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

Document number: SD-WM-DP-178

Section 1 **of** 6

Title: Final Report for Tank 241AY101 Grab Samples 1AY-96-1 Thru 1AY-96-10 & 1AY-96-FB [Pgs 1 Thru 187]

Date: 07/22/1996 **Revision:** R001

Originator: Esch, RA
Co: WHC

Recipient:
Co:

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COMPLETE

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 633305

Proj. ECN

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12. Description of Change

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13b. Justification Details

This ECN will assist in the completion of the documentation process for this document.

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DATE: JUL 22 1996 HANFORD RELEASE

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ID: 2

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ENGINEERING CHANGE NOTICE

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[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]				
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

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Safety		Design	
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Other		Other	
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		ADDITIONAL	

"FINAL REPORT FOR TANK 241-AY-101, GRAB SAMPLES 1AY-96-1 THROUGH 1AY-96-10 AND 1AY-96-FB."

Ruth A. Esch
Westinghouse Hanford Company, Richland, WA 99352
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Westinghouse
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ANALYTICAL SERVICES

FINAL REPORT FOR TANK 241-AY-101, GRAB SAMPLES 1AY-96-1 THROUGH 1AY-96-10 AND 1AY-96-FB

Project Coordinator: RUTH A. ESCH

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

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Part II consists of pages 2-1 through 2-135, and pages 2-2, 2-5, 2-15, 2-21, and 2-34 were intentionally left blank.

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NARRATIVE

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FINAL RESULTS FOR TANK 241-AY-101 GRAB SAMPLES 1AY-96-1 THROUGH 1AY-96-10 AND 1AY-96-FB

This document is the final report deliverable for tank 241-AY-101 grab samples. Ten grab samples (1AY-96-1 through 1AY-96-10) and one field blank (1AY-96-FB) were taken from tank 241-AY-101. The samples consisted of three supernates and two sludges from riser 15K and five supernate samples from riser 15S. Note that the sample numbers and riser locations differ from those listed in the *Tank 241-AY-101 Grab Sampling and Analysis Plan* (TSAP) (Thompson, 1996). These changes were noted in the process memo (CFE-96-003) and were addressed in the 45 Day report (Rev. 0 of this document).

Analyses were performed in support of the Safety Screening program, as specified in the TSAP and the *Tank Safety Screening Data Quality Objective* (DQO) (Dukelow, et al., 1995) and results were reported in earlier revisions to this document, with the exception of the results for sample 1AY-96-5 solids. For this sample, the dose rate of the subsample had exceeded the administrative limits for removing it from the hotcell for analysis. With a special radiation work permit for the hotcell load-out and a very small sample size, a portion of the sample was removed and analyzed for differential scanning calorimetry (DSC), thermogravimetric analysis (TGA) and total alpha activity (AT). In addition, the following were performed to further characterize this unusual sample: strontium-90 analysis (^{90}Sr), gamma energy analysis (GEA), and metals analysis by inductively coupled plasma emission (ICP).

Notification limits for DSC and AT were not exceeded for sample 1AY-96-5.

In addition to safety screening, analyses were performed on the supernate samples in support of the Tank Waste Compatibility program in accordance with the *Data Quality Objectives for Tank Farms Waste Compatibility Program* (Fowler, 1995). The required analytes for the safety screening and compatibility programs are indicated in the Procedure section of this document.

The results for the waste compatibility testing indicate the hydroxide concentration is outside of the allowable range with respect to corrosion concerns. Appropriate notifications were made.

Analytical Results Summary

Attachments

Attachment 1 is provided as a cross-reference for relating the tank farm customer ID numbers with the 222-S Laboratory sample numbers. The subsamples that were generated in the laboratory for analysis are also identified in these diagrams.

The data summary table (Table 1) included in this report compiles all of the analytical results associated with each sample.

For the FY96 242-A Evaporator Campaign acetone analysis was requested for samples 1AY-96-1 and 1AY-96-7. This analysis has been unavailable for radioactive samples and, therefore, has not yet been performed. The results will be included in a revision to this document after the analysis has been completed.

Safety Screening Program Concerns - Sample 1AY-96-5 Solids

The safety screening results for all samples, with the exception of sample 1AY-96-5 centrifuged solids, were reported in earlier revisions of this document. Therefore, this section will only address the safety screening results for 1AY-96-5 centrifuged solids.

DSC - Differential Scanning Calorimetry

The DSC analysis was performed in duplicate on a direct subsample. The exothermic energy based on the dry weight of the subsample was calculated using the average of the thermogravimetric analysis (TGA) result. The standard recovery and relative percent difference (RPDs) for this analysis were within the required limits. No exothermic energy was observed.

TGA - Thermogravimetric Analysis

The TGA analysis was performed in duplicate on a direct subsample. The % moisture result reported for sample 1AY-96-5 solids was from the first weight loss step that occured below 200° C. A second step that began around 100°C and ended above 200° C, as well as two additional weight loss steps above 200° C were not used to determine the result. The standard recovery and RPDs for this analysis were within the required limits.

Bulk Density

A single measurement was used to determine the bulk density of this sample portion with a result of 1.28 g/mL. Since this result is less than 1.5 g/mL, no adjustment was required for the notification limit for the total alpha activity analysis.

AT - Total Alpha Activity

The AT analysis was performed in duplicate on acid digested subsamples. The acid digest is indicated with an "A" in the aliquot class (#A) column in Table 1. The standard and spike recoveries and RPDs for this analysis were within the required limits. The sample results were well below the notification limit of 41 μCi/g, therefore no notifications were required.

Compatibility Program Concerns

The compatibility analyses were only required to be performed on the supernate samples. The decanted supernate from the two centrifuged sludges were not considered for evaluating the decision rules.

DSC - Differential Scanning Calorimetry - Energetics Decision Rule

The DSC analyses were performed in duplicate on direct subsamples of the supernates. The exothermic energy based on the dry weight of the subsample was calculated for all subsamples. The average of the thermogravimetric analysis (TGA) results for each subsample was used in the dry weight correction for that subsample. The standard recovery and relative percent difference (RPD) for this analysis were within the required limits, with the exception of sample 1AY-96-10 which had an RPD = 200%. This high RPD was due to a result of 0.0 joules/g for the sample, and 12.20 joules/g for the duplicate. A triplicate analysis was performed with a result of 0.0 joules/g. No further analyses were requested.

For waste compatibility energetics decision concerns, the exotherm/endotherm ratio must be less than one (1). This requirement is satisfied for all samples. The actual exotherm and endotherm results and the calculated ratios are presented Table 2.

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 3. This table presents the NO_3^-, OH^-, and NO_2^- results in μg/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. The concentration of OH^- was less than 125 μg/mL (<0.01 M) for all subsamples, which is below the acceptable concentration range required for corrosion control. The standard recovery and RPDs for these analyses were within the required limits.

The RPD calculation is not applicable for results that are below the detection limit. For samples 1AY-96-9 and 1AY-96-10, the OH^- is reported as a pH result which indicates that the pH of the sample was too low to perform the analysis. The results listed in Table 3 for these two samples are reported as less than the detection limit of 125 μg/mL.

For the NO_3^-, and NO_2^- analyses, all of the spike recoveries were within the required limits, with the exception of NO_2^- for sample 1AY-96-7. The spike recovery for this analyte for this sample was 134.1%. This high recovery may be due to the high NO_2^- concentration in the sample. The lower spike recovery results for the other subsamples with high NO_2^- concentration may have only been coincidental. No rerun was requested.

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

The Sp.G. of the waste is currently 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 1.059 to 1.099. The weighted mean Sp.G. = 1.079. This result does not exceed the 1.41 limit to allow waste transfer. The standard recovery and RPDs for this analysis were within the required limits.

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

$^{239/240}$Pu concentration was measured for the supernate samples to evaluate criticality safety for waste transfers. The results ranged from 2.64e-2 to 3.27e-2 μCi/mL for the six samples identified as supernates in the TSAP. For samples 1AY-96-9 and 1AY-96-10 which were originally expected to be sludges, the $^{239/240}$Pu concentration ranged from 5.93e-2 to 6.29e-2 μCi/mL. These results are below the criticality prevention limit of 0.80 μCi/mL stated in the compatibility DQO. The standard recovery and RPDs for this analysis were within the required limits, with the exception of sample 1AY-96-6 which had an RPD = 21.3%. This RPD value is only slightly outside of the ±20% required range and may be due to low activity in the sample; therefore, no rerun was requested.

^{241}Am - Americium 241 - Criticality Decision Rule

^{241}Am analysis was performed on the supernate samples. The results 3.09e-3 to 3.94e-3 for the six samples identified as supernates in the TSAP. For samples 1AY-96-9 and 1AY-96-10, which were originally expected to be sludges, the ^{241}Am concentration ranged from 8.03e-3 to 1.02e-2 μCi/mL. The standard recovery and RPDs for this analysis were within the required limits, with the exception of sample 1AY-96-10 which had an RPD = 21.0%. This RPD value is only slightly outside of the ±20% required range and may be due to low activity in the sample; therefore, no rerun was requested.

Inorganic Analyses

pH

The pH analysis was performed on the supernate samples. The results ranged from 9.752 to 9.880. The standard recovery and RPDs for this analysis were within the required limits. More information may be obtained by examining the raw data.

IC - Ion Chromatography

In the ion chromatography (IC) analysis there was an interferent, possibly an organic acid, in sample 1AY-96-6 that resulted in an RPD = 30.3% for the fluoride. A rerun would require a modification of the method; therefore, no rerun was requested.

During the analysis of the field blank, nitrate was detected in both the method blank and the field blank sample. The concentrations detected were considered insignificant with respect to the sample results (several orders of magnitude lower), therefore no rerun was performed. The standard recoveries for this analysis were within the required limits.

ICP - Inductively Coupled Plasma Spectrophotometry

Since the supernate sample results for sodium (Na) by inductively coupled plasma (ICP) exceeded the added spike concentrations by more than a factor of four, the matrix spike recovery results should not be used. The accuracy of these analyses was assessed by evaluating the serial dilution results. These results are identified in the raw data with an "_L" appended to the sample number. The samples were analyzed both undiluted and with a 5-fold serial dilution. For acceptable performance the percent difference between the serial dilution and the undiluted results must be ≤10%. The results provided in Table 4 indicate that the accuracy of the analyses was acceptable. The standard recoveries for these analyses were within the required limits. The uranium results for samples 1AY-96-1, 1AY-96-2 and 1AY-96-3 were all less than two times the detection limit. As a result, the spike recovery for sample 1AY-96-2 was low (69.25%) and the RPD for sample 1AY-96-3 was high (38.2%). It was believed that these failures were insignificant, and no reruns were requested.

The unusually high dose rate for the solid portion of sample 1AY-96-5 prompted a request for ICP analysis for all metals for additional characterization. The analysis was performed in duplicate on acid digested aliquots. This digestion is indicated by an "A" in the aliquot class (#A) column in Table 1. The standard recovery for the analysis was within the required limits. Three of the thirty-eight analytes measured had RPDs that were greater than the required ±20%. They were silver (25.4%), boron (26.6%), and silica (21.5%). The high RPDs for boron and silica may be due to the leaching of these analytes from the borosilicate glassware during the acid digestion. Silver results can be affected by precipitation from the addition of acid. These RPDs are considered to be insignificant with respect to data quality concerns, and no reruns were requested. Various analytes were detected in the preparation blank. The concentrations detected were considered insignificant with respect to the sample results (several orders of magnitude lower), therefore no rerun was performed.

NH_3 - Ammonia

Ammonia analysis was performed on all of the supernate samples. The standard recoveries and RPDs for this analysis were within the required limits. The duplicate result for sample 1AY-96-7 was reported as "n/a" due to insufficient sample for the duplicate analysis. The spike recoveries were within the required limits with the exception of sample 1AY-96-10 which had a spike recovery of 65.2%. The method blanks all had detectable levels of NH_3. However, since the concentrations were insignificant with respect to the sample results, data quality will not be affected. The pH of these samples (pH = 9) may have had a slight effect on the results. Variability in results for NH_3 analysis may be caused by high pH of the samples which interferes

with this method. Elevated caustic concentration in the samples may cause evolution of ammonia which would be lost each time the container is opened. In addition, high caustic causes slow electrode response resulting in inaccurate measurement of ammonia concentration in the sample.

TOC - Total Organic Carbon

TOC analysis was performed on all of the supernate samples. None of the results exceeded the notification limit of 30,000 μgC/mL. The standard recoveries, spike recoveries and RPDs for this analysis were within the required limits, with the exception of a low spike recovery (71.2%) for sample 1AY-96-7. This recovery is just outside of the 75 - 125% recovery allowed by the laboratories quality assurance document, and will have minimal effect on data quality. Note that the TOC concentration of samples 1AY-96-9 and 1AY-96-10 is approximately one-half that detected in the other supernate samples.

TIC - Total Inorganic Carbon

TIC analysis was performed on all of the supernate samples. The standard recoveries, spike recoveries and RPDs for this analysis were within the required limits. Note that the concentration of TIC is approximately the same for all samples analyzed.

Radionuclide Analyses

^{90}Sr - Strontium 90

^{90}Sr analysis was performed on direct subsamples of all the supernate samples and on an acid digested subsample of the solid portion of sample 1AY-96-5. This digest is indicated by an "A" in the #A column in Table 1. The standard recovery and RPDs for this analysis were within the required limits.

^{90}Sr was detected in the method blank for several of the analytical runs. However, the amount detected was at or near the sample detection limit and several orders of magnitude below the sample results and, therefore, does not impact the data quality.

GEA - Gamma Energy Analysis

GEA analysis was performed on direct subsamples of all the supernate samples and on an acid digested subsample of the solid portion of sample 1AY-96-5. This digest is indicated by an "A" in the #A column in Table 1. The standard recoveries and RPDs for this analysis were within the required limits, with the exception of cobalt 60 (^{60}Co) for sample 1AY-96-10 which had an RPD of 21.2%. This high RPD (greater than ±20%) may have been due to low activity in the sample dilution required for the cesium 137 (^{137}Cs) analysis. The analysis was not rerun because this failure was considered insignificant and would not impact sample data quality.

Procedures

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

Table 4: Analytical Procedures

Analysis	Program	Matrix	Preparation Procedure	Analysis Procedure
Inorganic Analyses				
DSC	Safety Screen & Compatibility	Liquid& Solid	N/A	LA-514-114 Rev. C-1
TGA	Safety Screen & Compatibility	Liquid& Solid	N/A	LA-514-114 Rev. C-1
Sp.G.	Safety Screen & Compatibility	Liquid	N/A	LA-510-112 Rev. C-3
pH	Compatibility	Liquid	N/A	LA-212-106 Rev. A-0ev.
NH_3	Evaporator	Liquid	N/A	LA-631-001 Rev. B-2
CN	Safety Screen	Liquid	N/A	LA-695-102 Rev. E-0
OH^-	Compatibility	Liquid	N/A	LA-211-102 Rev. C-0
IC: Cl^-, F^-, PO_4^{3-}, SO_4^{2-}, NO_3^-, NO_2^-, oxalate	Compatibility	Liquid	N/A	LA-533-105 Rev. D-1
ICP: Al, Cr, Fe, Mn, Na, Ni, Si, U	Compatibility	Liquid	N/A	LA-505-151 Rev. D-3 LA-505-161 Rev. B-0
ICP: all metals	Special Request	Solid	LA-505-159 Rev. D-0*	LA-505-151 Rev. D-3

Table 4: Analytical Procedures

Analyte	Purpose	Matrix	Preparation Procedure	Analytical Procedure
TOC	SafetyScreen & Compatibility	Liquid: Furnace Persulfate	N/A	LA-344-105 Rev. C-0 LA-342-100 Rev. C-0
TIC	Compatibility	Liquid	N/A	LA-622-102 Rev. C-0
Radionuclide Analyses				
AT	Safety Screen	Liquid Solid	N/A LA-549-141 Rev. F-0''	LA-508-101 Rev. D-2
AT	Special Request	Solid	LA-505-159 Rev. D-0'	LA-508-101 Rev. D-2
GEA: ^{137}Cs	Compatibility Special Request	Liquid Solid	N/A LA-505-159 Rev. D-0'	LA-548-121 Rev. E-0
^{90}Sr	Compatibility Special Request	Liquid Solid	N/A LA-505-159 Rev. D-0'	LA-220-101 Rev. D-1
^{241}Am	Compatibility	Liquid	N/A	LA-953-103 Rev. B-0
$^{239/240}Pu$	Compatibility	Liquid	N/A	LA-943-128 Rev. A-1

Notes:

Several analyses used procedures other than those listed in the TSAP for the reasons listed below.

DSC - The laboratory has two procedures for this analysis, one for each of two instruments. The TSAP listed only one of the two procedures (LA-514-113). The analyses were run on the procedure listed above, an alternate valid procedure for this test.

TGA - The laboratory has two procedures for this analysis, one for each of two instruments. The TSAP listed only one of the two procedures (LA-560-112). The analyses were run on the procedure listed above, an alternate valid procedure for this test.

TIC - The procedure listed in the TSAP (LA-344-102) is not a TIC procedure. The number listed above is the correct procedure for this analysis.

\+ Acid digest procedure

++ Fusion digest procedure

Abbreviations:
N/A = not applicable (these are direct samples)
DSC = differential scanning calorimetry
TGA = thermogravimetric analysis
Sp.G. = specific gravity
NH_3 = ammonia (by ion selective electrode (ISE)
CN = cyanide
OH = hydroxide
IC = ion chromatography
ICP = inductively coupled plasma
TOC = total organic carbon
TIC = total inorganic carbon
AT = total alpha
Abbreviations (continued):
GEA = gamma energy analysis
^{137}Cs = cesium 137
^{90}Sr = strontium 90
^{241}Am = americium 241
$^{239/240}Pu$ = plutonium 239/240

References

Dukelow, G. T., J. W. Hunt, H. Babad, and J. E. Meacham, 1995, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, WA 99352.

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.

Thompson, R. R., 1996, *Tank 241-AY-101 Grab Sampling and Analysis Plan*, WHC-SD-WM-TSAP-066, Rev. 2A, Westinghouse Hanford Company, Richland, WA 99352.

Turner, D. A., H. Babad, L. L. Buckley, and J. E. Meacham, 1995, *Data Quality Objective to Support Resolution of the Organic Complexant Safety Issue*, WHC-SD-WM-DQO-006, Rev. 2, Westinghouse Hanford Company, Richland, WA 99352.

ATTACHMENT 1

AY-101 GRAB SAMPLE BREAKDOWN

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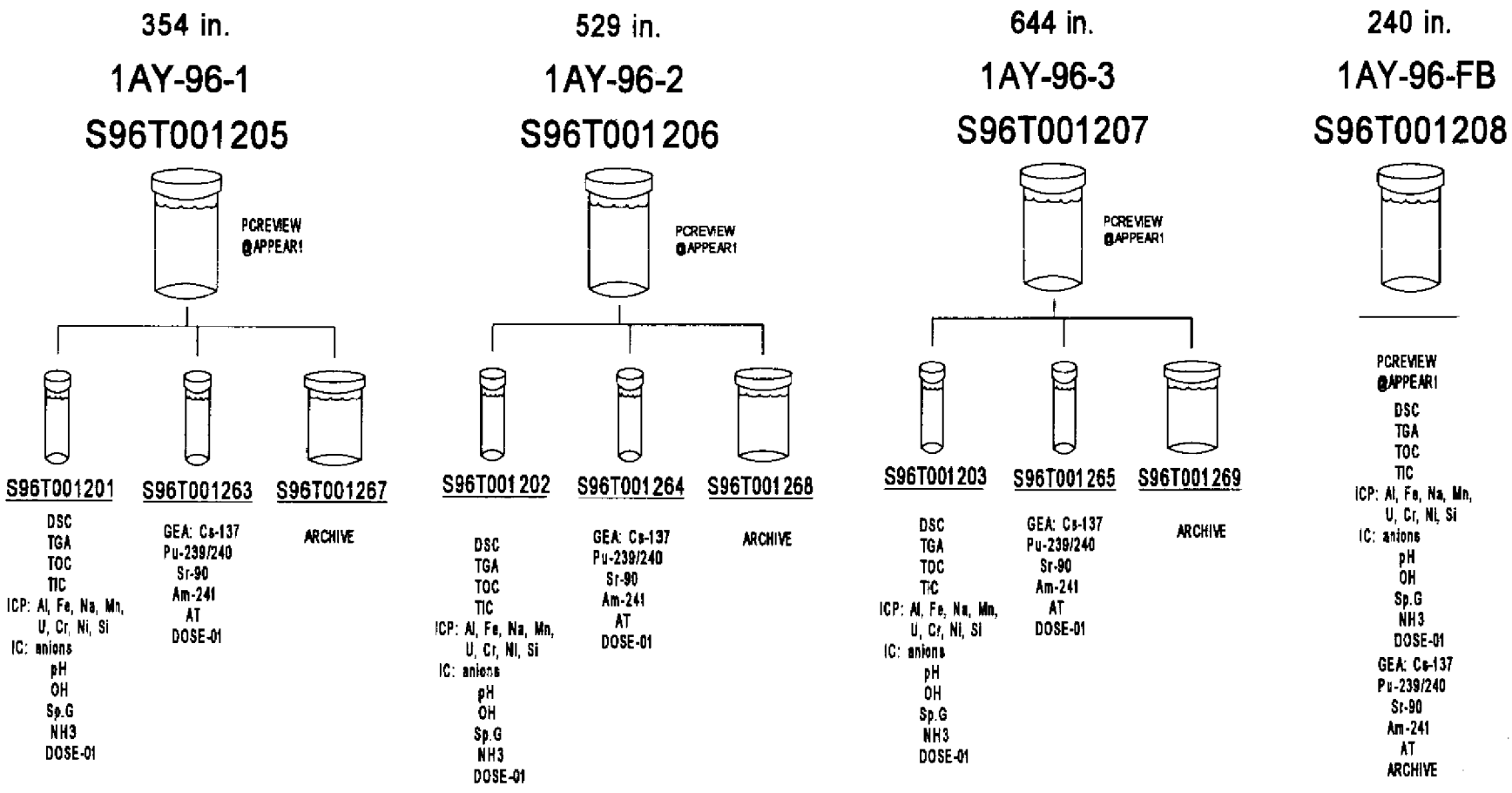
Attachment 1 (1 of 4)

AY-101 GRAB SAMPLE BREAKDOWN

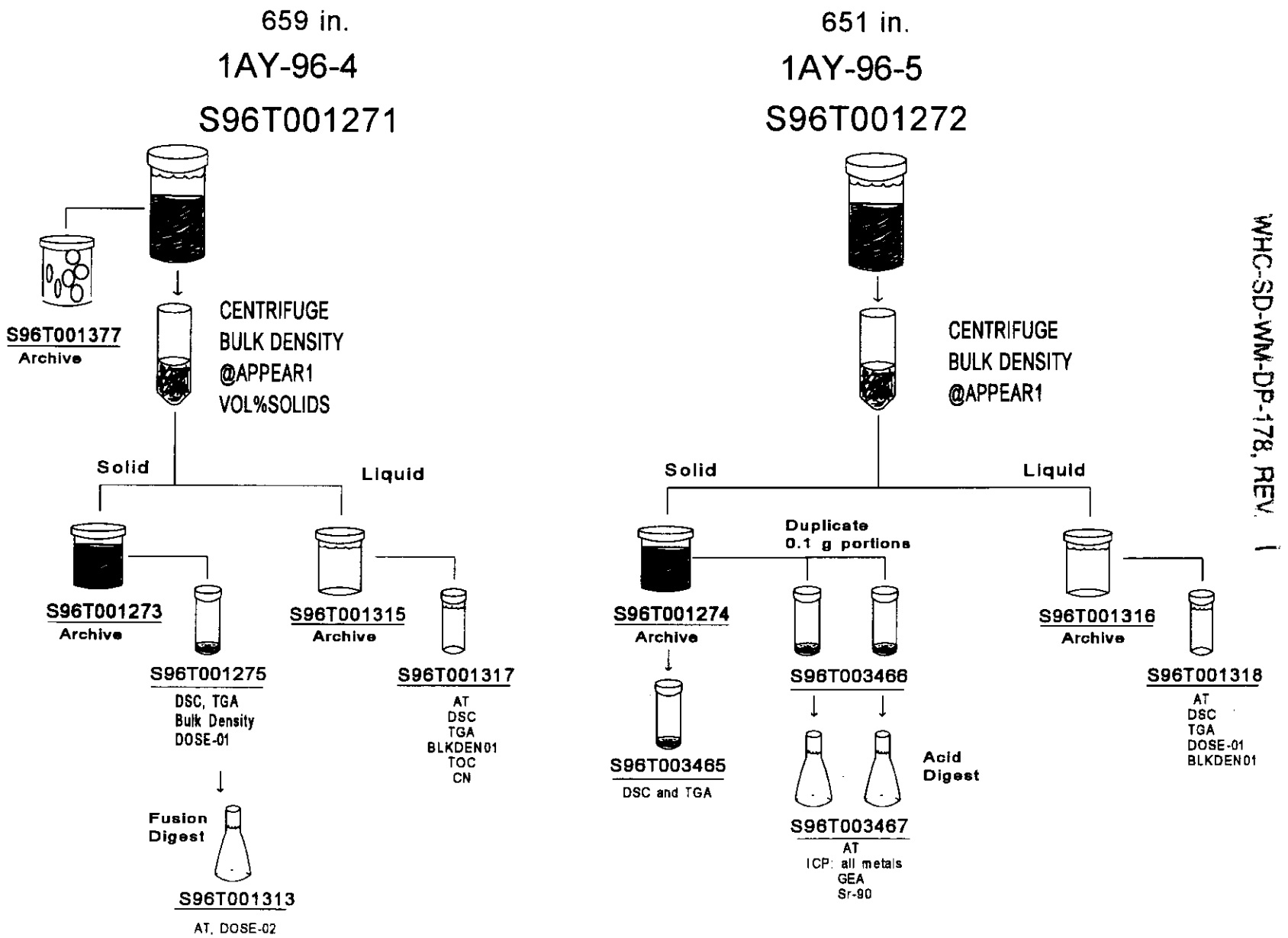
Riser 15K



Attachment 1 (2 of 4)

AY-101 GRAB SAMPLE BREAKDOWN

Riser 15K



Attachment 1 (3 of 4)

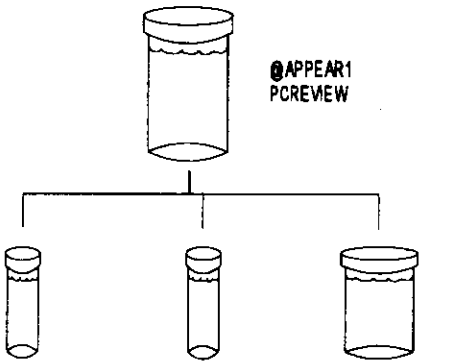
AY-101 GRAB SAMPLE BREAKDOWN

Riser 15S

354 in.

1AY-96-6

S96T001353



S96T001356

DSC
TGA
TOC
TIC
ICP: Al, Fe, Na, Mn, U, Cr, Ni, Si
IC: anions
pH
OH
Sp.G
NH3
DOSE-01

S96T001359

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT
DOSE-01

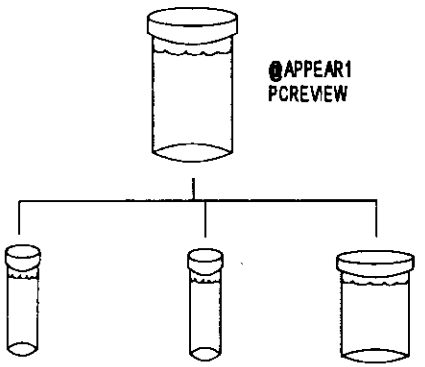
S96T001362

ARCHIVE

529 in.

1AY-96-7

S96T001354



S96T001357

DSC
TGA
TOC
TIC
ICP: Al, Fe, Na, Mn, U, Cr, Ni, Si
IC: anions
pH
OH
Sp.G.
NH3
DOSE-01

S96T001360

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT
DOSE-01

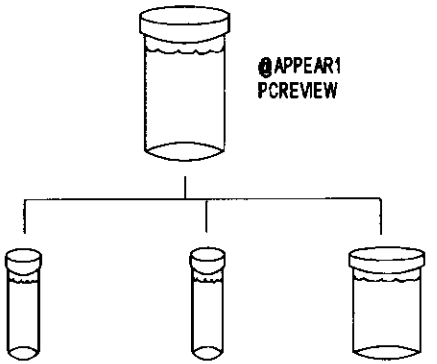
S96T001363

ARCHIVE

644 in.

1AY-96-8

S96T001355



S96T001358

DSC
TGA
TOC
TIC
ICP: Al, Fe, Na, Mn, U, Cr, Ni, Si
IC: anions
pH
OH
Sp.G.
NH3
DOSE-01

S96T001361

GEA: Cs-137
Pu-239/240
Sr-90
Am-241
AT
DOSE-01

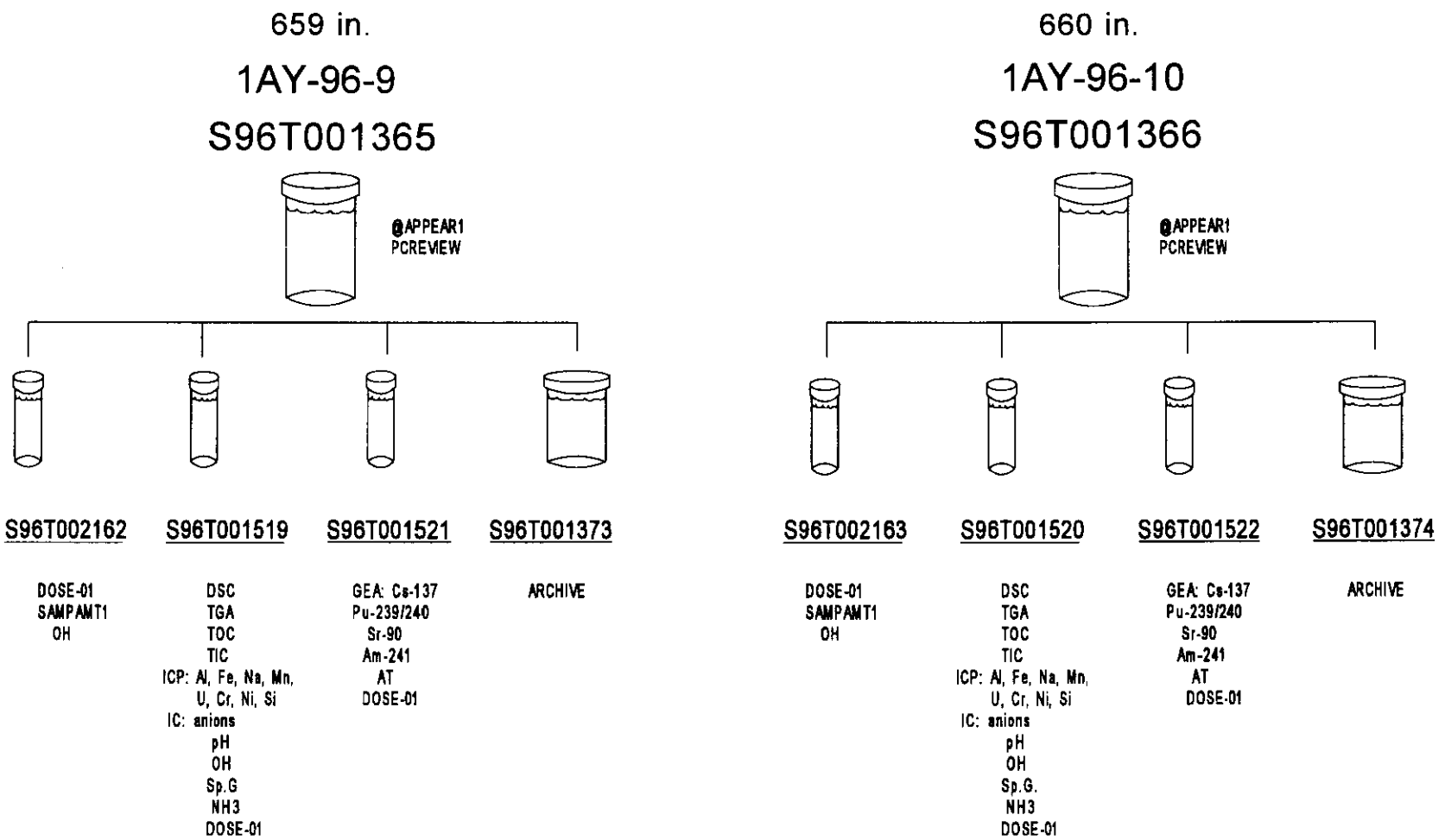
S96T001364

ARCHIVE

Attachment 1 (4 of 4)

AY-101 GRAB SAMPLE BREAKDOWN

Riser 15S



SAMPLE DATA SUMMARY

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Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-96-1

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001201			DSC Exotherm using Mettler	Joules/g	93.15	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001201			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001201			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	19.90	19.70	19.80	1.01	85.30	5.000	n/a
S96T001201			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001201			pH Direct	pH	n/a	n/a	9.788	9.759	9.774	0.30	n/a	1.00e-02	n/a
S96T001201			Specific Gravity	Sp.G.	96.95	n/a	1.084	1.081	1.083	0.28	n/a	1.00e-03	n/a
S96T001201			% Water by TGA using Mettler	%	102.7	n/a	84.28	84.37	84.33	0.11	n/a	n/a	n/a
S96T001201			Tot. Inorg. Carbon by Coul.	ug/mL	97.17	2.00e-01	7.67e+03	7.62e+03	7.64e+03	0.65	116.9	40.00	n/a
S96T001201			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	7.98e+03	7.27e+03	7.62e+03	9.31	82.20	105.0	n/a
S96T001201	D		Aluminium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	97.80	20.10	n/a
S96T001201	D		Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	1.10e+02	111.0	110.5	0.90	102.0	4.010	n/a
S96T001201	D		Iron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	n/a
S96T001201	D		Manganese-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	100.3	4.010	n/a
S96T001201	D		Sodium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-01	5.42e+04	5.29e+04	5.36e+04	2.43	n/a	40.10	n/a
S96T001201	D		Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	60.60	63.50	62.05	4.67	100.4	8.020	n/a
S96T001201	D		Silicon-ICP-Acid Dil.	ug/mL	92.80	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	92.00	20.10	n/a
S96T001201	D		Uranium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	2.70e+02	225.0	247.5	18.2	92.35	200.0	n/a
S96T001201			Fluoride-IC-Dionex 4000i/4500	ug/mL	93.39	<1.30e-02	1.43e+02	155.0	149.2	8.05	88.81	53.83	n/a
S96T001201			Chloride-IC-Dionex 4000i/4500	ug/mL	92.53	<1.70e-02	6.40e+02	660.0	650.0	3.08	85.70	70.40	n/a
S96T001201			Nitrite-IC - Dionex 4000i/4500	ug/mL	96.44	<1.07e-01	3.34e+04	3.45e+04	3.39e+04	3.24	105.1	443.1	n/a
S96T001201			Nitrate-IC - Dionex 4000i/4500	ug/mL	98.86	<1.40e-01	2.51e+04	2.49e+04	2.50e+04	0.80	102.0	579.7	n/a
S96T001201			Phosphate-IC-Dionex 4000i/4500	ug/mL	97.44	<1.19e-01	8.28e+02	875.0	851.5	5.52	93.41	492.4	n/a
S96T001201			Sulfate by IC-Dionex4000i/4500	ug/mL	95.88	<1.36e-01	5.68e+03	5.61e+03	5.64e+03	1.24	94.29	562.8	n/a
S96T001263			Strontium-89/90 High Level	uCi/mL	102.4	<4.31e-04	1.820	1.800	1.810	1.10	n/a	1.00e-03	6.89E-01
S96T001263			Pu-239/240 by TRU-SPEC Resin	uCi/mL	85.94	<2.75e-04	2.67e-02	2.69e-02	2.68e-02	0.75	n/a	1.00e-03	1.73E+00
S96T001263			Cobalt-60 by GEA	uCi/mL	100.4	<2.64e-05	2.38e-02	2.53e-02	2.46e-02	6.11	n/a	n/a	15.0
S96T001263			Cesium-137 by GEA	uCi/mL	103.3	<1.77e-03	86.70	86.20	86.45	0.58	n/a	n/a	0.150
S96T001263			Am-241 by Extraction	uCi/mL	81.76	<1.14e-03	3.72e-03	3.94e-03	3.83e-03	5.74	n/a	1.00e-03	2.41E+00
S96T001263			Alpha in Liquid Samples	uCi/mL	102.0	<2.62e-03	3.72e-02	3.58e-02	3.65e-02	3.84	101.9	6.00e-03	2.14E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-96-2

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001202			DSC Exotherm using Mettler	Joules/g	93.15	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001202			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001202			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	32.50	28.20	30.35	14.2	n/a	5.000	n/a
S96T001202			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001202			pH Direct	pH	n/a	n/a	9.762	9.759	9.761	0.03	n/a	1.00e-02	n/a
S96T001202			Specific Gravity	Sp.G.	96.95	n/a	1.076	1.075	1.075	0.09	n/a	1.00e-03	n/a
S96T001202			% Water by TGA using Mettler	%	102.7	n/a	84.21	84.22	84.22	0.01	n/a	n/a	n/a
S96T001202			Tot. Inorg. Carbon by Coul.	ug/mL	97.17	2.00e-01	7.77e+03	7.40e+03	7.58e+03	4.88	n/a	40.00	n/a
S96T001202			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	8.22e+03	7.85e+03	8.04e+03	4.60	n/a	105.0	n/a
S96T001202		D	Aluminium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	94.30	20.10	n/a
S96T001202		D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	1.11e+02	110.0	110.5	0.90	100.8	4.010	n/a
S96T001202		D	Iron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	103.0	20.10	n/a
S96T001202		D	Manganese-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	101.0	4.010	n/a
S96T001202		D	Sodium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-01	5.60e+04	5.38e+04	5.49e+04	4.01	n/a	40.10	n/a
S96T001202		D	Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	65.20	63.80	64.50	2.17	99.00	8.020	n/a
S96T001202		D	Silicon-ICP-Acid Dil.	ug/mL	92.80	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	90.80	20.10	n/a
S96T001202		D	Uranium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	2.87e+02	259.0	273.0	10.3	69.25	200.0	n/a
S96T001202			Fluoride-IC-Dionex 4000i/4500	ug/mL	93.39	<1.30e-02	1.58e+02	151.0	154.6	4.53	n/a	53.83	n/a
S96T001202			Chloride-IC-Dionex 4000i/4500	ug/mL	92.53	<1.70e-02	6.78e+02	635.0	656.5	6.55	n/a	70.40	n/a
S96T001202			Nitrite-IC - Dionex 4000i/4500	ug/mL	96.44	<1.07e-01	3.42e+04	3.45e+04	3.43e+04	0.87	n/a	443.1	n/a
S96T001202			Nitrate-IC - Dionex 4000i/4500	ug/mL	98.86	<1.40e-01	2.58e+04	2.58e+04	2.58e+04	0.00	n/a	579.7	n/a
S96T001202			Phosphate-IC-Dionex 4000i/4500	ug/mL	97.44	<1.19e-01	1.11e+03	1.01e+03	1.06e+03	9.43	n/a	492.4	n/a
S96T001202			Sulfate by IC-Dionex4000i/4500	ug/mL	95.88	<1.36e-01	5.84e+03	5.78e+03	5.81e+03	1.03	n/a	562.8	n/a
S96T001264			Strontium-89/90 High Level	uCi/mL	102.4	<4.31e-04	1.850	1.860	1.855	0.54	n/a	1.00e-03	7.17E-01
S96T001264			Pu-239/240 by TRU-SPEC Resin	uCi/mL	85.94	<2.75e-04	2.87e-02	2.87e-02	2.87e-02	0.00	n/a	1.00e-03	1.69E+00
S96T001264			Cobalt-60 by GEA	uCi/mL	100.4	<2.64e-05	2.81e-02	2.31e-02	2.56e-02	19.5	n/a	n/a	10.5
S96T001264			Cesium-137 by GEA	uCi/mL	103.3	<1.77e-03	82.00	79.70	80.85	2.84	n/a	n/a	0.160
S96T001264			Am-241 by Extraction	uCi/mL	81.76	<1.14e-03	3.30e-03	3.56e-03	3.43e-03	7.58	n/a	1.00e-03	2.71E+00
S96T001264			Alpha in Liquid Samples	uCi/mL	102.0	<2.62e-03	4.27e-02	4.29e-02	4.28e-02	0.47	104.5	6.00e-03	1.97E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-96-3

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001203			DSC Exotherm using Mettler	Joules/g	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001203			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001203			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	17.00	14.60	15.80	15.2	n/a	5.000	n/a
S96T001203			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001203			pH Direct	pH	n/a	n/a	9.765	9.759	9.762	0.06	n/a	1.00e-02	n/a
S96T001203			Specific Gravity	Sp.G.	96.95	n/a	1.077	1.070	1.074	0.65	n/a	1.00e-03	n/a
S96T001203			% Water by TGA using Mettler	%	99.44	n/a	84.17	84.08	84.12	0.11	n/a	n/a	n/a
S96T001203			Tot. Inorg. Carbon by Coul.	ug/mL	94.52	4.00e-01	6.58e+03	6.50e+03	6.54e+03	1.22	103.3	105.0	n/a
S96T001203			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	9.16e+03	8.45e+03	8.80e+03	8.06	81.40	105.0	n/a
S96T001203		D	Aluminium-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	100.0	20.10	n/a
S96T001203		D	Chromium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	1.11e+02	105.0	108.0	5.56	103.1	4.010	n/a
S96T001203		D	Iron-ICP-Acid Dil.	ug/mL	104.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	103.5	20.10	n/a
S96T001203		D	Manganese-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	102.3	4.010	n/a
S96T001203		D	Sodium-ICP-Acid Dil.	ug/mL	102.6	<1.00e-01	5.30e+04	5.14e+04	5.22e+04	3.07	n/a	40.10	n/a
S96T001203		D	Nickel-ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	62.20	62.40	62.30	0.32	101.9	8.020	n/a
S96T001203		D	Silicon-ICP-Acid Dil.	ug/mL	92.80	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	94.80	20.10	n/a
S96T001203		D	Uranium-ICP-Acid Dil.	ug/mL	96.00	<5.00e-01	2.48e+02	365.0	306.5	38.2	103.8	200.0	n/a
S96T001203			Fluoride-IC-Dionex 4000i/4500	ug/mL	107.1	<1.30e-02	1.58e+02	174.0	165.8	9.64	101.9	53.83	n/a
S96T001203			Chloride-IC-Dionex 4000i/4500	ug/mL	99.24	<1.70e-02	5.69e+02	522.0	545.5	8.62	101.1	70.40	n/a
S96T001203			Nitrite-IC - Dionex 4000i/4500	ug/mL	105.2	<1.07e-01	3.80e+04	3.78e+04	3.79e+04	0.53	110.9	443.1	n/a
S96T001203			Nitrate-IC - Dionex 4000i/4500	ug/mL	103.9	<1.40e-01	2.75e+04	2.75e+04	2.75e+04	0.00	115.3	579.7	n/a
S96T001203			Phosphate-IC-Dionex 4000i/4500	ug/mL	104.8	<1.19e-01	<4.92e+02	<4.92e2	n/a	n/a	108.4	492.4	n/a
S96T001203			Sulfate by IC-Dionex4000i/4500	ug/mL	102.5	<1.36e-01	5.63e+03	5.66e+03	5.65e+03	0.53	106.3	562.8	n/a
S96T001265			Strontium-89/90 High Level	uCi/mL	102.4	<4.31e-04	1.810	1.830	1.820	1.10	n/a	1.00e-03	6.92E-01
S96T001265			Pu-239/240 by TRU-SPEC Resin	uCi/mL	85.94	<2.75e-04	2.73e-02	2.68e-02	2.71e-02	1.85	n/a	1.00e-03	1.74E+00
S96T001265			Cobalt-60 by GEA	uCi/mL	100.4	<2.64e-05	2.70e-02	2.67e-02	2.68e-02	1.12	n/a	n/a	12.4
S96T001265			Cesium-137 by GEA	uCi/mL	103.3	<1.77e-03	86.90	87.20	87.05	0.34	n/a	n/a	0.150
S96T001265			Am-241 by Extraction	uCi/mL	81.76	<1.14e-03	3.55e-03	3.38e-03	3.47e-03	4.91	n/a	1.00e-03	2.62E+00
S96T001265			Alpha in Liquid Samples	uCi/mL	102.0	<2.62e-03	4.00e-02	4.54e-02	4.27e-02	12.6	104.5	6.00e-03	2.02E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-96-4

SEGMENT PORTION: Centrifuged Solids (Grab Sample)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001275			Bulk Density of Sample	g/mL	n/a	n/a	1.450	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001275			DSC Exotherm using Mettler	Joules/g	112.5	n/a	1.05e+02	104.3	104.7	0.76	n/a	n/a	n/a
S96T001275			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	1.96e+02	194.8	195.6	0.77	n/a	n/a	n/a
S96T001275			% Water by TGA using Mettler	%	103.1	n/a	45.21	47.73	46.47	5.42	n/a	n/a	n/a
S96T001313		F	Alpha of Digested Solid	uCi/g	116.4	<5.01e-01	4.480	3.760	4.120	17.5	101.4	6.43e-01	2.15E+01

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001317			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
S96T001317			Cyanide Water Distillation	ug/mL	97.16	<1.10e-02	20.70	26.70	23.70	25.3	108.0	1.100	n/a
S96T001317			DSC Exotherm using Mettler	Joules/g	104.7	n/a	1.44e+02	121.8	133.1	16.9	n/a	n/a	n/a
S96T001317			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	7.61e+02	642.4	701.8	16.9	n/a	n/a	n/a
S96T001317			% Water by TGA using Mettler	%	101.1	n/a	81.43	80.65	81.04	0.96	n/a	n/a	n/a
S96T001317			TOC by Persulfate/Coulometry	ug/mL	92.70	8.100	3.89e+03	3.57e+03	3.73e+03	8.58	n/a	40.00	n/a
S96T001317			Alpha in Liquid Samples	uCi/mL	97.39	<3.28e-03	1.38e-01	1.37e-01	1.38e-01	0.73	97.45	4.00e-03	9.63E+00

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%
S96T001271			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
S96T001271			Volume % Solids	%	n/a	n/a	65.10	n/a	n/a	n/a	n/a	n/a	n/a

Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-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%
S96T003465			DSC Exotherm using Mettler	Joules/g	105.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T003465			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T003465			% Water by TGA using Mettler	%	99.70	n/a	35.65	37.77	36.71	5.77	n/a	n/a	n/a
S96T003467		A	Strontium-89/90 High Level	uCi/g	95.08	<4.76e-01	4.69e+03	4.52e+03	4.60e+03	3.69	n/a	6.47e-01	5.50E-01
S96T003467		A	Silver -ICP-Acid Digest	ug/g	83.50	<1.00e-02	7.31e+02	566.0	648.5	25.4	n/a	6.450	n/a
S96T003467		A	Aluminium -ICP-Acid Digest	ug/g	90.20	1.36e-01	6.17e+04	5.63e+04	5.90e+04	9.15	n/a	32.30	n/a
S96T003467		A	Arsenic -ICP-Acid Digest	ug/g	87.20	<1.00e-01	< 64.50	<9.52e1	n/a	n/a	n/a	64.50	n/a
S96T003467		A	Boron -ICP-Acid Digest	ug/g	107.0	6.26e-01	2.64e+02	202.0	233.0	26.6	n/a	32.30	n/a
S96T003467		A	Barium -ICP-Acid Digest	ug/g	86.60	<5.00e-02	2.69e+02	246.0	257.5	8.93	n/a	32.30	n/a
S96T003467		A	Beryllium -ICP-Acid Digest	ug/g	93.80	<5.00e-03	< 3.230	<4.76e0	n/a	n/a	n/a	3.230	n/a
S96T003467		A	Bismuth -ICP-Acid Digest	ug/g	81.40	<1.00e-01	< 64.50	<9.52e1	n/a	n/a	n/a	64.50	n/a
S96T003467		A	Calcium -ICP-Acid Digest	ug/g	105.2	1.090	3.52e+03	3.06e+03	3.29e+03	14.0	n/a	64.50	n/a
S96T003467		A	Cadmium -ICP-Acid Digest	ug/g	86.40	<5.00e-03	23.60	22.40	23.00	5.22	n/a	3.230	n/a
S96T003467		A	Cerium -ICP-Acid Digest	ug/g	91.80	<1.00e-01	2.99e+02	323.0	311.0	7.72	n/a	64.50	n/a
S96T003467		A	Cobalt -ICP-Acid Digest	ug/g	89.40	<2.00e-02	< 12.90	<1.90e1	n/a	n/a	n/a	12.90	n/a
S96T003467		A	Chromium -ICP-Acid Digest	ug/g	88.80	1.40e-02	1.85e+03	1.70e+03	1.78e+03	8.45	n/a	6.450	n/a
S96T003467		A	Copper -ICP-Acid Digest	ug/g	82.20	1.60e-02	38.30	39.00	38.65	1.81	n/a	6.450	n/a
S96T003467		A	Iron -ICP-Acid Digest	ug/g	96.00	1.07e-01	1.59e+04	1.54e+04	1.56e+04	3.19	n/a	32.30	n/a
S96T003467		A	Potassium -ICP-Acid Digest	ug/g	99.60	<5.00e-01	3.45e+02	<4.76e2	n/a	n/a	n/a	323.0	n/a
S96T003467		A	Lanthanum -ICP-Acid Digest	ug/g	89.60	<5.00e-02	2.94e+03	2.76e+03	2.85e+03	6.32	n/a	32.30	n/a
S96T003467		A	Lithium -ICP-Acid Digest	ug/g	82.20	<1.00e-02	< 6.450	<9.52e0	n/a	n/a	n/a	6.450	n/a
S96T003467		A	Magnesium -ICP-Acid Digest	ug/g	88.20	1.17e-01	1.32e+03	1.26e+03	1.29e+03	4.65	n/a	64.50	n/a
S96T003467		A	Manganese -ICP-Acid Digest	ug/g	87.60	<1.00e-02	2.66e+03	2.50e+03	2.58e+03	6.20	n/a	6.450	n/a
S96T003467		A	Molybdenum -ICP-Acid Digest	ug/g	89.00	<5.00e-02	< 32.30	<4.76e1	n/a	n/a	n/a	32.30	n/a
S96T003467		A	Sodium -ICP-Acid Digest	ug/g	107.8	1.040	8.31e+04	7.60e+04	7.96e+04	8.93	n/a	64.50	n/a
S96T003467		A	Neodymium -ICP-Acid Digest	ug/g	92.00	<1.00e-01	1.33e+03	1.27e+03	1.30e+03	4.62	n/a	64.50	n/a
S96T003467		A	Nickel -ICP-Acid Digest	ug/g	89.00	<2.00e-02	3.15e+02	275.0	295.0	13.6	n/a	12.90	n/a
S96T003467		A	Phosphorus -ICP-Acid Digest	ug/g	87.20	<2.00e-01	5.36e+03	5.19e+03	5.28e+03	3.22	n/a	129.0	n/a
S96T003467		A	Lead -ICP-Acid Digest	ug/g	82.60	<1.00e-01	8.03e+02	783.0	793.0	2.52	n/a	64.50	n/a
S96T003467		A	Sulfur -ICP-Acid Digest	ug/g	86.00	1.21e-01	1.21e+03	1.17e+03	1.19e+03	3.36	n/a	64.50	n/a
S96T003467		A	Antimony -ICP-Acid Digest	ug/g	83.00	<6.00e-02	42.60	106.0	74.30	85.3	n/a	38.70	n/a
S96T003467		A	Selenium -ICP-Acid Digest	ug/g	89.20	<1.00e-01	< 64.50	<9.52e1	n/a	n/a	n/a	64.50	n/a
S96T003467		A	Silicon -ICP-Acid Digest	ug/g	204.0	9.10e-01	1.34e+03	1.08e+03	1.21e+03	21.5	n/a	32.30	n/a
S96T003467		A	Samarium -ICP-Acid Digest	ug/g	87.60	<1.00e-01	< 64.50	<9.52e1	n/a	n/a	n/a	64.50	n/a
S96T003467		A	Strontium -ICP-Acid Digest	ug/g	86.60	<1.00e-02	1.37e+02	127.0	132.0	7.58	n/a	6.450	n/a
S96T003467		A	Titanium-ICP-Acid Digest	ug/g	86.40	<1.00e-02	17.50	16.20	16.85	7.72	n/a	6.450	n/a
S96T003467		A	Thallium -ICP-Acid Digest	ug/g	80.80	<2.00e-01	<1.29e+02	<1.90e2	n/a	n/a	n/a	129.0	n/a
S96T003467		A	Uranium -ICP-Acid Digest	ug/g	83.20	<5.00e-01	<3.23e+02	<4.76e2	n/a	n/a	n/a	323.0	n/a
S96T003467		A	Vanadium -ICP-Acid Digest	ug/g	87.60	<5.00e-02	< 32.30	<4.76e1	n/a	n/a	n/a	32.30	n/a
S96T003467		A	Zinc -ICP-Acid Digest	ug/g	85.40	4.40e-02	88.50	80.70	84.60	9.22	n/a	6.450	n/a
S96T003467		A	Zirconium -ICP-Acid Digest	ug/g	87.40	<1.00e-02	< 6.450	<9.52e0	n/a	n/a	n/a	6.450	n/a
S96T003467		A	Cobalt-60 by GEA	uCi/g	105.4	<1.720	< 1.886	<2.57e0	n/a	n/a	n/a	1.886	n/a
S96T003467		A	Cesium-137 by GEA	uCi/g	102.9	<2.240	91.61	79.50	85.56	14.1	n/a	n/a	6.35

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T003467		A	Alpha of Digested Solid	uCi/g	98.44	<2.43e-01	4.840	4.470	4.655	7.95	103.9	4.89e-01	2.00E+01

Decanted Supernate (Liquid Grab Sludge): Decanted Supernate (Liquid Grab Sludge)

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001318			Bulk Density of Sample	g/mL	n/a	n/a	1.000	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001318			DSC Exotherm using Mettler	Joules/g	112.5	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001318			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001318			% Water by TGA using Mettler	%	103.2	n/a	84.70	84.97	84.84	0.32	n/a	n/a	n/a
S96T001318			Alpha in Liquid Samples	uCi/mL	102.6	<3.07e-03	1.97e-01	2.01e-01	1.99e-01	2.01	98.89	7.00e-03	8.71E+00

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%
S96T001272			Bulk Density of Sample	g/mL	n/a	n/a	1.280	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T001272			Volume % Solids	%	n/a	n/a	66.20	n/a	n/a	n/a	n/a	n/a	n/a

Table 1: Final Data Report
AY-101 GRAB

RISER: 15K
SEGMENT #: 1AY-96-FB

SEGMENT PORTION: Field Blank

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001208			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001208			DSC Exotherm on Perkin Elmer	Joules/g	100.1	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001208			Ammonia by ISE-Std Additions	ug/mL	106.6	3.50e-02	< 2.500	<2.50	n/a	n/a	94.90	2.500	n/a
S96T001208			OH- by Pot. Titration	ug/mL	98.56	<42.00	pH=6.09	N/A	n/a	n/a	n/a	n/a	n/a
S96T001208			pH Direct	pH	n/a	n/a	9.120	9.100	9.110	0.22	n/a	1.00e-02	n/a
S96T001208			Specific Gravity	Sp.G.	98.07	n/a	9.80e-01	9.76e-01	9.78e-01	0.41	n/a	1.00e-03	n/a
S96T001208			% Water by TGA on Perkin Elmer	%	98.46	n/a	99.79	99.79	99.79	0.00	n/a	n/a	n/a
S96T001208			Tot. Inorg. Carbon by Coul.	ug/mL	94.52	4.00e-01	12.50	11.00	11.75	12.8	n/a	5.000	n/a
S96T001208			Tot. Organic Carbon by Coul.	ug/mL	97.70	3.00e-02	< 5.500	7.150	n/a	n/a	99.40	5.500	n/a
S96T001208			Strontium-89/90 High Level	uCi/mL	106.5	5.54e-07	2.05e-04	2.08e-04	2.06e-04	1.45	n/a	6.19e-07	2.07E+00
S96T001208			Pu-239/240 by TRU-SPEC Resin	uCi/mL	107.1	<7.55e-06	<7.59e-06	<7.34E-6	n/a	n/a	n/a	7.59e-06	1.00E+02
S96T001208	D		Aluminium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S96T001208	D		Chromium-ICP-Acid Dil.	ug/mL	104.6	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S96T001208	D		Iron-ICP-Acid Dil.	ug/mL	102.6	<5.00e-02	<5.00e-02	<5.00e-2	n/a	n/a	n/a	5.00e-02	n/a
S96T001208	D		Manganese-ICP-Acid Dil.	ug/mL	102.6	<1.00e-02	<1.00e-02	<1.00e-2	n/a	n/a	n/a	1.00e-02	n/a
S96T001208	D		Sodium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	8.69e-01	7.81e-01	8.25e-01	10.7	n/a	1.00e-01	n/a
S96T001208	D		Nickel-ICP-Acid Dil.	ug/mL	103.2	<2.00e-02	<2.00e-02	<2.00e-2	n/a	n/a	n/a	2.00e-02	n/a
S96T001208	D		Silicon-ICP-Acid Dil.	ug/mL	96.40	<5.00e-02	8.78e-01	8.29e-01	8.53e-01	5.74	n/a	5.00e-02	n/a
S96T001208	D		Uranium-ICP-Acid Dil.	ug/mL	97.30	<5.00e-01	<5.00e-01	<5.00e-1	n/a	n/a	n/a	5.00e-01	n/a
S96T001208			Fluoride-IC-Dionex 4000i/4500	ug/mL	95.42	<1.30e-02	<1.30e-02	<1.30e-2	n/a	n/a	73.56	1.30e-02	n/a
S96T001208			Chloride-IC-Dionex 4000i/4500	ug/mL	90.89	3.40e-02	5.60e-02	4.70e-02	5.15e-02	17.5	95.19	1.70e-02	n/a
S96T001208			Nitrite-IC - Dionex 4000i/4500	ug/mL	99.07	<1.07e-01	1.09e-01	1.09e-01	1.09e-01	0.00	95.16	1.07e-01	n/a
S96T001208			Bromide by Ion Chromatograph	ug/mL	94.61	<1.26e-01	<1.26e-01	<1.26e-1	n/a	n/a	95.65	1.26e-01	n/a
S96T001208			Nitrate-IC - Dionex 4000i/4500	ug/mL	95.11	2.38e-01	3.75e-01	2.88e-01	3.32e-01	26.2	91.53	1.40e-01	n/a
S96T001208			Phosphate-IC-Dionex 4000i/4500	ug/mL	98.17	<1.19e-01	<1.19e-01	<1.19e-1	n/a	n/a	97.99	1.19e-01	n/a
S96T001208			Sulfate by IC-Dionex4000i/4500	ug/mL	96.20	1.90e-01	1.77e-01	1.57e-01	1.67e-01	12.0	96.83	1.36e-01	n/a
S96T001208			Oxalate by IC - Dionex 4000i	ug/mL	96.46	<1.05e-01	<1.05e-01	1.94e-01	n/a	n/a	99.41	1.05e-01	n/a
S96T001208			Cobalt-60 by GEA	uCi/mL	103.1	<4.47e-05	<4.40e-05	<4.78e-5	n/a	n/a	n/a	4.40e-05	n/a
S96T001208			Cesium-137 by GEA	uCi/mL	102.7	<6.38e-05	<1.01e-04	1.14e-04	n/a	n/a	n/a	1.01e-04	n/a
S96T001208			Am-241 by Extraction	uCi/mL	100.8	<2.32e-06	<2.53e-06	<2.80E-6	n/a	n/a	n/a	2.53e-06	1.00E+02
S96T001208			Alpha in Liquid Samples	uCi/mL	101.6	<1.02e-07	4.81e-07	7.32e-07	6.07e-07	41.4	100.8	2.11e-07	4.26E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15S
SEGMENT #: 1AY-96-6

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001356			DSC Exotherm using Mettler	Joules/g	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001356			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001356			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	28.20	32.20	30.20	13.2	n/a	5.000	n/a
S96T001356			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001356			pH Direct	pH	n/a	n/a	9.761	9.753	9.757	0.08	n/a	1.00e-02	n/a
S96T001356			Specific Gravity	Sp.G.	96.95	n/a	1.080	1.076	1.078	0.37	n/a	1.00e-03	n/a
S96T001356			% Water by TGA using Mettler	%	99.44	n/a	84.40	84.15	84.28	0.30	n/a	n/a	n/a
S96T001356			Tot. Inorg. Carbon by Coul.	ug/mL	94.52	4.00e-01	6.35e+03	6.94e+03	6.64e+03	8.88	n/a	105.0	n/a
S96T001356			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	8.21e+03	7.53e+03	7.87e+03	8.64	n/a	105.0	n/a
S96T001356		D	Aluminium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	5.280	5.650	5.465	6.77	94.80	5.050	n/a
S96T001356		D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	99.10	97.40	98.25	1.73	95.90	1.010	n/a
S96T001356		D	Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	98.20	5.050	n/a
S96T001356		D	Manganese-ICP-Acid Dil.	ug/mL	97.40	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	92.40	1.010	n/a
S96T001356		D	Sodium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	5.09e+04	5.02e+04	5.06e+04	1.38	n/a	10.10	n/a
S96T001356		D	Nickel-ICP-Acid Dil.	ug/mL	97.80	<2.00e-02	54.10	51.90	53.00	4.15	92.00	2.020	n/a
S96T001356		D	Silicon-ICP-Acid Dil.	ug/mL	94.40	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	89.90	5.050	n/a
S96T001356		D	Uranium-ICP-Acid Dil.	ug/mL	96.90	<5.00e-01	3.07e+02	322.0	314.5	4.77	103.0	50.50	n/a
S96T001356			Fluoride-IC-Dionex 4000i/4500	ug/mL	107.1	<1.30e-02	2.05e+02	151.0	178.1	30.3	n/a	53.83	n/a
S96T001356			Chloride-IC-Dionex 4000i/4500	ug/mL	99.24	<1.70e-02	4.82e+02	538.0	509.9	11.0	n/a	70.40	n/a
S96T001356			Nitrite-IC - Dionex 4000i/4500	ug/mL	105.2	<1.07e-01	3.68e+04	3.64e+04	3.66e+04	1.09	n/a	443.1	n/a
S96T001356			Nitrate-IC - Dionex 4000i/4500	ug/mL	103.9	<1.40e-01	2.74e+04	2.74e+04	2.74e+04	0.00	n/a	579.7	n/a
S96T001356			Phosphate-IC-Dionex 4000i/4500	ug/mL	104.8	<1.19e-01	<4.92e+02	<4.92e2	n/a	n/a	n/a	492.4	n/a
S96T001356			Sulfate by IC-Dionex4000i/4500	ug/mL	102.5	<1.36e-01	5.47e+03	5.36e+03	5.42e+03	2.03	n/a	562.8	n/a
S96T001359			Strontium-89/90 High Level	uCi/mL	104.1	1.10e-02	1.960	1.870	1.915	4.70	n/a	9.00e-03	2.20E+00
S96T001359			Pu-239/240 by TRU-SPEC Resin	uCi/mL	94.53	<3.08e-04	2.64e-02	3.27e-02	2.95e-02	21.3	n/a	1.00e-03	1.81E+00
S96T001359			Cobalt-60 by GEA	uCi/mL	100.4	<2.64e-05	2.78e-02	2.83e-02	2.80e-02	1.78	n/a	n/a	12.9
S96T001359			Cesium-137 by GEA	uCi/mL	103.3	<1.77e-03	91.50	87.90	89.70	4.01	n/a	n/a	0.150
S96T001359			Am-241 by Extraction	uCi/mL	102.6	<1.09e-03	3.29e-03	3.31e-03	3.30e-03	0.61	n/a	2.00e-03	3.15E+00
S96T001359			Alpha in Liquid Samples	uCi/mL	102.6	<3.07e-03	3.85e-02	4.04e-02	3.94e-02	4.82	100.3	7.00e-03	2.22E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15S
SEGMENT #: 1AY-96-7

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001357			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001357			DSC Exotherm on Perkin Elmer	Joules/g	98.56	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001357			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	19.00	n/a	n/a	n/a	n/a	125.0	n/a
S96T001357			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001357			pH Direct	pH	n/a	n/a	9.763	9.758	9.761	0.05	n/a	1.00e-02	n/a
S96T001357			Specific Gravity	Sp.G.	97.67	n/a	1.079	1.073	1.076	0.56	n/a	1.00e-03	n/a
S96T001357			% Water by TGA on Perkin Elmer	%	99.49	n/a	84.93	84.83	84.88	0.12	n/a	n/a	n/a
S96T001357			Tot. Inorg. Carbon by Coul.	ug/mL	95.85	8.00e-01	6.56e+03	6.60e+03	6.58e+03	0.61	98.67	105.0	n/a
S96T001357			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	8.54e+03	7.65e+03	8.10e+03	11.0	71.20	105.0	n/a
S96T001357		D	Aluminium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	5.600	<5.05e0	n/a	n/a	94.40	5.050	n/a
S96T001357		D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	1.01e+02	100.0	100.5	1.00	95.50	1.010	n/a
S96T001357		D	Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	98.20	5.050	n/a
S96T001357		D	Manganese-ICP-Acid Dil.	ug/mL	97.40	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	92.60	1.010	n/a
S96T001357		D	Sodium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	5.06e+04	5.03e+04	5.04e+04	0.59	n/a	10.10	n/a
S96T001357		D	Nickel-ICP-Acid Dil.	ug/mL	97.80	<2.00e-02	55.90	55.40	55.65	0.90	91.20	2.020	n/a
S96T001357		D	Silicon-ICP-Acid Dil.	ug/mL	94.40	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	89.90	5.050	n/a
S96T001357		D	Uranium-ICP-Acid Dil.	ug/mL	96.90	<5.00e-01	3.21e+02	334.0	327.5	3.97	100.5	50.50	n/a
S96T001357			Fluoride-IC-Dionex 4000i/4500	ug/mL	100.2	<1.30e-02	1.92e+02	197.0	194.5	2.57	108.8	53.83	n/a
S96T001357			Chloride-IC-Dionex 4000i/4500	ug/mL	102.4	7.40e-02	6.96e+02	702.0	699.0	0.86	95.70	70.40	n/a
S96T001357			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.1	<1.07e-01	3.16e+04	3.16e+04	3.16e+04	0.00	134.1	443.1	n/a
S96T001357			Nitrate-IC - Dionex 4000i/4500	ug/mL	99.35	3.79e-01	2.34e+04	2.39e+04	2.37e+04	2.11	114.7	579.7	n/a
S96T001357			Phosphate-IC-Dionex 4000i/4500	ug/mL	99.27	<1.19e-01	2.19e+03	2.17e+03	2.18e+03	0.92	91.21	492.4	n/a
S96T001357			Sulfate by IC-Dionex4000i/4500	ug/mL	100.6	2.53e-01	6.00e+03	6.15e+03	6.07e+03	2.47	100.0	562.8	n/a
S96T001360			Strontium-89/90 High Level	uCi/mL	104.1	1.10e-02	1.910	1.860	1.885	2.65	n/a	9.00e-03	2.21E+00
S96T001360			Pu-239/240 by TRU-SPEC Resin	uCi/mL	94.53	<3.08e-04	2.71e-02	3.08e-02	2.90e-02	12.8	n/a	1.00e-03	1.61E+00
S96T001360			Cobalt-60 by GEA	uCi/mL	100.4	<2.64e-05	2.48e-02	2.77e-02	2.62e-02	11.0	n/a	n/a	12.0
S96T001360			Cesium-137 by GEA	uCi/mL	103.3	<1.77e-03	85.40	85.70	85.55	0.35	n/a	n/a	0.150
S96T001360			Am-241 by Extraction	uCi/mL	102.6	<1.09e-03	3.13e-03	3.09e-03	3.11e-03	1.29	n/a	1.00e-03	3.02E+00
S96T001360			Alpha in Liquid Samples	uCi/mL	102.6	<3.07e-03	3.71e-02	4.88e-02	4.30e-02	27.2	99.16	7.00e-03	2.20E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15S
SEGMENT #: 1AY-96-8

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001358			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001358			DSC Exotherm on Perkin Elmer	Joules/g	98.91	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T001358			Ammonia by ISE-Std Additions	ug/mL	93.43	3.10e-02	34.50	36.20	35.35	4.81	n/a	5.000	n/a
S96T001358			OH- by Pot. Titration	ug/mL	93.37	<125.0	<1.25e+02	N/A	n/a	n/a	n/a	125.0	n/a
S96T001358			pH Direct	pH	n/a	n/a	9.754	9.752	9.753	0.02	n/a	1.00e-02	n/a
S96T001358			Specific Gravity	Sp.G.	97.67	n/a	1.059	1.088	1.074	2.70	n/a	1.00e-03	n/a
S96T001358			% Water by TGA on Perkin Elmer	%	102.0	n/a	83.87	84.84	84.36	1.15	n/a	n/a	n/a
S96T001358			Tot. Inorg. Carbon by Coul.	ug/mL	95.85	8.00e-01	6.67e+03	6.67e+03	6.67e+03	0.00	n/a	105.0	n/a
S96T001358			Tot. Organic Carbon by Coul.	ug/mL	104.7	1.00e-01	8.40e+03	7.52e+03	7.96e+03	11.1	n/a	105.0	n/a
S96T001358		D	Aluminium-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	5.880	5.270	5.575	10.9	94.20	5.050	n/a
S96T001358		D	Chromium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	99.30	100.0	99.65	0.70	97.70	1.010	n/a
S96T001358		D	Iron-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	98.70	5.050	n/a
S96T001358		D	Manganese-ICP-Acid Dil.	ug/mL	97.40	<1.00e-02	< 1.010	<1.01e0	n/a	n/a	93.00	1.010	n/a
S96T001358		D	Sodium-ICP-Acid Dil.	ug/mL	100.0	<1.00e-01	5.09e+04	5.12e+04	5.10e+04	0.59	n/a	10.10	n/a
S96T001358		D	Nickel-ICP-Acid Dil.	ug/mL	97.80	<2.00e-02	53.50	53.20	53.35	0.56	94.50	2.020	n/a
S96T001358		D	Silicon-ICP-Acid Dil.	ug/mL	94.40	<5.00e-02	< 5.050	<5.05e0	n/a	n/a	89.40	5.050	n/a
S96T001358		D	Uranium-ICP-Acid Dil.	ug/mL	96.90	<5.00e-01	3.11e+02	328.0	319.5	5.32	104.7	50.50	n/a
S96T001358			Fluoride-IC-Dionex 4000i/4500	ug/mL	100.2	<1.30e-02	2.22e+02	216.0	219.0	2.74	n/a	53.83	n/a
S96T001358			Chloride-IC-Dionex 4000i/4500	ug/mL	102.4	7.40e-02	7.25e+02	760.0	742.4	4.71	n/a	70.40	n/a
S96T001358			Nitrite-IC - Dionex 4000i/4500	ug/mL	102.1	<1.07e-01	3.87e+04	3.94e+04	3.90e+04	1.79	n/a	443.1	n/a
S96T001358			Nitrate-IC - Dionex 4000i/4500	ug/mL	99.35	3.79e-01	2.78e+04	2.80e+04	2.79e+04	0.72	n/a	579.7	n/a
S96T001358			Phosphate-IC-Dionex 4000i/4500	ug/mL	99.27	<1.19e-01	2.45e+03	2.36e+03	2.41e+03	3.74	n/a	492.4	n/a
S96T001358			Sulfate by IC-Dionex4000i/4500	ug/mL	100.6	2.53e-01	7.05e+03	7.22e+03	7.13e+03	2.38	n/a	562.8	n/a
S96T001361			Strontium-89/90 High Level	uCi/mL	100.8	4.00e-03	1.960	1.910	1.935	2.58	n/a	2.00e-03	1.49E+00
S96T001361			Pu-239/240 by TRU-SPEC Resin	uCi/mL	92.97	<3.28e-04	2.97e-02	2.95e-02	2.96e-02	0.68	n/a	2.00e-03	1.95E+00
S96T001361			Cobalt-60 by GEA	uCi/mL	100.4	<1.02e-03	2.63e-02	2.63e-02	2.63e-02	0.00	n/a	n/a	13.0
S96T001361			Cesium-137 by GEA	uCi/mL	99.63	<3.38e-03	88.20	86.00	87.10	2.53	n/a	n/a	0.170
S96T001361			Am-241 by Extraction	uCi/mL	78.83	<1.73e-03	3.35e-03	3.48e-03	3.42e-03	3.81	n/a	2.00e-03	2.52E+00
S96T001361			Alpha in Liquid Samples	uCi/mL	121.1	<2.43e-03	4.71e-02	4.74e-02	4.73e-02	0.63	108.9	3.00e-03	1.19E+01

Table 1: Final Data Report
AY-101 GRAB

RISER: 15S
SEGMENT #: 1AY-96-9

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001519			DSC Exotherm using Mettler	Joules/g	108.6	n/a	7.600	7.600	7.600	0.00	n/a	n/a	n/a
S96T001519			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	47.06	47.06	47.06	0.00	n/a	n/a	n/a
S96T001519			Ammonia by ISE-Std Additions	ug/mL	102.8	5.40e-02	26.10	24.40	25.25	6.73	76.60	5.000	n/a
S96T001519			pH Direct	pH	n/a	n/a	9.810	9.770	9.790	0.41	n/a	1.00e-02	n/a
S96T001519			Specific Gravity	Sp.G.	99.17	n/a	1.099	1.093	1.096	0.55	n/a	1.00e-03	n/a
S96T001519			% Water by TGA using Mettler	%	102.5	n/a	83.91	83.78	83.84	0.16	n/a	n/a	n/a
S96T001519			Tot. Inorg. Carbon by Coul.	ug/mL	94.52	4.00e-01	6.69e+03	6.36e+03	6.52e+03	5.06	123.3	105.0	n/a
S96T001519			Tot. Organic Carbon by Coul.	ug/mL	103.4	5.000	INS	INS	n/a	n/a	n/a	5.000	n/a
S96T001519		D	Aluminium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	95.50	10.10	n/a
S96T001519		D	Chromium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	1.07e+02	106.0	106.5	0.94	99.60	2.010	n/a
S96T001519		D	Iron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	104.5	10.10	n/a
S96T001519		D	Manganese-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	< 2.010	<2.01e0	n/a	n/a	99.50	2.010	n/a
S96T001519		D	Sodium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	5.29e+04	5.09e+04	5.19e+04	3.85	n/a	20.10	n/a
S96T001519		D	Nickel-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	62.40	59.80	61.10	4.26	98.30	4.020	n/a
S96T001519		D	Silicon-ICP-Acid Dil.	ug/mL	95.40	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	94.50	10.10	n/a
S96T001519		D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-01	3.44e+02	308.0	326.0	11.0	90.20	100.0	n/a
S96T001519			Fluoride-IC-Dionex 4000i/4500	ug/mL	93.22	<1.30e-02	1.64e+02	139.0	151.6	16.5	93.05	53.83	n/a
S96T001519			Chloride-IC-Dionex 4000i/4500	ug/mL	91.01	<1.70e-02	6.56e+02	631.0	643.4	3.89	90.89	70.40	n/a
S96T001519			Nitrite-IC - Dionex 4000i/4500	ug/mL	95.32	<1.07e-01	3.24e+04	3.32e+04	3.28e+04	2.44	115.9	443.1	n/a
S96T001519			Nitrate-IC - Dionex 4000i/4500	ug/mL	97.39	<1.40e-01	2.43e+04	2.39e+04	2.41e+04	1.66	104.7	579.7	n/a
S96T001519			Phosphate-IC-Dionex 4000i/4500	ug/mL	95.42	<1.19e-01	8.26e+02	814.0	820.1	1.46	96.89	492.4	n/a
S96T001519			Sulfate by IC-Dionex4000i/4500	ug/mL	95.56	<1.36e-01	5.55e+03	5.39e+03	5.47e+03	2.93	97.31	562.8	n/a
S96T001521			Tot. Organic Carbon by Coul.	ug/mL	103.0	2.00e-01	3.03e+03	3.15e+03	3.09e+03	3.88	102.0	55.00	n/a
S96T001521			Strontium-89/90 High Level	uCi/mL	97.56	1.00e-03	2.340	2.300	2.320	1.72	n/a	1.00e-03	9.64E-01
S96T001521			Pu-239/240 by TRU-SPEC Resin	uCi/mL	95.31	<3.22e-04	6.29e-02	5.93e-02	6.11e-02	5.89	n/a	3.00e-03	1.85E+00
S96T001521			Cobalt-60 by GEA	uCi/mL	100.8	<2.70e-04	2.41e-02	2.76e-02	2.58e-02	13.5	n/a	n/a	12.4
S96T001521			Cesium-137 by GEA	uCi/mL	100.0	<4.75e-04	85.50	86.50	86.00	1.16	n/a	n/a	0.150
S96T001521			Am-241 by Extraction	uCi/mL	85.34	<2.91e-03	1.02e-02	9.29e-03	9.75e-03	9.34	n/a	4.00e-03	1.69E+00
S96T001521			Alpha in Liquid Samples	uCi/mL	105.2	<4.47e-04	4.72e-02	5.12e-02	4.92e-02	8.13	112.3	1.00e-03	1.13E+01
S96T002162			OH- by Pot. Titration	ug/mL	96.15	<42.00	ph=6.71	n/a	n/a	n/a	n/a	125.0	n/a

Table 1: Final Data Report
AY-101 GRAB

RISER: 15S
SEGMENT #: 1AY-96-10

SEGMENT PORTION: Supernate

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001520			DSC Exotherm using Mettler	Joules/g	99.47	n/a	0.00e+00	12.20	6.100	200	n/a	n/a	n/a
S96T001520			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	80.21	40.10	200	n/a	n/a	n/a
S96T001520			Ammonia by ISE-Std Additions	ug/mL	102.3	4.90e-02	24.80	26.00	25.40	4.72	65.20	5.000	n/a
S96T001520			pH Direct	pH	n/a	n/a	9.800	9.880	9.840	0.81	n/a	1.00e-02	n/a
S96T001520			Specific Gravity	Sp.G.	99.17	n/a	1.081	1.073	1.077	0.74	n/a	1.00e-03	n/a
S96T001520			% Water by TGA using Mettler	%	102.1	n/a	84.30	85.27	84.78	1.14	n/a	n/a	n/a
S96T001520			Tot. Inorg. Carbon by Coul.	ug/mL	94.52	4.00e-01	6.77e+03	6.54e+03	6.66e+03	3.46	n/a	105.0	n/a
S96T001520			Tot. Organic Carbon by Coul.	ug/mL	103.4	5.000	3.29e+03	3.36e+03	3.32e+03	2.11	98.80	55.00	n/a
S96T001520		D	Aluminium-ICP-Acid Dil.	ug/mL	99.40	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	95.00	10.10	n/a
S96T001520		D	Chromium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-02	1.07e+02	104.0	105.5	2.84	100.2	2.010	n/a
S96T001520		D	Iron-ICP-Acid Dil.	ug/mL	103.2	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	101.5	10.10	n/a
S96T001520		D	Manganese-ICP-Acid Dil.	ug/mL	101.2	<1.00e-02	< 2.010	<2.01e0	n/a	n/a	99.50	2.010	n/a
S96T001520		D	Sodium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	5.16e+04	4.94e+04	5.05e+04	4.36	n/a	20.10	n/a
S96T001520		D	Nickel-ICP-Acid Dil.	ug/mL	102.0	<2.00e-02	60.50	59.30	59.90	2.00	99.20	4.020	n/a
S96T001520		D	Silicon-ICP-Acid Dil.	ug/mL	95.40	<5.00e-02	< 10.10	<1.01e1	n/a	n/a	94.00	10.10	n/a
S96T001520		D	Uranium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-01	3.36e+02	298.0	317.0	12.0	97.25	100.0	n/a
S96T001520			Fluoride-IC-Dionex 4000i/4500	ug/mL	93.22	<1.30e-02	1.87e+02	173.0	180.1	7.78	n/a	53.83	n/a
S96T001520			Chloride-IC-Dionex 4000i/4500	ug/mL	91.01	<1.70e-02	6.50e+02	628.0	638.9	3.44	n/a	70.40	n/a
S96T001520			Nitrite-IC - Dionex 4000i/4500	ug/mL	95.32	<1.07e-01	3.72e+04	3.59e+04	3.66e+04	3.56	n/a	443.1	n/a
S96T001520			Nitrate-IC - Dionex 4000i/4500	ug/mL	97.39	<1.40e-01	2.64e+04	2.61e+04	2.62e+04	1.14	n/a	579.7	n/a
S96T001520			Phosphate-IC-Dionex 4000i/4500	ug/mL	95.42	<1.19e-01	9.30e+02	891.0	910.5	4.28	n/a	492.4	n/a
S96T001520			Sulfate by IC-Dionex4000i/4500	ug/mL	95.56	<1.36e-01	5.69e+03	5.78e+03	5.73e+03	1.57	n/a	562.8	n/a
S96T001522			Strontium-89/90 High Level	uCi/mL	97.56	1.00e-03	1.530	1.650	1.590	7.55	n/a	1.00e-03	1.17E+00
S96T001522			Pu-239/240 by TRU-SPEC Resin	uCi/mL	95.31	<3.22e-04	5.95e-02	5.98e-02	5.96e-02	0.50	n/a	3.00e-03	1.61E+00
S96T001522			Cobalt-60 by GEA	uCi/mL	100.8	<2.70e-04	2.41e-02	2.98e-02	2.70e-02	21.2	n/a	n/a	12.2
S96T001522			Cesium-137 by GEA	uCi/mL	100.0	<4.75e-04	86.70	90.00	88.35	3.74	n/a	n/a	0.150
S96T001522			Am-241 by Extraction	uCi/mL	85.34	<2.91e-03	9.91e-03	8.03e-03	8.97e-03	21.0	n/a	5.00e-03	1.79E+00
S96T001522			Alpha in Liquid Samples	uCi/mL	105.2	<4.47e-04	5.08e-02	5.33e-02	5.20e-02	4.80	n/a	1.00e-03	1.08E+01
S96T002163			OH- by Pot. Titration	ug/mL	96.15	<42.00	ph=6.73	n/a	n/a	n/a	n/a	125.0	n/a

Table 2

Additional DSC Results for Tank 241-AY-101
Waste Compatibility Study

Risers 15K and 15S

Sample ID		Exothermic Energy (Joules/g)	Temp (° C)	Endothermic Energy (Joules/g)	Temp (° C)	Energy Ratio *
S96T001317						
1AY-96-4	Samp	144.3	367.0	1050.4	105.3	0.14
Liquid	Dup	121.8	426.9	1383.4	101.3	0.09
S96T001317						
1AY-96-4	Samp	105.1	350.1	766.1	101.3	0.14
Solid	Dup	104.3	340.9	842.9	103.3	0.12
S96T001519						
1AY-96-9	Samp	7.6	396.6	1452.9	99.3	0.01
	Dup	7.6	408.7	1237.5	103.3	0.01
S96T001520						
1AY-96-10	Samp	0.0	n/a	1674.5	101.3	0.00
	Dup	12.2	404.8	920.7	103.3	0.01
	Tripl	0.0	n/a	1560.6	101.3	0.00

Energy Ratio = Exothermic Energy /Endothermic Energy
* - This ratio must be < 1 for Compatibility Energetics
n/a - Temperature not applicable when no exotherm observed

Table 3 (1 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[illegible] [NO3]	[illegible] [OH]	[illegible]	[illegible] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001201 1AY-96-1	NO3	2.51E+04	0.405	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.34E+04	0.726	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[illegible] [NO3]	[illegible] [OH]	[illegible]	[illegible] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001201 1AY-96-1 DUP	NO3	2.49E+04	0.402	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.45E+04	0.750	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (2 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[NO3]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001202 1AY-96-2	NO3	2.58E+04	0.416	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.42E+04	0.743	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

(3)

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[NO3]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001202 1AY-96-2 DUP	NO3	2.58E+04	0.416	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.45E+04	0.750	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (3 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[illegible] [NO3]	[illegible] [OH]	[illegible] [NO2]	[illegible] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001203	NO3	2.75E+04	0.444	YES	NO	YES	
1AY-96-3	OH	<125	< 0.01				
	NO2	3.80E+04	0.826	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

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Sample ID	Analyte	Result (ug/mL)	Result (M)	[illegible] [NO3]	[illegible] [OH]	[illegible] [NO2]	[illegible] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001203	NO3	2.75E+04	0.444	YES	NO	YES	
1AY-96-3	OH	<125	< 0.01				
DUP	NO2	3.78E+04	0.822	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (4 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001356 1AY-96-6	NO3	2.74E+04	0.442	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.68E+04	0.800	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001356 1AY-96-6 DUP	NO3	2.74E+04	0.442	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.64E+04	0.791	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (5 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[redacted]	[redacted]	[redacted]	[redacted]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001357 1AY-96-7	NO3	2.34E+04	0.377	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.16E+04	0.687	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[redacted]	[redacted]	[redacted]	[redacted]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001357 1AY-96-7 DUP	NO3	2.39E+04	0.385	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.16E+04	0.687	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (6 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001358 1AY-96-8	NO3	2.78E+04	0.448	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.87E+04	0.841	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH] [NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001358 1AY-96-8 DUP	NO3	2.80E+04	0.452	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.94E+04	0.857	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (7 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001519 1AY-96-9	NO3	2.43E+04	0.392	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.24E+04	0.704	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO2]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001519 1AY-96-9 DUP	NO3	2.39E+04	0.385	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.32E+04	0.722	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 3 (8 of 8)

WASTE COMPATIBILITY CORROSION RULES

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO3]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001520 1AY-96-10	NO3	2.64E+04	0.426	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.72E+04	0.809	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Sample ID	Analyte	Result (ug/mL)	Result (M)	[NO3]	[OH]	[NO2]	[OH]/[NO3]
				<= 1.0 M?	0.010 M <= [OH] <= 4.0 M?	0.011 M <= [NO2] <= 5.5 M	
S96T001520 1AY-96-10 DUP	NO3	2.61E+04	0.421	YES	NO	YES	
	OH	<125	< 0.01				
	NO2	3.59E+04	0.780	1.0 M < [NO3] <= 3.0 M?	0.1 M * [NO3] <= [OH] < 10 M?		>= 0.4 * [NO3]?
				3.0 M < [NO3] <= 5.5 M?	0.3 <= [OH] < 10 M?		>= 1.2 M?

Table 4

ICP Serial Dilution Results for Tank 241-AY-101
Waste Compatibility Study

Risers 15K and 15S
Supernate

Sample ID	Analyte	Sample Result (µg/mL) Undiluted	Serial Dilution Result (µg/mL)	Percent Difference
S96T001201				
(1AY-96-1)	Na	5.42E+04	5.61E+04	3.4
15K				
S96T001202				
(1AY-96-2)	Na	5.60E+04	5.66E+04	1.1
15K				
S96T001203				
(1AY-96-3)	Na	5.30E+04	5.46E+04	3.0
15K				
S96T001356				
(1AY-96-6)	Na	5.09E+04	5.09E+04	0.1
15S				
S96T001357				
(1AY-96-7)	Na	5.06E+04	5.22E+04	3.2
15S				
S96T001358				
(1AY-96-8)	Na	5.09E+04	5.28E+04	3.8
15S				
S96T001519				
(1AY-96-9)	Na	5.29E+04	5.48E+04	3.6
15S				
S96T001520				
(1AY-96-10)	Na	5.16E+04	5.33E+04	3.3
15S				

Percent Difference = [(ABS(Sample - Serial Dilution))/Sample] X 100

CHAIN OF CUSTODY FORMS

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CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-1 (3) Supervisor JAMES SICKELS

(4) Tank 241-AY-101 (5) Riser KK (6) Cask/PIG Shipping Container Serial Number 6003 D

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5	0.5
Side Dose Rate	0.8	1.0
Bottom Dose Rate	1.2	1.3
Smearable Contamination	<20 (Alpha)	<20 (Alpha)
	<1000 (Beta-Gamma)	<1000 (Beta-Gamma)
RCT*	(Signature)	RCT (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1918
C. Date and Time Sample Removed from Tank	2-20-96 1234
D. Expected Liquid Content	100%
E. Expected Solid Content	N/A
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	150 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	125 mL

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

Medium Brown Color

(30) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels JAMES SICKELS	1245 2-20-96	
(17) Relinquished By (Sign and PRINT)		**(18) Received By (Sign and PRINT)**	**(19) Date/Time**	**(20) Receiver Comments**
R.J. PRAZNIK		CEL Sgd	2-21-96 13:10	
(21) Relinquished By (Sign and PRINT)		**(22) Received By (Sign and PRINT)**	**(23) Date/Time**	**(24) Receiver Comments**
CEL Sgd		N LAPIERS	2-21-96 14:19	
(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?	(30) Seal Data 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 (01/96)

WHC-SD-WM-DP-178, REV. 1

JUN. 7. 2002 9:08AM WEC 222S LAB ROOM 2F BACKSIDE No. 1550 P. 2/

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-2 (3) Supervisor James Sickels

) Tank 241-AY-101 (5) Riser 15K (6) Cask/PIG Shipping Container Serial Number 6003B

ıdiation Survey Date For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/HR	<0.5 mR/HR
Side Dose Rate	0.7 mR/HR	0.7 mR/HR
Bottom Dose Rate	0.5 mR/HR	<0.5 mR/HR
Smearable Contamination (Alpha)	<20 DPM	<20 DPM
(Beta-Gamma)	4000 DPM	<1000 DPM
RCT* (Signature)	SL	[illegible]

(8) Shipment Description

A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1919
C. Date and Time Sample Removed from Tank	2-21-96 1918
D. Expected Liquid Content	100%
E. Expected Solid Content	Ø
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	250 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120 mL

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

Light Brown Liquid

43

) Field Comments

(32) Laboratory Comments

) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels JAMES SICKELS	2130 2-21-96	

) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels JAMES SICKELS	Janie L Hensley JANIE L HENSLEY	1220 2-22-96	

) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
Janie L Hensley JANIE L HENSLEY	Keith Fuller KEITH FULLER	1313 2-22-96	

) 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

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

BC-6001-326 (01/96)

WHC-SD-WM-DP-178, REV 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-95-3 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15K (6) Cask/PIG Shipping Container Serial Number 6003D

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/HR	<0.5 mR/HR
Side Dose Rate	0.7 mR/HR	0.7 mR/HR
Bottom Dose Rate	0.5 mR/HR	0.5 mR/HR
Smearable Contamination (Alpha)	<20 DPM	<20 DPM
(Beta-Gamma)	400 DPM	<1000 DPM
RCT* (Signature)		RCT* J. Morales (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1920
C. Date and Time Sample Removed from Tank	2-21-96 1955
D. Expected Liquid Content	100%
E. Expected Solid Content	Ø %
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	200 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120 mL

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

44

(30) Field Comments

Light Brown Liquid

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222-S	James Sickels JAMES SICKELS	2155 2-21-96	
(17) Relinquished By (Sign and PRINT)		**(18) Received By (Sign and PRINT)**	**(19) Date/Time**	**(20) Receiver Comments**
James Sickels JAMES SICKELS		Janie L Hensley JANIE L HENSLEY	1220 2-22-96	
(21) Relinquished By (Sign and PRINT)		**(22) Received By (Sign and PRINT)**	**(23) Date/Time**	**(24) Receiver Comments**
Janie L Hensley JANIE L HENSLEY		Keith Fuller KEITH FULLER	1313 2-22-96	
(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?	(30) Seal Data 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 (01/95)

WHC-SD-WM-DP-178, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

hipment Number 200E-07-TF (2) Sample Number 1AY-96-4 (3) Supervisor James Sickels

ank 241-AY-101 (5) Riser 15K (6) Cask/PIG Shipping Container Serial Number 6003B

tion Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
ver Top Dose Rate	<0.5	<0.5
de Dose Rate	1.8	2.0
ttom Dose Rate	1.1	1.0
neerable Contamination	<20 (Alpha)	<20 (Alpha)
	<1000 (Beta-Gamma)	<1000 (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description	
A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1921
C. Date and Time Sample Removed from Tank	2-21-96 1950
D. Expected Liquid Content	50%
E. Expected Solid Content	50%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	800 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120 mL

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

45

Field Comments
Sludge Sample.
Lumpy and Dark Brown

(32) Laboratory Comments

Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels JAMES SICKELS	2135 2-21-96	
Relinquished By (Sign and PRINT) R.T. Plazwik		(18) Received By (Sign and PRINT) DAVID J Keane	(19) Date/Time 1023 2-22-96	(20) Receiver Comments
Relinquished By (Sign and PRINT) DAVID J Keane		(22) Received By (Sign and PRINT) N LAPIERS	(23) Date/Time 1125 2-22-96	(24) Receiver Comments
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?		
☒ Yes ☐ No	☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No

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

BC-6001-326 (01/96)

WHC-SD-WM-DP-178, REV. 1

Jun. 7. 1996 8:10AM WHC 222S LAB ROOM 2F BACKSIDE No. 1670 P. 5/11

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-5 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15K (6) Cask/PIG Shipping Container Serial Number ~~1923 2-21-96 TF 2-21-96~~ 6003D

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5	<0.5
Side Dose Rate	1.8	1.8
Bottom Dose Rate	0.8	1.3
Smearable Contamination (Alpha)	<20	<20
(Beta-Gamma)	<1000	<1000
RCT* (Signature)	[signature]	[signature]

(8) Shipment Description

A. Work Package Number	J3-ES-95-00633
B. Cask/PIG Seal Number	1923
C. Date and Time Sample Removed from Tank	2-21-96 2004
D. Expected Liquid Content	50%
E. Expected Solid Content	50%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	1500 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120 mL

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

45

(9) Field Comments Sludge Sample
Lumpy Dark Brown
Bottle only About 1/2 Full

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	[signature] JAMES SICKELS	2140 2-21-96	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
[signature] R.J. Prazmik		[signature] DAVID J KEANE	2-22-96	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
[signature] DAVID J KEANE		[signature] NORMAN N LAPIERS	1125 2-22-96	
(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?	(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 (01/96)

WHC-SD-WM-DP-178, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 2000E-07-TF (2) Sample Number 1AY-96-6 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15s (6) Cask/PIG Shipping Container Serial Number 6003B

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/HR	<0.5 mr/hr
Side Dose Rate	1 mR/HR	.5 mr/hr
Bottom Dose Rate	<0.5 mR/HR	<0.5 mr/hr
Smearable Contamination	<20 DPM (Alpha)	<20 DPM (Alpha)
	<1000 DPM (Beta-Gamma)	<1000 DPM (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1924
C. Date and Time Sample Removed from Tank	2-28-96 1336
D. Expected Liquid Content	100%
E. Expected Solid Content	Ø %
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	250 mr/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120mL

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

47

(30) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels	0720 2-29-96	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels		ML Dunnington	1030 2-29-96	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
ML Dunnington		EE Dubes	2-29-96 1130	
(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?	(30) Seal Data 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 (01/96)

WHC-SD-WM-DP-178, REV. 1

JUN 1995 BY AY WEC 222S LAB ROOM 23 ENCLOSURE NO. 570

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-7 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15s (6) Cask/PIG Shipping Container Serial Number 6003A

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/HR	<0.5 mr/hr
Side Dose Rate	1 mR/HR	<0.5 mr/hr
Bottom Dose Rate	<0.5 mR/HR	<0.5 mr/hr
Smearable Contamination	<20 DPM (Alpha)	<20 DPM (Alpha)
	<1000 DPM (Beta-Gamma)	<1000 DPM (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-96-0633
B. Cask/PIG Seal Number	1925
C. Date and Time Sample Removed from Tank	2-28-96 1408
D. Expected Liquid Content	100%
E. Expected Solid Content	0%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	250 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120 mL

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

49

(9) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222s	James Sickels	0720 2-29-96	

(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels	ML Dunnington	1030 2-29-96	

(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
ML Dunnington	FE Dukes	2-29-96 1130	

(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?	(30) Seal Data 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 (01/96)

WHC-SD-WM-DP-178, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-8 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15S (6) Cask/PIG Shipping Container Serial Number 6003B/63

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	.6 mrHR	<0.5 mr/hr
Side Dose Rate	1.2 mrHR	.5 mr/hr
Bottom Dose Rate	.8 mrHR	.5 mr/hr
Smearable Contamination	<20 DPM (Alpha)	<20 DPM (Alpha)
	<1000 DPM (Beta-Gamma)	<1000 DPM (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-96-00633
B. Cask/PIG Seal Number	1926
C. Date and Time Sample Removed from Tank	2-28-96 1415
D. Expected Liquid Content	100%
E. Expected Solid Content	0%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	250 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120mL

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

49

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels JAMES SICKELS	0720 2-29-96	

(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels James Sickels	M Dunnington	1230 2-29-96	

(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
M Dunnington	EEDubes	2-29-96 1330	

(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?	(30) Seal Data 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 (01/96)

WHC-SD-WM-DP-178, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-9 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15s (6) Cask/PIG Shipping Container Serial Number ~~6003B / 63 2/29/96~~ 6003A / TF-7

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/hr	<0.5 mR/hr
Side Dose Rate	1.5 mR/hr	.6 mR/hr
Bottom Dose Rate	1 mR/hr	.5 mR/hr
Smearable Contamination (Alpha)	<20 dpm	<20
(Beta-Gamma)	<1000 dpm	<1000
RCT* (Signature)	[signature]	RCT* [signature] (Signature)

(8) Shipment Description

A. Work Package Number	J3-ES-96-00633
B. Cask/PIG Seal Number	1927
C. Date and Time Sample Removed from Tank	2-28-96 1430
D. Expected Liquid Content	50%
E. Expected Solid Content	50%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	900 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120mL

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

59

(10) Field Comments: Sample More Liquid Than Sludge.

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels James Sickels	0720 2-29-96	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels James Sickels		[signature] M L Dunnington	1230 2-29-96	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
[signature] M L Dunnington		EE Dubes EE Dubes	2-29-96 1350	
(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?	(30) Seal Date Consistent with this Record?		
☑ Yes ☐ No	☑ 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-6001-326 (01/96)

WHC-SD-WM-DP-178, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-10 (3) Supervisor James Sickels

(4) Tank 241-AY-101 (5) Riser 15s (6) Cask/PIG Shipping Container Serial Number

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/hr	<0.5 mr/hr
Side Dose Rate	1.5 mR/hr	.5 mr/hr
Bottom Dose Rate	1.8 mR/hr	.8 mr/hr
Smearable Contamination (Alpha)	<20 dpm	<AD
(Beta-Gamma)	<1000 dpm	<1000
RCT* (Signature)	[signature]	[signature]

(8) Shipment Description	
A. Work Package Number	J3ES-96-00633
B. Cask/PIG Seal Number	1928
C. Date and Time Sample Removed from Tank	2-28-96 1441
D. Expected Liquid Content	50%
E. Expected Solid Content	50%
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	300 mR/hr
G. Expected Sample Length (Auger)/ Volume (GRAB)	120mL

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

(10) Field Comments

Sample pulled at 55' NOT 56'2"
Sludge Too Hard.

Sample Mostly Liquid

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222s	James Sickels	0720 2-29-96	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
James Sickels		[signature]	2-29-96	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
[signature]		EEDubes	13:12	
(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?	(30) Seal Data 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 (01/95)

WHC-SD-WM-DP-178, REV. 1

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CHAIN-OF-CUSTODY RECORD FOR AUGER/GRAB SAMPLING

(1) Shipment Number 200E-07-TF (2) Sample Number 1AY-96-FB (3) Supervisor J. Sickels

(4) Tank 241-AY-101 (5) Riser 15K (6) Cask/PIG Shipping Container Serial Number 6003B

Radiation Survey Data For Cask/PIG:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5	<0.5
Side Dose Rate	<0.5	<0.5
Bottom Dose Rate	<0.5	<0.5
Smearable Contamination (Alpha)	<20	<20
(Beta-Gamma)	<1000	<1000
RCT* (Signature)		RCT* (Signature)

(8) Shipment Description

A. Work Package Number	J3ES-95-00633
B. Cask/PIG Seal Number	1917
C. Date and Time Sample Removed from Tank	2-20-96 1228
D. Expected Liquid Content	125 mL 100%
E. Expected Solid Content	Ø
F. Dose Rate Through Drill String (Auger)/On Contact (GRAB)	<.5 75a mR/hr 2-21-96
G. Expected Sample Length (Auger)/ Volume (GRAB)	125 mL

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

Field Blank Lowered 20' Into Riser

52

(9) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AY-101	222S	James Sickels JAMES SICKELS	1200 2-20-96	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
R.J. Pentzinger		C Ed Byrd	2-21-96 13:11	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
C Ed Byrd		N Lapiers NLAPIERS	2-21-96 14:22	
(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?	(30) Seal Data 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.

SC-6001-326 (01/96)

WHC-SD-WM-DP-178 REV 1

PHOTOGRAPHS

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3-18-96

AY-101 GRAB 1AY-96-1 (X) 1AY-96-2 (R)

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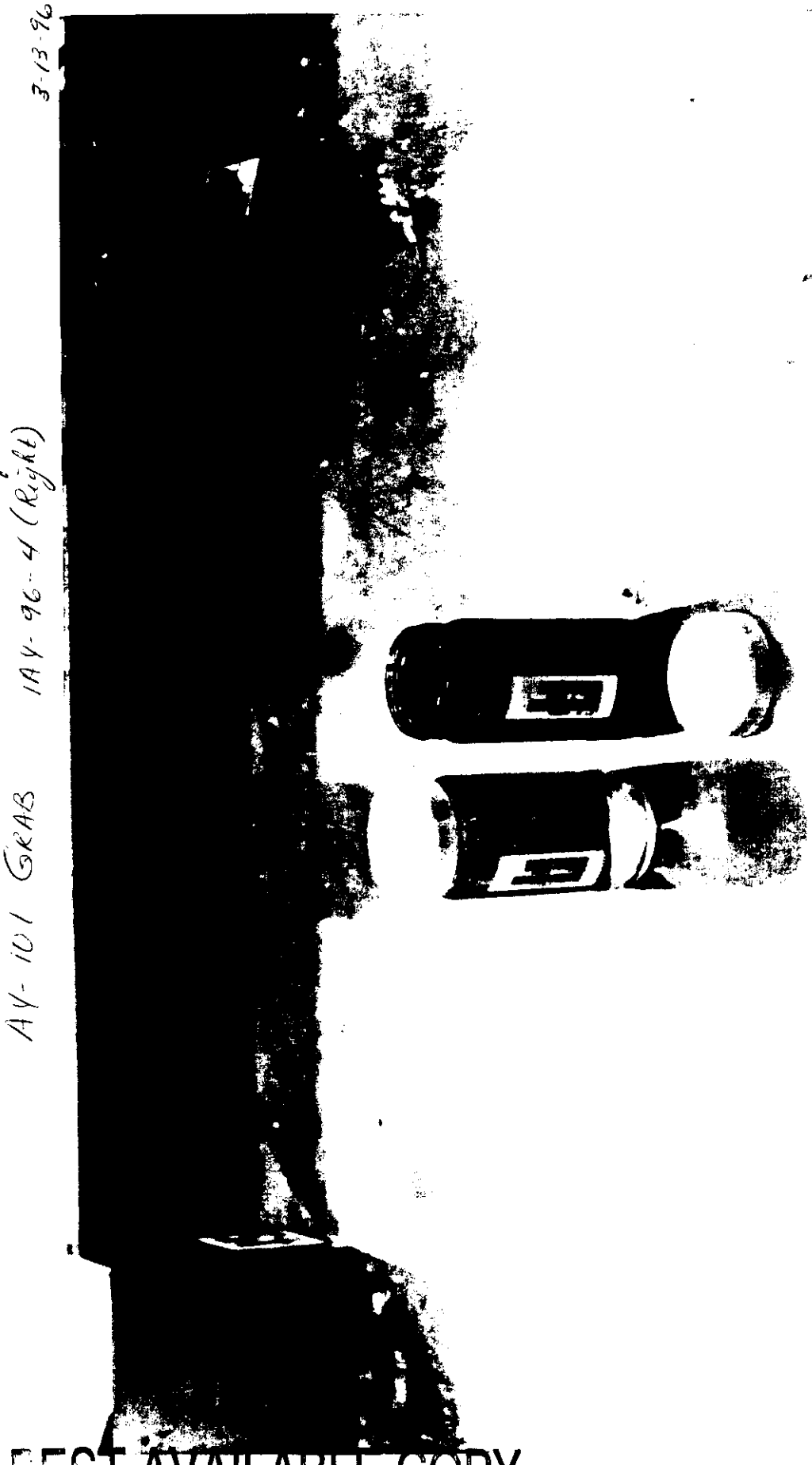

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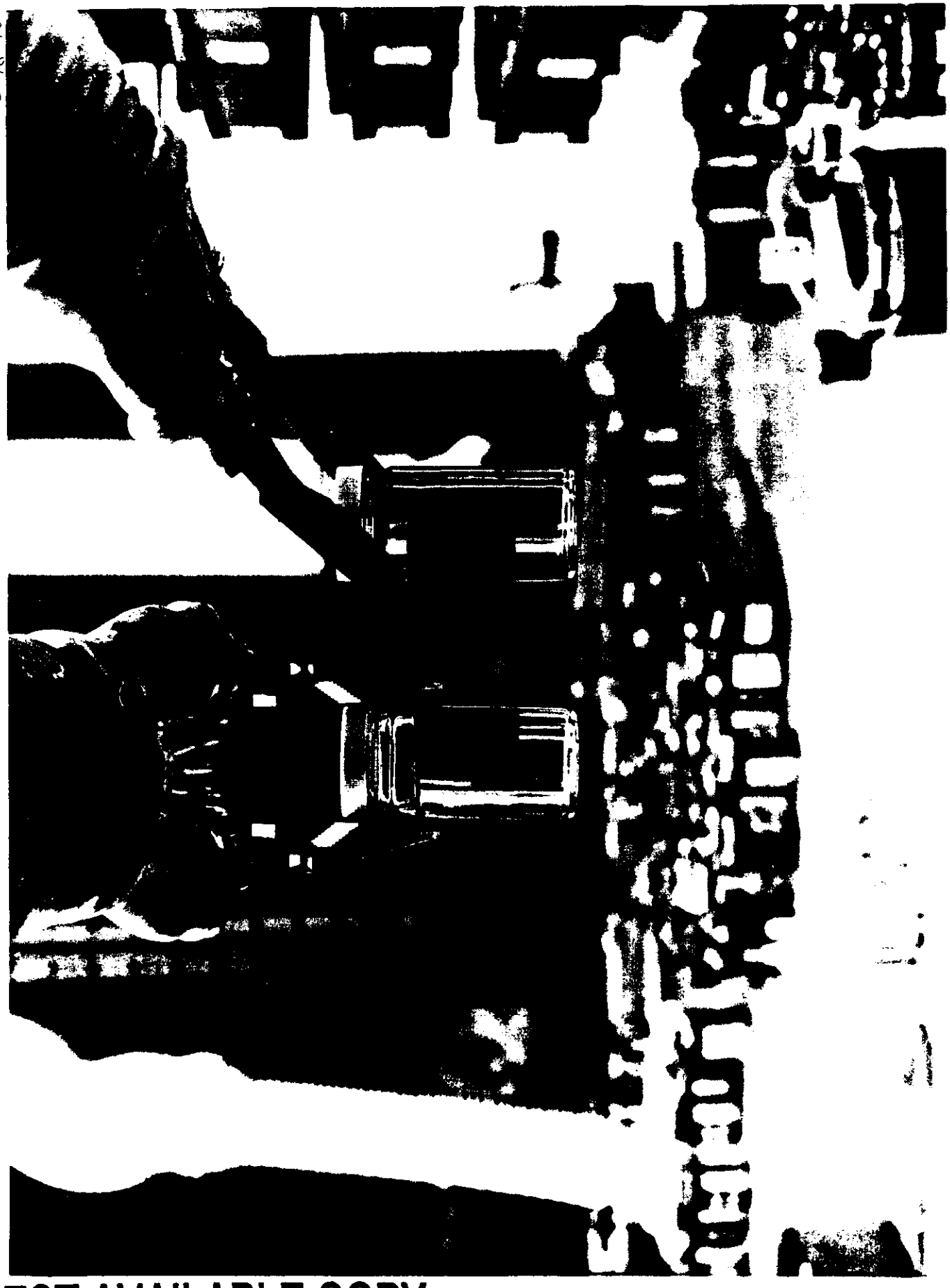


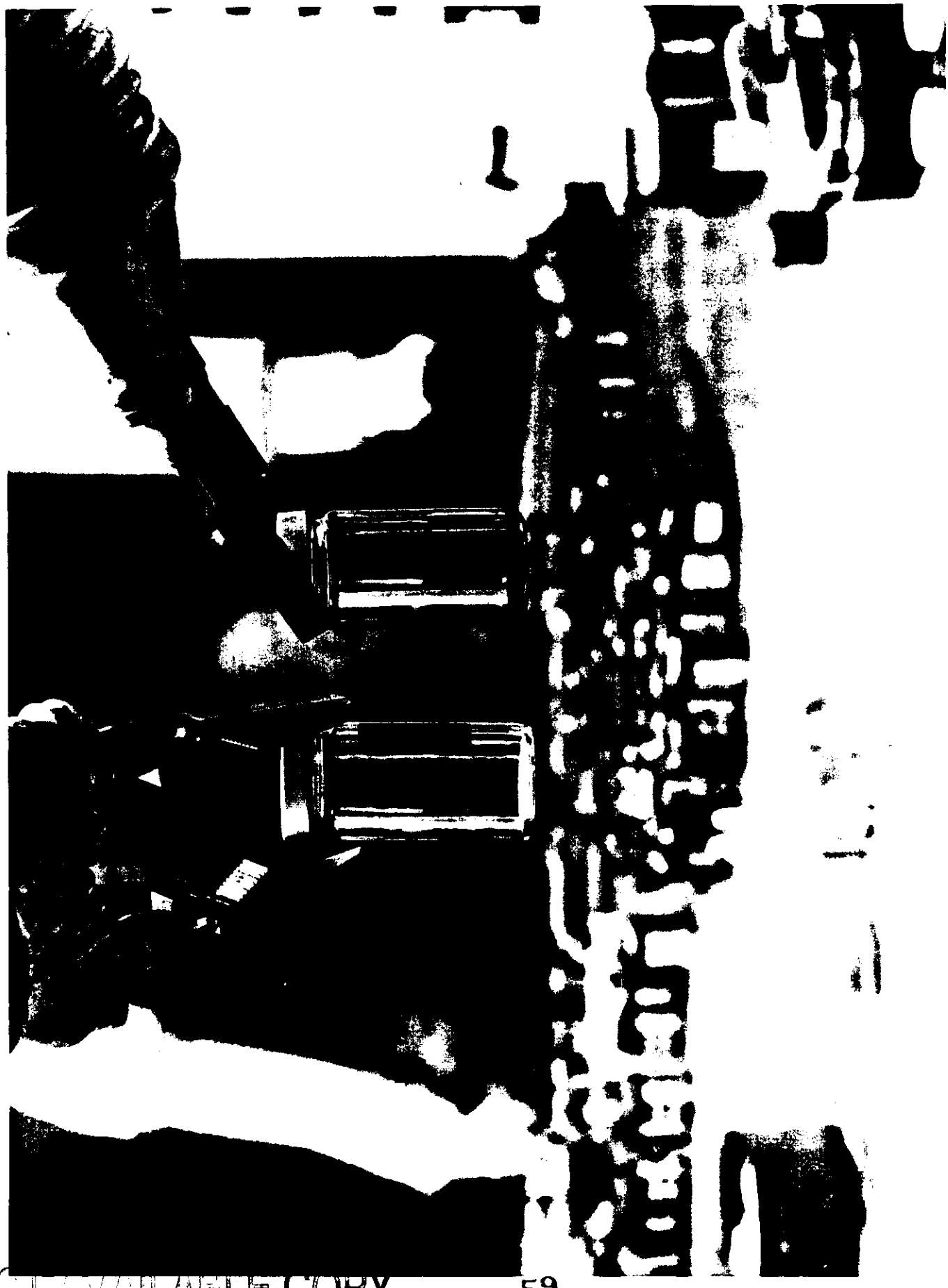
3-18-96

AY-101 GRAB 1AY-96-7 (5)

BEST AVAILABLE COPY

3-18-96

AY-101 GRAB 1AY-96-8 1AY-96-9



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SAMPLE HANDLING

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LABCORE Data Entry Template for Worklist# 7615

Analyst: TRO **Instrument:** NONE _____ **Book #** N/A

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

Worklist Comment: AY-101 @APPEAR

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000210	AY-101 GRAB	1 SAMPLE	S96T001208	0		@APPEAR1 ORGVOL01	LIQUID	N/A	N/A		mL
96000210	AY-101 GRAB	1 SAMPLE	S96T001208	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000210	AY-101 GRAB	1 SAMPLE	S96T001208	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	N/A		g
96000210	AY-101 GRAB	1 SAMPLE	S96T001208	0		@APPEAR1 DOSE-01	LIQUID	N/A	<.05		mrad/hour
96000210	AY-101 GRAB	1 SAMPLE	S96T001208	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	100		mL
96000210	AY-101 GRAB	2 SAMPLE	S96T001205	0		@APPEAR1 ORGVOL01	LIQUID	N/A	125		mL
96000210	AY-101 GRAB	2 SAMPLE	S96T001205	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000210	AY-101 GRAB	2 SAMPLE	S96T001205	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	4/11/96 ~~mg~~ 89.5		g
96000210	AY-101 GRAB	2 SAMPLE	S96T001205	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000210	AY-101 GRAB	2 SAMPLE	S96T001205	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000257	AY-101 GRAB	3 SAMPLE	S96T001353	0		@APPEAR1 ORGVOL01	LIQUID	N/A	N/A		mL
96000257	AY-101 GRAB	3 SAMPLE	S96T001353	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000257	AY-101 GRAB	3 SAMPLE	S96T001353	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	92.5 ~~N/A~~ 4/11/96		g
96000257	AY-101 GRAB	3 SAMPLE	S96T001353	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000257	AY-101 GRAB	3 SAMPLE	S96T001353	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000257	AY-101 GRAB	4 SAMPLE	S96T001354	0		@APPEAR1 ORGVOL01	LIQUID	N/A	N/A		mL
96000257	AY-101 GRAB	4 SAMPLE	S96T001354	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000257	AY-101 GRAB	4 SAMPLE	S96T001354	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	88.2 ~~N/A~~		g

Field blank sample 1AY-96-~~FB~~ 1208 is clear, colorless liquid.

Data Entry Comments:

Supernate samples 1AY-96-1 1205, 1AY-96-2 1206, 1AY-96-3 1207, 1AY-96-6 1353 & 1AY-96-7 1354, 8 1355 ~~1AY~~ ARE CLEAR, YELLOW LIQUIDS.

Sludge samples 1AY-96-4 1271 & 1AY-96-5 1272 are OPAQUE, BROWN SOLIDS.

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.

Supernate Samples 1AY-96-9 1365 & 1AY-96-10 1366 are clear, yellow samples with <1% SOLIDS PRESENT.

LABCORE Data Entry Template for Worklist# 7615

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000257	AY-101 GRAB	4 SAMPLE	S96T001354	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000257	AY-101 GRAB	4 SAMPLE	S96T001354	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000257	AY-101 GRAB	5 SAMPLE	S96T001355	0		@APPEAR1 ORGVOL01	LIQUID	N/A	N/A		mL
96000257	AY-101 GRAB	5 SAMPLE	S96T001355	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000257	AY-101 GRAB	5 SAMPLE	S96T001355	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	94.2 ~~N/A~~ mL 4/11/96		g
96000257	AY-101 GRAB	5 SAMPLE	S96T001355	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000257	AY-101 GRAB	5 SAMPLE	S96T001355	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000210	AY-101 GRAB	6 SAMPLE	S96T001206	0		@APPEAR1 ORGVOL01	LIQUID	N/A	N/A		mL
96000210	AY-101 GRAB	6 SAMPLE	S96T001206	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000210	AY-101 GRAB	6 SAMPLE	S96T001206	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	96.9 ~~N/A~~ mL 4/11/96		g
96000210	AY-101 GRAB	6 SAMPLE	S96T001206	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000210	AY-101 GRAB	6 SAMPLE	S96T001206	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000210	AY-101 GRAB	7 SAMPLE	S96T001207	0		@APPEAR1 ORGVOL01	LIQUID	N/A	NA		mL
96000210	AY-101 GRAB	7 SAMPLE	S96T001207	0		@APPEAR1 APPEAR01	LIQUID	N/A	complete		
96000210	AY-101 GRAB	7 SAMPLE	S96T001207	0		@APPEAR1 SAMPAMT1	LIQUID	N/A	89.9 ~~N/A~~ mL 4/11/96		g
96000210	AY-101 GRAB	7 SAMPLE	S96T001207	0		@APPEAR1 DOSE-01	LIQUID	N/A	N/A		mrad/hour
96000210	AY-101 GRAB	7 SAMPLE	S96T001207	0		@APPEAR1 SAMPLAMT	LIQUID	N/A	125		mL
96000210	AY-101 GRAB	8 SAMPLE	S96T001271	0		@APPEAR1 ORGVOL01	SOLID	N/A	N/A		mL
96000210	AY-101 GRAB	8 SAMPLE	S96T001271	0		@APPEAR1 APPEAR01	SOLID	N/A	complete		
96000210	AY-101 GRAB	8 SAMPLE	S96T001271	0		@APPEAR1 SAMPAMT1	SOLID	N/A	191.3 ~~N/A~~ mL 4/11/96		g
96000210	AY-101 GRAB	8 SAMPLE	S96T001271	0		@APPEAR1 DOSE-01	SOLID	N/A	N/A		mrad/hour

~~S96T001241~~ mL 4/11/96

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# 7615

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
96000257	AY-101 GRAB	9	SAMPLE	S96T001365	0		@APPEAR1 ORGVOL01	SOLID	N/A		N/A	mL
96000257	AY-101 GRAB	9	SAMPLE	S96T001365	0		@APPEAR1 APPEAR01	SOLID	N/A	complete		
96000257	AY-101 GRAB	9	SAMPLE	S96T001365	0		@APPEAR1 SAMPAMT1	SOLID	N/A	95.6	~~N/A~~ 4/11/96	g
96000257	AY-101 GRAB	9	SAMPLE	S96T001365	0		@APPEAR1 DOSE-01	SOLID	N/A	N/A		mrad/hour
96000257	AY-101 GRAB	10	SAMPLE	S96T001366	0		@APPEAR1 ORGVOL01	SOLID	N/A	N/A		mL
96000257	AY-101 GRAB	10	SAMPLE	S96T001366	0		@APPEAR1 APPEAR01	SOLID	N/A	complete		
96000257	AY-101 GRAB	10	SAMPLE	S96T001366	0		@APPEAR1 SAMPAMT1	SOLID	N/A	88.9	~~N/A~~ 4/11/96	g
96000257	AY-101 GRAB	10	SAMPLE	S96T001366	0		@APPEAR1 DOSE-01	SOLID	N/A	N/A		mrad/hour
96000210	AY-101 GRAB	11	SAMPLE	S96T001272	0		@APPEAR1 ORGVOL01	SOLID	N/A	N/A		mL
96000210	AY-101 GRAB	11	SAMPLE	S96T001272	0		@APPEAR1 APPEAR01	SOLID	N/A	complete		
96000210	AY-101 GRAB	11	SAMPLE	S96T001272	0		@APPEAR1 SAMPAMT1	SOLID	N/A	95.6	~~N/A~~ 4/11/96	g
96000210	AY-101 GRAB	11	SAMPLE	S96T001272	0		@APPEAR1 DOSE-01	SOLID	N/A	N/A		mrad/hour

Final page for worklist # 7615

TR Olsen 4/12/96
Analyst Signature Date

4-12-96
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.

SAMPLE PREPARATIONS

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LABCORE Data Entry Template for Worklist# 6592

Analyst: JAM **Instrument:** FUS01 SN16355 **Book #** _____

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

Worklist Comment: AY-101 GRAB SEG S4

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				FUSION01	SOLID	1	.250	N/A	g/L
96000210	AY-101 GRAB	2	SAMPLE	S96T001313	0	F	FUSION01	SOLID	N/A	1.7940		g/L
				.44859 → .2501								
96000210	AY-101 GRAB	3	SAMPLE	S96T001313	0	F	DOSE-02	SOLID	N/A	1750		mrad/hour
96000210	AY-101 GRAB	4	DUP	S96T001313	0	F	FUSION01	SOLID	1.7940	1.7900	N/A	g/L
				.44759 → .2501								
96000210	AY-101 GRAB	5	DUP	S96T001313	0	F	DOSE-02	SOLID	1750	1500	N/A	mrad/hour

Final page for worklist # 6592

JAMurphy 3-28-96
Analyst Signature **Date**

Susan Bee 4/02/96
Analyst Signature **Date**

Reviewed by RKFulle
4/2/96

Data Entry Comments: All Sample & QC - 40ml HNO_3, <1% solids
HPT - Judy Moralez

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# 9986

Analyst: [illegible] **Instrument:** ACD01 _____ **Book #** _____

Method: LA-505-159 Rev/Mod D-C

Worklist Comment: AY-101 GRAB SEG5 ACIDIG01 SKB

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP				ACIDIG01	SOLID	1	.050	N/A	g/L
		2 STD-PREP				ACIDIG01	SOLID	20	20	N/A	g/L
96000210	AY-101 GRAB	3 SAMPLE	S96T003467	0	A	ACIDIG01	SOLID	N/A	3.1000		g/L
96000210	AY-101 GRAB	4 SAMPLE	S96T003467	0	A	DOSE-02	SOLID	N/A	2000		mrad/hour
96000210	AY-101 GRAB	5 DUP	S96T003467	0	A	ACIDIG01	SOLID	3.1000	2.1000	N/A	g/L
96000210	AY-101 GRAB	6 DUP	S96T003467	0	A	DOSE-02	SOLID	2000	1750	N/A	mrad/hour

DF. 6-18-96 [illegible]

6-18-96 [illegible]

0.155g → ~~.1001~~ .0501

0.105g → .0501

Final page for worklist # 9986

Keith Fuller for Lisa A. Standley 6/20/96
Analyst Signature **Date**

[illegible] 6/20/96
Analyst Signature **Date**

S96T003466 → 3467

Sample = Jar # 10380
Duplicate = Jar # 10381
> samples are in 23 cell 11

Samples weighed out to 3 decimals using the balance in the hot cells due to high dose rates RK Fuller 6/18/96

Reviewed by RK Fuller 6/25/96

Data Entry Comments: Sampled weighed out in hot Cells on 6/18/96. RK Fuller

HPT: Bob Clemmons <190 Solids

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.

INORGANIC ANALYSES

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LABCORE Data Entry Template for Worklist# 10060

Analyst: ADP **Instrument:** DSC0 1 **Book #** 12N14B

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

Worklist Comment: Please run AY-101 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	28.45	30.1 *	N/A	Joules/g
96000210	AY-101 GRAB	2	SAMPLE	S96T003465	0		DSC-01	SOLID	N/A	Ø		Joules/g
96000210	AY-101 GRAB	3	DUP	S96T003465	0		DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 10060

Anthony Pennington 06-18-96
Analyst Signature **Date**

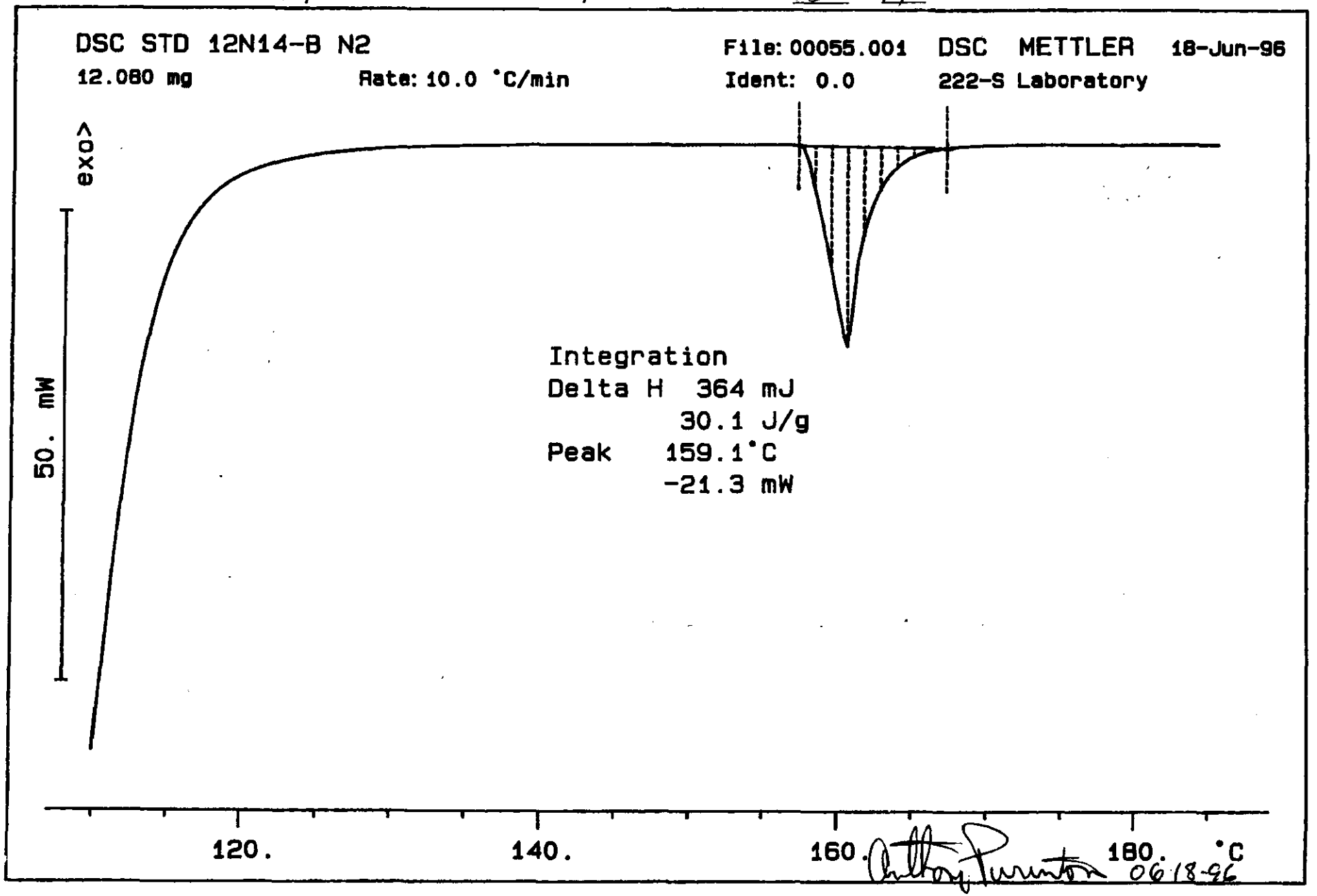
[illegible] 6-21-96
Analyst Signature **Date**

Verified/~~Vg~~ Validated by
Blandina Valenzuela
6-24-96

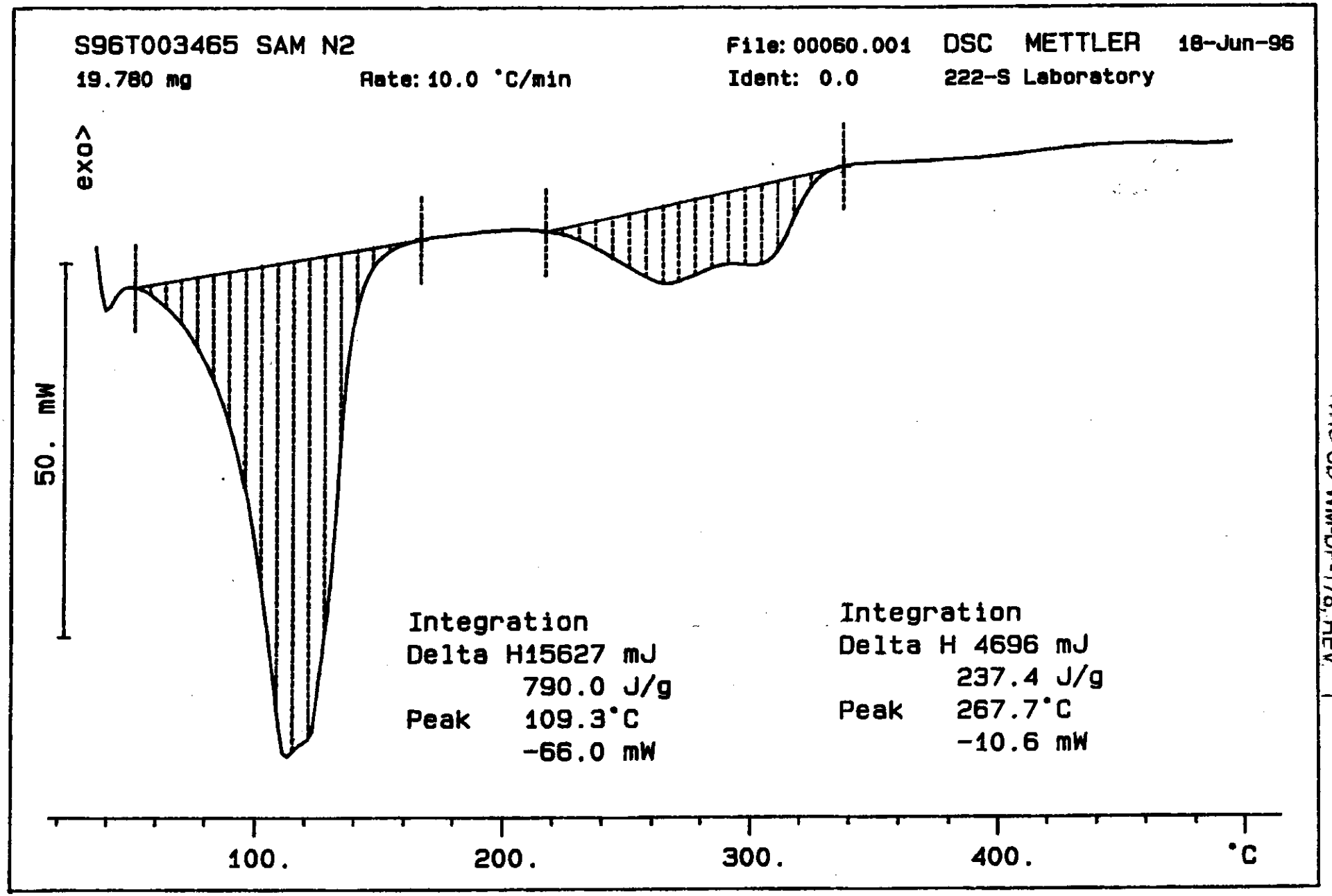
Data Entry Comments:

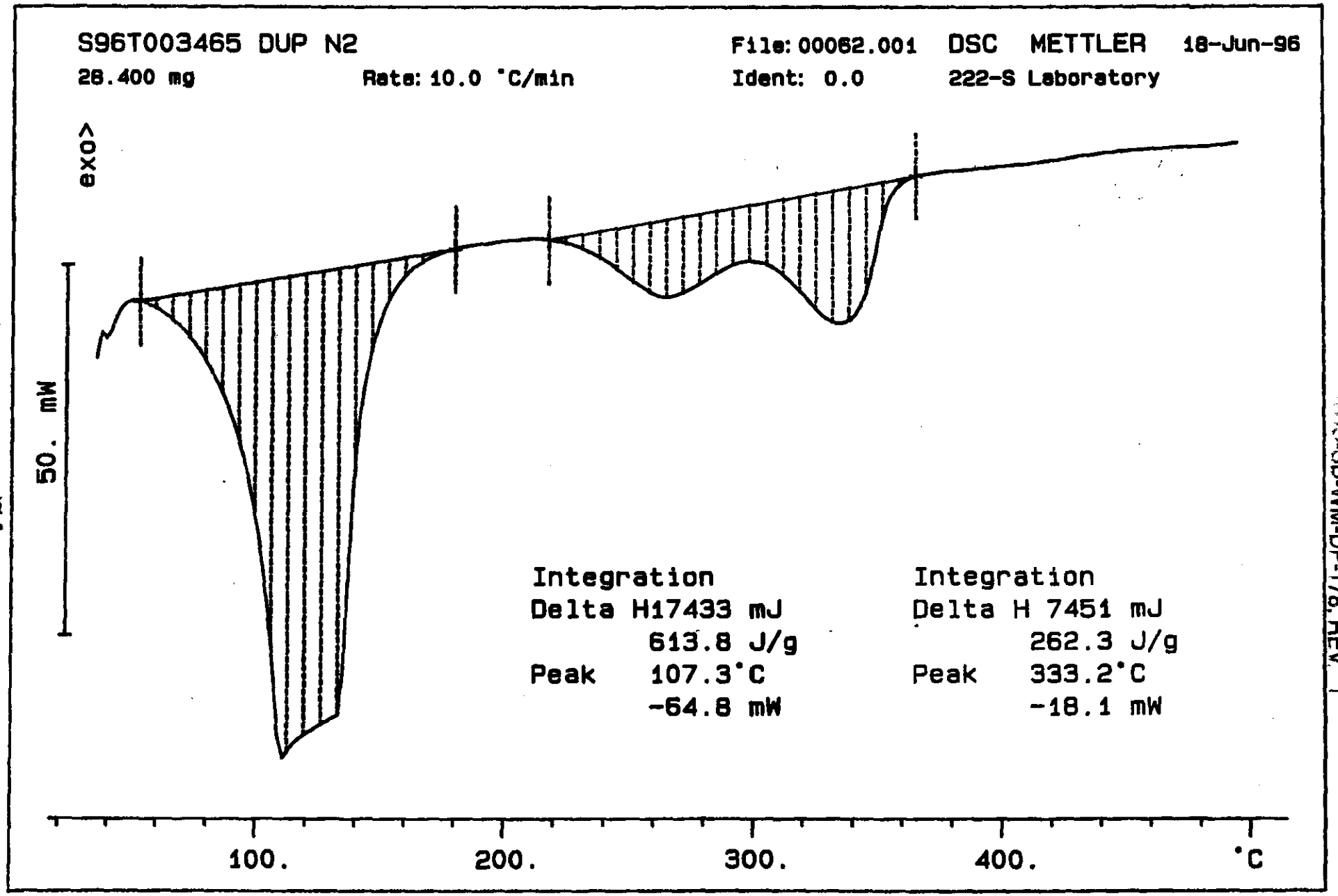
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 72 TO 74.



Anthony Purnton 06/18/96


S96T003465 SAM N2
19.780 mg
Rate: 10.0 °C/min
File: 00060.001
Ident: 0.0
DSC METTLER
222-S Laboratory
18-Jun-96
exo>
50. mW
Integration
Delta H15627 mJ
790.0 J/g
Peak 109.3°C
-66.0 mW
Integration
Delta H 4696 mJ
237.4 J/g
Peak 267.7°C
-10.6 mW
100.
200.
300.
400.
°C


S96T003465 DUP N2
File: 00062.001
DSC METTLER
18-Jun-96
28.400 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory
exo>
50. mW
Integration
Delta H17433 mJ
613.8 J/g
Peak 107.3°C
-64.8 mW
Integration
Delta H 7451 mJ
262.3 J/g
Peak 333.2°C
-18.1 mW
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 10061

Analyst: ADP **Instrument:** TGA0 1 **Book #** 82N8R

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

Worklist Comment: Please run AY-101 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	59.2	59.02	N/A	%
96000210	AY-101 GRAB	2	SAMPLE	S96T003465	0		TGA-01	SOLID	N/A	35.65		%
96000210	AY-101 GRAB	3	DUP	S96T003465	0		TGA-01	SOLID	35.65	37.77	N/A	%

Final page for worklist # 10061

Anthony Purnton 6-18-96
Analyst Signature **Date**

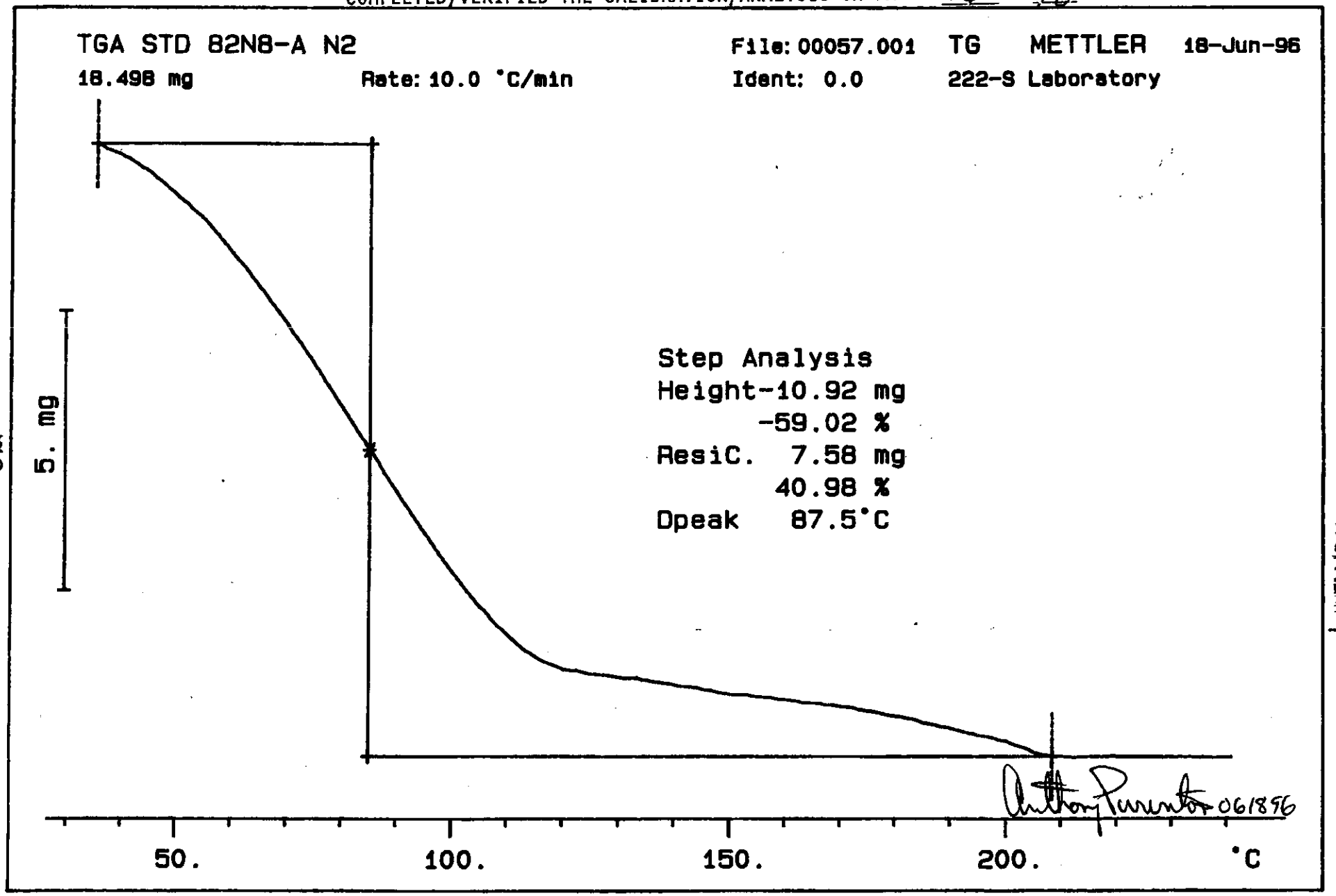
R. Hall 6-21-96
Analyst Signature **Date**

Verified/validated by
Blandina Valenzuela 6-24-96

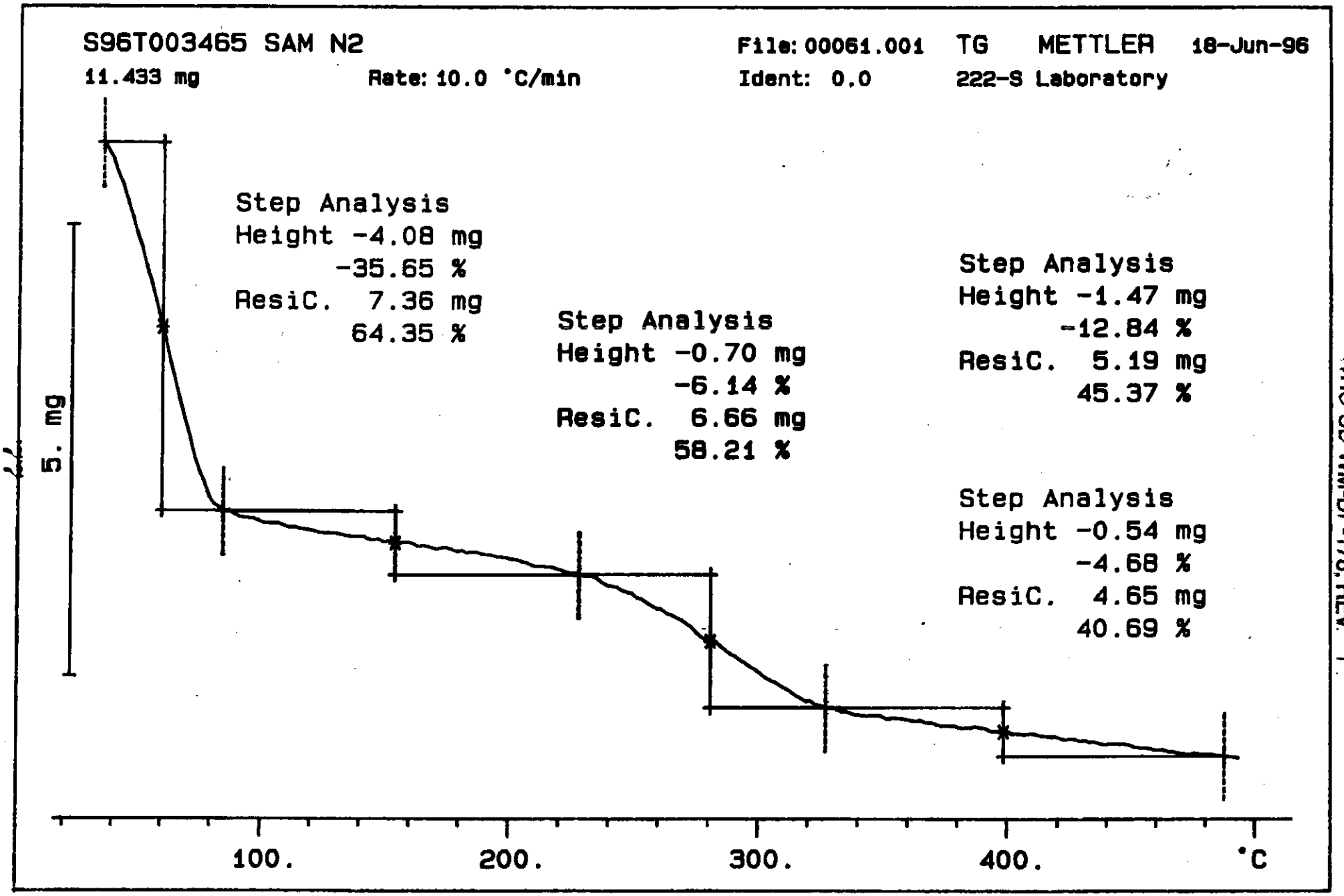
Data Entry Comments:

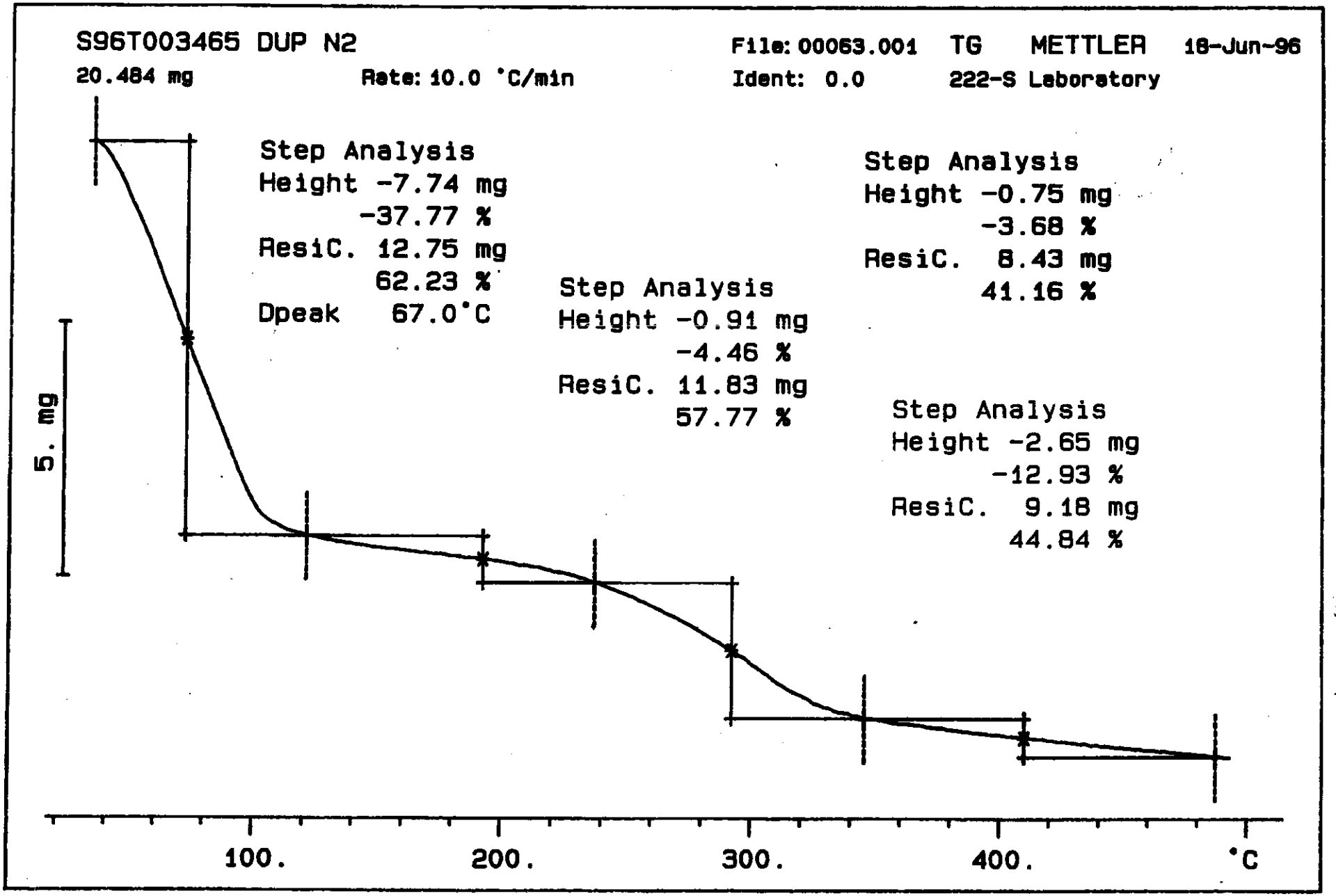
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 76 TO 78.



Anthony Purento 061896


S96T003465 SAM N2
11.433 mg
Rate: 10.0 °C/min
File: 00061.001
Ident: 0.0
TG METTLER 18-Jun-96
222-S Laboratory
Step Analysis
Height -4.08 mg
-35.65 %
ResiC. 7.36 mg
64.35 %
Step Analysis
Height -0.70 mg
-6.14 %
ResiC. 6.66 mg
58.21 %
Step Analysis
Height -1.47 mg
-12.84 %
ResiC. 5.19 mg
45.37 %
Step Analysis
Height -0.54 mg
-4.68 %
ResiC. 4.65 mg
40.69 %
5. mg
100.
200.
300.
400.
°C


S96T003465 DUP N2
20.484 mg
Rate: 10.0 °C/min
File: 00063.001
TG METTLER 18-Jun-96
Ident: 0.0
222-S Laboratory
Step Analysis
Height -7.74 mg
-37.77 %
ResiC. 12.75 mg
62.23 %
Dpeak 67.0°C
Step Analysis
Height -0.91 mg
-4.46 %
ResiC. 11.83 mg
57.77 %
Step Analysis
Height -0.75 mg
-3.68 %
ResiC. 8.43 mg
41.16 %
Step Analysis
Height -2.65 mg
-12.93 %
ResiC. 9.18 mg
44.84 %
5. mg
100.
200.
300.
400.
°C

LABCORE Data Entry Template for Worklist# 6747

Analyst: RDM **Instrument:** BA001 **Book #** 133N/6A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: AY-101 FOR SPG-01 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				SPG-01	LIQUID	1.3976	1.355	N/A	Sp.G.
96000210	AY-101 GRAB	2 SAMPLE	S96T001201	0		SPG-01	LIQUID	N/A	1.084	0.001	Sp.G.
96000210	AY-101 GRAB	3 DUP	S96T001201	0		SPG-01	LIQUID	1.084	1.081	N/A	Sp.G.
96000210	AY-101 GRAB	4 SAMPLE	S96T001202	0		SPG-01	LIQUID	N/A	1.076	0.001	Sp.G.
96000210	AY-101 GRAB	5 DUP	S96T001202	0		SPG-01	LIQUID	1.076	1.075	N/A	Sp.G.
96000210	AY-101 GRAB	6 SAMPLE	S96T001203	0		SPG-01	LIQUID	N/A	1.077	0.001	Sp.G.
96000210	AY-101 GRAB	7 DUP	S96T001203	0		SPG-01	LIQUID	1.077	1.070	N/A	Sp.G.
96000257	AY-101 GRAB	8 SAMPLE	S96T001356	0		SPG-01	LIQUID	N/A	1.080	0.001	Sp.G.
96000257	AY-101 GRAB	9 DUP	S96T001356	0		SPG-01	LIQUID	1.080	1.076	N/A	Sp.G.

Final page for worklist # 6747

RDMeyer 4/10/96
Analyst Signature **Date**

Linda Conlin 4/11/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/11/96

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
Gross Weight (W2)		1.4201	1.4137
Tare Weight (W1)		1.2835	1.2790
Weight of Solution (W2-W1)		0.1366	0.1347
Volume of Solution µL		100.1200	100.1200
Specific Gravity		1.3644	1.3454
Specific Gravity (Average)		1.3549	

Type	STANDARD
Worklist	6747
Test Code	SPG-01
Matrix	LIQUID
Sample #	STD
Instrument Code	BA001
Analyst	RD MEYERS
Date	04/10/96
Time	12:00 PM

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average = 1.355

Data Entry by:	Dan Hammitt	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
Type			
SAMPLE	Gross Weight (W2)	1.3958	1.4093
Work List	Tare Weight (W1)	1.2882	1.2998
6747	Weight of Solution (W2-W1)	0.1076	0.1095
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0747	1.0937
Matrix	Specific Gravity (Average)	1.0842	
LIQUID			
Sample #			
S96T001201			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.084	
12:00 PM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	[signature]	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.4112	1.3738
Work List	Tare Weight (W1)	1.3031	1.2655
6747	Weight of Solution (W2-W1)	0.1081	0.1083
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0797	1.0817
Matrix	Specific Gravity (Average)	1.0807	
LIQUID			
Sample #			
S96T001201 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.081	
12:00 PM			

Data Entry by:	Dany Hunter	Date:	04/10/96
Approved by:	Rui Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE	REPLICATE
Type			
SAMPLE	Gross Weight (W2)	1.4484	1.4403
Work List	Tare Weight (W1)	1.3396	1.3337
6747	Weight of Solution (W2-W1)	0.1088	0.1066
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0867	1.0647
Matrix	Specific Gravity (Average)	1.0757	
LIQUID			
Sample #			
S96T001202			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.076	
12:00 PM			

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

		DUPLICATE	REPLICATE
Type			
DUPLICATE	Gross Weight (W2)	1.4477	1.4553
WorkList	Tare Weight (W1)	1.3407	1.3471
6747	Weight of Solution (W2-W1)	0.107	0.1082
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0687	1.0807
Matrix	Specific Gravity (Average)	1.0747	
LIQUID			
Sample #			
S96T001202 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.075	
12:00 PM			

Data Entry by:	Mary Hammond	Date:	04/10/96
Approved by:	RH Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4559	1.4417
Work List	Tare Weight (W1)	1.3485	1.3334
6747	Weight of Solution (W2-W1)	0.1074	0.1083
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0727	1.0817
Matrix	Specific Gravity (Average)	1.0772	
LIQUID			
Sample #			
S96T001203			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.077	
12:00 PM			

Data Entry by:	Barry Hammond	Date:	04/10/96
Approved by:	Rui Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. /

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type
DUPLICATE
Work List
6747
Test Code
SPG-01
Matrix
LIQUID
Sample #
S96T001203 DUP
Instrument Code
BA001
Analyst
RD MEYERS
Date
04/10/96
Time
12:00 PM

	DUPLICATE	REPLICATE
Gross Weight (W2)	1.4717	1.3942
Tare Weight (W1)	1.3633	1.2883
Weight of Solution (W2-W1)	0.1084	0.1059
Volume of Solution µL	100.1200	100.1200
Specific Gravity	1.0827	1.0577
Specific Gravity (Average)	1.0702	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average =	1.070

Data Entry by:	[signature]	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type
SAMPLE
Worklist #
6747
Test Code
SPG-01
Matrix
LIQUID
Sample #
S96T001356
Instrument Code
BA001
Analyst
RD MEYERS
Date
04/10/96
Time
12:00 PM

	SAMPLE	REPLICATE
Gross Weight (W2)	1.4627	1.4109
Tare Weight (W1)	1.3548	1.3026
Weight of Solution (W2-W1)	0.1079	0.1083
Volume of Solution µL	100.1200	100.1200
Specific Gravity	1.0777	1.0817
Specific Gravity (Average)	1.0797	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average =	1.080

Data Entry by:	Dary Stenson	Date:	04/10/96
Approved by:	RW Schroeder	Date:	4/11/96

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.3725	1.4171
Work List #	Tare Weight (W1)	1.2653	1.3088
6747	Weight of Solution (W2-W1)	0.1072	0.1083
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0707	1.0817
Matrix	Specific Gravity (Average)	1.0762	
LIQUID			
Sample #			
S96T001356 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RD MEYERS	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/10/96	v RESULT v		
Time	Specific Gravity Average =	1.076	
12:00 PM			

Data Entry by:	Mary Hammett	Date:	04/10/96
Approved by:	Ruth Schroeder	Date:	4/1/96

Form 510112L1 Rev. 1.1

Page 1 of 1

LABCORE Data Entry Template for Worklist# 6750

Analyst: ADP **Instrument:** BA001 **Book #** 133N16A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: AY-101 & S-102 FOR SPG-01 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.397	1.365 / 1.079	N/A / 0.001	Sp.G.
96000257	AY-101 GRAB	2	SAMPLE	S96T001357	0		SPG-01	LIQUID	N/A / 1.079	~~1.08~~ NW 4/15/96		Sp.G.
96000257	AY-101 GRAB	3	DUP	S96T001357	0		SPG-01	LIQUID	~~1.08~~ NW 4/15/96	1.073 / 1.059	N/A / 0.001	Sp.G.
96000257	AY-101 GRAB	4	SAMPLE	S96T001358	0		SPG-01	LIQUID	N/A / 1.059	~~1.06~~ NW 4/15/96 / 1.088		Sp.G.
96000257	AY-101 GRAB	5	DUP	S96T001358	0		SPG-01	LIQUID	~~1.06~~ NW 4/15/96	~~1.09~~ NW 4/15/96 / 1.379	N/A / 0.001	Sp.G.
96000094	S102	6	SAMPLE	S96T001382	0		SPG-01	LIQUID	N/A / 1.379	~~1.38~~ NW 4/15/96		Sp.G.
96000094	S102	7	DUP	S96T001382	0		SPG-01	LIQUID	~~1.38~~ NW 4/15/96	1.451 / 1.348	N/A	Sp.G.
96000094	S102	8	SAMPLE	S96T001383	0		SPG-01	LIQUID	N/A / 1.348	~~1.353~~ ~~1.348~~	0.001 / 1.353	Sp.G. RWS 4/16/96
96000094	S102	9	DUP	S96T001383	0		SPG-01	LIQUID	~~1.353~~ RWS 4/16/96	~~1.35~~ NW 4/15/96	N/A RWS 4/16/96	Sp.G.

Final page for worklist # 6750

Anthony Pacunta 4-14-96
Analyst Signature **Date**

N E Wright 4/15/96
Analyst Signature **Date**

Reviewed & edited
RW Schroeder 4/16/96

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	1.9220	1.9818
Work List	Tare Weight (W1)	1.7860	1.8444
6750	Weight of Solution (W2-W1)	0.136	0.1374
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.3584	1.3724
Matrix	Specific Gravity (Average)	1.3654	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
A. PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/14/96	v RESULT v		
Time	Specific Gravity Average =	1.365	

Data Entry by:	[illegible]	Date:	04/15/96
Approved by:	Ru Schroeder	Date:	4/16/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type
SAMPLE
Work List
6750
Test Code
SPG-01
Matrix
LIQUID
Sample #
S96T001357
Instrument Code
Analyst
A. PURINTON
Date
04/14/96
Time

	SAMPLE	REPLICATE
Gross Weight (W2)	1.9532	1.8871
Tare Weight (W1)	1.8466	1.7777
Weight of Solution (W2-W1)	0.1066	0.1094
Volume of Solution µL	100.1200	100.1200
Specific Gravity	1.0647	1.0927
Specific Gravity (Average)	1.0787	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average =	1.079

Data Entry by:	NE Wright	Date:	04/15/96
Approved by:	RW Schroeder	Date:	4/16/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type
DUPLICATE
Work List
6750
Test Code
SPG-01
Matrix
LIQUID
Sample #
S96T001357
Instrument Code
Analyst
A. PURINTON
Date
04/14/96
Time

	DUPLICATE	REPLICATE
Gross Weight (W2)	1.9414	1.9353
Tare Weight (W1)	1.8340	1.8279
Weight of Solution (W2-W1)	0.1074	0.1074
Volume of Solution µL	100.1200	100.1200
Specific Gravity	1.0727	1.0727
Specific Gravity (Average)	1.0727	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average =	**1.073**

Data Entry by:	NEWright	Date:	04/15/96
Approved by:	RW Schroeder	Date:	4/16/96

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
Work List
6750
Test Code
SPG-01
Matrix
LIQUID
Sample #
S96T001358
Instrument Code
Analyst
A. PURINTON
Date
04/14/96
Time

	SAMPLE	REPLICATE
Gross Weight (W2)	1.9033	1.8927
Tare Weight (W1)	1.7953	1.7886
Weight of Solution (W2-W1)	0.108	0.1041
Volume of Solution µL	100.1200	100.1200
Specific Gravity	1.0787	1.0398
Specific Gravity (Average)	1.0592	

Gross Weight (W2) = Wt. of vial + cap + cotton + solution
Tare Weight (W1) = Wt. of vial + cap + cotton

Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]

v RESULT v

Specific Gravity Average =	1.059

Data Entry by:	RE Wright	Date:	04/15/96
Approved by:	RW Schroeder	Date:	4/16/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.9558	1.8775
Work List	Tare Weight (W1)	1.8461	1.7693
6750	Weight of Solution (W2-W1)	0.1097	0.1082
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.0957	1.0807
Matrix	Specific Gravity (Average)	1.0882	
LIQUID			
Sample #			
S96T001358			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
A. PURINTON	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/14/96	v RESULT v		
Time	Specific Gravity Average =	1.088	

Data Entry by:	NE Wright	Date:	04/15/96
Approved by:	RW Schroeder	Date:	4/16/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 7261

Analyst: ADP **Instrument:** BA001 **Book #** 133N16-A

Method: LA-510-112 Rev/Mod C-3

Worklist Comment: S-102 & AY-101 SPG RUN IN DUPLICATE. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.3976	1.386	N/A	Sp.G.
96000257	AY-101 GRAB	2	SAMPLE	S96T001519	0		SPG-01	LIQUID	N/A	1.099	0.001	Sp.G.
96000257	AY-101 GRAB	3	DUP	S96T001519	0		SPG-01	LIQUID	1.099	1.093	N/A	Sp.G.
96000257	AY-101 GRAB	4	SAMPLE	S96T001520	0		SPG-01	LIQUID	N/A	1.081	0.001	Sp.G.
96000257	AY-101 GRAB	5	DUP	S96T001520	0		SPG-01	LIQUID	1.081	1.073	N/A	Sp.G.
96000094	S102	6	SAMPLE	S96T001437	0		SPG-01	LIQUID	N/A	1.272	0.001	Sp.G.
96000094	S102	7	DUP	S96T001437	0		SPG-01	LIQUID	1.272	1.276	N/A	Sp.G.

Final page for worklist # 7261

Anthony Pinuto 4-19-96
Analyst Signature **Date**

RJ Stal 4-19-96
Analyst Signature **Date**

Reviewed RW Schroeder 4/22/96
& edited

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		STANDARD	STANDARD
Type			
STANDARD	Gross Weight (W2)	1.9638	1.9804
Work List	Tare Weight (W1)	1.8262	1.8405
7261	Weight of Solution (W2-W1)	0.1376	0.1399
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.3744	1.3973
Matrix	Specific Gravity (Average)	1.3858	
LIQUID			
Sample #			
133N1[illegible]			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/19/96	v RESULT v		
Time	Specific Gravity Average =	1.386	

Data Entry by:	RTS	Date:	04/19/96
Approved by:	RW Schroeder	Date:	4/22/96

Form 510-112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9503	
Work List	Tare Weight (W1)	1.8403	
7261	Weight of Solution (W2-W1)	0.11	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.0987	NA
Matrix			
LIQUID			
Sample #			
S96T00[illegible]319			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/19/[illegible]	v RESULT v		
Time	Specific Gravity =	1.099	

Data Entry by:	RTS	Date:	04/19/96
Approved by:	RW Schwecke	Date:	4/22/96

Form 51[illegible]2L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

		SAMPLE/DUP	REPLICATE
Type			
SAMPLE/DUP	Gross Weight (W2)	1.9480	
Work List	Tare Weight (W1)	1.8386	
7261	Weight of Solution (W2-W1)	0.1094	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.0927	NA
Matrix			
LIQUID			
Sample #			
S96T[illegible]19			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA0[illegible]	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/19[illegible]	v RESULT v		
Time	Specific Gravity =	1.093	

Data [illegible] by:	RTS	Date:	04/19/96
Approved:	Ray Schroeder	Date:	4/22/96

Form 5[illegible]2L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0153	
Work List	Tare Weight (W1)	1.9071	
7261	Weight of Solution (W2-W1)	0.1082	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.0807	NA
Matrix			
LIQUID			
Sample #			
S96T001520			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/19/96	v RESULT v		
Time	Specific Gravity =	1.081	

Data Entry by:	RWS	Date:	04/19/96
Approved by:	RW Schneider	Date:	4/22/96

Form 510112L1 Rev. 1.1

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0118	
Work List	Tare Weight (W1)	1.9044	
7261	Weight of Solution (W2-W1)	0.1074	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	1.0727	NA
Matrix			
LIQUID			
Sample #			
S96T001520/DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
04/19/96	v RESULT v		
Time	Specific Gravity =	1.073	

Data Entry by:	RTS	Date:	04/19/96
Approved by:	RW Schroeder	Date:	4/22/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 8387

Analyst: ADP **Instrument:** BA001 **Book #** 133N16 A

Method: LA-510-112 Rev/Mod C 3

Worklist Comment: AY-101,S-107,S-101, & A-101. Spg-01. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				SPG-01	LIQUID	1.40	1.373	N/A	Sp.G.
96000210	AY-101 GRAB	2	SAMPLE	S96T001208	0		SPG-01	LIQUID	N/A	.980	0.001	Sp.G.
96000210	AY-101 GRAB	3	DUP	S96T001208	0		SPG-01	LIQUID	.980	.976	N/A	Sp.G.
96000442	S-107	4	SAMPLE	S96T001795	0		SPG-01	LIQUID	N/A	1.210	0.001	Sp.G.
96000442	S-107	5	DUP	S96T001795	0		SPG-01	LIQUID	1.210	1.218	N/A	Sp.G.
96000394	S-101	6	SAMPLE	S96T001909	0		SPG-01	LIQUID	N/A	1.356	0.001	Sp.G.
96000394	S-101	7	DUP	S96T001909	0		SPG-01	LIQUID	1.356	1.362	N/A	Sp.G.
96000459	A-101 GRAB	8	SAMPLE	S96T002012	0		SPG-01	LIQUID	N/A	1.355	0.001	Sp.G.
96000459	A-101 GRAB	9	DUP	S96T002012	0		SPG-01	LIQUID	1.355	1.354	N/A	Sp.G.
96000459	A-101 GRAB	10	SAMPLE	S96T002013	0		SPG-01	LIQUID	N/A	1.354	0.001	Sp.G.
96000459	A-101 GRAB	11	DUP	S96T002013	0		SPG-01	LIQUID	1.354	1.338	N/A	Sp.G.

Final page for worklist # 8387

Anthony Purnutor 5-~~10~~ ADP 11-96
Analyst Signature Date

RJ Stahl 5-14-96
Analyst Signature Date

Edited and Approved
RW Schroeder
5/14/96

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0173	1.9845
Work List	Tare Weight (W1)	1.8792	1.8476
8387	Weight of Solution (W2-W1)	0.1381	0.1369
Test Code	Volume of Solution µL	100.1200	100.1200
SPG-01	Specific Gravity	1.3793	1.3674
Matrix	Specific Gravity (Average)	1.3734	
LIQUID			
Sample #			
STD			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/11/96	v RESULT v		
Time	Specific Gravity Average =	1.373	
02:00 PM			

Data Entry by:	[signature]	Date:	05/14/96
Approved by:	Robert W. Schroeder	Date:	5/29/96

Form 510112L1 Rev. 1.1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

SPECIFIC GRAVITY : LA-510-112 (C-3)

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.9321	
Work List	Tare Weight (W1)	1.8340	
8387	Weight of Solution (W2-W1)	0.0981	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9798	NA
Matrix			
LIQUID			
Sample #			
S9T001208			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/11/96	v RESULT v		
Time	Specific Gravity =	0.980	
02:00 PM			

Data Entry by:	[signature]	Date:	05/14/96
Approved by:	[signature]	Date:	5/29/96

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		DUPLICATE	REPLICATE
DUPLICATE	Gross Weight (W2)	1.9581	
Work List	Tare Weight (W1)	1.8604	
8387	Weight of Solution (W2-W1)	0.0977	0
Test Code	Volume of Solution µL	100.1200	
SPG-01	Specific Gravity	0.9758	NA
Matrix			
LIQUID			
Sample #			
S9T001208 DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = [(W2-W1) * 1000 µL/mL] / [Vol. of Solution µL * 1.000 g/mL]		
Date			
05/11/96	v RESULT v		
Time	Specific Gravity =	0.976	
02:00 PM			

Data Entry by: [signature] Date: 05/14/96

Approved by: Robert W. Schroeder Date: 5/29/96

Form 510112L1 Rev. 1.1

LABCORE Data Entry Template for Worklist# 6775

Analyst: JLF **Instrument:** PH01 **Book #** 144N16E

Method: LA-212-106 Rev/Mod A 0

Worklist Comment: AY-101 PH'S. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	9.18	9.207	N/A	pH
96000210	AY-101 GRAB	2	SAMPLE	S96T001201	0		PH-01	LIQUID	N/A	9.788	0.01	pH
96000210	AY-101 GRAB	3	DUP	S96T001201	0		PH-01	LIQUID	9.788	9.759	N/A	pH
96000210	AY-101 GRAB	4	SAMPLE	S96T001202	0		PH-01	LIQUID	N/A	9.762	0.01	pH
96000210	AY-101 GRAB	5	DUP	S96T001202	0		PH-01	LIQUID	9.762	9.759	N/A	pH
96000210	AY-101 GRAB	6	SAMPLE	S96T001203	0		PH-01	LIQUID	N/A	9.765	0.01	pH
96000210	AY-101 GRAB	7	DUP	S96T001203	0		PH-01	LIQUID	9.765	9.759	N/A	pH
96000257	AY-101 GRAB	8	SAMPLE	S96T001356	0		PH-01	LIQUID	N/A	9.761	0.01	pH
96000257	AY-101 GRAB	9	DUP	S96T001356	0		PH-01	LIQUID	9.761	9.753	N/A	pH
96000257	AY-101 GRAB	10	SAMPLE	S96T001357	0		PH-01	LIQUID	N/A	9.763	0.01	pH
96000257	AY-101 GRAB	11	DUP	S96T001357	0		PH-01	LIQUID	9.763	9.758	N/A	pH
96000257	AY-101 GRAB	12	SAMPLE	S96T001358	0		PH-01	LIQUID	N/A	9.754	0.01	pH
96000257	AY-101 GRAB	13	DUP	S96T001358	0		PH-01	LIQUID	9.754	9.752	N/A	pH

Final page for worklist # 6775

Jesse S Ansley 4-9-96
Analyst Signature **Date**

Linda Cook 4-10-96
Analyst Signature **Date**

Reviewed RW Schroeder 4/10/96

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# 7199

Analyst: JDS **Instrument:** PH01 **Book #** 144N16E

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: AY-101 PH'S RUN BEFORE OH'S. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	9.18	9.15	N/A	pH
96000257	AY-101 GRAB	2	SAMPLE	S96T001519	0		PH-01	LIQUID	N/A	9.81	0.01	pH
96000257	AY-101 GRAB	3	DUP	S96T001519	0		PH-01	LIQUID	9.81	9.77	N/A	pH
96000257	AY-101 GRAB	4	SAMPLE	S96T001520	0		PH-01	LIQUID	N/A	9.80	0.01	pH
96000257	AY-101 GRAB	5	DUP	S96T001520	0		PH-01	LIQUID	9.80	9.88	N/A	pH

Final page for worklist # 7199

JDS 4/10/96
Analyst Signature **Date**

Linda Cook 4/11/96
Analyst Signature **Date**

Reviewed RW Schwecke 4/11/96

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# 8284

Analyst: Vds **Instrument:** PH01 >7 **Book #** 144N16D

Method: LA-212-106 Rev/Mod A-0

Worklist Comment: PH-01, AY-101 Grab. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STDPH				PH-01	LIQUID	8.00	7.98	N/A	pH
96000210	AY-101 GRAB	2	SAMPLE	S96T001208	0		PH-01	LIQUID	N/A	9.12	0.01	pH
96000210	AY-101 GRAB	3	DUP	S96T001208	0		PH-01	LIQUID	9.12	9.10	N/A	pH

Final page for worklist # 8284

[signature] 5-3-96
Analyst Signature **Date**

[signature] 5/3/96
Analyst Signature **Date**

Approved RW Schwedler 5/7/96

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.

LABCORE Data Entry Template for Worklist# 6766

Analyst: RK **Instrument:** PH01 **Book #** 7978

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AY-101 OH'S. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID		<125	N/A	ug/mL
		2	STD				OH-01	LIQUID	1.60e4	1.55e4	N/A	ug/mL
96000210	AY-101 GRAB	3	SAMPLE	S96T001201	0		OH-01	LIQUID	N/A	<125	1.25 E2	ug/mL
96000210	AY-101 GRAB	4	DUP	S96T001201	0		OH-01	LIQUID	~~<1.25~~ <125 RJS	N/A	N/A	ug/mL
96000210	AY-101 GRAB	5	SAMPLE	S96T001202	0		OH-01	LIQUID	N/A	~~<1.25~~ 1.25 RJS	1.25 E2	ug/mL
96000210	AY-101 GRAB	6	DUP	S96T001202	0		OH-01	LIQUID	~~<1.25~~ <125 RJS	N/A	N/A	ug/mL
96000210	AY-101 GRAB	7	SAMPLE	S96T001203	0		OH-01	LIQUID	N/A	<125	1.25 E2	ug/mL
96000210	AY-101 GRAB	8	DUP	S96T001203	0		OH-01	LIQUID	<125	N/A	N/A	ug/mL
96000257	AY-101 GRAB	9	SAMPLE	S96T001356	0		OH-01	LIQUID	N/A	<125	1.25 E2	ug/mL
96000257	AY-101 GRAB	10	DUP	S96T001356	0		OH-01	LIQUID	<125	N/A	N/A	ug/mL
96000257	AY-101 GRAB	11	SAMPLE	S96T001357	0		OH-01	LIQUID	N/A	<125	~~1.25~~ 2.50 E2 RJS	ug/mL
96000257	AY-101 GRAB	12	DUP	S96T001357	0		OH-01	LIQUID	<125	N/A	N/A	ug/mL
96000257	AY-101 GRAB	13	SAMPLE	S96T001358	0		OH-01	LIQUID	N/A	<125	1.25 E2	ug/mL
96000257	AY-101 GRAB	14	DUP	S96T001358	0		OH-01	LIQUID	<125	N/A	N/A	ug/mL

Final page for worklist # 6766

Rob King 4/23/96
Analyst Signature **Date**

RJS 4-25-96
Analyst Signature **Date**

Reviewed RJ Schwenk 4/26/96

RJS 4/23/96

Data Entry Comments: S96T001357 has < 0.250ml remaining. Sample Size for all Samples = 1 ml except S96T001357 at 0.500ml. No duplicates required due to low pH's.

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.

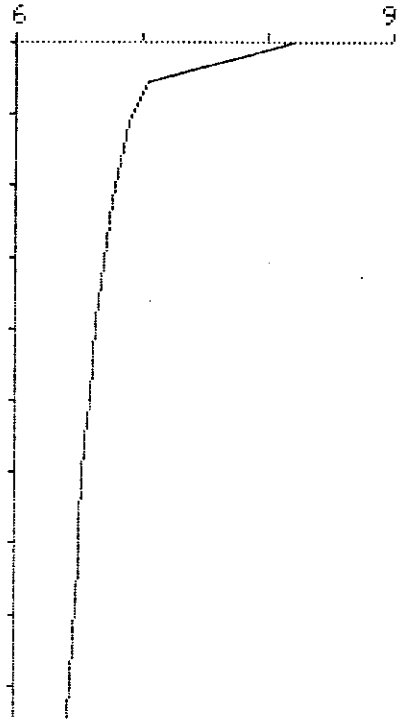
```
date 96-04-24 time 11:51
GET pH          12  #  334
Id.#1            0
Id.#2        .2005
pH(init)     7.86
             V/ml          pH
EP1          .009        6.13
stop volt.reached
        ========
```

```
calibration data
date     96-04-24
pH(S) 1      7.00
pH(S) 2     10.00
t.cal.       24.0 °C
slope(rel)   .967
U(as)        -6.3 mV
electr. input  1
        ========
```

1m1

```
date 96-04-24 time 13:58
GET pH          12  #  338
Id.#1         1201
Id.#2        .2005
pH(init)     8.23
stop V reached
        ========
```

```
date 96-04-24 time 14:01
GET pH          12  #  338
.10ml/div       ΔpH=1/div
start V    .000 ml
```




```
        --------

Id.#1         1357
C00=           1ml
Id.#1         1357
C00=       .500ml

date 96-04-24 time 14:47
GET pH          12  #  342
Id.#1         1357
Id.#2        .2005
pH(init)     6.65
stop V reached
        ========

date 96-04-24 time 14:50
GET pH          12  #  342
no titration data
        --------
```

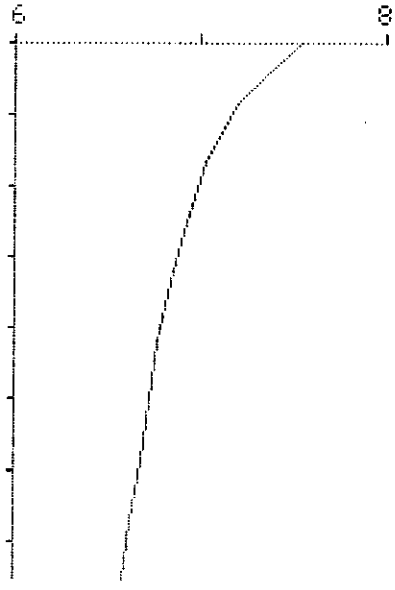
BEST AVAILABLE COPY

```
date 96-04-24 time 14:50
GET pH          12  #  342
no titration data
```

```
Id.#1        1358
C00=          1ml
```

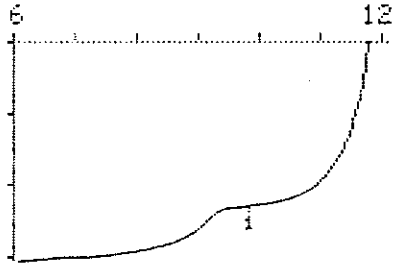
```
date 96-04-24 time 14:59
GET pH          12  #  343
Id.#1        1357
Id.#2       .2005
pH(init)     7.60
stop V reached
        ========
```

```
date 96-04-24 time 14:59
GET pH          12  #  343
.10ml/div       ΔpH=1/div
start V    .000 ml
```




```
date 96-04-24 time 12:05
GET pH          12  #  336
Id.#1        0000
Id.#2       .2005
pH(init)    11.76
           V/ml          pH
EP1        .228        9.81
stop volt.reached
        ========
```

```
date 96-04-24 time 12:06
GET pH          12  #  336
.10ml/div       ΔpH=1/div
start V    .000 ml
```

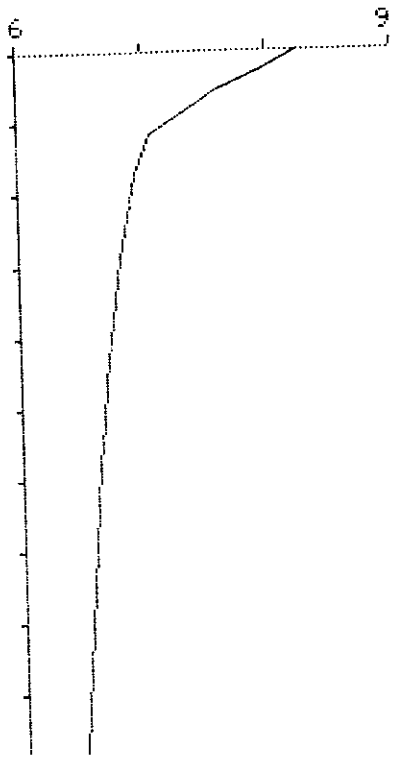



```
Id.#1        1202
C00=          1ml
```

```
date 96-04-24 time 14:11
GET pH          12  #  339
Id.#1        1202
Id.#2       .2005
pH(init)     8.24
stop V reached
        ========
```

```
date 96-04-24 time 14:12
GET pH          12  #  339
.10ml/div       ΔpH=1/div
start V    .000 ml
```

BEST AVAILABLE COPY



```
Id.#1        1203
C00=          1ml

date 96-04-24 time 14:21
GET pH         12  #  340
Id.#1        1203
Id.#2       .2005
pH(init)     7.53
stop V reached
        ========
```

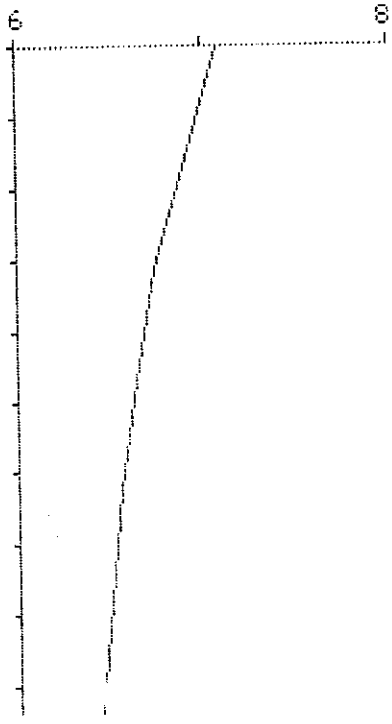
```
Id.#1        1356
C00=          1ml

date 96-04-24 time 14:34
GET pH         12  #  341
Id.#1        1356
Id.#2       .2005
pH(init)     7.09
stop V reached
        ========
```

```
date 96-04-24 time 14:25
GET pH         12  #  340
.10ml/div       ΔpH=1/div
start V    .000 ml
```

BEST AVAILABLE COPY

date 96-04-24 time 14:35
GET pH 12 # 341
.10ml/div ΔpH=1/div
start V .000 ml



BEST AVAILABLE COPY

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		BLANK	
Type	Sample Size (mL) SS	3 ~~1.000~~	RWS 4/26/96
BLANK	Concentration of HNO3 (Molarity)	0.2005	
Work List	HNO3 Titrant at OH end-point in mL	0.0 ~~0.009~~	RWS 4/26/96
6766	Dilution Factor DF	1	
Test Code	Concentration of OH in Sample (Molarity)	0.0 ~~1.80E-03~~	RWS 4/26/96
OH-01	OH in Sample in µg/mL (PPM)	<42 ~~3.07E+01~~	RWS 4/26/96
Matrix			
LIQUID			
Sample #	Detection Limit = 125µg / SS * DF		
BLANK		42	
Instrument Code	Detection Limit (µg/mL)	~~1.25E+02~~	RWS 4/26/96
PH01			
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor		
rwk			
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))		
04/23/96			
Time		BLANK	
	Concentration of OH in Sample (Molarity)	0.0 ~~1.80E-03~~	RWS 4/26/96
	OH in Sample in µg/mL (PPM)	<42 ~~<125~~	RWS 4/26/96

The Result is < Detection Limit

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

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	0.228
6766	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	9.14E-01
OH-01	OH in Sample in µg/mL (PPM)	1.55E+04
Matrix		
LIQUID		
Sample #		
79N8		
Instrument Code		
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		STANDARD
	Concentration of OH in Sample (Molarity)	9.14E-01
	OH in Sample in µg/mL (PPM)	1.55E+04

Data Entry by:	RTS	Date:	04/25/96
Approved by:	Rw Schwedin	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
WorkList	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001201		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	RWS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001202		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001203		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001356		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	0.500
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001357		
Instrument Code	Detection Limit (µg/mL)	2.50E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<250

The Result is < Detection Limit

Data Entry by:	RTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
WorkList	HNO3 Titrant at OH end-point in mL	0.000
6766	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		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001358		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
rwk		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/23/96		
Time		SAMPLE
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	KTS	Date:	04/25/96
Approved by:	RW Schroeder	Date:	4/26/96

Form 211102_1 Rev. 1.3

LABCORE Data Entry Template for Worklist# 8369

Analyst: JBB **Instrument:** PH01 _____ **Book #** 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AY-101 AND A-101 OH'S. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID	1	<.42	N/A	ug/mL
		2	STD				OH-01	LIQUID	1.66^{E4}	1.64^{E4}	N/A	ug/mL
96000210	AY-101 GRAB	3	SAMPLE	S96T001208	0		OH-01	LIQUID	N/A	pH=6.09 ~~<125~~	~~125~~	ug/mL RWS 5/16/96
96000210	AY-101 GRAB	4	DUP	S96T001208	0		OH-01	LIQUID	~~<125~~ N/A	~~<125~~ N/A	N/A	ug/mL RWS 5/16/96
96000459	A-101 GRAB	5	SAMPLE	S96T002012	0		OH-01	LIQUID	N/A	1.45^{E4}	2.50^{E3}	ug/mL
96000459	A-101 GRAB	6	DUP	S96T002012	0		OH-01	LIQUID	1.45^{E4}	1.40^{E4}	N/A	ug/mL
96000459	A-101 GRAB	7	SAMPLE	S96T002013	0		OH-01	LIQUID	N/A	5.51^{E4}	5.00^{E3}	ug/mL
96000459	A-101 GRAB	8	DUP	S96T002013	0		OH-01	LIQUID	5.51^{E4}	5.48^{E4}	N/A	ug/mL
96000459	A-101 GRAB	9	SAMPLE	S96T002014	0		OH-01	LIQUID	N/A	5.97^{E4}	5.00^{E3}	ug/mL
96000459	A-101 GRAB	10	DUP	S96T002014	0		OH-01	LIQUID	5.97^{E4}	5.51^{E4}	N/A	ug/mL

Final page for worklist # 8369

J B Biffin 5-15-96
Analyst Signature **Date**

[illegible] 5-16-96
Analyst Signature **Date**

0.2005M HNO3

Approved RW Johnson 5/16/96

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		BLANK
Type	Sample Size (mL) SS	3.000
BLANK	Concentration of HNO3 (Molarity)	0.2005
Worklist	HNO3 Titrant at OH end-point in mL	0.006
8369	Dilution Factor DF	1
TestCode	Concentration of OH in Sample (Molarity)	4.01E-04
OH-01	OH in Sample in µg/mL (PPM)	6.82E+00
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
BLNK		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
PH-01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DGG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		BLANK
07:00 PM	Concentration of OH in Sample (Molarity)	4.01E-04
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	[signature]	Date:	05/16/96
Approved by:	RW Schroeder	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

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
8369	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		
PH-01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DGG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		STANDARD
07:00 PM	Concentration of OH in Sample (Molarity)	9.66E-01
	OH in Sample in µg/mL (PPM)	1.64E+04

Data Entry by:	[signature]	Date:	05/16/96
Approved by:	[signature]	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		SAMPLE
Type	Sample Size (mL) SS	1.000
SAMPLE	Concentration of HNO3 (Molarity)	0.2005
Worklist	HNO3 Titrant at OH end-point in mL	0.007
8369	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.40E-03
OH-01	OH in Sample in µg/mL (PPM)	2.39E+01
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001208		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH-01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DGG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		SAMPLE
07:00 PM	Concentration of OH in Sample (Molarity)	1.40E-03
	OH in Sample in µg/mL (PPM)	pH = 6.09 ~~<125~~

The Result is < Detection Limit

RWS 5/16/96

Data Entry by:	[signature]	Date:	05/16/96
Approved by:	RW Schwieder	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		DUPLICATE
Type	Sample Size (mL) SS	1.000
DUPLICATE	Concentration of HNO3 (Molarity)	0.2005
Worklist	HNO3 Titrant at OH end-point in mL	0.005
8369	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	1.00E-03
OH-01	OH in Sample in µg/mL (PPM)	1.70E+01
Matrix		
LIQUID		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001208DUP		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
PH-01		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DGG		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		DUPLICATE
07:00 PM	Concentration of OH in Sample (Molarity)	1.00E-03
	OH in Sample in µg/mL (PPM)	~~<125~~

RWS 5/16/96

The Result is < Detection Limit

pH = 5.80

Data Entry by:		Date:	05/16/96
Approved by:	RW Satterwhite	Date:	5/16/96

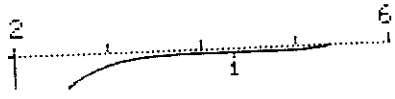
Form 211102_1 Rev. 1.3

BLANK
sample size = 3.0 ml DH_2O + 1 ml BaCl2

C00= 3.0ml

date 96-05-15 time 19:03
GET pH 12 # 3
Id.#1 0000
Id.#2 .2005
pH(init) 5.39
V/ml pH
EP1 .006 4.33
stop volt.reached
========

date 96-05-15 time 19:03
GET pH 12 # 3
.10ml/div ΔpH=1/div
start V .000 ml

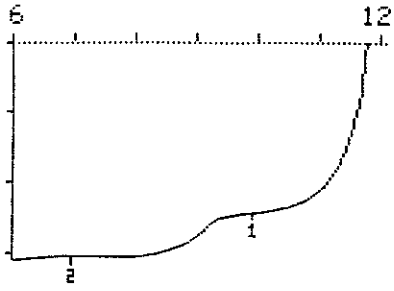


Std.
Sample size = .050 ml

C00= .050ml

date 96-05-15 time 19:32
GET pH 12 # 7
Id.#1 0000
Id.#2 .2005
pH(init) 11.75
V/ml pH
EP1 .241 9.90
EP2 .307 6.98
manual stop
========

date 96-05-15 time 19:32
GET pH 12 # 7
.10ml/div ΔpH=1/div
start V .000 ml



Sample Size = 1.0 ml

C00= 1.00ml

date 96-05-15 time 21:12
GET pH 12 # 8
Id.#1 1208
Id.#2 .2005
pH(init) 6.09
V/ml pH
EP1 .007 4.63
stop volt.reached
========

date 96-05-15 time 21:12
GET pH 12 # 8
.10ml/div ΔpH=1/div
start V .000 ml

Sample Size = 1.0 ml

C00= 1.00ml

date 96-05-15 time 21:16
GET pH 12 # 9
Id.#1 1208 -Dup
Id.#2 .2005
pH(init) 5.80
V/ml pH
EP1 .005 4.77
stop volt.reached
========

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RUSH

LABCORE Data Entry Template for Worklist# 8427

Analyst: DBB **Instrument:** PH01 _____ **Book #** 7978

Method: LA-211-102 Rev/Mod C-C

Worklist Comment: AY-101 OH. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID	1	<42	N/A	ug/mL
		2	STD				OH-01	LIQUID	1.66e4	1.60e4	N/A	ug/mL
96000257	AY-101 GRAB	3	SAMPLE	S96T002162	0		OH-01	LIQUID	N/A	pH=6.71		ug/mL
96000257	AY-101 GRAB	4	DUP	S96T002162	0		OH-01	LIQUID	NA	NA	N/A	ug/mL
96000257	AY-101 GRAB	5	SAMPLE	S96T002163	0		OH-01	LIQUID	N/A	pH=6.73		ug/mL
96000257	AY-101 GRAB	6	DUP	S96T002163	0		OH-01	LIQUID	NA	NA	N/A	ug/mL

Final page for worklist # 8427

DB Bryson 5-15-96
Analyst Signature **Date**

RHStach 5-17-96
Analyst Signature **Date**

Approved Rai Schwach 5/20/96

0.2005 M HNO3

Note: pH is too Low to RUN OH⁻'s on 2162 + 2163

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		Blank
Type	Sample Size (mL) SS	3.000
Blank	Concentration of HNO3 (Molarity)	0.2005
Work Order	HNO3 Titrant at OH end-point in mL	0.000
8427	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		
Liquid		
Sample #	Detection Limit = 125µg / SS * DF	
BLANK		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DG Griffin		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		Blank
	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:	RWS	Date:	05/16/96
Approved by:	RW Schwerd	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		Standard
	Sample Size (mL) SS	0.050
Standard	Concentration of HNO3 (Molarity)	0.2005
	HNO3 Titrant at OH end-point in mL	0.234
8427	Dilution Factor DF	1
	Concentration of OH in Sample (Molarity)	9.38E-01
OH-01	OH in Sample in µg/mL (PPM)	1.60E+04
Matrix		
Liquid		
Sample		
79N8		
Instrument Code		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DG Griffin		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		Standard
	Concentration of OH in Sample (Molarity)	9.38E-01
	OH in Sample in µg/mL (PPM)	1.60E+04

Data Entry by:	MWS	Date:	05/16/96
Approved by:	Ru Schwerdt	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		Sample
Type	Sample Size (mL) SS	1.000
Sample	Concentration of HNO3 (Molarity)	0.2005
Work Order	HNO3 Titrant at OH end-point in mL	0.000
8427	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		
Liquid		
Sample #	Detection Limit = 125µg / SS * DF	
S96T002162		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DG Griffin		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		Sample
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	DWS	Date:	05/16/96
Approved by:	DWS Schwendiman	Date:	5/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		Sample
Sample Type	Sample Size (mL) SS	1.000
Sample	Concentration of HNO3 (Molarity)	0.2005
Work Item	HNO3 Titrant at OH end-point in mL	0.000
8427	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		
Liquid		
Sample#	Detection Limit = 125µg / SS * DF	
S96T002163		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
DG Griffin		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/15/96		
Time		Sample
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

Data Entry by:	DWS	Date:	05/16/96
Approved by:	Dw Schroeder	Date:	5/16/96

Form 211102_1 Rev. 1.3

Blank

```
C00=        3.0ml

date 96-05-15 time 19:00
GET pH          12  #    2
Id.#1        0000
Id.#2       .2005
pH(init)     5.43
            V/ml          pH
EP1         .006        4.49
stop volt.reached
        ========
```

```
date 96-05-15 time 19:00
GET pH          12  #    2
.10ml/div       dpH=1/div
start V    .000 ml
```

```
--------
```

```
C00=        1.0ml

date 96-05-15 time 23:30
GET pH          12  #   21
Id.#1        2163
Id.#2       .2005
pH(init)     6.73
stop V reached
        ========
```

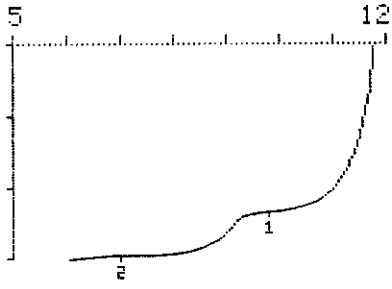
```
date 96-05-15 time 23:30
GET pH          12  #   21
no titration data
        --------
```

Std

```
C00=       .050ml

date 96-05-15 time 19:26
GET pH          12  #    6
Id.#1        0000
Id.#2       .2005
pH(init)    11.74
            V/ml          pH
EP1         .234        9.79
EP2         .299        6.98
manual stop
        ========
```

```
date 96-05-15 time 19:26
GET pH          12  #    6
.10ml/div       dpH=1/div
start V    .000 ml
```




```
--------
```

```
C00=        1.0ml

date 96-05-15 time 23:17
GET pH          12  #   20
Id.#1        2162
Id.#2       .2005
pH(init)     6.71
stop V reached
        ========
```

```
date 96-05-15 time 23:17
GET pH          12  #   20
no titration data
        --------
```

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THE FOLLOWING ANALYSES WERE RERUN. THEY ARE INCLUDED IN THE DATA PACKAGE BUT THE RESULTS HAVE NOT BEEN REPORTED IN THE FINAL SUMMARY REPORTS.

LABCORE Data Entry Template for Worklist# 7194

Analyst: RJ **Instrument:** PH01 **Book #** 79N8

Method: LA-211-102 Rev/Mod C-0

Worklist Comment: AY-101 OH RUN AFTER PH ONLY IF PH IS >12. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	LIQUID	1	<42	N/A	ug/mL
		2	STD				OH-01	LIQUID	7.66	1.59	N/A	ug/mL
96000257	AY-101 GRAB	3	SAMPLE	S96T001519	0		OH-01	LIQUID	N/A <125	~~0.00~~ 4/16/96	125	ug/mL
96000257	AY-101 GRAB	4	DUP	S96T001519	0		OH-01	LIQUID	~~0.00~~ 4/16/96	I.S. <125	N/A	ug/mL
96000257	AY-101 GRAB	5	SAMPLE	S96T001520	0		OH-01	LIQUID	N/A <125	~~0.00~~ ND 4/16/96	125	ug/mL
96000257	AY-101 GRAB	6	DUP	S96T001520	0		OH-01	LIQUID	~~0.00~~ 4/16/96	I.S.	N/A	ug/mL

Final page for worklist # 7194

Rae Ann Green 4-16-96
Analyst Signature Date

[signature] 4-16-96
Analyst Signature Date

Samples pH's are < 7 after addition of $BaCl_2$ indicati
the samples have an OH Buffering Capacity.
I.S. = Insufficient sample

DATA NOT USED IN PACKAGE

Didn't perform pH - insufficient sample amt

Data Entry Comments: Can't perform OH⁻ analysis. See reports #5 used max sample size 1ml pH initial @ 7.02 + @ 6.95
1st sam 2nd sample

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

Blank

```
date 96-04-17 time 04:36
GET pH          12  #  310
Id.#1       000682
Id.#2        .2005
pH(init)      4.76
            V/ml          pH
EP1         .008        3.92
stop volt.reached
        ========
```

BEST AVAILABLE COPY

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
7194	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		
Liquid		
Sample #	Detection Limit = 125µg / SS * DF	
Blnk		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAGreen		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/16/96		
Time		Blank
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

DATA NOT USED IN PACKAGE

The Result is < Detection Limit

Data Entry by:	RWS	Date:	04/16/96
Approved by:	RW Schroeder	Date:	4/16/96

Form 211102_1 Rev. 1.3

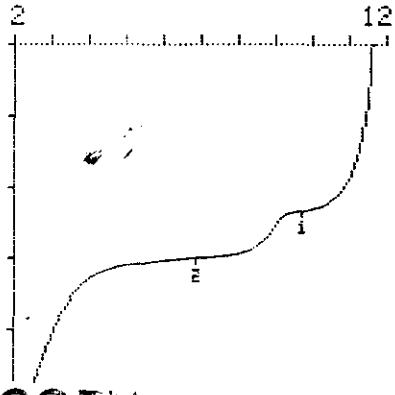
PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

.050mL STD

```
date 96-04-17 time 04:44
GET pH          12  #  311
.10ml/div        dpH=1/div
start V    .000 ml
```

```
date 96-04-17 time 04:44
GET pH          12  #  311
Id.#1       000682
Id.#2        .2005
pH(init)     11.59
            V/ml          pH
EP1         .233        9.72
EP2         .300        6.87
stop volt.reached
        ========
```



BEST AVAILABLE COPY

OH (AUTO) : LA-211-102 (C-0)

		STD
Type	Sample Size (mL) SS	0.050
STD	Concentration of HNO3 (Molarity)	0.2005
WorkList	HNO3 Titrant at OH end-point in mL	0.233
7194	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 #	Detection Limit = 125µg / SS * DF	
79N8		
Instrument Code	Detection Limit (µg/mL)	2.50E+03
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAGreen		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/16/96		
Time		STD
	Concentration of OH in Sample (Molarity)	9.34E-01
	OH in Sample in µg/mL (PPM)	1.59E+04

DATA NOT USED IN PACKAGE

Data Entry by:	RWS	Date:	04/16/96
Approved by:	RW Schneider	Date:	4/16/96

Form 211102_1 Rev. 1.3 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

```
date 96-04-17 time 04:55
GET pH          12  #  313
Id.#1       001519
Id.#2        .2005
pH(init)      7.02
stop V reached
        ========

date 96-04-17 time 04:55
GET pH          12  #  313
.10ml/div       dpH=1/div
start V    .000 ml
```

BEST AVAILABLE COPY

OH (AUTO) : LA-211-102 (C-0)

		Sample
Type	Sample Size (mL) SS	1.000
Sample	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
7194	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		
Liquid		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001519		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAGreen		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/16/96		
Time		Sample
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

DATA NOT USED IN PACKAGE

The Result is < Detection Limit

Data Entry by:	RWS	Date:	04/16/96
Approved by:	R W Schroeder	Date:	4/16/96

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-178, REV. 1

OH (AUTO) : LA-211-102 (C-0)

		Sample
Sample Type	Sample Size (mL) SS	1.000
Sample	Concentration of HNO3 (Molarity)	0.2005
Work List	HNO3 Titrant at OH end-point in mL	0.000
7194	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		
Liquid		
Sample #	Detection Limit = 125µg / SS * DF	
S96T001520		
Instrument Code	Detection Limit (µg/mL)	1.25E+02
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RAGreen		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
04/16/96		
Time		Sample
	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<125

The Result is < Detection Limit

DATA NOT USED IN PACKAGE

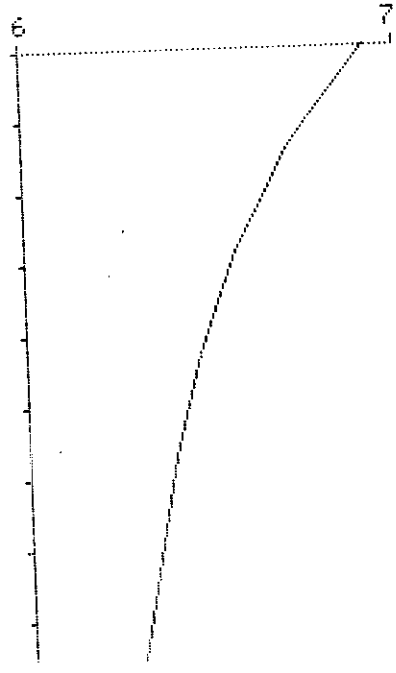
Data Entry by:	KWS	Date:	04/16/96
Approved by:	Ray Schwerdtfeger	Date:	4/16/96

Form 211102_1 Rev. 1.3

BEST AVAILABLE COPY

```
date 96-04-17 time 05:05
GET pH          12  #  314
Id.#1      001519
Id.#2       .2005
pH(init)     6.95
stop V reached
        ========
```

```
date 96-04-17 time 05:05
GET pH          12  #  314
.10ml/div        ΔpH=1/div
start V    .000 ml
```




```
--------

calibration data
date      96-04-17
pH(S) 1      7.00
pH(S) 2     10.00
t.cal.       24.0  °C
slope(rel)   .966
U(as)      -21.2  mV
electr. input  1
        ========
```

DATA NOT USED IN PACKAGE

LABCORE Data Entry Template for Worklist# 6762

Analyst: DBB **Instrument:** NH301 _____ **Book #** ~~145N16-A~~ 145N16-D

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: AY-101 AMMONIA'S. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	3.13e-2	N/A	ug/mL
		2	STD				NH3-01	LIQUID	4.11e2	3.99e2	N/A	ug/mL
96000210	AY-101 GRAB	3	SAMPLE	S96T001201	0		NH3-01	LIQUID	N/A	1.99e1	5.00	ug/mL
96000210	AY-101 GRAB	4	DUP	S96T001201	0		NH3-01	LIQUID	1.99e1	1.97e1	N/A	ug/mL
96000210	AY-101 GRAB	5	SPK	S96T001201	0		NH3-01	LIQUID	100	85.3	N/A	ug/mL
96000210	AY-101 GRAB	6	SAMPLE	S96T001202	0		NH3-01	LIQUID	N/A	3.25e1	5.00	ug/mL
96000210	AY-101 GRAB	7	DUP	S96T001202	0		NH3-01	LIQUID	3.25e1	2.82e1	N/A	ug/mL
96000210	AY-101 GRAB	8	SAMPLE	S96T001203	0		NH3-01	LIQUID	N/A	1.70e1	5.00	ug/mL
96000210	AY-101 GRAB	9	DUP	S96T001203	0		NH3-01	LIQUID	1.70e1	1.46e1	N/A	ug/mL
96000257	AY-101 GRAB	10	SAMPLE	S96T001356	0		NH3-01	LIQUID	N/A	2.82e1	5.00	ug/mL
96000257	AY-101 GRAB	11	DUP	S96T001356	0		NH3-01	LIQUID	2.82e1	3.22e1	N/A	ug/mL
96000257	AY-101 GRAB	12	SAMPLE	S96T001357	0		NH3-01	LIQUID	N/A	1.90e1	125	ug/mL
96000257	AY-101 GRAB	13	DUP	S96T001357	0		NH3-01	LIQUID	1.90e1	N/A	N/A	ug/mL
96000257	AY-101 GRAB	14	SAMPLE	S96T001358	0		NH3-01	LIQUID	N/A	3.45e1	5.00	ug/mL
96000257	AY-101 GRAB	15	DUP	S96T001358	0		NH3-01	LIQUID	3.45e1	3.62e1	N/A	ug/mL
		16	STD				NH3-01	LIQUID	4.11e2	3.84e2	N/A	ug/mL

Data Entry Comments: S96T000135 7 had only .200ml left in VIAL; run only on sample & no Dup.

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# 6762

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 6762

A S Griffin 4-24-96
Analyst Signature **Date**

R Eudy 4/26/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/26/96

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.

~~STD CONCN= 1014~~ RDE 6/4/96

WL # 6762

BLK

SS = 1.0 ml

Tot. Vol. = 25 ml

DOUBLE KNOWN ADDITION SELECTED
AT 19:58, 02-02-00

SAMPLE VOL= 25.000 AT 19:58, 02-02-00
ENTERED

EMF= 43.4 mV AT 20:03, 02-02-00

EMF= 44.1 mV AT 20:03, 02-02-00

EMF= 44.6 mV AT 20:04, 02-02-00

EMF= 45.1 mV AT 20:04, 02-02-00

EMF= 45.7 mV AT 20:05, 02-02-00

EMF= 45.9 mV AT 20:05, 02-02-00
ENTERED

STD CONCN= 1000 AT 20:05, 02-02-00
ENTERED

STD VOL= .25000 AT 20:06, 02-02-00
ENTERED

EMF=-94.7 mV AT 20:07, 02-02-00

EMF=-94.8 mV AT 20:07, 02-02-00
ENTERED

STD VOL= 2.5000 AT 20:07, 02-02-00
ENTERED

EMF=-151.0 mV AT 20:08, 02-02-00

EMF=-151.0 mV AT 20:08, 02-02-00
ENTERED

NH3 SLOPE=-56.2 mV/DEC
AT 20:08, 02-02-00

NH3 CONCN= .0313

BEST AVAILABLE COPY

WL#6762

DOUBLE KNOWN ADDITION SELECTED
AT 20:11, 02-02-00

SAMPLE VOL= 25.000 AT 20:11, 02-02-00
ENTERED

EMF=-110.2 mV AT 20:12, 02-02-00

EMF=-110.0 mV AT 20:12, 02-02-00

EMF=-109.9 mV AT 20:13, 02-02-00
ENTERED

STD CONCN= 1000 AT 20:13, 02-02-00
ENTERED

STD VOL= .25000 AT 20:13, 02-02-00
ENTERED

EMF=-121.3 mV AT 20:13, 02-02-00

EMF=-121.4 mV AT 20:14, 02-02-00
ENTERED

STD VOL= 2.5000 AT 20:14, 02-02-00
ENTERED

EMF=-157.4 mV AT 20:15, 02-02-00

EMF=-157.3 mV AT 20:15, 02-02-00
ENTERED

1:NH3 SLOPE=-55.7 mV/DEC
AT 20:15, 02-02-00

1:NH3 CONCN= 16.0 — 0.0313 x 25 = 399/411 x 100 = 97.1

1st std
std# 145N16-D
SS = 1.0 ml
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

OUBLE KNOWN ADDITION SELECTED
AT 20:27, 02-02-00

AMPLE VOL= 25.000 AT 20:27, 02-02-00
NTERED

MF=-29.6 mV AT 20:28, 02-02-00

EMF=-29.2 mV AT 20:28, 02-02-00

EMF=-29.0 mV AT 20:28, 02-02-00
ENTERED

TD CONCN= 1000 AT 20:29, 02-02-00
NTERED

TD VOL= .25000 AT 20:29, 02-02-00
ENTERED

EMF=-95.9 mV AT 20:30, 02-02-00

EMF=-95.9 mV AT 20:30, 02-02-00
ENTERED

TD VOL= 2.5000 AT 20:30, 02-02-00
ENTERED

EMF=-154.2 mV AT 20:31, 02-02-00

EMF=-154.2 mV AT 20:31, 02-02-00
NTERED

NH3 SLOPE=-60.2 mV/DEC
AT 20:31, 02-02-00

NH3 CONCN= .828 - 0.0313 x 25 = 1.99e1 ug/ml

S96T001201

SS = 1.0 ml

Tot. Vol. = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 20:40, 02-02-00

SAMPLE VOL= 25.000 AT 20:40, 02-02-00
ENTERED

EMF=-18.7 mV AT 20:40, 02-02-00

EMF=-18.8 mV AT 20:40, 02-02-00
ENTERED

STD CONCN= 1000 AT 20:41, 02-02-00
ENTERED

STD VOL= .25000 AT 20:41, 02-02-00
ENTERED

EMF=-86.0 mV AT 20:42, 02-02-00

EMF=-85.9 mV AT 20:42, 02-02-00
ENTERED

STD VOL= 2.5000 AT 20:42, 02-02-00
ENTERED

EMF=-143.7 mV AT 20:43, 02-02-00

EMF=-144.2 mV AT 20:43, 02-02-00
ENTERED

NH3 SLOPE=-60.1 mV/DEC
AT 20:43, 02-02-00

NH3 CONCN= .821 - 0.0313 x 25 = 1.97e1 µg/ml

596T001201-DUP
SS = 1.0 ml
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 20:48, 02-02-00

SAMPLE VOL= 25.000 AT 20:49, 02-02-00
ENTERED

EMF=-51.2 mV AT 20:49, 02-02-00

EMF=-50.0 mV AT 20:50, 02-02-00

EMF=-49.8 mV AT 20:50, 02-02-00
ENTERED

STD CONCN= 1000 AT 20:51, 02-02-00
ENTERED

STD VOL= .25000 AT 20:51, 02-02-00
ENTERED

EMF=-92.8 mV AT 20:51, 02-02-00

EMF=-93.0 mV AT 20:52, 02-02-00
ENTERED

STD VOL= 2.5000 AT 20:52, 02-02-00
ENTERED

EMF=-147.1 mV AT 20:53, 02-02-00

EMF=-147.2 mV AT 20:53, 02-02-00
ENTERED

[illegible]43 SLOPE=-58.8 mV/DEC
AT 20:53, 02-02-00

[illegible]43 CONCN= 2.23 - 0.828 x 25 = 35.05 / 411 x .100 x 100 = 85.3

S96 T00 1201-SPK
SS = 1.0 ml
Spk Vol. = .100 ml
Spk # = 145 N16-D
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

S96T00 1202

SS = 1.0 ml

Tot. Vol. = 25 ml

SAMPLE KNOWN ADDITION SELECTED
AT 22:19, 02-02-00

SAMPLE VOL= 25.000 AT 22:19, 02-02-00
ENTERED

EMF=-42.7 mV AT 22:20, 02-02-00

EMF -42.2 mV AT 22:21, 02-02-00

EMF=-42.1 mV AT 22:21, 02-02-00
ENTERED

STD CONCN= 1000 AT 22:21, 02-02-00
ENTERED

STD VOL= .25000 AT 22:21, 02-02-00
ENTERED

EMF -97.3 mV AT 22:22, 02-02-00

EMF=-97.4 mV AT 22:22, 02-02-00
ENTERED

STD VOL= 2.5000 AT 22:23, 02-02-00
ENTERED

EMF -153.5 mV AT 22:23, 02-02-00

EMF= 154.2 mV AT 22:23, 02-02-00
ENTERED

NH3 SLOPE=-59.7 mV/DEC
AT 22:23, 02-02-00

NH3 CONCN= 1.33 - 0.0313 x 25= 3.25e1 µg/ml

SAMPLE KNOWN ADDITION SELECTED
AT 22:24, 02-02-00

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 22:44, 02-02-00

SAMPLE VOL= 25.000 AT 22:45, 02-02-00
ENTERED

EMF=-36.2 mV AT 22:45, 02-02-00

EMF=-35.9 mV AT 22:46, 02-02-00

EMF=-35.8 mV AT 22:46, 02-02-00
ENTERED

STD CONCN= 1000 AT 22:46, 02-02-00
ENTERED

STD VOL= .25000 AT 22:47, 02-02-00
ENTERED

EMF=-92.9 mV AT 22:47, 02-02-00

EMF=-93.1 mV AT 22:47, 02-02-00
ENTERED

STD VOL= 2.5000 AT 22:47, 02-02-00
ENTERED

EMF=-149.0 mV AT 22:48, 02-02-00

EMF=-149.1 mV AT 22:48, 02-02-00
ENTERED

NH3 SLOPE=-58.5 mV/DEC
AT 22:49, 02-02-00

NH3 CONCN= 1.16 - 0.0313 x 25 = 2.8281

S96T001202- Dup

SS = 1.0 ml

Tot. Vol. = 25 ml

BEST AVAILABLE COPY

S96T001203

SS = 1.0 ml

Tot. Vol. = 25 ml

DOUBLE KNOWN ADDITION SELECTED
AT 22:55, 02-02-00

SAMPLE VOL= 25.000 AT 22:56, 02-02-00
ENTERED

EMF=-26.5 mV AT 22:57, 02-02-00

EMF=-26.6 mV AT 22:57, 02-02-00
ENTERED

STD CONCN= 1000 AT 22:57, 02-02-00
ENTERED

STD VOL= .25000 AT 22:57, 02-02-00
ENTERED

EMF -96.2 mV AT 22:58, 02-02-00

EMF= 96.2 mV AT 22:58, 02-02-00
ENTERED

STD VOL= 2.5000 AT 22:59, 02-02-00
ENTERED

EMF -153.8 mV AT 22:59, 02-02-00

EMF=-153.9 mV AT 22:59, 02-02-00
ENTERED

NH3 SLOPE=-59.3 mV/DEC
AT 22:59, 02-02-00

NH3 CONCN= .710 - 0.0313 x 25 = 1.697 or ~~2~~ 1.70e1 mg/ml

4/26/96
RWS

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 23:04, 02-02-00

SAMPLE VOL= 25.000 AT 23:04, 02-02-00
ENTERED

EMF=-28.3 mV AT 23:06, 02-02-00

EMF=-28.2 mV AT 23:06, 02-02-00
ENTERED

STD CONCN= 1000 AT 23:06, 02-02-00
ENTERED

STD VOL= .25000 AT 23:07, 02-02-00
ENTERED

EMF=-99.6 mV AT 23:07, 02-02-00

EMF=-99.5 mV AT 23:07, 02-02-00
ENTERED

STD VOL= 2.5000 AT 23:08, 02-02-00
ENTERED

EMF=-156.0 mV AT 23:09, 02-02-00

EMF=-156.0 mV AT 23:09, 02-02-00
ENTERED

1:NH3 SLOPE=-57.8 mV/DEC
AT 23:09, 02-02-00

1:NH3 CONCN= .615 -0.0313 x25= 1.461

596T001203-Dup

SS = 1.0 ml

Tot. Vol = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 23:15, 02-02-00

SAMPLE VOL= 25.000 AT 23:15, 02-02-00
ENTERED

EMF=-46.5 mV AT 23:15, 02-02-00

EMF=-45.0 mV AT 23:16, 02-02-00

EMF=-44.9 mV AT 23:16, 02-02-00

EMF=-44.5 mV AT 23:17, 02-02-00

EMF=-44.2 mV AT 23:17, 02-02-00
ENTERED

STD CONCN= 1000 AT 23:17, 02-02-00
ENTERED

STD VOL= .25000 AT 23:18, 02-02-00
ENTERED

EMF=-100.8 mV AT 23:18, 02-02-00

EMF=-100.8 mV AT 23:18, 02-02-00
ENTERED

STD VOL= 2.5000 AT 23:19, 02-02-00
ENTERED

EMF=-156.2 mV AT 23:19, 02-02-00

EMF=-156.1 mV AT 23:19, 02-02-00
ENTERED

NH3 SLOPE=-57.8 mV/DEC
AT 23:20, 02-02-00

NH3 CONCN= 1.16 -0.0313 x25= 2.82e1 µg/ml

S96T001356
SS = 1.0 ml
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 23:24, 02-02-00

SAMPLE VOL= 25.000 AT 23:25, 02-02-00
ENTERED

EMF=-43.7 mV AT 23:26, 02-02-00

EMF=-43.8 mV AT 23:26, 02-02-00
ENTERED

STD CONCN= 1000 AT 23:26, 02-02-00
ENTERED

STD VOL= .25000 AT 23:26, 02-02-00
ENTERED

EMF=-99.4 mV AT 23:27, 02-02-00

EMF=-99.8 mV AT 23:27, 02-02-00

EMF=-99.0 mV AT 23:27, 02-02-00
ENTERED

STD VOL= 2.5000 AT 23:28, 02-02-00
ENTERED

EMF=-155.8 mV AT 23:28, 02-02-00

EMF=-155.3 mV AT 23:29, 02-02-00

EMF=-155.3 mV AT 23:29, 02-02-00

EMF=-155.6 mV AT 23:29, 02-02-00
ENTERED

[illegible] SLOPE=-59.5 mV/DEC
AT 23:29, 02-02-00

[illegible] CONCN= 1.32 — 0.0313 x 25 = 3.22e1 µg/ml

S96T001356- Dup

SS = 1.0 ml

Tot. Vol. = 25 ml

BEST AVAILABLE COPY

```
DOUBLE KNOWN ADDITION SELECTED
 AT 23:38, 02-02-00

SAMPLE VOL= 25.000 AT 23:39, 02-02-00
ENTERED

EMF= 1.3 mV AT 23:40, 02-02-00

EMF= 1.8 mV AT 23:41, 02-02-00

EMF= 2.0 mV AT 23:41, 02-02-00

EMF= 2.2 mV AT 23:41, 02-02-00
ENTERED

STD CONCN= 1000 AT 23:42, 02-02-00
ENTERED

STD VOL= .25000 AT 23:42, 02-02-00
ENTERED

EMF=-99.0 mV AT 23:42, 02-02-00

EMF=-99.0 mV AT 23:43, 02-02-00
ENTERED

STD VOL= 2.5000 AT 23:43, 02-02-00
ENTERED

EMF=-156.7 mV AT 23:44, 02-02-00

EMF=-156.7 mV AT 23:45, 02-02-00
ENTERED

NH3 SLOPE=-58.1 mV/DEC
 AT 23:45, 02-02-00

NH3 CONCN= .183
```

596T001357

SS = 0.200 ml

Tot. Vol. = 25 ml.

RAN NO Dup, because out of Sample!

-0.0313 x 125 d.f. = 1.896 or 1.90e1 µg/ml

BEST AVAILABLE COPY

5 96 T00 1358
SS = 1.0 ml
Tot. vol. = 25 ml

DOUBLE KNOWN ADDITION SELECTED
AT 23:53, 02-02-00

SAMPLE VOL= 25.000 AT 23:54, 02-02-00
ENTERED

EMF= -50.2 mV AT 23:54, 02-02-00

EMF= -49.1 mV AT 23:55, 02-02-00

EMF= -48.7 mV AT 23:55, 02-02-00

EMF= -48.6 mV AT 23:55, 02-02-00
ENTERED

STD CONCN= 1000 AT 23:55, 02-02-00
ENTERED

STD VOL= .25000 AT 23:55, 02-02-00
ENTERED

EMF= -100.3 mV AT 23:56, 02-02-00

EMF= -100.3 mV AT 23:56, 02-02-00
ENTERED

STD VOL= 2.5000 AT 23:57, 02-02-00
ENTERED

EMF= -154.5 mV AT 23:57, 02-02-00

EMF= -154.6 mV AT 23:58, 02-02-00
ENTERED

NH3 SLOPE=-57.2 mV/DEC
AT 23:58, 02-02-00

NH3 CONCN= 1.41 — 0.0313 x 25 = 3.45e1 mg/ml

RECEIVED LEGIBLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 00:04, 02-03-00

SAMPLE VOL= 25.000 AT 00:04, 02-03-00
ENTERED

EMF=-50.6 mV AT 00:04, 02-03-00

EMF=-49.3 mV AT 00:05, 02-03-00

EMF=-49.0 mV AT 00:06, 02-03-00

EMF=-48.8 mV AT 00:06, 02-03-00
ENTERED

STD CONCN= 1000 AT 00:06, 02-03-00
ENTERED

STD VOL= .25000 AT 00:06, 02-03-00
ENTERED

EMF=-100.2 mV AT 00:07, 02-03-00

EMF=-100.2 mV AT 00:07, 02-03-00
ENTERED

STD VOL= 2.5000 AT 00:07, 02-03-00
ENTERED

EMF=-155.1 mV AT 00:08, 02-03-00

EMF=-155.1 mV AT 00:08, 02-03-00
ENTERED

SLOPE=-58.0 mV/DEC
AT 00:08, 02-03-00

CONCN= 1.48 − 0.0313 x 25 = 3.6281 ug/ml

S96T001358-Dup
SS = 1.0 ml
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

NL # 6762

2nd std.

Std # 145N16-D

SS = 1.0 ml

Tot. Vol. = 25 ml

DOUBLE KNOWN ADDITION SELECTED
AT 00:13, 02-03-00

SAMPLE VOL= 25.000 AT 00:13, 02-03-00
ENTERED

EMF=-111.8 mV AT 00:14, 02-03-00

EMF=-111.5 mV AT 00:14, 02-03-00

EMF=-110.9 mV AT 00:14, 02-03-00
ENTERED

STD CONCN= 1000 AT 00:14, 02-03-00
ENTERED

STD VOL= .25000 AT 00:15, 02-03-00
ENTERED

EMF=-122.1 mV AT 00:15, 02-03-00

EMF=-122.3 mV AT 00:15, 02-03-00
ENTERED

STD VOL= 2.5000 AT 00:16, 02-03-00
ENTERED

EMF -157.2 mV AT 00:17, 02-03-00

EMF=-157.2 mV AT 00:17, 02-03-00
ENTERED

NH3 SLOPE=-53.5 mV/DEC
AT 00:17, 02-03-00

NH3 CONCN= 15.4 $-0.0313 \times 25 = 384 / 411 \times 100 = 93.5$

DESTRUCTIVE COPY

worklistrpt Version 2.1 05/15/95
04/01/96 14:47

LABCORE Data Entry Template for Worklist# 7190

Analyst: DBB **Instrument:** NH301 _____ **Book #** 145N16-A

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: AY-101 AMMONIA. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	4.91e-2	N/A	ug/mL
		2	STD				NH3-01	LIQUID	3.95e2	4.04e2	N/A	ug/mL
96000257	AY-101 GRAB	3	SAMPLE	S96T001520	0		NH3-01	LIQUID	N/A	2.48e1	5.00	ug/mL
96000257	AY-101 GRAB	4	DUP	S96T001520	0		NH3-01	LIQUID	2.48e1	2.60e1	N/A	ug/mL
96000257	AY-101 GRAB	5	SPK	S96T001520	0		NH3-01	LIQUID	100	65.2	N/A	ug/mL
		6	STD				NH3-01	LIQUID	3.95e2	4.16e2	N/A	ug/mL

Final page for worklist # 7190

DBBuffer 4-23-96
Analyst Signature **Date**

RCWhitney 4/24/96
Analyst Signature **Date**

Reviewed RW Schwelm 4/26/96

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.

WL # 7190

DOUBLE KNOWN ADDITION SELECTED
AT 00:53, 02-02-00

SAMPLE VOL= 25.000 AT 00:54, 02-02-00
ENTERED

Blk

EMF= 39.3 mV AT 00:59, 02-02-00

Tot. Vol. = 25 ml

EMF= 40.0 mV AT 01:00, 02-02-00

EMF= 40.6 mV AT 01:00, 02-02-00

EMF= 41.1 mV AT 01:01, 02-02-00

EMF= 41.3 mV AT 01:01, 02-02-00

EMF= 41.1 mV AT 01:01, 02-02-00

EMF= 41.2 mV AT 01:02, 02-02-00
ENTERED

STD CONCN= 1000 AT 01:02, 02-02-00
ENTERED

STD VOL= .25000 AT 01:02, 02-02-00
ENTERED

EMF=-95.0 mV AT 01:03, 02-02-00

EMF=-95.1 mV AT 01:03, 02-02-00
ENTERED

STD VOL= 2.5000 AT 01:03, 02-02-00
ENTERED

EMF=-154.0 mV AT 01:04, 02-02-00

EMF=-154.1 mV AT 01:04, 02-02-00
ENTERED

NH3 SLOPE=-59.1 mV/DEC
AT 01:04, 02-02-00

NH3 CONCN= .0491

WL # 7190

DOUBLE KNOWN ADDITION SELECTED
AT 00:40, 02-02-00

SAMPLE VOL= 25.000 AT 00:41, 02-02-00
ENTERED

1st Std.
Std #145N16-A
SS = 1.0 ml
Tot Vol. = 25 ml

EMF=-104.7 mV AT 00:41, 02-02-00

EMF=-104.3 mV AT 00:41, 02-02-00

EMF=-103.9 mV AT 00:42, 02-02-00

EMF=-103.9 mV AT 00:42, 02-02-00
ENTERED

STD CONCN= 1000 AT 00:43, 02-02-00
ENTERED

STD VOL= .25000 AT 00:43, 02-02-00
ENTERED

EMF=-115.8 mV AT 00:43, 02-02-00

EMF=-115.8 mV AT 00:43, 02-02-00
ENTERED

STD VOL= 2.5000 AT 00:44, 02-02-00
ENTERED

EMF=-153.2 mV AT 00:45, 02-02-00

EMF=-153.2 mV AT 00:45, 02-02-00
ENTERED

NH3 SLOPE=-58.3 mV/DEC
AT 00:45, 02-02-00

NH3 CONCN= 16.2 $-0.0491 \times 25 = 403.8/395 \times 100 = 102.2\%$

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 02:28, 02-02-00

SAMPLE VOL= 25.000 AT 02:28, 02-02-00
ENTERED

596T0001520

SS = 1.0 ml

Tot. Vol. = 25 ml

EMF=-44.6 mV AT 02:30, 02-02-00

EMF=-44.2 mV AT 02:30, 02-02-00

EMF=-44.1 mV AT 02:30, 02-02-00

EMF=-44.0 mV AT 02:30, 02-02-00
ENTERED

STD CONCN= 1000 AT 02:31, 02-02-00
ENTERED

STD VOL= .25000 AT 02:31, 02-02-00
ENTERED

EMF=-102.7 mV AT 02:32, 02-02-00

EMF=-102.6 mV AT 02:32, 02-02-00
ENTERED

STD VOL= 2.5000 AT 02:32, 02-02-00
ENTERED

EMF=-157.8 mV AT 02:33, 02-02-00

EMF=-157.7 mV AT 02:33, 02-02-00
ENTERED

BEST AVAILABLE COPY

NH3 SLOPE=-57.3 mV/DEC
AT 02:33, 02-02-00

NH3 CONCN= 1.04 - 0.0491 = 0.9909 x 25 d.f. = 2.48e1 µg/ml

DOUBLE KNOWN ADDITION SELECTED
AT 02:47, 02-02-00

SAMPLE VOL= 25.000 AT 02:48, 02-02-00
ENTERED

EMF=-38.4 mV AT 02:48, 02-02-00

EMF=-38.2 mV AT 02:48, 02-02-00
ENTERED

STD CONCN= 1000 AT 02:49, 02-02-00
ENTERED

STD VOL= .25000 AT 02:49, 02-02-00
ENTERED

EMF=-96.3 mV AT 02:50, 02-02-00

EMF=-96.3 mV AT 02:50, 02-02-00
ENTERED

STD VOL= 2.5000 AT 02:50, 02-02-00
ENTERED

EMF=-151.9 mV AT 02:51, 02-02-00

EMF=-151.9 mV AT 02:51, 02-02-00
ENTERED

1:NH3 SLOPE=-57.9 mV/DEC
AT 02:51, 02-02-00

1:NH3 CONCN= 1.09 — 0.0491 x 25 d.f. = 2.60e1 µg/ml

596T0001520 - Dup

SS = 1.0 ml

Tot. vol. = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 02:37, 02-02-00

SAMPLE VOL= 25.000 AT 02:38, 02-02-00
ENTERED

EMF=-61.8 mV AT 02:38, 02-02-00

EMF=-61.5 mV AT 02:39, 02-02-00
ENTERED

STD CONCN= 1000 AT 02:39, 02-02-00
ENTERED

STD VOL= .25000 AT 02:39, 02-02-00
ENTERED

EMF=-101.0 mV AT 02:40, 02-02-00

EMF=-101.1 mV AT 02:40, 02-02-00
ENTERED

STD VOL= 2.5000 AT 02:41, 02-02-00
ENTERED

EMF=-149.2 mV AT 02:42, 02-02-00

EMF=-149.3 mV AT 02:42, 02-02-00
ENTERED

NH3 SLOPE=-52.0 mV/DEC
AT 02:42, 02-02-00

NH3 CONCN= 2.07 — 1.04 x 25 = 25.75 / 395 x .100 x 100 = 65.2% rec

S96T0001520 spk
SS = 1.0 ml
spk Vol. = .100 ml
Spk # = 145N16-A
Tot. Vol. = 25 ml

BEST AVAILABLE COPY

DOUBLE KNOWN ADDITION SELECTED
AT 03:03, 02-02-00

SAMPLE VOL= 25.000 AT 03:03, 02-02-00
ENTERED

EMF=-110.2 mV AT 03:03, 02-02-00

EMF=-109.7 mV AT 03:04, 02-02-00

EMF=-109.5 mV AT 03:04, 02-02-00
ENTERED

STD CONCN= 1000 AT 03:04, 02-02-00
ENTERED

STD VOL= .25000 AT 03:04, 02-02-00
ENTERED

EMF=-121.2 mV AT 03:05, 02-02-00

EMF=-121.2 mV AT 03:05, 02-02-00
ENTERED

STD VOL= 2.5000 AT 03:05, 02-02-00
ENTERED

EMF=-158.5 mV AT 03:06, 02-02-00

EMF=-158.5 mV AT 03:06, 02-02-00
ENTERED

1:NH3 SLOPE=-58.8 mV/DEC
AT 03:06, 02-02-00

1:NH3 CONCN= 16.7 - 0.0491 x 25 = 416/395 x100 = 105.4

2nd std
Std # 145N16-A
SS = 1.0 ml
Tot. Vol. = 25 ml

LABCORE Data Entry Template for Worklist# 7286

Analyst: DBB **Instrument:** NH301 **Book #** 145N16-A

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: AY-101 NH3. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	1	5.45e-2	N/A	ug/mL
		2	STD				NH3-01	LIQUID	3.95e2	4.06e2	N/A	ug/mL
96000257	AY-101 GRAB	3	SAMPLE	S96T001519	0		NH3-01	LIQUID	N/A	2.61e1	5.00	ug/mL
96000257	AY-101 GRAB	4	DUP	S96T001519	0		NH3-01	LIQUID	2.61e1	2.44e1	N/A	ug/mL
96000257	AY-101 GRAB	5	SPK	S96T001519	0		NH3-01	LIQUID	100	76.6	N/A	ug/mL
		6	STD				NH3-01	LIQUID	3.95e2	4.14e2	N/A	ug/mL

Final page for worklist # 7286

D B Griffin 4-23-96
Analyst Signature **Date**

RC Wiley 4/26/96
Analyst Signature **Date**

Reviewed RW Schroeder 4/26/96

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.

WL# 7286

B/K

Tot Vol = 25 ml

[illegible] KNOWN ADDITION SELECTED
20:15, 02-01-00

[illegible] VOL= 25.000 AT 20:15, 02-01-00
[illegible]ED

25.1 uV AT 20:20, 02-01-00

[illegible] mV AT 20:21, 02-01-00

[illegible] mV AT 20:21, 02-01-00
[illegible]ED

[illegible]CONC= 1000 AT 20:21, 02-01-00
[illegible]ED

VOL= [illegible] AT 20:21, 02-01-00
[illegible]ED

[illegible] mV AT 20:22, 02-01-00

[illegible] mV AT 20:22, 02-01-00
[illegible]ED

VOL= [illegible] AT 20:23, 02-01-00
[illegible]ED

[illegible] mV AT 20:24, 02-01-00

[illegible] mV AT 20:24, 02-01-00
[illegible]ED

[illegible] SLOPE=[illegible] mV/DEC
[illegible], 02-01-00

[illegible]

WL #7286

Std # M5N16-A

sample size = 1.0 ml

Tot vol = 25 ml

$-0.0545 \times 25 = 406 / 395 \times 100 = 102.8\%$ rec.

LE KNOWN ADDITION SELECTED
23:49, 02-01-00

LE VOL= 25.000 AT 23:49, 02-01-00
DED

-33.4 mV AT 23:49, 02-01-00

-33.4 mV AT 23:49, 02-01-00
DED

KNOWN 1000 AT 23:50, 02-01-00
DED

VOL= .25000 AT 23:50, 02-01-00
DED

-31.4 mV AT 23:51, 02-01-00

-31.4 mV AT 23:51, 02-01-00
DED

VOL= 0.5000 AT 23:51, 02-01-00
DED

-47.4 mV AT 23:52, 02-01-00

-47.4 mV AT 23:52, 02-01-00

SLOPE=-53.1 mV/DEC
23:52, 02-01-00

CONCN= 1.31 -0.0545 x 25= 2.61e1 µg/ml

S96T0001519

SS = 1.0 ml

Tot Vol = 25 ml

LE KNOWN ADDITION SELECTED
23:57, 02-01-00

LE VOL= 25.000 AT 23:57, 02-01-00
RED

-32.5 mV AT 23:58, 02-01-00

-32.1 mV AT 23:58, 02-01-00

21.9 mV AT 23:58, 02-01-00
RED

22VON= 1000 AT 23:59, 02-01-00
RED

VOL= .25000 AT 23:59, 02-01-00
RED

-29.2 mV AT 23:59, 02-01-00

-30.3 mV AT 00:00, 02-01-00
RED

VOL= 2.5000 AT 00:00, 02-01-00
RED

-124.9 mV AT 00:01, 02-01-00

-145.1 mV AT 00:02, 02-01-00
RED

SLOPE=-77.1 mV/MM
0.111, 02-02-00

S96T0001519 Dup
SS = 1.0 ml
Tot Vol. = 25 ml

BEST AVAILABLE COPY

$-0.0545 \times 25 = 2.44e1$ µg/ml

LE KNOWN ADDITION SELECTED
09:09, 02-02-00

LE VOL= 25.000 AT 00:09, 02-02-00
DED

-51.6 mV AT 00:10, 02-02-00

-51.2 mV AT 00:10, 02-02-00

-51.0 mV AT 00:10, 02-02-00

-50.8 mV AT 00:11, 02-02-00
DED

[illegible] 2010 AT 00:11, 02-02-00
DED

[illegible] .25000 AT 00:11, 02-02-00
DED

[illegible] mV AT 00:11, 02-02-00

[illegible] mV AT 00:12, 02-02-00
DED

[illegible] AT 00:12, 02-02-00

[illegible] AT 00:13, 02-02-00

[illegible] AT 00:13, 02-02-00
DED

[illegible] MODE
[illegible] 02-02-00

[illegible] - 01.10 x 25 = 30.25 / 395 x .100 x 100 = 76.6% recovery

S96T000/519 SPK

SS = 1.0 ml

spk Vol. = .100 ml

Spk # = 145N16-A

Tot. Vol. = 25 ml

BEST AVAILABLE COPY

Std# 145N16-A

2nd Std

SS = 1.0 ml

Tot Vol. = 25 ml

DOUBLE KNOWN ADDITION SELECTED
AT 00:31, 02-02-00

SAMPLE VOL= 25.000 AT 00:31, 02-02-00
ENTERED

EMF=-100.8 mV AT 00:31, 02-02-00

EMF=-100.6 mV AT 00:32, 02-02-00

EMF=-100.5 mV AT 00:32, 02-02-00
ENTERED

STD CONCN= 1000 AT 00:32, 02-02-00
ENTERED

STD VOL= .25000 AT 00:32, 02-02-00
ENTERED

EMF=-112.3 mV AT 00:33, 02-02-00

EMF=-112.4 mV AT 00:33, 02-02-00
ENTERED

STD VOL= 2.5000 AT 00:33, 02-02-00
ENTERED

EMF=-150.1 mV AT 00:34, 02-02-00

EMF=-150.2 mV AT 00:34, 02-02-00
ENTERED

1:NH3 SLOPE=-59.4 mV/DEC
AT 00:34, 02-02-00

1:NH3 CONCN= 16.6 — 0.0545 x 25 = 413.6 / 395 x 100 = 104.7

LABCORE Data Entry Template for Worklist# 8283

Analyst: SRM **Instrument:** NH301 **Book #** 145N16-F

Method: LA-631-001 Rev/Mod B-2

Worklist Comment: AY-101 Grab. NH3 - Save for Sonja Morris. new

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				NH3-01	LIQUID	/	.0353	N/A	ug/mL
		2	STD				NH3-01	LIQUID	4.12E[2]	4.39E[2]	N/A	ug/mL
96000210	AY-101 GRAB	3	SAMPLE	S96T001208	0		NH3-01	LIQUID	N/A	<2.50	2.50	ug/mL
96000210	AY-101 GRAB	4	DUP	S96T001208	0		NH3-01	LIQUID	<2.50	<2.50	N/A	ug/mL
96000210	AY-101 GRAB	5	SPK	S96T001208	0		NH3-01	LIQUID	100	94.9	N/A	ug/mL

Final page for worklist # 8283

S. Morris 5.20.96
Analyst Signature **Date**

RE Wright 5/22/96
Analyst Signature **Date**

Approved by RW Schmeck 5/22/96

Data Entry Comments: CM 7/11/96 2mL → 25mL

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.

W.L.# 8685

BLANK
25mL

S. Morris
5.20.96

DEST/V...

W.L.# 8283

STANDARD 145N16-F

1mL → 25mL

$(17.4 - .0355)(25) = 4.39_2$

$\frac{25}{1}$

DESTRAYABLE COPY

596T001208

2mL ⟶ 25mL

$$(.0759 - .0353)\left(\frac{25}{2}\right) = 5.0752^{-1} \text{ or } < 2.5\ \mu g/ml$$

12.5

BEST AVAILABLE COPY

W.L. # 8283

S96T001208 DUP

2mL ⟶ 25mL

$(.0439 - .0353)\left(\frac{25}{2}\right) = 1.075e^{-1}$ or < 2.5 mg/ml

BEST AVAILABLE COPY

W.L.# 8283

S96T001208 SPIKE

2mL + .100mL (145N16-F) → 25m

$$\frac{(1.64 - .0759)(\cancel{12.5})}{(\cancel{.100})(4.128^2)}(100) = \cancel{47.45\%}$$

25/.100 RWS 5/22/96

RWS 5/22/96

94.9% recovery

RWS 5/22/96

DEC AVAILABLE

LABCORE Data Entry Template for Worklist# 8328

Analyst: KRM **Instrument:** CN01 _____ **Book#** 83N8C

Method: LA-695-102 Rev/Mod E-0

Worklist Comment: AY-101 CN. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				CN-03	LIQUID		
2	STD				CN-03	LIQUID		
3	SAMPLE	S96T001317	0		CN-03	LIQUID	96000210	AY-101 GRAB
		Analytes Requested: CN-03						
4	DUP	S96T001317	0		CN-03	LIQUID		
5	SPK	S96T001317	0		CN-03	LIQUID		
6	CCV				CN-01	LIQUID		
7	CCB				CN-01	LIQUID		

Final page for worklist # 8328

See Attached for Signatures

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:

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

LABCORE Completed Worklist Report for Worklist# 8328

Analyst: krm **Instrument:** CN01 **Book#** 83N8C

Method: LA695102 Rev/Mod E-Ø

Worklist Comment: AY-101 CN. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK			0	CN-03	LIQUID	1	<1.10E-2		Ratio
2	STD			0	CN-03	LIQUID	9.49E+02	9.22E+2	97.155	% Recovery
3	SAMPLE	S96T001317		0	CN-03	LIQUID	N/A	2.07E+01	1.100	ug/mL
4	DUP	S96T001317		0	CN-03	LIQUID	2.07E+1	2.67E+1	25.316	RPD
5	SPK	S96T001317		0	CN-03	LIQUID	1.00E+02	1.08E+02	108.000	% Recovery
6	CCV			0	CN-01	LIQUID	9.49E+02	9.39E+2	98.946	% Recovery
7	CCB			0	CN-01	LIQUID	1	<1.10E-2		ug/ml

Final page for worklist# 8328

Analyst Signature **Date** **Analyst Signature** **Date**

H Anastn 6-4-96
Reviewer Signature **Date**

Validated 6/4/96 HEA

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 8328

Analyst: KRM **Instrument:** CN01 **Book #** 83N8C

Method: LA-695-~~103~~ 102 Rev/Mod E-0 Hea 5/2/96

Worklist Comment: AY-101 CN. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	CCV				CN-01	LIQUID			N/A	ug/mL
		2	CCB				CN-01	LIQUID			N/A	ug/mL
		3	BLNK				CN-03	LIQUID			N/A	ug/mL
		4	STD				CN-03	LIQUID			N/A	ug/mL
96000210	AY-101 GRAB	5	SAMPLE	S96T001317	0		CN-03	LIQUID	N/A			ug/mL
96000210	AY-101 GRAB	6	DUP	S96T001317	0		CN-03	LIQUID			N/A	ug/mL
96000210	AY-101 GRAB	7	SPK	S96T001317	0		CN-03	LIQUID			N/A	ug/mL

Final page for worklist # 8328

Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: BLANK1

CN- DETERMINATION : LA-695-102(E-0)

			BLANK
Type	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
BLNK	DISSOLUTION INFORMATION		
Work List	SAMPLE ALIQUOT (mL)	(SA)	N/A
8328	FINAL VOLUME (mL)	(FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:		
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	(SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	(FDV)	N/A
LIQUID	ANALYSIS INFORMATION:		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	5.000
96005244	ABSORBANCE OF BLANK (REAGENT, PREP)		0.003
Retrieve	Y-INTERCEPT VALUE		0.009796
0	SLOPE VALUE		0.160398
Sample Prep	AMOUNT OF CN- IN BLANK (µg)		-0.042
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)		-0.008

Sample #
Blank
Instrument Code
CN02
Prepared By
HLA
Chemist
HLA
Analyst
KRM
Date Complete
06/04/96
Analysis Date
06/01/96
Analysis Time
Sample Point

NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000

AMOUNT OF CN- (µg) = [(ABSORB. OF BLANK - INSTRUMENT BLANK) - (Y-INTERCEPT)] / SLOPE VALUE

CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)

DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)

METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2

QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL

NOTE: Reported Result is Below Detection Level.

Method Detection Limit in µg/mL		**1.10E-02**
QC Found in µg/mL	**<**	**1.10E-02**

Analyst:		KRM	Date:	06/04/96
Signature of Chemist:	H Anasto	HLA	Date:	6/4/96

BLANK.WB1 REV.1.0 69510NML

WORKBOOK PAGE: STD2

CN- DETERMINATION : LA-695-102(E-0)

			STANDARD
Type	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
STD	DISSOLUTION INFORMATION:		
Work List	STANDARD ALIQUOT (mL)		N/A
8328	FINAL VOLUME (mL)		N/A
Test Code	DILUTION INFORMATION:		
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	(SSD)	0.250
Matrix	FINAL DILUTION VOLUME (mL)	(FDV)	25.000
LIQUID	ANALYSIS INFORMATION:		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	0.500
96005244	ABSORBANCE OF BLANK		0.003
Rerun	ABSORBANCE OF STANDARD		0.752
0	STANDARD BOOK NUMBER		83N8C
Sample Prep	STANDARD VALUE OF CN- (µg / mL)		949
N/A	Y-INTERCEPT VALUE		0.009796
Sample #	SLOPE VALUE		0.160398
83N8C	AMOUNT OF CN- IN STANDARD (µg)		4.609
Instrument Code	CONCENTRATION OF CN- IN STANDARD (µg / mL)		921.712
CN02			
Prepared By			
HLA	AMOUNT OF CN- (µg) = [| ABSORB. OF STANDARD - ABSORB. OF BLANK | - (Y-INTERCEPT)] / SLOPE VA		
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD)		
HLA	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)		
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2		
KRM	QC ACTUAL (µg/mL) = STANDARD VALUE OF CN- in µg/mL		
Date Complete	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL		
06/04/96	% RECOVERY = QC FOUND / QC ACTUAL *100		
Analysis Date			
06/01/96			
Analysis Time	**Method Detection Limit in µg/mL**		**1.10E+01**
	QC Actual in µg/mL		**9.49E+02**
Sample Point	**QC Found in µg/mL**		**9.22E+02**
	Percent Standard Recovery		**97.1**

Analyst:	KRM	Date:	06/04/96
Signature of Chemist: H Anastn	HLA	Date:	6/4/96

STANDARD.WB1 REV.1. 69510NML

WORKBOOK PAGE: SAM3

CN- DETERMINATION : LA-695-102(E-0)

Test Type	WAS THIS RUN BY EDTA DISSOLUTION? (Y / N)	N
SAMPLE	DISSOLUTION INFORMATION	
Work Order	SAMPLE ALIQUOT (mL)	N/A
8328	FINAL VOLUME (mL)	N/A
Test Code	SAMPLE DILUTION INFORMATION	
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	N/A
LIQUID	ANALYSIS INFORMATION	
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL) (SS)	0.050
96005244	ABSORBANCE OF BLANK	0.003
Rerun	ABSORBANCE OF SAMPLE	0.179
0	Y-INTERCEPT VALUE	0.009796
Sample Prep	SLOPE VALUE	0.160398
N/A	AMOUNT OF CN- IN SAMPLE (µg)	1.036
Sample #	CONCENTRATION OF CN- IN SAMPLE (µg / mL)	20.724
S96T001317		
Instrument Code		
CN02		
Prepared By	AMOUNT OF CN- (µg) = [| ABSORB. OF SAMPLE - ABSORB. OF BLANK [- (Y-INTERCEPT)] / SLOPE VALUE	
HLA	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2)	
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)	
HLA	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in mL)	
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2	
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL	
Date Complete		
06/04/96		
Analysis Date		
06/01/96		
Analysis Time	**Method Detection Limit in µg/mL**	**1.10E+00**
Sample Point	**QC Found in µg/mL**	**2.07E+01**

Analyst:		KRM	Date:	06/04/96
Signature of Chemist:	H Anastos	HLA	Date:	6/4/96

SAMPLE.WB1 REV 1.0 69510NML

WORKBOOK PAGE: DUP4

CN- DETERMINATION : LA-695-102(E-0)

			DUPLICATE
Sample Type	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
DUP	DISSOLUTION INFORMATION		
Work List	SAMPLE ALIQUOT (mL)		N/A
8328	FINAL VOLUME (mL)		N/A
Test Code	SAMPLE DILUTION INFORMATION:		
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)		N/A
Matrix	FINAL DILUTION VOLUME (mL)		N/A
LIQUID	ANALYSIS INFORMATION:		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	0.050
96005244	ABSORBANCE OF BLANK		0.003
Rerun	ABSORBANCE OF SAMPLE		0.227
0	Y-INTERCEPT VALUE		0.009796
Sample Prep	SLOPE VALUE		0.160398
N/A	AMOUNT OF CN- IN SAMPLE (µg)		1.335
Sample	CONCENTRATION OF CN- IN SAMPLE (µg / mL)		26.709
S96T001317	SAMPLE RESULT		2.07E+01

Instrument Code	
CN02	
Prepared By	AMOUNT OF CN- (µg) = [| ABSORB. OF SAMPLE - ABSORB. OF BLANK | - (Y-INTERCEPT)] / SLOPE VALUE
HLA	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (DF) * (DF2)
Chemist	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)
HLA	DF2 = (FINAL VOLUME in mL) / (SAMPLE ALIQUOT in mL)
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2
KRM	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL
Date Complete	
06/04/96	
Analysis Date	
06/01/96	
Analysis Time	

Analysis Time	**Method Detection Limit in µg/mL**	**1.10E+00**
Sample Point	**QC Found in µg/mL**	**2.67E+01**
	RPD (of Sam and Dup Results)	**25.24%**

Analyst:		KRM	Date:	06/04/96
Signature of Chemist:	HAnastos	HLA	Date:	6/4/96

SAMPLE.WB1 REV 1.0 69510NML

CN- DETERMINATION : LA-695-102(E-0)

			SPIKE
Sample Type	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
SPK	DISSOLUTION INFORMATION:		
Worklist	SAMPLE ALIQUOT (mL)		N/A
8328	FINAL VOLUME (mL)		N/A
Test Code	SAMPLE DILUTION INFORMATION:		
CN-03	SAMPLE SIZE USED FOR DILUTION (mL)		N/A
Matrix	FINAL DILUTION VOLUME (mL)		N/A
LIQUID	ANALYSIS INFORMATION:		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	0.050
96005244	ABSORBANCE OF BLANK		0.003
Rerun	ABSORBANCE OF SPIKE		0.591
0	AMOUNT OF SPIKE STANDARD ADDED (mL)		0.250
Sample Prep	SPIKE BOOK NUMBER		83N8C
N/A	SPIKE VALUE OF CN- (µg / mL)		949
Sample	Y-INTERCEPT VALUE		0.009796
S96T001317	SLOPE VALUE		0.160398
Instrument Code	AMOUNT OF CN- IN SPIKE (µg)		3.605
CN02	AMOUNT OF CN- FROM SAMPLE (µg)		1.036
Prepared By			
HLA			
Chemist	AMOUNT OF CN- (µg) = [| ABSORB. OF SPIKE - ABSORB. OF BLANK| - (Y-INTERCEPT)] / SLOPE VALUE		
HLA	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2		
Analyst	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)		
KRM	% REC = 100 * (AMT OF CN- IN SPK - AMT OF CN- FROM SAM) / (SPK VAL /100 * AMT OF SPK STD ADDED)		
Date Complete	QC ACTUAL = SPIKE VALUE OF CN- in µg/mL		
06/04/96	QC FOUND = % RECOVERY * QC ACTUAL *100		
Analysis Date			
06/01/96			
Analysis Time	**Method Detection Limit in µg/mL**		**1.10E+00**
	QC Actual in µg/mL		**9.49E+02**
Sample Point	**QC Found in µg/mL**		**1.03E+03**
	Percent Standard Recovery		**108.3**

Analyst:	KRM	Date:	06/04/96
Signature of Chemist: H Anastas	HLA	Date:	6/4/96

SPIKE.WB1 REV.1.0 69510NML

WORKBOOK PAGE: STD6

CN- DETERMINATION : LA-695-102(E-0)

			STANDARD
Analysis Type	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
CCV	DISSOLUTION INFORMATION		
Work Order	STANDARD ALIQUOT (mL)		N/A
8328	FINAL VOLUME (mL)		N/A
Matrix Code	DILUTION INFORMATION		
CN-01	SAMPLE SIZE USED FOR DILUTION (mL)	(SSD)	0.250
Matrix	FINAL DILUTION VOLUME (mL)	(FDV)	25.000
LIQUID	ANALYSIS INFORMATION		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	0.500
	ABSORBANCE OF BLANK		0.005
Rerun #	ABSORBANCE OF STANDARD		0.768
0	STANDARD BOOK NUMBER		83N8C
Sample Prep	STANDARD VALUE OF CN- (µg / mL)		949
N/A	Y-INTERCEPT VALUE		0.009796
Sample #	SLOPE VALUE		0.160398
	AMOUNT OF CN- IN STANDARD (µg)		4.696
Instrument Code	CONCENTRATION OF CN- IN STANDARD (µg / mL)		939.169
CN02			
Prepared By			
HLA	AMOUNT OF CN- (µg) = [| ABSORB. OF STANDARD - ABSORB. OF BLANK | - (Y-INTERCEPT)] / SLOPE VA		
Chemist	CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD)		
HLA	DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)		
Analyst	METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2		
KRM	QC ACTUAL (µg/mL) = STANDARD VALUE OF CN- in µg/mL		
Date Complete	QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL		
06/04/96	% RECOVERY = QC FOUND / QC ACTUAL *100		
Analysis Date			
06/01/96			
Analysis Time	**Method Detection Limit in µg/mL**		**1.10E+01**
	QC Actual in µg/mL		**9.49E+02**
Sample Point	**QC Found in µg/mL**		**9.39E+02**
	Percent Standard Recovery		**99.0**

Analyst:		KRM	Date:	06/04/96
Signature of Chemist:	H Anastor	HLA	Date:	6/4/96

STANDARD.WB1 REV.1. 69510NML

WORKBOOK PAGE: BLANK7

CN- DETERMINATION : LA-695-102(E-0)

			BLANK
Revpo	WAS THIS RUN BY EDTA DISSOLUTION?	(Y / N)	N
CCB	DISSOLUTION INFORMATION:		
Workset	SAMPLE ALIQUOT (mL)	(SA)	N/A
8328	FINAL VOLUME (mL)	(FV)	N/A
Test Code	SAMPLE DILUTION INFORMATION:		
CN-01	SAMPLE SIZE USED FOR DILUTION (mL)	(SSD)	N/A
Matrix	FINAL DILUTION VOLUME (mL)	(FDV)	N/A
LIQUID	ANALYSIS INFORMATION:		
Batch Number	SAMPLE SIZE USED FOR ANALYSIS (mL)	(SS)	5.000
	ABSORBANCE OF BLANK (REAGENT, PREP)		0.005
Kermit	Y-INTERCEPT VALUE		0.009796
0	SLOPE VALUE		0.160398
Sample Prep	AMOUNT OF CN- IN BLANK (µg)		-0.030
N/A	CONCENTRATION OF CN- IN BLANK (µg / mL)		-0.006

Sample

Instrument Code

CN02

NOTE: The instrument is zeroed prior to each batch, therefore the Instrument Blank = 0.000

Prepared By

HLA

AMOUNT OF CN- (µg) = [(ABSORB. OF BLANK - INSTRUMENT BLANK) - (Y-INTERCEPT)] / SLOPE VALUE

Chemist

CONCENTRATION OF CN- (µg / mL) = (AMOUNT OF CN- in µg) / (SS in mL) * (FDV/SSD) * (FV/SA)

HLA

DF = (FINAL DILUTION VOLUME in mL) / (SAMPLE SIZE USED FOR DILUTION in mL)

Analyst

METHOD DETECTION LIMIT (µg / mL) = (0.055 µg CYANIDE) / (SS in mL) * DF * DF2

KRM

QC FOUND (µg/mL) = CONCENTRATION OF CN- in µg/mL

Date Complete

06/04/96

Analysis Date

06/01/96

NOTE: Reported Result is Below Detection Level.

Analysis Time

Method Detection Limit in µg/mL		**1.10E-02**

Sample Point

QC Found in µg/mL	**<**	**1.10E-02**

Analyst:	KRM	Date:	06/04/96
Signature of Chemist: H Anastos	HLA	Date:	6/4/96

BLANK.WB1 REV.1.0 69510NML

96040301.D09 → D16

LABCORE Data Entry Template for Worklist# 6788

Analyst: [illegible] **Instrument:** IC00 IC03 **Book#** 13319-C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AY-101 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	SAMPLE	S96T001201	0		@IC-01	LIQUID	96000210	AY-101 GRAB
	Analytes Requested:				CL-02 , F-02 , NO2-02 , NO3-02 , PO4-02 , SO4-02			
4	DUP	S96T001201	0		@IC-01	LIQUID		
5	SPK	S96T001201	0		@IC-01	LIQUID		
6	SAMPLE	S96T001202	0		@IC-01	LIQUID	96000210	AY-101 GRAB
	Analytes Requested:				CL-02 , F-02 , NO2-02 , NO3-02 , PO4-02 , SO4-02			
7	DUP	S96T001202	0		@IC-01	LIQUID		

Final page for worklist # 6788

R. Lambert 04·03·96

Analyst Signature **Date**

Analyst Signature **Date**

In shell 4/8/96

All in shell - use 6788ap.csv not 6788apr.csv
Uploaded 4/23/96

Data Entry Comments:

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

LABCORE Completed Worklist Report for Worklist# 6788

Analyst: eal **Instrument:** IC03 **Book#** 13319-C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AY-101 IC. RCJ

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	CCB			0	@IC-QC	F	QC	1	<1.30e-2		ug/mL
1	CCB			0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1	CCB			0	@IC-QC	NO2	QC	1	<1.07e-1		ug/mL
1	CCB			0	@IC-QC	BR	QC	1	<1.26e-1		ug/mL
1	CCB			0	@IC-QC	NO3	QC	1	<1.40e-1		ug/mL
1	CCB			0	@IC-QC	PO4	QC	1	<1.19e-1		ug/mL
1	CCB			0	@IC-QC	SO4	QC	1	<1.36e-1		ug/mL
1	CCB			0	@IC-QC	OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV			0	@IC-QC	F	QC	59	5.51e+01	93.390	% Recovery
2	CCV			0	@IC-QC	CL	QC	79	7.31e+01	92.532	% Recovery
2	CCV			0	@IC-QC	NO2	QC	534	5.15e+02	96.442	% Recovery
2	CCV			0	@IC-QC	BR	QC	575	5.44e+02	94.609	% Recovery
2	CCV			0	@IC-QC	NO3	QC	614	6.07e+02	98.860	% Recovery
2	CCV			0	@IC-QC	PO4	QC	546	5.32e+02	97.436	% Recovery
2	CCV			0	@IC-QC	SO4	QC	631	6.05e+02	95.880	% Recovery
2	CCV			0	@IC-QC	OXALATE2	QC	504	5.20e+02	103.175	% Recovery
3	SAMPLE	S96T001201		0	@IC-01	F-02	LIQUID	N/A	1.433e+02	53.830	ug/mL
3	SAMPLE	S96T001201		0	@IC-01	CL-02	LIQUID	N/A	6.400e+02	70.400	ug/mL
3	SAMPLE	S96T001201		0	@IC-01	NO2-02	LIQUID	N/A	3.339e+04	443.100	ug/mL
3	SAMPLE	S96T001201		0	@IC-01	NO3-02	LIQUID	N/A	2.513e+04	579.700	ug/mL
3	SAMPLE	S96T001201		0	@IC-01	PO4-02	LIQUID	N/A	8.280e+02	492.400	ug/mL
3	SAMPLE	S96T001201		0	@IC-01	SO4-02	LIQUID	N/A	5.679e+03	562.800	ug/mL
4	DUP	S96T001201		0	@IC-01	F-02	LIQUID	1.43e+02	1.55e+02	8.054	RPD
4	DUP	S96T001201		0	@IC-01	CL-02	LIQUID	6.40e+02	6.60e+02	3.077	RPD
4	DUP	S96T001201		0	@IC-01	NO2-02	LIQUID	3.34e+04	3.45e+04	3.240	RPD
4	DUP	S96T001201		0	@IC-01	NO3-02	LIQUID	2.51e+04	2.49e+04	0.800	RPD
4	DUP	S96T001201		0	@IC-01	PO4-02	LIQUID	8.28e+02	8.75e+02	5.520	RPD
4	DUP	S96T001201		0	@IC-01	SO4-02	LIQUID	5.68e+03	5.61e+03	1.240	RPD
5	SPK	S96T001201		0	@IC-01	F-02	LIQUID	59	5.24e+01	88.814	% Recovery
5	SPK	S96T001201		0	@IC-01	CL-02	LIQUID	79	6.77e+01	85.696	% Recovery
5	SPK	S96T001201		0	@IC-01	NO2-02	LIQUID	534	5.61e+02	105.056	% Recovery
5	SPK	S96T001201		0	@IC-01	NO3-02	LIQUID	614	6.26e+02	101.954	% Recovery
5	SPK	S96T001201		0	@IC-01	PO4-02	LIQUID	546	5.10e+02	93.407	% Recovery
5	SPK	S96T001201		0	@IC-01	SO4-02	LIQUID	631	5.95e+02	94.295	% Recovery
6	SAMPLE	S96T001202		0	@IC-01	F-02	LIQUID	N/A	1.581e+02	53.830	ug/mL
6	SAMPLE	S96T001202		0	@IC-01	CL-02	LIQUID	N/A	6.780e+02	70.400	ug/mL
6	SAMPLE	S96T001202		0	@IC-01	NO2-02	LIQUID	N/A	3.417e+04	443.100	ug/mL
6	SAMPLE	S96T001202		0	@IC-01	NO3-02	LIQUID	N/A	2.582e+04	579.700	ug/mL
6	SAMPLE	S96T001202		0	@IC-01	PO4-02	LIQUID	N/A	1.114e+03	492.400	ug/mL
6	SAMPLE	S96T001202		0	@IC-01	SO4-02	LIQUID	N/A	5.837e+03	562.800	ug/mL
7	DUP	S96T001202		0	@IC-01	F-02	LIQUID	1.58e+02	1.51e+02	4.531	RPD

Units shown for QC (BLK/BKG) may not reflect the actual units.