap
 If YES, contact Shift Manager for immediate notification to tank farms. solid line minimum

RAE Complete

8. Other Information: Record appearance information

RAE D. Determine bulk density of sample? Yes or No

RAE 1. Calculate bulk density of sample, if required: (BLKDEN01)

- a. Sum Net Weight for all cones 163.22 g
- b. Sum Total volumes for all cones 132 mL
- c. Determine bulk density of sample:

$$\frac{\text{Sum of Net Weight}}{\text{Sum of Total Volume}} = \frac{163.22}{132} = \underline{1.24} \text{ g/mL}$$

1.24
1.15 g/mL

- d. Other Information:

Record BLKDEN01 whole sample
on S96T004811 solid

HNF-SD-WM-DP-214, REV. 0

REL E. Determine bulk density of solids? Yes or NoREL 1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 118.63 g
 b. Sum Vol. Solids for all cones 89.5 mL
 c. Determine bulk density of solids:

$$\frac{\text{Sum of Wgt. Solids}}{\text{Sum of Vol. Solids}} = \frac{118.63}{89.5} = 1.32 \text{ g/mL}$$

- d. Other Information:

Rec'd BLKDEN01 solids only 10/3/96
 on S96T005020

REL F. Determine bulk density of liquids? Yes or NoREL 1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for all cones
- 40.86
- g

Wgt liquids = Sum of Net Wgt - Sum of Wgt solids

- b. Vol. liquids for all cones
- 39
- mL

Vol liquids = Sum of Total vol - Sum of Vol solids

- c. Determine bulk density of liquids:

$$\frac{\text{Wgt. Liquids}}{\text{Vol. Liquids}} = \frac{40.86}{39} = 1.05 \text{ g/mL}$$

- d. Other Information:

Rec'd BLKDEN01 liquids only 10/3/96
 on S96T005050

REL G. Determine volume % solids by centrifugation? Yes or NoREL 1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 89.5 mL
 b. Sum of Total vol for all cones 132 mL
 c. Determine volume % solids by centrifugation:

$$\frac{\text{Sum of Vol solids}}{\text{Sum of Total Volume}} \times 100 = \frac{89.5}{132} \times 100 = 67.8 \%$$

- d. Other Information:

Rec'd V%SLD-01 on S96T004811 10/3/96

Breakdown: Grab Sludge Worksheet

C.: RA Esch
 nk/
 oject: AW-105 GRAB

Sample ID: 5AW-96-7

Date: start 9/26/96
finish 9/27/96

art Time: _____
 ad Time: _____
 entrifugation
 ime (Min.): _____

Sample ID: 596T004811
 Jar/Vial Size: 125 mL
 Initial Weight: 306.35 g
 Final Weight: 137.43 g
 Net Weight: 168.92 g

*Some sludge
left in jar*

Labcore Entry
 Initials: _____

BLKDEN01? ☒ or N

V%SLD-01? ☒ or N

Cone#: 7A
 Wgt. Cone + Smp: 66.69 g
 Wgt. Cone + Sol: 50.88 g
 Wgt. Cone: 14.23 g
 Net Weight: 52.46 g
 Total Vol.: 42.5 mL

Cone#: 7B
 Wgt. Cone + Smp: 16.50 g
 Wgt. Cone + Sol: 52.63 g
 Wgt. Cone: 14.14 g
 Net Weight: 52.36 g
 Total Vol.: 42 mL

Cone#: 7C
 Wgt. Cone + Smp: 68.62 g
 Wgt. Cone + Sol: 52.44 g
 Wgt. Cone: 13.95 g
 Net Weight: 54.67 g
 Total Vol.: 44 mL

*Liquid removed from
top of sludge before transfer of
15ml cone to cone.*
7D

wgt cone + samp 11.26g
 wgt cone 7.53 g
 net wgt. 3.73g
 Total vol. 3.50 mL
 Bulk Dens. 1.07 g/mL

Vol. Solids: 27.5 mL
 Wgt. Solids: 15.8 + 34.65 g

Vol. Solids: 29 mL
 Wgt. Solids: 38.49 g

Vol. Solids: 33 mL
 Wgt. Solids: 43.49 g

Appearance/Special Instructions:

Remove any liquid from above sludge layer after determination of % Settled Solids. Record wgt. and vol. of liquid. Save liquid in 15ml cone.
Transfer sludge to 2 or 3 cones, as applicable, centrifuge for minimum of One hour.
and vol. solids, total volume. Transfer liquid to clean jar and resuspend solids.

Subsample: Grab Sludge Worksheet

Oct. 4, 1996 1:48PM WHC 2225 LAB ROOM 2F BACKSIDE
HNF-SD-WM-DP-214, REV. D
No. 5632 P. 19/40

Date: 9/27/96
Tank/
Project: AW-105 GRAB
P.C.: RA Esch
Phone#: 373-4314

Parent
Sample ID: SAW-96-7
S96T004811

TESTS
BULK DENSITY } whole
V% SLB-Ø1 } sample

GROUP # 96001213

Labcore Entry

Initials: _____

Labcore Entry

Initials: _____

Archive

Bin #: 82

Bin #: 82

70.36g = 500g
20.01g = 20g

Jar #: 11385

ARCHIVØ1

LABCORE#: S96T005017
Jar/Vial Size: 60 mL
Initial Weight: 88.12 g
Final Weight: 163.60 g
Net Weight: 75.48 g

Jar #: 11384
No liq.
subsample
from
here

LABCORE#: S96T005050
Jar/Vial Size: 60 mL
Initial Weight: 88.09 g
Final Weight: 109.43 g
Net Weight: 21.34 g

TESTS
DOSE-Ø1
BULK DENSITY
(liquid)
ARCHIVØ1

98

LABCORE#: S96T005020
Jar/Vial Size: 20 mL
Initial Weight: 34.77 g
Final Weight: 45.71 g
Net Weight: 10.94 g

Jar #: 11429

Tests:
DOSE-Ø1
BULK DENSITY (solids only)

LABCORE#: S96T005047 Jar #: 11430
Jar/Vial Size: 20 mL
Initial Weight: 34.11 g
Final Weight: 44.32 g
Net Weight: 10.21 g

Tests:
DOSE-Ø1

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining
- Solids - 2 subsamples from archive jar S96T005017

HNF-SD-WM-DP-214, REV. 0

SUBSAMPLE WORKSHEET

Tank: AW-105 Core: 624B Auger/Segment: 2A 5AW-96-7

Date: 9/27/96

Date Subsampled: 9/27/96

PC RA Esch
Phone# 373-4314

LABCORE # 596700-500 587 9/27/96

Jar# 11384

Jar/Vial Size: 60 mL

Initial Weight: 9.146 g

Final Weight: 88 g

Net Weight: 21.34 g

Subsample led from container noted from previous page

Bin# 82

Group # 9600/213

Jar Depleted: YES/NO ☐ ☒

99

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Bin # _____

Labcore Entry Initials: _____

Tests: Dose #1
BUDEW #1 (Digist)

Tests: _____

Bin # _____

Tests: _____

LABCORE # 596700-500

LABCORE # _____

LABCORE # _____

Jar# 11339

Jar/Vial Size: 20 mL

Final Weight: 51.82 g

Initial Weight: 34.45 g

Net Weight: 17.37 g

Jar# _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar# _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Special Instructions: _____

Subsample ~20% for analysis

Grab Sample Information Worksheet

Sample ID: SPW-96-9
 LABCORE #: S96T004813
 Tank/Project: AW-105 GRAB

Date: 9/30/96 (Date of Breakdown)

A. Record the sampling depth off of sample tag: 589 in.

B. Obtain the total weight of the grab sample:
 Total weight of jar + sample = 301.98 ^{WE 9/27/96} grams
301.84

C. Description of Sample:

1. Color of liquid: too little liquid to determine color and clarity
2. Is liquid clear or opaque: determine color and clarity
3. Approximate volume (Total): 125 mL
4. Are solids present: (Yes) or No

5. Approximate vol % settled solids ~100 %
6. If there is more than 2% settled solids, determine actual volume % settled solids:

- a. Height of solids: 75 mm Solids are light yellow mixed with gray.
- b. Height of total sample: 83 mm
- c. Volume % settled solids: 90.4 %

$$\frac{\text{Height of solids}}{\text{Height of Total Sample}} \times 100 = \frac{75}{83} \times 100 = 90.4$$
 w/ black specks - inner "core" of solids go to cap. % solids is minimum.

7. Is there an organic layer: Yes or (No)
 If YES, contact Shift Manager for immediate notification to tank farms.

8. Other Information:

ROT D. Determine bulk density of sample? (Yes) or No

ROT 1. Calculate bulk density of sample, if required: (BLKDEN01)

- a. Sum Net Weight for all cones 157.89 g
- b. Sum Total volumes for all cones 129.5 mL
- c. Determine bulk density of sample:

$$\frac{\text{Sum of Net Weight}}{\text{Sum of Total Volume}} = \frac{157.89}{129.5} = 1.22 \text{ g/mL}$$

- d. Other Information: Includes big solids removed from above storage.

Record BLKDEN01 for whole sample

on S96T004813

100

REL E.Determine bulk density of solids? (Yes) or NoREL

1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 115.85 g w/exception
 b. Sum Vol. Solids for all cones 89.5 mL of cone
 c. Determine bulk density of solids: 1.29 g/mL 9D

Sum of Wgt. Solids 1.29 g/mL
Sum of Vol. Solids

- d. Other Information:

Report BLKDEN01 for solids only
 on S96TOD5021

REL
10/3/96

REL F.Determine bulk density of liquids? (Yes) or NoREL

1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for all cones 32.88 g w/exception
 Wgt liquids = Sum of Net Wgt - Sum of Wgt solids of cone
9D

- b. Vol. liquids for all cones
- 32.0
- mL

Vol liquids = Sum of Total vol - Sum of Vol solids

- c. Determine bulk density of liquids:

Wgt. Liquids 1.03 g/mL
Vol. Liquids

- d. Other Information:

Record/report BLKDEN01 for liquids
 only on S96TOD5051

REL
10/3/96

REL G.Determine volume % solids by centrifugation? (Yes) or NoREL

1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 89.5 mL w/exception
 b. Sum of Total vol for all cones 121.5 mL of cone
 c. Determine volume % solids by centrifugation: 9D

Sum of Vol solids X 100 73.7 %
Sum of Total Volume

- d. Other Information:

Report V%SLD-01 on S96TOD4813

REL
10/3/96

Breakdown: Grab Sludge Worksheet

P.C.: RA Esch

Tank/
Project: AW-105 GRAB

Sample ID: SAW-96-9

Date: 9/27/96

Sample ID: 596T004813
Jar/Vial Size: 125 mL
Initial Weight: 301.84 g
Final Weight: 139.71 g
Net Weight: 162.13 g

9/30/96
check wts

500g = 500.3g
20g = 20.01g

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

101

Labcore Entry

Initials: _____

BLKDEN01? ☒ Y or N

V%SLD-01? ☒ Y or N

Some solid & oil
Liquid from jar - top
of sludge - removed before
transfer of sludge to cone

Cone#: 9A
Wgt. Cone + Smp: 61.25 g
Wgt. Cone + Sol: 49.20 g
Wgt. Cone: 13.80 g
Net Weight: 47.45 g
Total Vol.: 39 mL

Cone#: 9B
Wgt. Cone + Smp: 63.16 g
Wgt. Cone + Sol: 53.19 g
Wgt. Cone: 14.27 g
Net Weight: 48.89 g
Total Vol.: 40 mL

Cone#: 9C
Wgt. Cone + Smp: 66.68 g
Wgt. Cone + Sol: 55.82 g
Wgt. Cone: 14.29 g
Net Weight: 52.39 g
Total Vol.: 42.5 mL

9D 15ml
Wgt. Cone + Smp 16.60

Wgt. Cone 7.44
Net Wgt. 9.16
To be inv. 8.00

by 11.54 Vol. Solids: 27.5 mL
by 12.05 Wgt. Solids: 27.5 g

10ml Vol. Solids: 30 mL
9.97g Wgt. Solids: 38.92 g

10.5ml Vol. Solids: 32 mL
10.86ml Wgt. Solids: 41.53 g

1.14
3.2ml solids

Appearance/Special Instructions:

Remove any liquid from above sludge layers after determination of % Settled Solids. Record vol. & volume and discard this liquid.

Transfer sludge to 2 or 3 cones, as applicable, centrifuge for minimum of 10 min record vol. solids, total volume. Transfer liquids to clean jar and remove solids.

Subsample: Grab Sludge Worksheet

Date: 9/30/96

Tank/
Project: AW-105 GRAB

P.C.: RA Each

Phone#: 373-4314

GROUP # 96001213

Labcore Entry

Initials: _____

Archive

Bin.#/ 82

Jar#: 11387

ARCHIVE#1

LABCORE#: S96T005018

Jar/Vial Size: 60 mL

Initial Weight: 88.20 g

Final Weight: 152.61 g

Net Weight: 64.41 g

LABCORE#: S96T005021

Jar/Vial Size: 20 mL

Initial Weight: 34.44 g

Final Weight: 44.77 g

Net Weight: 10.33 g

Parent

Sample ID: SAW-96-9

S96T004813

TESTS

BLK DEN 01 } whole
V% SLD-01 } sample

Labcore Entry

Initials: _____

Archive

Bin #: 82

Jar#: 11386

No liq.
subsample
from
here

LABCORE#: S96T005051

Jar/Vial Size: 60 mL

Initial Weight: 88.28 g

Final Weight: 120.68 g

Net Weight: 32.40 g

TESTS

DOSE-01
BLK DEN 01
(liquid)

ARCHIVE#1
subsampled per
attached sheet

LABCORE#: S96T005048

Jar/Vial Size: 20 mL

Initial Weight: 34.30 g

Final Weight: 44.21 g

Net Weight: 9.91 g

Tests:

DOSE-01

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining
* 2 solid subsamples from archive jar S96T005018

SUBSAMPLE WORKSHEET

Tank: AW-105 Core: 62A13

Auger/Segment: 54W-96-9

Date: 9/30/96

Date Subsampled: 9/30/96

P.C.

Phone # RA Esch
313-4314

LABCORE # 5967005233

Jar #

11386

Jar Depleted: YES/NO
☐ YES ☒ NO

Jar/Vial Size: 60 mL

Initial Weight: 120.68 g

Final Weight: 99.75 g

Net Weight: 20.93 g

Group # 9600 1213

Bin # 82

HNF-SD-WM-DP-214, REV. 0

104

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Tests: Dose-01

BK Depl (liquid)

Tests: _____

Bin #

Tests: _____

Labcore Entry Initials: _____

LABCORE # 5967005233

LABCORE # _____

9/30/96

LABCORE # _____

Jar # 11433 ✓ 5251

Jar #

Jar #

Jar #

Jar/Vial Size: 20 mL

Final Weight: 52.94 g

Initial Weight: 34.74 g

Net Weight: 18.20 g

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar #

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Special Instructions: _____

Subsample ~ 20ml for analysis

No. 5632

P. 25/40

Grab Sample Information Worksheet

Sample ID: SAW-96-15
 LABCORE #: S96T004819
 Tank/Project: AW-105 GRAB

Date: 9/30/96 + 10/1/96 (Date of Breakdown)

A. Record the sampling depth off of sample tag: 571 in.

B. Obtain the total weight of the grab sample:
 Total weight of jar + sample = 296.00 grams

C. Description of Sample:

1. Color of liquid: YELLOW
2. Is liquid clear or opaque: clear
3. Approximate volume (Total): 125 mL
4. Are solids present: (Yes) or No
5. Approximate vol % settled solids ~90 %
6. If there is more than 2% settled solids, determine actual volume % settled solids:

- a. Height of solids: 75 mm
- b. Height of total sample: 83 mm
- c. Volume % settled solids:

$$\frac{\text{Height of solids}}{\text{Height of Total Sample}} \times 100 = \frac{75}{83} \times 100 = \underline{90.4} \%$$

Solids - darker yellow mixed with grey w/ black specks
 - inner core of solids go to cap, % solids is minimum

7. Is there an organic layer: Yes or (No)
 If YES, contact Shift Manager for immediate notification to tank farms.

8. Other Information: Report @ BRKDOWN 1 on S96T004819

calc D. Determine bulk density of sample? (Yes) or No

1. Calculate bulk density of sample, if required: (BLKDEN01)

- a. Sum Net Weight for all cones 155.76 g including 15ml upper lig.
- b. Sum Total volumes for all cones 133.8 mL cones.
- c. Determine bulk density of sample:

$$\frac{\text{Sum of Net Weight}}{\text{Sum of Total Volume}} = \frac{155.76}{133.8} = \underline{1.16} \text{ g/mL}$$

- d. Other Information:

Report BLKDEN01 whole sample on S96T004819

OK E. Determine bulk density of solids? (Yes) or No

OK 1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 100.11 g excluding
 b. Sum Vol. Solids for all cones 79.5 mL 15 mL
 c. Determine bulk density of solids: _____ cones

$$\frac{\text{Sum of Wgt. Solids}}{\text{Sum of Vol. Solids}} = \frac{100.11}{79.5} = 1.26 \text{ g/mL}$$

- d. Other Information:
 Report BLKDEN01 solids only on 596T005075

OK F. Determine bulk density of liquids? (Yes) or No

OK 1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for all cones 28.45 g excluding
 Wgt liquids = Sum of Net Wgt - Sum of Wgt solids 15 mL
 cones

- b. Vol. liquids for all cones 29.0 mL

$$\text{Vol liquids} = \text{Sum of Total vol} - \text{Sum of Vol solids}$$

- c. Determine bulk density of liquids:

$$\frac{\text{Wgt. Liquids}}{\text{Vol. Liquids}} = \frac{28.45}{29.0} = 0.98 \text{ g/mL}$$

- d. Other Information:
 Report BLKDEN01 liquids only on 596T005081

OK G. Determine volume % solids by centrifugation? (Yes) or No

OK 1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 79.5 mL excluding
 b. Sum of Total vol for all cones 108.5 mL 15 mL
 c. Determine volume % solids by centrifugation: _____ cones

$$\frac{\text{Sum of Vol solids}}{\text{Sum of Total Volume}} \times 100 = \frac{79.5}{108.5} = 73.3 \%$$

- d. Other Information:

Record V%SLD-01 on 596T004819

Breakdown: Grab Sludge Worksheet

Oct. 4, 1996

WHC 2225 LAB ROOM 2F BACKSIDE

No. 5632

P. 20/40

Date: 9/30/96check wts $500g = 500.36g$
 $20g = 20.01g$ Sample ID: 5AW-96-15

Sample ID: 596T004819
 Jar/Vial Size: 125 mL
 Initial Weight: 296.00 g
 Final Weight: 134.47 g
 Net Weight: 161.53 g

Labcore Entry

Initials: _____

BLK DEN01? ☒ Y or NV%SLD-01? ☒ Y or Nremoved liq above sld
w/ some slds transferred
to cones 15D + 15E

15D (15mL)

Wgt. Cone + Smp: 21.49 gWgt. Cone: 7.46 gNet Wgt: 14.01 gTotal Vol.: 13 mLVol. Solids: 1.08 gWgt. Solids: 1.08 gCone#: 15CWgt. Cone + Smp: 68.28 gWgt. Cone + Sol: 53.10 gWgt. Cone: 13.76 gNet Weight: 54.52 gTotal Vol.: 46 mLVol. Solids: 31 mLWgt. Solids: 39.34 g

15C liq. 15mL 15.18g

Cone#: 15BWgt. Cone + Smp: 67.61 gWgt. Cone + Sol: 59.06 gWgt. Cone: 13.66 gNet Weight: 53.95 gTotal Vol.: 45 mLVol. Solids: 36 mLWgt. Solids: 45.40 g

15B liq. 15mL 15.18g

Cone#: 15AWgt. Cone + Smp: 34.28 gWgt. Cone + Sol: 29.56 gWgt. Cone: 14.19 gNet Weight: 20.09 gTotal Vol.: 17.5 mLVol. Solids: 12.5 mLWgt. Solids: 15.37 g

Appearance/Special Instructions:

Remove any liquid from above sludge layer after determination of % Settled Solids. Record volume and discard this liquid.

Transfer sludge to 2 or 3 cones, as applicable, centrifuge for minimum of One hour.

Transfer liquid to clean jar and reweigh solids.

107

and cone
needed for
standing
2nd cone

SE
0.74 g
7.55 g
3.19 g
12-3 mL
10%
10%

15A
liquids
5mL
4.72g

15B
liquids
9.0mL
8.55g

Subsample: Grab Sludge Worksheet

HNF-SD-WM-DP-214, REV. 0

Oct. 4, 1996 1:54 PM WEC 222S LAB ROOM 2F BACKSIDE

No. 5632 P. 29/40

Date: 10/1/96
 Tank/
 Project: AW-105 GRAB
 P.C.: RA Esch
 Phone#: 373-4314

GROUP # 96001215

Labcore Entry

Initials: _____

Archive

Bin #: _____

Parent

Sample ID: SAW-96-15

S96T004819

TESTS

BLKDNØ1 } whole
 1% SLD-Ø1 } sample

Labcore Entry

Initials: _____

Archive

Bin #: n/a 82

see 9130/96 5234 ✓

LABCORE#: S96T005058

Jar/Vial Size: 60 mL

Initial Weight: 87.98 g

Final Weight: 97.72 g

Net Weight: 9.74 g

TESTS

~~DOSE-Ø1~~
~~BLKDNØ1~~
~~(liquid)~~

ARCHIVED

subsampled per
 attached sheet

LABCORE#: S96T005058 ✓

Jar/Vial Size: 60 mL

Initial Weight: 87.92 g

Final Weight: 140.63 g

Net Weight: 52.70 g

Jar#: 11386

No liq.
 subsample
 from
 here

LABCORE#: S96T005058

Jar/Vial Size: 60 mL

Initial Weight: 87.98 g

Final Weight: 97.72 g

Net Weight: 9.74 g

TESTS

~~DOSE-Ø1~~
~~BLKDNØ1~~
~~(liquid)~~

ARCHIVED

subsampled per
 attached sheet

LABCORE#: S96T005075

Jar/Vial Size: 20 mL

Initial Weight: 34.36 g

Final Weight: 45.34 g

Net Weight: 10.98 g

Jar#: 11436

Tests:

DOSE-Ø1

BLKDNØ1 (solid only)

LABCORE#: S96T005078

Jar/Vial Size: 20 mL

Initial Weight: 34.53 g

Final Weight: 45.52 g

Net Weight: 10.99 g

Tests:

DOSE-Ø1

108

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining
* 2 solid subsamples from archive jar S96T005058

HNF-SD-WM-DP-214, REV. 0

SUBSAMPLE WORKSHEET

Tank: AW-105 Core: GAABAuger/Segment: SAW-96-15Date: 9/30/96Date Subsampled: 9/30/96P.C. RA 2 scbPhone # 373-4314LABCORE # 5967005234Jar # 11388 Jar/Vial Size: 60 mLInitial Weight: N/A gFinal Weight: N/A gNet Weight: 9.74 gBin # 82109 Group # 96001215

Jar Depleted: YES/NO

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Bin # _____

Labcore Entry Initials: _____

Tests: Dose #1OUT-DEN-01 (Agar)

Tests: _____

Bin # _____

Tests: _____

LABCORE # 5967005234

LABCORE # _____

LABCORE # _____

Jar # 11435Jar/Vial Size: 20 mLFinal Weight: 24.925 gInitial Weight: 34.93 gNet Weight: 17.57 g

Jar # _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar # _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Special Instructions: _____

Subsample vial for analysis

Grab Sample Information Worksheet

Sample ID: SAW-96-17
 LABCORE #: S96T004821
 Tank/Project: AW-105 GRAB

Date: 10/1/96 (Date of Breakdown)

A. Record the sampling depth off of sample tag: 593 in.

B. Obtain the total weight of the grab sample:
 Total weight of jar + sample = 299.83 grams

C. Description of Sample:

1. Color of liquid:
2. Is liquid clear or opaque: too little liquid to determine color and clarity
3. Approximate volume (Total): 125 mL
4. Are solids present: (Yes) or No
5. Approximate vol % settled solids ~ 100 %
6. If there is more than 2% settled solids, determine actual volume % settled solids:

- a. Height of solids: 173 mm
- b. Height of total sample: 83 mm
- c. Volume % settled solids:

$$\frac{\text{Height of solids}}{\text{Height of Total Sample}} \times 100 = \underline{88.0} \%$$

solids mostly dark gray to black w/ small amount of yellow mixed in - most "core" of solids go to cap. % solids = minimum.

7. Is there an organic layer: Yes or (No)
 If YES, contact Shift Manager for immediate notification to tank farms.

8. Other Information: Report@BRKDOWN1 on S96T004821

see D. Determine bulk density of sample? (Yes) or No

see

1. Calculate bulk density of sample, if required: (BLKDEN01)

- a. Sum Net Weight for all cones 160.10 g including
- b. Sum Total volumes for all cones 131.5 mL 15 mL cone
- c. Determine bulk density of sample:

$$\frac{\text{Sum of Net Weight}}{\text{Sum of Total Volume}} = \underline{1.22} \text{ g/mL}$$

- d. Other Information:

Report BLKDEN01 whole sample
 on S96T004821

110

RAE E.Determine bulk density of solids? Yes or No

1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 108.22 g
 b. Sum Vol. Solids for all cones 82.5 mL *excluding*
 c. Determine bulk density of solids: 1.31 g/mL *17D*

$$\frac{\text{Sum of Wgt. Solids}}{\text{Sum of Vol. Solids}} = \frac{108.22}{82.5} = 1.31 \text{ g/mL}$$

- d. Other Information:

Report BLKDEN01 solids only on S96T005026

RAE F.Determine bulk density of liquids? Yes or No

1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for all cones 41.28 g *excluding*
 Wgt liquids = Sum of Net Wgt - Sum of Wgt solids *17D*

- b. Vol. liquids for all cones
- 39.5
- mL

Vol liquids = Sum of Total vol - Sum of Vol solids

- c. Determine bulk density of liquids:

$$\frac{\text{Wgt. Liquids}}{\text{Vol. Liquids}} = \frac{41.28}{39.5} = 1.04 \text{ g/mL}$$

- d. Other Information:

Report BLKDEN01 liquids only on S96T005082

RAE G.Determine volume % solids by centrifugation? Yes or No

1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 82.5 mL *excluding*
 b. Sum of Total vol for all cones 122.0 mL *17D*
 c. Determine volume % solids by centrifugation:

$$\frac{\text{Sum of Vol solids}}{\text{Sum of Total Volume}} \times 100 = \frac{82.5}{122.0} \times 100 = 67.6 \%$$

- d. Other Information:

Report V%SLD-01 on S96T004821

Breakdown: Grab Sludge Worksheet

10/14/1986 1:56PM WMC 2225 LAB ROOM 2F BACKSIDE
HNF-SD-WM-DP-214, REV. D

Date: 10/1/96

10/1/96
check wgt 500g = 500.38g
20g = 20.02g

Sample ID: SAW-96-17

Sample ID: 596T004821
Jar/Vial Size: 125 mL
Initial Weight: 299.83 g
Final Weight: 134.71 g
Net Weight: 165.12 g

Labcore Entry

Initials: _____

BLKDEN01? ☒ Y or N

V%SLD-01? ☒ Y or N

liquid removed
from above sites

112

Cone#: 17A
Wgt. Cone + Smp: 63.16 g
Wgt. Cone + Sol: 51.25 g
Wgt. Cone: 14.08 g
Net Weight: 49.08 g
Total Vol.: 40 mL
Vol. Solids: 27.5 mL
Wgt. Solids: 37.17 g

Cone#: 17B
Wgt. Cone + Smp: 64.83 g
Wgt. Cone + Sol: 51.88 g
Wgt. Cone: 13.73 g
Net Weight: 51.10 g
Total Vol.: 42 mL
Vol. Solids: 30 mL
Wgt. Solids: 38.15 g

Cone#: 17C
Wgt. Cone + Smp: 62.96 g
Wgt. Cone + Sol: 46.54 g
Wgt. Cone: 13.64 g
Net Weight: 49.32 g
Total Vol.: 40 mL
Vol. Solids: 25 mL
Wgt. Solids: 32.90 g

17D
Wgt. Cone + Smp: 18.05 g
Wgt. Cone + Sol: N/A g
Wgt. Cone: 7.45 g
Net Weight: 10.60 g
Total Vol.: 9.50 mL
Vol. Solids: N/A mL
Wgt. Solids: N/A g

Appearance/Special Instructions:

Remove any liquid from above sludge layer after determination of % Settled Solids. Record wgt. volume and discard this liquid.

Transfer sludge to 2 or 3 cones, as applicable, centrifuge for minimum of One hour. record vol solids, total volume. Transfer liquid to clean jar and reweigh solids.

No. 5632 P. 33/40

Subsample: Grab Sludge Worksheet

HNF-SD-WM-DP-214, REV. 0

Parent Sample ID: 5AW-96-17
 596T004821
 Tests
 BUCKEN01 whole
 V% SLB-01 sample

Labcore Entry

Initials:

Archive

Bin #: 82

LABCORE#: 596T005092

Jar/Vial Size: 60 mL

Initial Weight: 88.29g

Final Weight: 110.32g

Net Weight: 22.03g

Arch#101

DOSE-01

Tests

LABCORE#: 596T005079 Jar#: 11435

Jar/Vial Size: 20 mL

Initial Weight: 34.95g

Final Weight: 44.76g

Net Weight: 9.81g

no lg. from subsamp.
 Jar#: 11470
 are rel/196

are rel/196
 Jar#: 11438
 DOSE-01 (subsample)
 Tests:

LABCORE#: 596T005059
 Jar/Vial Size: 60 mL
 Initial Weight: 88.5g
 Final Weight: 164.48g
 Net Weight: 76.23g

LABCORE#: 596T005076 Jar#: 11438
 Jar/Vial Size: 20 mL
 Initial Weight: 34.46g
 Final Weight: 45.83g
 Net Weight: 11.13g

Bin #: 82

Archive

Initials:

Labcore Entry

GROUP # 96001215

Phone#: 373-4314

P.C.: RA Esch

Project: AW-105 GRAB

Tank/

Date: 10/1/96

Jar#: 11469

Arch#101

113

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining

* 2 solid subsamples from archive jar 596T005059

SUBSAMPLE WORKSHEET

Tank: AW-105 Core: GRAB Auger/Segment: 54W-96-17

Date: 10/1/96

Date Subsampled: 10/1/96

P.C. RA Esch

Phone# 373-4314

LABCORE # 5967005296

Jar # 11470

Jar/Vial Size: 60 mL

Initial Weight: N/A g

Final Weight: N/A g

Net Weight: 22.03 g

Bin# 82

Jar Depleted: YES/NO

☒ YES ☐ NO

Group # 96001215

HNF-SD-WM-DP-214, REV. 0

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Tests: DOSE-01

Tests: _____

Tests: _____

LABCORE # 5967005296

LABCORE # 6161176

LABCORE # _____

Jar# 11440

Jar# _____

Jar# _____

Jar/Vial Size: 20 mL

Jar/Vial Size: _____ mL

Jar/Vial Size: _____ mL

Final Weight: 53.02 g

Final Weight: _____ g

Final Weight: _____ g

Initial Weight: 34.35 g

Initial Weight: _____ g

Initial Weight: _____ g

Net Weight: 18.63 g

Net Weight: _____ g

Net Weight: _____ g

Special Instructions: _____

Subsample 15-20 mL for analysis

No. 5632 P. 35/40

HNF-SD-WM-DP-214, REV. D

Grab Sample Information Worksheet

Sample ID: SAW-96-20
 LABCORE #: S96T004824
 Tank/Project: AW-105 GRAB

Date: 10/2/96 (Date of Breakdown)

A. Record the sampling depth off of sample tag: 1000 in.

B. Obtain the total weight of the grab sample:
 Total weight of jar + sample = 302.26 grams

C. Description of Sample:

1. Color of liquid: too little liquid to
2. Is liquid clear or opaque: determine color and clarity
3. Approximate volume (Total): 125 mL
4. Are solids present: (Yes) or No
5. Approximate vol % settled solids ~100 %
6. If there is more than 2% settled solids, determine actual volume % settled solids:

- a. Height of solids: 75 mm Solids - yellow/grey rather even color
 - b. Height of total sample: 81 mm w/some dark (black) and light creamy
 - c. Volume % settled solids: 92.6 % white chunks - solids "mound" in center of jar as solids accumulate in to tank farms.
- $\frac{\text{Height of solids}}{\text{Height of Total Sample}} \times 100 = 92.6$ %

7. Is there an organic layer: Yes or (No)
 If YES, contact Shift Manager for immediate notification minimum

8. Other Information: Report @ BREAKDOWN on S96T004824 10/2/96

RAE D. Determine bulk density of sample? (Yes) or No

1. Calculate bulk density of sample, if required: (BLKDEN01)

- a. Sum Net Weight for all cones 164.61 g all
 - b. Sum Total volumes for all cones 147.2 mL cones
 - c. Determine bulk density of sample: 1.12 g/mL including
- $\frac{\text{Sum of Net Weight}}{\text{Sum of Total Volume}} = \frac{164.61}{147.2} = 1.12$ g/mL 10/2/96

d. Other Information:

Report BLKDEN01 whole sample 10/3/96
on S96T004824

REL E.Determine bulk density of solids? (Yes) or NoREL

1. Calculate bulk density of solids, if required: (BLKDEN01)

- a. Sum Wgt. Solids for all cones 119.14 g *excluding*
 b. Sum Vol. Solids for all cones 94.5 mL *cones*
 c. Determine bulk density of solids: 1.26 g/mL *per 11/3/96 200 IE*

Sum of Wgt. Solids 1.26 g/mL
Sum of Vol. Solids

d. Other Information:

Report BLKDEN01 solids only on 596T005077

REL
10/3/96REL F.Determine bulk density of liquids? (Yes) or NoREL

1. Calculate bulk density of liquids, if required: (BLKDEN01)

- a. Wgt liquids for all cones 27.2 g *excluding*
 Wgt liquids = Sum of Net Wgt - Sum of Wgt solids *cones 200 IE*

- b. Vol. liquids for all cones 25 mL
 Vol liquids = Sum of Total vol - Sum of Vol solids

c. Determine bulk density of liquids:

Wgt. Liquids 1.09 g/mL
Vol. Liquids

d. Other Information:

Report BLKDEN01 liquids only on 596T005083

REL
11/3/96REL G.Determine volume % solids by centrifugation? (Yes) or NoREL

1. Calculate volume % solids by centrifugation, if required: (V%SLD-01)

- a. Sum of Vol solids for all cones 94.5 mL *excluding*
 b. Sum of Total vol for all cones 119.5 mL *cones*
 c. Determine volume % solids by centrifugation: 79.1 % *per 11/3/96 200 IE*

Sum of Vol solids X 100 79.1 %
Sum of Total Volume

d. Other Information:

Report V%SLD-01 on 596T004024

REL
10/3/96

Breakdown: Grab Sludge

Date: 10/1/76

HNF-SD-WM-DP-214, REV. D

11/21/96

09:53

509 373 1432

001

C.: RA Esch
 ank/
 roject: AW-105 GRAB

Sample ID: 5AW-96-20

Sample ID: 596T004824
 Jar/Vial Size: 125 mL
 Initial Weight: 302.26 g
 Final Weight: 135.47 g
 Net Weight: 166.79 g

Labcore Entry

Initials: _____

BLKDEN01? ☒ or N

V%SLD-01? ☒ or N

*liquid & some solids
transferred from top
of jar*

Cone#: 20A
 Wgt. Cone + Smp: 67.61 g
 Wgt. Cone + Sol: 55.68 g
 Wgt. Cone: 14.32 g
 Net Weight: 53.79 g
 Total Vol.: 43.5 mL
 Vol. Solids: 32.5 mL
 Wgt. Solids: 41.33 g

Cone#: 20B
 Wgt. Cone + Smp: 67.39 g
 Wgt. Cone + Sol: 59.34 g
 Wgt. Cone: 14.33 g
 Net Weight: 53.06 g
 Total Vol.: 43.5 mL
 Vol. Solids: 36.0 mL
 Wgt. Solids: 45.01 g

Cone#: 20C
 Wgt. Cone + Smp: 54.27 g
 Wgt. Cone + Sol: 47.28 g
 Wgt. Cone: 14.28 g
 Net Weight: 39.99 g
 Total Vol.: 32.5 mL
 Vol. Solids: 26.0 mL
 Wgt. Solids: 32.80 g

20D 20F
 Wgt. Cone + Smp: 21.25 g 11.48 g
 Wgt. Cone + Sol: 7.46 g 7.50 g
 Net Weight: 14.29 g 3.98 g
 Total Vol.: 13 mL 4 mL
 Vol. Solids: _____ mL
 Wgt. Solids: _____ g

Appearance/Special Instructions:

Remove any liquid from above sludge layers after determination of % Settled Solids. Record vol. volume and discard this liquid.

Transfer sludge to 2 or 3 cones, as applicable, centrifuge for minimum of One hour. record vol. solids, total volume. Transfer liquid to clean jar and separate solids.

Subsample: Grab Sludge Worksheet

Date: 12/2/96
 Tank/
 Project: AW-105 GRAB
 P.C.: RA Esch
 Phone#: 373-4314

GROUP # 96001215

Labcore Entry

Initials: _____

Archive

Bin #: _____

Parent
 Sample ID: SAW-96-20
S96T004824

TESTS
 BLKDN01 } whole
 V%SLB-01 } sample

Labcore Entry

Initials: _____

Archive

Bin #: N/A

Jar#: 11472
 ARCHIVE 1

LABCORE#: S96T005060
 Jar/Vial Size: 60 mL
 Initial Weight: 88.09 g
 Final Weight: 116.316 g
 Net Weight: 75.07 g

Jar#: 11471
 No liq
 subsample
 from
 here

LABCORE#: S96T005063
 Jar/Vial Size: 60 mL
 Initial Weight: 88.07 g
 Final Weight: 96.87 g
 Net Weight: 8.80 g

TESTS
 DOSE-01
 BLKDN01
 (liquids)
 ARCHIVE 1

118

LABCORE#: S96T005077
 Jar/Vial Size: 20 mL
 Initial Weight: 34.88 g
 Final Weight: 45.06 g
 Net Weight: 10.18 g

Jar#: 11441
 Tests:
 DOSE-01
 BLKDN01 (solids only)

LABCORE#: S96T005080
 Jar/Vial Size: 20 mL
 Initial Weight: 34.83 g
 Final Weight: 44.58 g
 Net Weight: 10.25 g

Jar#: 11442
 Tests:
 DOSE-01

Appearance/Special Instructions:

Subsample 8-10g for analysis and archive remaining
* 2 solid subsamples from archive jar S96T005060

HNF-SD-WM-DP-214, REV. 0

Oct. 4, 1996 2:00PM WEC 222S LAB ROOM 2F BACKSIDE

No. 5632 P. 39/40

SUBSAMPLE WORKSHEET

Tank: AW-105 Core: 64BAuger Segment: SW-96-20Date Subsampled: 10/1/96Date: 10/1/96

P.C.

Phone # RA EschPhone # 979-4314LABCORE # 596T005318Jar # 11471 Jar/Vial Size: 60 mLInitial Weight: 88.07 gFinal Weight: 96.87 gNet Weight: 8.8 gJar Depleted: YES/NO ☒Group # 9601215Bin # 82

119

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Labcore Entry Initials: _____

Tests: Dose 01Outcomes (log 0)

Tests: _____

Bin # 1176

Labcore Entry Initials: _____

LABCORE # 596T005283LABCORE # 11471

LABCORE # _____

Jar # 11443Jar/Vial Size: 20 mLFinal Weight: 52.30 gInitial Weight: 34.31 gNet Weight: 17.99 g

Jar # _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar # _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Jar # _____

Jar/Vial Size: _____ mL

Final Weight: _____ g

Initial Weight: _____ g

Net Weight: _____ g

Special Instructions: _____

Subsample v. 15-2001 for analysis

LABCORE Data Entry Template for Worklist# 13738

Analyst: DPB Instrument: NONE Book # N/A

Method: LA-519-151 Rev/Mod E-2

Worklist Comment: AW105 @BRKDOWN1 - rae

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001213	AW-105 GRAB	1 SAMPLE	S96T004805	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>30</u>		mrad/hour
96001213	AW-105 GRAB	1 SAMPLE	S96T004805	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001213	AW-105 GRAB	1 SAMPLE	S96T004805	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL
96001213	AW-105 GRAB	2 SAMPLE	S96T004806	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>35</u>		mrad/hour
96001213	AW-105 GRAB	2 SAMPLE	S96T004806	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001213	AW-105 GRAB	2 SAMPLE	S96T004806	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL
96001215	AW-105 GRAB	3 SAMPLE	S96T004814	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>50</u>		mrad/hour
96001215	AW-105 GRAB	3 SAMPLE	S96T004814	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001215	AW-105 GRAB	3 SAMPLE	S96T004814	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL
96001215	AW-105 GRAB	4 SAMPLE	S96T004815	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>20</u>		mrad/hour
96001215	AW-105 GRAB	4 SAMPLE	S96T004815	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001215	AW-105 GRAB	4 SAMPLE	S96T004815	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL
96001213	AW-105 GRAB	5 SAMPLE	S96T004808	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>25</u>		mrad/hour
96001213	AW-105 GRAB	5 SAMPLE	S96T004808	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001213	AW-105 GRAB	5 SAMPLE	S96T004808	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL
96001215	AW-105 GRAB	6 SAMPLE	S96T004817	0	@BRKDOWN1 DOSERATE	LIQUID	N/A	<u>30</u>		mrad/hour
96001215	AW-105 GRAB	6 SAMPLE	S96T004817	0	@BRKDOWN1 APPEAR02	LIQUID	N/A	<u>complete</u>		
96001215	AW-105 GRAB	6 SAMPLE	S96T004817	0	@BRKDOWN1 SAMPANT2	LIQUID	N/A	<u>125</u>		mL

Data Entry Comments:

See attached sheet for appearance
information.

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
10/07/96 08:00

Page: 2

LABCORE Data Entry Template for Worklist# 13738

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001213	AW-105 GRAB	7 SAMPLE	S96T004809	0	@BRKDOWN1 DOSERATE	SOLID	N/A	200		mrads/hour
96001213	AW-105 GRAB	7 SAMPLE	S96T004809	0	@BRKDOWN1 APPEAR02	SOLID	N/A	Complete		
96001213	AW-105 GRAB	7 SAMPLE	S96T004809	0	@BRKDOWN1 SAMPANT2	SOLID	N/A	125		ml
96001213	AW-105 GRAB	8 SAMPLE	S96T004811	0	@BRKDOWN1 DOSERATE	SOLID	N/A	1000		mrads/hour
96001213	AW-105 GRAB	8 SAMPLE	S96T004811	0	@BRKDOWN1 APPEAR02	SOLID	N/A	Complete		
96001213	AW-105 GRAB	8 SAMPLE	S96T004811	0	@BRKDOWN1 SAMPANT2	SOLID	N/A	125		ml
96001213	AW-105 GRAB	9 SAMPLE	S96T004813	0	@BRKDOWN1 DOSERATE	SOLID	N/A	1000		mrads/hour
96001213	AW-105 GRAB	9 SAMPLE	S96T004813	0	@BRKDOWN1 APPEAR02	SOLID	N/A	Complete		
96001213	AW-105 GRAB	9 SAMPLE	S96T004813	0	@BRKDOWN1 SAMPANT2	SOLID	N/A	125		ml

Final page for worklist # 13738

See Attached Sheet
Analyst Signature Date
for signatures

Newright 10/17/96
Analyst Signature Date

Samuel J. Bromley 10/14/96
Daniel Duhon 10/14/96

Data Entry Comments:

Validated
10/15/96
PK Fuller

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.

Pig Breakdown Information

WL# 13738

<u>Access</u>	<u>Pig #</u>	<u>Vol. (mL)</u>	<u>Clarity</u>	<u>Color</u>	<u>% Solids</u>	<u>Dose Rate (mRad/hr)</u>
67204805	5AW-96-1	125	clear	yellow	< 1	30
4806	5AW-96-2	125	clear	yellow	< 1	35
4808	5AW-96-4	125	clear	light yellow	< 1	25
4809	5AW-96-5	125	clear	yellow	20	200
4811	5AW-96-7	125	opaque	brown-yellow	95	1000
4813	5AW-96-9	125	opaque	brown-yellow	95	1000
4814	5AW-96-10	125	clear	yellow	< 1	50
4815	5AW-96-11	125	clear	light yellow	< 1	20
4817	5AW-96-13	125	clear	light yellow	< 1	30

Pigs remaining to be broke down: 5AW-96-15, 5AW-96-17, 5AW-96-20

Dan P. Bromley

David C. Dunham

[Signature] 8/28/96
[Signature] 8-28-96

HNF-SD-WM-DP-214, REV. 0

Sample Preparations

HNF-SD-WM-DP-214, REV. 0

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worklistrpt Version 2.1 05/15/95
09/25/96 09:57

HNF-SD-WM-DP-214, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13318

Analyst: ELC Instrument: FUS01 Book # N/AMethod: LA-549-141 Rev/Mod 7.0

Worklist Comment: TANK#AW-105 Grab SEGMENT:5AW-96-5,5AW-96-7,5AW-96-9.FUS.new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID		250	N/A	g/L
96001213	AW-105 GRAB	2 SAMPLE	S96T005052	0 F	FUSION01	SOLID	N/A	1.1536		g/L
		2884g → 250g								
96001213	AW-105 GRAB	3 SAMPLE	S96T005052	0 F	DOSE-02	SOLID	N/A	7.5		mrad/hour
96001213	AW-105 GRAB	4 DUP	S96T005052	0 F	FUSION01	SOLID		1.1536 1.1296	N/A	g/L
		2824g → 250g								
96001213	AW-105 GRAB	5 DUP	S96T005052	0 F	DOSE-02	SOLID		7.5 7.5	N/A	mrad/hour
96001213	AW-105 GRAB	6 SAMPLE	S96T005053	0 F	FUSION01	SOLID	N/A	2.1152		g/L
		5288g → 250g								
96001213	AW-105 GRAB	7 SAMPLE	S96T005053	0 F	DOSE-02	SOLID	N/A	50		mrad/hour
96001213	AW-105 GRAB	8 DUP	S96T005053	0 F	FUSION01	SOLID		2.1152 2.1136	N/A	g/L
		5284g → 250g								
96001213	AW-105 GRAB	9 DUP	S96T005053	0 F	DOSE-02	SOLID		50 50	N/A	mrad/hour
96001213	AW-105 GRAB	10 SAMPLE	S96T005054	0 F	FUSION01	SOLID	N/A	2.0364		g/L
		5091g → 250g								
96001213	AW-105 GRAB	11 SAMPLE	S96T005054	0 F	DOSE-02	SOLID	N/A	50		mrad/hour
96001213	AW-105 GRAB	12 DUP	S96T005054	0 F	FUSION01	SOLID		2.0364 2.0012	N/A	g/L
		5003g → 250g								
96001213	AW-105 GRAB	13 DUP	S96T005054	0 F	DOSE-02	SOLID		50 50	N/A	mrad/hour

Final page for worklist # 13318

Analyst Signature A. Lambel Date 10-19-96Analyst Signature Frank Dush Date 10-19-96

596T005019 → 596T005052
 5020 → 5053
 5021 → 5054

Data Entry Comments:

596T005019 → Sam volume 1/2 due to lack of sample 5ml 4mHCl, 20ml Con H₂O₂
 all are clear + yellow.
 HPT Lerry Gundersen OTT: 2.5 mrad/hr @ bottom
 170 Solids container #1 10.5 mrad/hr @ bottom

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.

V. A. G. Sted
 G. M. G. 10/19/96

worklistrpt Version 2.1 05/15/95
09/25/96 09:59

HNF-SD-WM-DP-214, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13319

Analyst: EMC Instrument: FUS01 Book # N/AMethod: LA-549-141 Rev/Mod #0

Worklist Comment: TANK#AW-105 Grab SEGMENT:5AW-96-15,17,20. FUSION. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID		250	N/A	g/L
96001215	AW-105 GRAB	2 SAMPLE	S96T005084	0 F	FUSION01	SOLID	N/A	2.1204		g/L
		5301g → 250L								
96001215	AW-105 GRAB	3 SAMPLE	S96T005084	0 F	DOSE-02	SOLID	N/A	20		mrad/hour
96001215	AW-105 GRAB	4 DUP	S96T005084	0 F	FUSION01	SOLID	2.1204	2.0480	N/A	g/L
		5120g → 250L								
96001215	AW-105 GRAB	5 DUP	S96T005084	0 F	DOSE-02	SOLID	20	22.5	N/A	mrad/hour
96001215	AW-105 GRAB	6 SAMPLE	S96T005085	0 F	FUSION01	SOLID	N/A	2.0748		g/L
		5187g → 250L								
96001215	AW-105 GRAB	7 SAMPLE	S96T005085	0 F	DOSE-02	SOLID	N/A	100		mrad/hour
96001215	AW-105 GRAB	8 DUP	S96T005085	0 F	FUSION01	SOLID	2.0748	2.0296	N/A	g/L
		5074g → 250L								
96001215	AW-105 GRAB	9 DUP	S96T005085	0 F	DOSE-02	SOLID	100	100	N/A	mrad/hour
96001215	AW-105 GRAB	10 SAMPLE	S96T005086	0 F	FUSION01	SOLID	N/A	2.0160		g/L
		5040g → 250L								
96001215	AW-105 GRAB	11 SAMPLE	S96T005086	0 F	DOSE-02	SOLID	N/A	25		mrad/hour
96001215	AW-105 GRAB	12 DUP	S96T005086	0 F	FUSION01	SOLID	2.0160	2.0518	N/A	g/L
		5142g → 250L								
96001215	AW-105 GRAB	13 DUP	S96T005086	0 F	DOSE-02	SOLID	25	25	N/A	mrad/hour

Final page for worklist # 13319

Analyst Signature A. LambelDate 10-19-96Analyst Signature Frank Mank

Date

S96T005075 → S96T005084

5076 → 5085

5077 → 5086

Data Entry Comments:

All samples have 5 ml 4M HCl & 25 ml Con HNO₃.
 All are clear but grey in color & have 2% solids.
 HOT: Jerry Surunsky on container #1 is 0.5 ml at bottom
 container #2 is 0.7 ml at bottom

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.

A. Lambel
 dated 10/19/96

worklist Version 2.1 05/15/95
10/19/96 01:05

HNF-SD-WM-DP-214, Rev. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13320

Analyst: SAE

Instrument: H2001

Book # N/AMethod: LA-504-101 Rev/Mod E-0

Worklist Comment: TANK#AW-105 GRAB SEGMENT:5AW-96-5,5AW-96-7.FUSION. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H20DIG01	SOLID	<u>100</u>	<u>100</u>	N/A	g/L
96001213	AW-105 GRAB	2 SAMPLE	S96T005055	0 W	H20DIG01	SOLID	N/A	<u>2.714</u>		g/L
		2714g → 100g								
96001213	AW-105 GRAB	3 SAMPLE	S96T005055	0 W	DOSE-02	SOLID	N/A	<u>40.5</u>		mrad/hour
96001213	AW-105 GRAB	4 DUP	S96T005055	0 W	H20DIG01	SOLID	<u>2.714</u>	<u>2.739</u>	N/A	g/L
		2739g → 100g								
96001213	AW-105 GRAB	5 DUP	S96T005055	0 W	DOSE-02	SOLID	N/A	<u>40.5</u>	N/A	mrad/hour
96001213	AW-105 GRAB	6 SAMPLE	S96T005056	0 W	H20DIG01	SOLID	N/A	<u>5.262</u>		g/L
		5262g → 100g								
96001213	AW-105 GRAB	7 SAMPLE	S96T005056	0 W	DOSE-02	SOLID	N/A	<u>40.5</u>		mrad/hour
96001213	AW-105 GRAB	8 DUP	S96T005056	0 W	H20DIG01	SOLID	<u>5.262</u>	<u>5.209</u>	N/A	g/L
		5209g → 100g								
96001213	AW-105 GRAB	9 DUP	S96T005056	0 W	DOSE-02	SOLID	N/A	<u>40.5</u>	N/A	mrad/hour

Final page for worklist # 13320

A. Lambel
Analyst Signature10-19-96
DateKeith Mack
Analyst Signature10-19-96
DateS96T005019 → S96T005055
S96T005020 → S96T005056G. Mella 10/19/96
Val: daben

Data Entry Comments:

S96T005055 → Sam volume @ 12 due to lack of sample.

HPT: Gary Kurunsky OT: 40.5 mrad/hr

All samples have 5 ml 4M HCl & 2 ml 10M HCl. are clear yellow

All samples contain 190-0312-2 at 10-19-96

Units shown for GC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,

R = Replicate Number, A = Aliquot Code.

Keith - please correct the heading
on this one.

worklistrpt Version 2.1 05/15/95
09/25/96 10:02

HNF-SD-WM-DP-214, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13321

Analyst: EAL Instrument: H2001 Book # N/AMethod: LA-504-101 Rev/Mod E0Worklist Comment: TANK#AW-105 GRAB SEGMENT:5AW-96.9,5AW-96-15. ^{H20} _{DL 10-18-96} FUSION, new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H200IG01	SOLID	<u>100</u>	<u>100</u>	N/A	g/L
96001213	AW-105 GRAB	2 SAMPLE	S96T005057	0 W	H200IG01	SOLID	N/A	<u>5.337</u>		g/L
96001213	AW-105 GRAB	3 SAMPLE	S96T005057	0 W	DOSE-02	SOLID	N/A	<u><0.5</u>		mrad/hour
96001213	AW-105 GRAB	4 DUP	S96T005057	0 W	H200IG01	SOLID	<u>5.337</u>	<u>5.314</u>	N/A	g/L
96001213	AW-105 GRAB	5 DUP	S96T005057	0 W	DOSE-02	SOLID	N/A	<u><0.5</u>	N/A	mrad/hour
96001215	AW-105 GRAB	6 SAMPLE	S96T005087	0 W	H200IG01	SOLID	N/A	<u>5.012</u>		g/L
96001215	AW-105 GRAB	7 SAMPLE	S96T005087	0 W	DOSE-02	SOLID	N/A	<u><0.5</u>		mrad/hour
96001215	AW-105 GRAB	8 DUP	S96T005087	0 W	H200IG01	SOLID	<u>5.012</u>	<u>4.949</u>	N/A	g/L
96001215	AW-105 GRAB	9 DUP	S96T005087	0 W	DOSE-02	SOLID	N/A	<u><0.5</u>	N/A	mrad/hour

Final page for worklist # 13321

Analyst Signature A. Lambel Date 10-19-96Analyst Signature Samuel Mark Date 10-19-96

596T005057 → 596T005057
 5075 → 5087

Validated
 G. M. Kelly 10/19/96

Data Entry Comments:

HPT: Harry Dunaway OTT: <0.5 mrad/hr

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
09/25/96 10:04

HNF-SD-WM-DP-214, REV. D

Page: 1

LABCORE Data Entry Template for Worklist# 13322

Analyst: SM Instrument: H2001 Book # N/AMethod: LA-504-101 Rev/Mod E-0Worklist Comment: TANK#AW-105 GRAB SEGMENT:5AW-96-17,5AW-96-20. ^{H2O} ~~FUSION~~ ₀₂₋₁₀₋₁₈₋₉₆ new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	100% ^{100% to 100%}	100	N/A	g/L
96001215	AW-105 GRAB	2 SAMPLE	S96T005088	0 W	H2001G01	SOLID	N/A	5.333		g/L
96001215	AW-105 GRAB	3 SAMPLE	S96T005088	0 W	DOSE-02	SOLID	N/A	0.5		mrads/hour
96001215	AW-105 GRAB	4 DUP	S96T005088	0 W	H2001G01	SOLID	N/A	5.333 5.349	N/A	g/L
96001215	AW-105 GRAB	5 DUP	S96T005088	0 W	DOSE-02	SOLID	N/A	0.5	N/A	mrads/hour
96001215	AW-105 GRAB	6 SAMPLE	S96T005089	0 W	H2001G01	SOLID	N/A	5.276		g/L
96001215	AW-105 GRAB	7 SAMPLE	S96T005089	0 W	DOSE-02	SOLID	N/A	0.5		mrads/hour
96001215	AW-105 GRAB	8 DUP	S96T005089	0 W	H2001G01	SOLID	N/A	5.276 5.138	N/A	g/L
96001215	AW-105 GRAB	9 DUP	S96T005089	0 W	DOSE-02	SOLID	N/A	0.5	N/A	mrads/hour

Final page for worklist # 13322

Analyst Signature A. LumbelDate 10-19-96Analyst Signature David Muth Date 10-19-96596T005076 → 596T005088
5084 → 5089Validation
S. Mally 10/19/96

Data Entry Comments:

APT: Larry Lumbel

OT: 0.5 mrads/hr

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-214, REV. 0

Inorganic Analysis

HNF-SD-WM-DP-214, REV. 0

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LABCORE Data Entry Template for Worklist# 13070

Analyst: JLF Instrument: DSC0 1 Book # 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>28.5</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005004	0	DSC-01	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005004	0	DSC-01	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	4 SAMPLE	S96T005005	0	DSC-01	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001213	AW-105 GRAB	5 DUP	S96T005005	0	DSC-01	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13070

JLF 9/19/96
Analyst Signature Date

JLF 9/20/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9/23/96

Data Entry Comments:

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 133 TO 137.

12N14B DSC STD

25.810 mg

Rate: 10.0 °C/min

File: 00001.001 DSC METTLER 18-Sep-96

Ident: 0.0

222-S Laboratory

Blandina Valenzuela for

JL Frisby 9-26-96

exo

Integration

Delta H 735 mJ

28.5 J/g

Peak 159.5°C

-33.1 mW

20. mW

110. 120. 130. 140. 150. 160. 170. °C

S96T005005SAM

10.515 mg

Rate: 10.0 °C/min

File: 00009.001

DSC METTLER

19-Sep-96

Ident: 0.0

222-S Laboratory

Integration

Delta H15623 mJ

1485.8 J/g

Peak 105.3°C

-87.7 mW

S96T005005DUP

10.333 mg

Rate: 10.0 °C/min

File: 00011.001

DSC METTLER

19-Sep-96

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 13072

Analyst: JLF Instrument: DSC0 3 Book # 12N4B

Method: LA-514-114 Rev/Mod C-1-D-0
cor 2/19/97

Worklist Comment: AW-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>27.28</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005006 0		DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005006 0		DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13072

See attached for signatures
Analyst Signature [Signature] Date 9-19-96
BDY

[Signature] 9/20/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9/23/96

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 13072

Analyst: JLF Instrument: DSC0 Book # 12N148

Method: LA-514-113 Rev/Mod _____

Worklist Comment: AW-105 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
96001213	AW-105 GRAB	2 SAMPLE	S96T005006	0	DSC-01	LIQUID	N/A			Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005006	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 13072

Jessie S. Orsby 9-18-96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was used.
9-19-96

Blandina
Valenzuela

Data Entry Comments:

Curve 1: DSC

File info: IND091801 Wed Sep 18 17:27:19 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 140 TO 142

1 12N14-B INDIUM AT 10C/MIN: IND091801

Heat Flow (mW)

N2, EXOTHERM DOWN

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

Temperature (°C)

11 frisby

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Sep 18 17:28:08 1996

Curve 1: DSC

File info: SAM091803 Wed Sep 18 21:30:30 1996

Sample Weight: 12.020 mg

S96T005006SAM

HNF-SD-WM-DP-214, REV. 0

N2 10C/min
TEMP: 35.0 °C
TEMP: 500.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

JL FRISBY
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 21:32:20 1996

Curve 1: DSC

File info: DUP091805 Wed Sep 18 22:40:45 1996

Sample Weight: 11.270 mg

S96T005006DUP

N2 10C/min
TEMP: 55.0 °C
TIME: 55.0 s

TIME: 0.0 min RATE: 10.0 C/min

JL FRISBY
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 22:41:26 1996

HNFS-SD-WM-DP-214, REV. C

LABCORE Data Entry Template for Worklist# 13135

Analyst: QAM Instrument: DSC0 1 Book # 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 DSC,RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>26.3</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	2 SAMPLE	S96T005010	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	3 DUP	S96T005010	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	4 SAMPLE	S96T005011	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	5 DUP	S96T005011	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13135

QAM 9-20-96
Analyst Signature Date

Revised 9/24/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9-26-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 144 TO 148

CMurphy 9-20-96

12N14B DSC STD

25.810 mg

Rate: 10.0 °C/min

File: 00015.001

Ident: 0.0

DSC METTLER

20-Sep-96

222-S Laboratory

exo

10. mW

Integration

Delta H 680 mJ

26.3 J/g

Peak 159.7°C

-31.0 mW

110.

120.

130.

140.

150.

160.

170.

°C

HNF-SD-WM-DP-214, REV. 0

144

S96T005010 SAM N2

18.181 mg

Rate: 10.0 °C/min

File: 00016.001 DSC METTLER 20-Sep-96

Ident: 0.0

222-S Laboratory

exo

50. mW

Integration
Delta H20630 mJ
1134.7 J/g
Peak 101.3°C
-76.3 mW

100.

200.

300.

400.

°C

S96T005010 DUP N2

18.637 mg

Rate: 10.0 °C/min

File: 00018.001

DSC METTLER

20-Sep-96

Ident: 0.0

222-S Laboratory

S96T005011 SAM N2

4.735 mg

Rate: 10.0 °C/min

File: 00020.001

DSC METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration
Delta H 9578 mJ
2022.7 J/g
Peak 100.2°C
-55.1 mW

100.

200.

300.

400.

°C

HNF-SD-WM-DP-214, REV. 0

147

S96T005011 DUP N2

29.082 mg

Rate: 10.0 °C/min

File: 00022.001

DSC METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 13136

Analyst: QAM Instrument: DSC0 1 Book # 12048

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>25.3*</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	2 SAMPLE	S96T005012	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	3 DUP	S96T005012	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13136

QAM by 9-21-96
Analyst Signature Date

RCJ 4/24/98
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-26-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 150 TO 152.

AMurphy 9-21-96

12N14B DSC STD

25.810 mg

Rate: 10.0 °C/min

File: 00026.001

DSC METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration
Delta H 652 mJ
25.3 J/g
Peak 159.6 °C
-30.5 mW

110. 120. 130. 140. 150. 160. 170. °C

150
HNF-SD-WM-DP-214, REV. D

S96T005012 SAM N2

39.100 mg

Rate: 10.0 °C/min

File: 00029.001

DSC METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration

Delta H30004 mJ

767.4 J/g

Peak 105.3 °C

-86.0 mW

100.

200.

300.

400.

°C

HNF-SD-WM-DP-214, REV. D

S96T005012 DUP N2

7.109 mg

Rate: 10.0 °C/min

File: 00031.001

DSC METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

exo

50. mW

Integration

Delta H10143 mJ

1426.8 J/g

Peak 106.0°C

-68.6 mW

100.

200.

300.

400.

°C

HNF-SD-WM-DP-214, REV. 0

152

LABCORE Data Entry Template for Worklist# 13912

Analyst: KRM Instrument: DSC0 3 Book # 12N148

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

Worklist Comment: AW-105 Grab. Run under nitrogen.Std:INDIUM ~8mg. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>26.26</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005049	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005049	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	4 SAMPLE	S96T005050	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001213	AW-105 GRAB	5 DUP	S96T005050	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13912

See attached for signatures
Analyst Signature Blandina Valenzuela Date 10-23-96
BDV

Trish Mack
Analyst Signature Trish Mack Date 10-24-96

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# 13912

Analyst: KRM

Instrument: DSC0

Book # 12N14B

Method: LA-514-113 Rev/Mod

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: INDIUM ~8mg. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005049	0	DSC-01	LIQUID	N/A			Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005049	0	DSC-01	LIQUID			N/A	Joules/g
96001213	AW-105 GRAB	4 SAMPLE	S96T005050	0	DSC-01	LIQUID	N/A			Joules/g
96001213	AW-105 GRAB	5 DUP	S96T005050	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 13912

Analyst Signature

10-19-96
Date

Analyst Signature

Date

DSC-03 instrument
was used.

10-23-96

Blandina
Valenzuela

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: IND101901 Sat Oct 19 05:03:45 1996

Sample Weight: 22.750 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 155 TO 159.

HNF-SD-WM-DP-214, REV. 0

N2, EXOTHERM DOWN

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 05:06:21 1996

[Signature] 10-19-96

Curve 1: DSC
File info: SAM101901 Sat Oct 19 06:22:35 1996
Sample Weight: 10.430 mg
S96T005049

156

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 07:31:15 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101902 Sat Oct 19 08:16:57 1996

Sample Weight: 10.430 mg

S96T005049 DUP

N2 10C/min

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 08:17:17 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101903 Sat Oct 19 09:12:58 1996

Sample Weight: 11.940 mg

S96T005050

N2 10C/min

TEMP: 500.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER

7 Series Thermal Analysis System
Sat Oct 19 11:21:02 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101904 Sat Oct 19 12:16:30 1996

Sample Weight: 11.500 mg

S96T005050 DUP

HNF-SD-WM-DP-214, REV. 0

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 12:28:57 1996

LABCORE Data Entry Template for Worklist# 13913

Analyst: KRM Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: AW-105 Grab. Run under nitrogen.Std: INDIUM ~8mg. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>26.73</u>	<u>*</u>	<u>N/A</u> Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005051 0		DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005051 0		DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	4 SAMPLE	S96T005081 0		DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	5 DUP	S96T005081 0		DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13913

See attached for signatures 10-23-96
Analyst Signature Date

Frank Mueh 10-24-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 10-30-96

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# 13913

Analyst: KRM Instrument: DSC0 _____ Book # 12N 4 B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: AW-105 Grab. Run under nitrogen.Std: INDIUM ~8mg. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	LIQUID			N/A	Joules/g
96001213	AW-105 GRAB	2	SAMPLE	S96T005051	0		DSC-01	LIQUID	N/A			Joules/g
96001213	AW-105 GRAB	3	DUP	S96T005051	0		DSC-01	LIQUID			N/A	Joules/g
96001215	AW-105 GRAB	4	SAMPLE	S96T005081	0		DSC-01	LIQUID	N/A			Joules/g
96001215	AW-105 GRAB	5	DUP	S96T005081	0		DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 13913

10-19-96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was used.

10-23-96

Blandina
Valenzuela

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: IND101901 Sat Oct 19 05:03:45 1996

Sample Weight: 22.750 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 162 TO 166.

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 12:16:40 1996

[Signature] 10-19-96

HNFS-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101905 Sat Oct 19 13:21:20 1996

Sample Weight: 10.860 mg

S96T005051

N2 10C/min

TEMP: 35.0 °C
500.0 °C

TIME:

0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Oct 19 14:20:23 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC
File info: SAM101906 Sat Oct 19 15:06:10 1996
Sample Weight: 10.920 mg
S96T005051 DUP

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 15:12:07 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101907 Sat Oct 19 15:59:53 1996

Sample Weight: 11.210 mg

S96T005081

N2 10C/min

Temperature (°C)

TEMP: 25.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 17:52:23 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM102001 Sun Oct 20 05:54:31 1996

Sample Weight: 11.530 mg

S96T005061 DUP

HNF-SD-WM-DP-214, REV. 0

N2 10C/min

TEMP: 25.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH

PERKIN-ELMER

7 Series Thermal Analysis System

Sun Oct 20 06:04:59 1996

LABCORE Data Entry Template for Worklist# 13914

Analyst: 1/2 PM Instrument: DSC0 1 Book # 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 GRAB. Run under Nitrogen. Std: INDIUM ~8mg. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>27.6</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	2 SAMPLE	S96T005082	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	3 DUP	S96T005082	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001215	AW-105 GRAB	4 SAMPLE	S96T005083	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001215	AW-105 GRAB	5 DUP	S96T005083	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13914

Analyst Signature

Date

10-18-96

Analyst Signature

Date

10-24-96

10-25-96 ^{rem}

Verified / Validated by

Blandina

Valenzuela 10-30-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 168 TO 172

DSC STD 12N14B N2

17.838 mg

Rate: 10.0 °C/min

File: 00079.001

DSC METTLER

18-Oct-96

Ident: 0.0

222-S Laboratory

exo >

10. mW

Integration

Delta H 492 mJ

27.6 J/g

Peak 158.7 °C

-29.6 mW

120.

130.

140.

150.

160.

170.

°C

HNF-SD-WM-DP-214, REV. 0

[Signature] 10-18-96

S96T005082 N2

11.806 mg

Rate: 10.0 °C/min

File: 00082.001

DSC METTLER

18-Oct-96

Ident: 0.0

222-S Laboratory

exo>

50. mW

Integration
Delta H14398 mJ
1219.5 J/g
Peak 103.3°C
-78.0 mW

100.

200.

300.

400.

°C

S96T005082 DUP N2
11.949 mg
Rate: 10.0 °C/min
File: 00084.001 DSC METTLER 18-Oct-96
Ident: 0.0 222-S Laboratory

S96T005083 DUP N2

13.774 mg

Rate: 10.0 °C/min

File: 00088.001

Ident: 0.0

DSC METTLER

18-Oct-96

222-S Laboratory

<OXE

50 mW

Integration

Delta H14777 mJ

1072.8 J/g

Peak

103.3°C

-78.9 mW

°C

400.

300.

200.

100.

LABCORE Data Entry Template for Worklist# 13915

Analyst: KRM Instrument: DSC0 3 Book # 12N148

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

Worklist Comment: AW-105 GRAB. Run under nitrogen. Std: INDIUM ~8mg. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	<u>28.45</u>	<u>27.63</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	2	SAMPLE	S96T005019	0		DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001213	AW-105 GRAB	3	DUP	S96T005019	0		DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001213	AW-105 GRAB	4	SAMPLE	S96T005020	0		DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001213	AW-105 GRAB	5	DUP	S96T005020	0		DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13915

See attached for signatures 10-22-96
Analyst Signature KRM Date 10-22-96

10-24-96
10-25-96
Analyst Signature Frank Mark Date 10-25-96

Verified/Validated by

Blandina
Valenzuela 10-30-96

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# 13915

Analyst: KRM

Instrument: DSC0

Book # 12 N14B

Method: LA-514-113 Rev/Mod

Worklist Comment: AW-105 GRAB. Run under nitrogen. Std: INDIUM. ~8mg. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
96001213	AW-105 GRAB	2 SAMPLE	S96T005019	0	DSC-01	SOLID	N/A			Joules/g
96001213	AW-105 GRAB	3 DUP	S96T005019	0	DSC-01	SOLID			N/A	Joules/g
96001213	AW-105 GRAB	4 SAMPLE	S96T005020	0	DSC-01	SOLID	N/A			Joules/g
96001213	AW-105 GRAB	5 DUP	S96T005020	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 13915

Analyst Signature

Date

10-18-96

Analyst Signature

Date

DSC-03 instrument
was used.

10-22-96

Blandina
Valenzuela

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: IND101801 Fri Oct 18 04:48:22 1996

Sample Weight: 22.750 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 175 TO 179

175

Heat Flow (mW)

N2, EXOTHERM DOWN

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 05:10:33 1996

[Signature] 10-18-96

HNF-SD-WM-DP-214, REV. C

Curve 1: DSC

File info: SAM101801 Fri Oct 18 06:34:10 1996

Sample Weight: 10.780 mg

S96T005019

176

N2 10C/min

TEMP1: 35.0 °C
TEMP2: 500.0 °C

TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 08:09:07 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101802 Fri Oct 18 09:02:47 1996

Sample Weight: 23.680 mg

S96T005019 DUP

N2 10C/min

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

TEMP: 500.0 °C

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 09:26:21 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101803 Fri Oct 18 10:16:35 1996

Sample Weight: 23.950 mg

S96T005020

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 11:58:15 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: DSC

File info: SAM101804 Fri Oct 18 12:30:22 1996

Sample Weight: 29.280 mg

S96T005020 DUP

179

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 12:45:14 1996

HNF-SD-WM-DP-214, REV. 0

LABCORE Completed Worklist Report for Worklist# 13916

Analyst: rga

Instrument: DSC01

Book# 12N14B

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 GRAB. Run under nitrogen.Std: INDIUM ~8mg. new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		DSC-01	SOLID	28.45	27.5*	96.661	% Recovery
2	SAMPLE	S96T005021	0		DSC-01	SOLID	N/A	14.1		Joules/g
3	DUP	S96T005021	0		DSC-01	SOLID	14.1	0	200.000	RPD
4	SAMPLE	S96T005075	0		DSC-01	SOLID	N/A	16.4		Joules/g
5	DUP	S96T005075	0		DSC-01	SOLID	16.4	15.8	3.727	RPD

Final page for worklist# 13916

See attached for signatures
Analyst Signature _____ Date 11-1-96

Analyst Signature _____ Date _____

Reviewer Signature _____

Date 11-1-96

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

DSC STD 12N14B N2

22.750 mg

Rate: 10.0 °C/min

File: 00023.001

DSC METTLER

19-Oct-96

Ident: 0.0

222-S Laboratory

exo >

20. mW

Integration

Delta H 626 mJ

27.5 J/g

Peak 159.6 °C

-31.6 mW

HNF-SD-WM-DP-214, REV 0

120.

130.

140.

150.

160.

170.

°C

[Signature] 1020-96

S96T005021 SAM N2

26.701 mg

Rate: 10.0 °C/min

File: 00024.001

Ident: 0.0

DSC METTLER

19-Oct-96

222-S Laboratory

S96T005075 SAM N2

23.750 mg

Rate: 10.0 °C/min

File: 00028.001

DSC METTLER 19-Oct-96

Ident: 0.0

222-S Laboratory

HNF-SD-WM-DP-214, REV. C

LABCORE Completed Worklist Report for Worklist# 13917

Analyst: krm

Instrument: DSC01

Book# 12N148

Method: LA-514-113 Rev/Mod C-1

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: INDIUM ~ 8mg. new

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	DSC-01	SOLID	28.45	29.0	101.933 % Recovery	
2 SAMPLE	S96T005076	0	DSC-01	SOLID	N/A	31.6		Joules/g
3 DUF	S96T005076	0	DSC-01	SOLID	31.6	49.5	44.143 RPD	
4 SAMPLE	S96T005077	0	DSC-01	SOLID	N/A	22.2		Joules/g
5 DUF	S96T005077	0	DSC-01	SOLID	22.2	21.5	3.204 RPD	

Final page for worklist# 13917

See attached for signatures 10-30-96
Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Blondina Valenzuela 10-30-96
Reviewer Signature _____ Date _____

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 187 TO 191

DSC STD 12N14B N2

34.640 mg

Rate: 10.0 °C/min

File: 00033.001

DSC METTLER

19-Oct-96

Ident: 0.0

222-S Laboratory

exo

20. mW
0.2

Integration

Delta H 1005 mJ

29.0 J/g

Peak 158.6°C

-50.1 mW

BD Valenzuela for KR Monteith 10-23-96

120. 130. 140. 150. 160. 170. °C

HNE-SD-WM-DP-214, REV. 0

S96T005076 N2

29.521 mg

Rate: 10.0 °C/min

File: 00035.001

Ident: 0.0

DSC METTLER 19-Oct-96

222-S Laboratory

S96T005076 DUP N2

17.597 mg

Rate: 10.0 °C/min

File: 00037.001

DSC METTLER

19-Oct-96

Ident: 0.0

222-S Laboratory

S96T005077 N2

28.581 mg

Rate: 10.0 °C/min

File: 00039.001

DSC METTLER

19-Oct-96

Ident: 0.0

222-S Laboratory

exo

50 mW

Integration
Delta H25047 mJ
876.4 J/g
Peak 105.3°C
-75.9 mW

Integration
Delta H 634 mJ
22.2 J/g
Peak 309.2°C
1.6 mW

100.

200.

300.

400.

°C

S96T005077 DUP N2

20.654 mg

Rate: 10.0 °C/min

File: 00041.001

DSC METTLER

19-Oct-96

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 14911

Analyst: BDV Instrument: DSC01 Book # _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Dry DSC for AW-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001213	AW-105 GRAB	1 SAMPLE	S96T005021	0	DSC-02	SOLID	N/A	42.1		Joules/g Dry
96001213	AW-105 GRAB	2 DUP	S96T005021	0	DSC-02	SOLID	42.1	0	N/A	Joules/g Dry
96001215	AW-105 GRAB	3 SAMPLE	S96T005075	0	DSC-02	SOLID	N/A	66.7		Joules/g Dry
96001215	AW-105 GRAB	4 DUP	S96T005075	0	DSC-02	SOLID	66.7	64.3	N/A	Joules/g Dry
96001215	AW-105 GRAB	5 SAMPLE	S96T005076	0	DSC-02	SOLID	N/A	92.8		Joules/g Dry
96001215	AW-105 GRAB	6 DUP	S96T005076	0	DSC-02	SOLID	92.8	145	N/A	Joules/g Dry
96001215	AW-105 GRAB	7 SAMPLE	S96T005077	0	DSC-02	SOLID	N/A	70.9		Joules/g Dry
96001215	AW-105 GRAB	8 DUP	S96T005077	0	DSC-02	SOLID	70.9	68.7	N/A	Joules/g Dry

Final page for worklist # 14911

Blandina Valenzuela 11-14-96
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Dry DSC for AW-105

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T005021	14.1	66.54	42.1
5021D	Ø	66.54	Ø
5075	16.4	75.41	66.7
5075D	15.8	75.41	64.3
5076	31.6	65.96	92.8
5076D	49.5	65.96	145.4
5077	22.2	68.70	70.9
5077D	21.5	68.70	68.7
5049	Ø	92.68	
5049D	Ø	92.68	
5050	Ø	88.55	
5050D	Ø	88.55	
5019	Ø	80.11	
5019D	Ø	80.11	
5020	Ø	65.47	
5020D	Ø	65.47	
5051	Ø	88.85	
5051D	Ø	88.85	
5081	Ø	90.66	
5081D	Ø	90.66	

5082 Ø

5082D Ø

5083 Ø

5083D Ø

LABCORE Data Entry Template for Worklist# 13068

Analyst: JLF

Instrument: TGA0 1

Book # 8208A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: AW-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.58</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005004	0	TGA-01	LIQUID	<u>N/A</u>	<u>95.04</u>		%
96001213	AW-105 GRAB	3 DUP	S96T005004	0	TGA-01	LIQUID	<u>95.04</u>	<u>95.72</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	4 SAMPLE	S96T005005	0	TGA-01	LIQUID	<u>N/A</u>	<u>95.67</u>		%
96001213	AW-105 GRAB	5 DUP	S96T005005	0	TGA-01	LIQUID	<u>95.67</u>	<u>95.63</u>	<u>N/A</u>	%

Final page for worklist # 13068

Jessie B. Dushy 9/19/96
Analyst Signature Date

JLF 9/20/96
Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela
9/23/96

Data Entry Comments:

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 195 TO 199.

82N8A TGA STD

21.756 mg

Rate: 10.0 °C/min

File: 00002.001

TG

METTLER

18-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.74 mg

-58.58 %

ResidC. 9.01 mg

41.42 %

Dpeak 95.0 °C

5. mg

Blandina Valenzuela for J. L. Frisby
9-26-96 °C

S96T005004SAM

11.225 mg

Rate: 10.0 °C/min

File: 00004.001

TG

METTLER

18-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-10.67 mg
-95.04 %
ResiC. 0.53 mg
4.76 %

S96T005005SAM

11.798 mg

Rate: 10.0 °C/min

File: 00008.001

TG

METTLER

19-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.29 mg

-95.67 %

ResidC. 0.51 mg

4.33 %

Dpeak 87.0 °C

LABCORE Data Entry Template for Worklist# 13069

Analyst: JLF Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: AW-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.67</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005006	0	TGA-03	LIQUID	<u>N/A</u>	<u>94.61</u>		%
96001213	AW-105 GRAB	3 DUP	S96T005006	0	TGA-03	LIQUID	<u>94.61</u>	<u>94.53</u>	<u>N/A</u>	%

Final page for worklist # 13069

See attached for signatures
Analyst Signature JLF Date 9-19-96

JLF 9/20-96
Analyst Signature Date

Verified/Validated by

Blondina
Valenzuela
9/23/96

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 13069

Analyst: JLF

Instrument: TGA0

Book # 82 N8A

Method: LA-560-112 Rev/Mod

Worklist Comment: AW-105 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	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005006	0	TGA-01	LIQUID	N/A			%
96001213	AW-105 GRAB	3 DUP	S96T005006	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 13069

Jessie J. Inshy 9-18-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
went was used

9-19-96

Blandina
Valenzuela

Data Entry Comments:

Curve 1: TGA

File info: TER091801 Wed Sep 18 18:24:09 1996

Sample Weight: 19.153 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 202 TO 204.

HNF-SD-WM-DP-214, REV. 0

N2 10C/MIN

TEMP1: 35.0 °C
TEMP2: 305.0 °C
TIME1: 0.0 min RATE1: 10.0 C/min

Temperature (°C)

JL FRISBY
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 18:34:28 1996

Curve 1: TGA
File Info: SAM091801 Wed Sep 18 19:58:51 1996
Sample Weight: 11.450 mg
SS6T005006SAM

JL FRISBY
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 19 12:18:29 1996

Curve 1: TGA

File info: DUP091804 Wed Sep 18 22:05:36 1996

Sample Weight: 9.303 mg

S96T005006DUP

10C/MIN N2

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

Temperature (°C)

JL FRISBY
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 22:07:23 1996

HNFS-D-WM-DP-214, REV. 0

LABCORE Data Entry Template for Worklist# 13132

Analyst: QAM Instrument: TGA0 1 Book # 8228A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: AW-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	<u>59.2</u>	<u>58.99</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	2	SAMPLE	S96T005010	0		TGA-01	LIQUID	<u>N/A</u>	<u>95.10</u>		%
96001215	AW-105 GRAB	3	DUP	S96T005010	0		TGA-01	LIQUID	<u>95.10</u>	<u>94.98</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	4	SAMPLE	S96T005011	0		TGA-01	LIQUID	<u>N/A</u>	<u>94.79</u>		%
96001215	AW-105 GRAB	5	DUP	S96T005011	0		TGA-01	LIQUID	<u>94.79</u>	<u>94.92</u>	<u>N/A</u>	%

Final page for worklist # 13132

QAMurphy 9-20-96
Analyst Signature Date

Reichert 9/24/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-26-96

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.

DM Murphy 9-28-96

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 206 TO 210.

82N8A TGA STD

38.097 mg

Rate: 10.0 °C/min

File: 00013.001

TG

METTLER

20-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-22.47 mg

-58.99 %

Resid. 15.62 mg

41.01 %

Dpeak 114.2 °C

HNF-SD-WM-DP-214, REV. 0

S96T005010 SAM N2

18.113 mg

Rate: 10.0 °C/min

File: 00017.001

TG

METTLER

20-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-17.22 mg

-95.10 %

ResidC. 0.89 mg

4.90 %

Dpeak 99.0°C

S96T005010 DUP N2

19.688 mg

Rate: 10.0 °C/min

File: 00019.001

TG

METTLER

20-Sep-96

Ident: 0.0

222-S Laboratory

802

S96T005011 SAM N2

22.160 mg

Rate: 10.0 °C/min

File: 00021.001

TG

METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

S96T005011 DUP N2

29.501 mg

Rate: 10.0 °C/min

File: 00023.001

TG

METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-28.00 mg

-94.92 %

Resid. 1.50 mg

5.08 %

Dpeak 120.3°C

LABCORE Data Entry Template for Worklist# 13133

Analyst: QMM Instrument: TGA0 1 Book # 82N8A

Method: LA-560-112 Rev/Mod B-1

Worklist Comment: AW-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	58.28*	N/A	%
96001215	AW-105 GRAB	2 SAMPLE	S96T005012	0	TGA-01	LIQUID	N/A	94.03		%
96001215	AW-105 GRAB	3 DUP	S96T005012	0.	TGA-01	LIQUID	94.03	93.70	N/A	%

Final page for worklist # 13133

QMM 9-21-96
Analyst Signature Date

Rev. J. H. F. 9/24/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-26-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 212 TO 214.

AM Murphy 9/21/96

82N8A TGA STD

42.123 mg

Rate: 10.0 °C/min

File: 00025.001

TG

METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

212

HN-SD-WM-DP-214, REV. 0

S96T005012 SAM N2

30.021 mg

Rate: 10.0 °C/min

File: 00030.001 TG METTLER 21-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-28.23 mg

-94.03 %

Resid. 1.79 mg

5.97 %

Dpeak 117.0°C

S96T005012 DUP N2

24.665 mg

Rate: 10.0 °C/min

File: 00032.001

TG

METTLER

21-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-23.11 mg

-93.70 %

Resid. 1.55 mg

6.30 %

Dpeak 109.0 °C

10. mg

LABCORE Data Entry Template for Worklist# 13918

Analyst: KRM Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-03	LIQUID	<u>59.2</u>	<u>58.77</u>	<u>N/A</u> %
96001213	AW-105 GRAB	2 SAMPLE	S96T005049	0		TGA-03	LIQUID	<u>N/A</u>	<u>92.61</u>	<u>N/A</u> %
96001213	AW-105 GRAB	3 DUP	S96T005049	0		TGA-03	LIQUID	<u>92.61</u>	<u>92.74</u>	<u>N/A</u> %
96001213	AW-105 GRAB	4 SAMPLE	S96T005050	0		TGA-03	LIQUID	<u>N/A</u>	<u>88.66</u>	<u>N/A</u> %
96001213	AW-105 GRAB	5 DUP	S96T005050	0		TGA-03	LIQUID	<u>88.66</u>	<u>88.43</u>	<u>N/A</u> %

Final page for worklist # 13918

See attached for signatures 10-23-96
Analyst Signature Date BDV

T.R. Olson 10/24/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 10-30-96

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# 13918

Analyst: KRM

Instrument: TGA0

Book # 82NBA

Method: LA-560-112 Rev/Mod

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
96001213	AW-105 GRAB	2	SAMPLE	S96T005049	0		TGA-01	LIQUID	N/A			%
96001213	AW-105 GRAB	3	DUP	S96T005049	0		TGA-01	LIQUID			N/A	%
96001213	AW-105 GRAB	4	SAMPLE	S96T005050	0		TGA-01	LIQUID	N/A			%
96001213	AW-105 GRAB	5	DUP	S96T005050	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 13918

[Signature]
Analyst Signature

10-19-96
Date

[Signature]
Analyst Signature

[Signature]
Date

TGA-03 instrument

was used.

Blandina

Valenzuela

10-30-96

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: TER101901 Sat Oct 19 05:28:21 1996

Sample Weight: 23.126 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 217 TO 221.

N2 10C/MIN

TEMP: 350.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER

7 Series Thermal Analysis System
Sat Oct 19 05:30:02 1996

[Signature] 10-19-96

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101901 Sat Oct 19 06:36:43 1996

Sample Weight: 10.463 mg

S96T005049

10C/MIN N2

TEMP: 35.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER

7 Series Thermal Analysis System
Sat Oct 19 07:36:47 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File Info: SAM101902 Sat Oct 19 08:17:15 1996

Sample Weight: 10.466 mg

S96T005049 DUP

10C/MIN N2

TEMP: 23.061 °C
TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 08:23:20 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101903 Sat Oct 19 09:23:27 1996

Sample Weight: 11.278 mg

S96T005050

10C/MIN N2

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 11:30:49 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101904 Sat Oct 19 12:16:45 1996

Sample Weight: 11.205 mg

S96T005050 DUP

10C/MIN N2

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 12:35:15 1996

HNF-SD-WM-DP-214, REV. 0

LABCORE Data Entry Template for Worklist# 13919

Analyst: KRM Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	LIQUID	<u>59.2</u>	<u>58.77*</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	2	SAMPLE	S96T005051	0		TGA-03	LIQUID	<u>N/A</u>	<u>88.68</u>		%
96001213	AW-105 GRAB	3	DUP	S96T005051	0		TGA-03	LIQUID	<u>88.68</u>	<u>89.02</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	4	SAMPLE	S96T005081	0		TGA-03	LIQUID	<u>N/A</u>	<u>90.54</u>		%
96001215	AW-105 GRAB	5	DUP	S96T005081	0		TGA-03	LIQUID	<u>90.54</u>	<u>90.78</u>	<u>N/A</u>	%

Final page for worklist # 13919

See attached for signatures 10-23-96
Analyst Signature Date

Frank Mack 10-24-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 10-30-96

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# 13919

Analyst: KRM Instrument: TGA0 Book # 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005051	0	TGA-01	LIQUID	N/A			%
96001213	AW-105 GRAB	3 DUP	S96T005051	0	TGA-01	LIQUID			N/A	%
96001215	AW-105 GRAB	4 SAMPLE	S96T005081	0	TGA-01	LIQUID	N/A			%
96001215	AW-105 GRAB	5 DUP	S96T005081	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 13919

Analyst Signature [Signature] Date 10-19-96

Analyst Signature _____ Date _____

TGA-03 instrument
was used

10-23-96

Blandina
Valenzuela

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: TER101901 Sat Oct 19 05:28:21 1996

Sample Weight: 23.126 mg

TGA STD 82NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 224 TO 228

N2 10C/MIN

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

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 11:50:13 1996

[Signature] 10-19-96

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101905 Sat Oct 19 13:25:31 1996

Sample Weight: 11.810 mg

S96T005051

10C/MIN N2

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 19 14:29:18 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101906 Sat Oct 19 15:04:50 1996

Sample Weight: 11.577 mg

S96T005051 DUP

226

10C/MIN N2

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

Temperature (°C)

KR MONTEITH

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Oct 19 15:06:46 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA
 File info: SAM101907 Sat Oct 19 16:15:30 1996
 Sample Weight: 11.150 mg
 S96T005081

227

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

Temperature (°C)

KR MONTEITH
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sun Oct 20 04:28:27 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM102001 Sun Oct 20 05:56:22 1996

Sample Weight: 11.656 mg

S96T005081 DUP

10C/MIN N2

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Oct 20 05:59:41 1996

HNF-SD-WM-DP-214, REV. 0

LABCORE Data Entry Template for Worklist# 13920

Analyst: LCRM Instrument: TGA0 1 Book # 80N8A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.83</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	2 SAMPLE	S96T005082	0	TGA-01	LIQUID	<u>N/A</u>	<u>90.16</u>		%
96001215	AW-105 GRAB	3 DUP	S96T005082	0	TGA-01	LIQUID	<u>90.16</u>	<u>74.58</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	4 SAMPLE	S96T005083	0	TGA-01	LIQUID	<u>N/A</u>	<u>89.29</u>		%
96001215	AW-105 GRAB	5 DUP	S96T005083	0	TGA-01	LIQUID	<u>89.29</u>	<u>90.05</u>	<u>N/A</u>	%

Final page for worklist # 13920

Analyst Signature

Date

10-18-96

Analyst Signature

Date

10-24-96
10-25-96 rem

Verified/Validated by

Blandina

Valenzuela

10-30-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 220 TO 224.

TGA STD 82NBA N2

18.423 mg

Rate: 10.0 °C/min

File: 00081.001 TG METTLER 18-Oct-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height-10.84 mg
-58.83 %
Resid. 7.58 mg
41.13 %
Dpeak 84.2 °C

Signature 10-18-96

596T005082 N2

11.322 mg

Rate: 10.0 °C/min

File: 00083.001

Ident: 0.0

TG METTLER

18-Oct-96

222-S Laboratory

S96T005082 DUP N2

11.536 mg

Rate: 10.0 °C/min

File: 00085.001

TG

METTLER

18-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.60 mg

-74.58 %

ResiC. 2.93 mg

25.42 %

Dpeak 79.0 °C

S96T005083 N2

11.997 mg

Rate: 10.0 °C/min

File: 00087.001

TG

METTLER

18-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-10.71 mg
-89.29 %
ResidC. 1.24 mg
10.35 %
Dpeak 87.0 °C

S96T005083 DUP N2

12.241 mg

Rate: 10.0 °C/min

File: 00089.001

TG

METTLER

18-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.02 mg

-90.05 %

ResidC. 1.22 mg

9.95 %

Dpeak 87.0 °C

LABCORE Data Entry Template for Worklist# 13921

Analyst: KRM Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod D-0

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>59.64</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005019 0		TGA-03	SOLID	<u>N/A</u>	<u>80.79</u>		%
96001213	AW-105 GRAB	3 DUP	S96T005019 0		TGA-03	SOLID	<u>80.79</u>	<u>79.42</u>	<u>N/A</u>	%
96001213	AW-105 GRAB	4 SAMPLE	S96T005020 0		TGA-03	SOLID	<u>N/A</u>	<u>64.68</u>		%
96001213	AW-105 GRAB	5 DUP	S96T005020 0		TGA-03	SOLID	<u>64.68</u>	<u>66.26</u>	<u>N/A</u>	%

Final page for worklist # 13921

See attached for signatures 10-23-96
Analyst Signature KRM Date 10/23/96TR. Olson 10/24/96
Analyst Signature DateVerified/Validated by
Blandina
Valenzuela 10-30-96

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# 13921

Analyst:

KRM

Instrument: TGA0

Book #

B2NBA

Method: LA-560-112 Rev/Mod

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
96001213	AW-105 GRAB	2	SAMPLE	S96T005019	0		TGA-01	SOLID	N/A			%
96001213	AW-105 GRAB	3	DUP	S96T005019	0		TGA-01	SOLID			N/A	%
96001213	AW-105 GRAB	4	SAMPLE	S96T005020	0		TGA-01	SOLID	N/A			%
96001213	AW-105 GRAB	5	DUP	S96T005020	0		TGA-01	SOLID			N/A	%

Final page for worklist # 13921

10-18-96

Analyst Signature

Date

Analyst Signature

Date

TGA-03 instrument
was used.

10-23-96

Blandina
Valenzuela

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: TER101801 Fri Oct 18 05:35:08 1996

Sample Weight: 19.557 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 237 TO 241.

237

HNF-SD-WM-DP-214, REV. 0

N2 10C/MIN
TEMP: 35.0 °C
TEMP: 300.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 05:37:42 1996

[Signature] 10-18-96

Curve 1: TGA

File info: SAM101801 Fri Oct 18 06:41:32 1996

Sample Weight: 16.463 mg

S96T005019

10C/MIN N2

TEMP: 88.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 07:53:24 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101802 Fri Oct 18 09:25:51 1996

Sample Weight: 14.567 mg

S96T005019DUP

10C/MIN N2

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

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 09:39:13 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101803 Fri Oct 18 10:34:21 1996

Sample Weight: 13.027 mg

S95T005020

10C/MIN N2

TEMP: 28.0 C TIME: 0.0 min RATE: 10.0 C/min

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 11:48:14 1996

HNF-SD-WM-DP-214, REV. 0

Curve 1: TGA

File info: SAM101804 Fri Oct 18 12:33:51 1996

Sample Weight: 11.861 mg

S95T005020 DUP

HNF-SD-WM-DP-214, REV. 0

10C/MIN N2

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

Temperature (°C)

KR MONTEITH
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 18 12:39:32 1996

241

LABCORE Data Entry Template for Worklist# 13922

Analyst: RGH Instrument: TGA0 1 Book # 22N8A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.68</u>	<u>*N/A</u>	%
96001213	AW-105 GRAB	2 SAMPLE	S96T005021	0	TGA-01	SOLID	<u>N/A</u>	<u>66.46</u>		%
96001213	AW-105 GRAB	3 DUP	S96T005021	0	TGA-01	SOLID	<u>66.46</u>	<u>66.61</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	4 SAMPLE	S96T005075	0	TGA-01	SOLID	<u>N/A</u>	<u>75.58</u>		%
96001215	AW-105 GRAB	5 DUP	S96T005075	0	TGA-01	SOLID	<u>75.58</u>	<u>75.23</u>	<u>N/A</u>	%

Final page for worklist # 13922

[Signature]
Analyst Signature

10-20-96
Date

[Signature]
Analyst Signature

10-30-96
Date

Verified/Validated by

Blandina

Valenzuela

10-11-96
11-1-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 243 TO 247.

TGA STD 82N8A N2

27.295 mg

Rate: 10.0 °C/min

File: 00021.001

Ident: 0.0

TG METTLER 19-Oct-96

222-S Laboratory

Step Analysis

Height-16.02 mg

-58.68 %

Resid. 11.28 mg

41.32 %

Dpeak 96.7 °C

10. mg

Johnathan 10/20/96

50.

100.

150.

200.

°C

HNF-SD-WM-DP-214, REV. 0

243

S96T005021 SAM N2
31.489 mg
Rate: 10.0 °C/min
File: 00027.001 TG METTLER 20-Oct-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-20.93 mg
-66.46 %
ResidC. 10.56 mg
33.54 %
Dpeak 107.0 °C

Step Analysis
Height -0.37 mg.
-1.18 %
ResidC. 10.19 mg
32.36 %

10. mg

°C

400.

300.

200.

100.

S96T005021 DUP N2

41.606 mg

Rate: 10.0 °C/min

File: 00029.001

TG

METTLER

20-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-27.72 mg

-66.61 %

ResiC. 13.89 mg

33.39 %

Dpeak 117.0 °C

Step Analysis

Height -0.37 mg

-0.89 %

ResiC. 13.52 mg

32.50 %

10. mg

100.

200.

300.

400.

°C

HNFS-D-WM-DP-214, REV 0

245

S96T005075 SAM N2
20.789 mg
Rate: 10.0 °C/min
File: 00031.001 TG METTLER 20-Oct-96
Ident: 0.0 222-S Laboratory

S96T005075 DUP N2
26.021 mg
Rate: 10.0 °C/min
File: 00032.001 TG METTLER 20-Oct-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-19.58 mg
-75.23 %
Resid. 6.42 mg
24.69 %
Dpeak 109.0 °C

10. mg

°C

400.

300.

200.

100.

LABCORE Data Entry Template for Worklist# 13923

Analyst: KRM Instrument: TGA0 1 Book # 82N8A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: AW-105 Grab. Run under nitrogen. Std: TERLIQ .010ml. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.93</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	2 SAMPLE	S96T005076	0	TGA-01	SOLID	<u>N/A</u>	<u>65.12</u>		%
96001215	AW-105 GRAB	3 DUP	S96T005076	0	TGA-01	SOLID	<u>65.12</u>	<u>65.79</u>	<u>N/A</u>	%
96001215	AW-105 GRAB	4 SAMPLE	S96T005077	0	TGA-01	SOLID	<u>N/A</u>	<u>66.19</u>		%
96001215	AW-105 GRAB	5 DUP	S96T005077	0	TGA-01	SOLID	<u>66.19</u>	<u>71.20</u>	<u>N/A</u>	%

Final page for worklist # 13923

Analyst Signature

Date

10-20-96

Analyst Signature

Date

10-24-96

Verified/Validated by

Blandina

Valenzuela 10-30-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 249 TO 253

TGA STD 82N8A N2

20.615 mg

Rate: 10.0 °C/min

File: 00034.001

TG

METTLER

20-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.15 mg

-58.93 %

ResidC. 8.46 mg

41.05 %

Dpeak 88.3 °C

249

HNF-SD-WM-DP-214, REV. 0

S96T005076 N2

25.092 mg

Rate: 10.0 °C/min

File: 00098.001

TG

METTLER

20-Oct-86

Ident: 0.0

222-S Laboratory

S96T005076 DUP N2
38.088 mg
Rate: 10.0 °C/min
File: 00038.001 TG METTLER 20-Oct-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-25.44 mg
-66.79 %
Resid. 12.65 mg
33.21 %
Dpeak 113.0 °C

S96T005077 N2

18.791 mg

Rate: 10.0 °C/min

File: 00040.001

TG

METTLER

20-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.44 mg

-66.19 %

ResidC. 6.31 mg

33.59 %

Dpeak 89.0 °C

252

5. mg

100. 200. 300. 400. °C

S96T005077 DUP N2

12.279 mg

Rate: 10.0 °C/min

File: 00042.001 TG METTLER 20-Oct-96

Ident: 0.0 222-S Laboratory

Step Analysis

Height -8.74 mg

-71.20 %

ResidC. 3.54 mg

28.80 %

Dpeak 75.0 °C

LABCORE Data Entry Template for Worklist# 13073

Analyst: DPB Instrument: BA001 Book # 133N16-A
Method: LA-510-112 Rev/Mod C-3
Worklist Comment: AW-105 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>1.403</u>	<u>N/A</u>	Sp.G.
96001213	AW-105 GRAB	2 SAMPLE	S96T005004	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.0207</u> <u>1.0188</u>	<u>10-21-96</u>	Sp.G.
96001213	AW-105 GRAB	3 DUP	S96T005004	0	SPG-01	LIQUID	<u>1.0207</u> <u>1.0188</u> <u>2.5 10-21-96</u>	<u>1.0154</u>	<u>N/A</u>	Sp.G.
96001213	AW-105 GRAB	4 SAMPLE	S96T005006	0	SPG-01	LIQUID	<u>N/A</u>	<u>0.3042</u>		Sp.G.
96001213	AW-105 GRAB	5 DUP	S96T005006	0	SPG-01	LIQUID	<u>0.3042</u>	<u>0.3089</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 13073

Daniel P. Bromley 10/24/96 0440
Analyst Signature Date

R. Jones 10-21-96
Analyst Signature Date

Sample S96T005006 rejected.
Rerun requested.
RW Schneider

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.

SPECIFIC GRAVITY: LA-510-112 (C-3)

WORKLIST

#

ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

13073

DPB

10/24/96

0440

☐ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # =

STD # = 133N16-A

TARE WEIGHT (g) 1.9215
GROSS WEIGHT (g) 2.1300
VOL. of SOLUTION (mL) .14989

REPLICATE
1.9169
2.1289
.14989

☒ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # = 596T005004

STD # =

TARE WEIGHT (g) 1.9074
GROSS WEIGHT (g) 2.0604
VOL. of SOLUTION (mL) .14989

REPLICATE
1.9245
2.0767
.14989

☒ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # = 596T005006

STD # =

TARE WEIGHT (g) 1.8835
GROSS WEIGHT (g) 1.9291
VOL. of SOLUTION (mL) .14989

REPLICATE
1.8458
1.8921
.14989

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

HNF-SD-WM-DP-214, REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.1300	2.1289
Work List	Tare Weight (W1)	1.9215	1.9169
13073	Weight of Solution (W2-W1)	0.2085	0.212
Test Code	Volume of Solution μ L	149.8900	149.8900
SPG-01	Specific Gravity	1.3910	1.4144
Matrix	Specific Gravity (Average)	1.4027	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity Average =	1.403	
04:40 AM			

Data Entry by:

Date:

10/24/96

Approved by:

Date:

10/24/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0604	2.0767
Work List	Tare Weight (W1)	1.9074	1.9245
13073	Weight of Solution (W2-W1)	0.153	0.1522
Test Code	Volume of Solution μ L	149.8900	149.8900
SPG-01	Specific Gravity	1.0207	1.0154
Matrix	Specific Gravity (Average)	1.0181	
LIQUID			
Sample #			
S96T005004			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity Average =	1.018	
04:40 AM			

Data Entry by:	RCT	Date:	10/24/96
Approved by:	RW [Signature]	Date:	10/24/96

LABCORE Data Entry Template for Worklist# 13137

Analyst: DPB Instrument: BA001 Book # 133N16-A
Method: LA-510-112 Rev/Mod C-3
Worklist Comment: AW-105 SPG. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.398</u>	<u>1.392</u>	<u>N/A</u>	Sp.G.
96001215	AW-105 GRAB	2 SAMPLE	S96T005010	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.016</u>	<u>0.01</u>	Sp.G.
96001215	AW-105 GRAB	3 DUP	S96T005010	0	SPG-01	LIQUID	<u>1.016</u>	<u>1.027</u>	<u>N/A</u>	Sp.G.
96001215	AW-105 GRAB	4 SAMPLE	S96T005011	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.021</u>	<u>0.01</u>	Sp.G.
96001215	AW-105 GRAB	5 DUP	S96T005011	0	SPG-01	LIQUID	<u>1.021</u>	<u>1.025</u>	<u>N/A</u>	Sp.G.
96001215	AW-105 GRAB	6 SAMPLE	S96T005012	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.038</u>	<u>0.01</u>	Sp.G.
96001215	AW-105 GRAB	7 DUP	S96T005012	0	SPG-01	LIQUID	<u>1.038</u>	<u>1.040</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 13137

Daniel P. Bromley 10/24/96 0125 Analyst Signature Date
Frank Mack 10-24-96 Analyst Signature Date
Approved RW Schmedt 10/24/96

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.

SPECIFIC GRAVITY: LA-510-112 (C-3)

WORKLIST
#ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

13137

DPB

10/24/96

0125

☒ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # =

STD # = 133NIG7A

TARE WEIGHT (g) 1.8872
GROSS WEIGHT (g) 2.0455
VOL. of SOLUTION (mL) .14989

REPLICATE	
1.9599	
2.1689	
.14989	

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE	

☒ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # = 596T005010

STD # =

TARE WEIGHT (g) 1.9245
GROSS WEIGHT (g) 2.0268
VOL. of SOLUTION (mL) .14989

REPLICATE	
1.8827	
2.0367	
.14989	

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE	

☒ SAMPLE
☒ STANDARD☐ DUPLICATE

259 SAMPLE # = 596T005011 STD # =

TARE WEIGHT (g) 1.8910
GROSS WEIGHT (g) 2.0441
VOL. of SOLUTION (mL) .14989

REPLICATE	
1.8802	
2.0339	
.14989	

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE	

☒ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # = 596T005012

STD # =

TARE WEIGHT (g) 1.8901
GROSS WEIGHT (g) 2.0457
VOL. of SOLUTION (mL) .14989

REPLICATE	
1.8969	
2.0528	
.14989	

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE	

HNF-SD-WM-DP-214, REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STD	REPLICATE
STD	Gross Weight (W2)	2.0955	2.1689
Work List	Tare Weight (W1)	1.8872	1.9599
13137	Weight of Solution (W2-W1)	0.2083	0.209
Test Code	Volume of Solution μ L	149.8900	149.8900
SPG-01	Specific Gravity	1.3897	1.3944
Matrix	Specific Gravity (Average)	1.3920	
LIQUID			
Sample #			
STD 133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity Average =	1.392	
01:25 AM			

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM	REPLICATE
SAM	Gross Weight (W2)	2.0768	
Work List	Tare Weight (W1)	1.9245	
13137	Weight of Solution (W2-W1)	0.1523	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0161	NA
Matrix			
LIQUID			
Sample #			
S96T005010			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
10/24/96			
Time	Specific Gravity =	1.016	
01:25 AM			

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM-DUP	REPLICATE
SAM-DUP	Gross Weight (W2)	2.0367	
Work List	Tare Weight (W1)	1.8827	
13137	Weight of Solution (W2-W1)	0.154	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0274	NA
Matrix			
LIQUID			
Sample #			
S96T005010			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity =	1.027	
01:25 AM			

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM	REPLICATE
SAM	Gross Weight (W2)	2.0441	
Work List	Tare Weight (W1)	1.8910	
13137	Weight of Solution (W2-W1)	0.1531	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0214	NA
Matrix			
LIQUID			
Sample #			
S96T005011			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
10/24/96			
Time	Specific Gravity =	1.021	
01:25 AM			

Data Entry by:

Date:

10/24/96

Approved by:

Date:

10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM-DUP	REPLICATE
SAM-DUP	Gross Weight (W2)	2.0339	
Work List	Tare Weight (W1)	1.8802	
13137	Weight of Solution (W2-W1)	0.1537	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0254	NA
Matrix			
LIQUID			
Sample #			
S96T005011			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity =	1.025	
01:25 AM			

Data Entry by:

Date:

10/24/96

Approved by:

Date:

10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM	REPLICATE
SAM	Gross Weight (W2)	2.0457	
Work List	Tare Weight (W1)	1.8901	
13137	Weight of Solution (W2-W1)	0.1556	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0381	NA
Matrix			
LIQUID			
Sample #			
S96T006012			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity =	1.038	
01:25 AM			

Data Entry by:

Date:

10/24/96

Approved by:

Date:

10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAM-DUP	REPLICATE
SAM-DUP	Gross Weight (W2)	2.0528	
Work List	Tare Weight (W1)	1.8969	
13137	Weight of Solution (W2-W1)	0.1559	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0401	NA
Matrix			
LIQUID			
Sample #			
S96T005012			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
DPB			
Date	v RESULT v		
10/24/96			
Time	Specific Gravity =	1.040	
01:25 AM			

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 510112L1 Rev. 1.1

Page 1 of 1

LABCORE Data Entry Template for Worklist# 13781

Analyst: DPB Instrument: BA001 Book # 133N/6-4

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: AW-105 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>1.417</u>	<u>N/A</u>	Sp.G.
96001213	AW-105 GRAB	2 SAMPLE	S96T005008 0		SPG-01	LIQUID	<u>N/A</u>	<u>1.019</u>		Sp.G.
96001213	AW-105 GRAB	3 DUP	S96T005008 0		SPG-01	LIQUID	<u>1.019</u>	<u>1.020</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 13781

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.

SPECIFIC GRAVITY: LA-510-112 (C-3)

WORKLIST
#ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

13781

DPB

10/24/96

0515

☐ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # =

STD # = 133N16-A

TARE WEIGHT (g) 1.8419
GROSS WEIGHT (g) 2.0515
VOL. of SOLUTION (mL) .14989

REPLICATE
1.9216
2.1363
.14989

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☒ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # = 896T005008

STD # =

TARE WEIGHT (g) 1.8499
GROSS WEIGHT (g) 2.0027
VOL. of SOLUTION (mL) .14989

REPLICATE
2.0027
1.9939
.14989

DPB 10/24/96
1.8410☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

HNF-SD-WM-DP-214, REV. 0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0515	2.1368
Work List	Tare Weight (W1)	1.8419	1.9216
13781	Weight of Solution (W2-W1)	0.2096	0.2152
Test Code	Volume of Solution μ L	149.8900	149.8900
SPG-01	Specific Gravity	1.3984	1.4357
Matrix	Specific Gravity (Average)	1.4170	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity Average =	1.417	
05:15 AM			

Data Entry by: <i>RG</i>	Date: 10/24/96
Approved by: <i>RW Schmed</i>	Date: 10/24/96

Form 510112L1 Rev. 1.1 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0027	
Work List	Tare Weight (W1)	1.8499	
13781	Weight of Solution (W2-W1)	0.1528	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0194	NA
Matrix			
LIQUID			
Sample #			
S96T005008			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity =	1.019	
05:15 AM			

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9939	
Work List	Tare Weight (W1)	1.8410	
13781	Weight of Solution (W2-W1)	0.1529	0
Test Code	Volume of Solution μ L	149.8900	
SPG-01	Specific Gravity	1.0201	NA
Matrix			
LIQUID			
Sample #			
S96T005008DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DPB	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
10/24/96	v RESULT v		
Time	Specific Gravity =	1.020	
05:15 AM			

Data Entry by:

Date:

10/24/96

Approved by:

Date:

10/25/96

LABCORE Data Entry Template for Worklist# 14354

Analyst: ASB Instrument: BA001 Book # 133 N/6-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: AW-105 SPG-01 *RERUN* SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.39755</u>	<u>1.386</u> ^{SPG}	<u>N/A</u>	Sp.G.
96001213	AW-105 GRAB	2 SAMPLE	S96T005006	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.012</u>		Sp.G.
96001213	AW-105 GRAB	3 DUP	S96T005006	0	SPG-01	LIQUID	<u>1.012</u>	<u>1.010</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 14354

ASB
Analyst Signature Date 10-26-96

Susan Bee
Analyst Signature Date 10/26/96

Reviewed: ASB 10/27/96

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.

SPECIFIC GRAVITY: LA-510-112 (C-3)

WORKLIST
#ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

14354

JBS

10-26-96

☐ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # =

STD # = 133216-A

TARE WEIGHT (g) 1.4653
GROSS WEIGHT (g) 1.6037
VOL. of SOLUTION (mL) 0.10012

REPLICATE
1.3281
1.4672
0.10012

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☒ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # = 5967005006

STD # =

TARE WEIGHT (g) 1.3491
GROSS WEIGHT (g) 1.4504
VOL. of SOLUTION (mL) 0.10012

REPLICATE
1.3519
1.4530
0.10012

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

☐ SAMPLE
☐ STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g) _____
GROSS WEIGHT (g) _____
VOL. of SOLUTION (mL) _____

REPLICATE

HNF-SD-WM-DP-214, REV. 0

273

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type	STD 133N16A	REPLICATE
Gross Weight (W2)	1.6037	1.4672
Tare Weight (W1)	1.4653	1.3281
Weight of Solution (W2-W1)	0.1384	0.1391
Volume of Solution μ L	100.1200	100.1200
Specific Gravity	1.3823	1.3893
Specific Gravity (Average)	1.3858	
LIQUID		
Sample #		
STD		
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution	
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton	
Analyst		
DGG	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$	
Date		
10/26/96	v RESULT v	
Time	Specific Gravity Average = 1.386	
10:00 PM		

Data Entry by:	Date: 10/26/96
Approved by:	Date: 02/12/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4504	
Work List	Tare Weight (W1)	1.3491	
14354	Weight of Solution (W2-W1)	0.1013	0
Test Code	Volume of Solution μ L	100.1200	
SPG-01	Specific Gravity	1.0118	NA
Matrix			
LIQUID			
Sample #			
S96T005006			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DGG	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
10/26/96	Specific Gravity =	1.012	
Time			
10:00 PM			

Data Entry by:	Date: 10/26/96
Approved by:	Date:

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUP	REPLICATE
DUP	Gross Weight (W2)	1.4530	
Work List	Tare Weight (W1)	1.3519	
14354	Weight of Solution (W2-W1)	0.1011	0
Test Code	Volume of Solution μ L	100.1200	
SPG-01	Specific Gravity	1.0098	NA
Matrix			
LIQUID			
Sample #			
S96T005006			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DGG	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
10/26/96	Specific Gravity =	1.010	
Time			
10:00 PM			

Data Entry by:	Date:	10/26/96
Approved by:	Date:	

LABCORE Data Entry Template for Worklist# 13063

Analyst: JLF Instrument: PH01 Book # 18N198

Method: LA-212-106 Rev/Mod B-0

Worklist Comment: AW-105 PH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>7.00</u>	<u>6.99</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	2 SAMPLE	S96T005004	0	PH-01	LIQUID	<u>N/A</u>	<u>13.38</u>		pH
96001213	AW-105 GRAB	3 DUP	S96T005004	0	PH-01	LIQUID		<u>13.39</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	4 SAMPLE	S96T005005	0	PH-01	LIQUID	<u>N/A</u>	<u>13.43</u>		pH
96001213	AW-105 GRAB	5 DUP	S96T005005	0	PH-01	LIQUID		<u>13.44</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	6 SAMPLE	S96T005006	0	PH-01	LIQUID	<u>N/A</u>	<u>13.47</u>		pH
96001213	AW-105 GRAB	7 DUP	S96T005006	0	PH-01	LIQUID		<u>13.48</u>	<u>N/A</u>	pH

Final page for worklist # 13063

Jessi S. Gishy 9/26/96
Analyst Signature Date

Susan Bee 9/28/96
Analyst Signature Date

Validated into Labcore by John M. Cluskey 10/07/96

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# 13204

Analyst: JLF Instrument: PH01 Book # 18N19B

Method: LA-212-106 Rev/Mod B-D

Worklist Comment: AW-105 PH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>7.00</u>	<u>6.99</u>	N/A	pH
96001215	AW-105 GRAB	2 SAMPLE	S96T005010	0	PH-01	LIQUID	N/A	<u>13.41</u>		pH
96001215	AW-105 GRAB	3 DUP	S96T005010	0	PH-01	LIQUID	<u>13.41</u>	<u>13.42</u>	N/A	pH
96001215	AW-105 GRAB	4 SAMPLE	S96T005011	0	PH-01	LIQUID	N/A	<u>13.46</u>		pH
96001215	AW-105 GRAB	5 DUP	S96T005011	0	PH-01	LIQUID	<u>13.46</u>	<u>13.46</u>	N/A	pH
96001215	AW-105 GRAB	6 SAMPLE	S96T005012	0	PH-01	LIQUID	N/A	<u>13.63</u>		pH
96001215	AW-105 GRAB	7 DUP	S96T005012	0	PH-01	LIQUID	<u>13.63</u>	<u>13.64</u>	N/A	pH

Final page for worklist # 13204

Jessie J. Trishy 9/26/96
Analyst Signature Date

James Ben 9/28/96
Analyst Signature Date

verified into labcore by John McCluskey 10/07/96

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 13844

Analyst: ABD Instrument: PH01 Book # 18 W/19-13

Method: LA-212-106 Rev/Mod B-D

Worklist Comment: AW-105 PH DIRECT. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>7.00</u>	<u>7.00</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	2 SAMPLE	S96T005049	0	PH-01	LIQUID	<u>N/A</u>	<u>13.24</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	3 DUP	S96T005049	0	PH-01	LIQUID	<u>13.24</u>	<u>13.26</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	4 SAMPLE	S96T005050	0	PH-01	LIQUID	<u>N/A</u>	<u>13.45</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	5 DUP	S96T005050	0	PH-01	LIQUID	<u>13.45</u>	<u>13.49</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	6 SAMPLE	S96T005051	0	PH-01	LIQUID	<u>N/A</u>	<u>13.48</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	7 DUP	S96T005051	0	PH-01	LIQUID	<u>13.48</u>	<u>13.55</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	8 SAMPLE	S96T005081	0	PH-01	LIQUID	<u>N/A</u>	<u>13.46</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	9 DUP	S96T005081	0	PH-01	LIQUID	<u>13.46</u>	<u>13.48</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	10 SAMPLE	S96T005082	0	PH-01	LIQUID	<u>N/A</u>	<u>13.42</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	11 DUP	S96T005082	0	PH-01	LIQUID	<u>13.42</u>	<u>13.43</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	12 SAMPLE	S96T005083	0	PH-01	LIQUID	<u>N/A</u>	<u>13.34</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	13 DUP	S96T005083	0	PH-01	LIQUID	<u>13.34</u>	<u>13.28</u>	<u>N/A</u>	pH

Final page for worklist # 13844

Analyst Signature [Signature] Date 10/24/96

Analyst Signature [Signature] Date 11-24-96

Approved [Signature] 10/24/96

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# 13854

Analyst: JSB

Instrument: PH01

Book # 18N19-D

Method: LA-212-106 Rev/Mod B-0
105

Worklist Comment: AW-105 PH-02 PER PROCEDURE. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STDPH			PH-01	LIQUID	<u>8.00</u>	<u>7.97</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	2 SAMPLE	S96T005019	0	PH-02	SOLID	<u>N/A</u>	<u>11.66</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	3 DUP	S96T005019	0	PH-02	SOLID	<u>11.66</u>	<u>11.70</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	4 SAMPLE	S96T005020	0	PH-02	SOLID	<u>N/A</u>	<u>12.26</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	5 DUP	S96T005020	0	PH-02	SOLID	<u>12.26</u>	<u>12.25</u>	<u>N/A</u>	pH
96001213	AW-105 GRAB	6 SAMPLE	S96T005021	0	PH-02	SOLID	<u>N/A</u>	<u>12.44</u>	<u>0.01</u>	pH
96001213	AW-105 GRAB	7 DUP	S96T005021	0	PH-02	SOLID	<u>12.44</u>	<u>12.47</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	8 SAMPLE	S96T005075	0	PH-02	SOLID	<u>N/A</u>	<u>12.35</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	9 DUP	S96T005075	0	PH-02	SOLID	<u>12.35</u>	<u>12.33</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	10 SAMPLE	S96T005076	0	PH-02	SOLID	<u>N/A</u>	<u>12.35</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	11 DUP	S96T005076	0	PH-02	SOLID	<u>12.35</u>	<u>12.27</u>	<u>N/A</u>	pH
96001215	AW-105 GRAB	12 SAMPLE	S96T005077	0	PH-02	SOLID	<u>N/A</u>	<u>12.49</u>	<u>0.01</u>	pH
96001215	AW-105 GRAB	13 DUP	S96T005077	0	PH-02	SOLID	<u>12.49</u>	<u>12.48</u>	<u>N/A</u>	pH

Final page for worklist # 13854

JSB
Analyst Signature
10-26-96
Date

Steve Schaefer
Analyst Signature
10-26-96
Date

Approved RW Schaefer
10/29/96

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# 13062

Analyst: Res Instrument: PH01 Book # 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AW-105 OH. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID	<u>1</u>	<u>242</u>	<u>N/A</u>	ug/mL
		2	STD				OH-01	LIQUID	<u>1.66e⁴</u>	<u>1.66e⁴</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	3	SAMPLE	S96T005004	0		OH-01	LIQUID	<u>N/A</u>	<u>3.27e³</u>	<u>6.25e²</u>	ug/mL
96001213	AW-105 GRAB	4	DUP	S96T005004	0		OH-01	LIQUID	<u>3.27e³</u>	<u>3.37e³</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	5	SAMPLE	S96T005005	0		OH-01	LIQUID	<u>N/A</u>	<u>IS</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	6	DUP	S96T005005	0		OH-01	LIQUID	<u>IS</u>	<u>IS</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	7	SAMPLE	S96T005006	0		OH-01	LIQUID	<u>N/A</u>	<u>3.27e³</u>	<u>6.25e²</u>	ug/mL
96001213	AW-105 GRAB	8	DUP	S96T005006	0		OH-01	LIQUID	<u>3.27e³</u>	<u>3.19e³</u>	<u>N/A</u>	ug/mL

Final page for worklist # 13062

Rae Ann Green 9-29-96
Analyst Signature Date

Resight 10/1/96
Analyst Signature Date

Approved RW Schroeder
10/3/96

Data Entry Comments: Sample S96T 5005 - insufficient sample container
found empty.

WORKLIST
#

ANALYST
INITIALS

ANALYSIS
DATE

ANALYSIS
TIME

INSTRUMENT
CODE

13062

R. Green

9-30-96

23:40

☐ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☒ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml

* BaCl2 VOLUME ADDED
* ATTACH PRINT REPORT #2 & #5

.008

☐ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005005 MATRIX =

SAMPLE SIZE (mL)
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED
* ATTACH PRINT REPORT #2 & #5

INSUFFICIENT
SAMPLE
EMPTY

☒ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 79N8

MATRIX =

SAMPLE SIZE (mL) 0.50ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5

.241

☐ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005005 MATRIX =

SAMPLE SIZE (mL)
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED
* ATTACH PRINT REPORT #2 & #5

NO SAMPLE

☒ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T5004

MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml

* BaCl2 VOLUME ADDED
* ATTACH PRINT REPORT #2 & #5

.192

☒ SAMPLE
STANDARD

☐ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005006 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5

.192

☐ SAMPLE
STANDARD

☒ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T5004

MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5

.198

☐ SAMPLE
STANDARD

☒ DUPLICATE
PREP BLANK

☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005006 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H2O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED

* BaCl2 VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5

.187

INF-SD-MM-DP-214, REV. 0

SA6T005006

STD

date 96-09-30 time 22:25
GET pH 12 # 51
Id.#1 00000
Id.#2 .2005
pH(init) 11.64
V/ml pH
EP1 .241 9.75
EP2 .308 7.32
stop volt.reached
=====

date 96-09-30 time 22:25
GET pH 12 # 51
.10ml/div Δ pH=1/div
start V .000 ml

SA6T005004

date 96-09-30 time 22:35
GET pH 12 # 53
Id.#1 5004
Id.#2 .2005
pH(init) 11.54
V/ml pH
EP1 .192 8.41
EP2 .230 5.28
stop volt.reached
=====

date 96-09-30 time 22:38
GET pH 12 # 53
.10ml/div Δ pH=1/div
start V .000 ml

date 96-09-30 time 23:22
GET pH 12 # 58
Id.#1 5006
Id.#2 .2005
pH(init) 11.51
V/ml pH
EP1 .192 9.75
EP2 .225 6.63
stop volt.reached
=====

date 96-09-30 time 23:22
GET pH 12 # 58
.10ml/div Δ pH=1/div
start V .000 ml

Reagent Blank

date 96-09-30 time 22:13
GET pH 12 # 49
Id.#1 00000
Id.#2 .2005
pH(init) 4.24
V/ml pH
EP1 .008 3.73
stop volt.reached
=====

date 96-09-30 time 22:13
GET pH 12 # 49
.10ml/div Δ pH=1/div
start V .000 ml

SA6T005004 Dup

date 96-09-30 time 22:43
GET pH 12 # 54
Id.#1 5004
Id.#2 .2005
pH(init) 11.46
V/ml pH
EP1 .198 7.74
stop volt.reached
=====

date 96-09-30 time 22:49
GET pH 12 # 54
.10ml/div Δ pH=1/div
start V .000 ml

SA6T005006 Dup

date 96-09-30 time 23:27
GET pH 12 # 59
Id.#1 5006
Id.#2 .2005
pH(init) 11.48
V/ml pH
EP1 .187 10.00
EP2 .225 6.81
stop volt.reached
=====

date 96-09-30 time 23:27
GET pH 12 # 59
.10ml/div Δ pH=1/div
start V .000 ml

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		BLANK
Type	Sample Size (mL) SS	3.000
BLANK	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.008
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.35E-04
OH-01	OH in Sample in µg/mL (PPM)	9.09E+00
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
REAGENT BLANK		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time		
10:13 PM	Concentration of OH in Sample (Molarity)	5.35E-04
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by: <i>RC Wright</i>	Date: 10/01/96
Approved by: <i>BW Schwab</i>	Date: 10/3/96
Form 211102_1 Rev. 1.3	Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		STANDARD
Type	Sample Size (mL) SS	0.050
STANDARD	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.241
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	9.66E-01
OH-01	OH in Sample in µg/mL (PPM)	1.64E+04
Matrix		
LIQUID		
Sample #		
79N8		
Instrument Code		
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time	STANDARD	
10:13 PM	Concentration of OH in Sample (Molarity)	9.66E-01
	OH in Sample in µg/mL (PPM)	1.64E+04

Data Entry by: <i>RA Green</i>	Date: 10/01/96
Approved by: <i>RA Green</i>	Date: 10/3/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		SAMPLE
Type	Sample Size (mL) SS	0.200
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.192
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.92E-01
OH-01	OH in Sample in µg/mL (PPM)	3.27E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005004		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time		SAMPLE
10:13 PM	Concentration of OH in Sample (Molarity)	1.92E-01
	OH in Sample in µg/mL (PPM)	3.27E+03

Data Entry by: <i>new light</i>	Date: 10/01/96
Approved by: <i>RW Schmede</i>	Date: 10/3/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		DUPLICATE
Type	Sample Size (mL) SS	0.200
DUPLICATE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.198
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.98E-01
OH-01	OH in Sample in µg/mL (PPM)	3.37E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005004		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time		DUPLICATE
10:13 PM	Concentration of OH in Sample (Molarity)	1.98E-01
	OH in Sample in µg/mL (PPM)	3.37E+03

Data Entry by: <i>newright</i>	Date: 10/01/96
Approved by: <i>RW Schmolze</i>	Date: 10/3/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.200
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.192
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.92E-01
OH-01	OH in Sample in µg/mL (PPM)	3.27E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005006		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time		
10:13 PM		
		SAMPLE
Concentration of OH in Sample (Molarity)		1.92E-01
OH in Sample in µg/mL (PPM)		3.27E+03

Data Entry by: <i>RA GREEN</i>	Date: 10/01/96
Approved by: <i>RW Schneider</i>	Date: 10/3/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUPLICATE
Type	Sample Size (mL) SS	0.200
DUPLICATE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.187
13062	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.87E-01
OH-01	OH in Sample in µg/mL (PPM)	3.19E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005006		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = (mL HNO ₃)*(M HNO ₃)/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
09/30/96		
Time		
10:13 PM	Concentration of OH in Sample (Molarity)	1.87E-01
	OH in Sample in µg/mL (PPM)	3.19E+03

Data Entry by: *reight* Date: 10/01/96
 Approved by: *DW Johnson* Date: 10/3/96
 Form 211102_1 Rev. 1.3 Page 1 of 1

LABCORE Data Entry Template for Worklist# 13203

Analyst: RS Instrument: PH01 Book # 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AW-105 OH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			OH-01	LIQUID	<u>1</u>	<u>< 42</u>	<u>N/A</u>	ug/mL
		2 STD			OH-01	LIQUID	<u>1.66e4</u>	<u>1.66e+04</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	3 SAMPLE	S96T005010	0	OH-01	LIQUID	<u>N/A</u>	<u>2.90e+03</u>	<u>6.25e2</u>	ug/mL
96001215	AW-105 GRAB	4 DUP	S96T005010	0	OH-01	LIQUID	<u>2.90e3</u>	<u>2.95e+03</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	5 SAMPLE	S96T005011	0	OH-01	LIQUID	<u>N/A</u>	<u>3.15e+03</u>		ug/mL
96001215	AW-105 GRAB	6 DUP	S96T005011	0	OH-01	LIQUID	<u>3.15e3</u>	<u>3.37e+03</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	7 SAMPLE	S96T005012	0	OH-01	LIQUID	<u>N/A</u>	<u>5.13e+03</u>		ug/mL
96001215	AW-105 GRAB	8 DUP	S96T005012	0	OH-01	LIQUID	<u>5.13e3</u>	<u>5.18e+03</u>	<u>N/A</u>	ug/mL

Final page for worklist # 13203

RaeAnn Green 10-01-96
Analyst Signature Date

Susan Bee 10/4/96
Analyst Signature Date

Approved RW Schrock
10/7/96

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.

WORKLIST

#

ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

13203

R. Dreen

10-01-96

00:40

☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☒ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .004☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 79N8

MATRIX =

SAMPLE SIZE (mL) 1.050ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 new 10/1/96
244, 244☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005010 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .170☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005010 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 new 10/1/96
167☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005011 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .185☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005011 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .198☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005012 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .301☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = S96T005012 MATRIX =

SAMPLE SIZE (mL) 200ml
VOL. H₂O ADDED for DILUTION (if necessary) 3ml
VOL. DILUTED SAMPLE ANALYZED 1ml* BaCl₂ VOLUME ADDED 1ml
* ATTACH PRINT REPORT #2 & #5 .304
300 ps

OH ANALYSIS

Reagent blank

date 96-09-30 time 23:33
 GET pH 12 # 60
 Id.#1 00000
 Id.#2 2005
 pH(init) 5.94
 V/ml pH
 EP1 .004 4.92
 stop volt.reached
 =====

date 96-09-30 time 23:34
 GET pH 12 # 60
 .10ml/div Δ pH=1/div
 start V .000 ml

Std

date 96-09-30 time 23:39
 GET pH 12 # 61
 Id.#1 00000
 Id.#2 2005
 pH(init) 11.62
 V/ml pH
 EP1 .244 9.73
 EP2 .309 7.00
 stop volt.reached
 =====

date 96-09-30 time 23:39
 GET pH 12 # 61
 .10ml/div Δ pH=1/div
 start V .000 ml

S96T005010

date 96-09-30 time 23:44
 GET pH 12 # 62
 Id.#1 5010
 Id.#2 2005
 pH(init) 11.50
 V/ml pH
 EP1 .170 9.92
 EP2 .210 6.82
 stop volt.reached
 =====

date 96-09-30 time 23:44
 GET pH 12 # 62
 .10ml/div Δ pH=1/div
 start V .000 ml

S96T005010-Dup

date 96-09-30 time 23:48
 GET pH 12 # 63
 Id.#1 5010
 Id.#2 2005
 pH(init) 11.46
 V/ml pH
 EP1 .167 9.94
 EP2 .206 6.79
 stop volt.reached
 =====

date 96-09-30 time 23:48
 GET pH 12 # 63
 .10ml/div Δ pH=1/div
 start V .000 ml

S96T005011

date 96-09-30 time 23:53
 GET pH 12 # 64
 Id.#1 5011
 Id.#2 2005
 pH(init) 11.52
 V/ml pH
 EP1 .185 9.91
 EP2 .220 6.85
 stop volt.reached
 =====

date 96-09-30 time 23:53
 GET pH 12 # 64
 .10ml/div Δ pH=1/div
 start V .000 ml

S96T005011-Dup

date 96-10-01 time 00:13
 GET pH 12 # 68
 Id.#1 5011
 Id.#2 2005
 pH(init) 11.50
 V/ml pH
 EP1 .198 6.98
 stop volt.reached
 =====

date 96-10-01 time 00:19
 GET pH 12 # 68
 .10ml/div Δ pH=1/div
 start V .000 ml

HNF-SD-WM-DP-214, REV. 0
OH ANALYSIS

S96W005012
date 96-10-01 time 00:02
GET pH 12 # 66
Id.#1 5012
Id.#2 .2005
pH(init) 11.75
V/ml pH
EP1 .301 10.09
EP2 .340 8.15
EP3 .364 5.90
stop volt.reached
=====

date 96-10-01 time 00:03
GET pH 12 # 66
.10ml/div Δ pH=1/div
start V .000 ml

S96T005012
date 96-10-01 time 00:32
GET pH 12 # 69
Id.#1 5012
Id.#2 .2005
pH(init) 11.74
V/ml pH
EP1 .304 10.04
EP2 .333 8.04
EP3 .378 6.20
stop volt.reached
=====

date 96-10-01 time 00:32
GET pH 12 # 69
.10ml/div Δ pH=1/div
start V .000 ml

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		BLANK
Type	Sample Size (mL) SS	3.000
BLANK	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.004
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	2.67E-04
OH-01	OH in Sample in µg/mL (PPM)	4.54E+00
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
REAGENT BLANK		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/01/96		
Time		BLANK
11:34 PM	Concentration of OH in Sample (Molarity)	2.67E-04
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by: <i>K. Wright</i>	Date: 10/01/96
Approved by: <i>DW. Schneider</i>	Date: 10/7/96
Form 211102_1 Rev. 1.3	Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

	STANDARD
Type	Sample Size (mL) SS
STANDARD	Concentration of HNO3 (Molarity)
Work List	HNO3 Titrant at OH end-point in mL
13203	Dilution Factor DF
Test Code	Concentration of OH in Sample (Molarity)
OH-01	OH in Sample in µg/mL (PPM)

Matrix	
LIQUID	
Sample #	
79N8	
Instrument Code	
PH01	

Analyst OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor
 RA GREEN

Date OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))
 10/01/96

Time	STANDARD
11:34 PM	Concentration of OH in Sample (Molarity)
	OH in Sample in µg/mL (PPM)

Data Entry by: *newright* Date: 10/01/96
 Approved by: *RW Schmedt* Date: 10/7/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		SAMPLE
Type	Sample Size (mL) SS	0.200
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.170
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.70E-01
OH-01	OH in Sample in µg/mL (PPM)	2.90E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005010		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/01/96		
Time	SAMPLE	
11:34 PM	Concentration of OH in Sample (Molarity)	1.70E-01
	OH in Sample in µg/mL (PPM)	2.90E+03

Data Entry by: <i>RA Green</i>	Date: 10/01/96
Approved by: <i>RW Schneider</i>	Date: 10/7/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUPLICATE
Type	Sample Size (mL) SS	0.200
DUPLICATE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.167
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.67E-01
OH-01	OH in Sample in µg/mL (PPM)	2.85E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005010		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/01/96		
Time		
11:48 PM		
		DUPLICATE
Concentration of OH in Sample (Molarity)		1.67E-01
OH in Sample in µg/mL (PPM)		2.85E+03

Data Entry by: <i>newright</i>	Date: 10/01/96
Approved by: <i>P. J. Schroeder</i>	Date: 10/7/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		SAMPLE
Type	Sample Size (mL) SS	0.200
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.185
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.85E-01
OH-01	OH in Sample in µg/mL (PPM)	3.15E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005011		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
EAG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/04/96		
Time		
Concentration of OH in Sample (Molarity)		1.85E-01
OH in Sample in µg/mL (PPM)		3.15E+03

Data Entry by: <i>Sum Bee</i>	Date: 10/04/96
Approved by: <i>rw schoed</i>	Date: 10/7/96
Form 211102_1 Rev. 1.3	

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		DUPLICATE
Type	Sample Size (mL) SS	0.200
DUPLICATE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.198
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.98E-01
OH-01	OH in Sample in µg/mL (PPM)	3.37E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005011		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
EAG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/04/96		
Time		
		DUPLICATE
Concentration of OH in Sample (Molarity)		1.98E-01
OH in Sample in µg/mL (PPM)		3.37E+03

Data Entry by: Susan Bee	Date: 10/04/96
Approved by: R. W. Schneider	Date: 10/17/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		SAMPLE
Type	Sample Size (mL) SS	0.200
SAMPLE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.301
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	3.02E-01
OH-01	OH in Sample in µg/mL (PPM)	5.13E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005012		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/01/96		
Time		SAMPLE
11:48 PM	Concentration of OH in Sample (Molarity)	3.02E-01
	OH in Sample in µg/mL (PPM)	5.13E+03

Data Entry by: *newright* Date: 10/01/96
 Approved by: *Rw Johnson* Date: 10/7/96
 Form 211102_1 Rev. 1.3 Page 4 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		DUPLICATE
Type	Sample Size (mL) SS	0.200
DUPLICATE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.304
13203	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	3.05E-01
OH-01	OH in Sample in µg/mL (PPM)	5.18E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005012		
Instrument Code	Detection Limit (µg/mL)	6.25E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA GREEN		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/01/96		
Time	DUPLICATE	
11:48 PM	Concentration of OH in Sample (Molarity)	3.05E-01
	OH in Sample in µg/mL (PPM)	5.18E+03

Data Entry by: <i>R. Edwards</i>	Date: 10/01/96
Approved by: <i>R. Edwards</i>	Date: 10/9/96

LABCORE Data Entry Template for Worklist# 13842

Analyst: ABQ Instrument: PH01 Book # 79W8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AW-105 OH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			OH-01	LIQUID	<u>1.64⁵⁰⁴</u>	<u>1.77⁵⁰⁴</u>	<u>N/A</u>	ug/mL
		2 BLNK			OH-01	LIQUID	<u>1</u>	<u>42</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	3 SAMPLE	S96T005049	0	OH-01	LIQUID	<u>N/A</u>	<u>5.41⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001213	AW-105 GRAB	4 DUP	S96T005049	0	OH-01	LIQUID	<u>5.41⁵⁰³</u>	<u>5.48⁵⁰³</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	5 SAMPLE	S96T005050	0	OH-01	LIQUID	<u>N/A</u>	<u>8.64⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001213	AW-105 GRAB	6 DUP	S96T005050	0	OH-01	LIQUID	<u>8.64⁵⁰³</u>	<u>8.53⁵⁰³</u>	<u>N/A</u>	ug/mL
96001213	AW-105 GRAB	7 SAMPLE	S96T005051	0	OH-01	LIQUID	<u>N/A</u>	<u>9.41⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001213	AW-105 GRAB	8 DUP	S96T005051	0	OH-01	LIQUID	<u>9.41⁵⁰³</u>	<u>9.50⁵⁰³</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	9 SAMPLE	S96T005081	0	OH-01	LIQUID	<u>N/A</u>	<u>7.62⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001215	AW-105 GRAB	10 DUP	S96T005081	0	OH-01	LIQUID	<u>7.62⁵⁰³</u>	<u>7.44⁵⁰³</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	11 SAMPLE	S96T005082	0	OH-01	LIQUID	<u>N/A</u>	<u>9.04⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001215	AW-105 GRAB	12 DUP	S96T005082	0	OH-01	LIQUID	<u>9.04⁵⁰³</u>	<u>9.39⁵⁰³</u>	<u>N/A</u>	ug/mL
96001215	AW-105 GRAB	13 SAMPLE	S96T005083	0	OH-01	LIQUID	<u>N/A</u>	<u>8.66⁵⁰³</u>	<u>5.00⁵⁰²</u>	ug/mL
96001215	AW-105 GRAB	14 DUP	S96T005083	0	OH-01	LIQUID	<u>8.66⁵⁰³</u>	<u>9.07⁵⁰³</u>	<u>N/A</u>	ug/mL

Final page for worklist # 13842

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.

WORKLIST
#

OH (AUTO): LA-211-102 (C-0)

ANALYST
INITIALS

ANALYSIS
DATE

ANALYSIS
TIME

INSTRUMENT
CODE

13842

☐ SAMPLE STANDARD ☐ DUPLICATE PREP BLANK ☒ SPIKE REAGENT BLANK

SAMPLE/STD # = Blank MATRIX =

SAMPLE SIZE (mL) _____
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE STANDARD ☐ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T005050 MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE STANDARD ☐ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 79N9 MATRIX =

SAMPLE SIZE (mL) .050m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE STANDARD ☒ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T005050 Dup MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE STANDARD ☐ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T006049 MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE STANDARD ☐ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T005051 MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE STANDARD ☒ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T006049 Dup MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED
* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE STANDARD ☒ DUPLICATE PREP BLANK ☐ SPIKE REAGENT BLANK

SAMPLE/STD # = 596T005051 Dup MATRIX =

SAMPLE SIZE (mL) .250m
VOL. H₂O ADDED for DILUTION (if necessary) _____
VOL. DILUTED SAMPLE ANALYZED _____

* BaCl₂ VOLUME ADDED 1m
* ATTACH PRINT REPORT #2 & #5

HNF-SD-WM-DP-214, REV. 0

WORKLIST

#

ANALYST

INITIALS

ANALYSIS

DATE

ANALYSIS

TIME

INSTRUMENT

CODE

13842

JBLQ

10/24/96

01:30

☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005081 MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005083 MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005081 Dup MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005083 Dup MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005082 MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 596T005082 Dup MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = MATRIX =

SAMPLE SIZE (mL) .250ml
VOL. H2O ADDED for DILUTION (if necessary)
VOL. DILUTED SAMPLE ANALYZED* BaCl2 VOLUME ADDED 1ml/
* ATTACH PRINT REPORT #2 & #5

OH ANALYSIS

calibration data
 date 96-10-23
 PH(S) 1 7.00
 PH(S) 2 10.00
 t.cal. 23.0 °C
 slope (cell) .993
 U(as) -13.2 mV
 electr. input 1
 =====

BIK
 date 96-10-23 time 21:11
 GET pH 12 # 121
 Id.#1 0479
 Id.#2 .2005
 pH(init) 7.12
 V/ml pH
 EP1 .008 5.28
 stop volt. reached
 =====

date 96-10-23 time 21:22
 GET pH 12 # 122
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.52
 V/ml pH
 EP1 *STD* .260 9.71
 EP2 .335 6.99
 EP3 .471 3.76
 EP4 .520 3.09
 stop volt. reached
 =====

5967005049
 date 96-10-23 time 21:50
 GET pH 12 # 123
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.74
 V/ml pH
 EP1 .397 10.09
 EP2 .433 8.89
 EP3 .461 7.76
 EP4 .485 5.92
 stop volt. reached
 =====

5967005049
 date 96-10-23 time 21:55
 GET pH 12 # 123
 .10ml/div dPH=1/div
 start V .000 ml

5967005049 Dup
 date 96-10-23 time 22:04
 GET pH 12 # 124
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.63
 V/ml pH
 EP1 .402 9.92
 EP2 .430 8.92
 EP3 .463 6.96
 stop volt. reached
 =====

date 96-10-23 time 22:06
 GET pH 12 # 124
 .10ml/div dPH=1/div
 start V .000 ml

HNF-SD-WM-DP-214, REV. 0
OH ANALYSIS

596T005050

date 96-10-23 time 22:17
GET pH 12 # 125
Id.#1 0479
Id.#2 .2005
pH(init) 11.83

V/ml pH
EP1 .634 10.42
EP2 .855 7.75
stop V reached
=====

Sample size 250ml

date 96-10-23 time 22:22
GET pH 12 # 125
.10ml/div dPH=1/div
start V .000 ml

596T005050 Dup

date 96-10-23 time 22:32
GET pH 12 # 126
Id.#1 0479
Id.#2 .2005
pH(init) 11.87

V/ml pH
EP1 .626 10.45
EP2 .841 7.96
stop V reached
=====

596T005051

date 96-10-23 time 22:44
GET pH 12 # 127
Id.#1 0479
Id.#2 .2005
pH(init) 11.87

V/ml pH
EP1 .690 10.56
EP2 .939 8.12
stop V reached
=====

Sample size 250ml

date 96-10-23 time 22:48
GET pH 12 # 127
.10ml/div dPH=1/div
start V .000 ml

596T005051 Dup

date 96-10-23 time 22:57
GET pH 12 # 128
Id.#1 0479
Id.#2 .2005
pH(init) 11.92

V/ml pH
EP1 .697 10.57
EP2 .946 8.25
stop V reached
=====

Sample size 250ml

date 96-10-23 time 22:58
GET pH 12 # 128
.10ml/div dPH=1/div
start V .000 ml

OH ANALYSIS

596T005081

date 96-10-23 time 23:09
 GET pH 12 # 129
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.82
 V/ml pH
 EP1 .559 10.44
 EP2 .725 8.40
 EP3 .835 6.49
 stop V reached
 =====

596T005081 Dup

date 96-10-23 time 23:21
 GET pH 12 # 130
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.70
 V/ml pH
 EP1 .546 10.44
 EP2 .711 8.58
 EP3 .804 6.99
 EP4 .825 6.53
 stop V reached
 =====

596T005082

date 96-10-23 time 23:31
 GET pH 12 # 131
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.81
 V/ml pH
 EP1 .663 10.79
 EP2 .911 9.10
 stop V reached
 =====

Sample size .250ml

date 96-10-23 time 23:10
 GET pH 12 # 129
 .10ml/div Δ pH=1/div
 start V .000 ml

date 96-10-23 time 23:22
 GET pH 12 # 130
 .10ml/div Δ pH=1/div
 start V .000 ml

Sample size .250ml

date 96-10-23 time 23:31
 GET pH 12 # 131
 .10ml/div Δ pH=1/div
 start V .000 ml

OH ANALYSIS

596T 005082 Dyp

date 96-10-23 time 23:40
 GET pH 12 # 132
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.82
 V/ml pH
 EP1 .689 10.85
 EP2 .963 9.21
 stop V reached
 =====

sample size .250ml

date 96-10-23 time 23:41
 GET pH 12 # 132
 .10ml/div Δ pH=1/div
 start V .000 ml

596T 005083

date 96-10-23 time 23:48
 GET pH 12 # 133
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.74
 V/ml pH
 EP1 .635 10.92
 EP2 .868 9.59
 stop V reached
 =====

Sample size .250ml

date 96-10-23 time 23:49
 GET pH 12 # 133
 .10ml/div Δ pH=1/div
 start V .000 ml

596T 005083 Dyp

date 96-10-23 time 23:57
 GET pH 12 # 134
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.69
 V/ml pH
 EP1 .665 10.96
 EP2 .895 10.03
 stop V reached
 =====

date 96-10-24 time 01:31
 GET pH 12 # 134
 .10ml/div Δ pH=1/div
 start V .000 ml

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		STANDARD
Type	Sample Size (mL) SS	0.050
STANDARD	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.260
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.04E+00
OH-01	OH in Sample in µg/mL (PPM)	1.77E+04
Matrix		
LIQUID		
Sample #		
79N8		
Instrument Code		
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
		STANDARD
Concentration of OH in Sample (Molarity)		1.04E+00
OH in Sample in µg/mL (PPM)		1.77E+04

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 211102_1 Rev. 1.3

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		BLANK
Type	Sample Size (mL) SS	3.0 - 0.250
BLANK	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.008
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	6.42E-03
OH-01	OH in Sample in µg/mL (PPM)	1.09E+02
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
BLANK		
Instrument Code	Detection Limit (µg/mL)	42 - 5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
	Concentration of OH in Sample (Molarity)	6.42E-03
	OH in Sample in µg/mL (PPM)	<42 - 500
	The Result is < Detection Limit	

Data Entry by:	RCT	Date:	10/24/96
Approved by:	RW Schindler	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.397
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	3.18E-01
OH-01	OH in Sample in µg/mL (PPM)	5.41E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005049		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
		SAMPLE
Concentration of OH in Sample (Molarity)		3.18E-01
OH in Sample in µg/mL (PPM)		5.41E+03

Data Entry by:	RCS	Date:	10/24/96
Approved by:	RW Schmitt	Date:	10/24/96
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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.402
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	3.22E-01
OH-01	OH in Sample in µg/mL (PPM)	5.48E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005049DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	3.22E-01
	OH in Sample in µg/mL (PPM)	5.48E+03

Data Entry by:	RCJ	Date:	10/24/96
Approved by:	RW Schmeda	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.634
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.08E-01
OH-01	OH in Sample in µg/mL (PPM)	8.64E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T006050		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
		SAMPLE
Concentration of OH in Sample (Molarity)		5.08E-01
OH in Sample in µg/mL (PPM)		8.64E+03

Data Entry by:	<i>RCT</i>	Date:	10/24/96
Approved by:	<i>R. J. Johnson</i>	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.626
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.02E-01
OH-01	OH in Sample in µg/mL (PPM)	8.53E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005050DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	5.02E-01
	OH in Sample in µg/mL (PPM)	8.53E+03

Data Entry by:

Date: 10/24/96

Approved by:

Date: 10/24/96

Form 211102_1 Rev. 1.3

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Worklist	HNO3 Titrant at OH end-point in mL	0.690
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.53E-01
OH-01	OH in Sample in µg/mL (PPM)	9.41E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005051		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time	SAMPLE	
09:11 PM	Concentration of OH in Sample (Molarity)	5.53E-01
	OH in Sample in µg/mL (PPM)	9.41E+03

Data Entry by:	RCS	Date:	10/24/96
Approved by:	Rw Schmepp	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.697
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.59E-01
OH-01	OH in Sample in µg/mL (PPM)	9.50E+03

Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005051DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	5.59E-01
	OH in Sample in µg/mL (PPM)	9.50E+03

Data Entry by:	RCS	Date:	10/24/96
Approved by:	245 [Signature]	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.559
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	4.48E-01
OH-01	OH in Sample in µg/mL (PPM)	7.62E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005081		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
		SAMPLE
Concentration of OH in Sample (Molarity)		4.48E-01
OH in Sample in µg/mL (PPM)		7.62E+03

Data Entry by:	RCJ	Date:	10/24/96
Approved by:	RW Schreder	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.546
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	4.38E-01
OH-01	OH in Sample in µg/mL (PPM)	7.44E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005081DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		
09:11 PM		
		SAMPLE
Concentration of OH in Sample (Molarity)		4.38E-01
OH in Sample in µg/mL (PPM)		7.44E+03

Data Entry by:	RCT	Date:	10/24/96
Approved by:	RW Schmidt	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.663
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.32E-01
OH-01	OH in Sample in µg/mL (PPM)	9.04E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005082		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	5.32E-01
	OH in Sample in µg/mL (PPM)	9.04E+03

Data Entry by:	<i>RCT</i>	Date:	10/24/96
Approved by:	<i>Rw. Schneider</i>	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.689
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.53E-01
OH-01	OH in Sample in µg/mL (PPM)	9.39E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005082DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	5.53E-01
	OH in Sample in µg/mL (PPM)	9.39E+03

Data Entry by:	1285	Date:	10/24/96
Approved by:	<i>Paul Schneider</i>	Date:	10/24/96
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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.635
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.09E-01
OH-01	OH in Sample in µg/mL (PPM)	8.66E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005083		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time		SAMPLE
09:11 PM	Concentration of OH in Sample (Molarity)	5.09E-01
	OH in Sample in µg/mL (PPM)	8.66E+03

Data Entry by:	RCJ	Date:	10/24/96
Approved by:	RW Johnson	Date:	10/24/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.250
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.665
13842	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	5.33E-01
OH-01	OH in Sample in µg/mL (PPM)	9.07E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005083DUP		
Instrument Code	Detection Limit (µg/mL)	5.00E+02
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
KRQ		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
10/24/96		
Time	SAMPLE	
09:11 PM	Concentration of OH in Sample (Molarity)	5.33E-01
	OH in Sample in µg/mL (PPM)	9.07E+03

Data Entry by:	<i>ES</i>	Date:	10/24/96
Approved by:	<i>RW Schroeder</i>	Date:	10/24/96
Form 211102_1 Rev. 1.3		Page 1 of 1	

LABCORE Completed Worklist Report for Worklist# 14364

Analyst: rdm

Instrument: PH01

Book# 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: OH-01 FOR AW-105 S2 Drct RAD. TEST

RTS!

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK	0		OH-01	LIQUID	1	<43		ug/mL
2	STD	0		OH-01	LIQUID	1.664e4	1.59e4	95.553 %	Recovery
3	SAMPLE	S96T005008	0	OH-01	LIQUID	N/A	3.68e3	125.000	ug/mL
4	DUP	S96T005008	0	OH-01	LIQUID	3.68e3	3.89e3	5.548	RPD

Final page for worklist# 14364

See attached

Analyst Signature Date

See attached

Analyst Signature Date

JMM for RWS

Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 14364

Analyst: ROM

Instrument: PH01

Book # 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: OH-01 FOR AW-105 S2 Dct RAD. TEST

RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			OH-01	LIQUID	<u>1.66^{E4}</u>	<u>1.59^{E4}</u>	N/A	ug/mL
96001213	AW-105 GRAB	2 SAMPLE	S96T005008	0	OH-01	LIQUID	<u>N/A</u>	<u>3.68^{E3}</u>	<u>1.25^{E3}</u>	ug/mL
96001213	AW-105 GRAB	3 DUP	S96T005008	0	OH-01	LIQUID	<u>3.68^{E3}</u>	<u>3.89^{E3}</u>	N/A	ug/mL

Final page for worklist # 14364

Analyst Signature ROM Date 11/5/96

Analyst Signature [Signature] Date 11/5/96

Approved R. Schwedh
11/5/96

Data Entry Comments:

-2005 M HNO₃

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.

WORKLIST

#

14364

OH (AUTO): LA-211-102 (C-0)

ANALYST
INITIALS

RDM

ANALYSIS
DATE

7/15/96

ANALYSIS
TIME

0049

INSTRUMENT
CODE☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☒ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL)

.050

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED (m)

* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 7918

MATRIX =

SAMPLE SIZE (mL)

.050

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED (m)

* ATTACH PRINT REPORT #2 & #5

☒ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 546005008

MATRIX =

SAMPLE SIZE (mL)

.100

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED

* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE
STANDARD☒ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # = 546005008

MATRIX =

SAMPLE SIZE (mL)

.100

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED (m)

* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL)

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED

* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL)

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED

* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL)

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED

* ATTACH PRINT REPORT #2 & #5

☐ SAMPLE
STANDARD☐ DUPLICATE
PREP BLANK☐ SPIKE
REAGENT BLANK

SAMPLE/STD # =

MATRIX =

SAMPLE SIZE (mL)

VOL. H₂O ADDED for DILUTION (if necessary)

VOL. DILUTED SAMPLE ANALYZED

* BaCl₂ VOLUME ADDED

* ATTACH PRINT REPORT #2 & #5

HNF-SD-WM-DP-214, REV. 0

date 96-11-04 time 23:45
 GET pH 12 # 166
 Id.#1 0479
 Id.#2 .2005
 pH(init) 11.72
 V/ml pH
 EP1 .233 9.84
 EP2 .300 6.76
 EP3 .404 3.48
 stop volt.reached
 =====

date 96-11-04 time 23:56
 GET pH 12 # 166
 .10ml/div Δ pH=1/div
 start V .000 ml

date 96-11-04 time 23:36
 GET pH 12 # 165
 Id.#1 0479
 Id.#2 .2005 BLK
 pH(init) 4.95
 V/ml pH
 EP1 .004 4.42
 stop volt.reached
 =====

date 96-11-04 time 23:36
 GET pH 12 # 165
 .10ml/div Δ pH=1/div
 start V .000 ml

date 96-11-05 time 00:29
 GET pH 12 # 167
 Id.#1 0479
 Id.#2 .2005 5008
 pH(init) 11.30
 V/ml pH
 EP1 .108 7.70
 stop volt.reached
 =====

date 96-11-05 time 00:33
 GET pH 12 # 167
 .10ml/div Δ pH=1/div
 start V .000 ml

date 96-11-05 time 00:33
 GET pH 12 # 168
 Id.#1 0479
 Id.#2 .2005 5008
 pH(init) 11.32
 V/ml pH
 EP1 .114 6.97
 stop volt.reached
 =====

date 96-11-05 time 00:49
 GET pH 12 # 168
 .10ml/div Δ pH=1/div
 start V .000 ml

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		STANDARD
Type	Sample Size (mL) SS	0.050
STANDARD	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.233
14364	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	9.34E-01
OH-01	OH in Sample in µg/mL (PPM)	1.59E+04

Matrix		
LIQUID		
Sample #		
STD		
Instrument Code		
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RDM		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/05/96		
Time		
12:49 AM	Concentration of OH in Sample (Molarity)	9.34E-01
	OH in Sample in µg/mL (PPM)	1.59E+04

Data Entry by: <i>[Signature]</i>	Date: 11/05/96
Approved by: <i>[Signature]</i>	Date: 11/5/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		BLANK
Type	Sample Size (mL) SS	3 0.050
BLANK	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.004
14364	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.60E-02
OH-01	OH in Sample in µg/mL (PPM)	2.73E+02

RWS
11/5/96

Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
BLANK		
Instrument Code	Detection Limit (µg/mL)	43 2.50E+03
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RDM		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/05/96		
Time		BLANK
12:49 AM	Concentration of OH in Sample (Molarity)	1.60E-02
	OH in Sample in µg/mL (PPM)	<43 <2500

RWS
11/5/96RWS
11/5/96

The Result is < Detection Limit

Data Entry by: <i>[Signature]</i>	Date: 11/05/96
Approved by: <i>[Signature]</i>	Date: 11/5/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.100
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.108
14364	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	2.17E-01
OH-01	OH in Sample in µg/mL (PPM)	3.68E+03
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005008		
Instrument Code	Detection Limit (µg/mL)	1.25E+03
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RDM		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/05/96		
Time		
12:49 AM		
		SAMPLE
Concentration of OH in Sample (Molarity)		2.17E-01
OH in Sample in µg/mL (PPM)		3.68E+03

Data Entry by:

Date: 11/05/96

Approved by:

Date: 11/5/96

Form 211102_1 Rev. 1.3

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUPLICATE
Type	Sample Size (mL) SS	0.100
DUPLICATE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.114
14364	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	2.29E-01
OH-01	OH in Sample in µg/mL (PPM)	3.89E+03

Matrix

LIQUID

Sample #

Detection Limit = 125µg / SS * DF

S96T005008

Instrument Code

Detection Limit (µg/mL)

1.25E+03

PH01

Analyst

OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor

RDM

Date

OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))

11/05/96

Time

DUPLICATE

12:49 AM

Concentration of OH in Sample (Molarity)

2.29E-01

OH in Sample in µg/mL (PPM)

3.89E+03

Data Entry by:

Date: 11/05/96

Approved by:

Date: 11/5/96

Form 211102_1 Rev. 1.3

Page 1 of 1

LABCORE Data Entry Template for Worklist# 14789

Analyst: RAW Instrument: PH01 WC 06695 Book # 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AW-105 OH. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			OH-01	SOLID	<u>1</u>	<u>242</u>	<u>N/A</u>	ug/g
		2 STD			OH-01	SOLID	<u>1.664⁵⁰⁴</u>	<u>1.62⁵⁰⁴</u>	<u>N/A</u>	ug/g
96001213	AW-105 GRAB	3 SAMPLE	S96T005055	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001213	AW-105 GRAB	4 DUP	S96T005055	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g
96001213	AW-105 GRAB	5 SAMPLE	S96T005056	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001213	AW-105 GRAB	6 DUP	S96T005056	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g
96001213	AW-105 GRAB	7 SAMPLE	S96T005057	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001213	AW-105 GRAB	8 DUP	S96T005057	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g
96001215	AW-105 GRAB	9 SAMPLE	S96T005087	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001215	AW-105 GRAB	10 DUP	S96T005087	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g
96001215	AW-105 GRAB	11 SAMPLE	S96T005088	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001215	AW-105 GRAB	12 DUP	S96T005088	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g
96001215	AW-105 GRAB	13 SAMPLE	S96T005089	0 W	OH-01	SOLID	<u>N/A</u>	<u>242</u>	<u>42</u>	ug/g
96001215	AW-105 GRAB	14 DUP	S96T005089	0 W	OH-01	SOLID	<u>242</u>	<u>242</u>	<u>N/A</u>	ug/g

Final page for worklist # 14789

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

3 ml - 1 ml
SAM BAC

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.

OH ANALYSIS

calibration data
 date 96-11-11
 pH(S) 1 7.00
 pH(S) 2 10.00
 t.cal: 23.0 °C
 slope(rel) 1.000
 U(as) -9.6 mV
 electr. input 1
 =====

date 96-11-11 time 09:43
 GET pH 12 # 190
 Id.#1 0
 Id.#2 .2005
 pH(init) 8.42
 V/ml pH
 EP1 .008 6.50
 manual stop
 =====

date 96-11-11 time 09:43
 GET pH 12 # 190
 .10ml/div dPH=1/div
 start V .000 ml

date 96-11-11 time 10:08
 GET pH 12 # 192
 Id.#1 0
 Id.#2 .2005
 pH(init) 11.71
 V/ml pH
 EP1 .237 9.81
 EP2 .304 7.14
 stop volt.reached
 =====

date 96-11-11 time 10:14
 GET pH 12 # 192
 .10ml/div dPH=1/div
 start V .000 ml

date 96-11-11 time 10:17
 GET pH 12 # 193
 Id.#1 000
 Id.#2 .2005
 pH(init) 5.04
 V/ml pH
 EP1 .006 4.32
 stop volt.reached
 =====

date 96-11-11 time 10:17
 GET pH 12 # 193
 .10ml/div dPH=1/div
 start V .000 ml

date 96-11-11 time 10:19
 GET pH 12 # 194
 Id.#1 505
 Id.#2 2005
 pH(init) 8.7
 V/ml pH
 EP1 .01 9.97
 manual stop
 =====

Id.#1 5055
 pH 10.74
 pH 9.71

Id.#1 5056
 pH 11.51
 pH 10.80

date 96-11-11 time 10:30
 GET pH 12 # 195
 Id.#1 5056
 Id.#2 2005
 pH(init) 10.71
 V/ml pH
 EP1 .040 9.71
 manual stop
 =====

date 96-11-11 time 10:34
 GET pH 12 # 196
 Id.#1 5056
 Id.#2 2005
 pH(init) 10.71
 V/ml pH
 EP1 .033 8.90
 stop volt.reached
 =====

PREP BLK

ROE
 2/11/97

ROE
 2/11/97

date 96-11-11 time 10:41
GET pH 12 # 196
.10ml/div Δ pH=1/div
start V .000 ml

Id.#1 5057

pH 11.35
pH 10.76

date 96-11-11 time 10:48
GET pH 12 # 197
Id.#1 5057
Id.#2 .2005
pH(init) 10.78

V/ml pH
EP1 .039 8.93
stop volt.reached
=====

date 96-11-11 time 10:48
GET pH 12 # 197
.10ml/div Δ pH=1/div
start V .000 ml

Id.#1 5087

pH 11.23
pH 10.46

date 96-11-11 time 10:51
GET pH 12 # 198
Id.#1 5087
Id.#2 .2005
pH(init) 10.48
V/ml pH
EP1 .023 8.95
stop volt.reached
=====

date 96-11-11 time 10:51
GET pH 12 # 198
.10ml/div Δ pH=1/div
start V .000 ml

Id.#1 5088

pH 11.24
pH 10.55

date 96-11-11 time 10:57
GET pH 12 # 199
Id.#1 5088
Id.#2 .2005
pH(init) 10.59
V/ml pH
EP1 .021 9.70
EP2 .043 8.06
stop volt.reached
=====

date 96-11-11 time 10:58
GET pH 12 # 199
.10ml/div Δ pH=1/div
start V .000 ml

Id.#1 5089

pH 10.92
pH 10.12

date 96-11-11 time 11:05
GET pH 12 # 200
Id.#1 5089
Id.#2 .2005
pH(init) 10.12

V/ml pH
EP1 .026 8.01
stop volt.reached
=====

date 96-11-11 time 11:05
GET pH 12 # 200
.10ml/div Δ pH=1/div
start V .000 ml

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

OH (AUTO) : LA-211-102 (C-0)		BLANK
Type	Sample Size (mL) SS	3.000
BLANK	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
BLANK PREP		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		BLANK
09:43 AM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by: <i>PSJ</i>	Date: 11/11/96
Approved by: <i>raw Schmitt</i>	Date: 11/13/96
Form 211102_1 Rev. 1.3	

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		STANDARD
Type	Sample Size (mL) SS	0.050
STANDARD	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.237
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	9.50E-01
OH-01	OH in Sample in µg/mL (PPM)	1.62E+04
Matrix		
LIQUID		
Sample #		
79N8		
Instrument Code		
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
		STANDARD
Concentration of OH in Sample (Molarity)		9.50E-01
OH in Sample in µg/mL (PPM)		1.62E+04

Data Entry by: <i>EG</i>	Date: 11/11/96
Approved by: <i>REW, Schweden</i>	Date: 11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Worklist	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00

Matrix

SOLID

Sample #

Detection Limit = $125\mu\text{g} / \text{SS} * \text{DF}$

S96T006055

Instrument Code

Detection Limit (µg/mL)

4.17E+01

PH01

Analyst

OH Molarity = $((\text{mL HNO}_3) * (\text{M HNO}_3)) / \text{Sample Size in mL} * \text{Dilution Factor}$

RAW

Date

OH in µg/mL = $(\text{OH MOLARITY}) * (17.0\text{g/mole}) * ((1000000\mu\text{g/g}) / (1000\text{mL/L}))$

11/11/96

Time

SAMPLE

09:43 AM

Concentration of OH in Sample (Molarity)

0.00E+00

OH in Sample in µg/mL (PPM)

<42

The Result is < Detection Limit

Data Entry by:

Date: 11/11/96

Approved by:

Date: 11/13/96

Form 211102_1 Rev. 1.3

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO3 (Molarity)	0.2005
WorkList	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005055		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	<i>[Signature]</i>	Date:	11/11/96
Approved by:	<i>[Signature]</i>	Date:	11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005056		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by: <i>EG</i>	Date: 11/11/96
Approved by: <i>DW Schmidt</i>	Date: 11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00

Matrix

SOLID

Sample

S96T005056

Instrument Code

PH01

Analyst

RAW

Date

11/11/96

Time

09:43 AM

Detection Limit = 125µg / SS * DF

Detection Limit (µg/mL)

4.17E+01

OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor

OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))

Concentration of OH in Sample (Molarity)

0.00E+00

OH in Sample in µg/mL (PPM)

<42

The Result is < Detection Limit

Data Entry by:	<i>Ruf</i>	Date:	11/11/96
Approved by:	<i>RW Schneider</i>	Date:	11/15/96
Form 211102_1 Rev. 1.3		Page 1 of 1	

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00

Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005057		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42
The Result is < Detection Limit		

Data Entry by: <i>rew</i>	Date: 11/11/96
Approved by: <i>rew Schreder</i>	Date: 11/13/96
Form 211102_1 Rev. 1.3	Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00

Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005057		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		DUP
09:43 AM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	<i>RS</i>	Date:	11/11/96
Approved by:	<i>RAW Schroeder</i>	Date:	11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

	SAMPLE
Type	Sample Size (mL) SS
SAMPLE	Concentration of HNO3 (Molarity)
Work List	HNO3 Titrant at OH end-point in mL
14789	Dilution Factor DF
Test Code	Concentration of OH in Sample (Molarity)
OH-01	OH in Sample in µg/mL (PPM)

Matrix	
SOLID	

Sample #	Detection Limit = 125µg / SS * DF
S96T005087	
Instrument Code	Detection Limit (µg/mL)
PH01	4.17E+01

Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor
RAW	
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))
11/11/96	

Time	SAMPLE
09:43 AM	Concentration of OH in Sample (Molarity)
	OH in Sample in µg/mL (PPM)

The Result is < Detection Limit

Data Entry by:	Date: 11/11/96
Approved by:	Date: 11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO ₃ (Molarity)	0.2005
Work List	HNO ₃ Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005087		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	Date:	11/11/96
Approved by:	Date:	11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	3.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005088		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
Concentration of OH in Sample (Molarity)		0.00E+00
OH in Sample in µg/mL (PPM)		<42

The Result is < Detection Limit

Data Entry by:	<i>RG</i>	Date:	11/11/96
Approved by:	<i>aw2chneider</i>	Date:	11/13/96
Form 211102_1 Rev. 1.3		Page 1 of 1	

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005088		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
		DUP
Concentration of OH in Sample (Molarity)		0.00E+00
OH in Sample in µg/mL (PPM)		<42

The Result is < Detection Limit

Data Entry by: <i>RS</i>	Date: 11/11/96
Approved by: <i>Raw Schroeder</i>	Date: 11/13/96
Form 211102_1 Rev. 1.3	Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type:	Sample Size (mL) SS	3.000
SAMPLE	Concentration of HNO ₃ (Molarity)	0.2005
Work List:	HNO ₃ Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code:	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix:		
SOLID		
Sample #:	Detection Limit = 125µg / SS * DF	
S96T005089		
Instrument Code:	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst:	OH Molarity = ((mL HNO ₃)*(M HNO ₃))/Sample Size in mL*Dilution Factor	
RAW		
Date:	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time:		SAMPLE
09:43 AM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	Date:	11/11/96
Approved by:	Date:	11/13/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

OH (AUTO) : LA-211-102 (C-0)

		DUP
Type	Sample Size (mL) SS	3.000
DUP	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
14789	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH-01	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
SOLID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T005089		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH01		
Analyst	OH Molarity = ((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAW		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
11/11/96		
Time		
09:43 AM		
Concentration of OH in Sample (Molarity)		0.00E+00
OH in Sample in µg/mL (PPM)		<42

The Result is < Detection Limit

Data Entry by:	Date:	11/11/96
Approved by:	Date:	11/13/96
Form 211102_1 Rev. 1.3		

LABCORE Completed Worklist Report for Worklist# 13066

Analyst: pjm

Instrument: IC02

Book# 14/20B

Method: 14-533-105 Rev/Mod D-1

Worklist Comment: AW-105 IC. RCJ

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	01C-QC	F	QC	1	<1.30e-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	<1.07e-1	ug/mL
1 CCB	0	0	01C-QC	BR	QC	1	<1.26e-1	ug/mL
1 CCB	0	0	01C-QC	NO3	QC	1	<1.40e-1	ug/mL
1 CCB	0	0	01C-QC	PO4	QC	1	<1.19e-1	ug/mL
1 CCB	0	0	01C-QC	S04	QC	1	<1.36e-1	ug/mL
1 CCB	0	0	01C-QC	OXALATEZ	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	01C-QC	F	QC	5.90e01	6.13e+01	103.898 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	8.20e+01	103.797 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.43e02	5.45e+02	100.368 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	6.17e+02	104.754 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	6.19e+02	104.209 % Recovery
2 CCV	0	0	01C-QC	PO4	QC	5.45e02	5.48e+02	100.550 % Recovery
2 CCV	0	0	01C-QC	S04	QC	6.31e02	6.50e+02	103.011 % Recovery
2 CCV	0	0	01C-QC	OXALATEZ	QC	5.29e02	5.39e+02	101.890 % Recovery
3 SAMPLE	S96T005004	0	01C-01	F-02	LIQUID	N/A	1.588e+02	7.878 ug/mL
3 SAMPLE	S96T005004	0	01C-01	CL-02	LIQUID	N/A	2.216e+02	10.300 ug/mL
3 SAMPLE	S96T005004	0	01C-01	NO2-02	LIQUID	N/A	1.089e+03	64.840 ug/mL
3 SAMPLE	S96T005004	0	01C-01	BR-02	LIQUID	N/A	7.636e+01	76.360 ug/mL
3 SAMPLE	S96T005004	0	01C-01	NO3-02	LIQUID	N/A	2.394e+04	84.840 ug/mL
3 SAMPLE	S96T005004	0	01C-01	PO4-02	LIQUID	N/A	7.205e+01	72.050 ug/mL
3 SAMPLE	S96T005004	0	01C-01	S04-02	LIQUID	N/A	1.666e+02	82.360 ug/mL
3 SAMPLE	S96T005004	0	01C-01	OXALATEZ	LIQUID	N/A	6.363e+01	63.630 ug/mL
4 DUP	S96T005004	0	01C-01	F-02	LIQUID	1.59e+02	1.27e+02	22.378 RPD
4 DUP	S96T005004	0	01C-01	CL-02	LIQUID	2.22e+02	2.30e+02	3.540 RPD
4 DUP	S96T005004	0	01C-01	NO2-02	LIQUID	1.09e+03	1.12e+03	2.715 RPD
4 DUP	S96T005004	0	01C-01	BR-02	LIQUID	<7.64e1	<7.64e1	RPD
4 DUP	S96T005004	0	01C-01	NO3-02	LIQUID	2.39e+04	2.41e+04	0.833 RPD
4 DUP	S96T005004	0	01C-01	PO4-02	LIQUID	<7.20e1	<7.21e1	RPD
4 DUP	S96T005004	0	01C-01	S04-02	LIQUID	1.67e+02	1.66e+02	0.601 RPD
4 DUP	S96T005004	0	01C-01	OXALATEZ	LIQUID	<6.36e1	<6.36e1	RPD
5 SPK	S96T005004	0	01C-01	F-02	LIQUID	5.90e01	4.92e+01	83.390 % Recovery
5 SPK	S96T005004	0	01C-01	CL-02	LIQUID	7.90e01	8.07e+01	102.152 % Recovery
5 SPK	S96T005004	0	01C-01	NO2-02	LIQUID	5.43e02	5.51e+02	101.473 % Recovery
5 SPK	S96T005004	0	01C-01	BR-02	LIQUID	5.89e02	6.16e+02	104.584 % Recovery
5 SPK	S96T005004	0	01C-01	NO3-02	LIQUID	5.94e02	6.08e+02	102.357 % Recovery
5 SPK	S96T005004	0	01C-01	PO4-02	LIQUID	5.45e02	5.48e+02	100.550 % Recovery
5 SPK	S96T005004	0	01C-01	S04-02	LIQUID	6.31e02	6.45e+02	102.219 % Recovery
5 SPK	S96T005004	0	01C-01	OXALATEZ	LIQUID	5.29e02	5.51e+02	104.159 % Recovery
6 SAMPLE	S96T005005	0	01C-01	F-02	LIQUID	N/A	1.30e-002	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 13066

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S96T005005	0	@IC-01 CL-02	LIQUID	N/A <	IS	1.70e-002	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 NO2-02	LIQUID	N/A <	IS	0.107	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 BR-02	LIQUID	N/A <	IS	0.126	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 NO3-02	LIQUID	N/A <	IS	0.140	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 PO4-02	LIQUID	N/A <	IS	0.113	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 SO4-02	LIQUID	N/A <	IS	0.136	ug/mL
6 SAMPLE	S96T005005	0	@IC-01 OXALATE2	LIQUID	N/A <	IS	0.105	ug/mL
7 DUP	S96T005005	0	@IC-01 F-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 CL-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 NO2-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 BR-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 NO3-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 PO4-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 SO4-02	LIQUID	<0.00e0	<IS		RPD
7 DUP	S96T005005	0	@IC-01 OXALATE2	LIQUID	<0.00e0	<IS		RPD
8 SAMPLE	S96T005006	0	@IC-01 F-02	LIQUID	N/A	1.744e+02	7.878	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 CL-02	LIQUID	N/A	2.206e+02	10.300	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 NO2-02	LIQUID	N/A	1.122e+03	64.840	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 BR-02	LIQUID	N/A <	7.636e+01	76.360	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 NO3-02	LIQUID	N/A	2.414e+04	84.840	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 PO4-02	LIQUID	N/A <	7.205e+01	72.050	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 SO4-02	LIQUID	N/A	1.751e+02	82.360	ug/mL
8 SAMPLE	S96T005006	0	@IC-01 OXALATE2	LIQUID	N/A <	6.363e+01	63.630	ug/mL
9 DUP	S96T005006	0	@IC-01 F-02	LIQUID	1.74e+02	1.66e+02	4.706	RPD
9 DUP	S96T005006	0	@IC-01 CL-02	LIQUID	2.21e+02	2.16e+02	2.288	RPD
9 DUP	S96T005006	0	@IC-01 NO2-02	LIQUID	1.12e+03	1.10e+03	1.802	RPD
9 DUP	S96T005006	0	@IC-01 BR-02	LIQUID	<7.64e1	<7.64e1		RPD
9 DUP	S96T005006	0	@IC-01 NO3-02	LIQUID	2.41e+04	2.41e+04	0.000	RPD
9 DUP	S96T005006	0	@IC-01 PO4-02	LIQUID	<7.20e1	<7.21e1		RPD
9 DUP	S96T005006	0	@IC-01 SO4-02	LIQUID	1.75e+02	1.89e+02	7.692	RPD
9 DUP	S96T005006	0	@IC-01 OXALATE2	LIQUID	<6.36e1	<6.36e1		RPD

Comments Section:

Comments for sample# S96T005005 and test @IC-01
Insufficient sample to run on WKL 13066 IC. jmf

Final page for worklist# 13066

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John M. Foye 10/3/96
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 13066

Analyst: RLM Instrument: IC00 IC02 Book# 14N20-B

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 IC. RCJ

S Type	Sample#	R A Test	Matrix	Group#	Project
1 CCB		@IC-QC	QC		
2 CCV		@IC-QC	QC		
3 SAMPLE	S96T005004 0	@IC-01	LIQUID	96001213	AW-105 GRAB
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005004 0	@IC-01	LIQUID		
5 SPK	S96T005004 0	@IC-01	LIQUID		
6 SAMPLE	S96T005005 0	@IC-01	LIQUID	96001213	AW-105 GRAB
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S96T005005 0	@IC-01	LIQUID		
8 SAMPLE	S96T005006 0	@IC-01	LIQUID	96001213	AW-105 GRAB
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
9 DUP	S96T005006 0	@IC-01	LIQUID		

Final page for worklist # 13066

RLM 9/29/96

Analyst Signature

Date

Analyst Signature

Date

13066 sp.05V - added 2 extra files to cover for S96T005005 - with
edit them to say insufficient sample. Jmt

Uploaded 10/3/96 JMF

Validated 10/3/96 JMF

Data Entry Comments:

S96T005005 - no sample left in 22 ml vial in ship did can.
Could not find original sample to get another aliquot. RLM

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

03-Oct-96

Worklist#: 13066

Data File: 13066SP2.CSV

	Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution
-	=>	1	CCB	1	96092911.d01	CCB ELUENT BLANK	1.00
	=>	2	CCV	2	96092911.d02	CCV 14N20B	101.00
	=>	3	SAMPLE	3	96092911.d04	S96T005004 SMPL	606.00
	=>	4	DUP	4	96092911.d05	S96T005004 DUP	606.00
	=>	5	SPK	5	96092911.d06	S96T005004 SPIKE	606.00
	=>	6	SAMPLE	8	96092911.d07	S96T005006 SMPL	606.00
	=>	7	DUP	9	96092911.d08	S96T005006 DUP	606.00
	=>	8	SAMPLE	6	96093001.d01	INSTR BLANK	1.00
	=>	9	DUP	7	96093001.d03	PREP BLANK	1.00
<i>These files were added to have some to edit to indicate insufficient sample on S96T005005 gmf</i>							

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Sample Name: CCB ELUENT BLANK		Date: 09/29/1996 20:03:02
Data File : C:\DX\DATA\96092911.D01		
Method : C:\DX\METHOD\ANIONS.MET		
ACI Address: 1	System: 1	Inject#: 1
Analyst :	Column:	Detector: CDM-1

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
---------	----------	----------------	---------------------	--------	------	----------	--------

Totals			0.000	0	0		
--------	--	--	-------	---	---	--	--

DIRECT

File: 96092911.D01 Sample: CCB ELUENT BLANK

Sample Name: CCV 14N20B

Date: 09/29/1996 22:04:40

Data File : C:\DX\DATA\96092911.D02

Method : C:\DX\METHOD\ANIONS.MET

ACI Address: 1 System: 1 Inject#: 2

Detector: CDM-1

Analyst : Column:

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 101 3000 5Hz 0.00 10.00 200

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.49		0.000	25	411	1	
2	0.88		0.000	110	544	2	
3	1.06	FLUORIDE	61.311	2398	11859	2	0.63
5	1.64	CHLORIDE	81.987	2275	10766	1	-0.20
6	1.98	NITRITE	544.557	9106	50975	1	-0.83
7	3.02	BROMIDE	617.279	5595	37680	2	-0.55
8	3.45	NITRATE	618.837	6006	48992	2	-0.86
9	5.04	PHOSPHATE	547.968	1721	21302	1	-2.01
10	6.65	SULFATE	649.724	4574	66198	1	-2.49
12	8.78	OXALATE	538.670	2032	39559	1	-2.62

Totals 3660.332 33842 288285

.100mL - 10mL R. McLown 9/29/96

File: 96092911.D02 Sample: CCV 14N20B

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 353 TO 358

Data Reprocessed On 10/02/1996 16:37:37

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=====
Sample Name: S96T005004 SMPL                      Date: 09/29/1996 22:56:55
Data File  : E:\DATA\96092911.D04
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 4                Detector: CDM-1
Analyst    :                               Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      606    3000  5Hz  0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	0.88		0.000	198	1013	2	
3	1.05	FLUORIDE	158.789	855	4965	2	0.00
4	1.63	CHLORIDE	221.613	968	4782	1	-0.61
5	1.97	NITRITE	1089.427	2854	16179	1	-1.50
6	3.30	NITRATE	23937.331	35903	362708	1	0.10
7	6.68	SULFATE	166.565	149	1975	1	-2.00
Totals			25573.727	40928	391621		

File: 96092911.D04 Sample: S96T005004 SMPL

Data Reprocessed On 10/02/1996 16:38:56

```

=====
Sample Name: S96T005004 DUP                      Date: 09/29/1996 23:08:06
Data File  : E:\DATA\96092911.D05
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 5                Detector: CDM-1
Analyst    :                               Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          606    3000   5Hz   0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.41		0.000	25	320	1	
2	0.88		0.000	193	912	2	
3	1.05	FLUORIDE	127.328	800	3935	2	0.00
4	1.63	CHLORIDE	229.696	985	4959	1	-0.61
5	1.97	NITRITE	1116.339	2850	16606	1	-1.50
6	3.30	NITRATE	24069.742	35886	365066	1	0.10
7	6.68	SULFATE	165.813	150	1962	1	-2.00
Totals			25708.917	40889	393760		

File: 96092911.D05 Sample: S96T005004 DUP

```

=====
Sample Name: S96T005004 SPIKE                      Date: 09/29/1996 23:19:08
Data File  : E:\DATA\96092911.D06
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 6                  Detector: CDM-1
Analyst    :                                         Column:
=====
  
```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          606    3000   5Hz   0.00 10.00      200
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	261	1167	1	
2	1.05	FLUORIDE	404.562	2799	13077	1	0.00
3	1.63	CHLORIDE	625.146	2753	13751	2	-0.61
4	1.97	NITRITE	3845.128	10606	60283	2	-1.50
5	2.99	BROMIDE	3080.545	5033	31089	2	-1.64
6	3.28	NITRATE	26978.561	40133	418265	2	0.10
7	5.04	PHOSPHATE	2739.031	1435	17609	1	-2.01
8	6.64	SULFATE	3393.161	3962	57353	1	-2.59
10	8.78	OXALATE	2756.846	1730	33594	1	-2.70
Totals			43822.979	68713	646187		

File: 96092911.D06 Sample: S96T005004 SPIKE

Data Reprocessed On 10/02/1996 16:41:41

```

=====
Sample Name: S96T005006 SMPL                      Date: 09/29/1996 23:30:02
Data File  : E:\DATA\96092911.D07
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 7                 Detector: CDM-1
Analyst    :                               Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      606    3000    5Hz    0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	200	1062	2	
2	1.05	FLUORIDE	174.446	948	5478	2	0.00
3	1.63	CHLORIDE	220.616	947	4760	2	-0.61
4	1.97	NITRITE	1122.153	2920	16698	2	-1.50
5	3.30	NITRATE	24140.753	36185	366333	1	-0.10
6	6.68	SULFATE	175.104	157	2119	1	-2.00
Totals			25833.070	41356	396450		

File: 96092911.D07 Sample: S96T005006 SMPL

Data Reprocessed On 10/02/1996 16:42:52

```

=====
Sample Name: S96T005006 DUP                      Date: 09/29/1996 23:43:08
Data File  : E:\DATA\96092911.D08
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 8                Detector: CDM-1
Analyst    :                               Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      606      3000 5Hz      0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.39		0.000	18	221	1	
2	0.88		0.000	203	1049	2	
3	1.05	FLUORIDE	166.301	924	5211	2	0.00
4	1.63	CHLORIDE	216.005	951	4658	1	-0.61
5	1.97	NITRITE	1103.274	2933	16398	1	-1.50
6	3.30	NITRATE	24061.739	36063	364924	1	-0.10
7	6.68	SULFATE	188.825	166	2351	1	-2.10
Totals			25736.143	41258	394813		

File: 96092911.D08 Sample: S96T005006 DUP

LABCORE Completed Worklist Report for Worklist# 13571

Analyst: tam

Instrument: IC01

Book# 32 N20C

Method: LA-S33-105 Rev/Mod D-1

Worklist Comment: Rerun AW-105 IC REPRINT. jmf

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	③IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	③IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	③IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	③IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	③IC-QC NO3	QC	1	1.40e-01	0.140	ug/mL
1 CCB	0	③IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	③IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	③IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	③IC-QC F	QC	5.90e01	5.78e+01	97.966 %	Recovery
2 CCV	0	③IC-QC CL	QC	7.90e01	7.93e+01	100.380 %	Recovery
2 CCV	0	③IC-QC NO2	QC	5.43e02	5.32e+02	97.974 %	Recovery
2 CCV	0	③IC-QC BR	QC	5.89e02	5.72e+02	97.114 %	Recovery
2 CCV	0	③IC-QC NO3	QC	5.94e02	5.87e+02	98.822 %	Recovery
2 CCV	0	③IC-QC PO4	QC	5.45e02	5.00e+02	91.743 %	Recovery
2 CCV	0	③IC-QC SO4	QC	6.31e02	6.12e+02	96.989 %	Recovery
2 CCV	0	③IC-QC OXALATE2	QC	5.34e02	5.34e+02	100.000 %	Recovery
3 SAMPLE	S96T005012 0	③IC-01 F-02	LIQUID	N/A	1.060e+03	61.810	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 CL-02	LIQUID	N/A	3.077e+02	87.570	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 NO2-02	LIQUID	N/A	1.661e+03	556.300	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 BR-02	LIQUID	N/A	6.439e+02	643.900	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 NO3-02	LIQUID	N/A	2.803e+04	716.000	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 PO4-02	LIQUID	N/A	6.181e+02	618.100	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 SO4-02	LIQUID	N/A	7.108e+02	710.800	ug/mL
3 SAMPLE	S96T005012 0	③IC-01 OXALATE2	LIQUID	N/A	5.409e+02	540.900	ug/mL
4 DUP	S96T005012 0	③IC-01 F-02	LIQUID	1.06e+03	1.16e+03	9.009	RPD
4 DUP	S96T005012 0	③IC-01 CL-02	LIQUID	3.08e+02	3.07e+02	0.325	RPD
4 DUP	S96T005012 0	③IC-01 NO2-02	LIQUID	1.66e+03	1.76e+03	5.848	RPD
4 DUP	S96T005012 0	③IC-01 BR-02	LIQUID	<6.44e2	<6.44e2		RPD
4 DUP	S96T005012 0	③IC-01 NO3-02	LIQUID	2.80e+04	3.02e+04	7.560	RPD
4 DUP	S96T005012 0	③IC-01 PO4-02	LIQUID	<6.18e2	<6.18e2		RPD
4 DUP	S96T005012 0	③IC-01 SO4-02	LIQUID	<7.11e2	<7.11e2		RPD
4 DUP	S96T005012 0	③IC-01 OXALATE2	LIQUID	<5.41e2	<5.41e2		RPD

Final page for worklist# 13571

Analyst Signature Date

Analyst Signature Date

John M. Lye 11/21/96

LABCORE Data Entry Template for Worklist# 13571

Analyst: TAM Instrument: IC0 TCO1 Book# 320200

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: Rerun AW-105 IC REPRINT. jmf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005012 0		@IC-01	LIQUID	96001215	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005012 0		@IC-01	LIQUID		

Final page for worklist # 13571

Jamie Faye for Teresa Murphy 11/21/96
Analyst Signature Date

Analyst Signature Date

13571/NV.CSV

uploaded 11/21/96

Validated 11/21/96 Jmf

Data Entry Comments:

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				21-Nov-96			
Worklist#: 13571				Data File: 13571INV.CSV							
	Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution				
-	=>	1	CCB	-	1	96111811.d01	INST. BLANK	1.00			
	=>	2	CCV		2	96111811.d02	STD	101.00			
	=>	3	SAMPLE		3	96111811.d03	S96T005012 SAM	5151.00			
	=>	4	DUP		4	96111811.d04	S96T005012 DUP	5151.00			
			S96T005012			96111811.d05	S96T005012 SPK	5151.00			
			S96T005012								
+				+							

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Sample Name: INST. BLANK Date: 11/18/1996 19:37:44
Data File : C:\DX\DATA\96111811.D01
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
Analyst : *Sammy 11/18/96* 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	3.33	nitrate	0.140	28	157	1	6.61
Totals			0.140	28	157		

File: 96111811.D01 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 362 TO 366

Sample Name: STD Date: 11/18/1996 19:55:07
 Data File : C:\DX\DATA\96111811.D02
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
 Analyst : *Sam Murphy 11-18-96* 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	0.91		0.000	32	109	2	
2	1.08	fluoride	57.841	1610	10019	2	2.86
3	1.61	chloride	79.341	1720	9230	1	1.26
4	1.91	nitrite	532.170	6838	44958	1	-0.69
5	2.86	bromide	571.751	4880	34179	1	1.66
6	3.25	nitrate	587.114	5442	45639	1	4.05
7	4.64	phosphate	499.552	1339	19525	1	1.16
8	6.03	sulfate	612.401	4171	65699	1	0.89
9	7.89	oxalate	534.087	1974	42228	1	1.37
Totals			3474.256	28008	271585		

File: 96111811.D02 Sample: STD

```

=====
Sample Name: S96T005012 SAM                      Date: 11/18/1996 20:17:26
Data File  : C:\DX\DATA\96111811.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          5151  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
2	1.09	fluoride	1059.828	522	3495	1	4.13
3	1.63	chloride	307.681	130	744	1	2.51
4	1.94	nitrite	1661.274	273	1935	1	0.69
5	3.25	nitrate	28025.981	5044	42614	1	4.05
6	6.08	sulfate	625.852	38	722	1	1.79
Totals			31680.616	6006	49509		

File: 96111811.D03 Sample: S96T005012 SAM

```

=====
Sample Name: S96T005012 DUP                      Date: 11/18/1996 22:03:20
Data File  : C:\DX\DATA\96111811.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          5151   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	0.91		0.000	23	100	2	
2	1.07	fluoride	1160.387	641	3838	2	2.22
3	1.43		0.000	20	109	1	
4	1.62	chloride	306.786	151	742	1	1.67
5	1.93	nitrite	1762.033	331	2103	1	0.35
6	3.27	nitrate	30243.830	5349	46115	1	4.48
7	6.13	sulfate	604.393	41	677	1	2.68
Totals			34077.429	6556	53684		

File: 96111811.D04 Sample: S96T005012 DUP

```

=====
Sample Name: S96T005012 SPK                      Date: 11/18/1996 22:17:48
Data File   : C:\DX\DATA\96111811.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          5151  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
2	1.09	fluoride	716.636	361	2327	2	4.13
3	1.45		0.000	21	114	1	
4	1.64	chloride	260.961	121	640	1	2.93
5	1.94	nitrite	1726.031	301	2043	1	0.69
6	2.92	bromide	752.922	77	542	1	3.79
7	3.28	nitrate	20222.615	3535	30361	1	4.90
8	4.69	phosphate	242.762	18	213	1	2.33
9	6.08	sulfate	1226.394	103	1976	1	1.79
10	7.95	oxalate	671.597	29	672	1	2.05
Totals			25819.918	4567	38886		

File: 96111811.D05 Sample: S96T005012 SPK

LABCORE Completed Worklist Report for Worklist# 13780

Analyst: eal

Instrument: IC02

Book# 32W204

Method: 14-533-105 Rev/Mod D-/

Worklist Comment: AW-105 IC. RCJ

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	2.73e-01	0.273	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	6.00e+01	101.695 % Recovery	
2 CCV	0	④IC-QC CL	QC	7.90e01	7.60e+01	96.203 % Recovery	
2 CCV	0	④IC-QC NO2	QC	5.40e02	5.33e+02	98.704 % Recovery	
2 CCV	0	④IC-QC BR	QC	5.89e02	5.99e+02	101.698 % Recovery	
2 CCV	0	④IC-QC NO3	QC	5.94e02	6.17e+02	103.872 % Recovery	
2 CCV	0	④IC-QC P04	QC	5.45e02	5.52e+02	101.284 % Recovery	
2 CCV	0	④IC-QC S04	QC	6.31e02	6.40e+02	101.426 % Recovery	
2 CCV	0	④IC-QC OXALATE2	QC	5.27e02	5.46e+02	103.605 % Recovery	
3 SAMPLE	S96T005008 0	④IC-01 F-02	LIQUID	N/A	1.547e+02	13.330	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 CL-02	LIQUID	N/A	2.622e+02	18.890	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 NO2-02	LIQUID	N/A	1.203e+03	120.000	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 BR-02	LIQUID	N/A	< 1.389e+02	138.900	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 NO3-02	LIQUID	N/A	2.434e+04	154.400	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 P04-02	LIQUID	N/A	< 1.333e+02	133.300	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 S04-02	LIQUID	N/A	2.300e+02	153.300	ug/mL
3 SAMPLE	S96T005008 0	④IC-01 OXALATE2	LIQUID	N/A	< 1.167e+02	116.700	ug/mL
4 DUP	S96T005008 0	④IC-01 F-02	LIQUID	1.55e+02	1.54e+02	0.647	RPD
4 DUP	S96T005008 0	④IC-01 CL-02	LIQUID	2.62e+02	2.31e+02	12.576	RPD
4 DUP	S96T005008 0	④IC-01 NO2-02	LIQUID	1.20e+03	1.13e+03	6.009	RPD
4 DUP	S96T005008 0	④IC-01 BR-02	LIQUID	<1.39e2	<1.39e2		RPD
4 DUP	S96T005008 0	④IC-01 NO3-02	LIQUID	2.43e+04	2.46e+04	1.227	RPD
4 DUP	S96T005008 0	④IC-01 P04-02	LIQUID	<1.33e2	<1.33e2		RPD
4 DUP	S96T005008 0	④IC-01 S04-02	LIQUID	2.30e+02	2.25e+02	2.198	RPD
4 DUP	S96T005008 0	④IC-01 OXALATE2	LIQUID	<1.17e2	<1.17e2		RPD
5 SPK	S96T005008 0	④IC-01 F-02	LIQUID	5.90e01	5.72e+01	96.949 % Recovery	
5 SPK	S96T005008 0	④IC-01 CL-02	LIQUID	7.90e01	7.24e+01	91.646 % Recovery	
5 SPK	S96T005008 0	④IC-01 NO2-02	LIQUID	5.40e02	5.26e+02	97.407 % Recovery	
5 SPK	S96T005008 0	④IC-01 BR-02	LIQUID	5.89e02	6.25e+02	106.112 % Recovery	
5 SPK	S96T005008 0	④IC-01 NO3-02	LIQUID	5.94e02	7.62e+02	128.283 % Recovery	
5 SPK	S96T005008 0	④IC-01 P04-02	LIQUID	5.45e02	5.62e+02	103.119 % Recovery	
5 SPK	S96T005008 0	④IC-01 S04-02	LIQUID	6.31e02	6.50e+02	103.011 % Recovery	
5 SPK	S96T005008 0	④IC-01 OXALATE2	LIQUID	5.27e02	5.65e+02	107.211 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 13780

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	---	---	------	--------	--------	-------	-------------	------

Final page for worklist# 13780

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

10/30/96
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 13780

Analyst:

Ed

Instrument: IC0

IC02

Book#

32N20-A

Method: LA-533-105

Rev/Mod

D-1

Worklist Comment: AW-105 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005008 0		@IC-01	LIQUID	96001213	AW-105 GRAB
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
4 DUP	S96T005008 0		@IC-01	LIQUID		
5 SPK	S96T005008 0		@IC-01	LIQUID		

Final page for worklist # 13780

Analyst Signature

Date

Analyst Signature

Date

13780 oc. esv, sent

Inshell

Uploaded 10/30/96 JM Lye

Validated 10/3/96

Data Entry Comments:

Data Reprocessed On 10/30/1996 14:42:50

=====

Sample Name: INST. BLANK	Date: 10/30/1996 02:36:13
Data File : C:\DX\DATA\96103001.d11	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 11	Detector: CDM-1
Analyst : <i>John J. [Signature]</i>	Column:

=====

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

=====

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
4	3.47	NITRATE	0.273	151	1050	1	-0.29
Totals			0.273	151	1050		

=====

File: 96103001.d11 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 370 TO 376

Data Reprocessed On 10/30/1996 14:42:50

```

=====
Sample Name: 32N20-A STD.           Date: 10/30/1996 02:51:36
Data File  : C:\DX\DATA\96103001.d12
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 12      Detector: CDM-1
Analyst    :                      Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      101      3000      5Hz      0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.34		0.000	23	258	1	
2	0.88		0.000	125	584	2	
3	1.05	FLUORIDE	60.042	2253	11606	2	0.00
4	1.62	CHLORIDE	76.024	1979	9969	1	-1.02
5	1.96	NITRITE	533.088	8313	49868	1	-1.83
6	2.98	BROMIDE	598.933	5360	36512	2	-1.86
7	3.40	NITRATE	617.177	5923	48855	2	-2.20
8	4.94	PHOSPHATE	552.451	1723	21483	1	-3.96
9	6.52	SULFATE	639.581	4537	65129	1	-4.35
10	8.60	OXALATE	546.354	2065	40139	1	-4.69
Totals			3623.649	32301	284404		

File: 96103001.d12 Sample: 32N20-A STD.

Data Reprocessed On 10/30/1996 14:42:51

```

=====
Sample Name: S96T005008                      Date: 10/30/1996 03:06:07
Data File  : C:\DX\DATA\96103001.d13
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 13          Detector: CDM-1
Analyst    :                               Column:
=====

```

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1         4141   3000  5Hz   0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
3	1.06	FLUORIDE	117.630	85	343	1	0.63
4	1.62	CHLORIDE	248.142	151	732	1	-1.02
5	1.96	NITRITE	1336.005	345	2027	1	-1.83
6	3.41	NITRATE	20356.806	4838	38937	1	-2.01
Totals			22058.582	5418	42039		

File: 96103001.d13 Sample: S96T005008

Data Reprocessed On 10/30/1996 14:42:51

```

=====
Sample Name: S96T005008                      Date: 10/30/1996 03:19:32
Data File  : C:\DX\DATA\96103001.d14
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 14          Detector: CDM-1
Analyst    :                               Column:
=====

```

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      1111    3000    5Hz    0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	0.88		0.000	161	921	2	
3	1.05	FLUORIDE	154.702	456	2531	2	0.00
4	1.62	CHLORIDE	262.229	546	3059	1	-1.02
5	1.96	NITRITE	1202.888	1486	9310	1	-2.17
7	3.32	NITRATE	24339.610	20377	187420	1	-4.50
8	6.56	SULFATE	230.005	91	1282	1	-3.86
Totals			26189.434	23118	204522		

File: 96103001.d14 Sample: S96T005008

Data Reprocessed On 10/30/1996 14:42:51

```

=====
Sample Name: S96T005008  DUP                      Date: 10/30/1996 03:34:38
Data File  : C:\DX\DATA\96103001.d15
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 15                Detector: CDM-1
Analyst    :                      Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      1111    3000  5Hz   0.00 10.00      200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	124	677	2	
2	1.05	FLUORIDE	153.629	444	2512	2	0.00
3	1.62	CHLORIDE	230.736	532	2684	1	-1.02
4	1.96	NITRITE	1128.064	1465	8663	1	-2.17
5	3.32	NITRATE	24636.597	20428	189898	1	-4.50
6	6.54	SULFATE	225.440	90	1240	1	-4.06
Totals			26374.467	23083	205673		

File: 96103001.d15 Sample: S96T005008 DUP

Data Reprocessed On 10/30/1996 14:42:52

```

=====
Sample Name: S96T005008 SPIKE                      Date: 10/30/1996 03:45:28
Data File  : C:\DX\DATA\96103001.d16
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 16                 Detector: CDM-1
Analyst    :                                         Column:
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1111  3000  5Hz  0.00 10.00          200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	216	1003	2	
2	1.05	FLUORIDE	732.193	2547	12905	2	0.00
3	1.62	CHLORIDE	993.402	2319	11882	2	-1.42
4	1.96	NITRITE	6515.706	9434	55589	2	-2.17
5	2.96	BROMIDE	6310.581	5239	34907	2	-2.52
6	3.30		0.000	26162	253314	2	
7	4.94	PHOSPHATE	5679.770	1614	20022	1	-3.83
8	6.52	SULFATE	6797.265	4330	62852	1	-4.45
9	8.60	OXALATE	5711.580	1972	38093	1	-4.69
Totals			32740.496	53835	490569		

File: 96103001.d16 Sample: S96T005008 SPIKE

Data Reprocessed On 10/30/1996 14:50:00

```

=====
Sample Name: S96T005008 SPIKE           Date: 10/30/1996 03:45:28
Data File  : C:\DX\DATA\96103001.D16
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 16      Detector: CDM-1
Analyst    :                          Column:
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1111    3000   5Hz   0.00 10.00          200
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	216	1003	2	
2	1.05	FLUORIDE	732.193	2547	12905	2	0.00
3	1.62	CHLORIDE	993.402	2319	11882	2	-1.42
4	1.96	NITRITE	6515.706	9434	55589	2	-2.17
5	2.96	BROMIDE	6310.581	5239	34907	2	-2.52
6	3.30	NITRATE	32035.270	26162	253314	2	-0.10
7	4.94	PHOSPHATE	5679.770	1614	20022	1	-3.83
8	6.52	SULFATE	6797.265	4330	62852	1	-4.45
9	8.60	OXALATE	5711.580	1972	38093	1	-4.69
Totals			64775.765	53835	490569		

File: 96103001.D16 Sample: S96T005008 SPIKE

LABCORE Completed Worklist Report for Worklist# 13805

Analyst: rdm

Instrument: IC01

Book# 14W20C

Method: LA-633-105 Rev/Mod D-1

Worklist Comment: Rerun of AW-105 Ic. Try 5151 df.jmf

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	5.35e+01	90.678 % Recovery	
2 CCV	0	④IC-QC CL	QC	7.90e01	7.69e+01	97.342 % Recovery	
2 CCV	0	④IC-QC NO2	QC	5.40e02	4.96e+02	91.852 % Recovery	
2 CCV	0	④IC-QC BR	QC	5.89e02	5.83e+02	98.981 % Recovery	
2 CCV	0	④IC-QC NO3	QC	5.94e02	6.02e+02	101.347 % Recovery	
2 CCV	0	④IC-QC P04	QC	5.45e02	5.31e+02	97.431 % Recovery	
2 CCV	0	④IC-QC S04	QC	6.31e02	6.46e+02	102.377 % Recovery	
2 CCV	0	④IC-QC OXALATE2	QC	5.36e02	5.42e+02	101.119 % Recovery	
3 SAMPLE	S96T005010 0	④IC-01 F-02	LIQUID	N/A	1.308e+02	13.330	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 CL-02	LIQUID	N/A	2.136e+02	18.890	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 NO2-02	LIQUID	N/A	1.096e+03	120.000	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 BR-02	LIQUID	N/A <	1.389e+02	138.900	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 NO3-02	LIQUID	N/A	2.465e+04	154.400	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 P04-02	LIQUID	N/A <	1.333e+02	133.300	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 S04-02	LIQUID	N/A	2.211e+02	153.300	ug/mL
3 SAMPLE	S96T005010 0	④IC-01 OXALATE2	LIQUID	N/A <	1.167e+02	116.700	ug/mL
4 DUF	S96T005010 0	④IC-01 F-02	LIQUID	1.31e+02	1.29e+02	1.538	RPD
4 DUF	S96T005010 0	④IC-01 CL-02	LIQUID	2.14e+02	2.10e+02	1.887	RPD
4 DUF	S96T005010 0	④IC-01 NO2-02	LIQUID	1.09e+03	1.07e+03	1.852	RPD
4 DUF	S96T005010 0	④IC-01 BR-02	LIQUID	<1.39e2	<1.39e2		RPD
4 DUF	S96T005010 0	④IC-01 NO3-02	LIQUID	2.46e+04	2.48e+04	0.810	RPD
4 DUF	S96T005010 0	④IC-01 P04-02	LIQUID	<1.33e2	<1.33e2		RPD
4 DUF	S96T005010 0	④IC-01 S04-02	LIQUID	2.21e+02	1.87e+02	16.667	RPD
4 DUF	S96T005010 0	④IC-01 OXALATE2	LIQUID	<1.17e2	<1.17e2		RPD
5 SPK	S96T005010 0	④IC-01 F-02	LIQUID	5.90e01	5.08e+01	86.102 % Recovery	
5 SPK	S96T005010 0	④IC-01 CL-02	LIQUID	7.90e01	7.61e+01	96.329 % Recovery	
5 SPK	S96T005010 0	④IC-01 NO2-02	LIQUID	5.40e02	4.68e+02	86.667 % Recovery	
5 SPK	S96T005010 0	④IC-01 BR-02	LIQUID	5.89e02	5.14e+02	87.267 % Recovery	
5 SPK	S96T005010 0	④IC-01 NO3-02	LIQUID	5.94e02	6.57e+02	110.606 % Recovery	
5 SPK	S96T005010 0	④IC-01 P04-02	LIQUID	5.45e02	4.93e+02	90.459 % Recovery	
5 SPK	S96T005010 0	④IC-01 S04-02	LIQUID	6.31e02	5.95e+02	94.295 % Recovery	
5 SPK	S96T005010 0	④IC-01 OXALATE2	LIQUID	5.36e02	5.03e+02	93.843 % Recovery	
6 SAMPLE	S96T005011 0	④IC-01 F-02	LIQUID	N/A	1.594e+02	13.330	ug/mL

LABCORE Completed Worklist Report for Worklist# 13805

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S96T005011 0	QIC-01 CL-02	LIQUID	N/A	2.516e+02	18.890	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 NO2-02	LIQUID	N/A	1.284e+03	120.000	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 BR-02	LIQUID	N/A	1.389e+02	138.900	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 NO3-02	LIQUID	N/A	2.918e+04	154.400	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 PO4-02	LIQUID	N/A	1.333e+02	133.300	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 SO4-02	LIQUID	N/A	2.137e+02	153.300	ug/mL
6 SAMPLE	S96T005011 0	QIC-01 OXALATE2	LIQUID	N/A	1.167e+02	116.700	ug/mL
7 DUP	S96T005011 0	QIC-01 F-02	LIQUID	1.59e+02	1.53e+02	3.846	RPD
7 DUP	S96T005011 0	QIC-01 CL-02	LIQUID	2.52e+02	2.48e+02	1.600	RPD
7 DUP	S96T005011 0	QIC-01 NO2-02	LIQUID	1.28e+03	1.25e+03	2.372	RPD
7 DUP	S96T005011 0	QIC-01 BR-02	LIQUID	<1.39e2	<1.39e2		RPD
7 DUP	S96T005011 0	QIC-01 NO3-02	LIQUID	2.92e+04	2.85e+04	2.426	RPD
7 DUP	S96T005011 0	QIC-01 PO4-02	LIQUID	<1.33e2	<1.33e2		RPD
7 DUP	S96T005011 0	QIC-01 SO4-02	LIQUID	2.14e+02	2.14e+02	0.000	RPD
7 DUP	S96T005011 0	QIC-01 OXALATE2	LIQUID	<1.17e2	<1.17e2		RPD

Final page for worklist# 13805

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

10/21/96
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 13805

Analyst: RM Instrument: IC0 IC01 Book# 14N20C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: Rerun of AW-105 Ic. Try 5151 df.jmf

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005010 0		@IC-01	LIQUID	96001215	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005010 0		@IC-01	LIQUID		
5 SPK	S96T005010 0		@IC-01	LIQUID		
6 SAMPLE	S96T005011 0		@IC-01	LIQUID	96001215	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S96T005011 0		@IC-01	LIQUID		

Final page for worklist # 13805

RM 10/11/96
Analyst Signature Date

Analyst Signature Date

13805 OC.CSV

In shell

Uploaded 10/21/96 JMF

Validated 10/21/96 JMF

Data Entry Comments:

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				21-Oct-96			
Worklist#: 13805				Data File: I38050C.CSV							
	Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution				
-	=>	1 CCB		-	1 96100971.d01	BLK	1.00				
	=>	2 CCV			2 96100971.d02	14N20-C	101.00				
	=>	3 SAMPLE	S96T005010		3 96100971.d04	S96T005010	1111.00				
	=>	4 DUP	S96T005010		4 96100971.d05	S96T005010DUP	1111.00				
	=>	5 SPK	S96T005010		5 96100971.d06	S96T005010SPK	1111.00				
	=>	6 SAMPLE	S96T005011		6 96100971.d07	S96T005011	1111.00				
	=>	7 DUP	S96T005011		7 96100971.d08	S96T005011DUP	1111.00				
+				+							

Save(F4) Abort(Shift-F3) ListFiles(Shift-F1) UploadFile(F8)

Sample Name: BLK Date: 10/17/1996 19:19:39
 Data File : C:\DX\DATA\96100971.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
ROM 12/13/97

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	1.40		0.000	87	561	1	
2	3.52	nitrate	0.138	22	123	1	3.23
Totals			0.138	109	684		

File: 96100971.D01 Sample: BLK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 381 TO 387.

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=====
Sample Name: 14N20-C                      Date: 10/17/1996 19:32:44
Data File  : C:\DX\DATA\96100971.D02
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2       Detector: CDM-1
Analyst    :                          Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====

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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	0.89		0.000	48	193	2	
2	1.05	fluoride	53.534	1864	10535	2	3.27
3	1.40		0.000	67	406	1	
4	1.63	chloride	76.905	1945	10190	1	1.24
5	1.96	nitrite	495.751	7369	45696	1	-1.01
6	3.01	bromide	583.077	4955	35813	1	1.12
7	3.44	nitrate	601.617	5364	46143	1	0.88
8	4.75	phosphate	531.102	1595	21248	1	-3.72
9	6.29	sulfate	645.593	4409	66024	1	-4.07
10	8.32	oxalate	541.746	2157	42896	1	-9.27
Totals			3529.325	29774	279143		

File: 96100971.D02 Sample: 14N20-C

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=====
Sample Name: S96T005010                      Date: 10/17/1996 20:01:22
Data File  : C:\DX\DATA\96100971.D04
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 4           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1111 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	0.89		0.000	59	279	2	
2	1.06	fluoride	130.783	355	2158	2	3.92
3	1.40		0.000	59	387	1	
4	1.64	chloride	213.593	462	2569	1	1.65
5	1.97	nitrite	1086.197	1273	8306	1	-0.67
6	3.35	nitrate	24650.330	18911	183253	1	-1.66
7	6.35	sulfate	221.121	88	1571	1	-3.25
Totals			26302.025	21207	198523		

File: 96100971.D04 Sample: S96T005010

Sample Name: S96T005010DUP Date: 10/17/1996 20:13:45
 Data File : C:\DX\DATA\96100971.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	1111	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	0.89		0.000	59	286	2	
2	1.06	fluoride	129.294	356	2131	2	3.92
3	1.39		0.000	58	357	1	
4	1.63	chloride	210.072	466	2527	1	1.24
5	1.97	nitrite	1069.675	1269	8166	1	-0.67
6	3.35	nitrate	24812.717	18902	184555	1	-1.66
7	6.35	sulfate	187.173	85	1259	1	-3.25
Totals			26408.932	21195	199280		

File: 96100971.D05 Sample: S96T005010DUP

Sample Name: S96T005010SPK Date: 10/17/1996 20:29:28
 Data File : C:\DX\DATA\96100971.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	1111	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	0.89		0.000	100	418	2	
2	1.05	fluoride	644.048	2009	11554	2	3.27
3	1.39		0.000	38	212	1	
4	1.63	chloride	982.305	2161	11854	1	0.83
5	1.95	nitrite	5809.014	7743	48767	1	-1.35
6	2.99	bromide	5196.137	4312	28790	1	0.45
7	3.33	nitrate	31287.036	23881	237576	1	-2.44
8	4.75	phosphate	4980.313	1334	18073	1	-3.72
9	6.29	sulfate	6236.164	3805	57790	1	-4.07
10	8.32	oxalate	5079.410	1834	36485	1	-9.27
Totals			60214.427	47216	451519		

File: 96100971.D06 Sample: S96T005010SPK

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=====
Sample Name: S96T005011                      Date: 10/17/1996 20:43:43
Data File  : C:\DX\DATA\96100971.D07
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 7           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1111 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	0.89		0.000	68	303	2	
2	1.06	fluoride	159.405	451	2677	2	3.92
3	1.39		0.000	46	299	1	
4	1.63	chloride	251.631	555	3023	1	1.24
5	1.96	nitrite	1283.592	1546	9984	1	-1.01
6	3.33	nitrate	29178.048	22457	220056	1	-2.25
7	6:35	sulfate	213.732	93	1503	1	-3.25
Totals			31086.408	25216	237846		

File: 96100971.D07 Sample: S96T005011

Sample Name: S96T005011DUP

Date: 10/17/1996 20:56:37

Data File : C:\DX\DATA\96100971.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
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External	1	1111	3000	5Hz	0.00	10.00		50
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***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	64	286	2	
2	1.06	fluoride	152.844	433	2558	2	3.92
3	1.40		0.000	58	379	1	
4	1.63	chloride	247.813	547	2977	1	1.24
5	1.96	nitrite	1248.969	1487	9690	1	-1.01
6	3.33	nitrate	28501.154	21769	214485	1	-2.25
7	6.35	sulfate	214.145	93	1507	1	-3.25
Totals			30364.925	24451	231882		

File: 96100971.D08 Sample: S96T005011DUP

LABCORE Completed Worklist Report for Worklist# 13846

Analyst: krm

Instrument: IC01

Book# 32N804

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 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	2.13e-01	0.213	ug/mL
1 CCB	0	⊖IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	⊖IC-QC S04	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	5.26e+01	89.153 % Recovery	
2 CCV	0	⊖IC-QC CL	QC	7.90e01	7.34e+01	92.911 % Recovery	
2 CCV	0	⊖IC-QC NO2	QC	5.40e02	4.95e+02	91.667 % Recovery	
2 CCV	0	⊖IC-QC BR	QC	5.89e02	5.56e+02	94.397 % Recovery	
2 CCV	0	⊖IC-QC NO3	QC	5.94e02	5.96e+02	100.337 % Recovery	
2 CCV	0	⊖IC-QC P04	QC	5.45e02	5.23e+02	95.963 % Recovery	
2 CCV	0	⊖IC-QC S04	QC	6.31e02	6.43e+02	101.902 % Recovery	
2 CCV	0	⊖IC-QC OXALATE2	QC	5.27e02	5.27e+02	100.000 % Recovery	
3 SAMPLE	S96T005049	⊖IC-01 F-02	LIQUID	N/A	1.506e+03	13.930	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 CL-02	LIQUID	N/A	2.476e+02	18.890	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 NO2-02	LIQUID	N/A	1.517e+03	120.000	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 BR-02	LIQUID	N/A	< 1.389e+02	138.900	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 NO3-02	LIQUID	N/A	2.386e+04	154.400	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 P04-02	LIQUID	N/A	< 1.333e+02	133.300	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 S04-02	LIQUID	N/A	4.115e+02	153.300	ug/mL
3 SAMPLE	S96T005049	⊖IC-01 OXALATE2	LIQUID	N/A	< 1.167e+02	116.700	ug/mL
4 DUP	S96T005049	⊖IC-01 F-02	LIQUID	1.51e+03	2.49e+03	1.333 RPD	
4 DUP	S96T005049	⊖IC-01 CL-02	LIQUID	2.48e+02	2.57e+02	3.564 RPD	
4 DUP	S96T005049	⊖IC-01 NO2-02	LIQUID	1.52e+03	1.53e+03	0.656 RPD	
4 DUP	S96T005049	⊖IC-01 BR-02	LIQUID	<1.39e2	<1.39e2	RPD	
4 DUP	S96T005049	⊖IC-01 NO3-02	LIQUID	3.39e+04	3.35e+04	1.187 RPD	
4 DUP	S96T005049	⊖IC-01 P04-02	LIQUID	<1.33e2	<1.33e2	RPD	
4 DUP	S96T005049	⊖IC-01 S04-02	LIQUID	4.12e+02	3.99e+02	3.206 RPD	
4 DUP	S96T005049	⊖IC-01 OXALATE2	LIQUID	<1.17e2	<1.17e2	RPD	
5 SPK	S96T005049	⊖IC-01 F-02	LIQUID	5.90e01	5.53e+01	93.729 % Recovery	
5 SPK	S96T005049	⊖IC-01 CL-02	LIQUID	7.90e01	7.27e+01	92.025 % Recovery	
5 SPK	S96T005049	⊖IC-01 NO2-02	LIQUID	5.40e02	5.03e+02	93.148 % Recovery	
5 SPK	S96T005049	⊖IC-01 BR-02	LIQUID	5.89e02	5.36e+02	91.002 % Recovery	
5 SPK	S96T005049	⊖IC-01 NO3-02	LIQUID	5.94e02	5.74e+02	96.633 % Recovery	
5 SPK	S96T005049	⊖IC-01 P04-02	LIQUID	5.45e02	5.38e+02	98.716 % Recovery	
5 SPK	S96T005049	⊖IC-01 S04-02	LIQUID	6.31e02	6.40e+02	101.426 % Recovery	
5 SPK	S96T005049	⊖IC-01 OXALATE2	LIQUID	5.27e02	5.47e+02	103.795 % Recovery	
6 SAMPLE	S96T005050	⊖IC-01 F-02	LIQUID	N/A	9.608e+03	13.330	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 13846

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S96T005050	0	@IC-01 CL-02	LIQUID	N/A	3.147e+02	18.890	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 NO2-02	LIQUID	N/A	4.644e+03	120.000	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 BR-02	LIQUID	N/A	1.389e+02	138.900	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 NO3-02	LIQUID	N/A	2.685e+04	154.400	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 PO4-02	LIQUID	N/A	2.892e+02	133.300	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 SO4-02	LIQUID	N/A	1.549e+03	153.300	ug/mL
6 SAMPLE	S96T005050	0	@IC-01 OXALATE2	LIQUID	N/A	3.201e+02	116.700	ug/mL
7 DUP	S96T005050	0	@IC-01 F-02	LIQUID	9.61e+03	9.61e+03	0.000	RPD
7 DUP	S96T005050	0	@IC-01 CL-02	LIQUID	3.15e+02	3.12e+02	0.957	RPD
7 DUP	S96T005050	0	@IC-01 NO2-02	LIQUID	4.64e+03	4.64e+03	0.000	RPD
7 DUP	S96T005050	0	@IC-01 BR-02	LIQUID	<1.39e2	<1.39e2		RPD
7 DUP	S96T005050	0	@IC-01 NO3-02	LIQUID	2.68e+04	2.69e+04	0.372	RPD
7 DUP	S96T005050	0	@IC-01 PO4-02	LIQUID	2.89e+02	3.24e+02	11.419	RPD
7 DUP	S96T005050	0	@IC-01 SO4-02	LIQUID	1.55e+03	1.58e+03	1.917	RPD
7 DUP	S96T005050	0	@IC-01 OXALATE2	LIQUID	3.20e+02	3.11e+02	2.853	RPD

Final page for worklist# 13846

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____ Date 10/31/96

LABCORE Data Entry Template for Worklist# 13846

Analyst: KRM Instrument: IC0 IC01 Book# 32N20A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005049 0		@IC-01	LIQUID	96001213	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005049 0		@IC-01	LIQUID		
5 SPK	S96T005049 0		@IC-01	LIQUID		
6 SAMPLE	S96T005050 0		@IC-01	LIQUID	96001213	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S96T005050 0		@IC-01	LIQUID		

Final page for worklist # 13846

Analyst Signature

Date

Analyst Signature

Date

138460c.csv

Uploaded 10/31/96 gm Lye

Validated 10/31/96 gm Lye

Data Entry Comments:

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

31-Oct-96

Worklist#: 13846

Data File: 138460C.CSV

	Seq	Type	Sample #		Seq#	Data File	Sample Name	Dilution
-	=>	1	CCB		1	96103001.d29	INST. BLK	1.00
	=>	2	CCV		2	96103001.d30	STD 32N20A	101.00
	=>	3	SAMPLE	S96T005049		96103001.d31	BLK	1.00
	=>	4	DUP	S96T005049	3	96103001.d33	S96T005049	1111.00
	=>	5	SPK	S96T005049	4	96103001.d34	S96T005049 DUP	1111.00
	=>	6	SAMPLE	S96T005050	5	96103001.d35	S96T005049 SPIK	1111.00
	=>	7	DUP	S96T005050	6	96103001.d36	S96T005050	1111.00
					7	96103001.d37	S96T005050 DUP	1111.00
+				+				

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Date: 10/30/1996 07:29:40

Sample Name: INST. BLK

Data File : C:\DX\DATA\96103001.D29

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 29

Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 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
2	3.37	nitrate	0.213	88	707	1	-1.27
3	5.81		0.000	29	1135	1	
Totals			0.213	117	1843		

File: 96103001.D29 Sample: INST. BLK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 392 TO 398.

Sample Name: STD 32N20A Date: 10/30/1996 07:48:41
 Data File : C:\DX\DATA\96103001.D30
 Method : C:\DX\METHOD\KIT.MET
 ACT Address: 1 System: 1 Inject#: 30 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	0.89		0.000	41	155	2	
2	1.06	fluoride	52.615	1772	10348	2	3.92
3	1.61	chloride	73.401	1769	9721	1	-0.41
4	1.92	nitrite	495.065	7067	45631	1	-3.03
5	2.89	bromide	555.924	4940	34086	1	-2.91
6	3.30	nitrate	596.126	5491	45706	1	-3.23
7	4.69	phosphate	523.016	1514	20919	1	-4.80
8	6.13	sulfate	642.675	4459	65718	1	-6.50
9	8.05	oxalate	526.660	1994	41685	1	-1.91
Totals			3465.483	29046	273971		

File: 96103001.D30 Sample: STD 32N20A

Sample Name: S96T005049 Date: 10/30/1996 10:08:35
 Data File : C:\DX\DATA\96103001.D33
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 33 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1111	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	0.90		0.000	53	192	2	
2	1.05	fluoride	1505.613	4707	27770	2	3.27
3	1.61	chloride	247.586	518	2975	1	-0.41
4	1.92	nitrite	1517.012	1788	11970	1	-3.03
5	3.20	nitrate	33855.508	26916	259259	1	-6.16
6	6.19	sulfate	411.527	213	3325	1	-5.69
Totals			37537.246	34194	305490		

File: 96103001.D33 Sample: S96T005049

Sample Name: S96T005049 DUP Date: 10/30/1996 10:23:41
 Data File : C:\DX\DATA\96103001.D34
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 34 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1111	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	0.90		0.000	57	211	2	
2	1.05	fluoride	1493.597	4733	27540	2	3.27
3	1.61	chloride	257.015	523	3087	1	0.00
4	1.92	nitrite	1528.045	1792	12064	1	-3.03
5	3.20	nitrate	33498.360	26790	256220	1	-6.16
6	6.19	sulfate	399.119	215	3210	1	-5.69
Totals			37176.136	34110	302332		

File: 96103001.D34 Sample: S96T005049 DUP

Sample Name: S96T005049 SPIKE Date: 10/30/1996 10:36:00
 Data File : C:\DX\DATA\96103001.D35
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 35 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1111	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	0.89		0.000	89	351	2	
2	1.05	fluoride	2063.742	6735	38598	2	2.61
3	1.60	chloride	981.684	2179	11847	1	-0.83
4	1.91	nitrite	6593.295	8800	55551	1	-3.37
5	2.89	bromide	5413.240	4737	30039	1	-3.13
6	3.19	nitrate	39650.701	31846	309679	1	-6.55
7	4.67	phosphate	5431.212	1438	19732	1	-5.34
8	6.08	sulfate	6881.147	3948	63924	1	-7.32
9	8.05	oxalate	5526.378	2081	39740	1	-1.91
Totals			72541.399	61853	569460		

File: 96103001.D35 Sample: S96T005049 SPIKE

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=====
Sample Name: S96T005050                      Date: 10/30/1996 10:47:45
Data File  : C:\DX\DATA\96103001.D36
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 36          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1111 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	0.90		0.000	70	199	2	
2	1.05	fluoride	9607.629	41453	228048	2	2.61
3	1.60	chloride	314.709	672	3777	1	-0.83
4	1.91	nitrite	4643.916	5996	38724	1	-3.37
5	3.21	nitrate	26852.664	21399	201020	1	-5.77
6	4.03		0.000	92	847	1	
7	4.67	phosphate	289.219	83	1045	1	-5.34
8	6.13	sulfate	1548.701	900	13830	1	-6.50
9	8.11	oxalate	320.053	104	2081	1	-1.26
Totals			43576.892	70769	489571		

File: 96103001.D36 Sample: S96T005050

Sample Name: S96T005050 DUP Date: 10/30/1996 11:00:00
 Data File : C:\DX\DATA\96103001.D37
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 37 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1111	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	0.90		0.000	66	182	2	
2	1.05	fluoride	9613.489	41459	228252	2	2.61
3	1.60	chloride	311.567	676	3740	1	-0.83
4	1.91	nitrite	4637.035	5982	38665	1	-3.37
5	3.21	nitrate	26860.984	21399	201088	1	-5.77
6	4.03		0.000	86	787	1	
7	4.69	phosphate	324.196	92	1171	1	-4.80
8	6.13	sulfate	1580.258	912	14123	1	-6.50
9	8.11	oxalate	311.488	106	2020	1	-1.26
Totals			43639.017	70778	490026		

File: 96103001.D37 Sample: S96T005050 DUP

LABCORE Completed Worklist Report for Worklist# 13847

Analyst: krm

Instrument: IC01

Book# 32N20A

Method: 19-533-105 Rev/Mod D-1

Worklist Comment: AW-105 IC, USE .100ML-10ML SS. 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	<1.39e-1		ug/mL
1 CCB	0	⊗IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	⊗IC-QC S04	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	5.34e+01	90.508 % Recovery	
2 CCV	0	⊗IC-QC CL	QC	7.90e01	7.18e+01	90.886 % Recovery	
2 CCV	0	⊗IC-QC NO2	QC	5.40e02	4.88e+02	90.370 % Recovery	
2 CCV	0	⊗IC-QC BR	QC	5.89e02	5.72e+02	97.114 % Recovery	
2 CCV	0	⊗IC-QC NO3	QC	5.94e02	5.99e+02	100.673 % Recovery	
2 CCV	0	⊗IC-QC P04	QC	5.45e02	5.32e+02	97.615 % Recovery	
2 CCV	0	⊗IC-QC S04	QC	6.31e02	6.38e+02	101.109 % Recovery	
2 CCV	0	⊗IC-QC OXALATE2	QC	5.27e02	5.29e+02	100.380 % Recovery	
4 DUP	S96T005051 0	⊗IC-01 F-02	LIQUID	7.70e+02	7.91e+02	2.691 RPD	
4 DUP	S96T005051 0	⊗IC-01 CL-02	LIQUID	1.68e+01	1.71e+01	1.770 RPD	
4 DUP	S96T005051 0	⊗IC-01 NO2-02	LIQUID	3.05e+02	3.10e+02	1.826 RPD	
4 DUP	S96T005051 0	⊗IC-01 BR-02	LIQUID	<5.64e1	<5.64e1	RPD	
4 DUP	S96T005051 0	⊗IC-01 NO3-02	LIQUID	2.01e+03	2.06e+03	2.457 RPD	
4 DUP	S96T005051 0	⊗IC-01 P04-02	LIQUID	<5.41e1	<5.41e1	RPD	
4 DUP	S96T005051 0	⊗IC-01 S04-02	LIQUID	1.02e+02	1.03e+02	0.976 RPD	
4 DUP	S96T005051 0	⊗IC-01 OXALATE2	LIQUID	<4.74e1	<4.74e1	RPD	
5 SPK	S96T005051 0	⊗IC-01 F-02	LIQUID	5.90e01	4.86e+00	8.237 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 CL-02	LIQUID	7.90e01	4.81e+00	6.089 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 NO2-02	LIQUID	5.40e02	3.54e+01	6.556 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 BR-02	LIQUID	5.89e02	4.16e+01	7.063 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 NO3-02	LIQUID	5.94e02	4.57e+01	7.694 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 P04-02	LIQUID	5.45e02	3.07e+01	5.633 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 S04-02	LIQUID	6.31e02	4.18e+01	6.624 % Recovery	
5 SPK	S96T005051 0	⊗IC-01 OXALATE2	LIQUID	5.27e02	3.85e+01	7.306 % Recovery	
6 SAMPLE	S96T005081 0	⊗IC-01 F-02	LIQUID	N/A	4.229e+03	5.412 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 CL-02	LIQUID	N/A	3.983e+02	7.667 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 NO2-02	LIQUID	N/A	3.006e+03	48.720 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 BR-02	LIQUID	N/A	< 5.638e+01	56.380 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 NO3-02	LIQUID	N/A	2.928e+04	62.490 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 P04-02	LIQUID	N/A	2.279e+02	54.120 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 S04-02	LIQUID	N/A	9.507e+02	62.240 ug/mL	
6 SAMPLE	S96T005081 0	⊗IC-01 OXALATE2	LIQUID	N/A	1.958e+02	47.350 ug/mL	
7 DUP	S96T005081 0	⊗IC-01 F-02	LIQUID	4.23e+03	4.23e+03	0.000 RPD	

LABCORE Completed Worklist Report for Worklist# 13847

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
7	DUP	S96T005081	0		@IC-01	CL-02	LIQUID	3.98e+02	3.93e+02	1.264 RPD
7	DUP	S96T005081	0		@IC-01	NO2-02	LIQUID	3.01e+03	2.93e+03	2.694 RPD
7	DUP	S96T005081	0		@IC-01	BR-02	LIQUID	<5.64e1	<5.64e1	RPD
7	DUP	S96T005081	0		@IC-01	NO3-02	LIQUID	2.93e+04	2.91e+04	0.685 RPD
7	DUP	S96T005081	0		@IC-01	PO4-02	LIQUID	2.28e+02	2.23e+02	2.217 RPD
7	DUP	S96T005081	0		@IC-01	SO4-02	LIQUID	9.51e+02	9.49e+02	0.211 RPD
7	DUP	S96T005081	0		@IC-01	OXALATE2	LIQUID	1.96e+02	2.32e+02	16.822 RPD

Final page for worklist# 13847

Analyst Signature Date

Analyst Signature Date

John M. Lutz 10/31/96

Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 13847

Analyst: KRM Instrument: IC0 IC01 Book# 32N20A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 IC, USE .100ML-10ML SS. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005051 0		@IC-01	LIQUID	96001213	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005051 0		@IC-01	LIQUID		
5 SPK	S96T005051 0		@IC-01	LIQUID		
6 SAMPLE	S96T005081 0		@IC-01	LIQUID	96001215	AW-105 GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S96T005081 0		@IC-01	LIQUID		

Final page for worklist # 13847

Analyst Signature

Date

Analyst Signature

Date

138470C.csv

Uploaded 10/31/96 Gmf

S96T005051 Rejected because spike was not
diluted properly. Gmf

Ret validated 10/31/96 Gmf
Re run on NKL 14522

Data Entry Comments:

451 QF - .250 - 10 - 1000 - 10

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				31-Oct-96			
Worklist#: 13847				Data File: 13847OC.CSV							
		Seq	Type	Sample #			Seq#	Data File	Sample Name	Dilution	
-	=>	1	CCB	S96T005051 S96T005051 S96T005051 S96T005051 S96T005081 S96T005081	-	2	96103001.d38	STD 32N20A	101.00		
	=>	2	CCV			1	96103001.d02	BLK	1.00		
	=>	3	SAMPLE			3	96103001.d43	S96T005051	451.00		
	=>	4	DUP			4	96103001.d44	S96T005051 DUP	451.00		
	=>	5	SPK			5	96103001.d45	S96T005051 SPK	451.00		
	=>	6	SAMPLE			6	96103001.d03	S96T005081	451.00		
	=>	7	DUP			7	96103001.d04	S96T005081 DUP	451.00		
+					+						

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Sample Name: STD 32N20A Date: 10/30/1996 11:18:27
 Data File : C:\DX\DATA\96103001.D38
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 38 Detector: CDM-1
 Analyst : *John J. Lyle* Column: AG4A/AS4A anion column
for KRM 2/13/97

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	0.90		0.000	39	138	2	
2	1.06	fluoride	53.388	1794	10505	2	3.92
3	1.42		0.000	35	181	1	
4	1.61	chloride	71.827	1826	9511	1	-0.41
5	1.91	nitrite	488.441	7207	45003	1	-3.37
6	2.89	bromide	571.514	4997	35077	1	-3.13
7	3.29	nitrate	598.311	5498	45880	1	-3.62
8	4.67	phosphate	532.325	1554	21298	1	-5.34
9	6.08	sulfate	638.499	4159	65280	1	-7.32
10	8.05	oxalate	529.245	2221	41893	1	-1.91
Totals			3483.551	29329	274765		

File: 96103001.D38 Sample: STD 32N20A

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 402 TO 406

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=====
Sample Name: BLK                               Date: 10/30/1996 15:51:00
Data File  : C:\DX\DATA\96103001.D02
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          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	82	488	1	
2	2.27		0.000	678	5544	1	
3	5.12	phosphate	0.083	23	339	1	3.85
Totals			0.083	782	6371		

File: 96103001.D02 Sample: BLK

Data Reprocessed On 10/31/1996 10:04:12

```

=====
Sample Name: S96T005081                      Date: 10/30/1996 16:03:49
Data File  : F:\DATA\96103001.D03
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 3           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      451    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	0.90		0.000	138	421	2	
2	1.05	fluoride	4229.315	46245	258118	2	2.61
3	1.58	chloride	398.266	2019	11840	1	-2.07
4	1.90	nitrite	3005.514	9531	62581	1	-4.04
5	3.09	nitrate	29276.223	58646	648071	1	0.11
6	4.01		0.000	89	846	1	
7	4.64	phosphate	227.856	154	2021	1	-5.88
8	6.08	sulfate	950.653	1435	21194	1	-7.32
9	8.00	oxalate	195.773	162	3246	1	-2.56
Totals			38283.599	118419	1008337		

File: 96103001.D03 Sample: S96T005081

Data Reprocessed On 10/31/1996 10:05:30

```

=====
Sample Name: S96T005081  DUP                      Date: 10/30/1996 16:15:26
Data File  : F:\DATA\96103001.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          451    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	0.90		0.000	134	406	2	
2	1.05	fluoride	4230.268	46200	258211	2	2.61
3	1.58	chloride	393.002	2041	11681	1	-2.07
4	1.90	nitrite	2926.240	9501	60885	1	-4.04
5	3.10	nitrate	29123.480	58682	643347	1	0.00
6	4.00		0.000	84	769	1	
7	4.64	phosphate	223.061	155	1979	1	-5.88
8	6.08	sulfate	949.445	1453	21166	1	-7.32
9	8.00	oxalate	231.577	179	3880	1	-2.56
Totals			38077.072	118430	1002325		

File: 96103001.D04 Sample: S96T005081 DUP

LABCORE Completed Worklist Report for Worklist# 13849

Analyst: eal

Instrument: IC01

Book# 32020 A

Method: 1A-533-105 Rev/Mod 8-1

Worklist Comment: AW-105 IC, USE .100ML-10ML SS. 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	<1.00e-1		ug/mL
1 CCB	0	QIC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	QIC-QC NO3	QC	1	1.71e-01	0.171	ug/mL
1 CCB	0	QIC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	QIC-QC SO4	QC	1	<1.30e-1		ug/mL
1 CCB	0	QIC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	QIC-QC F	QC	5.90e01	5.51e+01	93.390 % Recovery	
2 CCV	0	QIC-QC CL	QC	7.90e01	7.13e+01	90.253 % Recovery	
2 CCV	0	QIC-QC NO2	QC	5.40e02	4.90e+02	90.741 % 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	5.89e+02	99.158 % Recovery	
2 CCV	0	QIC-QC PO4	QC	5.45e02	5.33e+02	97.798 % Recovery	
2 CCV	0	QIC-QC SO4	QC	6.31e02	6.34e+02	100.475 % Recovery	
2 CCV	0	QIC-QC OXALATE2	QC	5.27e02	5.30e+02	100.569 % Recovery	
3 SAMPLE	S96T005082 0	QIC-01 F-02	LIQUID	N/A	1.044e+04	25.450	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 CL-02	LIQUID	N/A	3.241e+02	18.890	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 NO2-02	LIQUID	N/A	4.706e+03	120.000	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 BR-02	LIQUID	N/A	1.389e+02	138.900	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 NO3-02	LIQUID	N/A	2.705e+04	294.800	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 PO4-02	LIQUID	N/A	3.693e+02	133.300	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 SO4-02	LIQUID	N/A	1.535e+03	153.300	ug/mL
3 SAMPLE	S96T005082 0	QIC-01 OXALATE2	LIQUID	N/A	3.208e+02	116.700	ug/mL
4 DUP	S96T005082 0	QIC-01 F-02	LIQUID	1.04e+04	1.05e+04	0.957	RPD
4 DUP	S96T005082 0	QIC-01 CL-02	LIQUID	3.24e+02	3.23e+02	0.309	RPD
4 DUP	S96T005082 0	QIC-01 NO2-02	LIQUID	4.71e+03	4.73e+03	0.424	RPD
4 DUP	S96T005082 0	QIC-01 BR-02	LIQUID	<1.39e02	<1.39e02		RPD
4 DUP	S96T005082 0	QIC-01 NO3-02	LIQUID	2.70e+04	2.69e+04	0.371	RPD
4 DUP	S96T005082 0	QIC-01 PO4-02	LIQUID	3.69e+02	4.14e+02	11.494	RPD
4 DUP	S96T005082 0	QIC-01 SO4-02	LIQUID	1.54e+03	1.49e+03	3.300	RPD
4 DUP	S96T005082 0	QIC-01 OXALATE2	LIQUID	3.21e+02	3.88e+02	18.900	RPD
5 SPK	S96T005082 0	QIC-01 F-02	LIQUID	5.90e01	5.56e+01	94.237 % Recovery	
5 SPK	S96T005082 0	QIC-01 CL-02	LIQUID	7.90e01	7.06e+01	89.367 % Recovery	
5 SPK	S96T005082 0	QIC-01 NO2-02	LIQUID	5.40e02	5.16e+02	95.556 % Recovery	
5 SPK	S96T005082 0	QIC-01 BR-02	LIQUID	5.89e02	5.44e+02	92.360 % Recovery	
5 SPK	S96T005082 0	QIC-01 NO3-02	LIQUID	5.94e02	6.33e+02	106.566 % Recovery	
5 SPK	S96T005082 0	QIC-01 PO4-02	LIQUID	5.45e02	5.29e+02	97.064 % Recovery	
5 SPK	S96T005082 0	QIC-01 SO4-02	LIQUID	6.31e02	6.39e+02	101.268 % Recovery	
5 SPK	S96T005082 0	QIC-01 OXALATE2	LIQUID	5.27e02	5.36e+02	101.708 % Recovery	
6 SAMPLE	S96T005083 0	QIC-01 F-02	LIQUID	N/A	5.887e+03	13.330	ug/mL

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 13849

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S96T005083 0	QIC-01 CL-02	LIQUID	N/A	2.956e+02	18.890	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 NO2-02	LIQUID	N/A	3.941e+03	120.000	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 BR-02	LIQUID	N/A	1.389e+02	138.900	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 NO3-02	LIQUID	N/A	3.034e+04	154.400	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 PO4-02	LIQUID	N/A	3.931e+02	133.300	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 SO4-02	LIQUID	N/A	1.239e+03	153.300	ug/mL
6 SAMPLE	S96T005083 0	QIC-01 OXALATE2	LIQUID	N/A	2.723e+02	116.700	ug/mL
7 DUP	S96T005083 0	QIC-01 F-02	LIQUID	9.89e+03	9.81e+03	0.812	RPD
7 DUP	S96T005083 0	QIC-01 CL-02	LIQUID	2.96e+02	2.98e+02	0.673	RPD
7 DUP	S96T005083 0	QIC-01 NO2-02	LIQUID	3.94e+03	3.92e+03	0.509	RPD
7 DUP	S96T005083 0	QIC-01 BR-02	LIQUID	<1.39e2	<1.39e2		RPD
7 DUP	S96T005083 0	QIC-01 NO3-02	LIQUID	3.03e+04	3.03e+04	0.000	RPD
7 DUP	S96T005083 0	QIC-01 PO4-02	LIQUID	3.93e+02	4.04e+02	2.760	RPD
7 DUP	S96T005083 0	QIC-01 SO4-02	LIQUID	1.24e+03	1.28e+03	3.175	RPD
7 DUP	S96T005083 0	QIC-01 OXALATE2	LIQUID	2.72e+02	2.87e+02	5.367	RPD

Final page for worklist# 13849

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

11/4/96
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 13849

Analyst: EM Instrument: IC0 IC01 Book# 32N20-A

Method: LA-533-105 Rev/Mod D.1

Worklist Comment: AW-105 IC, USE .100ML-10ML SS. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	SAMPLE	S96T005082 0			@IC-01	LIQUID	96001215	AW-105 GRAB
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
4	DUP	S96T005082 0			@IC-01	LIQUID		
5	SPK	S96T005082 0			@IC-01	LIQUID		
6	SAMPLE	S96T005083 0			@IC-01	LIQUID	96001215	AW-105 GRAB
		Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7	DUP	S96T005083 0			@IC-01	LIQUID		

Final page for worklist # 13849

A. Lambel 10-31-96
Analyst Signature Date
A. Lambel 11-01-96

Analyst Signature Date

13849 NV, CSV

Inshell

Uploaded 11/3/96 M. Luge

Validated 11/4/96 M. Luge

Data Entry Comments:

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

04-Nov-96

Worklist#: 13849

Data File: 13849NV.CSV

	Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution
-	=>	1	CCB	1	96103101.d01	INST. BLANK	1.00
	=>	2	CCV	2	96103101.d04	32N20-A STD.	101.00
	=>	3	SAMPLE		96103101.d05	S96T005082	101.00
	=>	4	DUP		96103101.d06	S96T005082	561.00
	=>	5	SPK	3	96103101.d07	S96T005082	1111.00
	=>	6	SAMPLE	4	96103101.d08	S96T005082 DUP	1111.00
	=>	7	DUP	5	96103101.d09	S96T005082 SPIK	1111.00
				3	96103101.d10	S96T005082	2121.00
				4	96103101.d11	S96T005082 DUP	2121.00
				5	96103101.d12	S96T005082 SPIKE	2121.00
				6	96103101.d13	S96T005083	1111.00
				7	96103101.d14	S96T005083 DUP	1111.00
+				+			

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

A-0010-12

SAMPLE ANALYTE RESOLUTION FOR S96T005082

04-Nov-96

Analyte		Samples Selected from Data File for Worklist Slot Number 3				
		[1]	[2]	[3]	[4]	[5]
		96103101.d07	96103101.d10			
		1.1110e+003	2.1210e+003			
F-02	2		1.0437e+004			
CL-02	1	324.0670				
NO2-02	1	4.7057e+003				
BR-02	1	0.0000				
NO3-02	2		2.7053e+004			
PO4-02	1	369.3430				
SO4-02	1	1.5351e+003				
OXALATE2	1	320.8330				

Done (F4) Abort (Shift-F3) UnPick (F7)

A-0010-12		SAMPLE ANALYTE RESOLUTION FOR S96T005082				04-Nov-96
Analyte		Samples Selected from Data File for Worklist Slot Number 4				
		[1]	[2]	[3]	[4]	[5]
		96103101.d08	96103101.d11			
		1.1110e+003	2.1210e+003			
F-02	2		1.0526e+004			
CL-02	1	323.1310				
NO2-02	1	4.7258e+003				
BR-02	1	0.0000				
NO3-02	2		2.6928e+004			
PO4-02	1	414.1170				
SO4-02	1	1.4923e+003				
OXALATE2	1	388.1870				

Done (F4) Abort (Shift-F3) UnPick (F7)

A-0010-12

SAMPLE ANALYTE RESOLUTION FOR S96T005082

04-Nov-96

Analyte		Samples Selected from Data File for Worklist Slot Number 5				
		[1]	[2]	[3]	[4]	[5]
		96103101.d09	96103101.d12			
		1.1110e+003	2.1210e+003			
F-02	2		1.1561e+004			
CL-02	1	1.0369e+003				
NO2-02	1	9.9200e+003				
BR-02	1	5.4975e+003				
NO3-02	2		3.9846e+004			
PO4-02	1	5.7099e+003				
SO4-02	1	7.9854e+003				
OXALATE2	1	5.7332e+003				

Done (F4) Abort (Shift-F3) UnPick (F7)

Data Reprocessed On 11/04/1996 10:02:45

Sample Name: INST. BLANK Date: 10/31/1996 23:20:42
 Data File : C:\DX\DATA\96103101.d01
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *John Lyle* Column: AG4A/AS4A anion column

John Lyle
60 EAL 2/13/97

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	0.16		0.000	53	293	1	
2	0.40		0.000	27	107	1	
4	3.37	nitrate	0.171	56	375	1	-1.08
Totals			0.171	137	775		

File: 96103101.d01 Sample: INST. BLANK

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 414 TO 423.


```

=====
Sample Name: 32N20-A STD.                      Date: 11/01/1996 00:18:40
Data File  : C:\DX\DATA\96103101.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		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	40	146	2	
2	1.05	fluoride	55.077	1788	10848	2	3.27
3	1.60	chloride	71.340	1748	9445	1	-0.83
4	1.91	nitrite	489.784	7089	45130	1	-3.70
5	2.88	bromide	573.748	4986	35219	1	-3.36
6	3.28	nitrate	589.019	5473	45141	1	-3.81
7	4.59	phosphate	532.694	1533	21313	1	-6.96
8	6.03	sulfate	633.645	4595	64771	1	-8.13
9	7.95	oxalate	530.121	2244	41963	1	-3.21
Totals			3475.427	29495	273976		

File: 96103101.d04 Sample: 32N20-A STD.

```

=====
Sample Name: S96T005082                      Date: 11/01/1996 02:20:56
Data File  : C:\DX\DATA\96103101.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          1111 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	0.90		0.000	76	203	2	
2	1.05	fluoride	9977.369	44208	241274	2	3.27
3	1.60	chloride	324.067	670	3889	1	-0.83
4	1.91	nitrite	4705.706	5967	39256	1	-3.70
5	3.19	nitrate	29356.621	23837	221530	1	-6.35
6	3.99		0.000	72	666	1	
7	4.61	phosphate	369.343	102	1332	1	-6.42
8	6.08	sulfate	1535.090	916	13704	1	-7.32
9	8.00	oxalate	320.833	115	2087	1	-2.56
Totals			46589.030	75962	523941		

File: 96103101.d07 Sample: S96T005082

Data Reprocessed On 11/04/1996 10:02:55

```

=====
Sample Name: S96T005082  DUP                      Date: 11/01/1996 02:34:55
Data File  : C:\DX\DATA\96103101.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          1111 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	0.90		0.000	75	199	2	
2	1.05	fluoride	10012.624	43895	242575	2	2.61
3	1.59	chloride	323.131	671	3878	1	-1.24
4	1.91	nitrite	4725.765	5983	39428	1	-3.70
5	3.20	nitrate	29387.725	23780	221787	1	-6.16
6	3.98		0.000	75	699	1	
7	4.61	phosphate	414.117	106	1493	1	-6.42
8	6.08	sulfate	1492.309	913	13308	1	-7.32
9	8.00	oxalate	388.187	127	2571	1	-2.56
Totals			46743.859	75625	525937		

File: 96103101.d08 Sample: S96T005082 DUP

Data Reprocessed On 11/04/1996 10:02:57

```

=====
Sample Name: S96T005082 SPIKE                      Date: 11/01/1996 02:52:50
Data File  : C:\DX\DATA\96103101.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 1111 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	0.89		0.000	93	269	2	
2	1.05	fluoride	10291.253	46101	253125	2	2.61
3	1.59	chloride	1036.923	2266	12523	1	-1.65
4	1.90	nitrite	9920.047	13475	84536	1	-4.04
5	2.87	bromide	5497.536	4681	30524	1	0.12
6	3.17	nitrate	35927.487	28849	277039	1	-6.94
7	3.98		0.000	68	614	1	
8	4.59	phosphate	5709.905	1528	20760	1	-6.96
9	6.03	sulfate	7985.353	5334	74474	1	-8.13
10	7.95	oxalate	5733.204	2181	41248	1	-3.21
Totals			82101.708	104575	795112		

File: 96103101.d09 Sample: S96T005082 SPIKE

Data Reprocessed On 11/04/1996 10:03:00

```

=====
Sample Name: S96T005082                      Date: 11/01/1996 03:04:24
Data File  : C:\DX\DATA\96103101.d10
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 2121 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	0.90		0.000	40	125	2	
2	1.05	fluoride	10437.007	20610	111568	2	2.61
3	1.61	chloride	303.247	348	1917	1	-0.41
4	1.91	nitrite	4338.684	2771	18409	1	-3.37
5	3.24	nitrate	27052.541	11633	101885	1	-4.99
6	4.61	phosphate	283.281	44	540	1	-6.42
7	6.08	sulfate	1524.928	445	6895	1	-7.32
8	8.00	oxalate	306.956	53	938	1	-2.56
Totals			44246.643	35944	242277		

File: 96103101.d10 Sample: S96T005082

Data Reprocessed On 11/04/1996 10:03:02

```

=====
Sample Name: S96T005082 DUP                      Date: 11/01/1996 03:18:54
Data File  : C:\DX\DATA\96103101.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      50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	44	128	2	
2	1.05	fluoride	10525.893	20790	112668	2	2.61
3	1.61	chloride	329.166	364	2078	1	-0.41
4	1.91	nitrite	4405.737	2798	18708	1	-3.37
5	3.24	nitrate	26928.013	11710	101394	1	-4.99
6	3.98		0.000	33	299	1	
7	4.61	phosphate	408.495	55	775	1	-6.42
8	6.08	sulfate	1517.771	449	6861	1	-7.32
9	8.00	oxalate	357.038	61	1126	1	-2.56
Totals			44472.114	36305	244038		

File: 96103101.d11 Sample: S96T005082 DUP

Data Reprocessed On 11/04/1996 09:46:25

```

=====
Sample Name: S96T005082 SPIKE          Date: 11/01/1996 03:29:44
Data File  : C:\DX\DATA\96103101.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 2121 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	0.90		0.000	65	194	2	
2	1.05	fluoride	11560.758	23027	125739	2	2.61
3	1.59	chloride	1742.603	2025	11005	1	-1.24
4	1.90	nitrite	14461.668	10086	64070	1	-4.04
5	2.87	bromide	11285.038	4841	32908	1	0.12
6	3.22	nitrate	39846.397	17189	153333	1	-5.57
7	3.98		0.000	29	249	1	
8	4.59	phosphate	10987.367	1521	20927	1	-6.96
9	6.03	sulfate	14253.444	4957	69505	1	-8.13
10	7.95	oxalate	10930.832	2199	41193	1	-3.21
Totals			115068.108	65939	519122		

File: 96103101.D12 Sample: S96T005082 SPIKE

Data Reprocessed On 11/04/1996 10:03:06

```

=====
Sample Name: S96T005083                      Date: 11/01/1996 03:40:59
Data File  : C:\DX\DATA\96103101.d13
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 13          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1111 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	0.89		0.000	63	176	2	
2	1.05	fluoride	9886.902	43709	237969	2	2.61
3	1.60	chloride	295.584	643	3548	1	-0.83
4	1.91	nitrite	3940.910	5025	32684	1	-3.70
5	3.19	nitrate	30338.728	24243	229667	1	-6.35
6	3.98		0.000	56	512	1	
7	4.61	phosphate	393.070	113	1418	1	-6.42
8	6.08	sulfate	1238.866	761	10962	1	-7.32
9	8.00	oxalate	272.269	91	1738	1	-2.56
Totals			46366.330	74705	518674		

File: 96103101.d13 Sample: S96T005083

Sample Name: S96T005083 DUP	Date: 11/01/1996 03:52:11
Data File : C:\DX\DATA\96103101.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	1111	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	0.90		0.000	72	207	2	
2	1.05	fluoride	9811.758	43533	235259	2	2.61
3	1.60	chloride	297.892	660	3576	1	-0.83
4	1.91	nitrite	3921.694	5042	32519	1	-3.70
5	3.19	nitrate	30306.992	24337	229404	1	-6.55
6	3.98		0.000	58	539	1	
7	4.61	phosphate	404.332	108	1458	1	-6.42
8	6.08	sulfate	1276.482	770	11310	1	-7.32
9	8.00	oxalate	286.531	92	1840	1	-2.56
Totals			46305.681	74672	516112		

File: 96103101.d14 Sample: S96T005083 DUP

LABCORE Completed Worklist Report for Worklist# 14191

Analyst: eal

Instrument: IC01

Book# 32N204

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 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	1.96e-01	0.196	ug/mL
1 CCB	0	@IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC S04	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	5.34e+01	90.508 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.23e+01	91.519 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.40e02	4.95e+02	91.667 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.57e+02	94.567 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	5.94e+02	100.000 % Recovery	
2 CCV	0	@IC-QC P04	QC	5.45e02	5.22e+02	95.780 % Recovery	
2 CCV	0	@IC-QC S04	QC	6.31e02	6.41e+02	101.585 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.27e02	5.23e+02	99.241 % Recovery	
3 BLNK-PREP	0	@IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	@IC-01 CL-02	SOLID	1	2.00e-02	0.020	ug/g
3 BLNK-PREP	0	@IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	@IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	@IC-01 NO3-02	SOLID	1	1.79e-01	0.179	ug/g
3 BLNK-PREP	0	@IC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	@IC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	@IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S96T005055	W @IC-01 F-02	SOLID	N/A	1.410e+03	22.110	ug/g
4 SAMPLE	S96T005055	W @IC-01 CL-02	SOLID	N/A	2.082e+02	31.320	ug/g
4 SAMPLE	S96T005055	W @IC-01 NO2-02	SOLID	N/A	1.306e+03	198.900	ug/g
4 SAMPLE	S96T005055	W @IC-01 BR-02	SOLID	N/A	< 2.303e+02	230.300	ug/g
4 SAMPLE	S96T005055	W @IC-01 NO3-02	SOLID	N/A	2.618e+04	256.100	ug/g
4 SAMPLE	S96T005055	W @IC-01 P04-02	SOLID	N/A	4.451e+02	221.100	ug/g
4 SAMPLE	S96T005055	W @IC-01 S04-02	SOLID	N/A	4.340e+02	254.200	ug/g
4 SAMPLE	S96T005055	W @IC-01 OXALATE2	SOLID	N/A	< 1.934e+02	193.400	ug/g
5 DUP	S96T005055	W @IC-01 F-02	SOLID	1.41e+03	1.38e+03	2.151	RPD
5 DUP	S96T005055	W @IC-01 CL-02	SOLID	2.08e+02	2.03e+02	2.433	RPD
5 DUP	S96T005055	W @IC-01 NO2-02	SOLID	1.31e+03	1.26e+03	3.891	RPD
5 DUP	S96T005055	W @IC-01 BR-02	SOLID	< 2.30e2	< 2.28e2		RPD
5 DUP	S96T005055	W @IC-01 NO3-02	SOLID	2.62e+04	2.64e+04	0.760	RPD
5 DUP	S96T005055	W @IC-01 P04-02	SOLID	4.45e+02	4.86e+02	8.808	RPD
5 DUP	S96T005055	W @IC-01 S04-02	SOLID	4.34e+02	4.15e+02	4.476	RPD
5 DUP	S96T005055	W @IC-01 OXALATE2	SOLID	<1.93e2	<1.92e2		RPD
6 SPK	S96T005055	W @IC-01 F-02	SOLID	5.90e01	6.26e+01	106.102 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 14191

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S96T005055 0 W	@IC-01 CL-02	SOLID	7.90e01	7.42e+01	93.924 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 NO2-02	SOLID	5.40e02	5.05e+02	93.519 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 BR-02	SOLID	5.89e02	5.78e+02	98.132 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 NO3-02	SOLID	5.94e02	6.96e+02	117.172 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 PO4-02	SOLID	5.45e02	5.37e+02	98.532 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 SO4-02	SOLID	6.31e02	6.59e+02	104.437 %	Recovery
6 SPK	S96T005055 0 W	@IC-01 OXALATE2	SOLID	5.27e02	5.41e+02	102.657 %	Recovery
7 SAMPLE	S96T005056 0 W	@IC-01 F-02	SOLID	N/A	3.843e+04	116.300	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 CL-02	SOLID	N/A	1.750e+02	164.800	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 NO2-02	SOLID	N/A	3.684e+03	1047.000	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 BR-02	SOLID	N/A	1.212e+03	1212.000	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 NO3-02	SOLID	N/A	1.862e+04	1347.000	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 PO4-02	SOLID	N/A	1.163e+03	1163.000	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 SO4-02	SOLID	N/A	1.538e+03	1338.000	ug/g
7 SAMPLE	S96T005056 0 W	@IC-01 OXALATE2	SOLID	N/A	1.018e+03	1017.000	ug/g
8 DUP	S96T005056 0 W	@IC-01 F-02	SOLID	3.84e+04	3.48e+04	9.836	RPD
8 DUP	S96T005056 0 W	@IC-01 CL-02	SOLID	1.75e+02	<1.66e2		RPD
8 DUP	S96T005056 0 W	@IC-01 NO2-02	SOLID	3.68e+03	3.52e+03	4.444	RPD
8 DUP	S96T005056 0 W	@IC-01 BR-02	SOLID	<1.21e3	<1.22e3		RPD
8 DUP	S96T005056 0 W	@IC-01 NO3-02	SOLID	1.86e+04	1.69e+04	9.577	RPD
8 DUP	S96T005056 0 W	@IC-01 PO4-02	SOLID	<1.16e3	<1.17e3		RPD
8 DUP	S96T005056 0 W	@IC-01 SO4-02	SOLID	1.54e+03	1.73e+03	11.621	RPD
8 DUP	S96T005056 0 W	@IC-01 OXALATE2	SOLID	<1.02e3	<1.03e3		RPD

Final page for worklist# 14191

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John M. Faye 10/31/96
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 14191

Analyst: SM Instrument: IC0 IC01 Book# 32N20A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-105 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	S96T005055 0 W	@IC-01	SOLID	96001213	AW-105	GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S96T005055 0 W	@IC-01	SOLID			
6 SPK	S96T005055 0 W	@IC-01	SOLID			
7 SAMPLE	S96T005056 0 W	@IC-01	SOLID	96001213	AW-105	GRAB
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
8 DUP	S96T005056 0 W	@IC-01	SOLID			

Final page for worklist # 14191

A. Lambel
Analyst Signature

10-30-96
Date

Analyst Signature

Date

1419100.csv

Uploaded 10/31/96 gmLye

Validated 10/31/96 gmLye

Data Entry Comments:

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

31-Oct-96

Worklist#: 14191

Data File: 14191OC.CSV

		Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution
-	=>	1	CCB	S96T005055	-	1 96103001.d13	INST. BLANK	1.00
	=>	2	CCV			2 96103001.d14	32N20-A STD.	101.00
	=>	3	BLNK-PREP			3 96103001.d15	PREP. BLANK	1.00
	=>	4	SAMPLE			96103001.d16	S96T005055	41.00
	=>	5	DUP			96103001.d17	S96T005055	11.00
	=>	6	SPK		4	96103001.d18	S96T005055	5.00
	=>	7	SAMPLE		5	96103001.d19	S96T005055 DUP	5.00
	=>	8	DUP		6	96103001.d20	S96T005055 SPIKE	5.00
					7	96103001.d23	S96T005056	51.00
					8	96103001.d24	S96T005056 DUP	51.00
+					+			

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Sample Name: 32N20-A STD.

Date: 10/30/1996 02:50:30

Data File : C:\DX\DATA\96103001.D14

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 14

Detector: CDM-1

Analyst : *A. Jambel* 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	0.89		0.000	48	188	2	
2	1.06	fluoride	53.383	1758	10504	2	3.92
3	1.61	chloride	72.274	1749	9570	1	-0.41
4	1.91	nitrite	494.990	7195	45624	1	-3.37
5	2.88	bromide	557.346	5006	34176	1	-3.36
6	3.28	nitrate	594.075	5503	45543	1	-3.81
7	4.72	phosphate	521.711	1521	20866	1	-4.26
8	6.19	sulfate	641.083	4613	65551	1	-5.69
9	8.11	oxalate	523.395	2115	41423	1	-1.26
Totals			3458.258	29508	273447		

File: 96103001.D14 Sample: 32N20-A STD.

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 428 TO 431.

Sample Name: INST. BLANK	Date: 10/30/1996 02:36:41
Data File : C:\DX\DATA\96103001.D13	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 13	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	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	1.42		0.000	16	79	1	
2	1.62	chloride	0.003	18	75	1	0.41
3	3.36	nitrate	0.196	78	575	1	-1.47
Totals			0.200	112	729		

File: 96103001.D13 Sample: INST. BLANK

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Sample Name: PREP. BLANK                      Date: 10/30/1996 03:03:43
Data File  : C:\DX\DATA\96103001.D15
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 15          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 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	1.33		0.000	40	318	1	
2	1.63	chloride	0.020	33	297	1	1.24
3	3.35	nitrate	0.179	64	442	1	-1.66
Totals			0.200	137	1057		

File: 96103001.D15 Sample: PREP. BLANK