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ENGINEERING DATA TRANSMITTAL

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Tank 241-B-108, Cores 172 and 173 Analytical Results for the Final Report

Jennifer L. Nuzum

Rust Federal Services of Hanford, Inc., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

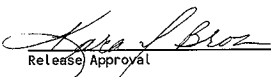
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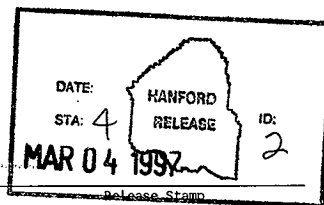
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ANALYTICAL SERVICES

**TANK 241-B-108, CORES 172 AND 173
ANALYTICAL RESULTS FOR THE FINAL REPORT**

Project Coordinator: JENNIFER L. NUZUM

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

by

**222-S Laboratory
Rust Federal Services of Hanford Inc.
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NARRATIVE

222-S ANALYTICAL SERVICES

**TANK 241-B-108, CORES 172 AND 173,
ANALYTICAL RESULTS FOR THE FINAL REPORT**

This document is the final laboratory report for Tank 241-B-108. Push mode core segments were removed from Risers 3 and 6 between September 4, 1996, and September 6, 1996. The field blank was prepared September 4, 1996. Segments were received and extruded at 222-S Analytical Laboratory. Analyses were performed in accordance with *Tank 241-B-108 Push Mode Core Sampling and Analysis Plan* (TSAP) (Schreiber, 1996), *Tank Safety Screening Data Quality Objective* (SSDQO) (Dukelow, et al., 1995), and *Historical Model Evaluation Data Requirements* (HistoricalDQO) (Simpson, et al., 1995).

None of the subsamples exceeded notification limits as described in TSAP. Statistical evaluation of results by calculating the 95% upper confidence limit is not performed by 222-S Laboratory and is not considered in this report.

Appearance and Sample Handling

Samples were removed from Tank 241-B-108 between September 4, 1996, and September 5, 1996. These samples were delivered to 222-S Laboratory on October 11, 1996. TSAP states that core samples shall be transported to the laboratory within three calendar days from the time each segment is taken from the tank. The laboratory does not control the shipment of segments; this issue is beyond the scope of this report.

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

A core composite was prepared for Core 173 and underwent analysis as directed by TSAP. Limited sample recovery from Core 172, segment 2 precluded the preparation of a core composite. Lower Half Segment 1 of Core 172 and Lower Half Segment 1 of Core 173 were identified for secondary analyses as required by TSAP and HistoricalDQO.

Core 172

Two push mode core segments were removed from Tank 241-B-108 Riser 6 on September 4, 1996. Both segments were received by 222-S Laboratory on October 11, 1996. Table 1 summarizes the extrusion information.

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Core 173

Two push mode core segments were removed from Tank 241-B-108 Riser 3 between September 5, 1996 and September 6, 1996. Both segments were received by 222-S Laboratory on October 11, 1996. Table 2 summarizes the extrusion information.

Field Blank

A field blank was provided to 222-S Laboratory with Core 172. This sample was treated as a drainable liquid in accordance with TSAP.

Hydrostatic Head Fluid

There is no indication of the use of hydrostatic head fluid (HHF) in procuring these samples; a HHF blank was not provided to 222-S Laboratory.

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Table 1. Sample Receipt and Extrusion Information for B-108, Core 172.

Customer Sample #	Date Sampled	Date Received	Date Extruded	Inches Extruded	Liquid Recovered (g)	Sludge Recovered (g)	Sample Description
H ₂ O Blank	9/4/96	10/11/96	10/16/96	0.0	254.4—drainable	0.0	The drainable liquid was clear and colorless. No organic layer.
96-504	9/4/96	10/11/96	10/16/96	13.5	26.9—drainable	66.3—upper half 103.3—lower half	The upper half was yellowish-brown and resembled a sludge slurry (D2). The lower half was tan and resembled a mixture of sludge slurry (D2) and salt slurry (M2). The drainable liquid was brown and opaque. No organic layer.
96-505	9/4/96	10/11/96	10/21/96	1.5	0.0	29.4—lower half	The lower half was dark tan to brown and resembled a mixture of sludge slurry (D2) and salt slurry (M2). Approximately 2 mL of liquid was extruded and subsampled with the solids. The solids contained hard crystals approximately ¼ inch in size.

* Approximate inches Extruded

Table 2. Sample Receipt and Extrusion Information for B-108, Core 173.

Customer Sample #	Date Sampled	Date Received	Date Extruded	Inches Extruded	Liquid Recovered (g)	Sludge Recovered (g)	Sample Description
96-506	9/5/96	10/11/96	10/16/96	9.0	0.0	136.2—upper half 66.8—lower half	The upper half was a tan-gray at the lower end lightening to a bright yellow-cream color at the upper end. The middle portion of the upper half appeared more damp while the upper portion appeared drier. These solids were uncompressible during subsampling and resembled a wet sludge (D3). The lower half was tan mixed with some cream color. It appeared more wet than the upper half and resembled a mixture of sludge and saltcake.
96-507	9/6/96	10/11/96	10/16/96	5.0	0.0	140.4—lower half	The lower half was tan, darker at the ends. The solids were slightly crumbly and resembled a dry saltcake (M2).

* Approximate inches Extruded

Results Summary

The Data Summary Table (Table 3) included in this report compiles analytical results in compliance with all applicable DQOs.

Liquid subsamples that were prepared for analysis by an acid adjustment of the direct subsample are indicated by a "D" in the A# column in Table 3. Solid subsamples that were prepared for analysis by performing a fusion digest are indicated by an "F" in the A# column in Table 3. Solid subsamples that were prepared for analysis by performing a water digest are indicated by a "W" or an "I" in the A# column of Table 3.

Due to poor precision and accuracy in original analysis of both Lower Half Segment 2 of Core 173 and the core composite of Core 173, fusion and water digests were performed for a second time. Precision and accuracy improved with the reparation of Core 173 Composite. Analyses with the reparation of Lower Half Segment 2 of Core 173 did not show improvement and suggest sample heterogeneity. Results from both preparations are included in Table 3.

Inorganic Analyses

DSC - Differential Scanning Calorimetry

There are no exceptions to the quality control (QC) parameters stated in TSAP for these samples.

TGA- Thermogravimetric Analysis

There are no exceptions to the QC parameters stated in TSAP for these samples.

Sp.G.-Specific Gravity/Bulk Density

There are no exceptions to the QC parameters stated in TSAP for these samples.

IC - Ion Chromatography

Only required analyte results (Br, PO₄, SO₄, NO₃, and F) are considered in this report. Other opportunistic analyte results are included in Table 3. These analytes do not have customer defined QC parameters and are not discussed. Lower Half Segment 2 of Core 172 (S96T005515) exhibited high relative percent difference (RPD) between sample and duplicate results and elevated spike recoveries. Rerun analyses did not improve precision or accuracy and suggest sample heterogeneity. Continuing reruns were not requested.

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RPD between sample and duplicate for the Lower Half Segment 2 of Core 173 (S97T000017) for NO₃ and SO₄ were 32.0% and 44.4%, respectively. This sample was a reparation of the water digest. Consistently high RPDs between the old and new water digest suggest the sample was heterogenous and further rerun analyses were not requested.

ICP - Inductively Coupled Plasma Spectroscopy

Only required analyte results (Li, Na, and Al) are considered in this report. Other "opportunistic" analyte results are included in Table 3. These analytes do not have customer defined QC parameters and are not discussed.

RPDs between sample and duplicate for the Lower Half Segment 2 of Core 173 (S97T000001) and the core composite of Core 173 (S97T000002) for Al was 63.4% and 22.2%, respectively. These samples were reparations of the fusion. Consistently high RPDs between the old and new fusions suggest the samples are heterogenous. Further rerun analyses were not requested.

The Na spike recovery reported in Table 3 for Drainable Liquid Segment 1 of Core 172 (S96T005523) is invalid because the spike concentration (1 ppm) is too low in comparison to the sample concentration (less than 25%). A second spike with an analyte level of 10 ppm was performed, and the resulting spike recovery was 99.8%. This calculation can be found in the raw data.

Preparation blanks showed Na results above the detection level. The levels of these analytes in the preparation blank are inconsequential when compared to the result for the sample. This contamination does not impact sample data quality.

TOC - Total Organic Carbon

There are no exceptions to the QC parameters stated in TSAP for these samples.

TIC - Total Inorganic Carbon

There are no exceptions to the QC parameters stated in TSAP for these subsamples.

U - Total Uranium

The preparation blank results for uranium were above the detection level. This level is inconsequential when compared to sample results. RPD between sample and duplicate for the core composite of Core 173 (S97T000002) was 25.0%. This sample was a reparation of the fusion. Consistently high RPDs between the old and new fusion suggest the sample was heterogenous and further rerun analyses were not requested.

Radiochemical Analyses

Attachment 2 contains the Data Verification and Deliverable (DVD) summary report for radionuclide analyses. This report summarizes results from radiochemical analyses and provides data qualifiers and total propagated uncertainty (TPU) values for results. The TPU values are based on the uncertainties inherent in each step of the analysis process. They may be used as an additional reference to determine "reasonable" RPD values which may be used to accept valid data that do not meet the TSAP acceptance criteria. A report guide is provided with the report to assist in understanding this summary report.

AT - Total Alpha

One preparation blank showed AT activity above the detection level. The activity was inconsequential when compared to the results for the samples. This contamination does not impact sample data quality.

Two subsamples showed RPDs greater than 20%. Elevated RPD (38.1%) for S96T005477 (Lower Half Segment 1 of Core 173) was attributed to low alpha activity and a rerun was not requested. S97T000001 (Lower Half Segment 2 of Core 173) was a reparation of the fusion. Consistently high RPDs between the old and new fusion suggest the sample was heterogenous and further rerun analyses were not requested.

AT analysis of two subsamples resulted in low spike recoveries. Rerun results were similar, suggesting the cause to be matrix interference. Continuing reruns were not requested.

TB - Total Beta

The preparation blanks showed TB activity above the detection level. The activity in these preparation blanks is inconsequential when compared to the results for the samples. This contamination does not impact sample data quality.

RPD between sample and duplicate for the core composite of Core 173 (S97T000002) was 21.6. Rerun analyses suggest poor precision is due to sample heterogeneity. Further reruns were not requested.

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GEA - Gamma Energy Analysis

Only required analyte results (^{137}Cs) are considered in this report. Other "opportunistic" analyte results are included in Table 3. These analytes do not have customer defined QC parameters and are not discussed.

RPD between sample and duplicate exceeded 20% for two subsamples. Lower Half Segment 2 of Core 172 (S96T005512) and Lower Half Segment 2 of Core 173 (S97T000001) had RPDs of 22.7% and 39.8%, respectively. Consistently high RPDs between original and rerun data suggest these samples are heterogenous and further rerun analyses were not requested.

^{90}Sr - Strontium-90

The preparation blanks showed ^{90}Sr activity above the detection level. The activity in these preparation blanks is inconsequential when compared to the results for the samples. This contamination does not impact sample data quality.

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Procedures

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

Table 4. Analytical Procedures

Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
DSC	Solid Liquid	N/A	LA-514-113 Rev. C-1 LA-514-114 Rev. D-0
TGA	Solid Liquid	N/A	LA-514-114 Rev. D-0 LA-560-112 Rev. C-0
Bulk Density	Solid	N/A	LO-160-103 Rev. B-0
Sp.G.	Liquid	N/A	LA-510-112 Rev. C-3
IC	Solid Liquid	LA-504-101 Rev. E-0 N/A	LA-533-105 Rev. D-1
ICP	Solid Liquid	LA-549-141 Rev. F-0 N/A	LA-505-151 Rev. D-3 LA-505-161 Rev. B-1
TOC	Solid Liquid	N/A	LA-342-100 Rev. E-0
TIC	Solid Liquid	N/A	LA-342-100 Rev. E-0
AT	Solid Liquid	LA-549-141, Rev. F-0	LA-508-101 Rev. E-1

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TB	Solid	LA-549-141 Rev. F-0	LA-508-101 Rev. E-1
GEA	Solid	LA-549-141 Rev. F-0	LA-548-121 Rev. E-0
⁹⁰ Sr	Solid	LA-549-141 Rev. F-0	LA-220-101 Rev. D-1
U	Solid	LA-549-141 Rev. F-0	LA-925-009 Rev. A-1

Abbreviations:

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

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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.
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- 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.

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ATTACHMENT 1

B-108 SAMPLE BREAKDOWN

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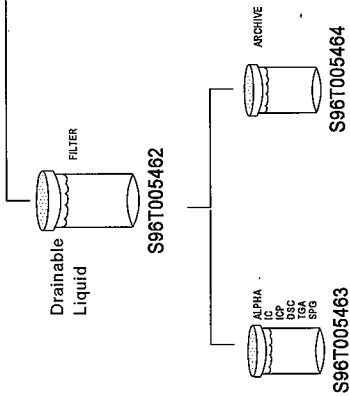
B-108

Core:172

Field Blank (Blank H2O)

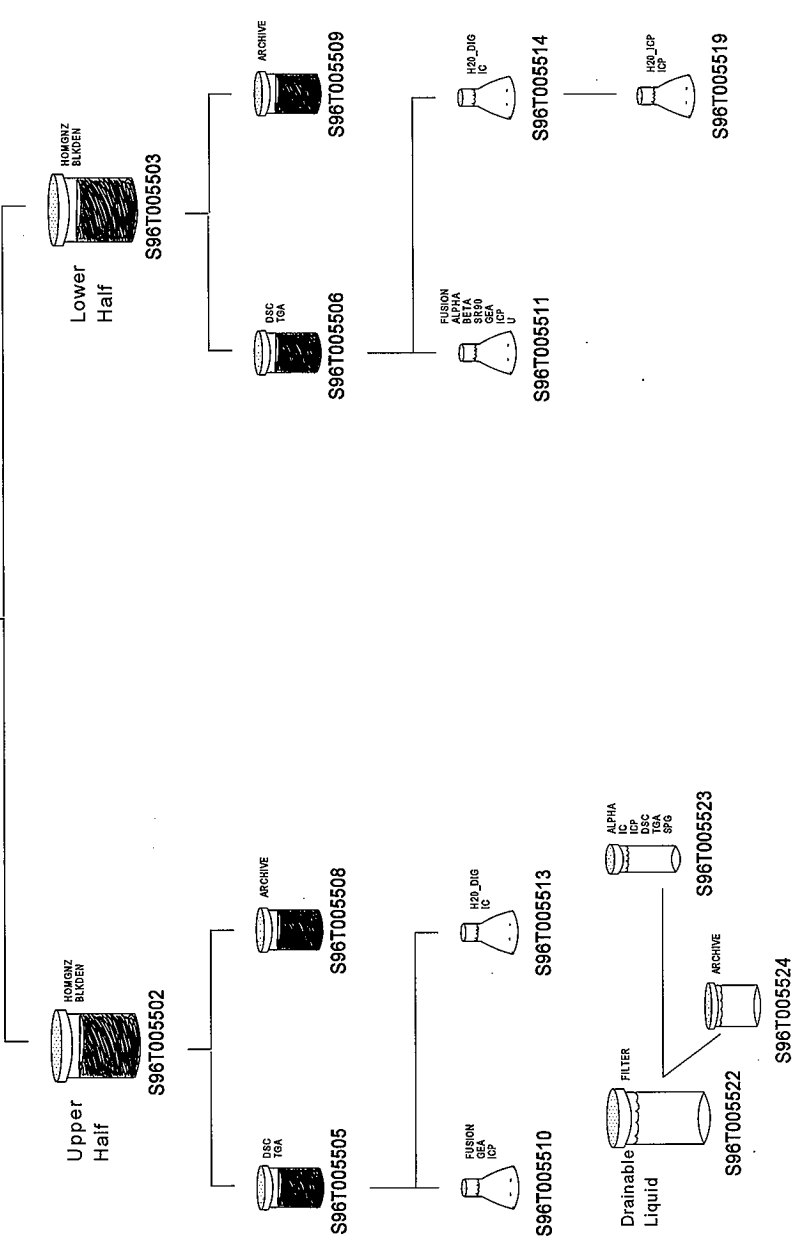
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Attachment 1



B-108
Core:172
Seg: 1 (96-504)
S96T005394

Attachment 1



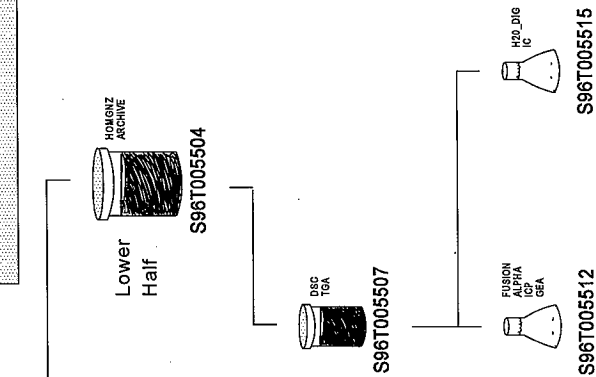
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Core:172

Seg: 2 (96-505)

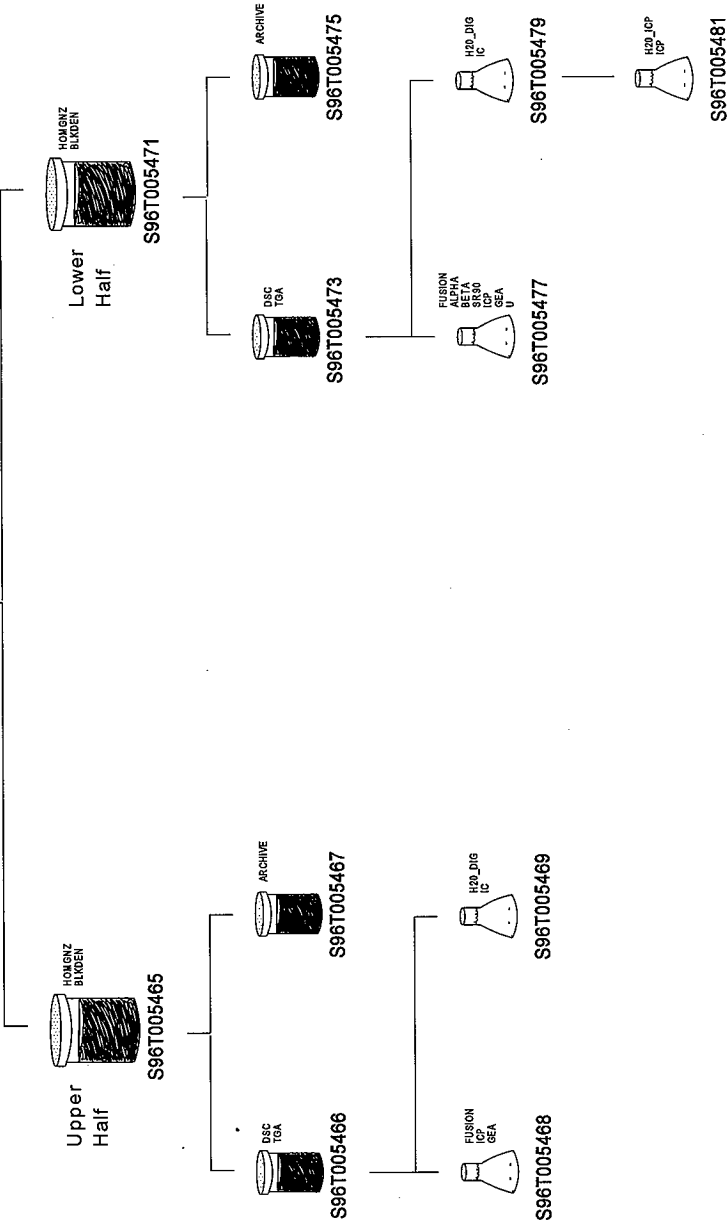
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Attachment 1



B-108
Core:173
Seg: 1 (96-506)
S96T005396

Attachment 1



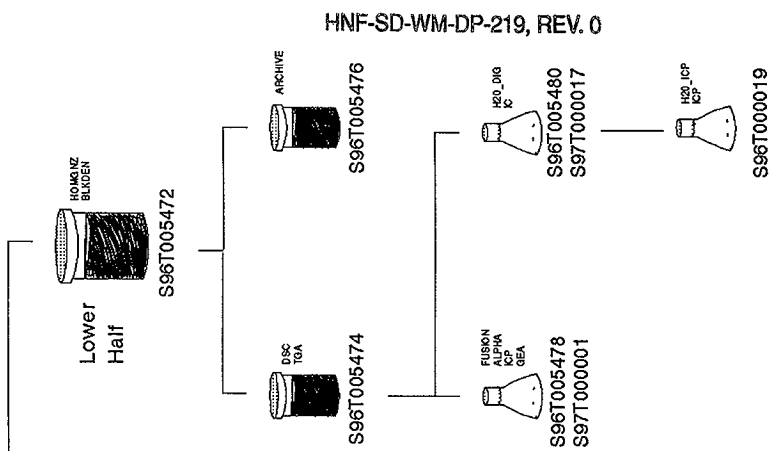
B-108

Core:173

Seg: 2 (96-507)

S96T005397

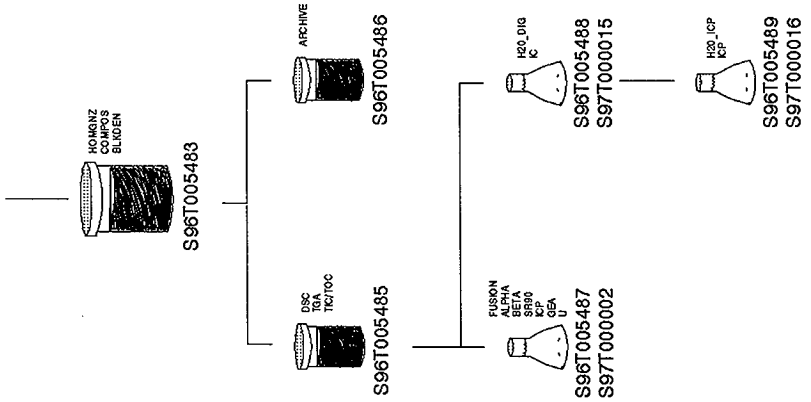
Attachment 1



Attachment 1

B-108
Core:173
Composite

Composited:
Segment: Grams:
1 LH 22.6
1 LH 20.2
2 LH 21.0



ATTACHMENT 2
DATA VERIFICATION AND DELIVERABLE SUMMARY REPORT

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TANK 241-B-108, CORE 172

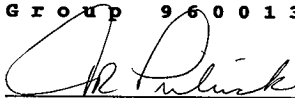
SDG 96001379
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
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End of Section	.	.	.	50

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Lab id 222-S
Protocol SST
Version 1.0
Form DVD-TOC
Version 3.08
Report date 02/24/97

SDG 96001379

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Client TWRS

Tank 241-B-108

REPORT GUIDE

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

Group 96001379

REPORT GUIDES

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-RG

Version 3.08

Report date 02/24/97

222 - S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

GUIDE, cont.

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRs

Tank 241-B-108

SAMPLE SUMMARY

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	PRIORITY COLLECTED	RECEIVED
B108 C172 FB Direct J116	R: 6 S: Field Blank C: 1	LIQUID		S96T005463		10/17/96 06:11
B108 C172 FB Direct J116	R: 6 S: Field Blank C: 1	LIQUID		S96T005463D		
B108 C172S1 DL Direct V#	R: 6 S: 1 C: 172	LIQUID		S96T005523		10/21/96 12:27
B108 C172S1 DL Direct V#	R: 6 S: 1 C: 172	LIQUID		S96T005523D		
B108 C172S1 DL Direct V#	R: 6 S: 1 C: 172	LIQUID		S96T005523S		
B108 C172S1 LH Fusion	R: 6 S: 1 C: 172	FUSION	SOLID	S96T005511		10/21/96 12:08
B108 C172S1 LH Fusion-DU	R: 6 S: 1 C: 172	FUSION	SOLID	S96T005511D		
B108 C172S1 LH Fusion-SP	R: 6 S: 1 C: 172	FUSION	SOLID	S96T005511S		
B108 C172S1 UH Fusion	R: 6 S: 1 C: 172	FUSION	SOLID	S96T005510		10/21/96 12:06
B108 C172S1 UH Fusion-DU	R: 6 S: 1 C: 172	FUSION	SOLID	S96T005510D		
B108 C172S2 LH Fusion	R: 6 S: 2 C: 172	FUSION	SOLID	S96T005512		10/21/96 12:08
B108 C172S2 LH Fusion-DU	R: 6 S: 2 C: 172	FUSION	SOLID	S96T005512D		
DI Blank		LIQUID		B14351-2		
DI Blank		LIQUID		B14608-2		
Method Blank		SOLID		B14788-2		
Method Blank		SOLID		B14949-2		
Method Blank		SOLID		B16016-2		
Method Blank		SOLID		B16018-2		
Method Blank		SOLID		B16020-2		
Method Blank		SOLID		B16140-2		
Lab Control Sample		LIQUID		S14351-1		
Lab Control Sample		LIQUID		S14608-1		
Lab Control Sample		SOLID		S14788-1		
Lab Control Sample		SOLID		S14949-1		
Lab Control Sample		SOLID		S16016-1		
Lab Control Sample		SOLID		S16018-1		
Lab Control Sample		SOLID		S16020-1		
Lab Control Sample		SOLID		S16140-1		

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SAMPLE SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. FrittsClient TWRS
Tank 241-B-108

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS FROM/TO		LAB SAMPLE ID	DEPARTMENT SAMPLE ID
							COLL	RCDV		
96001379-F	n/a	B108 C172S1 LH Fusion	FUSION	SOLID				126	S96T005511	
		B108 C172S1 UH Fusion	FUSION	SOLID				126	S96T005510	
		B108 C172S2 LH Fusion	FUSION	SOLID				126	S96T005512	
		B108 C172S1 LH Fusion-DU	FUSION	SOLID				126	S96T005511D	
		B108 C172S1 LH Fusion-SP	FUSION	SOLID				126	S96T005511S	
		B108 C172S1 UH Fusion-DU	FUSION	SOLID				126	S96T005510D	
		B108 C172S2 LH Fusion-DU	FUSION	SOLID				126	S96T005512D	
96001379-L		B108 C172 FB Direct J116	LIQUID					130	S96T005463	
		B108 C172S1 DL Direct V#	LIQUID					126	S96T005523	
		B108 C172 FB Direct J116	LIQUID					130	S96T005463D	
		B108 C172S1 DL Direct V#	LIQUID					126	S96T005523D	
		B108 C172S1 DL Direct V#	LIQUID					126	S96T005523S	
LIQUID		DI Blank	LIQUID						B14351-2	
		DI Blank	LIQUID						B14608-2	
		Lab Control Sample	LIQUID						S14351-1	
		Lab Control Sample	LIQUID						S14608-1	
SOLID		Method Blank	SOLID						B14788-2	
		Method Blank	SOLID						B14949-2	
		Method Blank	SOLID						B16016-2	
		Method Blank	SOLID						B16018-2	
		Method Blank	SOLID						B16020-2	
		Method Blank	SOLID						B16140-2	
		Lab Control Sample	SOLID						S14788-1	
		Lab Control Sample	SOLID						S14949-1	
		Lab Control Sample	SOLID						S16016-1	
		Lab Control Sample	SOLID						S16018-1	
		Lab Control Sample	SOLID						S16020-1	
		Lab Control Sample	SOLID						S16140-1	

Group 96001379

QC SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

PREP BATCH SUMMARY

TEST	MATRIX	METHOD	PREPARATION	ERROR	PLANCHETS ANALYZED						QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	FIERS
Gas Proportional Counting												
SR	SOLID	Strontium-89/90	96012651	15.0	1			1	1	1/1		
Gas Proportional Counting												
AT	LIQUID	Alpha Analysis	96010892	15.0	1			1	1	1/1		
			96011188	15.0	1			1	1	1/1	1/1	
	SOLID	Alpha Analysis	96011382	15.0	1			1	1	1/1		
			96011553	15.0	1			1	1	1/1	1/1	
TB	SOLID	Beta Analysis	96012647	15.0	1			1	1	1/1	1/1	
Gamma Energy Analysis												
GEA	SOLID	Gamma Spectroscopy	96012649	15.0	2			1	1	3/2		
			96012785	15.0	1			1	1	0/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Group 96001379

PREP BATCH SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

WORK SUMMARY

SDG 96001379

Contact L. L. Fritts

Client THRS

Tank 241-B-108

CLIENT SAMPLE ID		LAB SAMPLE ID								
LOCATION	MATRIX	COLLECTED			SUF-					
CUSTODY	Priority	RECEIVED	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
B108 C172 FB Direct J116		S96T005463	14351-4	AT		10/29/96		SLF	Alpha Analysis	
R: 6 S: Field Blank C: 1 LIQUID		10/17/96								
B108 C172 FB Direct J116		S96T005463D	14351-5	AT		10/29/96		SLF	Alpha Analysis	
R: 6 S: Field Blank C: 1 LIQUID		10/17/96								
B108 C172S1 DL Direct-V#		S96T005523	14608-4	AT		11/06/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 LIQUID		10/21/96								
B108 C172S1 DL Direct V#		S96T005523D	14608-5	AT		11/06/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 LIQUID		10/21/96								
B108 C172S1 DL Direct V#		S96T005523S	14608-6	AT		11/06/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 LIQUID		10/21/96								
B108 C172S1 LH Fusion	FUSION	S96T005511	14949-4	AT	01	11/20/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 SOLID		16020-5	GEA			01/09/97		PPB	Gamma Spectroscopy	
n/a		10/21/96	16018-4	SR		01/08/97		SAC	Strontium-89/90	
			16016-4	TB		01/09/97		SLF	Beta Analysis	
B108 C172S1 LH Fusion-DU	FUSION	S96T005511D	14949-5	AT	01	11/20/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 SOLID		16020-6	GEA			01/09/97		PPB	Gamma Spectroscopy	
		10/21/96	16018-5	SR		01/08/97		SAC	Strontium-89/90	
			16016-5	TB		01/09/97		SLF	Beta Analysis	
B108 C172S1 LH Fusion-SP	FUSION	S96T005511S	14949-6	AT	01	11/20/96		SLF	Alpha Analysis	
R: 6 S: 1 C: 172 SOLID		16016-6	TB			01/09/97		SLF	Beta Analysis	
		10/21/96								
B108 C172S1 UH Fusion	FUSION	S96T005510	16020-3	GEA		01/09/97		PPB	Gamma Spectroscopy	
R: 6 S: 1 C: 172 SOLID										
n/a		10/21/96								

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WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

WORK SUMMARY, cont.

Client THRS
Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX Priority	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
B108 C172S1 UH Fusion-DU R: 6 S: 1 C: 172	FUSION SOLID	S96T005510D 10/21/96	16020-4	GEA		01/09/97		PPB	Gamma Spectroscopy
B108 C172S2 LH Fusion R: 6 S: 2 C: 172 n/a	FUSION SOLID	S96T005512 10/21/96	14788-7 16140-3	AT GEA		11/11/96 01/14/97		SLF PPB	Alpha Analysis Gamma Spectroscopy
B108 C172S2 LH Fusion-DU R: 6 S: 2 C: 172	FUSION SOLID	S96T005512D 10/21/96	14788-8 16020-8	AT GEA		11/11/96 01/10/97		SLF PPB	Alpha Analysis Gamma Spectroscopy
DI Blank	LIQUID	B14351-2	14351-2	AT		10/29/96		SLF	Alpha Analysis
DI Blank	LIQUID	B14608-2	14608-2	AT		11/06/96		SLF	Alpha Analysis
Method Blank	SOLID	B14788-2	14788-2	AT		11/11/96		SLF	Alpha Analysis
Method Blank	SOLID	B14949-2	14949-2	AT		11/20/96		SLF	Alpha Analysis
Method Blank	SOLID	B16016-2	16016-2	TB		01/09/97		SLF	Beta Analysis
Method Blank	SOLID	B16018-2	16018-2	SR		01/08/97		SAC	Strontium-89/90
Method Blank	SOLID	B16020-2	16020-2	GEA		01/09/97		PPB	Gamma Spectroscopy
Method Blank	SOLID	B16140-2	16140-2	GEA		01/14/97		PPB	Gamma Spectroscopy
Lab Control Sample	LIQUID	S14351-1	14351-1	AT		10/29/96		SLF	Alpha Analysis

Group 96001379

WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

WORK SUMMARY, cont.

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	PRIORITY	MATRIX	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
Lab Control Sample		LIQUID	S14608-1	14608-1	AT		11/06/96		SLF	Alpha Analysis
Lab Control Sample		SOLID	S14788-1	14788-1	AT		11/11/96		SLF	Alpha Analysis
Lab Control Sample		SOLID	S14949-1	14949-1	AT		11/20/96		SLF	Alpha Analysis
Lab Control Sample		SOLID	S16016-1	16016-1	TB		01/09/97		SLF	Beta Analysis
Lab Control Sample		SOLID	S16018-1	16018-1	SR		01/08/97		SAC	Strontium-89/90
Lab Control Sample		SOLID	S16020-1	16020-1	GEA		01/09/97		PPB	Gamma Spectroscopy
Lab Control Sample		SOLID	S16140-1	16140-1	GEA		01/14/97		PPB	Gamma Spectroscopy

COUNTS OF TESTS BY SAMPLE TYPE

TEST	PRIORITY	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
AT		Alpha Analysis	222-S Lab Analytical Procedure	2			2	2	2	1	9
AT		Alpha Analysis	222-S Lab Analytical Procedure	2			2	2	2	1	9
GEA		Gamma Spectroscopy	222-S Lab Analytical Procedure	3			2	2	3		10
SR		Strontium-89/90	222-S Lab Analytical Procedure	1			1	1	1		4
TB		Beta Analysis	222-S Lab Analytical Procedure	1			1	1	1	1	5
TOTALS				9			8	8	9	3	37

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WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

BLANKS

Client TWRS
Tank 241-B-108

Lab sample id <u>B14351-2</u>		Client sample id <u>DI Blank</u>					
Dept sample id _____		Material/Matrix _____ LIQUID					
ANALYTE	CAS NO	RESULT uCi/ml	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<7.1E-06		7.1E-06		UL	AT 96010892

Lab sample id <u>B14608-2</u>		Client sample id <u>DI Blank</u>					
Dept sample id _____		Material/Matrix _____ LIQUID					
ANALYTE	CAS NO	RESULT uCi/ml	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<6.9E-03		6.9E-03		U	AT 96011188

Lab sample id <u>B14788-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<4.8E-03		4.8E-03		U	AT 96011382

Lab sample id <u>B14949-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<4.2E-03		4.2E-03		U	AT 96011553

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BLANKS

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Lab id	<u>222-S</u>
Protocol	<u>SST</u>
Version	<u>1.0</u>
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Report date	<u>02/26/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

BLANKS

Client TWRS
Tank 241-B-108

Lab sample id B16016-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Beta	12587-47-2	<1.7E-02		1.7E-02		U	TB 96012647

Lab sample id B16018-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Strontium 90	10098-97-2	2.11E-03	120	3.4E-03		U	SR 96012651

Lab sample id B16020-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<1.4E-02		1.4E-02		U	GEA 96012649
Cesium 137	10045-97-3	<2.9E-02		2.9E-02		U	GEA 96012649
Europium 154	15585-10-1	<3.4E-02		3.4E-02		U	GEA 96012649
Europium 155	14391-16-3	<3.1E-02		3.1E-02		U	GEA 96012649
Americium 241	14596-10-2	<7.0E-02		7.0E-02		U	GEA 96012649

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BLANKS

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TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

BLANKS

Client THRS
Tank 241-B-108

Lab sample id B16140-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<1.2E-02		1.2E-02		U	GEA 96012785
Cesium 137	10045-97-3	<3.0E-02		3.0E-02		U	GEA 96012785
Europium 154	15585-10-1	<2.8E-02		2.8E-02		U	GEA 96012785
Europium 155	14391-16-3	<3.4E-02		3.4E-02		U	GEA 96012785
Americium 241	14596-10-2	<8.1E-02		8.1E-02		U	GEA 96012785

Group 96001379

BLANKS

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222-S LABORATORY

TANK 241-B-108, CORE 172

LAB CONTROL SAMPLES

SDG 96001379
Contact L. L. FrittsClient THRS
Tank 241-B-108

Lab sample id <u>S14351-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ LIQUID							
ANALYTE	RESULT uCi/ml	2 σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ADDED uCi/ml	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	1.82E-04	15	7.1E-07			AT	2.31E-4	5.0	79	80-120	70-130	96010892

Lab sample id <u>S14608-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ LIQUID							
ANALYTE	RESULT uCi/ml	2 σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ADDED uCi/ml	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	2.61E-04	15	6.8E-07			AT	2.31E-4	5.0	113	73-127	70-130	96011188

Lab sample id <u>S14788-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ SOLID							
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	1.20E-01	15	4.8E-04			AT	1.22E-1	5.0	98	76-124	70-130	96011382

Lab sample id <u>S14949-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ SOLID							
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	1.04E-01	15	4.2E-04			AT	1.22E-1	5.0	85	79-121	70-130	96011553

Group 96001379

LAB CONTROL SAMPLES

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 Version 1.0
 Form DVD-LCS
 Version 3.08
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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

LAB CONTROL SAMPLES

Client THRS
Tank 241-B-108

Lab sample id <u>S16016-1</u>						Client sample id <u>Lab Control Sample</u>						
Dept sample id _____						Material/Matrix _____ <u>SOLID</u>						
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Beta	1.71E-00	15	1.7E-03			TB	1.56E00	5.0	110	74-126	80-110	96012647

Lab sample id <u>S16018-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ <u>SOLID</u>							
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Strontium 90	8.98E-01	16	1.6E-03			SR	8.92E-1	5.0	101	76-124	75-125	96012651

Lab sample id <u>S16020-1</u>						Client sample id <u>Lab Control Sample</u>						
Dept sample id _____						Material/Matrix <u>SOLID</u>						
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
GEA Analytes												
Cobalt 60	3.74E-03	15				GEA	3.79E03	5.0	99	76-124		96012649
Cesium 137	3.73E-03	15				GEA	3.76E03	5.0	99	76-124	80-120	96012649

Group 96001379

LAB CONTROL SAMPLES

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SUMMARY DATA SECTION

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 Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-LCS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

LAB CONTROL SAMPLES

Client TWRS

Tank 241-B-108

Lab sample id S16140-1					Client sample id Lab Control Sample							
Dept sample id					Material/Matrix SOLID							
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
GEA Analytes												
Cobalt 60	3.84E 03	15				GEA	3.94E03	5.0	97	77-123		96012785
Cesium 137	3.83E 03	15				GEA	3.92E03	5.0	98	76-124	80-120	96012785

Group 96001379

LAB CONTROL SAMPLES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-LCS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T005463D

B108 C172 FB Direct J116

DUPLICATE

SDG 96001379

Contact L. L. Fritts

DUPLICATE

Lab sample id S96T005463D

Dept sample id

ORIGINAL

Lab sample id S96T005463

Dept sample id

Received 10/17/96

Client TWRS

Tank 241-B-108

Client sample id B108 C172 FB Direct J116

Location/Matrix R: 6 S: Field Blank C: 1 LIQUID

Collected

Chain of custody id

ANALYTE	DUPLICATE uCi/ml	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ORIGINAL uCi/ml	2σ TPU %	MDA uCi/ml	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
Total Alpha	<7.1E-06		7.1E-06		UL	AT	<7.1E-06		7.1E-06	UL		

Loc: Riser: 6 Seg: Field Blank Core: 172

Samp: B108 C172 FB Direct J11600

Loc: Riser: 6 Seg: Field Blank Core: 172

Group 96001379

DUPLICATES

Page 1

SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T0055100

B108 C172S1 UH Fusion

DUPLICATE

SDG 96001379

Contact L. L. Fritts

DUPLICATE

Lab sample id S96T0055100

Dept sample id

ORIGINAL

Lab sample id S96T005510

Dept sample id

Received 10/21/96

Client TWRS

Tank 241-B-108

Client sample id B108 C172S1 UH Fusion FUSION

Location/Matrix R: 6 S: 1 C: 172 SOLID

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
GEA Analytes												
Cobalt 60	<1.2E-02		1.2E-02		U	GEA	<1.2E-02		1.2E-02	U	-	
Cesium 137	2.51E-01	15	0.0E-00			GEA	5.08E-02	15	0.0E-00		199	45 20
Europium 154	<3.8E-02		3.8E-02		U	GEA	<3.8E-02		3.8E-02	U	-	
Europium 155	<1.2E-01		1.2E-01		U	GEA	<1.2E-01		1.2E-01	U	-	
Americium 241	<3.1E-01		3.1E-01		U	GEA	<3.1E-01		3.1E-01	U	-	

Group 96001379

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T005511D

B108 C172S1 LH Fusion

DUPLICATE

SDG 96001379

Contact L. L. Fritts

DUPLICATE

ORIGINAL

Client TWRS

Tank 241-B-108

Lab sample id S96T005511D

Lab sample id S96T005511

Client sample id B108 C172S1 LH Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 6 S: 1 C: 172 SOLID

Received 10/21/96

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
Total Alpha	3.84E-03	89	4.5E-03		U	AT	3.99E-03	93	4.2E-03	U	-	
Total Beta	3.59E-01	15	1.8E-02			TB	4.14E-01	15	1.7E-02		14	32 20
Strontium 90	3.88E-01	15	2.8E-03			SR	4.25E-01	15	2.6E-03		9	33 20
GEA Analytes												
Cobalt 60	<1.2E-02		1.2E-02		U	GEA	<1.2E-02		1.2E-02	U	-	
Cesium 137	3.90E-01	15	0.0E-00			GEA	7.63E-02	14	0.0E-00		199	45 20
Europium 154	<3.9E-02		3.9E-02		U	GEA	<3.9E-02		3.9E-02	U	-	
Europium 155	<1.6E-01		1.6E-01		U	GEA	<1.6E-01		1.6E-01	U	-	
Americium 241	4.1E-01		4.1E-01		U	GEA	4.1E-01		4.1E-01	U	-	

Group 96001379

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DUP
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T005512D

B108 C172S2 LH Fusion

DUPLICATE

SDG 96001379

Contact L. L. Fritts

DUPLICATE

Lab sample id S96T005512D

Dept sample id

ORIGINAL

Lab sample id S96T005512

Dept sample id

Received 10/21/96

Client TWRS

Tank 241-B-108

Client sample id B108 C172S2 LH Fusion FUSION

Location/Matrix R: 6 S: 2 C: 172 SOLID

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
Total Alpha	4.42E-03	43	1.8E-03			AT	3.85E-03	49	1.8E-03		14	98 87
GEA Analytes												
Cobalt 60	<9.3E-03		9.3E-03		U	GEA	<1.1E-02		1.1E-02	U	-	
Cesium 137	1.97E-01	15	0.0E-00			GEA	1.56E-01	15	0.0E-00		23	32 20
Europium 154	<3.0E-02		3.0E-02		U	GEA	<4.5E-02		4.5E-02	U	-	
Europium 155	<1.0E-01		1.0E-01		U	GEA	<9.9E-02		9.9E-02	U	-	
Americium 241	<2.6E-01		2.6E-01		U	GEA	<2.6E-01		2.6E-01	U	-	

Group 96001379

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T0055230

B108 C172S1 DL Direct V#

DUPLICATE

SDG <u>96001379</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T0055230</u>	Lab sample id <u>S96T005523</u>
Dept sample id _____	Client sample id <u>B108 C172S1 DL Direct V#</u>
	Location/Matrix <u>R: 6 S: 1 C: 172</u> <u>LIQUID</u>
	Collected _____
	Chain of custody id _____
	Received <u>10/21/96</u>

ANALYTE	DUPLICATE uCi/ml	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ORIGINAL uCi/ml	2σ TPU %	MDA uCi/ml	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
Total Alpha	<u><6.9E-03</u>		<u>6.9E-03</u>		<u>U</u>	<u>AT</u>	<u><6.9E-03</u>		<u>6.9E-03</u>	<u>U</u>		

Samp: B108 C172S1 DL Direct V#11647

Group 96001379

DUPLICATES

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Lab id	<u>222-S</u>
Protocol	<u>SST</u>
Version	<u>1.0</u>
Form	<u>DVD-DUP</u>
Version	<u>3.08</u>
Report date	<u>02/24/97</u>

S96T005511S

TANK 241-B-108, CORE 172

B108 C172S1 LH Fusion

MATRIX SPIKE

SDG 96001379

Contact L. L. Fritts

Client IWRS

Tank 241-B-108

MATRIX SPIKE

ORIGINAL

Lab sample id S96T005511S

Lab sample id S96T005511

Client sample id B108 C172S1 LH Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 6 S: 1 C: 172 SOLID

Received 10/21/96

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ % (TOTAL)	LMTS LIMITS	PROTOCOL
Total Alpha	8.61E-00				AT		1.90E01	5.0	3.99E-03	93	45	87-113	75-125
Total Beta	1.17E-02				TB		7.97E01	5.0	4.14E-01	15	95	64-136	75-125

Group 96001379

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-MS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

MATRIX SPIKE

S96T005523S

B108 C172S1 DL Direct V#

SDG 96001379

Contact L. L. Fritts

MATRIX SPIKE

Lab sample id S96T005523S

Dept sample id

ORIGINAL

Lab sample id S96T005523

Dept sample id

Received 10/21/96

Client TWRS

Tank 241-B-108

Client sample id B108 C172S1 DL Direct V#

Location/Matrix R: 6 S: 1 C: 172 LIQUID

Collected

Chain of custody id

ANALYTE	SPIKE uCi/ml	2 σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS TEST	ADDED uCi/ml	2 σ ERR %	ORIGINAL uCi/ml	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Alpha	3.53E-02				AT	3.59E-2	5.0			98 77-123	75-125

Samp: B108 C172S1 DL Direct V#11647

Group 96001379

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-MS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T005463

B108 C172 FB Direct J116

DATA SHEET

SDG 96001379
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005463Client sample id B108 C172 FB Direct J116

Dept sample id _____

Location/Matrix R: 6 S: Field Blank C: 1 LIQUIDReceived 10/17/96

Collected _____

Chain of custody id _____

ANALYTE	CAS NO	RESULT uCi/ml	2 σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST
Total Alpha	12587-46-1	<7.1E-06		7.1E-06		UL	AT

Samp: B108 C172 FB Direct J11600
Loc: Riser: 6 Seg: Field Blank Core: 172

Group 96001379

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-S
Protocol SST
Version 1.0
Form DVD-DS
Version 3.08
Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T005523

B108 C172S1 DL Direct V#

DATA SHEET

SDG 96001379
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005523Client sample id B108 C172S1 DL Direct V#

Dept sample id _____

Location/Matrix R: 6 S: 1 C: 172 LIQUIDReceived 10/21/96

Collected _____

Chain of custody id _____

ANALYTE	CAS NO	RESULT uCi/ml	2 σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST
Total Alpha	12587-46-1	<6.9E-03		6.9E-03		U	AT

Samp: B108 C172S1 DL Direct V#11647

Group 96001379

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222 - S LABORATORY

TANK 241-B-108, CORE 172

S96T005511

B108 C172S1 LH Fusion

DATA SHEET

SDG 96001379

Client TWRS

Contact L. L. Fritts

Tank 241-B-108

Lab sample id S96T005511

Client sample id B108 C172S1 LH Fusion FUSION

Dept sample id

Location/Matrix R: 6 S: 1 C: 172 SOLID

Received 10/21/96

Collected

Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	3.99E-03	93	4.2E-03		U	AT
Total Beta	12587-47-2	4.14E-01	15	1.7E-02			TB
Strontium 90	10098-97-2	4.25E-01	15	2.6E-03			SR
GEA Analytes							
Cobalt 60	10198-40-0	<1.2E-02		1.2E-02		U	GEA
Cesium 137	10045-97-3	7.63E-02	14	0.0E-00			GEA
Europium 154	15585-10-1	<3.9E-02		3.9E-02		U	GEA
Europium 155	14391-16-3	<1.6E-01		1.6E-01		U	GEA
Americium 241	14596-10-2	<4.1E-01		4.1E-01		U	GEA

Group 96001379

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DS

Version 3.08

Report date 02/24/97

222 - S LABORATORY

TANK 241-B-108, CORE 172

S96T005510

B108 C172S1 UH Fusion

DATA SHEET

SDG 96001379
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005510Client sample id B108 C172S1 UH Fusion FUSION

Dept sample id _____

Location/Matrix R: 6 S: 1 C: 172 SOLIDReceived 10/21/96

Collected _____

Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
GEA Analytes							
Cobalt 60	10198-40-0	<1.2E-02	15	1.2E-02		U	GEA
Cesium 137	10045-97-3	5.08E-02		0.0E 00			GEA
Europium 154	15585-10-1	<3.8E-02		3.8E-02		U	GEA
Europium 155	14391-16-3	<1.2E-01		1.2E-01		U	GEA
Americium 241	14596-10-2	<3.1E-01		3.1E-01		U	GEA

Group 96001379

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-s
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222 - S LABORATORY

TANK 241-B-108, CORE 172

S96T005512

B108 C172S2 LH Fusion

DATA SHEET

SDG 96001379
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005512
Dept sample id _____
Received 10/21/96Client sample id B108 C172S2 LH Fusion FUSION
Location/Matrix R: 6 S: 2 C: 172 SOLID
Collected _____
Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RD uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	3.85E-03	49	1.8E-03			AT
GEA Analytes							
Cobalt 60	10198-40-0	<1.1E-02		1.1E-02		U	GEA
Cesium 137	10045-97-3	1.56E 01	15	0.0E 00			GEA
Europium 154	15585-10-1	<4.5E-02		4.5E-02		U	GEA
Europium 155	14391-16-3	<9.9E-02		9.9E-02		U	GEA
Americium 241	14596-10-2	<2.6E-01		2.6E-01		U	GEA

Group 96001379

DATA SHEETS

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SUMMARY DATA SECTION

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 Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY

STRONTIUM-89/90

GAS PROPORTIONAL COUNTING

Test SR Matrix SOLID

SDG 96001379

Contact L. L. Fritts

Client IWRS

Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- PLANCHET	Strontium 90
------------------	------------------	-----------------	------------------	--------------

Preparation batch 96012651

B108 C172S1 LH Fusion FU S96T005511 16018-4 4.25E-01

B108 C172S1 LH Fusion-DU S96T005511D 16018-5 ok

Method Blank B16018-2 16018-2 U

Lab Control Sample S16018-1 16018-1 ok

Nominal values and limits from method RDLs (uCi/g)

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- TEST FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT keV	DAYS HELD	ANAL- PREPARED	YZED	DETECTOR
------------------	------------------	-----------------	------------------	--------------	------------	-------------	---------------	------------	----------	--------------	-------------	--------------	--------------	-------------------	------	----------

Preparation batch 96012651 2σ prep error 15.0 % Reference

B108 C172S1 LH Fusion FU S96T005511 2.6E-03 0.500 5.3E5 1.00 90 42 10 11/08/96 01/08 W82781112

B108 C172S1 LH Fusion-DU S96T005511D 2.8E-03 0.500 5.7E5 1.00 91 42 10 11/08/96 01/08 W82781112

Method Blank B16018-2 3.4E-03 0.500 5.2E5 1.00 70 42 10 01/08/97 W82781112

Lab Control Sample S16018-1 1.6E-03 1.00 5.2E5 1.00 72 42 10 01/08/97 W82781112

Nominal values and limits from method 0.100 30-105 10
20-55

PROCEDURES REFERENCE 222-S Lab Analytical Procedure

LO-160-103 Core Segment Extrusion Process and Sample Preparation, rev 17

LA-549-141 Fusion with Alkali Metal Hydroxide, rev 40

LA-220-101 High level Strontium 89/90 in aqueous samples, rev 41

LA-508-11NB Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES ± 2 SD MDA 2.6E-03 ± 1.5E-03

FOR 4 SAMPLES YIELD 81 ± 23

EFFICIENCY 42 ± 0

Group 96001379

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-CMS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

Test AT Matrix LIQUID

SDG 96001379

Contact L. L. Fritts

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Client TWRS

Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	1: Total Alpha	2: Sum, Alpha Emitters	RESULT RATIO (%) 2+1 2σ
Preparation batch 96010892						
B108 C172 FB Direct J116	S96T005463			14351-4	U	
B108 C172 FB Direct J116	S96T005463D			14351-5	- U	
DI Blank	B14351-2			14351-2	U	
Lab Control Sample	S14351-1			14351-1	LOW	

Preparation batch 96011188						
B108 C172S1 DL Direct V#	S96T005523			14608-4	U	
B108 C172S1 DL Direct V#	S96T005523D			14608-5	- U	
B108 C172S1 DL Direct V#	S96T005523S			14608-6	ok	
DI Blank	B14608-2			14608-2	U	
Lab Control Sample	S14608-1			14608-1	ok	

Nominal values and limits from method RDLs (uCi/ml) 80
Average

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MDA uCi/ml	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZED	DETECTOR
Preparation batch 96010892 2σ prep error 15.0 % Reference																
B108 C172 FB Direct J116	S96T005463			7.1E-06	0.100	1.00	1.00		23	30				10/29/96		WB27807
B108 C172 FB Direct J116	S96T005463D			7.1E-06	0.100	1.00	1.00		23	30				10/29/96		WB27807
DI Blank	B14351-2			7.1E-06	0.100		1.00		23	30				10/29/96		WB27807
Lab Control Sample	S14351-1			7.1E-07	1.00	1.00	1.00		23	30				10/29/96		WB27807

Preparation batch 96011188 2σ prep error 15.0 % Reference																
B108 C172S1 DL Direct V#	S96T005523			6.9E-03	1.00	1.00	10200		21	30				11/06/96		WB27809
B108 C172S1 DL Direct V#	S96T005523D			6.9E-03	1.00	1.00	10200		21	30				11/06/96		WB27809
B108 C172S1 DL Direct V#	S96T005523S			6.9E-03	1.00	1.00	1.00		21	30				11/06/96		WB27809
DI Blank	B14608-2			6.9E-03	1.00		10200		21	30				11/06/96		WB27809
Lab Control Sample	S14608-1			6.9E-07	1.00	1.00	1.00		21	30				11/06/96		WB27809

Nominal values and limits from method 0.100 30
20-55

Group 96001379

METHOD SUMMARIES

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-CMS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY, cont.

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test AT Matrix

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
	L0-160-103	Core Segment Extrusion Process and Sample Preparation, rev 17
	LA-508-101A	Alpha in liquid samples, rev 42
	LA-508-11NA	Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES $\pm$ 2 SD	MDA <u>2.6E-03</u> $\pm$ <u>7.1E-03</u>
FOR 9 SAMPLES	EFFICIENCY <u>22</u> $\pm$ <u>2.1</u>

Group 96001379

METHOD SUMMARIES

Page 3

SUMMARY DATA SECTION

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Lab id	222-S
Protocol	SST
Version	1.0
Form	DVD-CMS
Version	3.08
Report date	02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

Test AT Matrix SOLID

SDG 96001379

Contact L. L. Fritts

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Client THRS

Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	1: Total Alpha	2: Sum, Alpha Emitters	RESULT RATIO (%) 2+1 2σ
Preparation batch 96011382							
B108 C172S2 LH Fusion FU	S96T005512			14788-7	3.85E-03		
B108 C172S2 LH Fusion-DU	S96T005512D			14788-8	ok		
Method Blank	B14788-2			14788-2	U		
Lab Control Sample	S14788-1			14788-1	ok		
Preparation batch 96011553							
B108 C172S1 LH Fusion FU	S96T005511	01		14949-4	U		
B108 C172S1 LH Fusion-DU	S96T005511D	01		14949-5	U		
B108 C172S1 LH Fusion-SP	S96T005511S	01		14949-6	LOW		
Method Blank	B14949-2			14949-2	U		
Lab Control Sample	S14949-1			14949-1	ok		
Nominal values and limits from method							80
							Average

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL- YZED	DETECTOR
Preparation batch 96011382 2σ prep error 15.0 % Reference																
B108 C172S2 LH Fusion FU	S96T005512			1.8E-03	0.250	5.1E5	1.00		25	30			11/08/96	11/11	WB27810	
B108 C172S2 LH Fusion-DU	S96T005512D			1.8E-03	0.250	4.9E5	1.00		25	30			11/08/96	11/11	WB27810	
Method Blank	B14788-2			4.8E-03	0.100	528	1.00		25	30				11/11/96	WB27810	
Lab Control Sample	S14788-1			4.8E-04	1.00	528	1.00		25	30				11/11/96	WB27810	
Preparation batch 96011553 2σ prep error 15.0 % Reference																
B108 C172S1 LH Fusion FU	S96T005511	01		4.2E-03	0.100	5.3E5	1.00		27	30			11/08/96	11/20	WB27806	
B108 C172S1 LH Fusion-DU	S96T005511D	01		4.5E-03	0.100	5.7E5	1.00		27	30			11/08/96	11/20	WB27806	
B108 C172S1 LH Fusion-SP	S96T005511S	01			0.100	528	1.00		27	30			11/08/96	11/20	WB27806	
Method Blank	B14949-2			4.2E-03	0.100	528	1.00		27	30				11/20/96	WB27806	
Lab Control Sample	S14949-1			4.2E-04	1.00	528	1.00		27	30				11/20/96	WB27806	

Nominal values and limits from method

0.100

30

20-55

Group 96001379

METHOD SUMMARIES

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-CMS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY, cont.

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test AT Matrix _____

SDG 96001379 _____

Contact L. L. Fritts _____

Client TWRS _____

Tank 241-B-108 _____

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
	L0-160-103	Core Segment Extrusion Process and Sample Preparation, rev 17
	LA-549-141	Fusion with Alkali Metal Hydroxide, rev 40
	LA-508-101A	Alpha in liquid samples, rev 42
	LA-508-11NA	Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES $\pm$ 2 SD	MDA <u>2.8E-03</u> $\pm$ <u>3.7E-03</u>
FOR 9 SAMPLES	EFFICIENCY <u>26</u> $\pm$ <u>2.1</u>

Group 96001379

METHOD SUMMARIES

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Lab id 222-S _____

Protocol SST _____

Version 1.0 _____

Form DVD-CMS _____

Version 3.08 _____

Report date 02/24/97 _____

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY

BETA ANALYSIS

GAS PROPORTIONAL COUNTING

Test IB Matrix SOLIDSDG 96001379Contact L. L. FrittsClient THRSTank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	1: Total Beta	2: Sum, Beta Emitters	RESULT RATIO (%) 2+1 2σ
Preparation batch 96012647						
B108 C172S1 LH Fusion FU S96T005511		16016-4		4.14E-01	7.63E-02	0 0
B108 C172S1 LH Fusion-DU S96T005511D		16016-5		ok	3.90E-01	109 23
B108 C172S1 LH Fusion-SP S96T005511S		16016-6		ok		
Method Blank		B16016-2		U		
Lab Control Sample		S16016-1		ok		

Nominal values and limits from method RDLs (uCi/g)

80

Average 54

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZZED	DETECTOR
Preparation batch 96012647 2σ prep error 15.0 % Reference																
B108 C172S1 LH Fusion FU S96T005511		16016-4		1.7E-02	0.100	5.3E5	1.00	42	30				11/08/96	01/09	WB26872	
B108 C172S1 LH Fusion-DU S96T005511D		16016-5		1.8E-02	0.100	5.7E5	1.00	42	30				11/08/96	01/09	WB26872	
B108 C172S1 LH Fusion-SP S96T005511S		16016-6		0.100	528	1.00	42	30					11/08/96	01/09	WB26872	
Method Blank		B16016-2		1.7E-02	0.100	528	1.00	42	30					01/09/97	WB26872	
Lab Control Sample		S16016-1		1.7E-03	1.00	528	1.00	42	30					01/09/97	WB26872	

Nominal values and limits from method

0.100

30

20-55

PROCEDURES REFERENCE 222-S Lab Analytical Procedure

LO-160-103 Core Segment Extrusion Process and Sample Preparation, rev 17

LA-549-141 Fusion with Alkali Metal Hydroxide, rev 40

LA-508-101B Beta in liquid samples, rev 42

LA-508-11NB Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES ± 2 SD MDA 1.3E-02 ± 1.6E-02

FOR 5 SAMPLES EFFICIENCY 42 ± 0

Group 96001379

METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 172

Test GEA Matrix SOLIDSDG 96001379Contact L. L. FrittsClient THRSTank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSIS

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- PLANCHET	Cobalt 60	Cesium 137	Europium 154	Europium 155	Americium 241
Preparation batch 96012649								
B108 C172S1 LH Fusion FU S96T005511			16020-5	U	7.63E-02	U	U	U
B108 C172S1 LH Fusion-DU S96T005511D			16020-6	- U	OUT	- U	- U	- U
B108 C172S1 UH Fusion FU S96T005510			16020-3	U	5.08E-02	U	U	U
B108 C172S1 UH Fusion-DU S96T005510D			16020-4	- U	OUT	- U	- U	- U
B108 C172S2 LH Fusion-DU S96T005512D			16020-8	- U	OUT	- U	- U	- U
Method Blank	B16020-2		16020-2	U	U	U	U	U
Lab Control Sample	S16020-1		16020-1	ok	ok			
Preparation batch 96012785								
B108 C172S2 LH Fusion FU S96T005512		01	16140-3	U	1.56E 01	U	U	U
Method Blank	B16140-2		16140-2	U	U	U	U	U
Lab Control Sample	S16140-1		16140-1	ok	ok			

Nominal values and limits from method RDLs (uCi/g)

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- MAX MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT keV	DAYS HELD	ANAL- PREPARED	YZZED	DETECTOR
Preparation batch 96012649 2σ prep error 15.0 % Reference															
B108 C172S1 LH Fusion FU S96T005511			4.1E-01		5.3E5	1.00						11/08/96	01/09		GEA03
B108 C172S1 LH Fusion-DU S96T005511D			4.1E-01		5.7E5	1.00						11/08/96	01/09		GEA03
B108 C172S1 UH Fusion FU S96T005510			3.1E-01		4.9E5	1.00						11/08/96	01/09		GEA03
B108 C172S1 UH Fusion-DU S96T005510D			3.1E-01		4.9E5	1.00						11/08/96	01/09		GEA03
B108 C172S2 LH Fusion-DU S96T005512D			2.6E-01		4.9E5	1.00						11/08/96	01/10		GEA03
Method Blank	B16020-2		7.0E-02		4.9E5	1.00							01/09/97		GEA03
Lab Control Sample	S16020-1				4.9E5	1.00							01/09/97		GEA03
Preparation batch 96012785 2σ prep error 15.0 % Reference															
B108 C172S2 LH Fusion FU S96T005512		01	2.6E-01	1.00	5.1E5	1.00			50			11/08/96	01/14		GEA03
Method Blank	B16140-2		6.1E-02	1.00	5.1E5	1.00			50				01/14/97		GEA03
Lab Control Sample	S16140-1			1.00	5.1E5	1.00			50				01/14/97		GEA03

Nominal values and limits from method

0.100

50

Group 96001379

METHOD SUMMARIES

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Lab id 222-SProtocol SSTVersion 1.0Form DVD-CMSVersion 3.08Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY, cont.

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSISTest GEA Matrix _____SDG 96001379Contact L. L. FrittsClient TWRSTank 241-B-108

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
	L0-160-103	Core Segment Extrusion Process and Sample Preparation, rev 17
	LA-549-141	Fusion with Alkali Metal Hydroxide, rev 40
	LA-548-121	Preparation of Sample Mounts for Gamma Energy Analysis, rev 41
	LA-508-162	Gamma Energy Analysis - the Genie System, rev 11

AVERAGES $\pm$ 2 SD	MDA <u>2.6E-01</u> $\pm$ <u>2.6E-01</u>
FOR 8 SAMPLES	YIELD _____ $\pm$ _____

Group 96001379

METHOD SUMMARIES

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2 2 2 - S L A B O R A T O R Y

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
Tank 241-B-108

S A M P L E S U M M A R Y

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.
- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

Group 96001379

REPORT GUIDES

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Lab id 222-S
Protocol SST
Version 1.0
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Version 3.08
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2 2 2 - S L A B O R A T O R Y

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
Tank 241-B-108

P R E P A R A T I O N B A T C H S U M M A R Y

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified.
 Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not
 ready for final reporting.
- 2 There were two or more results for one analyte on one
 planchet imported at one time. The results in DVD may
 not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id 222-S
Protocol SST
Version 1.0
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Version 3.08
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222 - S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

REPORT GUIDE

Client TWRS
Tank 241-B-108

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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 Lab id 222-S
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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

REPORT GUIDE

Client TWRS
Tank 241-B-108

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.
- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id 222-S
Protocol SST
Version 1.0
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SDG 96001379

Contact L. L. FrittsClient TWRSTank 241-B-108

GUIDE, cont.

DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.
- Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

GUIDE, cont.

DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

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2 2 2 - S L A B O R A T O R Y

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
Tank 241-B-108

L A B C O N T R O L S A M P L E

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.
- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.
- * Laboratory control limits are defined in procedure LQ-543-101.

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

GUIDE, cont.

LAB CONTROL SAMPLE

DVD reported limits are based on total propagated uncertainty, a part of which is the laboratory control limits.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. FrittsClient TWRSTank 241-B-108

REPORT GUIDE

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.
- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.
- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.
- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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2 2 2 - S L A B O R A T O R Y

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. FrittsClient TWRSTank 241-B-108

GUIDE, cont.

D U P L I C A T E

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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REPORT GUIDES

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Lab id 222-SProtocol SSTVersion 1.0Form DVD-RGVersion 3.08Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

REPORT GUIDE

Client TWRS
Tank 241-B-108

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

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222 - S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

GUIDE, cont.

MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

* The recovery is underlined (out of spec) if it is outside either of these ranges.

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222 - S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

REPORT GUIDE

Client TWRS
Tank 241-B-108

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

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TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

GUIDE, cont.

Client TWRS
Tank 241-B-108

METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.
- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the QC batch.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

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2 2 2 - S L A B O R A T O R Y

TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

G U I D E , c o n t .

Client TWRS
Tank 241-B-108

M E T H O D S U M M A R Y

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held (Analyzed - Collected) are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

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Contact L. L. Fritts

Client TWRS

Tank 241-B-108

GUIDE, cont.

METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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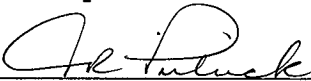
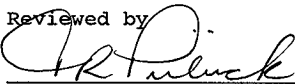
Report date 02/24/97

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 173SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108

S U M M A R Y D A T A S E C T I O N

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Reviewed by J. K. Duluck

Approved by _____

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Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

SAMPLE SUMMARY

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	PRIORITY COLLECTED	RECEIVED
B108 C173 COMP Fusion	R: 3 S: Core Composite C	FUSION	SOLID	S96T005487		10/17/96 12:05
B108 C173 Comp Fusion Re	R: 3 S: Core Composite C	FUSION	SOLID	S97T000002		01/06/97 11:37
B108 C173 Comp Fusion Re	R: 3 S: Core Composite C	FUSION	SOLID	S97T000002D		
B108 C173 Comp Fusion Re	R: 3 S: Core Composite C	FUSION	SOLID	S97T000002S		
B108 C173 COMP Fusion-DU	R: 3 S: Core Composite C	FUSION	SOLID	S96T005487D		
B108 C173 COMP Fusion-SP	R: 3 S: Core Composite C	FUSION	SOLID	S96T005487S		
B108 C173S1 LH Fusion	R: 3 S: 1 C: 173	FUSION	SOLID	S96T005477		10/17/96 06:42
B108 C173S1 LH Fusion-DU	R: 3 S: 1 C: 173	FUSION	SOLID	S96T005477D		
B108 C173S1 LH Fusion-SP	R: 3 S: 1 C: 173	FUSION	SOLID	S96T005477S		
B108 C173S1 UH Fusion	R: 3 S: 1 C: 173	FUSION	SOLID	S96T005468		10/17/96 06:25
B108 C173S1 UH Fusion-DU	R: 3 S: 1 C: 173	FUSION	SOLID	S96T005468D		
B108 C173S2 LH Fusion	R: 3 S: 2 C: 173	FUSION	SOLID	S96T005478		10/17/96 06:42
B108 C173S2 LH Fusion Re	R: 3 S: 2 C: 173	FUSION	SOLID	S97T000001		01/06/97 11:37
B108 C173S2 LH Fusion Re	R: 3 S: 2 C: 173	FUSION	SOLID	S97T000001D		
B108 C173S2 LH Fusion Re	R: 3 S: 2 C: 173	FUSION	SOLID	S97T000001S		
B108 C173S2 LH Fusion-DU	R: 3 S: 2 C: 173	FUSION	SOLID	S96T005478D		
B108 C173S2 LH Fusion-SP	R: 3 S: 2 C: 173	FUSION	SOLID	S96T005478S		
Method Blank			SOLID	B14361-2		
Method Blank			SOLID	B14725-2		
Method Blank			SOLID	B15416-2		
Method Blank			SOLID	B15952-2		
Method Blank			SOLID	B16015-2		
Method Blank			SOLID	B16017-2		
Method Blank			SOLID	B16019-2		
Method Blank			SOLID	B16256-2		
Method Blank			SOLID	B16258-2		
Method Blank			SOLID	B16349-2		
Method Blank			SOLID	B16362-2		
Method Blank			SOLID	B16409-2		
Lab Control Sample			SOLID	S14361-1		
Lab Control Sample			SOLID	S14725-1		
Lab Control Sample			SOLID	S15416-1		
Lab Control Sample			SOLID	S15952-1		
Lab Control Sample			SOLID	S16015-1		
Lab Control Sample			SOLID	S16017-1		
Lab Control Sample			SOLID	S16019-1		
Lab Control Sample			SOLID	S16256-1		
Lab Control Sample			SOLID	S16258-1		
Lab Control Sample			SOLID	S16349-1		

Group 96001380

SAMPLE SUMMARY

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Lab id 222-s

Protocol SST

Version 1.0

Form DVD-CS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

SAMPLE SUMMARY, cont.

SDG 96001380

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB	PRIORITY COLLECTED	RECEIVED
				SAMPLE ID		
Lab Control Sample		SOLID		S16362-1		
Lab Control Sample		SOLID		S16409-1		

Group 96001380

SAMPLE SUMMARY

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Lab id 222-s

Protocol SST

Version 1.0

Form DVD-CS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SAMPLE		BASIS AMOUNT	DAYS FROM/TO		LAB SAMPLE ID	DEPARTMENT SAMPLE ID
				MOIST	AMOUNT		COLL RCVD	RCVD RPTD		
96001380-F	n/a	B108 C173 COMP Fusion	FUSION	SOLID				130	S96T005487	
		B108 C173 Comp Fusion Re	FUSION	SOLID				49	S97T000002	
		B108 C173S1 LH Fusion	FUSION	SOLID				130	S96T005477	
		B108 C173S1 UH Fusion	FUSION	SOLID				130	S96T005468	
		B108 C173S2 LH Fusion	FUSION	SOLID				130	S96T005478	
		B108 C173S2 LH Fusion Re	FUSION	SOLID				49	S97T000001	
		B108 C173 Comp Fusion Re	FUSION	SOLID				49	S97T0000020	
		B108 C173 Comp Fusion Re	FUSION	SOLID				49	S97T000002S	
		B108 C173 COMP Fusion-DU	FUSION	SOLID				130	S96T005487D	
		B108 C173 COMP Fusion-SP	FUSION	SOLID				130	S96T005487S	
		B108 C173S1 LH Fusion-DU	FUSION	SOLID				130	S96T005477D	
		B108 C173S1 LH Fusion-SP	FUSION	SOLID				130	S96T005477S	
		B108 C173S1 UH Fusion-DU	FUSION	SOLID				130	S96T005468D	
		B108 C173S2 LH Fusion Re	FUSION	SOLID				49	S97T000001D	
		B108 C173S2 LH Fusion Re	FUSION	SOLID				49	S97T000001S	
		B108 C173S2 LH Fusion-DU	FUSION	SOLID				130	S96T005478D	
		B108 C173S2 LH Fusion-SP	FUSION	SOLID				130	S96T005478S	
SOLID		Method Blank	SOLID						B14361-2	
		Method Blank	SOLID						B14725-2	
		Method Blank	SOLID						B15416-2	
		Method Blank	SOLID						B15952-2	
		Method Blank	SOLID						B16015-2	
		Method Blank	SOLID						B16017-2	
		Method Blank	SOLID						B16019-2	
		Method Blank	SOLID						B16256-2	
		Method Blank	SOLID						B16258-2	
		Method Blank	SOLID						B16349-2	
		Method Blank	SOLID						B16362-2	
		Method Blank	SOLID						B16409-2	
		Lab Control Sample	SOLID						S14361-1	
		Lab Control Sample	SOLID						S14725-1	
		Lab Control Sample	SOLID						S15416-1	
		Lab Control Sample	SOLID						S15952-1	
		Lab Control Sample	SOLID						S16015-1	
		Lab Control Sample	SOLID						S16017-1	
		Lab Control Sample	SOLID						S16019-1	
		Lab Control Sample	SOLID						S16256-1	
		Lab Control Sample	SOLID						S16258-1	
		Lab Control Sample	SOLID						S16349-1	

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QC SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. FrittsClient THRSTank 241-B-108

QC SUMMARY, cont.

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS FROM/TO		LAB SAMPLE ID	DEPARTMENT SAMPLE ID
							COLL	RCVD		
		Lab Control Sample	SOLID						S16362-1	
		Lab Control Sample	SOLID						S16409-1	

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QC SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. Fritts

PREP BATCH SUMMARY

Client THRS

Tank 241-B-108

TEST	MATRIX	METHOD	PREPARATION	ERROR			PLANCHETS ANALYZED				QUALITY FIERS	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG		MS/ORIG
Gas Proportional Counting												
SR	SOLID	Strontium-89/90	96012589	15.0	1			1	1	1/1		
			96012650	15.0	1			1	1	1/1		
			97000108	15.0	1			1	1	1/1		
Gas Proportional Counting												
AB	SOLID	Alpha Analysis	96011318	15.0	1			1	1	1/1	1/1	
			97000273	15.0	1			1	1	1/1	1/1	
AT	SOLID	Alpha Analysis	96010903	15.0	2			1	1	2/2	1/1	
			97000208	15.0	1			1	1	1/1	1/1	
TB	SOLID	Beta Analysis	96012646	15.0	1			1	1	1/1	1/1	
Gamma Energy Analysis												
GEA	SOLID	Gamma Spectroscopy	96012029	15.0	1			1	1	1/1		
			96012648	15.0	3			1	1	3/3		
			97000110	15.0	1			1	1	1/1		
			97000227	15.0	1			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Group 96001380

PREP BATCH SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

WORK SUMMARY

SDG 96001380
Contact L. L. FrittsClient THRS
Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX Priority	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
B108 C173 COMP Fusion R: 3 S: Core Composite C SOLID n/a	FUSION	S96T005487 10/17/96	14725-4 15416-3 15952-4	AB GEA SR	01 01 02	11/08/96 12/16/96 01/06/97		SLF PPB SAC	Alpha Analysis Gamma Spectroscopy Strontium-89/90
B108 C173 Comp Fusion Re R: 3 S: Core Composite C SOLID n/a	FUSION	S97T000002 01/06/97	16409-4 16258-5 16256-4	AB GEA SR	01 01 01	01/29/97 01/22/97 01/22/97		SLF PPB SAC	Alpha Analysis Gamma Spectroscopy Strontium-89/90
B108 C173 Comp Fusion Re R: 3 S: Core Composite C SOLID	FUSION	S97T000002D 01/06/97	16409-5 16258-6 16256-5	AB GEA SR	01 01 01	01/29/97 01/22/97 01/22/97		SLF PPB SAC	Alpha Analysis Gamma Spectroscopy Strontium-89/90
B108 C173 Comp Fusion Re R: 3 S: Core Composite C SOLID	FUSION	S97T000002S 01/06/97	16409-6	AB	01	01/29/97		SLF	Alpha Analysis
B108 C173 COMP Fusion-DU R: 3 S: Core Composite C SOLID	FUSION	S96T005487D 10/17/96	14725-5 15416-4 15952-5	AB GEA SR	01 01 02	11/08/96 12/16/96 01/06/97		SLF PPB SAC	Alpha Analysis Gamma Spectroscopy Strontium-89/90
B108 C173 COMP Fusion-SP R: 3 S: Core Composite C SOLID	FUSION	S96T005487S 10/17/96	14725-6	AB	01	11/08/96		SLF	Alpha Analysis
B108 C173S1 LH Fusion R: 3 S: 1 C: 173 n/a	FUSION SOLID	S96T005477 10/17/96	14361-4 16019-5 16017-4 16015-4	AT GEA SR TB		10/30/96 01/09/97 01/07/97 01/09/97		SLF PPB SAC SLF	Alpha Analysis Gamma Spectroscopy Strontium-89/90 Beta Analysis
B108 C173S1 LH Fusion-DU R: 3 S: 1 C: 173	FUSION SOLID	S96T005477D 10/17/96	14361-5 16019-6 16017-5 16015-5	AT GEA SR TB		10/30/96 01/09/97 01/07/97 01/09/97		SLF PPB SAC SLF	Alpha Analysis Gamma Spectroscopy Strontium-89/90 Beta Analysis
B108 C173S1 LH Fusion-SP R: 3 S: 1 C: 173	FUSION SOLID	S96T005477S 10/17/96	16015-6	TB		01/09/97		SLF	Beta Analysis

Group 96001380

WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

SDG 96001380

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	PRIORITY	MATRIX	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
B108 C173S1 UH Fusion R: 3 S: 1 C: 173 n/a		FUSION SOLID	S96T005468 10/17/96	16019-3	GEA		01/09/97		PPB	Gamma Spectroscopy
B108 C173S1 UH Fusion-DU R: 3 S: 1 C: 173 n/a		FUSION SOLID	S96T005468D 10/17/96	16019-4	GEA		01/09/97		PPB	Gamma Spectroscopy
B108 C173S2 LH Fusion R: 3 S: 2 C: 173 n/a		FUSION SOLID	S96T005478 10/17/96	14361-6 16019-7	AT GEA		10/30/96 01/10/97		SLF PPB	Alpha Analysis Gamma Spectroscopy
B108 C173S2 LH Fusion Re R: 3 S: 2 C: 173 n/a		FUSION SOLID	S97T000001 01/06/97	16349-4 16362-3	AT GEA	01 01	01/26/97 01/28/97		SLF LLF	Alpha Analysis Gamma Spectroscopy
B108 C173S2 LH Fusion Re R: 3 S: 2 C: 173 n/a		FUSION SOLID	S97T000001D 01/06/97	16349-5 16362-4	AT GEA	01	01/26/97 01/28/97		SLF LLF	Alpha Analysis Gamma Spectroscopy
B108 C173S2 LH Fusion Re R: 3 S: 2 C: 173 n/a		FUSION SOLID	S97T000001S 01/06/97	16349-6	AT	01	01/26/97		SLF	Alpha Analysis
B108 C173S2 LH Fusion-DU R: 3 S: 2 C: 173 n/a		FUSION SOLID	S96T005478D 10/17/96	14361-7 16019-8	AT GEA		10/30/96 01/10/97		SLF PPB	Alpha Analysis Gamma Spectroscopy
B108 C173S2 LH Fusion-SP R: 3 S: 2 C: 173 n/a		FUSION SOLID	S96T005478S 10/17/96	14361-8	AT		10/30/96		SLF	Alpha Analysis
Method Blank		SOLID	B14361-2	14361-2	AT		10/30/96		SLF	Alpha Analysis
Method Blank		SOLID	B14725-2	14725-2	AB		11/08/96		SLF	Alpha Analysis

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WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

SDG 96001380

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	PRIORITY	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
Method Blank	SOLID	B15416-2	15416-2	GEA		12/16/96		PPB	Gamma Spectroscopy
Method Blank	SOLID	B15952-2	15952-2	SR		01/06/97		SAC	Strontium-89/90
Method Blank	SOLID	B16015-2	16015-2	TB		01/09/97		SLF	Beta Analysis
Method Blank	SOLID	B16017-2	16017-2	SR		01/07/97		SAC	Strontium-89/90
Method Blank	SOLID	B16019-2	16019-2	GEA		01/09/97		PPB	Gamma Spectroscopy
Method Blank	SOLID	B16256-2	16256-2	SR		01/22/97		SAC	Strontium-89/90
Method Blank	SOLID	B16258-2	16258-2	GEA		01/22/97		PPB	Gamma Spectroscopy
Method Blank	SOLID	B16349-2	16349-2	AT		01/26/97		SLF	Alpha Analysis
Method Blank	SOLID	B16362-2	16362-2	GEA		01/28/97		LLF	Gamma Spectroscopy
Method Blank	SOLID	B16409-2	16409-2	AB		01/29/97		SLF	Alpha Analysis
Lab Control Sample	SOLID	S14361-1	14361-1	AT		10/30/96		SLF	Alpha Analysis
Lab Control Sample	SOLID	S14725-1	14725-1	AB		11/08/96		SLF	Alpha Analysis
Lab Control Sample	SOLID	S15416-1	15416-1	GEA		12/16/96		PPB	Gamma Spectroscopy

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Lab id 222-S

Protocol SST

Version 1.0

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HNF-SD-WM-DP-219, REV. 0
222-S LABORATORY

TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

SDG 96001380
 Contact L. L. Fritts

Client IWRS
 Tank 241-B-108

CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX Priority	LAB SAMPLE ID COLLECTED RECEIVED	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
Lab Control Sample	SOLID	S15952-1	15952-1	SR		01/06/97		SAC	Strontium-89/90
Lab Control Sample	SOLID	S16015-1	16015-1	TB		01/09/97		SLF	Beta Analysis
Lab Control Sample	SOLID	S16017-1	16017-1	SR		01/07/97		SAC	Strontium-89/90
Lab Control Sample	SOLID	S16019-1	16019-1	GEA		01/09/97		PPB	Gamma Spectroscopy
Lab Control Sample	SOLID	S16256-1	16256-1	SR		01/22/97		SAC	Strontium-89/90
Lab Control Sample	SOLID	S16258-1	16258-1	GEA		01/22/97		PPB	Gamma Spectroscopy
Lab Control Sample	SOLID	S16349-1	16349-1	AT		01/26/97		SLF	Alpha Analysis
Lab Control Sample	SOLID	S16362-1	16362-1	GEA		01/28/97		LLF	Gamma Spectroscopy
Lab Control Sample	SOLID	S16409-1	16409-1	AB		01/29/97		SLF	Alpha Analysis

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Lab id 222-S
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222-S LABORATORY

TANK 241-B-108, CORE 173

WORK SUMMARY, cont.SDG 96001380Contact L. L. FrittsClient THRSTank 241-B-108**COUNTS OF TESTS BY SAMPLE TYPE**

TEST	Priority	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
AB		Alpha Analysis	222-S Lab Analytical Procedure	2			2	2	2	2	10
AT		Alpha Analysis	222-S Lab Analytical Procedure	3			2	2	3	2	12
GEA		Gamma Spectroscopy	222-S Lab Analytical Procedure	6			4	4	6		20
SR		Strontium-89/90	222-S Lab Analytical Procedure	3			3	3	3		12
TB		Beta Analysis	222-S Lab Analytical Procedure	1			1	1	1	1	5
TOTALS				15			12	12	15	5	59

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WORK SUMMARY

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380
Contact L. L. Fritts

BLANKS

Client TWRS
Tank 241-B-108

Lab sample id <u>B14361-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<7.8E-03		7.8E-03		U	AT 96010903

Lab sample id <u>B14725-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<1.9E-02		1.9E-02		U	AB 96011318
Total Beta	12587-47-2	<5.7E-02		5.7E-02		U	AB 96011318

Lab sample id <u>B15416-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<1.2E-02		1.2E-02		U	GEA 96012029
Cesium 137	10045-97-3	<1.7E-02		1.7E-02		U	GEA 96012029
Europium 154	15585-10-1	<3.2E-02		3.2E-02		U	GEA 96012029
Europium 155	14391-16-3	<3.1E-02		3.1E-02		U	GEA 96012029
Americium 241	14596-10-2	<7.3E-02		7.3E-02		U	GEA 96012029

Group 96001380

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380
Contact L. L. Fritts

BLANKS

Client TWRS
Tank 241-B-108

Lab sample id <u>B15952-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Strontium 90	10098-97-2	<u>1.95E-03</u>	92	<u>2.4E-03</u>		<u>U</u>	SR 96012589

Lab sample id <u>B16015-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Beta	12587-47-2	<u>3.32E-02</u>	42	<u>1.6E-02</u>			TB 96012646

Lab sample id <u>B16017-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Strontium 90	10098-97-2	<u>8.20E-03</u>	51	<u>4.9E-03</u>			SR 96012650

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Lab id	<u>222-S</u>
Protocol	<u>SST</u>
Version	<u>1.0</u>
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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380
Contact L. L. Fritts

BLANKS

Client THRS
Tank 241-B-108

Lab sample id B16019-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<1.6E-02		1.6E-02		U	GEA 96012648
Cesium 137	10045-97-3	<3.3E-02		3.3E-02		U	GEA 96012648
Europium 154	15585-10-1	<5.0E-02		5.0E-02		U	GEA 96012648
Europium 155	14391-16-3	<4.3E-02		4.3E-02		U	GEA 96012648
Americium 241	14596-10-2	<8.2E-02		8.2E-02		U	GEA 96012648

Lab sample id B16256-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Strontium 90	10098-97-2	1.72E-02	34	5.3E-03		SR	97000108

Lab sample id B16258-2		Client sample id Method Blank					
Dept sample id		Material/Matrix SOLID					
ANALYTE	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<1.6E-02		1.6E-02		U	GEA 97000110
Cesium 137	10045-97-3	<2.3E-02		2.3E-02		U	GEA 97000110
Europium 154	15585-10-1	<3.7E-02		3.7E-02		U	GEA 97000110
Europium 155	14391-16-3	<3.4E-02		3.4E-02		U	GEA 97000110
Americium 241	14596-10-2	<6.8E-02		6.8E-02		U	GEA 97000110

Group 96001380

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

BLANKS

Lab sample id <u>B16349-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<u><3.2E+03</u>		<u>3.2E+03</u>		<u>U</u>	AT 97000208

Lab sample id <u>B16362-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
GEA Analytes							
Cobalt 60	10198-40-0	<u><1.1E-02</u>		<u>1.1E-02</u>		<u>U</u>	GEA 97000227
Cesium 137	10045-97-3	<u><2.3E-02</u>		<u>2.3E-02</u>		<u>U</u>	GEA 97000227
Europium 154	15585-10-1	<u><3.6E-02</u>		<u>3.6E-02</u>		<u>U</u>	GEA 97000227
Europium 155	14391-16-3	<u><3.0E-02</u>		<u>3.0E-02</u>		<u>U</u>	GEA 97000227
Americium 241	14596-10-2	<u><8.2E-02</u>		<u>8.2E-02</u>		<u>U</u>	GEA 97000227

Lab sample id <u>B16409-2</u>		Client sample id <u>Method Blank</u>					
Dept sample id _____		Material/Matrix _____ <u>SOLID</u>					
ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST PREP BATCH
Total Alpha	12587-46-1	<u>3.06E-03</u>	100	<u>4.1E-03</u>		<u>U</u>	AB 97000273
Total Beta	12587-47-2	<u>9.06E-02</u>	22	<u>1.8E-02</u>		<u>U</u>	AB 97000273

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Lab id <u>222-S</u>
Protocol <u>SST</u>
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Report date <u>02/26/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 173

LAB CONTROL SAMPLES

SDG 96001380

Contact L. L. Fritts

Client TWRs

Tank 241-B-108

Lab sample id <u>S14361-1</u>					Client sample id <u>Lab Control Sample</u>							
Dept sample id _____					Material/Matrix _____ SOLID							
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	8.18E-02	16	3.6E-04			AT	1.02E-1	5.0	80	80-120	70-130	96010903

Lab sample id <u>S14725-1</u>							Client sample id <u>Lab Control Sample</u>					
Dept sample id _____							Material/Matrix _____ <u>SOLID</u>					
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	1.03E-01	16	4.2E-04			AB	1.11E-1	5.0	93	77-123	70-130	96011318
Total Beta	1.42E-00	15	1.3E-03			AB	1.43E00	5.0	99	76-124	80-110	96011318

Lab sample id <u>S15416-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix _____ SOLID						
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH	
GEA Analytes													
Cobalt 60	3.65E-03	15				GEA	3.75E03	5.0	97	77-123		96012029	
Cesium 137	3.71E-03	15				GEA	3.69E03	5.0	100	76-124	80-120	96012029	

Group 96001380

LAB CONTROL SAMPLES

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Version 1.0

Form DVD-LCS

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222-S LABORATORY

TANK 241-B-108, CORE 173

LAB CONTROL SAMPLES

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

Lab sample id <u>S15952-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix _____ SOLID						
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP	BATCH
Strontium 90	8.10E-01	15	2.4E-03			SR	8.15E-1	5.0	99	76-124	75-125		96012589

Lab sample id <u>S16015-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix _____ SOLID						
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP	BATCH
Total Beta	1.41E-00	15	1.6E-03		B	TB	1.30E00	5.0	108	74-126	80-110		96012646

Lab sample id <u>S16017-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix _____ SOLID						
ANALYTE	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	REC %	3 σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP	BATCH
Strontium 90	6.45E-01	15	1.9E-03		B	SR	7.47E-1	5.0	86	79-121	75-125		96012650

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222-S LABORATORY

TANK 241-B-108, CORE 173

LAB CONTROL SAMPLES

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

Lab sample id <u>S16019-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix <u> </u>						

Lab sample id <u>S16256-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix _____ <u>SOLID</u>						
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH	
Strontium 90	8.04E-01	15	1.3E-03		B	SR	8.33E-1	5.0	97	77-123	75-125	97000108	

Lab sample id <u>S16258-1</u>							Client sample id <u>Lab Control Sample</u>						
Dept sample id _____							Material/Matrix <u>SOLID</u>						
ANALYTE	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH	
GEA Analytes													
Cobalt 60	3.74E 03	15				GEA	3.77E03	5.0	99	76-124		97000110	
Cesium 137	3.69E 03	15				GEA	3.76E03	5.0	98	76-124	80-120	97000110	

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222-S LABORATORY

TANK 241-B-108, CORE 173

S96T0054680

B108 C173S1 UH Fusion

DUPLICATE

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

DUPLICATE

ORIGINAL

Lab sample id S96T0054680

Lab sample id S96T005468

Client sample id B108 C173S1 UH Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: 1 C: 173 SOLID

Received 10/17/96

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
GEA Analytes												
Cobalt 60	<1.8E-02		1.8E-02		U	GEA	<1.8E-02		1.8E-02	U	-	
Cesium 137	2.29E-01	15	0.0E-00			GEA	2.30E-01	15	0.0E-00		0	32 20
Europium 154	<5.9E-02		5.9E-02		U	GEA	<5.9E-02		5.9E-02	U	-	
Europium 155	<1.5E-01		1.5E-01		U	GEA	<1.5E-01		1.5E-01	U	-	
Americium 241	<3.2E-01		3.2E-01		U	GEA	<3.2E-01		3.2E-01	U	-	

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DUPLICATES

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Lab id 222-s

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T0054770

B108 C173S1 LH Fusion

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

ORIGINAL

Client TWRSTank 241-B-108Lab sample id S96T0054770Lab sample id S96T005477Client sample id B108 C173S1 LH Fusion FUSION

Dept sample id _____

Dept sample id _____

Location/Matrix R: 3 S: 1 C: 173 SOLIDReceived 10/17/96

Collected _____

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ TOT	PROT LIMIT
Total Alpha	7.34E-03	98	7.8E-03		U	AT	1.08E-02	62	7.8E-03		38	162	172
Total Beta	2.42E-01	15	1.6E-02		B	TB	2.83E-01	15	1.6E-02	B	16	32	20
Strontium 90	4.09E-00	15	3.3E-03		B	SR	4.74E-00	15	3.3E-03	B	15	32	20
GEA Analytes													
Cobalt 60	<1.3E-02		1.3E-02		U	GEA	<1.3E-02		1.3E-02	U	-		
Cesium 137	1.66E-01	15	0.0E-00			GEA	1.74E-01	15	0.0E-00		5	32	20
Europium 154	<3.7E-02		3.7E-02		U	GEA	<3.7E-02		3.7E-02	U	-		
Europium 155	<1.2E-01		1.2E-01		U	GEA	<1.2E-01		1.2E-01	U	-		
Americium 241	<2.6E-01		2.6E-01		U	GEA	<2.6E-01		2.6E-01	U	-		

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DUPLICATES

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222-S LABORATORY

TANK 241-B-108, CORE 173

S96T0054780

B108 C173S2 LH Fusion

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

ORIGINAL

Client TWRS

Tank 241-B-108

Lab sample id S96T0054780

Lab sample id S96T005478

Client sample id B108 C173S2 LH Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: 2 C: 173 SOLID

Received 10/17/96

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2 σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3 σ PROT TOT LIMIT
Total Alpha	1.37E-02	80	1.6E-02		U	AT	9.37E-03	110	1.6E-02	U	-	
GEA Analytes												
Cobalt 60	<1.5E-02		1.5E-02		U	GEA	<1.5E-02		1.5E-02	U	-	
Cesium 137	1.48E-01	15	0.0E-00			GEA	9.48E-00	15	0.0E-00		44	33 20
Europium 154	<3.6E-02		3.6E-02		U	GEA	<3.6E-02		3.6E-02	U	-	
Europium 155	<9.5E-02		9.5E-02		U	GEA	<9.5E-02		9.5E-02	U	-	
Americium 241	<2.1E-01		2.1E-01		U	GEA	<2.1E-01		2.1E-01	U	-	

Group 96001380

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T0054870

B108 C173 COMP Fusion

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

ORIGINAL

Lab sample id S96T0054870

Lab sample id S96T005487

Dept sample id

Dept sample id

Received 10/17/96

Client TWRS

Tank 241-B-108

Client sample id B108 C173 COMP Fusion FUSION

Location/Matrix R: 3 S: Core Composite C SOLID

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ TOT	PROT LIMIT
Total Alpha	1.19E-02	120	1.9E-02		U	AB	<1.9E-02		1.9E-02	U	-		
Total Beta	2.36E 01	15	5.8E-02			AB	1.07E 01	15	5.7E-02		75	34	20
Strontium 90	5.80E 00	15	2.4E-03			SR	4.30E-01	15	2.4E-03		172	42	20
GEA Analytes													
Cobalt 60	<1.4E-02		1.4E-02		U	GEA	<1.4E-02		1.4E-02	U	-		
Cesium 137	1.53E 01	15	0.0E 00			GEA	1.09E 01	15	0.0E 00		34	32	20
Europium 154	<2.9E-02		2.9E-02		U	GEA	<2.9E-02		2.9E-02	U	-		
Europium 155	<8.4E-02		8.4E-02		U	GEA	<8.4E-02		8.4E-02	U	-		
Americium 241	<2.1E-01		2.1E-01		U	GEA	<2.1E-01		2.1E-01	U	-		

Loc: Riser: 3 Seg: Core Composite Core: 173

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000001D

B108 C173S2 LH Fusion Re

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

ORIGINAL

Client TWRS

Tank 241-B-108

Lab sample id S97T000001D

Lab sample id S97T000001

Client sample id B108 C173S2 LH Fusion Re FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: 2 C: 173 SOLID

Received 01/06/97

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ PROT TOT LIMIT
Total Alpha	1.80E-03	140	3.2E-03		U	AT	4.66E-03	84	3.2E-03		89	214 198
GEA Analytes												
Cobalt 60	<1.1E-02		1.1E-02		U	GEA	<1.1E-02		1.1E-02	U		
Cesium 137	7.15E-00	15	0.0E-00			GEA	1.07E-01	15	0.0E-00		40	33 20
Europium 154	<3.8E-02		3.8E-02		U	GEA	<3.8E-02		3.8E-02	U		
Europium 155	<8.5E-02		8.5E-02		U	GEA	<8.5E-02		8.5E-02	U		
Americium 241	<2.1E-01		2.1E-01		U	GEA	<2.1E-01		2.1E-01	U		

Samp: B108 C173S2 LH Fusion Reprep

Group 96001380

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T0000020

B108 C173 Comp Fusion Re

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

Lab sample id S97T0000020

Dept sample id

ORIGINAL

Lab sample id S97T0000020

Dept sample id

Received 01/06/97

Client TWRS

Tank 241-B-108

Client sample id B108 C173 Comp Fusion Re FUSION

Location/Matrix R: 3 S: Core Composite C SOLID

Collected

Chain of custody id n/a

ANALYTE	DUPLICATE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ORIGINAL uCi/g	2σ TPU %	MDA uCi/g	QUALI- FIERS	RPD %	3σ TOT	PROT LIMIT
Total Alpha	1.37E-02	36	4.1E-03			AB	1.33E-02	38	4.1E-03		3	78	61
Total Beta	2.41E 01	15	1.8E-02		B	AB	1.94E 01	15	1.8E-02	B	22	32	20
Strontium 90	3.80E 00	15	5.2E-03		B	SR	3.26E 00	15	5.3E-03	B	15	32	20
GEA Analytes													
Cobalt 60	<1.3E-02		1.3E-02		U	GEA	<1.3E-02		1.3E-02	U	-		
Cesium 137	1.52E 01	15	0.0E 00			GEA	1.25E 01	15	0.0E 00		19	32	20
Europium 154	<3.5E-02		3.5E-02		U	GEA	<3.5E-02		3.5E-02	U	-		
Europium 155	<8.9E-02		8.9E-02		U	GEA	<8.9E-02		8.9E-02	U	-		
Americium 241	<2.3E-01		2.3E-01		U	GEA	<2.3E-01		2.3E-01	U	-		

Loc: Riser: 3 Seg: Core Composite Core: 173

Samp: B108 C173 Comp Fusion Reprep

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

DUPLICATES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-DUP

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005477S

B108 C173S1 LH Fusion

MATRIX SPIKE

SDG 96001380

Contact L. L. Fritte

MATRIX SPIKE

Lab sample id S96T005477S

Dept sample id

ORIGINAL

Lab sample id S96T005477

Dept sample id

Received 10/17/96

Client IWRs

Tank 241-B-108

Client sample id B108 C173S1 LH Fusion FUSION

Location/Matrix R: 3 S: 1 C: 173 SOLID

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Beta	9.68E 01				B	TB	6.67E01	5.0	2.83E 01	15	103	65-135 75-125

Group 96001380

MATRIX SPIKES

Page 1

SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-MS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S961005478S

B108 C173S2 LH Fusion

MATRIX SPIKE

SDG 96001380

Contact L. L. Fritts

Client IWRS

Tank 241-B-108

MATRIX SPIKE

ORIGINAL

Lab sample id S96T005478S

Lab sample id S96T005478

Client sample id B108 C173S2 LH Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: 2 C: 173 SOLID

Received 10/17/96

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Alpha	1.73E-01				AT	1.60E01	5.0	9.37E-03	110	108 75-125	75-125

Group 96001380

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-MS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005487S

B108 C173 COMP Fusion

MATRIX SPIKE

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

MATRIX SPIKE

ORIGINAL

Lab sample id S96T005487S

Lab sample id S96T005487

Client sample id B108 C173 COMP Fusion FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: Core Composite C SOLID

Received 10/17/96

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Alpha	1.29E 01				AB		1.73E01	5.0			75 82-118	75-125
Total Beta	7.87E 01				AB		7.33E01	5.0	1.07E 01	15	93 74-126	75-125

Loc: Riser: 3 Seg: Core Composite Core: 173

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-MS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000001S

B108 C173S2 LH Fusion Re

MATRIX SPIKE

SDG 26001380

Contact L. L. Fritts

MATRIX SPIKE

Lab sample id S97T000001S

Dept sample id

ORIGINAL

Lab sample id S97T000001

Dept sample id

Received 01/06/97

Client IWRS

Tank 241-B-108

Client sample id B108 C173S2 LH Fusion Re FUSION

Location/Matrix R: 3 S: 2 C: 173 SOLID

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Alpha	1.15E-01				AT	1.76E01	5.0	4.66E-03	84	65 83-117	75-125

Samp: B108 C173S2 LH Fusion Reprep

Group 96001380

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-MS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T0000025

B108 C173 Comp Fusion Re

MATRIX SPIKE

SDG 96001380

Contact L. L. Fritte

Client TWRS

Tank 241-B-108

MATRIX SPIKE

ORIGINAL

Lab sample id S97T0000025

Lab sample id S97T000002

Client sample id B108 C173 Comp Fusion Re FUSION

Dept sample id

Dept sample id

Location/Matrix R: 3 S: Core Composite C SOLID

Received 01/06/97

Collected

Chain of custody id n/a

ANALYTE	SPIKE uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2 σ ERR %	ORIGINAL uCi/g	2 σ TPU %	REC 3 σ LMTS % (TOTAL)	PROTOCOL LIMITS
Total Alpha	1.43E-01				AB		1.77E01	5.0	1.33E-02	38	81	80-120 75-125
Total Beta	1.02E-02				AB		7.44E01	5.0	1.94E-01	15	111	68-132 75-125

Loc: Riser: 3 Seg: Core Composite Core: 173

Samp: B108 C173 Comp Fusion Reprep

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

MATRIX SPIKES

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SUMMARY DATA SECTION

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Lab id 222-s

Protocol SST

Version 1.0

Form DVD-MS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005487

B108 C173 COMP Fusion

DATA SHEET

SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005487
Dept sample id _____
Received 10/17/96Client sample id B108 C173 COMP Fusion FUSION
Location/Matrix R: 3 S: Core Composite C SOLID
Collected _____
Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	<1.9E-02		1.9E-02		U	AB
Total Beta	12587-47-2	1.07E 01	15	5.7E-02			AB
Strontium 90	10098-97-2	4.30E-01	15	2.4E-03			SR
GEA Analytes							
Cobalt 60	10198-40-0	<1.4E-02		1.4E-02		U	GEA
Cesium 137	10045-97-3	1.09E 01	15	0.0E 00			GEA
Europium 154	15585-10-1	<2.9E-02		2.9E-02		U	GEA
Europium 155	14391-16-3	<8.4E-02		8.4E-02		U	GEA
Americium 241	14596-10-2	<2.1E-01		2.1E-01		U	GEA

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000002

B108 C173 Comp Fusion Re

DATA SHEET

SDG 96001380

Client TWRS

Contact L. L. Fritts

Tank 241-B-108

Lab sample id S97T000002

Client sample id B108 C173 Comp Fusion Re FUSION

Dept sample id

Location/Matrix R: 3 S: Core Composite C SOLID

Received 01/06/97

Collected

Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	1.33E-02	38	4.1E-03			AB
Total Beta	12587-47-2	1.94E 01	15	1.8E-02		B	AB
Strontium 90	10098-97-2	3.26E 00	15	5.3E-03		B	SR
GEA Analytes							
Cobalt 60	10198-40-0	<1.3E-02		1.3E-02		U	GEA
Cesium 137	10045-97-3	1.25E 01	15	0.0E 00			GEA
Europium 154	15585-10-1	<3.5E-02		3.5E-02		U	GEA
Europium 155	14391-16-3	<8.9E-02		8.9E-02		U	GEA
Americium 241	14596-10-2	<2.3E-01		2.3E-01		U	GEA

Samp: B108 C173 Comp Fusion Reprep

Loc: Riser: 3 Seg: Core Composite Core: 173

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-s

Protocol SST

Version 1.0

Form DVD-DS

Version 3.08

Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005477

B108 C173S1 LH Fusion

DATA SHEET

SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005477Client sample id B108 C173S1 LH Fusion FUSION

Dept sample id _____

Location/Matrix R: 3 S: 1 C: 173 SOLIDReceived 10/17/96

Collected _____

Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	1.08E-02	62	7.8E-03			AT
Total Beta	12587-47-2	2.83E 01	15	1.6E-02		B	TB
Strontium 90	10098-97-2	4.74E 00	15	3.3E-03		B	SR
GEA Analytes							
Cobalt 60	10198-40-0	<1.3E-02		1.3E-02		U	GEA
Cesium 137	10045-97-3	1.74E 01	15	0.0E 00			GEA
Europium 154	15585-10-1	<3.7E-02		3.7E-02		U	GEA
Europium 155	14391-16-3	<1.2E-01		1.2E-01		U	GEA
Americium 241	14596-10-2	<2.6E-01		2.6E-01		U	GEA

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-SProtocol SSTVersion 1.0Form DVD-DSVersion 3.08Report date 02/24/97

222 - S LABORATORY

TANK 241-B-108, CORE 173

S96T005468

B108 C173S1 UH Fusion

DATA SHEET

SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005468Client sample id B108 C173S1 UH Fusion FUSION

Dept sample id _____

Location/Matrix R: 3 S: 1 C: 173 SOLIDReceived 10/17/96

Collected _____

Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
GEA Analytes							
Cobalt 60	10198-40-0	<1.8E-02	15	1.8E-02		U	GEA
Cesium 137	10045-97-3	2.30E-01		0.0E-00			GEA
Europium 154	15585-10-1	<5.9E-02		5.9E-02		U	GEA
Europium 155	14391-16-3	<1.5E-01		1.5E-01		U	GEA
Americium 241	14596-10-2	<3.2E-01		3.2E-01		U	GEA

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005478

DATA SHEET

B108 C173S2 LH Fusion

SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S96T005478
Dept sample id _____
Received 10/17/96Client sample id B108 C173S2 LH Fusion FUSION
Location/Matrix R: 3 S: 2 C: 173 SOLID
Collected _____
Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	9.37E-03	110	1.6E-02		U	AT
GEA Analytes							
Cobalt 60	10198-40-0	<1.5E-02		1.5E-02		U	GEA
Cesium 137	10045-97-3	9.48E 00	15	0.0E 00			GEA
Europium 154	15585-10-1	<3.6E-02		3.6E-02		U	GEA
Europium 155	14391-16-3	<9.5E-02		9.5E-02		U	GEA
Americium 241	14596-10-2	<2.1E-01		2.1E-01		U	GEA

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000001

B108 C173S2 LH Fusion Re

DATA SHEET

SDG 96001380
Contact L. L. FrittsClient TWRS
Tank 241-B-108Lab sample id S97T000001
Dept sample id _____
Received 01/06/97Client sample id B108 C173S2 LH Fusion Re FUSION
Location/Matrix R: 3 S: 2 C: 173 SOLID
Collected _____
Chain of custody id n/a

ANALYTE	CAS NO	RESULT uCi/g	2 σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha	12587-46-1	4.66E-03	84	3.2E-03			AT
GEA Analytes							
Cobalt 60	10198-40-0	<1.1E-02		1.1E-02		U	GEA
Cesium 137	10045-97-3	1.07E-01	15	0.0E-00			GEA
Europium 154	15585-10-1	<3.8E-02		3.8E-02		U	GEA
Europium 155	14391-16-3	<8.5E-02		8.5E-02		U	GEA
Americium 241	14596-10-2	<2.1E-01		2.1E-01		U	GEA

Samp: B108 C173S2 LH Fusion Reprep

Group 96001380

DATA SHEETS

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SUMMARY DATA SECTION

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 Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-DS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY

STRONTIUM-89/90

GAS PROPORTIONAL COUNTING

Test SR Matrix SOLIDSDG 96001380Contact L. L. FrittsClient THRSTank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	Strontium 90
------------------	------------------	-------------	-------------	----------	--------------

Preparation batch 96012589

B108 C173 COMP Fusion FU S96T005487 02 15952-4 4.30E+01

B108 C173 COMP Fusion-DU S96T005487D 02 15952-5 OUT

Method Blank B15952-2 15952-2 U

Lab Control Sample S15952-1 15952-1 ok

Preparation batch 96012650

B108 C173S1 LH Fusion FU S96T005477 16017-4 4.74E-00

B108 C173S1 LH Fusion-DU S96T005477D 16017-5 ok

Method Blank B16017-2 16017-2 8.20E-03

Lab Control Sample S16017-1 16017-1 ok

Preparation batch 97000108

B108 C173 Comp Fusion Re S97T000002 16256-4 3.26E-00

B108 C173 Comp Fusion Re S97T000002D 16256-5 ok

Method Blank B16256-2 16256-2 1.72E-02

Lab Control Sample S16256-1 16256-1 ok

Nominal values and limits from method RDLs (uCi/g)

Group 96001380

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

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Lab id 222-SProtocol SSTVersion 1.0Form DVD-CMSVersion 3.08Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 173

Test SR Matrix SOLIDSDG 96001380Contact L. L. FrittsClient THRSTank 241-B-108

METHOD SUMMARY

STRONTIUM-89/90

GAS PROPORTIONAL COUNTING

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZED	DETECTOR
Preparation batch 96012589 2 σ prep error 15.0 % Reference																
B108 C173 COMP Fusion FU	S96T005487	02		2.4E-03	1.00	482	1.00	90	41	10			10/26/96	01/06	WB2687010	
B108 C173 COMP Fusion-DU	S96T005487D	02		2.4E-03	1.00	489	1.00	90	41	10			10/26/96	01/06	WB2687010	
Method Blank	B15952-2			2.4E-03	1.00	482	1.00	89	41	10				01/06/97	WB2687010	
Lab Control Sample	S15952-1			2.4E-03	1.00	482	1.00	89	41	10				01/06/97	WB2687010	
Preparation batch 96012650 2 σ prep error 15.0 % Reference																
B108 C173S1 LH Fusion FU	S96T005477			3.3E-03	0.500	4.4E5	1.00	88	41	10			10/26/96	01/07	WB2687010	
B108 C173S1 LH Fusion-DU	S96T005477D			3.3E-03	0.500	4.4E5	1.00	89	41	10			10/26/96	01/07	WB2687010	
Method Blank	B16017-2			4.9E-03	0.500	442	1.00	60	41	10				01/07/97	WB2687010	
Lab Control Sample	S16017-1			1.9E-03	1.00	442	1.00	79	41	10				01/07/97	WB2687010	
Preparation batch 97000108 2 σ prep error 15.0 % Reference																
B108 C173 Comp Fusion Re	S97T000002			5.3E-03	0.250	493	1.00	90	42	10			01/15/97	01/22	WB2781112	
B108 C173 Comp Fusion Re	S97T000002D			5.2E-03	0.250	492	1.00	92	42	10			01/15/97	01/22	WB2781112	
Method Blank	B16256-2			5.3E-03	0.250	493	1.00	91	42	10				01/22/97	WB2781112	
Lab Control Sample	S16256-1			1.3E-03	1.00	493	1.00	91	42	10				01/22/97	WB2781112	
Nominal values and limits from method					0.100			30-105		10						
								20-55								

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
LO-160-103	Core Segment Extrusion Process and Sample Preparation, rev 17	
LA-549-141	Fusion with Alkali Metal Hydroxide, rev 40	
LA-220-101	High level Strontium 89/90 in aqueous samples, rev 41	
LA-508-11NB	Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems	

AVERAGES $\pm$ 2 SD	MDA <u>3.3E-03</u> $\pm$ <u>2.9E-03</u>
FOR 12 SAMPLES	YIELD <u>86</u> $\pm$ <u>18</u>
	EFFICIENCY <u>41</u> $\pm$ <u>0.98</u>

Group 96001380

METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test AB Matrix SOLID
 SDG 96001380
 Contact L. L. Fritts

Client TWRS
 Tank 241-B-108

METHOD SUMMARY

ALPHA ANALYSIS
 GAS PROPORTIONAL COUNTING

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	1: Total Alpha	2: Total Beta	3: Sum, Alpha Emitters	4: Sum, Beta Emitters	RESULT 3+1	RATIOS (%) 2α	4÷2	2α
Preparation batch 96011318												
B108 C173 COMP Fusion FU	S96T005487	01		14725-4	U	1.07E 01		1.09E 01			102	21
B108 C173 COMP Fusion-DU	S96T005487D	01		14725-5	U	OUT		1.53E 01			65	14
B108 C173 COMP Fusion-SP	S96T005487S	01		14725-6	LOW	ok						
Method Blank	B14725-2			14725-2	U	U						
Lab Control Sample	S14725-1			14725-1	ok	ok						
Preparation batch 97000273												
B108 C173 Comp Fusion Re	S97T000002	01		16409-4	1.33E-02	1.94E 01		1.25E 01			64	14
B108 C173 Comp Fusion Re	S97T000002D	01		16409-5	ok	OUT		1.52E 01			63	13
B108 C173 Comp Fusion Re	S97T000002S	01		16409-6	ok	ok						
Method Blank	B16409-2			16409-2	U	9.06E-02						
Lab Control Sample	S16409-1			16409-1	ok	ok						
Nominal values and limits from method												
RDLs (uCi/g)									80	80		
									Averages		74	

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METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test AB Matrix SOLIDSDG 96001380Contact L. L. FrittsClient THRSTank 241-B-108

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

METHOD PERFORMANCE

	LAB	RAW	SUF-	MAX	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
CLIENT SAMPLE ID	SAMPLE ID	TEST	FIX	uCi/g		ml	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 96011318 2σ prep error 15.0 % Reference																	
B108 C173 COMP Fusion FU	S96T005487		01	5.7E-02	0.250	482		11.0		45	30				10/26/96	11/08	WB27807
B108 C173 COMP Fusion-DU	S96T005487D		01	5.8E-02	0.250	489		11.0		45	30				10/26/96	11/08	WB27807
B108 C173 COMP Fusion-SP	S96T005487S		01		0.250	482		1.00		45	30				10/26/96	11/08	WB27807
Method Blank	B14725-2			5.7E-02	0.250	482		11.0		45	30					11/08/96	WB27807
Lab Control Sample	S14725-1			1.3E-03	1.00	482		1.00		45	30					11/08/96	WB27807
Preparation batch 97000273 2σ prep error 15.0 % Reference																	
B108 C173 Comp Fusion Re	S97T0000002		01	1.8E-02	0.100	493		1.00		42	30				01/15/97	01/29	WB27806
B108 C173 Comp Fusion Re	S97T0000002D		01	1.8E-02	0.100	492		1.00		42	30				01/15/97	01/29	WB27806
B108 C173 Comp Fusion Re	S97T0000002S		01		0.100	493		1.00		42	30				01/15/97	01/29	WB27806
Method Blank	B16409-2			1.8E-02	0.100	493		1.00		42	30					01/29/97	WB27806
Lab Control Sample	S16409-1			1.8E-03	1.00	493		1.00		42	30					01/29/97	WB27806

Nominal values and limits from method

0.100

30

20-55

PROCEDURES REFERENCE 222-S Lab Analytical Procedure

LO-160-103 Core Segment Extrusion Process and Sample Preparation, rev 17

LA-549-141 Fusion with Alkali Metal Hydroxide, rev 40

LA-508-101 Alpha/Beta in liquid samples, rev 42

LA-508-11NA Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES $\pm$ 2 SD MDA 2.9E-02 $\pm$ 4.9E-02

FOR 10 SAMPLES EFFICIENCY 44 $\pm$ 3.2

Group 96001380

METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test AT Matrix SOLID

SDG 96001380

Contact L. L. Fritts

Client TWRs

Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	1: Total Alpha	2: Sum, Alpha Emitters	RESULT RATIO (%) 2+1 2σ
Preparation batch 96010903						
B108 C173S1 LH Fusion FU S96T005477			14361-4	1.08E-02		
B108 C173S1 LH Fusion-DU S96T005477D			14361-5	ok U		
B108 C173S2 LH Fusion FU S96T005478			14361-6	U		
B108 C173S2 LH Fusion-DU S96T005478D			14361-7	- U		
B108 C173S2 LH Fusion-SP S96T005478S			14361-8	ok		
Method Blank	B14361-2		14361-2	U		
Lab Control Sample	S14361-1		14361-1	ok		
Preparation batch 97000208						
B108 C173S2 LH Fusion Re S97T000001		01	16349-4	4.66E-03		
B108 C173S2 LH Fusion Re S97T000001D		01	16349-5	ok U		
B108 C173S2 LH Fusion Re S97T000001S		01	16349-6	LOW		
Method Blank	B16349-2		16349-2	U		
Lab Control Sample	S16349-1		16349-1	ok		
Nominal values and limits from method						80
RDLs (uCi/g)						Average

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METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test AT Matrix SOLID

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- uc/g	MDA ml	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZED	DETECTOR
Preparation batch 96010903	2 σ prep error 15.0 %		Reference													
B108 C173S1 LH Fusion FU	S96T005477		7.8E-03	0.500	4.4E5	11.0			25	30				10/26/96	10/30	WB27810
B108 C173S1 LH Fusion-DU	S96T005477D		7.8E-03	0.500	4.4E5	11.0			25	30				10/26/96	10/30	WB27810
B108 C173S2 LH Fusion FU	S96T005478		1.6E-02	0.250	4.4E5	11.0			25	30				10/26/96	10/30	WB27810
B108 C173S2 LH Fusion-DU	S96T005478D		1.6E-02	0.250	4.5E5	11.0			25	30				10/26/96	10/30	WB27810
B108 C173S2 LH Fusion-SP	S96T005478S			0.250	445	1.00			25	30				10/26/96	10/30	WB27810
Method Blank	B14361-2		7.8E-03	0.500	442	11.0			25	30				10/30/96		WB27810
Lab Control Sample	S14361-1		3.6E-04	1.00	442	1.00			25	30				10/30/96		WB27810

Preparation batch 97000208	2 σ prep error 15.0 %		Reference													
B108 C173S2 LH Fusion Re	S97T000001	01	3.2E-03	0.100	490	1.00			27	30				01/15/97	01/26	WB26872
B108 C173S2 LH Fusion Re	S97T000001D	01	3.2E-03	0.100	490	1.00			27	30				01/15/97	01/26	WB26872
B108 C173S2 LH Fusion Re	S97T000001S	01		0.100	490	1.00			27	30				01/15/97	01/26	WB26872
Method Blank	B16349-2		3.2E-03	0.100	490	1.00			27	30				01/26/97		WB26872
Lab Control Sample	S16349-1		3.3E-04	1.00	490	1.00			27	30				01/26/97		WB26872

Nominal values and limits from method

0.100

30

20-55

PROCEDURES REFERENCE 222-S Lab Analytical Procedure
 LO-160-103 Core Segment Extrusion Process and Sample Preparation, rev 17
 LA-549-141 Fusion with Alkali Metal Hydroxide, rev 40
 LA-508-101A Alpha in liquid samples, rev 42
 LA-508-111A Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES $\pm$ 2 SD MDA 6.6E-03 $\pm$ 1.1E-02
 FOR 12 SAMPLES EFFICIENCY 26 $\pm$ 2.1

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METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test TB Matrix SOLID

SDG 96001380

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

METHOD SUMMARY

BETA ANALYSIS

GAS PROPORTIONAL COUNTING

RESULTS

		LAB	RAW	SUF-	1: Total	2: Sum, Beta	RESULT RATIO (%)	
CLIENT SAMPLE ID	SAMPLE ID	TEST	FIX	PLANCHET	Beta	Emitters	2+1	2σ
Preparation batch 96012646								
B108 C173S1 LH Fusion-FU	S96T005477			16015-4	2.83E-01	1.74E 01	61	13
B108 C173S1 LH Fusion-DU	S96T005477D			16015-5	ok	1.66E 01	69	15
B108 C173S1 LH Fusion-SP	S96T005477S			16015-6	ok			
Method Blank	B16015-2			16015-2	3.32E-02			
Lab Control Sample	S16015-1			16015-1	ok			

Nominal values and limits from method RDLs (uCi/g)

80

Average 65

METHOD PERFORMANCE

CLIENT	SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL- YZED	DETECTOR
Preparation batch 96012646 2σ prep error 15.0 % Reference																	
B108	C173S1	LH Fusion-FU	S96T005477		1.6E-02	0.100	4.4E5	1.00		42	30			10/26/96	01/09	WB27806	
B108	C173S1	LH Fusion-DU	S96T005477D		1.6E-02	0.100	4.4E5	1.00		42	30			10/26/96	01/09	WB27806	
B108	C173S1	LH Fusion-SP	S96T005477S			0.100	442	1.00		42	30			10/26/96	01/09	WB27806	
Method Blank		B16015-2			1.6E-02	0.100	442	1.00		42	30				01/09/97	WB27806	
Lab Control Sample		S16015-1			1.6E-03	1.00	442	1.00		42	30				01/09/97	WB27806	

Nominal values and limits from method

0.100

30

20-55

PROCEDURES REFERENCE 222-S Lab Analytical Procedure
 LO-160-103 Core Segment Extrusion Process and Sample Preparation, rev 17
 LA-549-141 Fusion with Alkali Metal Hydroxide, rev 40
 LA-508-101B Beta in liquid samples, rev 42
 LA-508-11NB Operation of the [Tennelec LB-5500 (n=0, A-5), LB-1000 (n=1, A-3), Gamma Products (n=4, A-2)] Alpha/Beta Counting Systems

AVERAGES ± 2 SD MDA 1.2E-02 ± 1.4E-02
 FOR 5 SAMPLES EFFICIENCY 42 ± 0

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METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test GEA Matrix SOLIDSDG 96001380Contact L. L. FrittsClient TwrsTank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSIS

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- PLANCHET	Cobalt 60	Cesium 137	Europium 154	Europium 155	Americium 241
Preparation batch 96012029								
B108 C173 COMP Fusion FU	S96T005487	01	15416-3	U	1.09E 01	U	U	U
B108 C173 COMP Fusion-DU	S96T005487D		15416-4	- U	OUT	- U	- U	- U
Method Blank	B15416-2		15416-2	U	U	U	U	U
Lab Control Sample	S15416-1		15416-1	ok	ok			
Preparation batch 96012648								
B108 C173S1 LH Fusion FU	S96T005477		16019-5	U	1.74E 01	U	U	U
B108 C173S1 LH Fusion-DU	S96T005477D		16019-6	- U	ok	- U	- U	- U
B108 C173S1 UH Fusion FU	S96T005468		16019-3	U	2.30E 01	U	U	U
B108 C173S1 UH Fusion-DU	S96T005468D		16019-4	- U	ok	- U	- U	- U
B108 C173S2 LH Fusion FU	S96T005478		16019-7	U	9.48E 00	U	U	U
B108 C173S2 LH Fusion-DU	S96T005478D		16019-8	- U	OUT	- U	- U	- U
Method Blank	B16019-2		16019-2	U	U	U	U	U
Lab Control Sample	S16019-1		16019-1	ok	ok			
Preparation batch 97000110								
B108 C173 Comp Fusion Re	S97T000002		16258-5	U	1.25E 01	U	U	U
B108 C173 Comp Fusion Re	S97T000002D		16258-6	- U	ok	- U	- U	- U
Method Blank	B16258-2		16258-2	U	U	U	U	U
Lab Control Sample	S16258-1		16258-1	ok	ok			
Preparation batch 97000227								
B108 C173S2 LH Fusion Re	S97T000001	01	16362-3	U	1.07E 01	U	U	U
B108 C173S2 LH Fusion Re	S97T000001D		16362-4	- U	OUT	- U	- U	- U
Method Blank	B16362-2		16362-2	U	U	U	U	U
Lab Control Sample	S16362-1		16362-1	ok	ok			
Nominal values and limits from method								
RDLs (uCi/g)								

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METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

Test GEA Matrix SOLIDSDG 96001380Contact L. L. FrittsClient TWRSTank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSIS

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MAX MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF % min	COUNT keV	FWHM keV	DRIFT HELD	DAYS PREPARED	ANAL- YZED	DETECTOR
Preparation batch 96012029 2 σ prep error 15.0 % Reference															
B108 C173 COMP Fusion FU	S96T005487	01		2.1E-01	1.00	482	1.00			50			10/26/96	12/16	GEA03
B108 C173 COMP Fusion-DU	S96T005487D			2.1E-01	1.00	489	1.00			50			10/26/96	12/16	GEA03
Method Blank	B15416-2			7.3E-02	1.00	4.8E5	1.00			50				12/16/96	GEA03
Lab Control Sample	S15416-1				1.00	4.8E5	1.00			50				12/16/96	GEA03
Preparation batch 96012648 2 σ prep error 15.0 % Reference															
B108 C173S1 LH Fusion FU	S96T005477			2.6E-01	1.00	4.4E5	1.00			50			10/26/96	01/09	GEA02
B108 C173S1 LH Fusion-DU	S96T005477D			2.6E-01	1.00	4.4E5	1.00			50			10/26/96	01/09	GEA02
B108 C173S1 UH Fusion FU	S96T005468			3.2E-01	1.00	4.8E5	1.00			50			10/26/96	01/09	GEA02
B108 C173S1 UH Fusion-DU	S96T005468D			3.2E-01	1.00	4.7E5	1.00			50			10/26/96	01/09	GEA02
B108 C173S2 LH Fusion FU	S96T005478			2.1E-01	1.00	4.4E5	1.00			50			10/26/96	01/10	GEA02
B108 C173S2 LH Fusion-DU	S96T005478D			2.1E-01	1.00	4.5E5	1.00			50			10/26/96	01/10	GEA02
Method Blank	B16019-2			8.2E-02	1.00	4.8E5	1.00			50				01/09/97	GEA02
Lab Control Sample	S16019-1				1.00	4.8E5	1.00			50				01/09/97	GEA02
Preparation batch 97000110 2 σ prep error 15.0 % Reference															
B108 C173 Comp Fusion Re	S97T000002			2.3E-01	1.00	493	1.00			50			01/15/97	01/22	GEA03
B108 C173 Comp Fusion Re	S97T000002D			2.3E-01	1.00	492	1.00			50			01/15/97	01/22	GEA03
Method Blank	B16258-2			6.8E-02	1.00	4.9E5	1.00			50				01/22/97	GEA03
Lab Control Sample	S16258-1				1.00	4.9E5	1.00			50				01/22/97	GEA03
Preparation batch 97000227 2 σ prep error 15.0 % Reference															
B108 C173S2 LH Fusion Re	S97T000001	01		2.1E-01	1.00	490	1.00			50			01/15/97	01/28	GEA03
B108 C173S2 LH Fusion Re	S97T000001D			2.1E-01	1.00	490	1.00			50			01/15/97	01/28	GEA03
Method Blank	B16362-2			8.2E-02	1.00	4.9E5	1.00			50				01/28/97	GEA03
Lab Control Sample	S16362-1				1.00	4.9E5	1.00			50				01/28/97	GEA03
Nominal values and limits from method				0.100				50							

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222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY, cont.

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSISTest GEA Matrix _____SDG 96001380Contact L. L. FrittsClient THRSTank 241-B-108

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
	LO-160-103	Core Segment Extrusion Process and Sample Preparation, rev 17
	LA-549-141	Fusion with Alkali Metal Hydroxide, rev 40
	LA-548-121	Preparation of Sample Mounts for Gamma Energy Analysis, rev 41
	LA-508-162	Gamma Energy Analysis - the Genie System, rev 11

AVERAGES $\pm$ 2 SD
FOR 16 SAMPLESMDA 2.0E-01 $\pm$ 1.6E-01
YIELD _____ $\pm$ _____

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HNF-SD-WM-DP-219, REV. 0

SAMPLE DATA SUMMARY

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Table 3. Data Summary Table
8-108

CORE NUMBER: 172

SEGMENT #: Field Blank

SEGMENT PORTION: Field Blank

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Sbk Rec %	Det Limit	Count Err%
5961005463		DSC Exotherm Dry	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5961005463		DSC Exotherm on Perkin Elmer	Joules/g	100.8	n/a	0.00e+00	0.00e+00	0.00e+00	1.00	n/a	n/a	n/a
5961005463		Specific Gravity	Sp.G.	99.81	n/a	2.270	2.298	2.284	1.23	n/a	1.00e-03	n/a
5961005463		% Water by TGA using Mettler	%	99.81	n/a	97.42	97.69	99.56	0.27	n/a	n/a	n/a
5961005463		D Aluminum-DP-Acid DIL	ug/mL	98.60	<1.00e-02	<1.00e-02	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Silicon-DP-Acid DIL	ug/mL	97.40	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Aluminum-DP-Acid DIL	ug/mL	103.8	<1.00e-01	<1.00e-1	<1.00e-1	2.04	3.92	n/a	7.00e-01	n/a
5961005463		D Arsenic-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-01	n/a
5961005463		D Boron-DP-Acid DIL	ug/mL	98.40	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-01	n/a
5961005463		D Barium-DP-Acid DIL	ug/mL	102.8	<1.00e-03	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Beryllium-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Bismuth-DP-Acid DIL	ug/mL	101.2	<1.00e-01	<1.00e-1	<1.00e-1	17.00	0.00	n/a	7.00e-01	n/a
5961005463		D Cadmium-DP-Acid DIL	ug/mL	99.80	<1.00e-01	<1.00e-1	<1.00e-1	17.00	0.00	n/a	7.00e-01	n/a
5961005463		D Calcium-DP-Acid DIL	ug/mL	100.4	<1.00e-03	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Cerium-DP-Acid DIL	ug/mL	98.60	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Cobalt-DP-Acid DIL	ug/mL	100.8	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Chromium-DP-Acid DIL	ug/mL	100.8	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Copper-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Iron-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Potassium-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Lanthanum-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Lithium-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Magnesium-DP-Acid DIL	ug/mL	97.80	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Manganese-DP-Acid DIL	ug/mL	97.80	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Molybdenum-DP-Acid DIL	ug/mL	100.8	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Sodium-DP-Acid DIL	ug/mL	98.40	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Neodymium-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Nickel-DP-Acid DIL	ug/mL	100.4	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Phosphorus-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Lead-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Sulfur-DP-Acid DIL	ug/mL	98.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Antimony-DP-Acid DIL	ug/mL	98.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Selenium-DP-Acid DIL	ug/mL	97.20	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Strontium-DP-Acid DIL	ug/mL	99.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Samarium-DP-Acid DIL	ug/mL	97.20	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Tellurium-DP-Acid DIL	ug/mL	97.40	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Thallium-DP-Acid DIL	ug/mL	97.80	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Uranium-DP-Acid DIL	ug/mL	95.20	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Vanadium-DP-Acid DIL	ug/mL	95.20	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Zirconium-DP-Acid DIL	ug/mL	100.2	<1.00e-02	<1.00e-1	<1.00e-1	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Zinc-DP-Acid DIL	ug/mL	101.6	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Zirconium-DP-Acid DIL	ug/mL	98.20	<1.00e-02	<1.00e-2	<1.00e-2	1.815	3.68	n/a	7.00e-02	n/a
5961005463		D Fluoride-DP-Acid DIL	ug/mL	100.0	<1.20e-02	<1.20e-02	<1.20e-02	2.59e-01	3.48	n/a	1.20e-02	n/a
5961005463		D Chloride-DP-Acid DIL	ug/mL	94.05	<1.70e-02	<1.70e-02	<1.70e-02	1.107	18.0	n/a	1.717	n/a
5961005463		D Nitrate-DP-Acid DIL	ug/mL	93.35	<1.08e-01	<1.08e-01	<1.08e-01	19.75	0.51	n/a	1.08e-01	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005463		Bromide by Ion Chromatograph	ug/mL	97.96	<1.25e-01	4.33e-01	4.33e-01	4.33e-01	0.00	N/A	1.43e-01	N/A
S96T005463		Nitrate by IC-Dionex 4000/4500	ug/mL	95.29	<1.39e-01	51.09	51.40	51.23	0.59	N/A	1.35e-01	N/A
S96T005463		Phosphate-IC-Dionex 4000/4500	ug/mL	93.57	<1.20e-01	<1.20e-01	1.51e-01	N/A	N/A	N/A	1.28e-01	N/A
S96T005463		Sulfate by IC-Dionex 4000/4500	ug/mL	96.99	<1.38e-01	16.09	16.20	16.14	0.62	N/A	1.38e-01	N/A
S96T005463		Oxalate by IC-Dionex 4000/4500	ug/mL	102.5	<1.05e-01	<1.05e-01	<1.05e-01	N/A	N/A	N/A	1.05e-01	N/A
S96T005463		Alpha In Liquid Samples	UCI/mL	78.79	<4.40e-06	<3.96e-06	<4.40e-06	N/A	N/A	N/A	7.13e-06	5.00E-02

Table 3. Data Summary Table
g-108

CORE NUMBER: 172

SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005502		Bulk Density of Sample	g/mL	100.9	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T005505		DSC Exotherm using Mettler	Joules/g	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005505		DSC Exotherm Dry Calculated	Joules/g	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005505		% Water by TGA using Mettler	%	100.3	n/a	34.40	32.63	33.52	5.28	n/a	n/a	n/a
S96T005510	F	NIckel - ICP-Fusion	ug/g	99.20	8.60e-02	5.50e-03	4.87e+03	5.21e+03	13.1	n/a	395.0	n/a
S96T005510	F	SIlver - ICP-Fusion	ug/g	98.00	<1.00e-02	<2.00e-02	<1.99e2	n/a	n/a	n/a	500.0	n/a
S96T005510	F	ALuminum - ICP-Fusion	ug/g	96.60	<1.00e-02	9.72e+04	<1.99e3	9.90e+04	0.30	n/a	956.0	n/a
S96T005510	F	ArArsenic - ICP-Fusion	ug/g	101.6	<1.00e-01	<2.00e-02	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Boron - ICP-Fusion	ug/g	98.40	<5.00e-02	<9.98e-02	<9.97e2	n/a	n/a	n/a	956.0	n/a
S96T005510	F	Barium - ICP-Fusion	ug/g	98.20	<5.00e-02	<9.98e-02	<9.97e2	n/a	n/a	n/a	956.0	n/a
S96T005510	F	Beryllium - ICP-Fusion	ug/g	102.4	<1.00e-01	<9.98e-02	<9.97e1	n/a	n/a	n/a	95.60	n/a
S96T005510	F	Bismuth - ICP-Fusion	ug/g	98.80	<1.00e-01	<2.00e-03	2.39e+03	2.82e+03	16.0	n/a	2.00e+03	n/a
S96T005510	F	Calcium - ICP-Fusion	ug/g	99.40	<1.00e-03	<9.98e-02	<9.97e1	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Cadmium - ICP-Fusion	ug/g	98.20	<1.00e-03	<2.00e-03	<1.99e3	n/a	n/a	n/a	95.60	n/a
S96T005510	F	Cerium - ICP-Fusion	ug/g	99.80	<1.00e-02	<5.99e-02	<5.99e2	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Cobalt - ICP-Fusion	ug/g	100.0	<1.00e-02	<3.00e-02	526.0	515.0	5.07	n/a	200.0	n/a
S96T005510	F	Chromium - ICP-Fusion	ug/g	103.4	<1.00e-02	<2.00e-02	<1.99e2	n/a	n/a	n/a	500.0	n/a
S96T005510	F	Copper - ICP-Fusion	ug/g	99.20	<5.00e-02	4.07e+03	6.18e+03	5.12e+03	41.2	n/a	956.0	n/a
S96T005510	F	Iron - ICP-Fusion	ug/g	99.80	<5.00e-02	<9.98e-02	<9.97e2	n/a	n/a	n/a	956.0	n/a
S96T005510	F	Lanthanum - ICP-Fusion	ug/g	99.00	<1.00e-02	<2.00e-02	<1.99e2	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Lithium - ICP-Fusion	ug/g	95.00	<1.00e-01	<2.00e-03	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Magnesium - ICP-Fusion	ug/g	95.00	<1.00e-01	<2.00e-03	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Manganese - ICP-Fusion	ug/g	16.60	<1.00e-02	<2.00e-02	<9.97e2	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Molybdenum - ICP-Fusion	ug/g	100.0	<5.00e-02	<2.00e-02	<9.97e2	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Nickel - ICP-Fusion	ug/g	95.60	<1.00e-01	<5.00e-03	1.47e+03	1.48e+03	2.02	n/a	2.00e+03	n/a
S96T005510	F	Niodymium - ICP-Fusion	ug/g	99.60	<1.00e-01	<5.00e-03	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Phosphorus - ICP-Fusion	ug/g	99.60	<2.00e-01	5.54e+04	2.51e+04	2.52e+04	1.9	n/a	3.99e+03	n/a
S96T005510	F	Lead - ICP-Fusion	ug/g	98.80	<1.00e-01	<5.00e-03	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Sulfur - ICP-Fusion	ug/g	95.00	<1.00e-01	<2.00e-03	3.49e+03	3.46e+03	1.73	n/a	2.00e+03	n/a
S96T005510	F	Antimony - ICP-Fusion	ug/g	98.40	<5.00e-02	<2.00e-03	<1.99e3	n/a	n/a	n/a	1.20e+03	n/a
S96T005510	F	Selenium - ICP-Fusion	ug/g	98.80	<1.00e-02	<2.00e-03	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Strontium - ICP-Fusion	ug/g	96.60	<1.00e-02	<2.00e-03	<1.99e3	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Tantalum - ICP-Fusion	ug/g	97.60	<1.00e-01	<2.00e-02	<1.99e3	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Thallium - ICP-Fusion	ug/g	97.20	<1.00e-02	<2.00e-02	<1.99e2	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Thallium - ICP-Fusion	ug/g	96.40	<1.00e-01	<9.98e-03	<9.97e3	n/a	n/a	n/a	3.99e+03	n/a
S96T005510	F	Uranium - ICP-Fusion	ug/g	99.60	<5.00e-02	<9.98e-03	<9.97e3	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Vanadium - ICP-Fusion	ug/g	100.8	<1.00e-02	<2.00e-02	<1.99e2	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Zinc - ICP-Fusion	ug/g	98.60	<1.00e-02	<1.98e-02	<1.99e2	n/a	n/a	n/a	1.20e+02	n/a
S96T005510	F	Zirconium - ICP-Fusion	ug/g	98.60	<1.00e-02	<1.98e-02	<1.99e2	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Cobalt-60 by GEA	uCi/g	99.07	<2.35e-03	<1.14e-2	<1.14e-2	n/a	n/a	n/a	0.360	n/a
S96T005510	F	Europium-154 by GEA	uCi/g	99.07	<2.35e-03	<3.82e-2	<3.82e-2	24.90	1.61	n/a	3.80e+02	n/a
S96T005510	F	Europium-155 by GEA	uCi/g	n/a	<3.14e-02	<1.29e-01	<1.20e-1	n/a	n/a	n/a	1.23e+01	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spec %	Det Limit	Count Err%
S96T005510	F	Anticorium-241 by GEA	uCi/g	n/a	< 0.0e-02	< 1.3e-01	4.30e-01	1.3e-04	n/a	n/a	3.16e-01	n/a
S96T005513	F	Fluoride-IC-Bionex 4000/4500	uB/g	103.4	< 1.20e-02	1.40e-04	1.20e-04	1.3e-04	17.6	n/a	5.11e-01	n/a
S96T005515	W	Chloride-IC-Bionex 4000/4500	uB/g	97.34	4.60e-02	1.40e-03	8.85e-03	1.31e-03	49.2	n/a	72.49	n/a
S96T005513	W	Nitrite-IC - Bionex 4000/4500	uB/g	96.34	< 1.20e-01	1.1e-04	9.85e-03	1.05e-04	11.6	n/a	640.5	n/a
S96T005513	W	Bromide by Ion Chromatograph	uB/g	100.3	< 1.20e-01	7.20e-02	5.08e-02	7.3e-04	n/a	n/a	592.0	n/a
S96T005513	W	Nitrate by IC-Bionex 4000/4500	uB/g	97.25	< 1.20e-01	1.20e-01	1.05e-05	1.6e-05	18.0	n/a	511.8	n/a
S96T005513	W	Phosphate-IC-Bionex 4000/4500	uB/g	100.5	< 1.20e-01	1.20e-01	6.80e-02	7.53e-03	18.1	n/a	588.4	n/a
S96T005513	W	Sulfate by IC-Bionex 4000/4500	uB/g	106.7	< 1.20e-01	8.21e-03	6.80e-02	7.53e-03	18.1	n/a	447.7	n/a
S96T005513	W	Oxalate by IC-Bionex 4000/4500	uB/g	106.7	< 1.00e-01	4.48e-02	4.25e-02	n/a	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spec %	Det Limit	Count Err%
S96T005503		Bulk Density of Sample	g/mL	100.0	n/a	1.590	1.590	n/a	n/a	n/a	5.00e-01	n/a
S96T005505		DSC Exotherm using Mettler	Joules/g	100.0	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005506		DSC Exotherm DRY Calculated	Joules/g DRY	100.0	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005506		% Water by IGA using Mettler	%	100.0	4.50	3.10	3.68	3.69	1.69	n/a	n/a	n/a
S96T005511	F	Uranium by Phosphorescence	uB/g	3.22	4.50	1.20e-03	1.20e-03	1.27e-03	1.57	111.7	1.950	1.31e+00
S96T005511	F	U-Phosphorescence INST. Error	% INST Error	3.22	2.310	1.330	1.330	1.320	n/a	n/a	3.00e-03	3.20e+00
S96T005511	F	Strontium-89/90 High Level	uCi/g	100.0	2.00e-03	4.25e-01	3.88e-01	4.06e-01	9.10	n/a	n/a	n/a
S96T005511	F	Nickel -IC-Fusion	uB/g	99.20	5.40e-03	1.52e-03	1.64e-03	1.62e-03	3.10	99.60	435.0	n/a
S96T005511	F	Aluminum -IC-Fusion	uB/g	98.00	0.00e-02	2.10e-02	2.34e-02	n/a	n/a	92.10	216.0	n/a
S96T005511	F	Arsenic -IC-Fusion	uB/g	96.60	5.00e-03	9.61e-03	1.01e-02	9.86e-03	4.97	96.50	1.08e+03	n/a
S96T005511	F	Boron -IC-Fusion	uB/g	101.0	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	103.0	2.16e+03	n/a
S96T005511	F	Barium -IC-Fusion	uB/g	98.20	5.00e-02	< 1.00e-03	< 1.7e-03	n/a	n/a	97.80	1.08e+03	n/a
S96T005511	F	Beryllium -IC-Fusion	uB/g	102.0	5.00e-03	< 1.00e-02	< 1.7e-02	n/a	n/a	95.90	1.08e+03	n/a
S96T005511	F	Bismuth -IC-Fusion	uB/g	100.4	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	99.90	108.0	n/a
S96T005511	F	Calcium -IC-Fusion	uB/g	99.40	5.00e-03	< 1.00e-02	< 3.4e-03	n/a	n/a	105.0	2.16e+03	n/a
S96T005511	F	Cadmium -IC-Fusion	uB/g	99.00	5.00e-03	< 1.00e-02	< 3.4e-03	n/a	n/a	100.0	2.16e+03	n/a
S96T005511	F	Cerium -IC-Fusion	uB/g	98.20	< 1.00e-02	< 3.4e-02	< 3.4e-02	n/a	n/a	99.40	108.0	n/a
S96T005511	F	Cobalt -IC-Fusion	uB/g	99.80	< 1.00e-02	< 3.4e-02	< 3.4e-02	n/a	n/a	99.60	435.0	n/a
S96T005511	F	Chromium -IC-Fusion	uB/g	103.4	< 1.00e-02	< 3.4e-02	< 3.4e-02	285.0	7.72	99.90	216.0	n/a
S96T005511	F	Copper -IC-Fusion	uB/g	100.0	< 1.00e-02	< 3.4e-02	< 3.4e-02	n/a	n/a	102.0	216.0	n/a
S96T005511	F	Iron -IC-Fusion	uB/g	99.20	5.00e-02	< 1.00e-03	< 1.7e-03	n/a	n/a	103.0	1.08e+03	n/a
S96T005511	F	Lanthanum -IC-Fusion	uB/g	99.80	5.00e-02	< 1.00e-03	< 1.7e-03	n/a	n/a	98.80	1.08e+03	n/a
S96T005511	F	Lithium -IC-Fusion	uB/g	99.00	< 1.00e-01	< 1.00e-02	< 3.4e-02	n/a	n/a	96.50	216.0	n/a
S96T005511	F	Magnesium -IC-Fusion	uB/g	95.00	< 1.00e-01	< 1.00e-02	< 3.4e-02	n/a	n/a	95.40	2.16e+03	n/a
S96T005511	F	Manganese -IC-Fusion	uB/g	96.60	< 1.00e-02	< 1.00e-02	< 3.4e-02	n/a	n/a	94.60	216.0	n/a
S96T005511	F	Nickel -IC-Fusion	uB/g	100.0	5.00e-02	< 1.00e-03	< 1.7e-03	n/a	n/a	100.0	1.08e+03	n/a
S96T005511	F	Sodium -IC-Fusion	uB/g	99.60	1.670	2.30e+05	2.30e+05	2.30e+05	0.00	102.0	2.16e+03	n/a
S96T005511	F	Neodymium -IC-Fusion	uB/g	99.60	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	98.10	2.16e+03	n/a
S96T005511	F	Phosphorus -IC-Fusion	uB/g	99.60	< 1.00e-01	8.93e+03	1.29e+04	1.09e+04	36.4	99.90	4.35e+03	n/a
S96T005511	F	Lead -IC-Fusion	uB/g	98.80	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	101.0	2.16e+03	n/a
S96T005511	F	Strontium -IC-Fusion	uB/g	98.00	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	95.40	1.30e+03	n/a
S96T005511	F	Tellurium -IC-Fusion	uB/g	95.00	< 1.00e-02	< 1.00e-03	< 3.4e-03	n/a	n/a	101.0	2.16e+03	n/a
S96T005511	F	Titanium -IC-Fusion	uB/g	96.60	< 1.00e-01	< 1.00e-03	< 3.4e-03	n/a	n/a	99.90	1.08e+03	n/a
S96T005511	F	Vanadium -IC-Fusion	uB/g	98.80	< 1.00e-02	< 1.00e-03	< 3.4e-03	n/a	n/a	95.70	2.16e+03	n/a
S96T005511	F	Zinc -IC-Fusion	uB/g	97.40	< 1.00e-02	< 1.00e-02	< 3.4e-02	n/a	n/a	95.60	216.0	n/a
S96T005511	F	Zinc -IC-Fusion	uB/g	97.20	< 1.00e-02	< 1.00e-02	< 3.4e-02	n/a	n/a	96.60	216.0	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005511	F	Thallium - ICP-Fusion	ug/g	96.40	<2.00e-01	24.35e+03	44.69e3	n/a	n/a	91.50	4.35e+03	n/a
S96T005511	F	Uranium - ICP-Fusion	ug/g	94.60	<5.00e-01	<1.08e+04	<1.17e4	n/a	n/a	91.00	1.08e+04	n/a
S96T005511	F	Vanadium - ICP-Fusion	ug/g	99.80	<5.00e-02	<2.16e+02	<2.34e2	n/a	n/a	99.00	1.99e+03	n/a
S96T005511	F	Zinc - ICP-Fusion	ug/g	100.8	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	101.0	16.0	n/a
S96T005511	F	Zirconium - ICP-Fusion	ug/g	97.60	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	96.60	26.0	n/a
S96T005511	F	Cobalt-60 by BEA	uCi/g	98.72	<1.35e-02	<1.21e-02	<1.70e-02	n/a	n/a	n/a	1.20e-02	n/a
S96T005511	F	Cesium-137 by BEA	uCi/g	99.09	<2.89e-02	<1.65e-02	<3.70e-02	19.54	3.63	n/a	4.03e+01	n/a
S96T005511	F	Europium-154 by BEA	uCi/g	n/a	<3.45e-02	<5.90e-02	<2.91e-02	n/a	n/a	n/a	3.90e-01	n/a
S96T005511	F	Europium-155 by BEA	uCi/g	n/a	<3.14e-02	<1.56e-01	<1.65e-01	n/a	n/a	n/a	1.40e-01	n/a
S96T005511	F	Americium-241 by BEA	uCi/g	n/a	<7.38e-02	<4.09e-01	<4.17e-01	n/a	n/a	n/a	4.96e-01	n/a
S96T005511	F	Beta of Digested Solid	uCi/g	109.5	<4.00e-02	<1.40	35.90	38.76	n/a	95.76	1.70e-02	4.24E+01
S96T005511	F	Alpha of Digested Solid	uCi/g	85.28	<1.69e-03	<5.95e-03	3.84e-03	3.92e-03	3.53	95.76	1.70e-02	9.19E+01
S96T005511	F	Fluoride-IC-Dioxex 4000/4500	ug/g	103.4	<1.20e-02	<3.79e+04	4.09e+04	3.76e+04	7.31	105.4	237.1	n/a
S96T005511	F	Chloride-IC-Dioxex 4000/4500	ug/g	97.34	<4.60e-02	<1.78e+03	<1.88e+03	1.83e+03	5.94	99.84	351.1	n/a
S96T005511	F	Nitrite-IC - Dioxex 4000/4500	ug/g	96.30	<1.00e-01	<2.23e+04	2.40e+04	2.31e+04	7.34	99.35	2.08e+03	n/a
S96T005511	F	Bromide by Ion Chromatograph	ug/g	96.27	<12.60	<1.77e+02	<1.06e3	1.07e2	n/a	90.32	977.4	n/a
S96T005511	F	Nitrate by IC-Dioxex 4000/4500	ug/g	97.98	<1.35e-01	<1.51e+03	<1.82e+03	1.57e+03	7.03	106.6	2.48e+03	n/a
S96T005511	F	Phosphate-IC-Dioxex 4000/4500	ug/g	95.52	<1.20e-01	<4.09e+04	<3.60e+04	3.60e+04	12.7	99.38	3.31e+03	n/a
S96T005511	F	Sulfate by IC-Dioxex 4000/4500	ug/g	100.3	<1.38e-01	<1.49e+03	<1.67e+03	1.59e+03	12.6	106.3	2.46e+03	n/a
S96T005511	F	Oxalate by IC-Dioxex 4000/4500	ug/g	106.7	<1.05e-01	<2.02e+03	<2.26e3	1.99e+03	n/a	103.2	2.02e+03	n/a
S96T005511	F	Silver - ICP-H2O Dig/Acid	ug/g	97.40	<1.00e-02	<1.90	1.54e3	1.13e+03	3.54	98.70	19.40	n/a
S96T005511	F	Aluminum - ICP-H2O Dig/Acid	ug/g	100.0	<3.59e-01	<1.16e+03	<1.54e3	1.13e+03	n/a	105.0	97.90	n/a
S96T005511	F	Arsenic - ICP-H2O Dig/Acid	ug/g	103.6	<1.00e-01	<1.65e+02	<2.13e2	2.28e+02	8.35	103.0	196.0	n/a
S96T005511	F	Boron - ICP-H2O Dig/Acid	ug/g	101.0	<3.570	<2.16e+02	<2.74e+02	2.74e+02	n/a	103.0	97.90	n/a
S96T005511	F	Barium - ICP-H2O Dig/Acid	ug/g	103.6	<5.00e-02	<9.90	<1.06e2	n/a	n/a	102.0	9.790	n/a
S96T005511	F	Beryllium - ICP-H2O Dig/Acid	ug/g	101.4	<1.00e-03	<9.90	<1.06e2	n/a	n/a	109.0	196.0	n/a
S96T005511	F	Bismuth - ICP-H2O Dig/Acid	ug/g	103.6	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	98.70	196.0	n/a
S96T005511	F	Calcium - ICP-H2O Dig/Acid	ug/g	98.00	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	101.0	9.790	n/a
S96T005511	F	Cadmium - ICP-H2O Dig/Acid	ug/g	98.20	<5.00e-03	<9.90	<1.06e2	n/a	n/a	102.0	196.0	n/a
S96T005511	F	Cerium - ICP-H2O Dig/Acid	ug/g	107.6	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	102.0	39.20	n/a
S96T005511	F	Cobalt - ICP-H2O Dig/Acid	ug/g	99.2	<1.00e-02	<59.70	<70.70	65.20	16.9	102.0	19.60	n/a
S96T005511	F	Chromium - ICP-H2O Dig/Acid	ug/g	98.00	<1.00e-02	<2.52e+02	<281.0	267.5	10.1	99.50	19.60	n/a
S96T005511	F	Copper - ICP-H2O Dig/Acid	ug/g	18.0	<1.00e-03	<9.90	<2.13e1	n/a	n/a	104.0	19.60	n/a
S96T005511	F	Iron - ICP-H2O Dig/Acid	ug/g	98.00	<5.00e-02	<9.90	<1.06e2	n/a	n/a	96.00	97.90	n/a
S96T005511	F	Potassium - ICP-H2O Dig/Acid	ug/g	103.8	<5.00e-01	<1.40e+03	1.79e+03	1.60e+03	24.5	116.0	979.0	n/a
S96T005511	F	Lanthanum - ICP-H2O Dig/Acid	ug/g	99.60	<5.00e-02	<9.90	<1.06e2	n/a	n/a	100.0	97.90	n/a
S96T005511	F	Lithium - ICP-H2O Dig/Acid	ug/g	102.2	<1.00e-02	<9.90	<2.13e1	n/a	n/a	n/a	19.60	n/a
S96T005511	F	Magnesium - ICP-H2O Dig/Acid	ug/g	99.60	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	96.80	196.0	n/a
S96T005511	F	Manganese - ICP-H2O Dig/Acid	ug/g	97.60	<1.00e-02	<9.90	<2.13e1	n/a	n/a	98.96	196.0	n/a
S96T005511	F	Molybdenum - ICP-H2O Dig/Acid	ug/g	100.8	<5.00e-02	<9.90	<2.13e1	n/a	n/a	101.0	19.60	n/a
S96T005511	F	Sodium - ICP-H2O Dig/Acid	ug/g	108.2	<5.150	<2.16e+03	<2.23e+03	2.20e+03	3.19	118.0	196.0	n/a
S96T005511	F	Selenium - ICP-H2O Dig/Acid	ug/g	100.0	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	99.10	196.0	n/a
S96T005511	F	Neodymium - ICP-H2O Dig/Acid	ug/g	97.60	<2.00e-02	<39.20	<44.25e1	n/a	n/a	101.0	39.20	n/a
S96T005511	F	Nickel - ICP-H2O Dig/Acid	ug/g	105.8	<2.00e-01	<1.42e+04	1.23e+04	1.32e+04	14.3	140.0	392.0	n/a
S96T005511	F	Lead - ICP-H2O Dig/Acid	ug/g	96.40	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	104.0	196.0	n/a
S96T005511	F	Phosphorus - ICP-H2O Dig/Acid	ug/g	100.8	<1.00e-01	<4.79e+04	5.44e+04	5.12e+04	12.7	230.0	196.0	n/a
S96T005511	F	Sulfur - ICP-H2O Dig/Acid	ug/g	100.8	<1.00e-02	<1.7e+02	<1.28e2	n/a	n/a	99.50	17.0	n/a
S96T005511	F	Antimony - ICP-H2O Dig/Acid	ug/g	101.8	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	107.0	196.0	n/a
S96T005511	F	Selenium - ICP-H2O Dig/Acid	ug/g	99.20	<7.280	<1.96e+04	1.85e+04	1.76e+04	9.63	140.0	97.90	n/a
S96T005511	F	Silicon - ICP-H2O Dig/Acid	ug/g	104.6	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	106.0	196.0	n/a
S96T005511	F	Samarium - ICP-H2O Dig/Acid	ug/g	103.4	<1.00e-02	<19.60	<2.13e1	n/a	n/a	104.0	19.60	n/a
S96T005511	F	Strontium - ICP-H2O Dig/Acid	ug/g	103.4	<1.00e-02	<19.60	<2.13e1	n/a	n/a	104.0	19.60	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005519	1	Titanium-ICP-H2O Dig/Acid	ug/g	97.80	<1.00e-02	< 19.60	<2.15e1	n/a	n/a	99.00	19.60	n/a
S96T005519	1	Titanium-ICP-H2O Dig/Acid	ug/g	99.00	<5.00e-01	<5.92e-02	<4.23e1	n/a	n/a	99.10	392.0	n/a
S96T005519	1	Uranium-ICP-H2O Dig/Acid	ug/g	105.0	<2.00e-01	<3.79e-02	<4.06e1	n/a	n/a	11.0	97.0	n/a
S96T005519	1	Vanadium-ICP-H2O Dig/Acid	ug/g	100.4	<5.00e-02	< 91.90	<1.06e2	n/a	n/a	103.0	97.90	n/a
S96T005519	1	Zinc-ICP-H2O Dig/Acid	ug/g	100.6	<2.00e-02	< 19.60	<2.70e1	n/a	n/a	102.0	19.60	n/a
S96T005519	1	Zirconium-ICP-H2O Dig/Acid	ug/g	101.0	<1.00e-02	< 19.60	<2.15e1	n/a	n/a	103.0	19.60	n/a

Drainable Liquid; Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005523		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
S96T005523		DSC Exotherm on Perkin Elmer	Joules/g	97.47	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005523		Specific Gravity	Sp-G.	99.67	n/a	1.587	1.371	1.331	9.94	n/a	1.00e+03	n/a
S96T005523		% Water by TGA on Perkin Elmer	%	98.73	n/a	75.20	76.94	76.54	1.33	n/a	1.00e+03	n/a
S96T005523		% Silver-ICP-Acid DIL.	ug/mL	98.60	<1.00e-02	12.30	12.39	12.35	2.39	91.0	40.10	n/a
S96T005523		% Aluminum-ICP-Acid DIL.	ug/mL	97.40	<5.00e-02	8.82e-02	915	896.5	5.67	115.0	20.10	n/a
S96T005523		% Arsenic-ICP-Acid DIL.	ug/mL	103.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.0	40.10	n/a
S96T005523		% Barium-ICP-Acid DIL.	ug/mL	99.60	<5.00e-02	< 20.30	<2.15e1	20.55	6.21	99.0	20.10	n/a
S96T005523		% Beryllium-ICP-Acid DIL.	ug/mL	98.40	<5.00e-02	< 20.30	<3.00e1	n/a	n/a	99.00	20.10	n/a
S96T005523		% Bismuth-ICP-Acid DIL.	ug/mL	102.8	<5.00e-03	< 2.00e1	<2.00e1	n/a	n/a	101.0	2.000	n/a
S96T005523		% Calcium-ICP-Acid DIL.	ug/mL	101.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	104.0	40.10	n/a
S96T005523		% Cadmium-ICP-Acid DIL.	ug/mL	99.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	101.0	40.10	n/a
S96T005523		% Cerium-ICP-Acid DIL.	ug/mL	100.4	<5.00e-03	< 2.00e1	<2.00e1	n/a	n/a	100.0	2.000	n/a
S96T005523		% Cobalt-ICP-Acid DIL.	ug/mL	98.60	<1.00e-02	< 40.10	<4.01e1	n/a	n/a	100.0	40.10	n/a
S96T005523		% Chromium-ICP-Acid DIL.	ug/mL	100.8	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	100.0	8.020	n/a
S96T005523		% Copper-ICP-Acid DIL.	ug/mL	100.9	<1.00e-02	< 5.91e-02	<6.02e1	596.5	1.84	111.0	4.010	n/a
S96T005523		% Iron-ICP-Acid DIL.	ug/mL	104.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	105.0	4.010	n/a
S96T005523		% Potassium-ICP-Acid DIL.	ug/mL	100.2	<5.00e-01	< 3.15e+03	<3.31e+03	3.24e+03	4.64	99.40	20.10	n/a
S96T005523		% Lithium-ICP-Acid DIL.	ug/mL	100.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	104.0	20.10	n/a
S96T005523		% Magnesium-ICP-Acid DIL.	ug/mL	100.4	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	103.0	4.010	n/a
S96T005523		% Manganese-ICP-Acid DIL.	ug/mL	96.20	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	95.70	40.10	n/a
S96T005523		% Molybdenum-ICP-Acid DIL.	ug/mL	97.80	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	95.60	4.010	n/a
S96T005523		% Nickel-ICP-Acid DIL.	ug/mL	100.4	<5.00e-02	< 35.30	<35.20	35.25	0.28	102.0	20.10	n/a
S96T005523		% Neodymium-ICP-Acid DIL.	ug/mL	100.4	<1.00e-01	< 1.72e+05	<1.76e+05	1.74e+05	2.30	3.55e+03	40.10	n/a
S96T005523		% Niobium-ICP-Acid DIL.	ug/mL	100.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	n/a
S96T005523		% Nitrogen-ICP-Acid DIL.	ug/mL	99.40	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	99.00	8.020	n/a
S96T005523		% Phosphorus-ICP-Acid DIL.	ug/mL	99.60	<1.00e-01	< 1.16e+03	<1.21e+03	1.21e+03	8.26	124.0	80.20	n/a
S96T005523		% Lead-ICP-Acid DIL.	ug/mL	98.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	n/a
S96T005523		% Sulfur-ICP-Acid DIL.	ug/mL	98.80	<1.00e-01	< 4.69e+03	<4.82e+03	4.76e+03	2.73	179.0	40.10	n/a
S96T005523		% Antimony-ICP-Acid DIL.	ug/mL	95.80	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	98.10	24.10	n/a
S96T005523		% Selenium-ICP-Acid DIL.	ug/mL	97.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	108.0	40.10	n/a
S96T005523		% Silicon-ICP-Acid DIL.	ug/mL	99.80	<5.00e-02	< 59.50	<82.00	70.75	31.8	121.0	20.10	n/a
S96T005523		% Strontium-ICP-Acid DIL.	ug/mL	97.60	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	97.90	40.10	n/a
S96T005523		% Tellurium-ICP-Acid DIL.	ug/mL	97.00	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	98.40	4.010	n/a
S96T005523		% Thallium-ICP-Acid DIL.	ug/mL	96.80	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	95.50	80.20	n/a
S96T005523		% Vanadium-ICP-Acid DIL.	ug/mL	95.20	<5.00e-01	<2.00e+02	<2.00e2	n/a	n/a	98.00	200.0	n/a
S96T005523		% Zirconium-ICP-Acid DIL.	ug/mL	100.2	<1.00e-02	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	n/a
S96T005523		% Zinc-ICP-Acid DIL.	ug/mL	101.6	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	103.0	4.010	n/a
S96T005523		% Zirconium-ICP-Acid DIL.	ug/mL	98.20	<1.00e-02	< 4.010	<4.01e1	n/a	n/a	98.90	4.010	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec. %	Det Limit	Count Err%
S96T005525		Fluoride-IC-Dionex 4000/4500	ug/mL	102.7	<1.20e-02	5.94e+02	<1.28e2	N/A	N/A	17.97	122.4	N/A
S96T005525		Chloride-IC-Dionex 4000/4500	ug/mL	95.70	2.00e-02	4.79e+03	4.38e+03	4.58e+03	8.94	87.34	173.4	N/A
S96T005525		Nitrite-IC - Dionex 4000/4500	ug/mL	95.38	<1.08e-01	5.43e+04	5.31e+04	5.37e+04	2.23	95.53	1.08e+03	N/A
S96T005525		Bromide by Ion Chromatograph	ug/mL	99.49	<1.25e-01	<1.28e+03	<1.28e3	N/A	N/A	87.26	1.28e+03	N/A
S96T005525		Nitrate by IC-Dionex 4000/4500	ug/mL	98.15	<1.39e-01	3.75e+03	3.78e+03	3.77e+03	0.80	82.48	1.28e+03	N/A
S96T005525		Phosphate-IC-Dionex 4000/4500	ug/mL	95.77	<1.20e-01	2.74e+03	3.22e+03	2.99e+03	16.11	82.33	1.22e+03	N/A
S96T005525		Sulfate by IC-Dionex 4000/4500	ug/mL	100.8	<1.38e-01	1.58e+04	1.34e+04	1.56e+04	2.94	103.37	1.61e+03	N/A
S96T005525		Oxalate by IC-Dionex 4000/4500	ug/mL	106.1	<1.05e-01	<1.07e+03	<1.07e3	N/A	N/A	103.0	1.07e+03	N/A
S96T005525		Alpha In Liquid Samples	uCi/mL	113.0	<5.78e-03	<5.10e-03	<2.85E-3	N/A	N/A	98.33	7.00e-03	5.00E+02

Table 3. Data Summary Table
g-108

CORE NUMBER: 172
SEGMENT #: 2

SEGMENT PORTION: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO % Spk Rec %	Det Limit	Count Err%
S96T005507		DSC Exotherm using Mettler	Joules/g	100.0	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a
S96T005507		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
S96T005507		% Water by TGA using Mettler	%	100.0	n/a	18.54	23.12	0.00e+00	8.17	n/a	n/a
S96T005512		F Nickel - ICP-Fusion	ug/g	99.20	8.60e-02	1.78e+02	2.84e+02	2.31e+03	45.9	n/a	n/a
S96T005512		F Silver - ICP-Fusion	ug/g	98.00	< 1.00e-02	3.59e+02	4.20e+02	n/a	n/a	418.0	n/a
S96T005512		F Aluminum - ICP-Fusion	ug/g	98.60	< 5.00e-02	8.55e+02	8.76e+02	8.64e+03	2.66	n/a	1.05e+03
S96T005512		F Arsenic - ICP-Fusion	ug/g	10.16	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Boron - ICP-Fusion	ug/g	98.30	< 5.00e-02	< 1.00e+02	< 0.153	n/a	n/a	1.05e+03	n/a
S96T005512		F Barium - ICP-Fusion	ug/g	98.20	< 5.00e-02	< 1.00e+02	< 0.153	n/a	n/a	1.05e+03	n/a
S96T005512		F Beryllium - ICP-Fusion	ug/g	102.0	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	105.0	n/a
S96T005512		F Bismuth - ICP-Fusion	ug/g	100.0	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Calcium - ICP-Fusion	ug/g	98.60	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	105.0	n/a
S96T005512		F Cadmium - ICP-Fusion	ug/g	99.40	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Cerium - ICP-Fusion	ug/g	99.30	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Cobalt - ICP-Fusion	ug/g	99.80	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	4.18e+0	n/a
S96T005512		F Chromium - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Copper - ICP-Fusion	ug/g	103.4	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Iron - ICP-Fusion	ug/g	99.30	< 5.00e-02	< 1.00e+02	< 0.153	n/a	n/a	1.05e+03	n/a
S96T005512		F Lanthanum - ICP-Fusion	ug/g	98.00	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Lithium - ICP-Fusion	ug/g	95.00	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	1.05e+03	n/a
S96T005512		F Magnesium - ICP-Fusion	ug/g	95.00	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Manganese - ICP-Fusion	ug/g	96.60	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Molybdenum - ICP-Fusion	ug/g	100.0	< 5.00e-02	< 1.00e+02	< 0.153	n/a	n/a	2.09e+03	n/a
S96T005512		F Sodium - ICP-Fusion	ug/g	95.60	1.670	2.98e+02	2.97e+02	2.98e+05	0.34	n/a	1.05e+03
S96T005512		F Strontium - ICP-Fusion	ug/g	99.60	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Phosphorus - ICP-Fusion	ug/g	99.60	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Lead - ICP-Fusion	ug/g	98.80	< 2.00e-01	< 1.00e+02	< 0.263	1.74e+04	63.6	n/a	4.18e+03
S96T005512		F Sulfur - ICP-Fusion	ug/g	98.00	< 1.00e-01	< 1.00e+02	< 0.263	9.44e+04	10.7	n/a	2.09e+03
S96T005512		F Tellurium - ICP-Fusion	ug/g	95.00	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Vanadium - ICP-Fusion	ug/g	96.60	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	1.05e+03	n/a
S96T005512		F Silicon - ICP-Fusion	ug/g	98.80	< 5.00e-02	< 1.00e+02	< 0.153	n/a	n/a	2.09e+03	n/a
S96T005512		F Zirconium - ICP-Fusion	ug/g	96.60	< 1.00e-01	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Barium - ICP-Fusion	ug/g	97.40	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Strontium - ICP-Fusion	ug/g	97.20	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Calcium - ICP-Fusion	ug/g	96.60	< 2.00e-01	< 1.00e+02	< 0.263	n/a	n/a	4.18e+03	n/a
S96T005512		F Thallium - ICP-Fusion	ug/g	96.60	< 5.00e-01	< 1.00e+02	< 0.263	n/a	n/a	1.05e+04	n/a
S96T005512		F Vanadium - ICP-Fusion	ug/g	96.60	< 5.00e-01	< 1.00e+02	< 0.153	n/a	n/a	1.05e+03	n/a
S96T005512		F Uranium - ICP-Fusion	ug/g	99.80	< 5.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Zirconium - ICP-Fusion	ug/g	100.8	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	2.09e+03	n/a
S96T005512		F Zinc - ICP-Fusion	ug/g	97.60	< 1.00e-02	< 1.00e+02	< 0.263	n/a	n/a	1.10e+02	n/a
S96T005512		F Cobalt - 160 by GEA	uc1/g	97.36	< 15e-02	< 1.32e-02	< 8.63e-03	17.61	22.7	n/a	1.25
S96T005512		F Gadolinium - 160 by GEA	uc1/g	97.83	< 81e-02	< 4.44e-02	< 2.58e-2	n/a	n/a	4.50e-02	n/a
S96T005512		F Europium - 155 by GEA	uc1/g	n/a	< 5.42e-02	< 9.91e-02	< 0.07e-1	n/a	n/a	9.90e-02	n/a
S96T005512		F Americium - 241 by GEA	uc1/g	n/a	< 8.09e-02	< 2.63e-01	< 2.81e-1	n/a	n/a	2.63e-01	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPO %	Spk Rec %	Det Limit	Count Err%
S56T005512	F	Alpha of Digested Solid	LCI/g	98.70	<3.16e-03	2.89e-03	4.02e-02	4.13e-03	13.8	130.6	2.00e+03	4.63E+01
S56T005515	W	Fluoride-IC-Bionex 4000/4500	ug/g	87.29	<1.210	2.69e-04	7.06e-04	6.44e-04	17.5	130.6	2.00e+03	0.0
S56T005515	W	Chloride-IC-Bionex 4000/4500	ug/g	101.8	<1.720	2.59e-02	1.887e-01	709.9	49.9	133.9	2.00e+03	0.0
S56T005515	W	Nitrite-IC - Bionex 4000/4500	ug/g	105.9	<10.90	7.63e-03	1.03e-01	9.93e+03	5.54	130.5	2.25e+03	0.0
S56T005515	W	Bromide by Ion Chromatograph	ug/g	96.27	<12.60	7.06e-03	1.13e-01	7.48e+04	6.73	130.9	1.06e+03	0.0
S56T005515	W	Nitrate by IC-Bionex 4000/4500	ug/g	100.8	<14.00	7.24e-04	7.72e-02	8.54e+04	6.72	130.0	2.89e+03	0.0
S56T005515	W	Phosphate-IC-Bionex 4000/4500	ug/g	93.38	<12.10	1.23e-03	3.72e-02	8.54e+04	112	130.3	2.50e+03	0.0
S56T005515	W	Sulfate by IC-Bionex 4000/4500	ug/g	100.2	<13.90	2.10e-03	3.23e-05	2.67e+05	42.4	130.7	2.89e+03	0.0
S56T005515	W	Oxalate by IC-Bionex 4000/4500	ug/g	102.1	<10.60	<2.19e-03	<2.14e-3	n/a	n/a	118.1	2.19e+03	0.0

Table 3. Data Summary Table
B-108CORE NUMBER: 173
SEGMENT #: Core Composite

SEGMENT PORTION: Core Composite

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005483		Bulk Density of Sample	g/mL	n/a	n/a	1.740	n/a	n/a	n/a	n/a	3.00E-01	n/a
S96T005483		DSC Exotherm using Mettler	Joules/g	95.61	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
S96T005483		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
S96T005483		% Water by TGA using Mettler	%	99.09	n/a	39.65	30.95	35.30	24.6	n/a	n/a	n/a
S96T005483		TIC by Acul/Coulometry	ug/g	100.2	4.200	1.51E+03	1.26E+03	1.38E+03	16.1	96.00	5.0E-01	n/a
S96T005483		TIC by Persulfate/Coulometry	ug/g	93.67	3.500	3.59E+02	2.94E+02	3.16E+02	14.2	92.60	4.00E-01	n/a
S96T005487		F Uranium by Phosphorescence	ug/g	107.7	104.0	8.09E+02	1.12E+03	964.3	32.2	91.80	1.780	1.24E+03
S96T005487		F U-Phosphorescence Inst. Error	% Inst Error	3.50	1.150	1.240	1.340	1.390	1.54	n/a	2.00E-03	2.22E+03
S96T005487		F Strontium-89/90 High Level	uCi/g	99.41	2.00E+03	4.30E-01	3.80E-03	3.56E+03	3.22	n/a	2.00E-03	2.22E+03
S96T005487		F Nickel -ICP-Fusion	ug/g	100.0	1.220	1.53E+03	1.58E+03	1.58E+03	3.22	96.20	38.0	n/a
S96T005487		F Silver -ICP-Fusion	ug/g	99.00	45.00E-02	1.59E+02	1.59E+02	1.59E+02	n/a	87.30	193.0	n/a
S96T005487		F Aluminum -ICP-Fusion	ug/g	95.80	45.00E-02	1.77E+04	7.2E+04	4.60E+04	14	85.20	94.0	n/a
S96T005487		F Arsenic -ICP-Fusion	ug/g	101.0	41.00E-01	1.97E+03	4.9E+03	4.9E+03	n/a	93.40	1.93E+03	n/a
S96T005487		F Boron -ICP-Fusion	ug/g	97.80	45.00E-02	3.64E+02	4.9E+02	n/a	n/a	88.20	94.0	n/a
S96T005487		F Barium -ICP-Fusion	ug/g	100.2	45.00E-02	3.64E+02	4.9E+02	n/a	n/a	88.20	94.0	n/a
S96T005487		F Beryllium -ICP-Fusion	ug/g	100.2	45.00E-03	3.64E+02	4.9E+02	n/a	n/a	88.20	94.0	n/a
S96T005487		F Bismuth -ICP-Fusion	ug/g	100.6	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	102.0	1.93E+03	n/a
S96T005487		F Calcium -ICP-Fusion	ug/g	101.0	45.00E-01	1.93E+03	4.9E+03	n/a	n/a	99.40	1.93E+03	n/a
S96T005487		F Cadmium -ICP-Fusion	ug/g	100.2	45.00E-03	1.93E+03	4.9E+03	n/a	n/a	99.40	1.93E+03	n/a
S96T005487		F Cerium -ICP-Fusion	ug/g	98.40	41.00E-03	1.93E+03	4.9E+03	n/a	n/a	94.90	96.40	n/a
S96T005487		F Cobalt -ICP-Fusion	ug/g	101.4	42.00E-01	1.93E+03	4.9E+03	n/a	n/a	96.40	38E-03	n/a
S96T005487		F Chromium -ICP-Fusion	ug/g	101.4	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	96.50	193.0	n/a
S96T005487		F Copper -ICP-Fusion	ug/g	102.2	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	97.70	193.0	n/a
S96T005487		F Iron -ICP-Fusion	ug/g	97.60	45.00E-03	3.29E+03	4.9E+03	n/a	n/a	93.70	94.0	n/a
S96T005487		F Lanthanum -ICP-Fusion	ug/g	100.0	45.00E-03	3.29E+03	4.9E+03	n/a	n/a	90.90	94.0	n/a
S96T005487		F Lithium -ICP-Fusion	ug/g	96.80	41.00E-03	1.93E+03	4.9E+03	n/a	n/a	85.20	193.0	n/a
S96T005487		F Magnesium -ICP-Fusion	ug/g	97.40	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	87.70	1.93E+03	n/a
S96T005487		F Manganese -ICP-Fusion	ug/g	97.40	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	90.30	94.0	n/a
S96T005487		F Molybdenum -ICP-Fusion	ug/g	101.0	45.00E-02	1.93E+03	4.9E+03	n/a	n/a	90.30	94.0	n/a
S96T005487		F Sodium -ICP-Fusion	ug/g	97.60	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	90.30	94.0	n/a
S96T005487		F Neodymium -ICP-Fusion	ug/g	97.60	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	90.30	94.0	n/a
S96T005487		F Phosphorus -ICP-Fusion	ug/g	98.20	42.00E-01	1.93E+03	4.9E+03	n/a	n/a	89.00	1.93E+03	n/a
S96T005487		F Lead -ICP-Fusion	ug/g	100.2	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	86.50	3.8E+03	n/a
S96T005487		F Sulfur -ICP-Fusion	ug/g	98.20	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	97.70	1.93E+03	n/a
S96T005487		F Antimony -ICP-Fusion	ug/g	98.20	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	91.10	1.6E+03	n/a
S96T005487		F Selenium -ICP-Fusion	ug/g	98.20	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	93.40	1.93E+03	n/a
S96T005487		F Silicon -ICP-Fusion	ug/g	98.20	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	93.40	94.0	n/a
S96T005487		F Samarium -ICP-Fusion	ug/g	98.20	41.00E-01	1.93E+03	4.9E+03	n/a	n/a	92.00	1.93E+03	n/a
S96T005487		F Strontium -ICP-Fusion	ug/g	97.00	41.00E-02	1.93E+03	4.9E+03	n/a	n/a	87.40	193.0	n/a
S96T005487		F Tantalum -ICP-Fusion	ug/g	97.40	41.00E-03	1.93E+03	4.9E+03	n/a	n/a	89.40	193.0	n/a
S96T005487		F Thallium -ICP-Fusion	ug/g	94.90	45.00E-01	3.58E+03	4.9E+03	n/a	n/a	93.30	3.8E+03	n/a
S96T005487		F Uranium -ICP-Fusion	ug/g	94.90	45.00E-02	4.9E+03	4.9E+03	n/a	n/a	93.30	9.4E+03	n/a
S96T005487		F Vanadium -ICP-Fusion	ug/g	100.2	45.00E-02	4.9E+03	4.9E+03	n/a	n/a	94.70	94.0	n/a
S96T005487		F Zinc -ICP-Fusion	ug/g	102.0	41.00E-02	4.9E+03	4.9E+03	n/a	n/a	99.50	193.0	n/a

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Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005487	F	Zirconium - ICP-Fusion	ug/g	98.60	<1.00e-02	<1.95e-02	<1.95e-02	N/A	N/A	97.10	183.0	N/A
S96T005487	F	Cobalt-60 by GEA	uCi/g	97.49	<1.15e-02	<1.18e-02	<1.18e-02	N/A	N/A	N/A	1.40e-02	N/A
S96T005487	F	Cesium-137 by GEA	uCi/g	100.3	<1.12e-02	10.39	15.50	13.10	33.6	N/A	N/A	1.45
S96T005487	F	Europium-154 by GEA	uCi/g	N/A	<3.21e-02	<8.9e-02	<3.78e-02	N/A	N/A	N/A	2.90e-02	N/A
S96T005487	F	Europium-155 by GEA	uCi/g	N/A	<3.11e-02	<8.40e-02	<1.00e-01	N/A	N/A	N/A	8.40e-02	N/A
S96T005487	F	Americium-241 by GEA	uCi/g	N/A	<1.23e-02	<2.10e-01	<2.14e-01	N/A	N/A	N/A	2.10e-01	N/A
S96T005487	F	Alpha of Digested Sample	uCi/g	92.64	<1.23e-02	<1.24e-02	1.19e-02	N/A	74.37	90.3	5.90e-02	2.45E+00
S96T005487	F	Beta of Solid Sample	uCi/g	99.66	<1.23e-02	10.70	23.60	17.13	75.3	90.3	5.70e-02	1.65E+00
S96T005488	F	Fluoride-IC-Bioxex 4000/4500	ug/g	100.7	<1.20e-02	1.92e-04	4.58e-04	3.24e-04	81.4	131.4	333.7	N/A
S96T005488	F	Chloride-IC-Bioxex 4000/4500	ug/g	95.95	<2.70e-02	8.94e-03	1.14e-03	4.99e-03	65.3	103.0	2.12e+03	N/A
S96T005488	F	Nitrite-IC - Bioex 4000/4500	ug/g	95.95	<1.08e-01	1.53e-03	1.05e-04	7.92e-03	65.3	99.67	2.12e+03	N/A
S96T005488	F	Bromide by Ion Chromatograph	ug/g	98.64	<1.23e-01	4.40e-03	4.46e-3	N/A	70.5	102.9	2.73e+03	N/A
S96T005488	F	Nitrate by Ion Chromatograph	ug/g	97.64	<1.35e-01	1.30e-04	7.05e-04	2.89e-04	51.9	150.7	2.36e+03	N/A
S96T005488	F	Phosphate-IC-Bioxex 4000/4500	ug/g	94.50	<1.35e-01	1.30e-02	1.64e-04	1.03e-03	15.9	102.4	2.71e+03	N/A
S96T005488	F	Sulfate by IC-Bioxex 4000/4500	ug/g	99.03	<1.35e-01	2.22e-03	1.60e-03	9.37e-04	15.9	102.4	2.71e+03	N/A
S96T005488	F	Oxalate by IC-Bioxex 4000/4500	ug/g	104.2	<1.00e-02	12.50	<2.0e-03	N/A	107.4	107.4	2.04e+03	N/A
S96T005489	F	Silver - ICP-H2O Dig/Actd	ug/g	100.3	<1.00e-02	2.50	81.20	13.75	12.7	102.0	40.00	N/A
S96T005489	F	Aluminum - ICP-H2O Dig/Actd	ug/g	99.60	<3.01e-01	2.39e-02	81.60	553.0	112	101.0	20.00	N/A
S96T005489	F	Arsenic - ICP-H2O Dig/Actd	ug/g	104.2	<1.00e-02	5.99e-02	<3.90e-02	N/A	96.6	109.0	40.00	N/A
S96T005489	F	Boron - ICP-H2O Dig/Actd	ug/g	102.4	<1.00e-02	5.58e-02	1.60e-03	1.08e-03	96.6	103.0	20.00	N/A
S96T005489	F	Barium - ICP-H2O Dig/Actd	ug/g	102.4	<1.00e-02	<3.00	<1.98e-03	N/A	101.0	101.0	20.00	N/A
S96T005489	F	Beryllium - ICP-H2O Dig/Actd	ug/g	104.4	<5.00e-03	<3.00	<1.98e-03	N/A	104.0	104.0	2.000	N/A
S96T005489	F	Bismuth - ICP-H2O Dig/Actd	ug/g	103.0	<1.00e-01	<30.90	<3.97e-01	N/A	108.0	108.0	40.00	N/A
S96T005489	F	Calcium - ICP-H2O Dig/Actd	ug/g	99.60	<1.00e-01	<30.90	<3.97e-01	N/A	107.0	107.0	40.00	N/A
S96T005489	F	Cadmium - ICP-H2O Dig/Actd	ug/g	101.6	<5.00e-03	<3.00	<1.98e-03	N/A	104.0	104.0	2.000	N/A
S96T005489	F	Cerium - ICP-H2O Dig/Actd	ug/g	102.4	<1.00e-02	<3.90	<3.97e-01	N/A	103.0	103.0	40.00	N/A
S96T005489	F	Cobalt - ICP-H2O Dig/Actd	ug/g	102.0	<2.00e-02	<7.90	<7.93e-03	N/A	104.0	104.0	7.980	N/A
S96T005489	F	Chromium - ICP-H2O Dig/Actd	ug/g	107.4	<1.00e-02	75.00	128.0	100.5	54.7	104.0	4.000	N/A
S96T005489	F	Copper - ICP-H2O Dig/Actd	ug/g	101.6	<5.00e-02	<3.90	<3.97e-03	N/A	106.0	106.0	40.00	N/A
S96T005489	F	Iron - ICP-H2O Dig/Actd	ug/g	101.6	<5.00e-02	<3.00	<1.98e-01	N/A	102.0	102.0	20.00	N/A
S96T005489	F	Potassium - ICP-H2O Dig/Actd	ug/g	97.80	<5.00e-01	3.29e+02	611.0	470.0	60.0	114.0	200.0	N/A
S96T005489	F	Lanthanum - ICP-H2O Dig/Actd	ug/g	104.0	<5.00e-02	<20.00	<1.98e-01	N/A	104.0	104.0	20.00	N/A
S96T005489	F	Lithium - ICP-H2O Dig/Actd	ug/g	104.8	<1.00e-02	<3.90	<3.97e-03	N/A	105.0	105.0	4.000	N/A
S96T005489	F	Magnesium - ICP-H2O Dig/Actd	ug/g	98.40	<1.00e-01	<39.90	<3.97e-01	N/A	98.00	98.00	40.00	N/A
S96T005489	F	Manganese - ICP-H2O Dig/Actd	ug/g	98.80	<1.00e-02	<3.90	<3.97e-03	N/A	98.40	98.40	4.000	N/A
S96T005489	F	Molybdenum - ICP-H2O Dig/Actd	ug/g	102.4	<5.00e-02	<20.00	<1.98e-01	N/A	104.0	104.0	20.00	N/A
S96T005489	F	Sodium - ICP-H2O Dig/Actd	ug/g	101.6	<6.70	1.79e+05	2.06e+05	1.92e+05	14.6	<1.920e1	40.00	N/A
S96T005489	F	Neodymium - ICP-H2O Dig/Actd	ug/g	104.0	<1.00e-01	<39.90	<3.97e-03	N/A	104.0	104.0	40.00	N/A
S96T005489	F	Nickel - ICP-H2O Dig/Actd	ug/g	101.2	<2.00e-02	<6.37e+04	2.75e+04	4.56e+04	79.4	104.0	7.980	N/A
S96T005489	F	Phosphorus - ICP-H2O Dig/Actd	ug/g	104.4	<2.00e-01	6.37e+04	2.75e+04	4.56e+04	79.4	<5.620e1	79.80	N/A
S96T005489	F	Lead - ICP-H2O Dig/Actd	ug/g	101.2	<1.00e-01	<39.90	<3.97e-01	N/A	104.0	104.0	40.00	N/A
S96T005489	F	Sulfur - ICP-H2O Dig/Actd	ug/g	100.8	<1.00e-02	<29.00	<2.38e-01	N/A	101.0	101.0	24.00	N/A
S96T005489	F	Antimony - ICP-H2O Dig/Actd	ug/g	98.60	<1.00e-02	<39.90	<3.97e-01	N/A	99.40	99.40	40.00	N/A
S96T005489	F	Selenium - ICP-H2O Dig/Actd	ug/g	98.60	<1.00e-01	<24.00	<2.38e-01	N/A	101.0	101.0	40.00	N/A
S96T005489	F	Silicon - ICP-H2O Dig/Actd	ug/g	100.8	<1.950	1.79e+03	1.24e+04	7.08e+03	151	136.0	20.00	N/A
S96T005489	F	Strontium - ICP-H2O Dig/Actd	ug/g	100.8	<1.00e-01	<39.90	<3.97e-01	N/A	101.0	101.0	40.00	N/A
S96T005489	F	Tantalum - ICP-H2O Dig/Actd	ug/g	101.4	<1.00e-02	<3.90	<3.97e-03	N/A	101.0	101.0	4.000	N/A
S96T005489	F	Tellurium - ICP-H2O Dig/Actd	ug/g	101.4	<1.00e-02	<3.90	<3.97e-03	N/A	101.0	101.0	4.000	N/A
S96T005489	F	Thallium - ICP-H2O Dig/Actd	ug/g	98.20	<2.00e-01	<79.90	<7.93e-01	N/A	98.00	98.00	79.80	N/A
S96T005489	F	Thorium - ICP-H2O Dig/Actd	ug/g	98.60	<5.00e-01	<22.00e+02	<1.98e-02	N/A	98.40	98.40	200.0	N/A
S96T005489	F	Uranium - ICP-H2O Dig/Actd	ug/g	102.4	<5.00e-02	<20.00	<1.98e-01	N/A	104.0	104.0	20.00	N/A
S96T005489	F	Vanadium - ICP-H2O Dig/Actd	ug/g	102.4	<5.00e-02	<20.00	<1.98e-01	N/A	104.0	104.0	20.00	N/A

Sample#	R	#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec. %	Det Limit	Count Err%
S961005439	1	Zinc - ICP-H20 Dig/Acid	ug/g	102.6	2.60e-02	16.50	<3.97e0	n/a	n/a	n/a	104.0	4.000	n/a
S961005439	1	Zirconium by Phosphorescence	ug/g	101.0	<1.00e-02	< 3.990	8.420	n/a	n/a	n/a	102.1	4.000	n/a
S971000002	F	Uranium by Phosphorescence	ug/g	104.4	16.40	5.00e-02	395.0	431.3	23.0	82.51	1.850	1.41E+00	n/a
S971000002	F	U-Phosphorus Instr. Error	% Inst Error	3.15	1.580	3.40	1.360	1.365	1.365	1.36	n/a	n/a	n/a
S971000002	F	U-Phosphorus-Inst. Error	% Inst Error	3.15	1.580	3.40	1.360	1.365	1.365	1.36	n/a	n/a	n/a
S971000002	F	Uranium-8790 High Level	ug/g	96.45	1.70e-02	3.260	3.800	3.550	15.3	n/a	5.00e-03	1.61E+00	n/a
S971000002	F	Silver - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e-02	<1.97e2	n/a	n/a	n/a	83.80	987.0	n/a
S971000002	F	Aluminum - ICP-Fusion	ug/g	99.20	<5.00e-02	6.35e-04	7.92e+04	22.2	77.70	97.70	1.97e+03	n/a	n/a
S971000002	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-02	<1.97e-03	<1.97e3	n/a	n/a	n/a	87.70	1.97e+03	n/a
S971000002	F	Boron - ICP-Fusion	ug/g	100.8	<5.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	89.40	988.0	n/a
S971000002	F	Beryllium - ICP-Fusion	ug/g	103.2	<5.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	89.40	988.0	n/a
S971000002	F	Bismuth - ICP-Fusion	ug/g	103.2	<5.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	89.40	988.0	n/a
S971000002	F	Calcium - ICP-Fusion	ug/g	98.60	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Cadmium - ICP-Fusion	ug/g	103.2	<1.00e-03	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Cobalt - ICP-Fusion	ug/g	100.4	<1.00e-02	<3.95e-02	<3.94e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Copper - ICP-Fusion	ug/g	101.2	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Iron - ICP-Fusion	ug/g	101.2	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Lanthanum - ICP-Fusion	ug/g	99.60	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Lithium - ICP-Fusion	ug/g	101.6	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Magnesium - ICP-Fusion	ug/g	98.40	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Manganese - ICP-Fusion	ug/g	101.4	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Molybdenum - ICP-Fusion	ug/g	103.6	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	92.50	1.97e+03	n/a
S971000002	F	Sodium - ICP-Fusion	ug/g	102.6	<1.00e-01	<1.97e+03	<1.97e3	1.84e+05	9.21	49.0	1.97e+03	n/a	n/a
S971000002	F	Neodymium - ICP-Fusion	ug/g	101.0	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	93.50	3.95e+03	n/a
S971000002	F	Phosphorus - ICP-Fusion	ug/g	98.00	<1.00e-01	<1.97e+03	<1.97e3	4.35e+04	28.4	93.50	3.95e+03	n/a	n/a
S971000002	F	Lead - ICP-Fusion	ug/g	98.00	<1.00e-01	<1.97e+03	<1.97e3	3.94e3	26.4	93.50	3.95e+03	n/a	n/a
S971000002	F	Sulfur - ICP-Fusion	ug/g	98.00	<1.00e-01	<1.97e+03	<1.97e3	1.47e4	32.4	93.50	3.95e+03	n/a	n/a
S971000002	F	Antimony - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	1.26e+04	26.4	93.50	3.95e+03	n/a	n/a
S971000002	F	Selenium - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	1.18e4	n/a	96.40	1.97e+03	n/a	n/a
S971000002	F	Silicon - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	1.94e+03	51.3	94.30	988.0	n/a	n/a
S971000002	F	Samarium - ICP-Fusion	ug/g	101.2	<1.00e-02	<1.97e+03	<1.97e3	n/a	n/a	n/a	94.10	1.97e+03	n/a
S971000002	F	Strontium - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	n/a	n/a	n/a	94.10	1.97e+03	n/a
S971000002	F	Titanium - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	n/a	n/a	n/a	91.00	197.0	n/a
S971000002	F	Thallium - ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+03	<1.97e3	n/a	n/a	n/a	91.00	3.95e+03	n/a
S971000002	F	Uranium - ICP-Fusion	ug/g	98.30	<5.00e-01	<3.87e-02	<3.85e2	n/a	n/a	n/a	94.00	9.88e+03	n/a
S971000002	F	Vanadium - ICP-Fusion	ug/g	100.8	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	95.20	988.0	n/a
S971000002	F	Zinc - ICP-Fusion	ug/g	100.8	<1.00e-02	<3.87e-02	<3.85e2	n/a	n/a	n/a	100.0	197.0	n/a
S971000002	F	Zirconium - ICP-Fusion	ug/g	100.2	<1.00e-02	<1.97e+03	<1.97e3	n/a	n/a	n/a	92.50	197.0	n/a
S971000002	F	Cobalt-60 by GEA	ug/g	99.18	<2.29e-02	<1.33e-02	<1.54e+2	n/a	n/a	n/a	n/a	1.30e-02	n/a
S971000002	F	Cesium-137 by GEA	ug/g	98.25	<2.29e-02	<1.33e-02	<1.54e+2	13.84	19.5	n/a	n/a	n/a	1.37
S971000002	F	Europium-154 by GEA	ug/g	98.25	<2.29e-02	<1.33e-02	<1.54e+2	n/a	n/a	n/a	n/a	3.50e-02	n/a
S971000002	F	Europium-155 by GEA	ug/g	98.25	<2.29e-02	<1.33e-02	<1.54e+2	n/a	n/a	n/a	n/a	8.90e-02	n/a
S971000002	F	Amplum-241 by GEA	ug/g	98.25	<2.29e-02	<1.33e-02	<1.54e+2	n/a	n/a	n/a	n/a	2.27e-01	n/a
S971000002	F	Alpha of Digested Solid	ug/g	93.61	3.00e-03	1.33e-02	1.37e-02	1.35e-02	2.96	80.50	4.00e-03	3.43E+01	n/a
S971000002	F	Beta of Solid Sample	ug/g	107.1	9.10e-02	19.40	24.10	21.75	21.6	110.2	1.80e-02	5.95E-01	n/a
S971000015	W	Fluoride-18-Dioxex 4000/4500	ug/g	95.76	<4.92e-01	2.42e+04	2.35e+04	4.18	433.2	6.93	138.0	98.56	n/a
S971000015	W	Chloride-18-Dioxex 4000/4500	ug/g	100.8	<4.92e-01	4.48e+04	4.18	433.2	6.93	138.0	107.0	887.2	n/a
S971000015	W	Nitrite-18-Dioxex 4000/4500	ug/g	103.1	<2.17e-01	9.64e+03	8.55e+03	9.26e+03	8.75	107.0	887.2	n/a	n/a
S971000015	W	Bromide by Ion Chromatograph	ug/g	99.15	<5.120	<1.03e+03	<1.05e3	n/a	n/a	n/a	96.94	1.03e+03	n/a

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Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	App. %	Spk Rec. %	Det. Limits	Count Err%
S97T000015	W	Nitrate by IC-Dionex 4000/4500	ug/g	100.0	<5.700	3.42e+04	3.11e+04	3.23e+04	11.2	106.1	1.6E+03	N/A
S97T000015	W	Phosphate by IC-Dionex 4000/4500	ug/g	100.0	<4.920	1.44e+05	1.38e+05	1.41e+05	4.26	107.4	1.9E+03	N/A
S97T000015	W	Sulfate by IC-Dionex 4000/4500	ug/g	99.84	<5.660	4.02e+04	3.47e+04	3.74e+04	4.77	106.0	1.3E+03	N/A
S97T000015	W	Oxalate by IC-Dionex 4000/4500	ug/g	100.9	<4.800	<8.63e-02	<8.62e-02	N/A	N/A	100.0	862.6	N/A
S97T000015	W	Silver - ICP-H20 D19/Acid	ug/g	98.40	<1.00e-02	13.60	12.30	13.05	8.93	98.0	30.90	N/A
S97T000016	1	Aluminum - ICP-H20 D19/Acid	ug/g	99.00	<1.74e-01	8.49e-02	785.0	817.0	7.83	98.50	30.90	N/A
S97T000016	1	Arsenic - ICP-H20 D19/Acid	ug/g	103.8	<1.00e-01	< 6.170	<6.17e1	N/A	N/A	100.0	61.80	N/A
S97T000016	1	Boron - ICP-H20 D19/Acid	ug/g	101.2	2.230	8.51e-02	838.0	844.5	1.54	99.60	30.90	N/A
S97T000016	1	Barium - ICP-H20 D19/Acid	ug/g	102.6	<5.00e-02	< 30.90	<3.08e1	N/A	N/A	102.0	30.90	N/A
S97T000016	1	Beryllium - ICP-H20 D19/Acid	ug/g	102.4	<5.00e-01	< 3.090	<3.08e0	N/A	N/A	102.0	30.90	N/A
S97T000016	1	Blsmith - ICP-H20 D19/Acid	ug/g	102.2	<1.00e-01	< 6.170	<6.17e1	N/A	N/A	100.0	61.80	N/A
S97T000016	1	Calcium - ICP-H20 D19/Acid	ug/g	97.60	<1.00e-03	< 3.090	<3.08e0	N/A	N/A	101.0	30.90	N/A
S97T000016	1	Cadmium - ICP-H20 D19/Acid	ug/g	100.4	<5.00e-03	< 6.170	<6.17e1	N/A	N/A	102.0	61.80	N/A
S97T000016	1	Cerium - ICP-H20 D19/Acid	ug/g	100.4	<1.00e-01	< 6.170	<6.17e1	N/A	N/A	102.0	61.80	N/A
S97T000016	1	Cobalt - ICP-H20 D19/Acid	ug/g	101.2	<2.00e-02	1.26e+02	117.0	121.5	7.41	100.0	12.30	N/A
S97T000016	1	Chromium - ICP-H20 D19/Acid	ug/g	99.40	<1.00e-02	< 6.170	<6.17e0	N/A	N/A	107.0	61.80	N/A
S97T000016	1	Copper - ICP-H20 D19/Acid	ug/g	107.4	<1.00e-02	< 30.90	<3.08e1	N/A	N/A	103.0	30.90	N/A
S97T000016	1	Iron - ICP-H20 D19/Acid	ug/g	100.2	<5.00e-02	< 30.90	<3.08e1	N/A	N/A	80.30	30.90	N/A
S97T000016	1	Potassium - ICP-H20 D19/Acid	ug/g	106.6	<5.00e-01	7.47e+02	688.0	687.5	17.3	103.0	30.90	N/A
S97T000016	1	Leutham - ICP-H20 D19/Acid	ug/g	102.0	<1.00e-02	< 30.90	<3.08e1	N/A	N/A	101.0	61.80	N/A
S97T000016	1	Lithium - ICP-H20 D19/Acid	ug/g	101.2	<1.00e-02	< 6.170	<6.17e1	N/A	N/A	100.0	61.80	N/A
S97T000016	1	Magnesium - ICP-H20 D19/Acid	ug/g	101.2	<1.00e-02	< 6.170	<6.17e1	N/A	N/A	96.90	61.80	N/A
S97T000016	1	Manganese - ICP-H20 D19/Acid	ug/g	97.60	<1.00e-02	< 30.90	<3.08e1	N/A	N/A	104.0	30.90	N/A
S97T000016	1	Molybdenum - ICP-H20 D19/Acid	ug/g	101.2	<5.00e-02	1.74e+03	1.68e+03	1.71e+03	3.51	5.10e+02	61.80	N/A
S97T000016	1	Sodium - ICP-H20 D19/Acid	ug/g	104.4	3.640	1.74e+03	1.68e+03	1.71e+03	N/A	104.0	61.80	N/A
S97T000016	1	Neodymium - ICP-H20 D19/Acid	ug/g	102.0	<1.00e-01	< 6.170	<6.17e1	N/A	N/A	100.0	12.30	N/A
S97T000016	1	Nickel - ICP-H20 D19/Acid	ug/g	100.6	<2.00e-02	12.30	<1.35e1	4.77e+04	0.00	-2.59e+03	123.0	N/A
S97T000016	1	Phosphorus - ICP-H20 D19/Acid	ug/g	103.2	<2.00e-01	4.77e+04	<4.77e4	N/A	N/A	101.0	61.80	N/A
S97T000016	1	Lead - ICP-H20 D19/Acid	ug/g	97.60	<1.00e-01	1.49e+02	<1.49e1	N/A	N/A	97.20	36.90	N/A
S97T000016	1	Antimony - ICP-H20 D19/Acid	ug/g	98.40	<1.00e-02	< 37.00	<3.70e1	1.36e+04	9.59	63.60	61.80	N/A
S97T000016	1	Selenium - ICP-H20 D19/Acid	ug/g	99.30	<1.00e-02	< 41.70	<4.17e1	N/A	N/A	93.80	61.80	N/A
S97T000016	1	Silicon - ICP-H20 D19/Acid	ug/g	99.30	<1.00e-01	4.23e+03	4.2e+03	4.2e+03	0.47	153.0	30.90	N/A
S97T000016	1	Samarium - ICP-H20 D19/Acid	ug/g	100.2	5.02e-01	< 41.70	<4.17e1	N/A	N/A	301.0	61.80	N/A
S97T000016	1	Strontium - ICP-H20 D19/Acid	ug/g	101.0	<1.00e-02	< 6.170	<6.17e0	N/A	N/A	101.0	61.80	N/A
S97T000016	1	Tantalum - ICP-H20 D19/Acid	ug/g	99.00	<1.00e-02	< 6.170	<6.17e0	N/A	N/A	99.40	61.80	N/A
S97T000016	1	Thallium - ICP-H20 D19/Acid	ug/g	97.00	<2.00e-01	<1.35e+02	<1.35e2	N/A	N/A	95.00	123.0	N/A
S97T000016	1	Uranium - ICP-H20 D19/Acid	ug/g	98.00	<5.00e-01	<1.09e+02	<1.09e2	N/A	N/A	100.50	309.0	N/A
S97T000016	1	Vanadium - ICP-H20 D19/Acid	ug/g	100.8	<5.00e-02	< 6.170	<6.17e0	N/A	N/A	103.0	61.80	N/A
S97T000016	1	Zinc - ICP-H20 D19/Acid	ug/g	101.6	<1.00e-02	< 6.170	<6.17e0	N/A	N/A	104.0	61.80	N/A
S97T000016	1	Zirconium - ICP-H20 D19/Acid	ug/g	100.2	<1.00e-02	< 6.170	<6.17e0	N/A	N/A	101.0	61.80	N/A

24-feb-1997 18:11:11
A-0002-1CORE NUMBER: 173
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Table 3. Data Summary Table
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Sample #	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count Err%
3961005465		Bulk Density of Sample	g/mL	n/a	n/a	1.910	n/a	n/a	n/a	5.00e-01	n/a
3961005466		DSC Exotherm using Mettler	Joules/g	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a
3961005466		DSC Exotherm DRY Calculated	Joules/g DRY	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a
3961005466		% Water by IGA using Mettler	%	99.0	n/a	18.38	18.34	18.36	0.22	n/a	n/a
3961005468	F	Nickel - ICP-Fusion	ug/g	100.0	1.26	7.83e+02	3.67e+03	5.75e+03	72.3	97.00	384.0
3961005468	F	Silver - ICP-Fusion	ug/g	99.80	4.03e-02	4.19e+02	1.88e2	n/a	90.80	192.0	n/a
3961005468	F	Aluminum - ICP-Fusion	ug/g	99.80	5.03e-02	2.10e+03	2.31e+05	9.52	93.80	960.0	n/a
3961005468	F	Arsenic - ICP-Fusion	ug/g	10.0	4.03e-01	4.19e+03	1.88e3	n/a	100.0	1.92e+03	n/a
3961005468	F	Boron - ICP-Fusion	ug/g	97.80	5.03e-02	9.60e+02	49.42e2	n/a	93.40	960.0	n/a
3961005468	F	Barium - ICP-Fusion	ug/g	97.80	5.03e-03	9.60e+02	49.42e1	n/a	92.20	960.0	n/a
3961005468	F	Beryllium - ICP-Fusion	ug/g	100.2	5.03e-03	9.60e+02	49.42e1	n/a	92.20	960.0	n/a
3961005468	F	Blomuth - ICP-Fusion	ug/g	100.0	4.03e-01	2.46e+03	2.36e+03	2.41e+03	4.35	97.40	1.92e+03
3961005468	F	Calcium - ICP-Fusion	ug/g	101.0	4.03e-01	4.19e+03	1.88e3	n/a	101.0	1.92e+03	n/a
3961005468	F	Cadmium - ICP-Fusion	ug/g	98.40	4.03e-01	4.19e+03	1.88e3	n/a	94.70	960.0	n/a
3961005468	F	Cerium - ICP-Fusion	ug/g	101.4	2.00e-02	3.84e+02	43.77e2	n/a	98.50	384.0	n/a
3961005468	F	Cobalt - ICP-Fusion	ug/g	101.0	4.03e-02	2.08e+02	24.3	225.5	15.5	98.80	192.0
3961005468	F	Chromium - ICP-Fusion	ug/g	102.2	4.03e-02	4.19e+03	1.88e2	n/a	n/a	97.40	192.0
3961005468	F	Copper - ICP-Fusion	ug/g	99.60	5.00e-02	1.93e+03	1.67e+03	1.55e+03	15.5	96.10	960.0
3961005468	F	Iron - ICP-Fusion	ug/g	100.0	5.00e-02	9.60e+02	49.42e2	n/a	95.60	960.0	n/a
3961005468	F	Lanthanum - ICP-Fusion	ug/g	96.80	4.03e-02	4.19e+03	1.88e2	n/a	91.30	192.0	n/a
3961005468	F	Lithium - ICP-Fusion	ug/g	94.00	4.03e-01	4.19e+03	1.88e3	n/a	89.80	1.92e+03	n/a
3961005468	F	Magnesium - ICP-Fusion	ug/g	97.20	4.03e-02	4.19e+03	1.88e2	n/a	93.40	192.0	n/a
3961005468	F	Manganese - ICP-Fusion	ug/g	101.0	5.00e-02	9.60e+02	49.42e2	n/a	98.40	960.0	n/a
3961005468	F	Niobium - ICP-Fusion	ug/g	94.80	1.510	8.67e+04	7.54e+04	8.10e+04	13.9	88.40	1.92e+03
3961005468	F	Sodium - ICP-Fusion	ug/g	99.60	4.03e-01	4.19e+03	1.88e3	n/a	95.10	1.92e+03	n/a
3961005468	F	Selenium - ICP-Fusion	ug/g	98.40	2.00e-01	5.69e+03	3.17e3	n/a	98.20	3.84e+03	n/a
3961005468	F	Phosphorus - ICP-Fusion	ug/g	100.4	4.03e-01	4.19e+03	1.88e3	n/a	99.80	1.92e+03	n/a
3961005468	F	Sulfur - ICP-Fusion	ug/g	98.20	4.03e-02	4.19e+03	2.25e+03	2.12e+03	12.8	97.90	1.92e+03
3961005468	F	Titanium - ICP-Fusion	ug/g	96.00	4.03e-02	4.19e+03	1.3e3	n/a	93.50	1.55e+03	n/a
3961005468	F	Sodium - ICP-Fusion	ug/g	95.00	4.03e-01	4.19e+03	1.88e3	n/a	98.50	1.92e+03	n/a
3961005468	F	Silicon - ICP-Fusion	ug/g	96.80	5.00e-02	9.60e+02	1.10e+03	1.04e+03	12.2	96.20	960.0
3961005468	F	Strontium - ICP-Fusion	ug/g	96.40	4.03e-01	4.19e+03	1.88e3	n/a	93.80	1.92e+03	n/a
3961005468	F	Vanadium - ICP-Fusion	ug/g	97.00	4.03e-02	4.19e+03	1.88e2	n/a	92.40	192.0	n/a
3961005468	F	Zinc - ICP-Fusion	ug/g	97.40	4.03e-02	4.19e+03	1.88e2	n/a	94.50	960.0	n/a
3961005468	F	Thallium - ICP-Fusion	ug/g	94.60	2.00e-01	3.84e+03	43.77e3	n/a	90.70	3.84e+03	n/a
3961005468	F	Vanadium - ICP-Fusion	ug/g	94.90	5.00e-02	9.60e+03	49.42e3	n/a	94.50	9.60e+03	n/a
3961005468	F	Uranium - ICP-Fusion	ug/g	102.4	5.00e-02	9.60e+02	49.42e2	n/a	97.80	960.0	n/a
3961005468	F	Zinc - ICP-Fusion	ug/g	100.0	4.03e-02	2.01e+02	213.0	207.0	5.80	101.0	192.0
3961005468	F	Zirconium - ICP-Fusion	ug/g	98.60	4.03e-02	4.19e+03	1.88e2	n/a	95.00	1.80e+02	n/a
3961005468	F	Cobalt-60 by BEA	uc/g/g	99.75	4.65e-02	4.17e+02	41.35e2	n/a	n/a	n/a	1.11
3961005468	F	Caesium-137 by BEA	uc/g/g	98.05	5.01e-02	23.00	22.90	22.95	0.44	n/a	5.90e-02
3961005468	F	Europium-154 by BEA	uc/g/g	n/a	44.31e-02	41.48e-01	41.47e-1	n/a	n/a	n/a	1.48e-01
3961005468	F	Europium-155 by BEA	uc/g/g	n/a	44.31e-02	41.48e-01	41.47e-1	n/a	n/a	n/a	1.48e-01

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk	RPD % Sec	Det Limit	Count Err%
S961005466	F	Ammonium-241 by GEA	uCi/g		< 16e-03	< 1.6e-01	< 3.09e-1	0.02	n/a	n/a	3.16e-01	n/a
S961005469	F	Fluoride-IC-Dioxex 4000/4500	ug/g	102.2	< 1.20e-02	0.32e+03	2.01e+03	2.16e+03	14.3	95.59	12.80	n/a
S961005469	F	Chloride-IC-Dioxex 4000/4500	ug/g	103.4	< 1.70e-03	9.08e+02	8.79e+02	893.5	3.25	104.2	18.14	n/a
S961005469	F	Nitrite-IC - Dioxex 4000/4500	ug/g	101.5	< 1.08e-01	1.44e+04	1.38e+04	1.41e+04	4.26	103.3	115.2	n/a
S961005469	F	Bromide by Ion Chromatography	ug/g	99.69	< 1.25e-01	1.36e+02	1.36e+02	n/a	n/a	100.2	133.4	n/a
S961005469	F	Nitrate by IC-Dioxex 4000/4500	ug/g	100.8	< 1.94e-01	5.28e+04	5.18e+04	5.23e+04	1.91	103.4	148.3	n/a
S961005469	F	Phosphate by IC-Dioxex 4000/4500	ug/g	98.71	< 1.20e-01	1.53e+03	1.32e+03	1.43e+03	14.7	109.4	128.0	n/a
S961005469	F	Sulfate by IC-Dioxex 4000/4500	ug/g	102.2	< 1.38e-01	5.91e+03	5.72e+03	5.81e+03	3.27	108.9	147.2	n/a
S961005469	F	Oxalate by IC-Dioxex 4000/4500	ug/g	106.9	< 1.05e-01	1.41e+02	139.0	139.8	1.43	105.3	112.0	n/a

L Lower Half of Segment; I Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD % Spk	RPD % Sec	Det Limit	Count Err%
S961005471	F	Bulk Density of Sample	g/mL	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S961005473	F	DSC Exotherm using Mettler	Joules/g	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961005473	F	DSC Exotherm DRY Calculated	Joules/g	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961005473	F	% Water by GR using Mettler	%	99.70	n/a	34.86	36.85	35.86	5.55	n/a	n/a	n/a
S961005473	F	Uranium by Phosphorrescence	ug/g	109.3	< 5.92e-05	1.49e+03	1.47e+03	1.48e+03	1.35	111.3	1.640	1.28E+00
S961005477	F	Phosphorus by ICP-Fusion	ug/g	3.24	< 1.160	1.280	1.240	1.260	1.24	n/a	n/a	n/a
S961005477	F	Strontium-89/90 High Level	uCi/g	86.59	< 8.00e-03	4.740	4.090	4.415	14.7	n/a	3.00e-03	8.29E-01
S961005477	F	Boron - ICP-Fusion	ug/g	100.0	< 1.220	5.02e+03	3.76e+03	4.39e+03	28.7	n/a	354.0	n/a
S961005477	F	Strontium - ICP-Fusion	ug/g	99.00	< 1.00e-02	< 1.77e+02	< 1.78e2	n/a	n/a	n/a	177.0	n/a
S961005477	F	Aluminum - ICP-Fusion	ug/g	95.80	< 5.00e-02	5.34e+04	4.96e+04	5.15e+04	7.38	n/a	884.0	n/a
S961005477	F	Aluminum - ICP-Fusion	ug/g	101.0	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Aluminum - ICP-Fusion	ug/g	97.80	< 5.00e-02	< 8.84e+02	< 8.88e2	n/a	n/a	n/a	884.0	n/a
S961005477	F	Boron - ICP-Fusion	ug/g	97.60	< 5.00e-02	< 8.84e+02	< 8.88e2	n/a	n/a	n/a	884.0	n/a
S961005477	F	Beryllium - ICP-Fusion	ug/g	100.2	< 5.00e-03	< 88.40	< 88.40	n/a	n/a	n/a	88.40	n/a
S961005477	F	Lithium - ICP-Fusion	ug/g	100.6	< 1.00e-01	< 1.77e+03	< 1.77e+03	2.06e+03	4.38	n/a	1.77e+03	n/a
S961005477	F	Lithium - ICP-Fusion	ug/g	101.0	< 1.00e-01	< 1.77e+03	< 1.77e+03	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Calcium - ICP-Fusion	ug/g	100.2	< 5.00e-03	< 88.40	< 88.40	n/a	n/a	n/a	88.40	n/a
S961005477	F	Calcium - ICP-Fusion	ug/g	101.4	< 1.00e-02	< 3.54e+02	< 3.54e2	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Calcium - ICP-Fusion	ug/g	98.40	< 1.00e-01	< 1.77e+03	< 1.77e+03	2.16e+03	9.97	n/a	354.0	n/a
S961005477	F	Chromium - ICP-Fusion	ug/g	101.4	< 2.00e-02	< 1.83e+02	< 1.87e+02	185.0	2.16	n/a	177.0	n/a
S961005477	F	Copper - ICP-Fusion	ug/g	102.2	< 1.00e-02	< 1.77e+02	< 1.78e2	n/a	n/a	n/a	177.0	n/a
S961005477	F	Iron - ICP-Fusion	ug/g	99.60	< 5.00e-02	< 8.84e+02	< 8.88e2	n/a	n/a	n/a	884.0	n/a
S961005477	F	Lanthanum - ICP-Fusion	ug/g	100.0	< 5.00e-02	< 8.84e+02	< 8.88e2	n/a	n/a	n/a	884.0	n/a
S961005477	F	Lithium - ICP-Fusion	ug/g	96.80	< 1.00e-02	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	177.0	n/a
S961005477	F	Magnesium - ICP-Fusion	ug/g	94.00	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Manganese - ICP-Fusion	ug/g	97.20	< 1.00e-02	< 1.77e+02	< 1.78e2	n/a	n/a	n/a	177.0	n/a
S961005477	F	Molybdenum - ICP-Fusion	ug/g	101.0	< 5.00e-02	< 8.84e+02	< 8.88e2	n/a	n/a	n/a	884.0	n/a
S961005477	F	Sodium - ICP-Fusion	ug/g	94.80	< 1.510	1.62e+03	1.79e+03	1.70e+03	9.97	n/a	1.77e+03	n/a
S961005477	F	Niobium - ICP-Fusion	ug/g	99.60	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Phosphorus - ICP-Fusion	ug/g	98.40	< 2.00e-01	< 3.40e+04	3.82e+04	3.61e+04	11.6	n/a	3.54e+03	n/a
S961005477	F	Lead - ICP-Fusion	ug/g	100.4	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Sulfur - ICP-Fusion	ug/g	98.20	< 1.00e-01	< 1.55e+04	1.48e+04	1.52e+04	4.62	n/a	1.77e+03	n/a
S961005477	F	Antimony - ICP-Fusion	ug/g	96.00	< 1.00e-02	< 1.06e+03	< 1.07e3	n/a	n/a	n/a	1.06e+03	n/a
S961005477	F	Selenium - ICP-Fusion	ug/g	95.00	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Silicon - ICP-Fusion	ug/g	96.80	< 5.00e-02	< 1.76e+03	< 1.76e+03	1.76e+03	0.00	n/a	884.0	n/a
S961005477	F	Strontium - ICP-Fusion	ug/g	96.60	< 1.00e-01	< 1.77e+03	< 1.78e3	n/a	n/a	n/a	1.77e+03	n/a
S961005477	F	Tantalum - ICP-Fusion	ug/g	97.00	< 1.00e-02	< 1.77e+02	< 1.78e2	n/a	n/a	n/a	177.0	n/a
S961005477	F	Titanium - ICP-Fusion	ug/g	97.40	< 1.00e-02	< 1.77e+02	< 1.78e2	n/a	n/a	n/a	177.0	n/a

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count EmP2
S961005477	F	Thallium - ICP-Fusion	ug/g	94.80	< 2.00e-01	< 3.54e+03	< 3.55e+03	N/A	N/A	N/A	3.54e+03	N/A
S961005477	F	Uranium - ICP-Fusion	ug/g	94.80	< 5.00e-01	< 8.84e+03	< 8.85e+03	N/A	N/A	N/A	8.84e+03	N/A
S961005477	F	Vanadium - ICP-Fusion	ug/g	100.4	< 5.00e-02	< 8.84e+03	< 8.85e+03	N/A	N/A	N/A	884.0	N/A
S961005477	F	Zinc - ICP-Fusion	ug/g	102.4	< 1.00e-02	< 1.77e+02	< 1.78e+02	N/A	N/A	N/A	177.0	N/A
S961005477	F	Zirconium - ICP-Fusion	ug/g	98.40	< 1.00e-02	< 1.77e+02	< 1.78e+02	N/A	N/A	N/A	1.77e+02	N/A
S961005477	F	Cobalt-60 by GEA	uc/g	99.25	< 4.50e-02	< 1.27e+02	< 1.28e+02	N/A	N/A	N/A	1.30e+02	N/A
S961005477	F	Cesium-137 by GEA	uc/g	98.05	< 3.35e-02	< 3.69e+02	< 3.70e+02	N/A	N/A	N/A	3.70e+02	N/A
S961005477	F	Europium-154 by GEA	uc/g	N/A	< 4.31e-02	< 1.24e+01	< 1.24e+01	N/A	N/A	N/A	1.24e+01	N/A
S961005477	F	Europium-241 by GEA	uc/g	N/A	< 8.16e-02	< 2.59e+01	< 2.60e+01	N/A	N/A	N/A	2.59e+01	N/A
S961005477	F	Beta of Solid Sample	uc/g	107.8	< 3.00e-02	< 28.30	< 28.30	26.25	15.6	102.6	1.60e+02	4.64E+01
S961005479	F	Alumina of Digested Solid	ug/g	103.2	< 4.50e-03	< 1.09e+02	< 1.09e+02	7.34e+03	9.07e+03	N/A	8.00e+03	N/A
S961005479	F	Fluoride-IC-Dioxin 4000/4500	ug/g	80.09	< 4.00e-02	< 2.69e+04	< 2.68e+04	2.69e+04	0.37	N/A	127.87	N/A
S961005479	F	Chloride-IC-Dioxin 4000/4500	ug/g	103.4	< 1.00e-02	< 8.98e+02	< 8.98e+02	8.98	9.81	N/A	89.3	N/A
S961005479	F	Methylene-IC-Dioxin 4000/4500	ug/g	101.5	< 1.00e-01	< 1.28e+04	< 1.28e+04	1.17e+04	17.9	N/A	808.9	N/A
S961005479	F	Bromide by Ion Chromatograph	ug/g	99.49	< 2.50e-01	< 9.35e+02	< 9.35e+02	N/A	N/A	N/A	936.0	N/A
S961005479	F	Nitrate by IC-Dioxin 4000/4500	ug/g	100.8	< 1.90e-01	< 4.88e+04	< 4.88e+04	1.39e+05	8.24	N/A	898.7	N/A
S961005479	F	Phosphate by IC-Dioxin 4000/4500	ug/g	102.2	< 1.30e-01	< 6.54e+04	< 6.54e+04	1.33e+05	8.24	N/A	1.04e+03	N/A
S961005479	F	Sulfate by IC-Dioxin 4000/4500	ug/g	106.9	< 4.00e-01	< 2.78e+04	< 2.78e+04	5.99e+04	8.78	N/A	1.03e+03	N/A
S961005479	F	Oxalate by IC-Dioxin 4000/4500	ug/g	99.60	< 1.00e-02	< 18.80	< 18.80	< 18.80	N/A	N/A	786.4	N/A
S961005481	I	Silver - ICP-H2O D19/acid	ug/g	96.00	< 3.81e-01	< 8.98e+02	< 8.98e+02	483.0	N/A	N/A	93.40	N/A
S961005481	I	Aluminum - ICP-H2O D19/acid	ug/g	107.4	< 1.00e-01	< 1.89e+02	< 1.89e+02	714.0	N/A	N/A	106.0	N/A
S961005481	I	Barium - ICP-H2O D19/acid	ug/g	100.4	< 4.430	< 1.30e+03	< 1.30e+03	58.2	100.0	93.80	93.80	N/A
S961005481	I	Boron - ICP-H2O D19/acid	ug/g	103.2	< 5.00e-02	< 9.380	< 9.380	N/A	N/A	N/A	103.0	N/A
S961005481	I	Beryllium - ICP-H2O D19/acid	ug/g	103.2	< 5.00e-03	< 9.380	< 9.380	N/A	N/A	N/A	103.0	N/A
S961005481	I	Bismuth - ICP-H2O D19/acid	ug/g	110.6	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	109.0	N/A
S961005481	I	Calcium - ICP-H2O D19/acid	ug/g	97.40	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	98.00	N/A
S961005481	I	Cadmium - ICP-H2O D19/acid	ug/g	101.4	< 5.00e-03	< 9.380	< 9.380	N/A	N/A	N/A	100.0	N/A
S961005481	I	Cerium - ICP-H2O D19/acid	ug/g	101.4	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	95.90	N/A
S961005481	I	Cobalt - ICP-H2O D19/acid	ug/g	101.8	< 2.00e-02	< 4.730	< 4.730	49.25	7.92	98.90	37.50	N/A
S961005481	I	Chromium - ICP-H2O D19/acid	ug/g	98.40	< 1.00e-02	< 1.82e+02	< 1.82e+02	149.0	165.5	96.30	18.80	N/A
S961005481	I	Copper - ICP-H2O D19/acid	ug/g	100.6	< 1.00e-02	< 18.80	< 18.80	< 18.80	N/A	N/A	102.0	N/A
S961005481	I	Cobalt - ICP-H2O D19/acid	ug/g	100.8	< 5.00e-02	< 93.80	< 93.80	N/A	N/A	N/A	98.30	N/A
S961005481	I	Iron - ICP-H2O D19/acid	ug/g	100.0	< 5.00e-01	< 93.80	< 93.80	N/A	N/A	N/A	151.0	N/A
S961005481	I	Lead - ICP-H2O D19/acid	ug/g	99.60	< 5.00e-02	< 93.80	< 93.80	N/A	N/A	N/A	99.50	N/A
S961005481	I	Lithium - ICP-H2O D19/acid	ug/g	94.40	< 1.00e-02	< 18.80	< 18.80	N/A	N/A	N/A	92.90	N/A
S961005481	I	Magnesium - ICP-H2O D19/acid	ug/g	103.2	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	102.0	N/A
S961005481	I	Manganese - ICP-H2O D19/acid	ug/g	103.6	< 5.00e-02	< 18.80	< 18.80	< 18.80	N/A	N/A	99.80	N/A
S961005481	I	Molybdenum - ICP-H2O D19/acid	ug/g	103.6	< 5.00e-02	< 93.80	< 93.80	N/A	N/A	N/A	102.0	N/A
S961005481	I	Nickel - ICP-H2O D19/acid	ug/g	98.80	6.210	< 1.74e+05	< 1.74e+05	1.72e+05	2.92	62.90	188.0	N/A
S961005481	I	Neodymium - ICP-H2O D19/acid	ug/g	99.00	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	98.30	N/A
S961005481	I	Niobium - ICP-H2O D19/acid	ug/g	100.2	< 2.00e-02	< 37.50	< 37.50	N/A	N/A	N/A	100.0	N/A
S961005481	I	Nickel - ICP-H2O D19/acid	ug/g	106.0	< 2.00e-01	< 4.16e+04	< 4.16e+04	4.26e+04	4.92	118.0	375.0	N/A
S961005481	I	Phosphorus - ICP-H2O D19/acid	ug/g	99.20	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	103.0	N/A
S961005481	I	Lead - ICP-H2O D19/acid	ug/g	99.20	< 1.00e-01	< 2.07e+04	< 2.07e+04	1.96e+04	10.7	115.0	188.0	N/A
S961005481	I	Sulfur - ICP-H2O D19/acid	ug/g	102.0	< 1.00e-01	< 1.35e+02	< 1.35e+02	N/A	N/A	N/A	98.40	N/A
S961005481	I	Antimony - ICP-H2O D19/acid	ug/g	81.20	< 6.00e-02	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	79.90	N/A
S961005481	I	Selenium - ICP-H2O D19/acid	ug/g	114.6	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	98.40	N/A
S961005481	I	Silicon - ICP-H2O D19/acid	ug/g	98.00	4.430	< 8.32e+03	< 8.32e+03	5.26e+03	117	117.0	93.80	N/A
S961005481	I	Samarium - ICP-H2O D19/acid	ug/g	109.0	< 1.00e-01	< 1.88e+02	< 1.88e+02	N/A	N/A	N/A	110.0	N/A
S961005481	I	Strontium - ICP-H2O D19/acid	ug/g	105.2	< 1.00e-02	< 18.80	< 18.80	< 18.80	N/A	N/A	105.0	N/A

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S961005481	1	Titanium-1CP-H2O Dig/Acid	ug/g	67.0	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	95.90	18.80	n/a	n/a
S961005481	1	Tantalum-1CP-H2O Dig/Acid	ug/g	102.4	<1.00e-01	< 3.79e-02	<3.35e1	n/a	n/a	92.30	375.0	n/a	n/a
S961005481	1	Thallium-1CP-H2O Dig/Acid	ug/g	102.4	<1.00e-01	< 3.79e-02	<3.35e1	n/a	n/a	112.0	93.80	n/a	n/a
S961005481	1	Uranium-1CP-H2O Dig/Acid	ug/g	103.2	<1.00e-02	< 38.80	<9.37e1	n/a	n/a	103.0	93.80	n/a	n/a
S961005481	1	Vanadium-1CP-H2O Dig/Acid	ug/g	104.0	<1.00e-02	< 30.40	<1.87e1	n/a	n/a	103.0	18.80	n/a	n/a
S961005481	1	Zinc-1CP-H2O Dig/Acid	ug/g	104.0	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	105.0	18.80	n/a	n/a
S961005481	1	Zirconium-1CP-H2O Dig/Acid	ug/g	104.0	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	105.0	18.80	n/a	n/a

Table 3. Data Summary Table
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SEGMENT PORTION: 1 Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	RPD %	Det Limit	Count	Err%
S96T005472		Bulk Density of Sample	g/mL	n/a	n/a	1.570	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T005474		DSC Exotherm using Mettler	Joules/g	95.61	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005474		DSC Exotherm DTA Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005474		% Water by TGA using Mettler	%	99.03	n/a	43.53	43.03	43.78	3.43	n/a	n/a	n/a	n/a
S96T005478	F	Nickel - ICP-Fusion	ug/g	100.0	1.26	2.52e+03	2.41e+04	1.33e+04	162	95.30	356.0	n/a	n/a
S96T005478	F	Silver - ICP-Fusion	ug/g	99.30	< 1.00e-02	1.75e+02	< 1.80e2	n/a	n/a	89.30	178.0	n/a	n/a
S96T005478	F	Aluminum - ICP-Fusion	ug/g	100.0	< 1.00e-02	1.53e+04	7.25e+04	4.44e+04	127	89.80	888.0	n/a	n/a
S96T005478	F	Arsenic - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 1.78e+03	< 1.80e3	n/a	n/a	98.60	1.78e+03	n/a	n/a
S96T005478	F	Boron - ICP-Fusion	ug/g	97.80	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	91.50	888.0	n/a	n/a
S96T005478	F	Barium - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	90.90	888.0	n/a	n/a
S96T005478	F	Beryllium - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 1.78e+03	< 1.80e3	n/a	n/a	99.70	1.78e+03	n/a	n/a
S96T005478	F	Bismuth - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 1.78e+03	< 1.80e3	n/a	n/a	101.0	1.78e+03	n/a	n/a
S96T005478	F	Calcium - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 1.78e+03	< 1.80e3	n/a	n/a	97.00	88.80	n/a	n/a
S96T005478	F	Chromium - ICP-Fusion	ug/g	98.60	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	93.10	88.80	n/a	n/a
S96T005478	F	Cobalt - ICP-Fusion	ug/g	101.0	< 1.00e-02	< 3.56e+02	< 3.60e2	n/a	n/a	98.70	356.0	n/a	n/a
S96T005478	F	Copper - ICP-Fusion	ug/g	102.2	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	98.60	178.0	n/a	n/a
S96T005478	F	Iron - ICP-Fusion	ug/g	99.60	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	94.90	888.0	n/a	n/a
S96T005478	F	Lanthanum - ICP-Fusion	ug/g	100.0	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	93.70	888.0	n/a	n/a
S96T005478	F	Lithium - ICP-Fusion	ug/g	96.80	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	88.20	178.0	n/a	n/a
S96T005478	F	Magnesium - ICP-Fusion	ug/g	97.20	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	88.10	178e-03	n/a	n/a
S96T005478	F	Manganese - ICP-Fusion	ug/g	101.0	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	92.80	178.0	n/a	n/a
S96T005478	F	Nickel - ICP-Fusion	ug/g	94.80	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	98.00	888.0	n/a	n/a
S96T005478	F	Sodium - ICP-Fusion	ug/g	94.80	1.510	2.12e+05	1.75e+05	1.92e+05	20.3	99.70	1.78e+03	n/a	n/a
S96T005478	F	Strontium - ICP-Fusion	ug/g	99.60	< 1.00e-01	< 1.78e+03	< 1.80e3	n/a	n/a	92.30	1.78e+03	n/a	n/a
S96T005478	F	Phosphorus - ICP-Fusion	ug/g	98.60	< 1.00e-01	< 5.42e+04	2.21e+04	3.82e+04	84.1	94.00	3.56e+03	n/a	n/a
S96T005478	F	Lead - ICP-Fusion	ug/g	100.4	< 1.00e-01	< 1.78e+03	< 1.80e3	n/a	n/a	98.80	1.78e+03	n/a	n/a
S96T005478	F	Sulfur - ICP-Fusion	ug/g	98.20	< 1.00e-01	< 2.12e+04	3.42e+04	2.77e+04	46.9	98.60	1.78e+03	n/a	n/a
S96T005478	F	Antimony - ICP-Fusion	ug/g	95.00	< 1.00e-02	< 1.07e+03	< 1.08e3	n/a	n/a	95.80	1.07e+03	n/a	n/a
S96T005478	F	Barium - ICP-Fusion	ug/g	96.80	< 1.00e-01	< 1.08e+03	< 1.80e3	n/a	n/a	95.00	1.78e+03	n/a	n/a
S96T005478	F	Selenium - ICP-Fusion	ug/g	96.60	< 1.00e-01	< 1.08e+03	< 1.80e3	n/a	n/a	93.50	1.78e+03	n/a	n/a
S96T005478	F	Samarium - ICP-Fusion	ug/g	97.00	< 1.00e-02	< 1.78e+03	< 1.80e2	n/a	n/a	92.80	178.0	n/a	n/a
S96T005478	F	Strontium - ICP-Fusion	ug/g	97.00	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	90.80	88.80	n/a	n/a
S96T005478	F	Lithium - ICP-Fusion	ug/g	94.60	< 2.00e-01	< 3.56e+03	< 3.60e3	n/a	n/a	89.80	3.56e+03	n/a	n/a
S96T005478	F	Thallium - ICP-Fusion	ug/g	94.90	< 1.00e-01	< 8.90e+02	< 9.01e2	n/a	n/a	94.00	8.88e+03	n/a	n/a
S96T005478	F	Vanadium - ICP-Fusion	ug/g	100.4	< 1.00e-02	< 8.90e+02	< 9.01e2	n/a	n/a	97.00	888.0	n/a	n/a
S96T005478	F	Zinc - ICP-Fusion	ug/g	102.0	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	101.0	178.0	n/a	n/a
S96T005478	F	Chromium - ICP-Fusion	ug/g	98.60	< 1.00e-02	< 1.78e+02	< 1.80e2	n/a	n/a	93.70	1.78e+02	n/a	n/a
S96T005478	F	Zirconium - ICP-Fusion	ug/g	80.09	< 4.50e-03	9.37e+02	1.37e+02	1.15e+02	37.5	108.1	1.60e+02	n/a	n/a
S96T005480		Alpha of Distilled Solid	ug/g	110.7	< 2.00e-02	3.90e+04	3.53e+04	3.71e+04	9.96	3.750e1	86.14	n/a	n/a
S96T005480		Gamma of Distilled Solid	ug/g	95.06	< 2.00e-02	4.57e+02	5.28	4.92	14.4	98.86	122.1	n/a	n/a
S96T005480		Chlorine-36-37 Dioxin	ug/g	95.93	< 1.08e-01	7.13e+03	6.21e+03	6.67e+03	13.8	95.01	775.3	n/a	n/a
S96T005480		Nitrite-16 - Dioxin	ug/g	95.93	< 1.08e-01	7.13e+03	6.21e+03	6.67e+03	13.8	95.01	775.3	n/a	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limite	Count Err%
S96T005480	W	Bromide by Ion Chromatograph	ug/g	98.64	<1.25e-01	<8.97e-02	<9.25e2	n/a	n/a	100.3	897.5	n/a
S96T005480	W	Nitrate by IC-Dionex 4000/4500	ug/g	97.30	<1.39e-01	2.16e+04	3.39e+04	3.61e+04	12.4	94.61	891.7	n/a
S96T005480	W	Phosphate by IC-Dionex 4000/4500	ug/g	94.30	<1.20e-01	2.16e+05	1.87e+05	2.01e+05	15.3	26.86	881.4	n/a
S96T005480	W	Sulfate by IC-Dionex 4000/4500	ug/g	99.05	<1.38e-01	7.21e+04	6.37e+04	6.89e+04	9.29	87.84	940.6	n/a
S96T005480	W	Oxalate by IC-Dionex 4000/4500	ug/g	104.2	<1.05e-01	<1.56e+02	<7.75e2	n/a	n/a	109.3	734.0	n/a
S97T000001	F	Silver - ICP-Fusion	ug/g	99.20	<1.00e-02	<1.96e+02	<1.96e+02	n/a	n/a	85.60	984.0	n/a
S97T000001	F	Aluminum - ICP-Fusion	ug/g	99.20	<5.00e-02	2.39e+04	1.24e+04	1.82e+04	63.4	101.10	983.0	n/a
S97T000001	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<1.96e+03	<1.96e+03	n/a	n/a	101.10	1.84e+03	n/a
S97T000001	F	Boron - ICP-Fusion	ug/g	100.3	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	95.50	986.0	n/a
S97T000001	F	Barium - ICP-Fusion	ug/g	100.3	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	94.50	984.0	n/a
S97T000001	F	Beryllium - ICP-Fusion	ug/g	103.2	<5.00e-03	<95.00	<9.80e1	n/a	n/a	77.70	987.0	n/a
S97T000001	F	Bismuth - ICP-Fusion	ug/g	102.0	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	105.0	1.86e+03	n/a
S97T000001	F	Calcium - ICP-Fusion	ug/g	98.60	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	97.90	1.86e+03	n/a
S97T000001	F	Cadmium - ICP-Fusion	ug/g	100.0	<5.00e-03	<95.00	<9.80e1	n/a	n/a	97.90	1.86e+03	n/a
S97T000001	F	Cerium - ICP-Fusion	ug/g	103.2	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	97.90	1.86e+03	n/a
S97T000001	F	Cobalt - ICP-Fusion	ug/g	100.4	<1.00e-02	<3.92e+02	<3.92e2	n/a	n/a	98.00	992.0	n/a
S97T000001	F	Chromium - ICP-Fusion	ug/g	106.8	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	97.10	194.0	n/a
S97T000001	F	Copper - ICP-Fusion	ug/g	101.2	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	98.00	980.0	n/a
S97T000001	F	Iron - ICP-Fusion	ug/g	102.4	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	98.00	980.0	n/a
S97T000001	F	Lanthanum - ICP-Fusion	ug/g	101.6	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	97.50	194.0	n/a
S97T000001	F	Lithium - ICP-Fusion	ug/g	98.40	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	98.00	980.0	n/a
S97T000001	F	Magnesium - ICP-Fusion	ug/g	98.40	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	98.00	980.0	n/a
S97T000001	F	Manganese - ICP-Fusion	ug/g	101.4	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	98.00	980.0	n/a
S97T000001	F	Molybdenum - ICP-Fusion	ug/g	105.6	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	99.30	194.0	n/a
S97T000001	F	Neodymium - ICP-Fusion	ug/g	102.6	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	93.90	1.94e+03	n/a
S97T000001	F	Phosphorus - ICP-Fusion	ug/g	101.0	<2.00e-01	<3.92e+02	<3.92e2	n/a	n/a	97.00	1.94e+03	n/a
S97T000001	F	Sulfur - ICP-Fusion	ug/g	98.00	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	106.0	3.92e+03	n/a
S97T000001	F	Antimony - ICP-Fusion	ug/g	98.40	<5.00e-02	<1.96e+02	<1.96e2	n/a	n/a	99.90	1.94e+03	n/a
S97T000001	F	Selenium - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.96e+02	<1.96e2	n/a	n/a	98.40	1.94e+03	n/a
S97T000001	F	Silicon - ICP-Fusion	ug/g	97.20	<5.00e-02	<1.96e+02	<1.96e2	n/a	n/a	94.70	1.94e+03	n/a
S97T000001	F	Samarium - ICP-Fusion	ug/g	101.2	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	96.50	1.94e+03	n/a
S97T000001	F	Strontium - ICP-Fusion	ug/g	101.4	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	95.70	194.0	n/a
S97T000001	F	Titanium - ICP-Fusion	ug/g	97.20	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	94.80	194.0	n/a
S97T000001	F	Thallium - ICP-Fusion	ug/g	97.20	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	92.70	3.92e+03	n/a
S97T000001	F	Uranium - ICP-Fusion	ug/g	98.00	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	90.00	2.80e+03	n/a
S97T000001	F	Vanadium - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.96e+02	<1.96e2	n/a	n/a	97.70	980.0	n/a
S97T000001	F	Zinc - ICP-Fusion	ug/g	100.8	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	101.0	194.0	n/a
S97T000001	F	Zirconium - ICP-Fusion	ug/g	100.2	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	95.90	194.0	n/a
S97T000001	F	Cobalt-60 by GEA	uCi/g	100.2	<1.13e-02	<1.13e+02	<9.76e3	n/a	n/a	n/a	1.10e+02	n/a
S97T000001	F	Cesium-137 by GEA	uCi/g	103.5	<2.26e-02	<1.04e+02	<7.15e3	8.915	39.8	n/a	n/a	1.47
S97T000001	F	Europium-154 by GEA	uCi/g	n/a	<2.26e-02	<8.84e+02	<4.16e+2	n/a	n/a	n/a	3.80e+02	n/a
S97T000001	F	Europium-155 by GEA	uCi/g	n/a	<2.26e-02	<8.84e+02	<4.16e+2	n/a	n/a	n/a	8.50e+02	n/a
S97T000001	F	Americium-241 by GEA	uCi/g	101.9	<2.10e-02	<2.16e+01	<1.70e+1	n/a	n/a	n/a	2.13e+01	n/a
S97T000001	F	Alpha of Digested Sol.1d	uCi/g	101.9	<2.10e-02	<2.16e+01	<1.70e+1	n/a	n/a	65.46	3.00e+03	8.21E+01
S97T000001	F	Fluoride-IC-Dionex 4000/4500	ug/g	95.76	<4.95e-01	3.31e+02	3.65e+04	3.59e+04	4.43	87.85	97.66	n/a
S97T000001	F	Chloride-IC-Dionex 4000/4500	ug/g	103.1	<4.95e-01	3.13e+02	328.0	319.9	5.00	97.81	138.4	n/a
S97T000001	F	Nitrate-IC - Dionex 4000/4500	ug/g	103.1	<2.67e-01	5.10e+03	<1.01e3	5.97e+03	29.8	110.0	879.0	n/a
S97T000001	W	Bromide by Ion Chromatograph	ug/g	99.15	<5.72e-01	<1.02e+03	<1.01e3	n/a	n/a	97.62	1.02e+03	n/a
S97T000001	W	Nitrate by IC-Dionex 4000/4500	ug/g	100.0	<5.70e-01	2.36e+04	3.26e+04	2.81e+04	32.0	99.33	1.13e+03	n/a

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000017	W		Phosphate-IC-Dionex 4000/4500	ug/g	100.0	<4,920	2.14e+05	1.85e+05	2.00e+05	14.5	99.08	976.6	n/a
S97T000017	W		Sulfate by IC-Dionex 4000/4500	ug/g	99.84	<5,660	4.56e+04	7.16e+04	5.86e+04	44.4	105.5	1.12e+03	n/a
S97T000017	W		Oxalate by IC-Dionex 4000/4500	ug/g	100.9	<4,300	<8.55e+02	<8.48e2	n/a	n/a	96.44	854.9	n/a

HNF-SD-WM-DP-219, REV. 0

CHAIN OF CUSTODY FORMS

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

200W-08-TF

96-504

200W-08-TF

200W-08-TF

Whc Jones

172

1

6

5

2005

Radiation Survey Data:		(9) FIELD		(10) SHIPMENT DESCRIPTION	
Over Top Dose Rate	1.5 mR/hr	40.5		A. Work Package Number	ES-96-00692
Side Dose Rate	4.2 mR/hr	3.5		B. Cask Seal Number	11165
Bottom Dose Rate	3.0 mR/hr	2		C. Sampler Serial Number	96-084
Smearable Contamination	2.0 dpm/100cm ²	180 dpm	445	D. Date and Time Sampler Unsealed	9-8-96 0215
	1000 dpm/100cm ²	(Alpha)		E. Expected Liquid Content	30%
		(Beta-Gamma)		F. Expected Solid Content	70%
ACT* (HPT)	Dave Smith	ACT* (HPT)		G. Dose Rate Through Drill String	250 mR/hr
		(Signature)		H. Expected Sample Length	15"

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

HNF-SD-WM-DP-219, REV. 0

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Field Comments		(34) Laboratory Comments	
2) Field Comments			
3) Point of Origin	B-Farm 222-S	(15) Sender Name (Sign and PRINT)	James Sicket
4) Relinquished By (Sign and PRINT)	James Sicket	(16) Date/Time	10-11-96
5) Relinquished By (Sign and PRINT)	James Sicket	(17) Sender Comments	
6) Relinquished By (Sign and PRINT)	James Sicket	(22) Receiver Comments	
7) Relinquished By (Sign and PRINT)	James Sicket	(26) Receiver Comments	
		(30) Receiver Comments	
(18) Seal Intact Upon Release?	☒ Yes ☐ No	(31) Seal Intact Upon Receipt?	☒ Yes ☐ No
(19) Seal Intact Upon Receipt?	☒ Yes ☐ No	(32) Seal Data Consistent with this Record?	☒ Yes ☐ No
Sample No.		Sample No.	
☒ Yes ☐ No		☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Oct. 11, 1996 11:49AM WHC 222S LAB ROOM 2F BACKSIDE No. 5792 P. 4/5

1) Shipment Number 20W-08-TF (2) Sample Number 96-506 (3) Supervisor Daniel D. Brown

1) Tank B 108 (5) Riser 3 (6) Segment 1 (7) Core 173 (8) Cask Serial Number 2012

1) Field Survey Date: (9) FIELD (10) Shipment Description

Over Top Dose Rate	<u>4.5 m/hr</u>	(33) LABORATORY	A. Work Package Number	<u>E5-96-00691</u>
Side Dose Rate	<u>3.0 m/hr</u>		B. Cask Seal Number	<u>11277</u>
Bottom Dose Rate	<u>1.2 m/hr</u>		C. Sampler Serial Number	<u>96-012</u>
Smearable Contamination	<u>220 dpm/100cm²</u> (Alpha)		D. Date and Time Sampler Uncoated	<u>9-5-96 1730</u>
	<u>1000 dpm/100cm²</u> (Beta-Gamma)		E. Expected Liquid Content	<u>10%</u>
	<u>1000 dpm/100cm²</u> (Beta-Gamma)		F. Expected Solid Content	<u>90%</u>
RCT* (HPT)	<u>Dan Dyer</u> (Signature)	RCT* (HPT)	G. Dose Rate Through Drill String	<u>110 MR / HR</u>
			H. Expected Sample Length	<u>19"</u>

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

HNF-SD-WM-DP-219, REV. 0

146

2) Field Comments

(34) Laboratory Comments

1) Point of Origin	1) Destination	1) Sender Name (Sign and PRINT)	1) Sender Comments
<u>B 108</u>	<u>222S</u>	<u>Daniel D. Brown</u>	
2) Relinquished By (Sign and PRINT)	2) Received By (Sign and PRINT)	2) Date/Time	2) Receiver Comments
<u>Daniel D. Brown</u>	<u>Daniel D. Brown</u>	<u>10-11-96</u>	
3) Relinquished By (Sign and PRINT)	3) Received By (Sign and PRINT)	3) Date/Time	3) Receiver Comments
<u>Daniel D. Brown</u>	<u>Daniel D. Brown</u>	<u>10-11-96</u>	
4) Relinquished By (Sign and PRINT)	4) Received By (Sign and PRINT)	4) Date/Time	4) Receiver Comments
<u>Daniel D. Brown</u>	<u>Daniel D. Brown</u>	<u>10-11-96</u>	

(32) Seal Data Consistent with this Record?

(31) Seal Intact Upon Receipt?

(18) Seal Intact Upon Release?

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Oct. 11. 1996 11:49AM WHC 222S LAB ROOM 2F BACKSIDE P. 5792 P. 5/5

200W-08-TT-
B-108

(2) Sample Number 96-507

(3) Supervisor M.C. Jones

(5) Riser 3

(6) Segment 2

(7) Core 172-173

(8) Cask Serial Number C-1028

Isolation Survey Data:

(9) FIELD

Over Top Dose Rate

1.5 mR/hr

Side Dose Rate

1.5 mR/hr

Bottom Dose Rate

1.9 mR/hr

Smearable Contamination

120 mR/hr dpm/100cm²

(Alpha)

1000 dpm/100cm²

(Beta-Gamma)

ACT* (HPT)

Doug Jones

ACT* (HPT)

Signature

(33) LABORATORY

<0.5"

1.5"

2

<150 dpm 145

(Alpha)

<1000 dpm 145

(Beta-Gamma)

Signature

(10) Shipment Description

A. Work Package Number

B. Cask Seal Number

C. Sampler Serial Number

D. Date and Time Sampler Unsealed

E. Expected Liquid Content

F. Expected Solid Content

G. Dose Rate Through Drill String

H. Expected Sample Length

ES-96-01691

11167

96-138

9-6-96/0130

3090

2096

60 MR/HR

14"

HNF-SD-WM-DP-219, REV. 0

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

147

2) Field Comments

daily pushed 14" DO TO HITTING HIGH SOUND BONE.

(34) Laboratory Comments

3) Point of Origin

B-Farm

(14) Destination

222-S

(15) Sender Name (Sign and PRINT)

Dana Hickok James Sackett

(16) Date/Time

10-11-96

(17) Sender Comments

(18) Seal Intact Upon Release?

Yes ☐ No ☐

(19) Relinquished By (Sign and PRINT)

Dana Hickok James Sackett

(20) Received By (Sign and PRINT)

Edith Byrd

(21) Relinquished By (Sign and PRINT)

Edith Byrd

(22) Receiver Comments

(23) Date/Time

10-11-96

(24) Received By (Sign and PRINT)

Edith Byrd

(25) Date/Time

10-11-96

(26) Receiver Comments

(27) Relinquished By (Sign and PRINT)

Edith Byrd

(28) Received By (Sign and PRINT)

Edith Byrd

(29) Date/Time

10-11-96

(30) Receiver Comments

(18) Seal Intact Upon Release?

Yes ☐ No ☐

(31) Seal Intact Upon Receipt?

Yes ☒ No ☐

(32) Seal Data Consistent with this Record?

Yes ☒ No ☐

Cask Seal No.

Yes ☒ No ☐

Sample No.

Yes ☒ No ☐

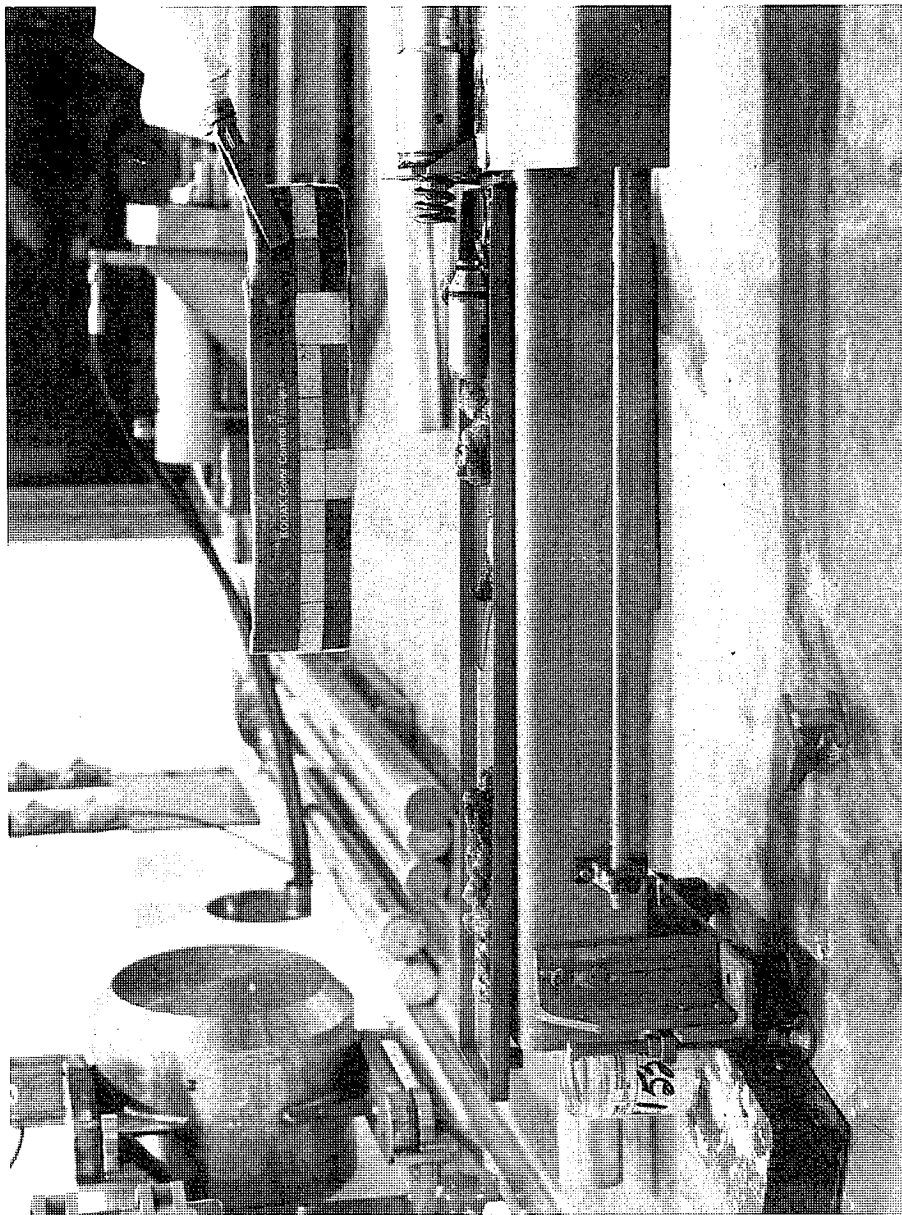
PHOTOGRAPHS

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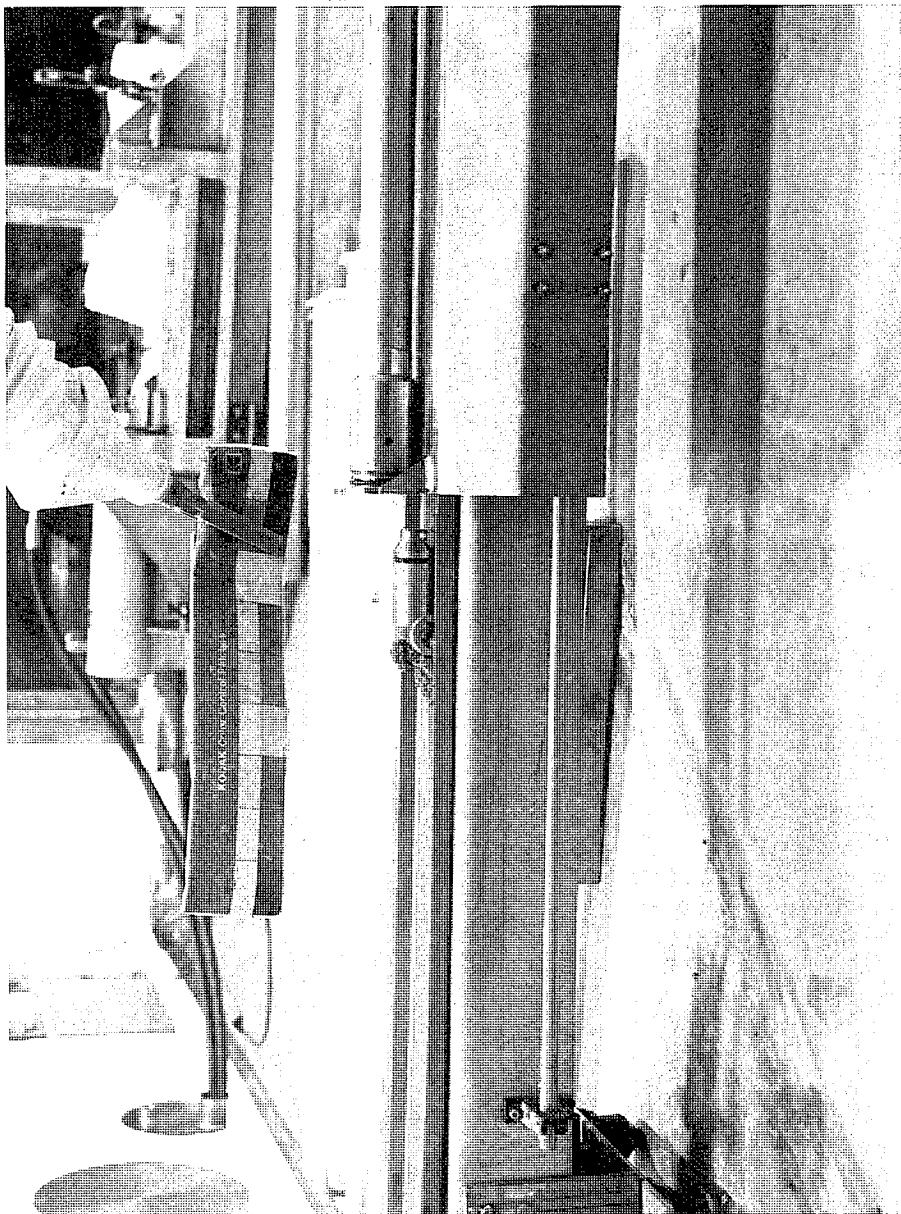
B-105 Core 172 Segment #1

10-16-96



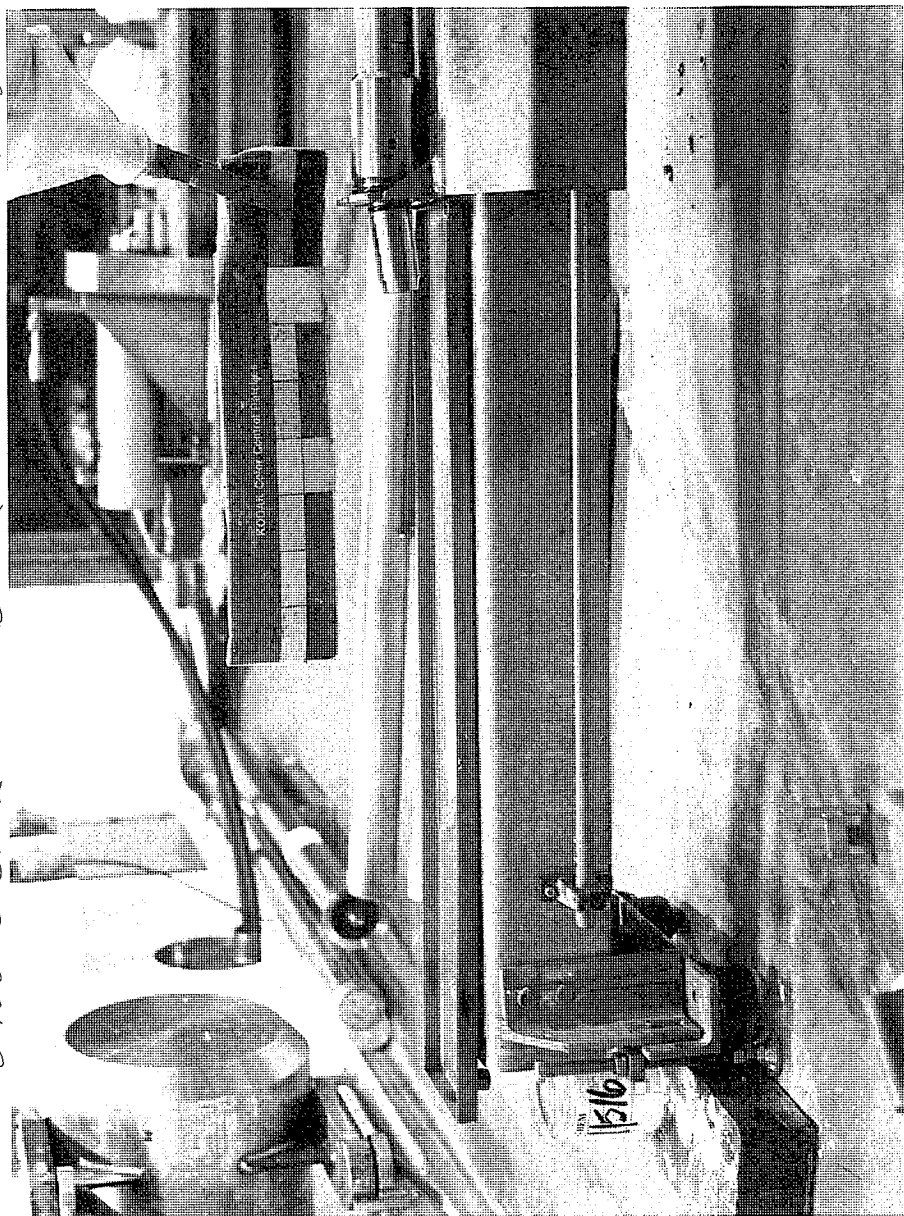
B-108 Core 172 Segment #2 10-21-96

HNF-SD-WM-DP-219, REV. 0

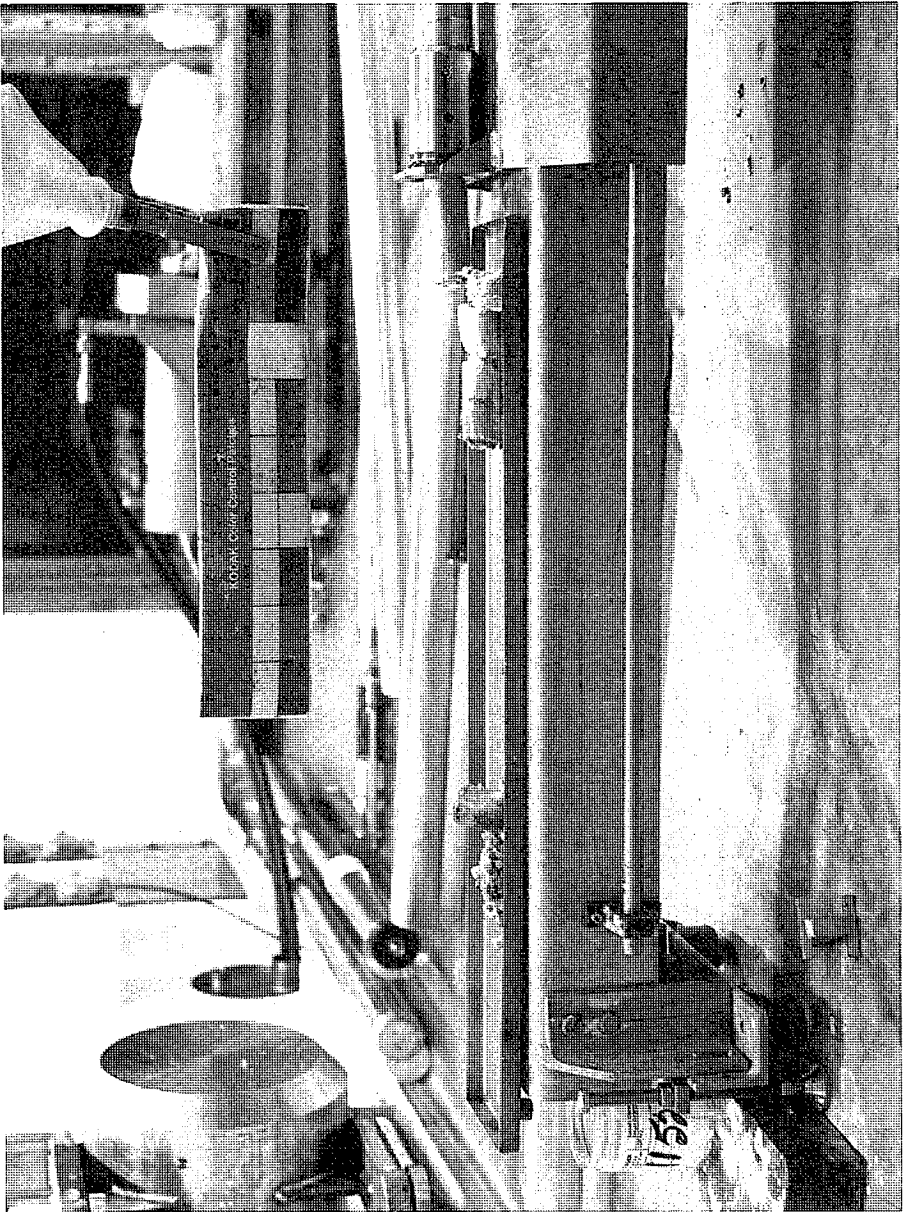


10-16-86

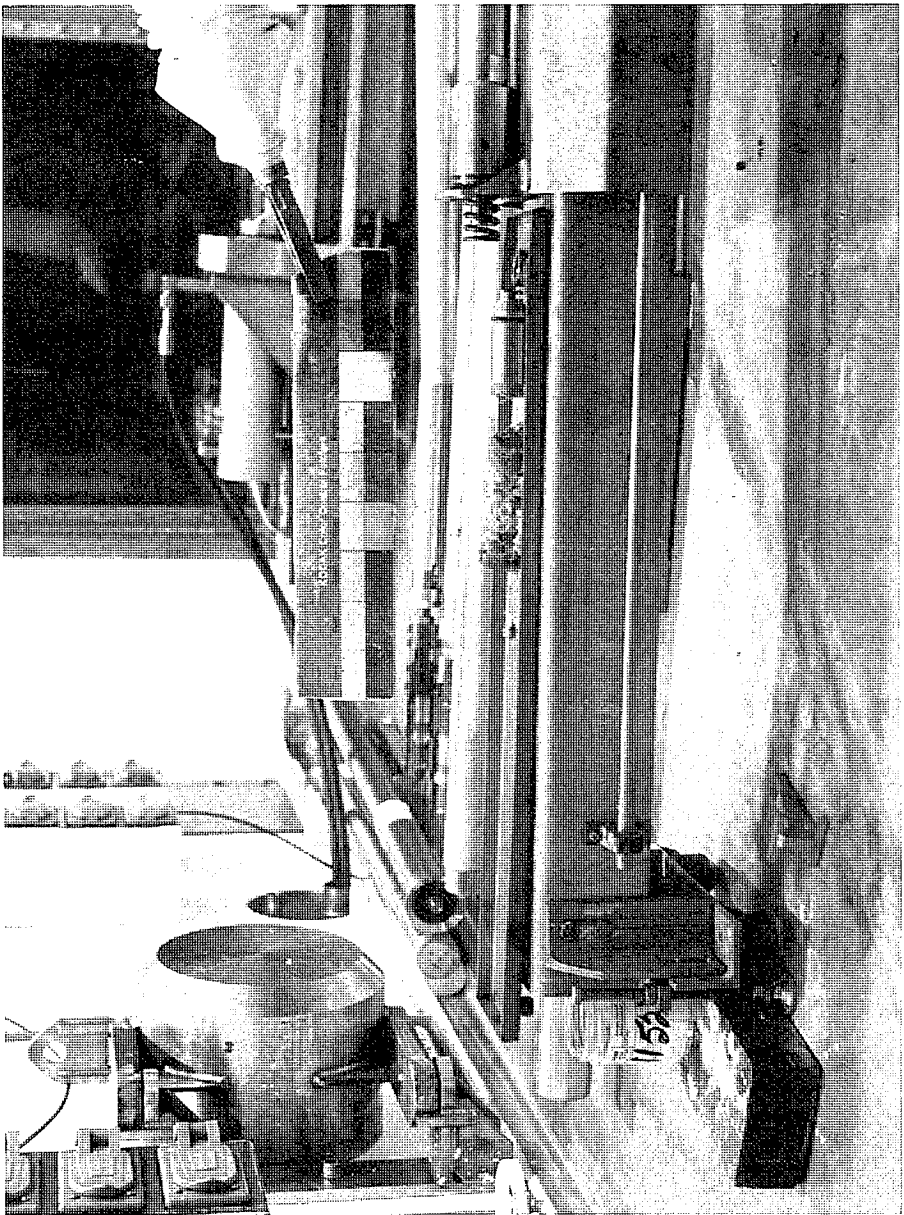
B-108 Ore 172 Field Blank



B-108 Core 173 Segment #1 10-16-98



B-108 One 173 Segment #2 10-16-96



HNF-SD-WM-DP-219, REV. 0

CORE COMPOSITE WORKSHEETS

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Final Composite Calculation SheetDate: 10/19/96 Technician: A. J. LillatTotal number of jars used to build the composite: 3Composite Jar number: 11507 Jar size: 60

- 1) Sample from segment jar 11505 to composite jar = 26.0 grams
- 2) Sample from segment jar 11506 to composite jar = 20.4 grams
- 3) Sample from segment jar 11484 to composite jar = 21.0 grams
- 4) Sample from segment jar _____ to composite jar = _____ grams
- 5) Sample from segment jar _____ to composite jar = _____ grams
- 6) Sample from segment jar _____ to composite jar = _____ grams
- 7) Sample from segment jar _____ to composite jar = _____ grams
- 8) Sample from segment jar _____ to composite jar = _____ grams
- 9) Sample from segment jar 11507 to composite jar = _____ grams
- 10) Sample from segment jar 11507 to composite jar = _____ grams
- 11) Sample from segment jar 11507 to composite jar = _____ grams
- 12) Sample from segment jar _____ to composite jar = _____ grms
- 13) Sample from segment jar _____ to composite jar = _____ grams
- 14) Sample from segment jar _____ to composite jar = _____ grms

Total grams collected in composite jar # 11507 = 61.4 grams

Composite % Calculation Sheet

Date: 10-19-96 Technician: By Llt1) Segment jar # 11505:

$$\frac{20.0 \text{ grams from segment jar to composite jar}}{61.4 \text{ Total grams in composite jar}} \times 100 = \underline{32.6} \%$$

2) Segment jar # 11526:

$$\frac{20.4 \text{ grams from segment jar to composite jar}}{61.4 \text{ Total grams in composite jar}} \times 100 = \underline{33.2} \%$$

3) Segment jar # 11484:

$$\frac{21.0 \text{ grams from segment jar to composite jar}}{61.4 \text{ Total grams in composite jar}} \times 100 = \underline{34.2} \%$$

4) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

5) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

6) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

7) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

8) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

9) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

10) Segment jar # _____:

$$\frac{\text{grams from segment jar to composite jar}}{\text{Total grams in composite jar}} \times 100 = \underline{\hspace{2cm}} \%$$

EXTRUSION ANALYSIS

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LABCORE Data Entry Template for Worklist# 14037

Analyst: CE Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod 00

Worklist Comment: B-108 C172 FIELD BLANK RISER 6 EXTRUSION

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>500.11</u>	<u>N/A</u>	
96001379	B-108	3	SAMPLE	S96T005393	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>260</u>		ml
96001379	B-108	4	SAMPLE	S96T005393	0		DLIQWT01	SOLID	<u>N/A</u>	<u>254.4</u>		g
96001379	B-108	5	SAMPLE	S96T005393	0		EST.G/ML	SOLID	<u>N/A</u>	<u>1.02</u>		g/ml
96001379	B-108	6	SAMPLE	S96T005393	0		EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	7	SAMPLE	S96T005393	0		LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001379	B-108	8	SAMPLE	S96T005393	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1179</u>		
96001379	B-108	9	SAMPLE	S96T005393	0		SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
96001379	B-108	10	SAMPLE	S96T005393	0		SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
96001379	B-108	11	SAMPLE	S96T005393	0		APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	12	SAMPLE	S96T005393	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 14037

CE 10-18-96
Analyst Signature Date

CE 10-18-96
Analyst Signature Date

Bertrand Hoff II
10-21-96

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 14038

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod D0

Worklist Comment: B-108 C172 SEG # 1 RISER 6 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.11</u>	<u>N/A</u>	
96001379	B-108	3 SAMPLE	S96T005394	0	DL1QVOL1	SOLID	<u>N/A</u>	<u>20</u>		mL
96001379	B-108	4 SAMPLE	S96T005394	0	DL1QWT01	SOLID	<u>N/A</u>	<u>26.9</u>		g
96001379	B-108	5 SAMPLE	S96T005394	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.34</u>		g/mL
96001379	B-108	6 SAMPLE	S96T005394	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	7 SAMPLE	S96T005394	0	LL1QWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001379	B-108	8 SAMPLE	S96T005394	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1179</u>		
96001379	B-108	9 SAMPLE	S96T005394	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
96001379	B-108	10 SAMPLE	S96T005394	0	SLDWT-01	SOLID	<u>N/A</u>	<u>169.6</u>		g
96001379	B-108	11 SAMPLE	S96T005394	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	12 SAMPLE	S96T005394	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 14038

EC 10-18-96
Analyst Signature Date

✓

EC 10-18-96
Analyst Signature Date

B. Duff II 10-21-96

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# 14040

Analyst: CC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: B-108 C172 SEG # 2 RISER 6 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.09</u>	<u>N/A</u>	
96001379	B-108	3 SAMPLE	S96T005395	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
96001379	B-108	4 SAMPLE	S96T005395	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001379	B-108	5 SAMPLE	S96T005395	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
96001379	B-108	6 SAMPLE	S96T005395	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	7 SAMPLE	S96T005395	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001379	B-108	8 SAMPLE	S96T005395	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1179</u>		
96001379	B-108	9 SAMPLE	S96T005395	0	SLDVOL01	SOLID	<u>N/A</u>	<u>N/A</u>		mL
96001379	B-108	10 SAMPLE	S96T005395	0	SLDWT-01	SOLID	<u>N/A</u>	<u>29.4</u>		g
96001379	B-108	11 SAMPLE	S96T005395	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
96001379	B-108	12 SAMPLE	S96T005395	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 14040

B. Diffin II
10-23-96
Analyst Signature Date 10-22-96

CSL
Analyst Signature Date 10-22-96

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# 14042

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0

Worklist Comment: B-108 C173 SEG # 1 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.0/</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.1/</u>	<u>N/A</u>	
96001380	B-108	3 SAMPLE	S96T005396	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		mL
96001380	B-108	4 SAMPLE	S96T005396	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001380	B-108	5 SAMPLE	S96T005396	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
96001380	B-108	6 SAMPLE	S96T005396	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
96001380	B-108	7 SAMPLE	S96T005396	0	LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001380	B-108	8 SAMPLE	S96T005396	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>12-179</u>		
96001380	B-108	9 SAMPLE	S96T005396	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
96001380	B-108	10 SAMPLE	S96T005396	0	SLDWT-01	SOLID	<u>N/A</u>	<u>203.0</u>		g
96001380	B-108	11 SAMPLE	S96T005396	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
96001380	B-108	12 SAMPLE	S96T005396	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 14042

Analyst Signature

Date

Bertrand Duff II
10-21-96

Analyst Signature

Date

10-18-96

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# 14043

Analyst: EC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod 030

Worklist Comment: B-108 C173 SEG # 2 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500</u>	<u>500.11</u>	<u>N/A</u>	
96001380	B-108	3 SAMPLE	S96T005397	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>10</u>		mL
96001380	B-108	4 SAMPLE	S96T005397	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
96001380	B-108	5 SAMPLE	S96T005397	0	EST. G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
96001380	B-108	6 SAMPLE	S96T005397	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
96001380	B-108	7 SAMPLE	S96T005397	0	LLIQWT01	SOLID	<u>N/A</u>	<u>25</u>		g
96001380	B-108	8 SAMPLE	S96T005397	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-1179</u>		
96001380	B-108	9 SAMPLE	S96T005397	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		mL
96001380	B-108	10 SAMPLE	S96T005397	0	SLDWT-01	SOLID	<u>N/A</u>	<u>140.4</u>		g
96001380	B-108	11 SAMPLE	S96T005397	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
96001380	B-108	12 SAMPLE	S96T005397	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 14043

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

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

HNF-SD-WM-DP-219, REV. 0

SAMPLE PREPARATION

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worklistrpt Version 2.1 05/15/95
10/17/96 13:15

HNF-SD-WM-DP-219, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 14104

Analyst: EAL

Instrument: FUS01

Book # N/AMethod: LA-549-141 Rev/Mod F.O

Worklist Comment: B-108 FUSION DIGEST C173S1,2,COMP lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>250</u>	<u>250</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005468 O F		FUSION01	SOLID	<u>N/A</u>	<u>2.0824</u>		<u>g/L</u>
96001380	B-108	3 SAMPLE	S96T005468 O F		DOSE-02	SOLID	<u>N/A</u>	<u>12.5</u>		<u>mrad/hour</u>
96001380	B-108	4 DUP	S96T005468 O F		FUSION01	SOLID	<u>2.0824</u>	<u>2.1228</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	5 DUP	S96T005468 O F		DOSE-02	SOLID	<u>12.5</u>	<u>12.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	6 SAMPLE	S96T005477 O F		FUSION01	SOLID	<u>N/A</u>	<u>2.2624</u>		<u>g/L</u>
96001380	B-108	7 SAMPLE	S96T005477 O F		DOSE-02	SOLID	<u>N/A</u>	<u>9</u>		<u>mrad/hour</u>
96001380	B-108	8 DUP	S96T005477 O F		FUSION01	SOLID	<u>2.2624</u>	<u>2.2524</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	9 DUP	S96T005477 O F		DOSE-02	SOLID	<u>9</u>	<u>7.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	10 SAMPLE	S96T005478 O F		FUSION01	SOLID	<u>N/A</u>	<u>2.2476</u>		<u>g/L</u>
96001380	B-108	11 SAMPLE	S96T005478 O F		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
96001380	B-108	12 DUP	S96T005478 O F		FUSION01	SOLID	<u>2.2476</u>	<u>2.2204</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	13 DUP	S96T005478 O F		DOSE-02	SOLID	<u>2.5</u>	<u>6.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	14 SAMPLE	S96T005487 O F		FUSION01	SOLID	<u>N/A</u>	<u>2.0756</u>		<u>g/L</u>
96001380	B-108	15 SAMPLE	S96T005487 O F		DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>		<u>mrad/hour</u>
96001380	B-108	16 DUP	S96T005487 O F		FUSION01	SOLID	<u>2.0756</u>	<u>2.0460</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	17 DUP	S96T005487 O F		DOSE-02	SOLID	<u>2.5</u>	<u>7.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Data Entry Comments:

5mls 4M HCL + 5ml 10M H₂O₂ color is absent and all are clear. HPT: Joe Valdez
weighed by Anna 10-26-96
OT: 9mrads 15mrads
contained 2

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# 14104

GROUP	PROJECT	S TYPE	SAMPLE#	R A -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 14104

A. Lampel 10-26-96
Analyst Signature Date

Susan Bee 10/26/96
Analyst Signature Date

Reviewed: J. Langley 10/27/96

Data Entry Comments: Samples have 0% solids. Samples were not
homogeneous.

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# 14172

Analyst: RJB Instrument: FUS01 Book # _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: B-108 FUSION DIGEST C172S1,2 LH UH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250L</u>	<u>N/A</u>	g/L
96001379	B-108	2 SAMPLE	S96T005510	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.054</u>		g/L
			<u>.5135</u>		<u>.250L</u>					
96001379	B-108	3 SAMPLE	S96T005510	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>10</u>		mrad/hour
96001379	B-108	4 DUP	S96T005510	0 F	FUSION01	SOLID	<u>2.054</u>	<u>2.056</u>	<u>N/A</u>	g/L
			<u>.5140</u>		<u>.250L</u>					
96001379	B-108	5 DUP	S96T005510	0 F	DOSE-02	SOLID	<u>10</u>	<u>10</u>	<u>N/A</u>	mrad/hour
96001379	B-108	6 SAMPLE	S96T005511	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.895</u>		g/L
			<u>.4737</u>		<u>.250L</u>					
96001379	B-108	7 SAMPLE	S96T005511	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>5</u>		mrad/hour
96001379	B-108	8 DUP	S96T005511	0 F	FUSION01	SOLID	<u>1.895</u>	<u>1.750</u>	<u>N/A</u>	g/L
			<u>.4374</u>		<u>.250L</u>					
96001379	B-108	9 DUP	S96T005511	0 F	DOSE-02	SOLID	<u>5</u>	<u>5</u>	<u>N/A</u>	mrad/hour
96001379	B-108	10 SAMPLE	S96T005512	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.959</u>		g/L
			<u>.4897</u>		<u>.250L</u>					
96001379	B-108	11 SAMPLE	S96T005512	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>5</u>		mrad/hour
96001379	B-108	12 DUP	S96T005512	0 F	FUSION01	SOLID	<u>1.959</u>	<u>2.034</u>	<u>N/A</u>	g/L
			<u>.5086</u>		<u>.250L</u>					
96001379	B-108	13 DUP	S96T005512	0 F	DOSE-02	SOLID	<u>5</u>	<u>5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 14172

OB Bruffin 11-8-96
Analyst Signature Date

Susan Bee 11/08/96
Analyst Signature Date

S96T005505 → S96T005510
5506 → 5511
5507 → 5512

Validated
by RK Fuller
11/11/96

Data Entry Comments:

Samples are not homogeneous; sample 5512
has large pieces of solids.

Submitted by OB Bruffin, 11-8-96

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

LABCORE Completed Worklist Report for Worklist# 16005

Analyst: abc

Instrument: FUS01

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: B-108 C173S2LH & COMP lad Repreps. Originals showed hi RPD

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		FUSION01	SOLID	1	0.250	0.250	g/L
2 SAMPLE	S97T000001	0 F	FUSION01	SOLID	N/A	2.0412	1.00e-005	g/L
3 SAMPLE	S97T000001	0 F	DOSE-02	SOLID	N/A	<10	9.99e-002	mrad/hour
4 DUP	S97T000001	0 F	FUSION01	SOLID	2.0412	2.0416	0.020	RPD
5 DUP	S97T000001	0 F	DOSE-02	SOLID	<10	<10		mrad/hr
6 SAMPLE	S97T000002	0 F	FUSION01	SOLID	N/A	2.0268	1.00e-005	g/L
7 SAMPLE	S97T000002	0 F	DOSE-02	SOLID	N/A	<10	9.99e-002	mrad/hour
8 DUP	S97T000002	0 F	FUSION01	SOLID	2.0268	2.0308	0.197	RPD
9 DUP	S97T000002	0 F	DOSE-02	SOLID	<10	<10		mrad/hr

Final page for worklist# 16005

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 14105

Analyst: GRK JAM Instrument: H2O01 Book # NA

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

Worklist Comment: B-108 H2O DIGEST C173S1 UH,LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2O1G01	SOLID	<u>1</u>	<u>0.106</u>	<u>N/A</u>	g/L
96001380	B-108	2 SAMPLE	S96T005469 0 W		H2O1G01	SOLID	<u>N/A</u>	<u>5.6240</u>		g/L
		<u>0.5624g</u> → <u>0.100g</u>								
96001380	B-108	3 SAMPLE	S96T005469 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>3.5</u>		mrad/hour
96001380	B-108	4 DUP	S96T005469 0 W		H2O1G01	SOLID	<u>5.6240</u>	<u>5.5240</u>	<u>N/A</u>	g/L
		<u>0.5524g</u> → <u>0.100g</u>								
96001380	B-108	5 DUP	S96T005469 0 W		DOSE-02	SOLID	<u>3.5</u>	<u>3</u>	<u>N/A</u>	mrad/hour
96001380	B-108	6 SAMPLE	S96T005479 0 W		H2O1G01	SOLID	<u>N/A</u>	<u>5.4750</u>		g/L
		<u>0.5475g</u> → <u>0.100g</u>								
96001380	B-108	7 SAMPLE	S96T005479 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>3</u>		mrad/hour
96001380	B-108	8 DUP	S96T005479 0 W		H2O1G01	SOLID	<u>5.4750</u>	<u>5.4800</u>	<u>N/A</u>	g/L
		<u>0.5480g</u> → <u>0.100g</u>								
96001380	B-108	9 DUP	S96T005479 0 W		DOSE-02	SOLID	<u>3</u>	<u>2.5</u>	<u>N/A</u>	mrad/hour
96001380	B-108	10 SAMPLE	S96T005470 0 I		H2O1CP01	SOLID	<u>N/A</u>	<u>5.4782</u>		g/L
		<u>5.6240</u> + <u>1.0266</u>								
96001380	B-108	11 SAMPLE	S96T005470 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		mrad/hour
96001380	B-108	12 DUP	S96T005470 0 I		H2O1CP01	SOLID	<u>5.4782</u>	<u>5.3808</u>	<u>N/A</u>	g/L
		<u>5.5240</u> + <u>1.0266</u>								
96001380	B-108	13 DUP	S96T005470 0 I		DOSE-02	SOLID	<u>0.5</u>	<u>0.5</u>	<u>N/A</u>	mrad/hour
96001380	B-108	14 SAMPLE	S96T005481 0 I		H2O1CP01	SOLID	<u>N/A</u>	<u>5.3331</u>		g/L
		<u>5.4750</u> + <u>1.0266</u>								
96001380	B-108	15 SAMPLE	S96T005481 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		mrad/hour
96001380	B-108	16 DUP	S96T005481 0 I		H2O1CP01	SOLID	<u>5.3331</u>	<u>5.3380</u>	<u>N/A</u>	g/L
		<u>5.4800</u> + <u>1.0266</u>								
96001380	B-108	17 DUP	S96T005481 0 I		DOSE-02	SOLID	<u>0.5</u>	<u>0.5</u>	<u>N/A</u>	mrad/hour

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# 14105

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

Final page for worklist # 14105

*OK follow
for*
IA Murphy 10/28/96
Analyst Signature Date

Frank Mack 10-28-96
Analyst Signature Date

Performed 10/28/96

8967005466 → 5469 → 5470
5473 → 5479 → 5481

Reviewed: *[Signature]* 10/28/96

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.

05/12/26.1996

5:09PM

WHC 222S LAB ROOM 2F BACKSIDE

No. 6313 P. 5/6

worklist Version 2.1 05/15/95

HNF-SD-WM-DP-219, REV. 0

Page: 1

10/17/96 13:17

LABCORE Data Entry Template for Worklist# 14105

Analyst:

VAM

Instrument: H2001

Book #

N/A

Method: LA-504-101 Rev/Mod

E2

Worklist Comment: B-108 H2O DIGEST C173S1 UH,LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H20DIG01	SOLID	1	100	N/A	g/L
96001380	B-108	2 SAMPLE	S96T005469 0 W		H20DIG01	SOLID	N/A	5.6240		g/L
96001380	B-108	3 SAMPLE	S96T005469 0 W		DOSE-02	SOLID	N/A	3.5		mrads/hour
96001380	B-108	4 DUP	S96T005469 0 W		H20DIG01	SOLID	5.6240	5.5240	N/A	g/L
96001380	B-108	5 DUP	S96T005469 0 W		DOSE-02	SOLID	N/A	3	N/A	mrads/hour
96001380	B-108	6 SAMPLE	S96T005479 0 W		H20DIG01	SOLID	N/A	5.4750		g/L
96001380	B-108	7 SAMPLE	S96T005479 0 W		DOSE-02	SOLID	N/A	3		mrads/hour
96001380	B-108	8 DUP	S96T005479 0 W		H20DIG01	SOLID	5.4750	5.4800	N/A	g/L
96001380	B-108	9 DUP	S96T005479 0 W		DOSE-02	SOLID	N/A	2.5	N/A	mrads/hour
96001380	B-108	10 SAMPLE	S96T005470 0 I		H20ICP01	SOLID	N/A			g/L
96001380	B-108	11 SAMPLE	S96T005470 0 I		DOSE-02	SOLID	N/A	.5		mrads/hour
96001380	B-108	12 DUP	S96T005470 0 I		H20ICP01	SOLID	N/A		N/A	g/L
96001380	B-108	13 DUP	S96T005470 0 I		DOSE-02	SOLID	N/A	.5	N/A	mrads/hour
96001380	B-108	14 SAMPLE	S96T005481 0 I		H20ICP01	SOLID	N/A			g/L
96001380	B-108	15 SAMPLE	S96T005481 0 I		DOSE-02	SOLID	N/A	.5		mrads/hour
96001380	B-108	16 DUP	S96T005481 0 I		H20ICP01	SOLID			N/A	g/L
96001380	B-108	17 DUP	S96T005481 0 I		DOSE-02	SOLID		.5	N/A	mrads/hour

Data Entry Comments:

weighed by Anna 10.26.96 HPT: Joe Valdez at: 5mrads

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.

Oct 26, 1996

5:09PM

WHC 222S LAB ROOM 2F BACKSIDE

No. 6313 P. 6/6

worklistrpt Version 2.1 05/15/95
10/17/96 13:17

HNF-SD-WM-DP-219, REV. 0

Page: 2

LABCORE Data Entry Template for Worklist# 14105

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 14105

Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 14106

Analyst: OKT fm TAM Instrument: H2001 Book # N/A

Method: LA-504-101 Rev/Med E-Q

Worklist Comment: B-108 H2O DIGEST C173S2LH C173 COMP lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	<u>1</u>	<u>0.100</u>	<u>N/A</u>	g/L
96001380	B-108	2 SAMPLE	S96T005480 0 W		H2001G01	SOLID	<u>N/A</u>	<u>5.7110</u>		g/L
		<u>0.5711 g</u>	<u>→ 0.1008</u>							
96001380	B-108	3 SAMPLE	S96T005480 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>2</u>		mrad/hour
96001380	B-108	4 DUP	S96T005480 0 W		H2001G01	SOLID	<u>5.7110</u>	<u>5.5540</u>	<u>N/A</u>	g/L
		<u>0.5554 g</u>	<u>→ 0.1008</u>							
96001380	B-108	5 DUP	S96T005480 0 W		DOSE-02	SOLID	<u>2</u>	<u>1.5</u>	<u>N/A</u>	mrad/hour
96001380	B-108	6 SAMPLE	S96T005488 0 W		H2001G01	SOLID	<u>N/A</u>	<u>5.1420</u>		g/L
		<u>0.5142 g</u>	<u>→ 0.1008</u>							
96001380	B-108	7 SAMPLE	S96T005488 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		mrad/hour
96001380	B-108	8 DUP	S96T005488 0 W		H2001G01	SOLID	<u>5.1420</u>	<u>5.1770</u>	<u>N/A</u>	g/L
		<u>0.5177 g</u>	<u>→ 0.1008</u>							
96001380	B-108	9 DUP	S96T005488 0 W		DOSE-02	SOLID	<u>1.5</u>	<u>2.5</u>	<u>N/A</u>	mrad/hour
96001380	B-108	10 SAMPLE	S96T005482 0 I		H201CP01	SOLID	<u>N/A</u>	<u>5.5630</u>		g/L
		<u>5.7110 ÷ 1.0266</u>								
96001380	B-108	11 SAMPLE	S96T005482 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		mrad/hour
96001380	B-108	12 DUP	S96T005482 0 I		H201CP01	SOLID	<u>5.5630</u>	<u>5.4100</u>	<u>N/A</u>	g/L
		<u>5.5540 ÷ 1.0266</u>								
96001380	B-108	13 DUP	S96T005482 0 I		DOSE-02	SOLID	<u>0.5</u>	<u>0.5</u>	<u>N/A</u>	mrad/hour
96001380	B-108	14 SAMPLE	S96T005489 0 I		H201CP01	SOLID	<u>N/A</u>	<u>5.0087</u>		g/L
		<u>5.1420 ÷ 1.0266</u>								
96001380	B-108	15 SAMPLE	S96T005489 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		mrad/hour
96001380	B-108	16 DUP	S96T005489 0 I		H201CP01	SOLID	<u>5.0087</u>	<u>5.0428</u>	<u>N/A</u>	g/L
		<u>5.1770 ÷ 1.0266</u>								
96001380	B-108	17 DUP	S96T005489 0 I		DOSE-02	SOLID	<u>0.5</u>	<u>0.5</u>	<u>N/A</u>	mrad/hour

Data Entry Comments:

~~S96T005466~~ → ~~S96T005469~~ → ~~S96T005470~~ OK? ~~N/A~~
S96T005474 → S96T005480 → S96T005482
S96T005485 → S96T005488 → S96T005489

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# 14106

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 14106

Keith Fuller for

Teresa P. Murphy 10/28/96
Analyst Signature Date

Frank Mack 10-28-96
Analyst Signature Date

Reviewed: *KJ Steyer*

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.

10/17/96 13:18

LABCORE Data Entry Template for Worklist# 14106Analyst: OAM Instrument: H2001 Book # N/AMethod: LA-504-101 Rev/Mod E.O

Worklist Comment: B-108 H2O DIGEST C173S2LH C173 COMP lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H20DIG01	SOLID	<u>1</u>	<u>100</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005480	0 W	H20DIG01	SOLID	<u>N/A</u>	<u>5.7110</u>		<u>g/L</u>
96001380	B-108	3 SAMPLE	S96T005480	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>2</u>		<u>mrad/hour</u>
96001380	B-108	4 DUP	S96T005480	0 W	H20DIG01	SOLID	<u>5.7110</u>	<u>5.5540</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	5 DUP	S96T005480	0 W	DOSE-02	SOLID	<u>2</u>	<u>15</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	6 SAMPLE	S96T005488	0 W	H20DIG01	SOLID	<u>N/A</u>	<u>5.1420</u>		<u>g/L</u>
96001380	B-108	7 SAMPLE	S96T005488	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>15</u>		<u>mrad/hour</u>
96001380	B-108	8 DUP	S96T005488	0 W	H20DIG01	SOLID	<u>5.1420</u>	<u>5.1770</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	9 DUP	S96T005488	0 W	DOSE-02	SOLID	<u>1.5</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	10 SAMPLE	S96T005482	0 I	H20ICP01	SOLID	<u>N/A</u>			<u>g/L</u>
96001380	B-108	11 SAMPLE	S96T005482	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		<u>mrad/hour</u>
96001380	B-108	12 DUP	S96T005482	0 I	H20ICP01	SOLID			<u>N/A</u>	<u>g/L</u>
96001380	B-108	13 DUP	S96T005482	0 I	DOSE-02	SOLID		<u>.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	14 SAMPLE	S96T005489	0 I	H20ICP01	SOLID	<u>N/A</u>			<u>g/L</u>
96001380	B-108	15 SAMPLE	S96T005489	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		<u>mrad/hour</u>
96001380	B-108	16 DUP	S96T005489	0 I	H20ICP01	SOLID			<u>N/A</u>	<u>g/L</u>
96001380	B-108	17 DUP	S96T005489	0 I	DOSE-02	SOLID		<u>.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Data Entry Comments:

weighed by Ann 10.26.96 HPT: Joe Valdez at 2.5 mrad/hr

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

Oct. 26, 1996

5:08PM

WHC 222S LAB ROOM 2F BACKSIDE

No. 6313

P. 4/6

worklistrpt Version 2.1 05/15/95
10/17/96 13:18

HNF-SD-WM-DP-219, REV. 0

Page: 2

LABCORE Data Entry Template for Worklist# 14106

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

Final page for worklist # 14106

AMurphy 10-26-96
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.

worklistrpt Version 2.1 05/15/95
10/21/96 13:15

Page: 1

LABCORE Data Entry Template for Worklist# 14173

Analyst: KNT Instrument: H2001 Book # _____

Method: LA-504-101 Rev/Mod _____

Worklist Comment: B-108 H2ODIG H2OICP C172S1,2 UH LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2ODIG01	SOLID	<u>1</u>	<u>.100</u>	<u>N/A</u>	g/L
96001379	B-108	2 SAMPLE	S96T005513 0 W <u>.4925 → .100L</u>		H2ODIG01	SOLID	<u>N/A</u>	<u>4.925</u>		g/L
96001379	B-108	3 SAMPLE	S96T005513 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>40.5</u>		mrad/hour
96001379	B-108	4 DUP	S96T005513 0 W <u>.5214 → .100L</u>		H2ODIG01	SOLID	<u>4.925</u>	<u>5.214</u>	<u>N/A</u>	g/L
96001379	B-108	5 DUP	S96T005513 0 W		DOSE-02	SOLID	<u>40.5</u>	<u>40.5</u>	<u>N/A</u>	mrad/hour
96001379	B-108	6 SAMPLE	S96T005516 0 I <u>4.925 ÷ 1.0267 → .100L K11-8-96</u>		H2OICP01	SOLID	<u>N/A</u>	<u>4.7969</u>		g/L
96001379	B-108	7 SAMPLE	S96T005516 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>40.5</u>		mrad/hour
96001379	B-108	8 DUP	S96T005516 0 I <u>5.214 ÷ 1.0267 → .100L K11-8-96</u>		H2OICP01	SOLID	<u>4.7969</u>	<u>5.0784</u>	<u>N/A</u>	g/L
96001379	B-108	9 DUP	S96T005516 0 I		DOSE-02	SOLID	<u>40.5</u>	<u>40.5</u>	<u>N/A</u>	mrad/hour
96001379	B-108	10 SAMPLE	S96T005514 0 W <u>.5244 → .100L</u>		H2ODIG01	SOLID	<u>N/A</u>	<u>5.244</u>		g/L
96001379	B-108	11 SAMPLE	S96T005514 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>6</u>		mrad/hour
96001379	B-108	12 DUP	S96T005514 0 W <u>.4829 → .100L</u>		H2ODIG01	SOLID	<u>5.244</u>	<u>4.829</u>	<u>N/A</u>	g/L
96001379	B-108	13 DUP	S96T005514 0 W		DOSE-02	SOLID	<u>6</u>	<u>7</u>	<u>N/A</u>	mrad/hour
96001379	B-108	14 SAMPLE	S96T005519 0 I <u>5.244 ÷ 1.0267 → .100L K11-8-96</u>		H2OICP01	SOLID	<u>N/A</u>	<u>5.1076</u>		g/L
96001379	B-108	15 SAMPLE	S96T005519 0 I		DOSE-02	SOLID	<u>N/A</u>	<u>40.5</u>		mrad/hour
96001379	B-108	16 DUP	S96T005519 0 I <u>4.829 ÷ 1.0267</u>		H2OICP01	SOLID	<u>5.1076</u>	<u>4.7034</u>	<u>N/A</u>	g/L
96001379	B-108	17 DUP	S96T005519 0 I		DOSE-02	SOLID	<u>40.5</u>	<u>40.5</u>	<u>N/A</u>	mrad/hour
96001379	B-108	18 SAMPLE	S96T005515 0 W <u>.4851 → .100L</u>		H2ODIG01	SOLID	<u>N/A</u>	<u>4.851</u>		g/L

596T005505 → 596T005513 → 596T005516
Data Entry Comments: 596T005506 → 596T005514 → 596T005519

Samples not homogeneous.

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

LABCORE Completed Worklist Report for Worklist# 16245

Analyst: abc

Instrument: H2001

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: B-108 H2O DIGEST C173S2LH & COMP lad

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 BLNK-PREP	0		H20DIG01	SOLID	1	0.100	0.100	g/L
2 SAMPLE	S97T000015	0 W	H20DIG01	SOLID	N/A	4.991	1.00e-004	g/L
3 SAMPLE	S97T000015	0 W	DOSE-02	SOLID	N/A	<5	9.99e-002	mrad/hour
4 DUP	S97T000015	0 W	H20DIG01	SOLID	4.9910	4.994	0.060	RPD
5 DUP	S97T000015	0 W	DOSE-02	SOLID	<5	<5		mrad/hr
6 SAMPLE	S97T000016	0 I	H20ICP01	SOLID	N/A	4.861	1.00e-004	g/L
7 SAMPLE	S97T000016	0 I	DOSE-02	SOLID	N/A	<5	9.99e-002	mrad/hour
8 DUP	S97T000016	0 I	H20ICP01	SOLID	4.861	4.864	0.062	RPD
9 DUP	S97T000016	0 I	DOSE-02	SOLID	<5	<5		mrad/hr
10 SAMPLE	S97T000017	0 W	H20DIG01	SOLID	N/A	5.037	1.00e-004	g/L
11 SAMPLE	S97T000017	0 W	DOSE-02	SOLID	N/A	<5	9.99e-002	mrad/hour
12 DUP	S97T000017	0 W	H20DIG01	SOLID	5.037	5.078	0.811	RPD
13 DUP	S97T000017	0 W	DOSE-02	SOLID	<5	<5		mrad/hr
14 SAMPLE	S97T000019	0 I	H20ICP01	SOLID	N/A	4.906	1.00e-004	g/L
15 SAMPLE	S97T000019	0 I	DOSE-02	SOLID	N/A	<5	9.99e-002	mrad/hour
16 DUP	S97T000019	0 I	H20ICP01	SOLID	4.906	4.946	0.812	RPD
17 DUP	S97T000019	0 I	DOSE-02	SOLID	<5	<5		mrad/hr

Final page for worklist# 16245

Analyst Signature

Date

Analyst Signature

Date

Reviewer Signature

Date

LABCORE Data Entry Template for Worklist# 14173

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001379	B-108	19 SAMPLE	S96T005515	0 W	DOSE-02	SOLID	N/A	60.5		mrad/hour
96001379	B-108	20 DUP	S96T005515	0 W	H20DIG01	SOLID	4.851	4.962	N/A	g/L
			4.962 → .100 L							
96001379	B-108	21 DUP	S96T005515	0 W	DOSE-02	SOLID	60.5	60.5	N/A	mrad/hour
96001379	B-108	22 SAMPLE	S96T005520	0 I	H20ICP01	SOLID	N/A	4.7248		g/L
			4.851 ÷ 1.0267							
96001379	B-108	23 SAMPLE	S96T005520	0 I	DOSE-02	SOLID	N/A	60.5		mrad/hour
96001379	B-108	24 DUP	S96T005520	0 I	H20ICP01	SOLID	4.7248	4.8330	N/A	g/L
			4.962 ÷ 1.0267							
96001379	B-108	25 DUP	S96T005520	0 I	DOSE-02	SOLID	60.5	60.5	N/A	mrad/hour

Final page for worklist # 14173

Kim Thomas 11-8-96
Analyst Signature Date

Lucia Mack 11-8-96
Analyst Signature Date

S96T005507 → S96T005515 → S96T005520

Validated
S. M. 11/9/96

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.

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HNF-SD-WM-DP-219, REV. 0

BULK DENSITY WORKLISTS

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Bulk Density Worksheet

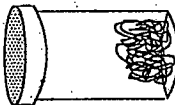
Date: 10-30-96

HNF-SD-WM-DP-219, REV. 0

Tank: B-108
Core: 172
Seg: 1 LH
Auger: ---
Sample ID: 5967005302

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

Jar#: 11161
Jar/Vial Size: 125 mL
Initial Weight: 96 g
Final Weight: 103.4 g
Net Weight: 17.3 g



Cone#: 11161
Final Vol: 10.2 mL
Initial Weight: 7.5 g
Final Weight: 24.8 g
Net Weight: 17.3 g
Sample ID: 5967005302

Appearance/Narrative:
BULKWGT = 17.3 / 10.2 = 1.70 g/cc

Tank: B-108
Core: 172
Seg: 1 LH
Auger: ---
Sample ID: 5967005303

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

Jar#: 11162
Jar/Vial Size: 125 mL
Initial Weight: 96 g
Final Weight: 114 g
Net Weight: 18.4 g



Cone#: 11162
Final Vol: 8.3 mL
Initial Weight: 7.5 g
Final Weight: 21.5 g
Net Weight: 14.0 g
Sample ID: 5967005303

Appearance/Narrative:
BULKWGT = 14.0 / 8.3 = 1.69 g/cc

HNF-SD-WM-DP-219, REV. 0

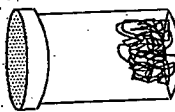
Bulk Density Worksheet

Date: 10/18/96

Requestor: FRITS

Tank: 6138
 Core: 173
 Seg: 111
 Auger: —
 Sample ID: —

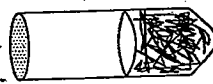
Start Time: —
 End Time: —
 Homogenization Time (Min.): —



Jar#: 11159
 Jar/Vial Size: 125 mL
 Initial Weight: 259.2 g
 Final Weight: — g
 Net Weight: — g



Cone#: 59
 Final Vol: 10 mL
 Initial Weight: 7.45 g
 Final Weight: 24.69 g
 Net Weight: 17.24 g



Sample ID: —

Appearance/Narrative: 17.24/10 = 1.91 g/mL

Tank: —
 Core: —
 Seg: —
 Auger: —
 Sample ID: —

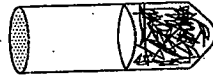
Start Time: —
 End Time: —
 Homogenization Time (Min.): —



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



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



Sample ID: —

Appearance/Narrative: —

HNF-SD-WM-DP-219; REV. 0

Bulk Density Worksheet

Requestor: Flitts

Date: 10/19/96

Tank: B-108

Core: 143

Seg: 1 LH

Auger: ---

Sample ID: 5967005441

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



Jar#: 11158
Jar/Vial Size: 125 mL
Initial Weight: 187.7 g
Final Weight: --- g
Net Weight: --- g

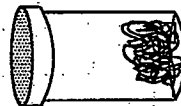


Cone#: 11158
Final Vol: 7.5 mL
Initial Weight: 7.52 g
Final Weight: 20.57 g
Net Weight: 13.05 g
Sample ID: 5967005441

Appearance/Narrative: 13.05/7.5 = 17.4 g/mL

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

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



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



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

Appearance/Narrative: 95/101 #2

HNF-SD-WM-DP-219, REV. 0

Bulk Density Worksheet

Requestor: Fri 115Date: 10-16-96Tank: B-108Core: 173Seg: 2 LHAuger: Sample ID: 5967005442Start Time: End Time: Homogenization
Time (Min.): Jar#: 11157Jar/Vial Size: 125 mLInitial Weight: 96 gFinal Weight: 104.8 gNet Weight: gCone#: 11157Final Vol: 11.0 mLInitial Weight: 7.5 gFinal Weight: 24.8 gNet Weight: 17.3 gSample ID: 5967005442

Appearance/Narrative:

Bulk Density = 17.3/11.0DID NOT PACK WELL DUE TOConsistency of Sample.Tank: Core: Seg: Auger: Sample ID: Start Time: End Time: Homogenization
Time (Min.): Jar#: Jar/Vial Size: mLInitial Weight: gFinal Weight: gNet Weight: gCone#: Final Vol: mLInitial Weight: gFinal Weight: gNet Weight: gSample ID:

Appearance/Narrative:

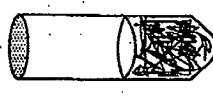
762/192

Bulk Density Worksheet

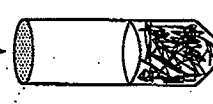
Requestor: FR.H.S.Date: 10-19-96Tank: B-108Core: 173

Seg: _____

Auger: _____

Sample ID: 5961005483Start Time: _____
End Time: _____
Homogenization
Time (Min.): _____Jar#: 11507
Jar/Vial Size: 60 mL
Initial Weight: 19.7 g
Final Weight: 27.1 g
Net Weight: 7.4 gCone#: 07
Final Vol: 11.0 mL
Initial Weight: 27.1 g
Final Weight: 19.7 g
Net Weight: 7.4 g
Sample ID: 5961005483

Appearance/Narrative:

BLD 681 = 19.7 / 11.0 = 1.79 g/ccTank: _____
Core: _____
Seg: _____
Auger: _____
Sample ID: _____Start Time: _____
End Time: _____
Homogenization
Time (Min.): _____Jar#: _____
Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ gCone#: _____
Final Vol: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g
Sample ID: _____

Appearance/Narrative:

96/11/01 AD

INORGANIC ANALYSIS

HNF-SD-WM-DP-219, REV. 0

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LABCORE Data Entry Template for Worklist# 14390

Analyst: Jds Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: DSC-01 FOR B-108 PLEASE RUN UNDR N2 RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>27.4</u>	<u>N/A</u>	Joules/g
96001380	B-108	2 SAMPLE	S96T005466	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001380	B-108	3 DUP	S96T005466	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001380	B-108	4 SAMPLE	S96T005473	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001380	B-108	5 DUP	S96T005473	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 14390

[Signature] 11-2-96
Analyst Signature Date

[Signature] 11-8-96
Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela 11-12-96

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 192 TO 194.

DSC STD 12N14B N2 File: 00019.001 DSC METTLER 01-Nov-96
34.640 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

exo>

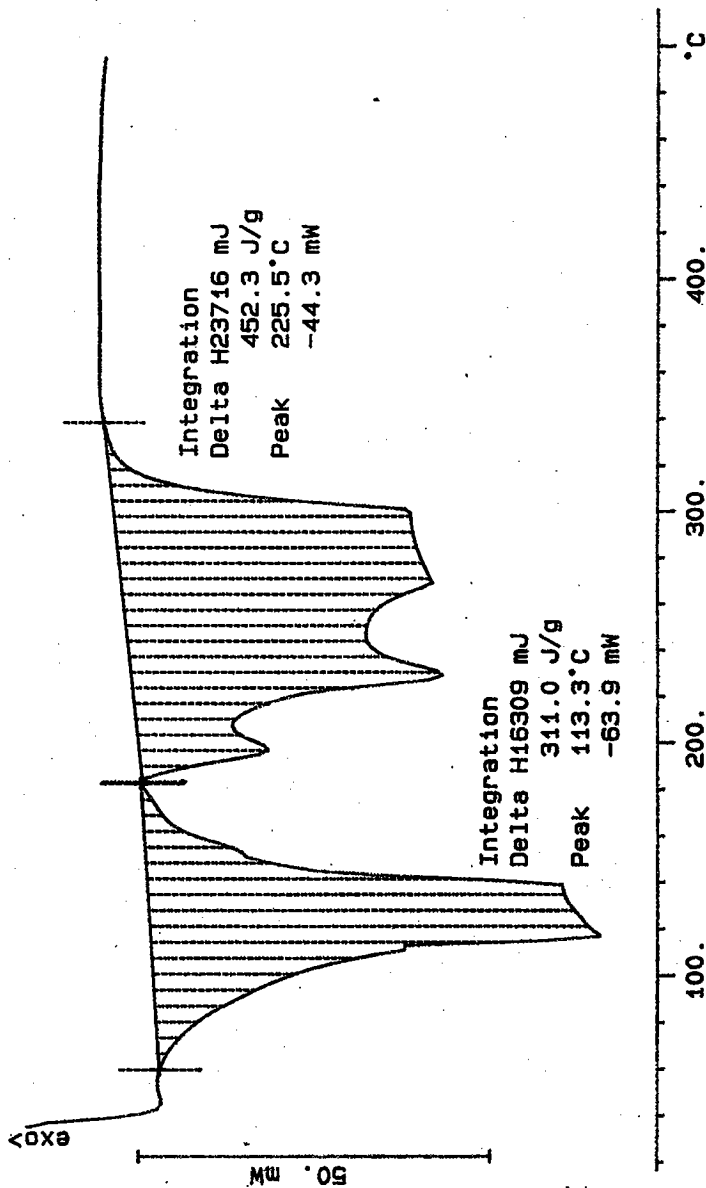
Integration
Delta H 948 mJ
27.4 J/g
Peak 159.9°C
-42.1 mW

20. mW

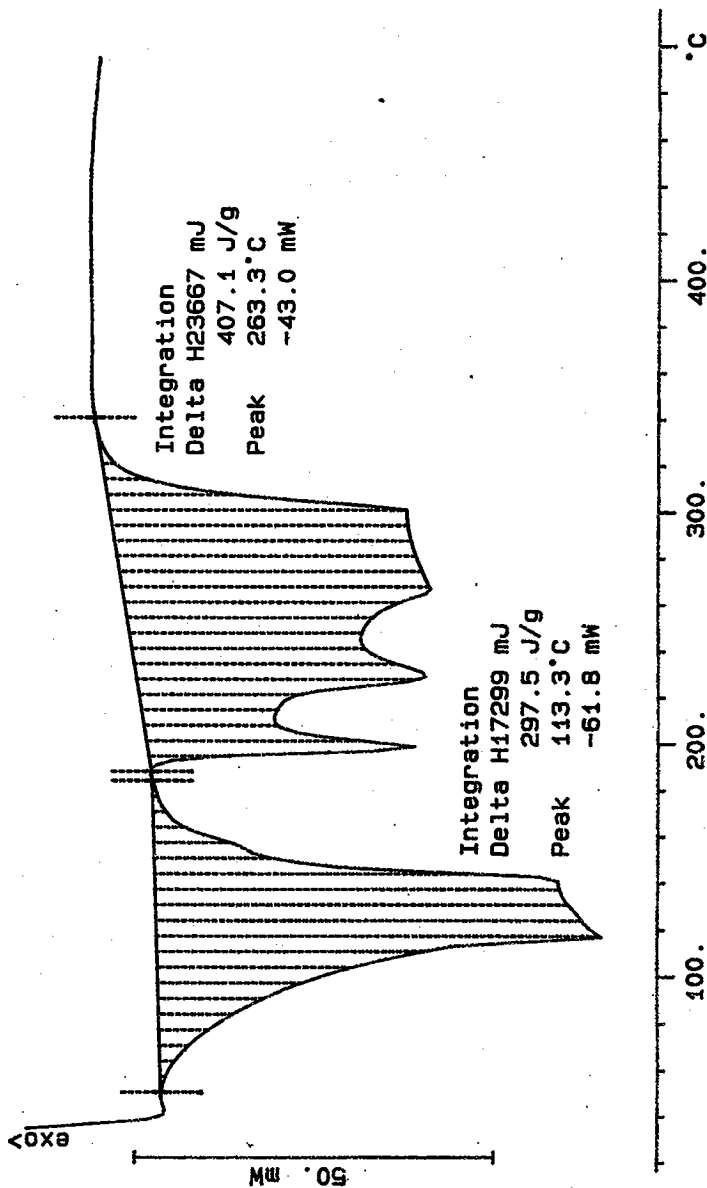
Spk Sp 11-2-96

120. 130. 140. 150. 160. 170. °C

S96T005466 N2
52.440 mg
Rate: 10.0 °C/min
File: 00021.001 DSC METTLER 02-Nov-98
Ident: 0.0 222-S Laboratory



S96T005466 DUP N2
58.140 mg
Rate: 10.0 °C/min
File: 00023.001 DSC METTLER 02-Nov-96
Ident: 0.0 222-S Laboratory



11-8-86

S96T0054673 N2

29.590 mg

File: 00025.001 DSC METTLER 02-Nov-86

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo >

Integration
 Delta H 3592 mJ
 121.4 J/g
 Peak 259.6 °C
 -19.8 mW

Integration
 Delta H 19577 mJ
 661.6 J/g
 Peak 117.3 °C
 -76.6 mW

50. mW

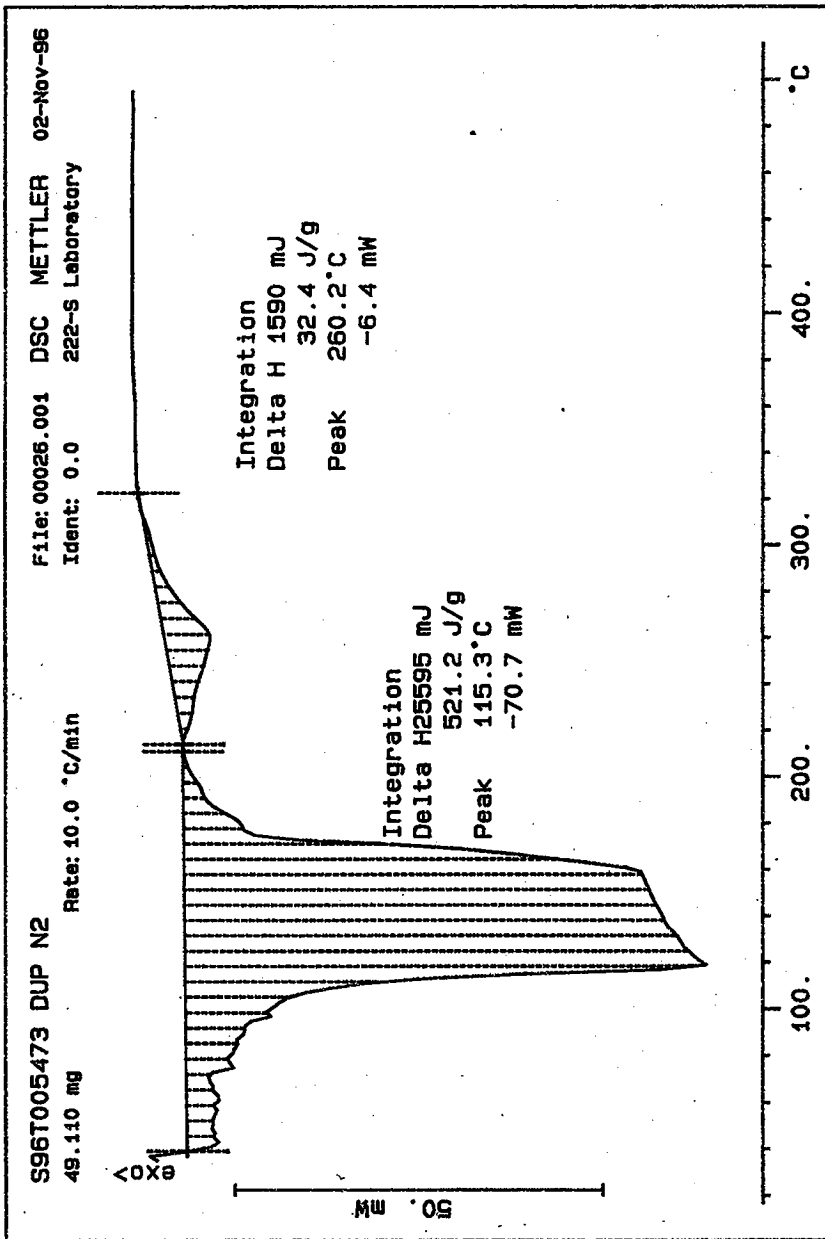
100.

200.

300.

400.

°C



LABCORE Data Entry Template for Worklist# 14391

Analyst: KRM Instrument: DSC0 1 Book # 14N14B
2

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

Worklist Comment: DSC-01 FOR B-108 PLEASE RUN UNDER N2

RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.2</u>	<u>27.2</u>	<u>N/A</u>	Joules/g
96001380	B-108	2 SAMPLE	S96T005474	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001380	B-108	3 DUP	S96T005474	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001380	B-108	4 SAMPLE	S96T005485	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001380	B-108	5 DUP	S96T005485	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 14391

Analyst Signature

Date

10-29-96

Analyst Signature

Date

11-1-96

Verified/Validated by

Blandine Valenzuela 11-8-96

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 198 TO 202.

DSC STD 12N14B N2 File: 00007.001 DSC METTLER 29-Oct-96
34.640 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

exo

Integration
Delta H 942 mJ
27.2 J/g
Peak 159.1°C
-45.4 mW

20. mW

120. 130. 140. 150. 160. 170. °C

[Signature]
10-29-96

S96T005474 N2

73.358 mg

File: 00009.001

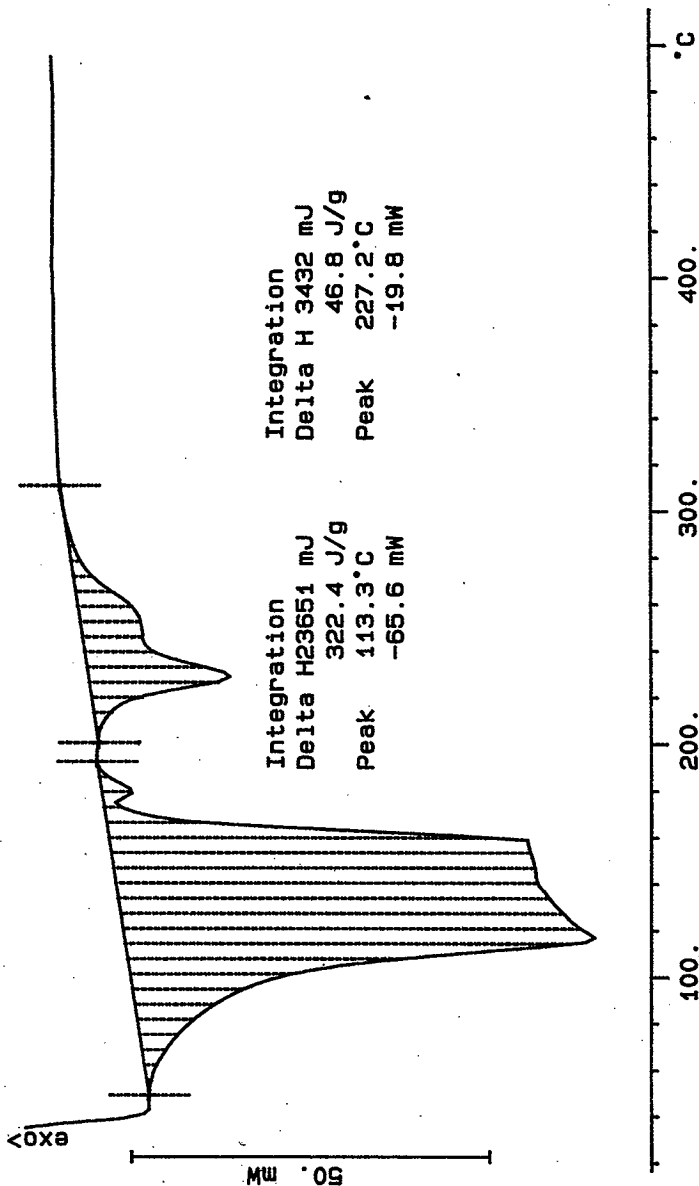
DSC METTLER

29-Oct-96

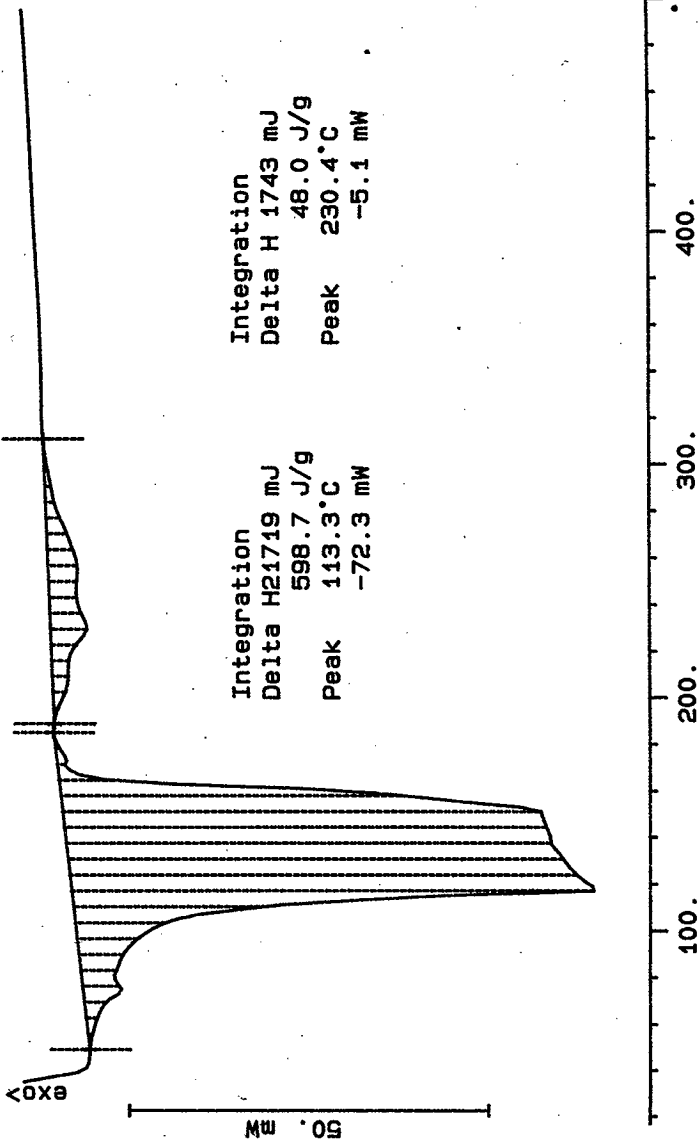
Rate: 10.0 °C/min

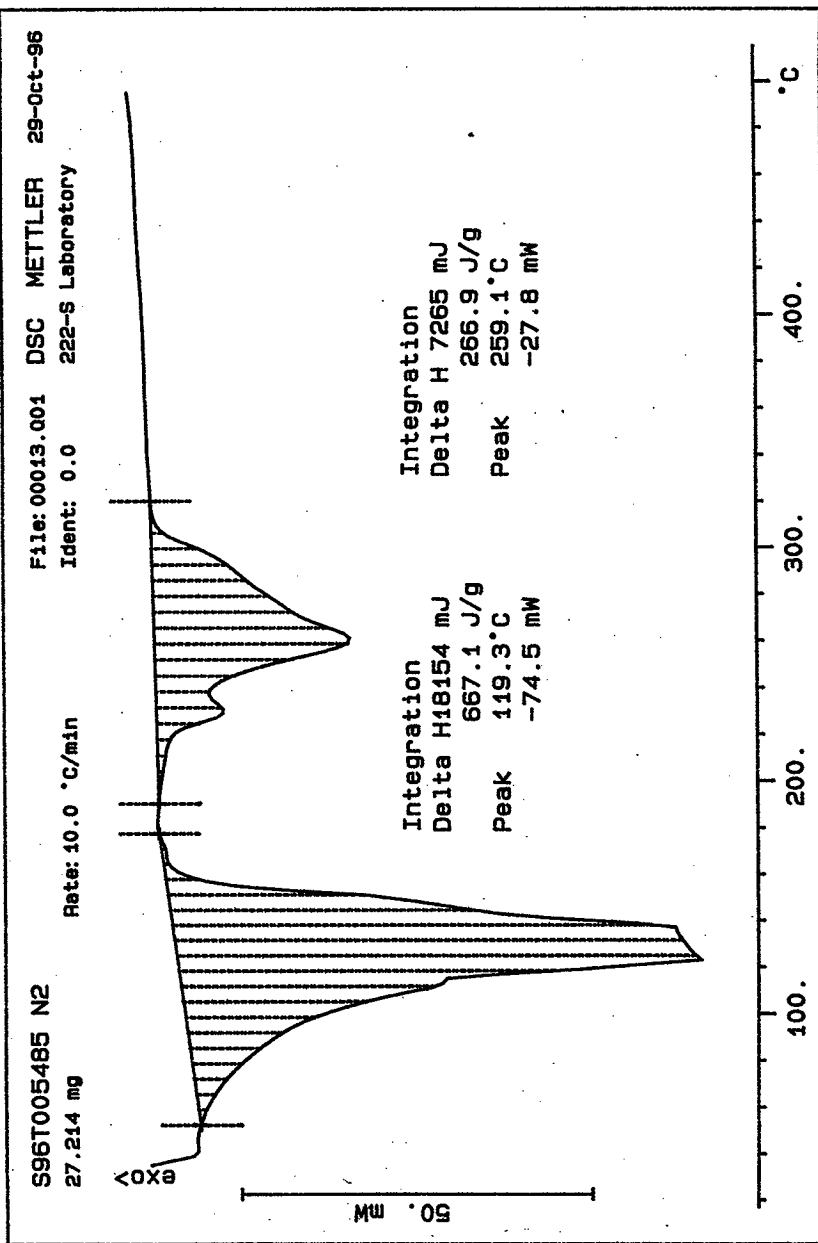
Ident: 0.0

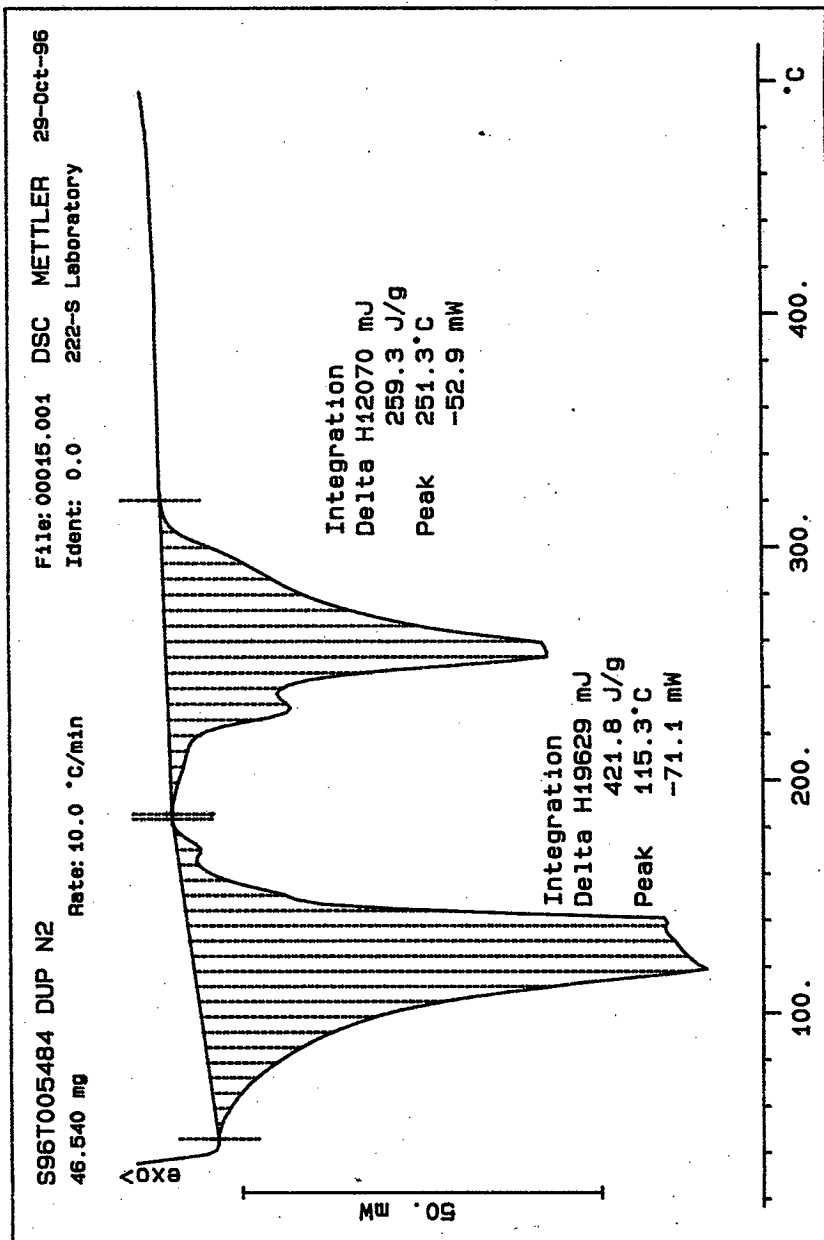
222-S Laboratory



S96T005474 DUP N2
36.274 mg
Rate: 10.0 °C/min
File: 00011.001
Ident: 0.0
DSC METTLER
222-S Laboratory
29-Oct-96







LABCORE Data Entry Template for Worklist# 14656

Analyst: SME Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: Please run B-108 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>28.68</u>	<u>N/A</u>	Joules/g
96001379	B-108	2 SAMPLE	S96T005463	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001379	B-108	3 DUP	S96T005463	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 14656

See attached for signatures
Analyst Signature Date 11-12-96

Susan Bee 11/12/96
Analyst Signature Date

Verified/Validated by
Blandina
Valepsula 11-20-96

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.

Call 20

LABCORE Data Entry Template for Worklist# 14656

Analyst:

SMF

Instrument: DSC0

Book # 12014B

Method: LA-514-113 Rev/Mod

Worklist Comment: Please run B-108 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
96001379	B-108	2 SAMPLE	S96T005463	0	DSC-01	LIQUID	N/A			Joules/g
96001379	B-108	3 DUP	S96T005463	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 14656

Analyst Signature

Date

Analyst Signature

Date

DSC-03 instrument
was used.

11-12-96

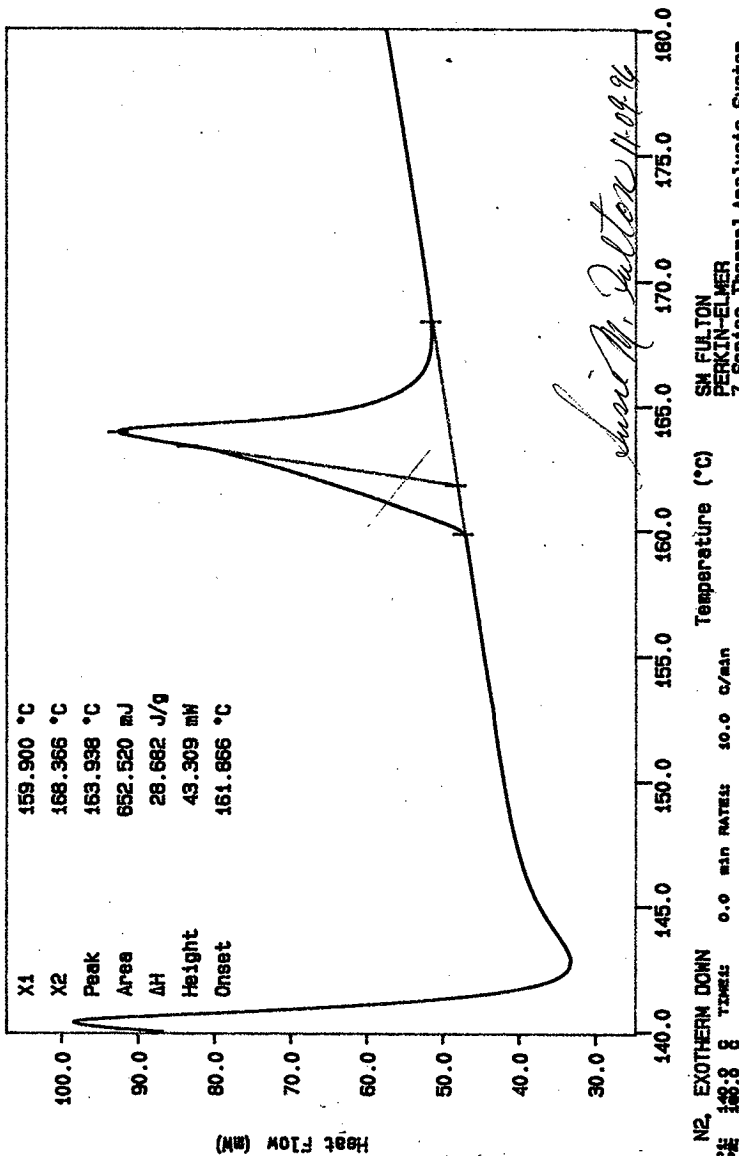
Blandina
Valenzuela

Data Entry Comments:

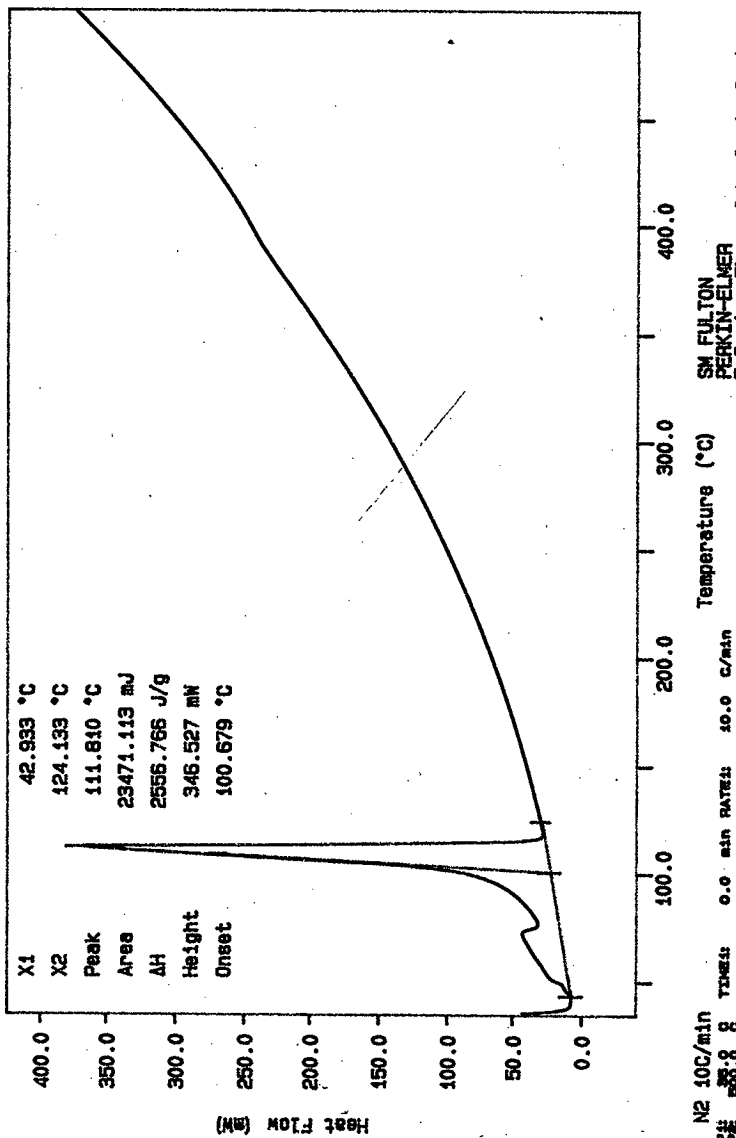
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
 File info: IND110901 Sat Nov 9 17:36:36 1996
 Sample Weight: 22.750 mg
 12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 205 TO 207.



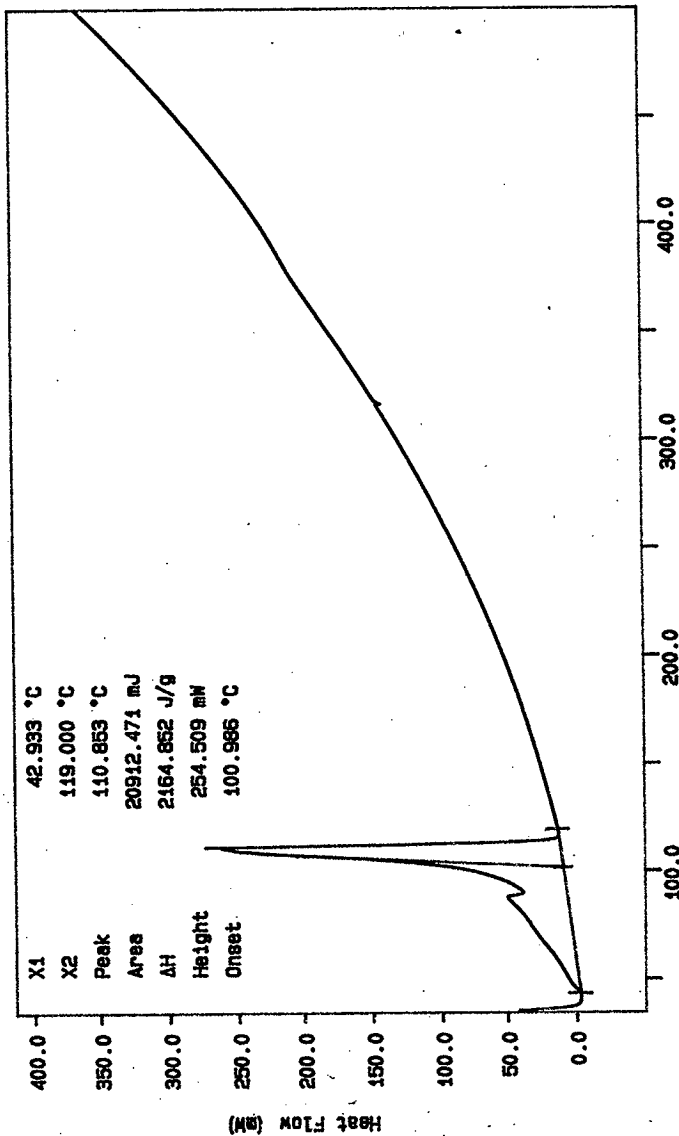
Curve 1: DSC
 File info: SAM110901 Sat Nov 9 20: 21: 51 1996
 Sample Weight: 9.180 mg
 S96T005463



SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Nov 9 20: 51: 37 1996

N2 10C/min
 THERM 88.8 g
 TIME: 0.0 min RATE: 10.0 C/min

Curve 1: DSC
 File Info: SAM110902 Sat Nov 9 22:52:27 1996
 Sample Weight: 9.660 mg
 S96T005463 DUP



SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Nov 9 23:37:26 1996

N2 10C/min
 TEMPERATURE 800.0
 TIME 0.0 min RATE 10.0 C/min

LABCORE Data Entry Template for Worklist# 14715

Analyst: DCD Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: B-108 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>27.73</u>	<u>N/A</u>	Joules/g
96001379	B-108	2 SAMPLE	S96T005523	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001379	B-108	3 DUP	S96T005523	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 14715

See attached for signatures
Analyst Signature _____ Date 11-20-96

Analyst Signature _____ Date _____

Verified/Validated by

Blandina

Valenzuela 11-21-96

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# 14715

Analyst: DCD Instrument: DSC0 Book # 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: B-108 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
96001379	B-108	2 SAMPLE	S96T005523	0	DSC-01	LIQUID	N/A			Joules/g
96001379	B-108	3 DUP	S96T005523	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 14715

David C. Dunham 11-19-96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was down.

11-20-96

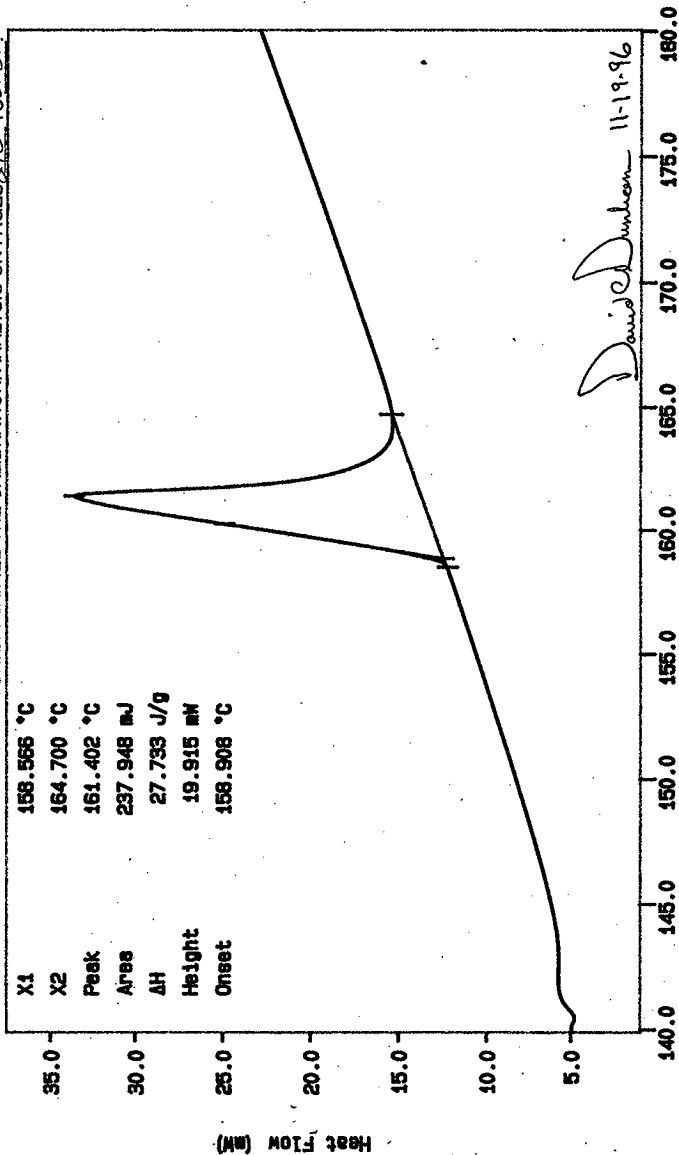
Blandina
Valenzuela

Data Entry Comments:

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

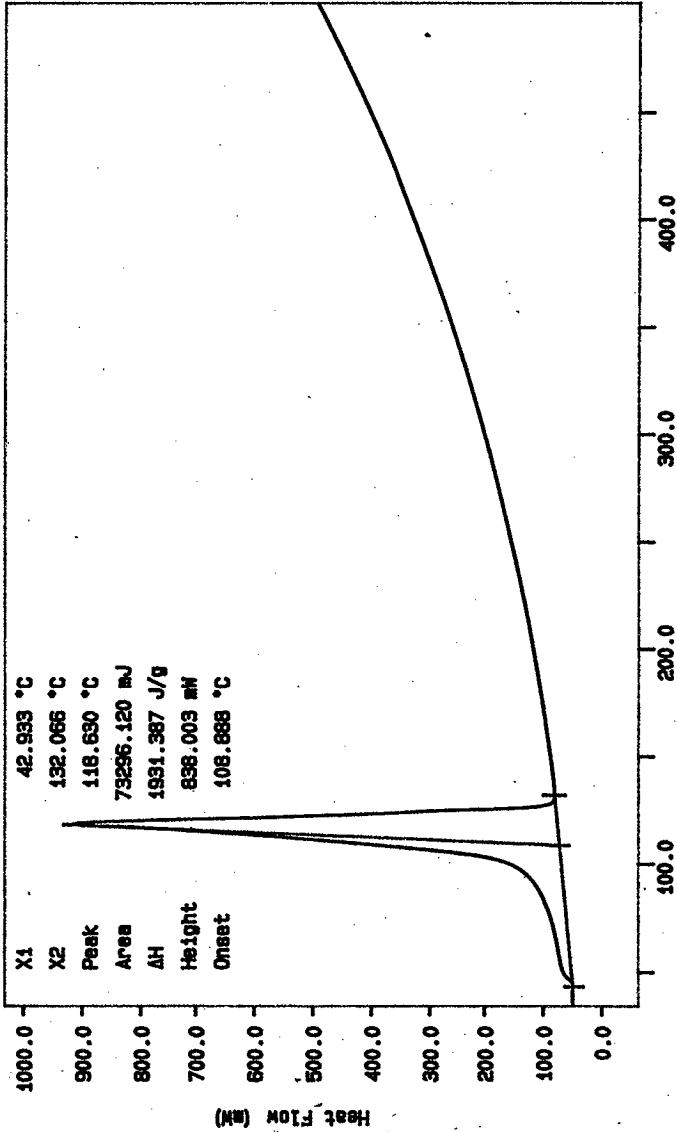
Curve 1: DSC
 File Info: IND11901 Tue Nov 19 14: 48: 12 1996
 Sample Weight: 8.580 mg
 12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 210 TO 212.



N2, EXOTHERM DOWN
 RATE 10.0 °C/min
 TIME 12.08 min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Nov 20 00: 09: 59 1996

Curve 1: DSC
 File Info: SAM111907 Wed Nov 20 03:23:57 1996
 Sample Weight: 37.950 mg
 S96T005B23 SAM



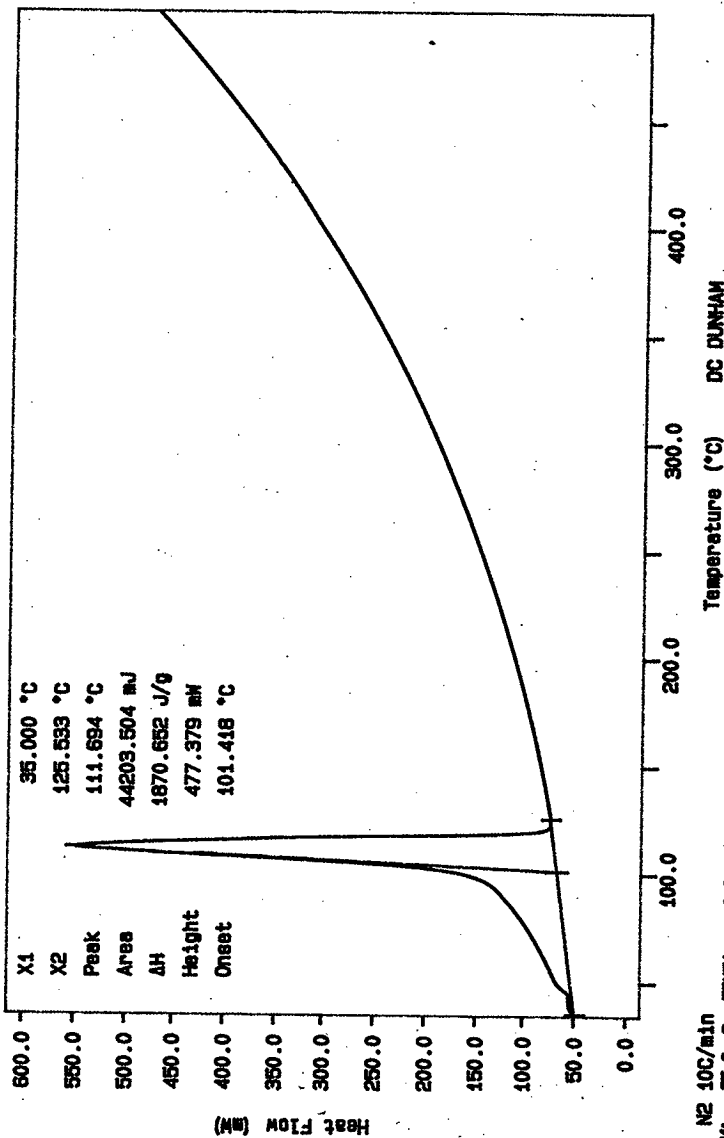
N2 100 mL/min
 Temp: 55.8 °C
 Time: 00:08
 0.0 min RATE: 10.0 °C/min
 DC DUNHAM
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Nov 20 03:30:05 1996

Curve 1: DSC

File Info: SAM11908 Wed Nov 20 04:25:55 1996

Sample Weight: 23.630 mg

596T005523 DUP



N2 10C/min

TIME 35.8 g

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

DC DUNHAM
PERKIN-ELMER

7 Series Thermal Analysis System
Wed Nov 20 05:52:37 1996

LABCORE Data Entry Template for Worklist# 14718

Analyst: DPB Instrument: DSC0 1 Book # 12114-B

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

Worklist Comment: B-108 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.7</u>	<u>N/A</u>	Joules/g
96001379	B-108	2 SAMPLE	S96T005505	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001379	B-108	3 DUP	S96T005505	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001379	B-108	4 SAMPLE	S96T005506	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001379	B-108	5 DUP	S96T005506	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001379	B-108	6 SAMPLE	S96T005507	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001379	B-108	7 DUP	S96T005507	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 14718

Daniel P. Bromley 11/11/96
Analyst Signature Date

Li Jones 11-12-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela 11-12-96

S96T005505 thermograms display an endotherm consistant with Aluminum Hydroxide.

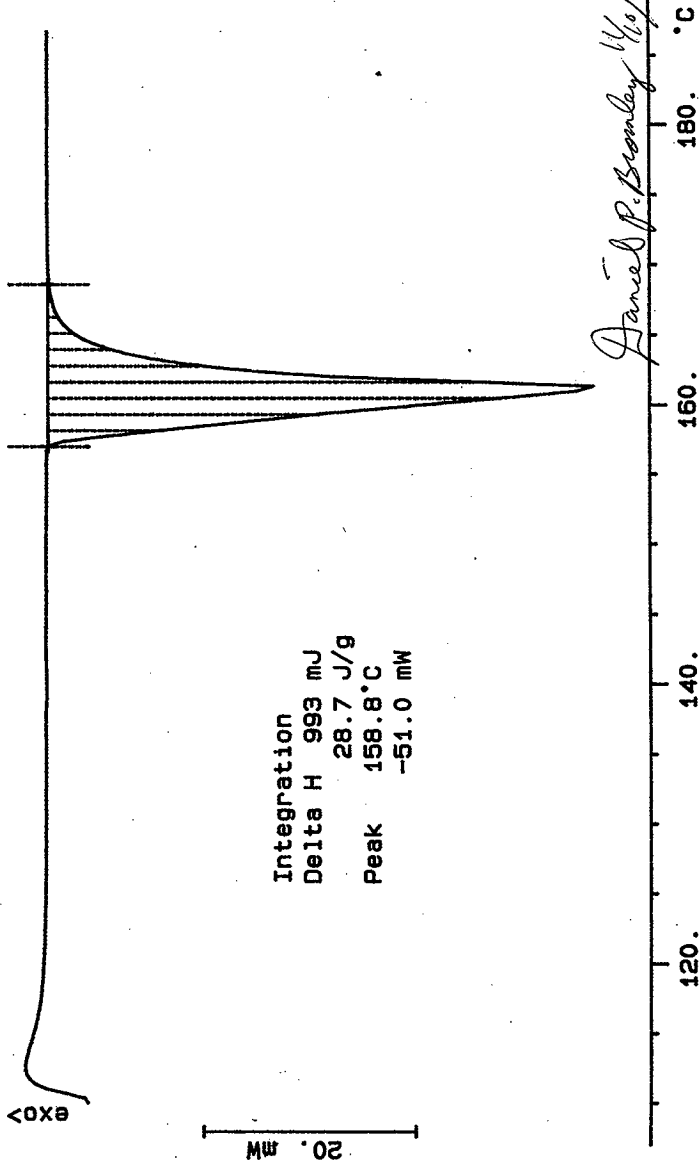
Data Entry Comments: S96T005506 thermograms display an endotherm consistant with Aluminum Hydroxide

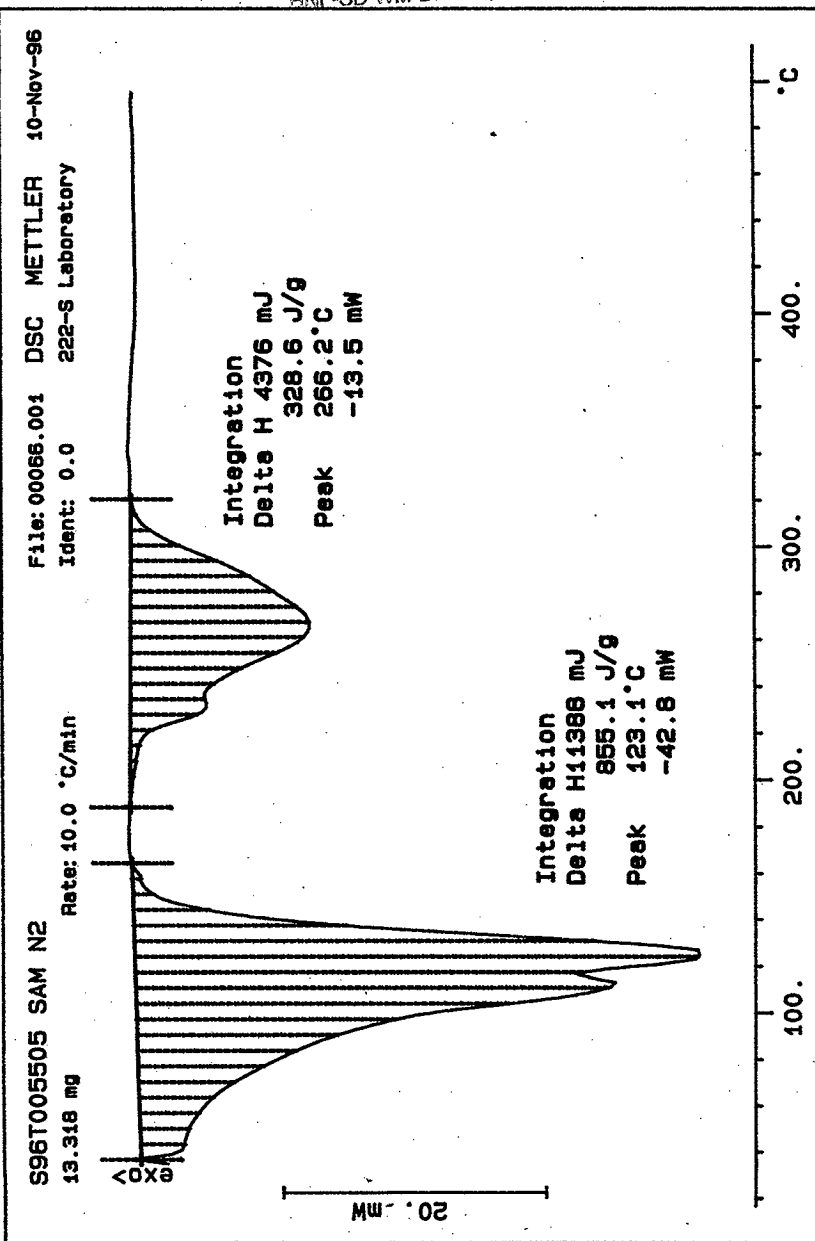
S96T005507 thermograms display an endotherm consistant with Aluminum Hydroxide.

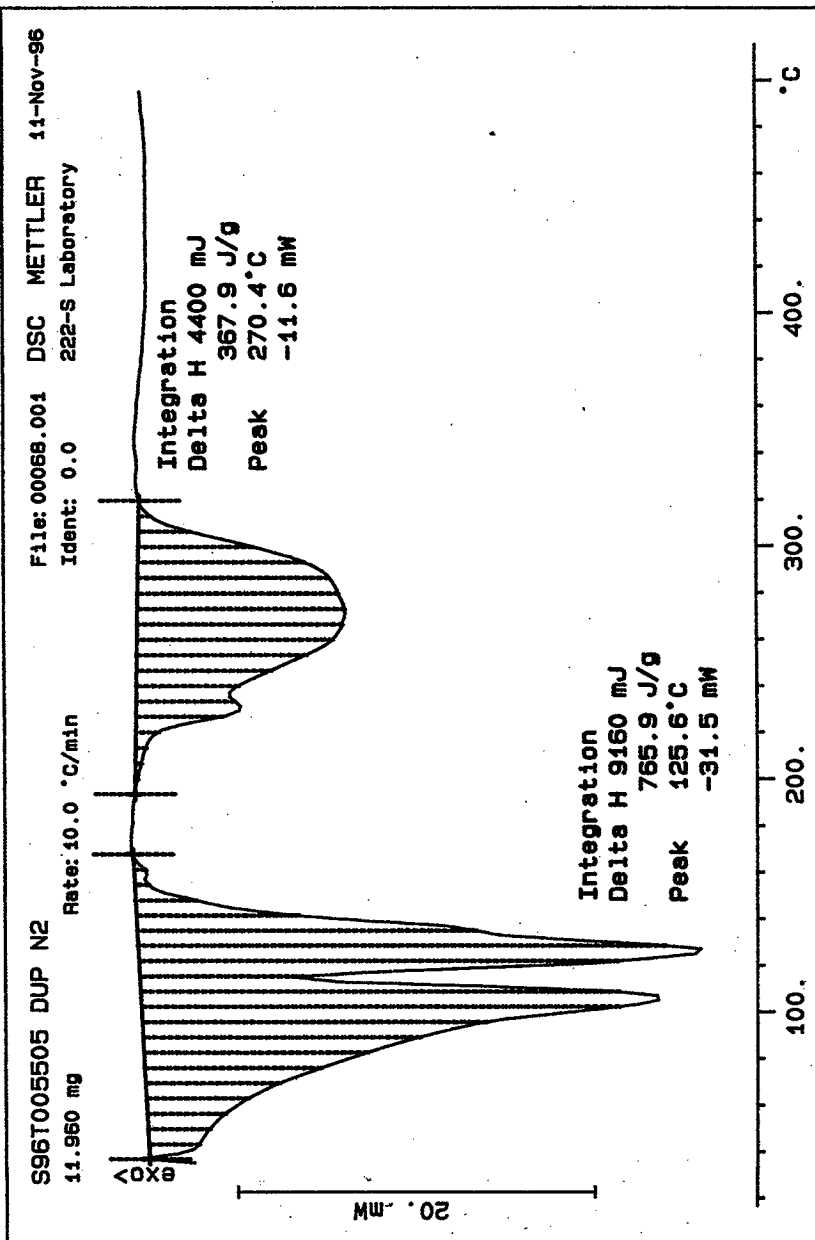
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

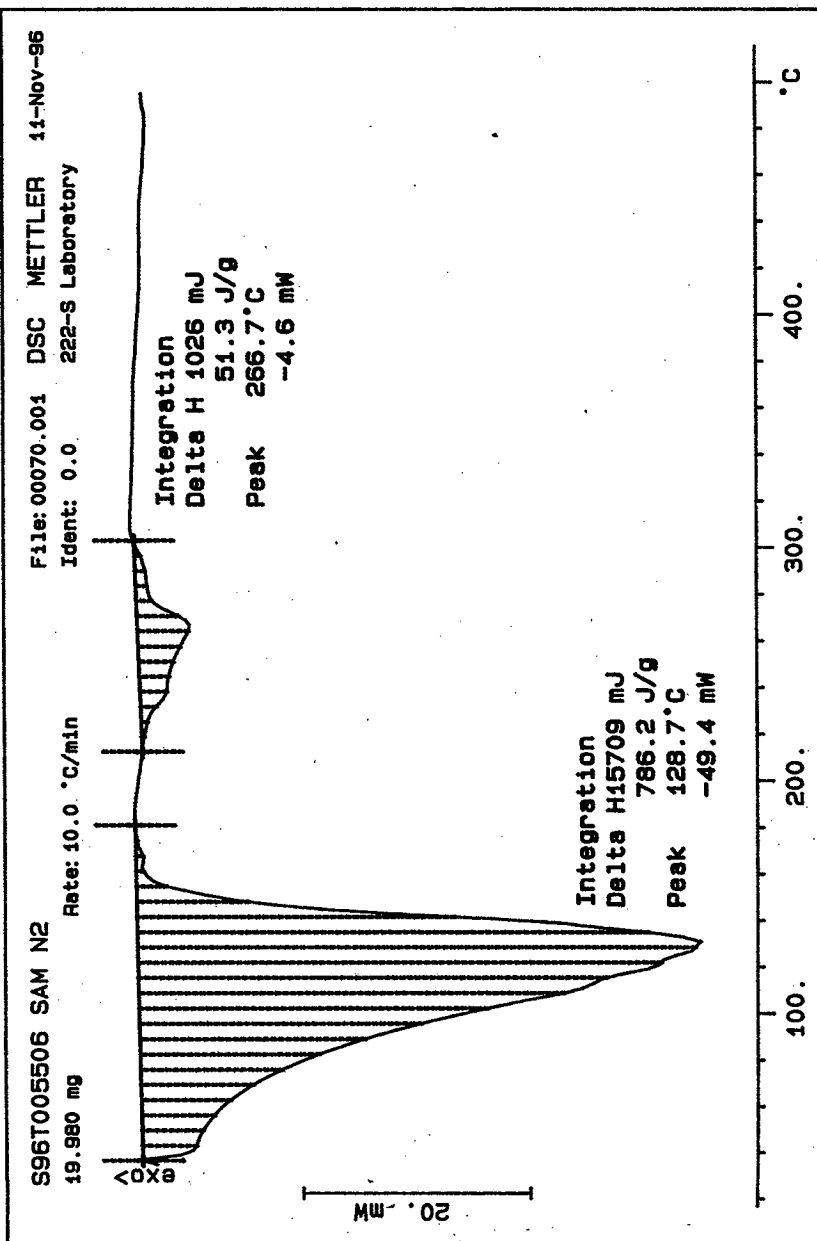
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 214 TO 220.

DSC STD 12N14B N2
34.640 mg
Rate: 10.0 °C/min
File: 00064.001
Ident: 0.0
DSC METTLER
222-S Laboratory
10-Nov-96

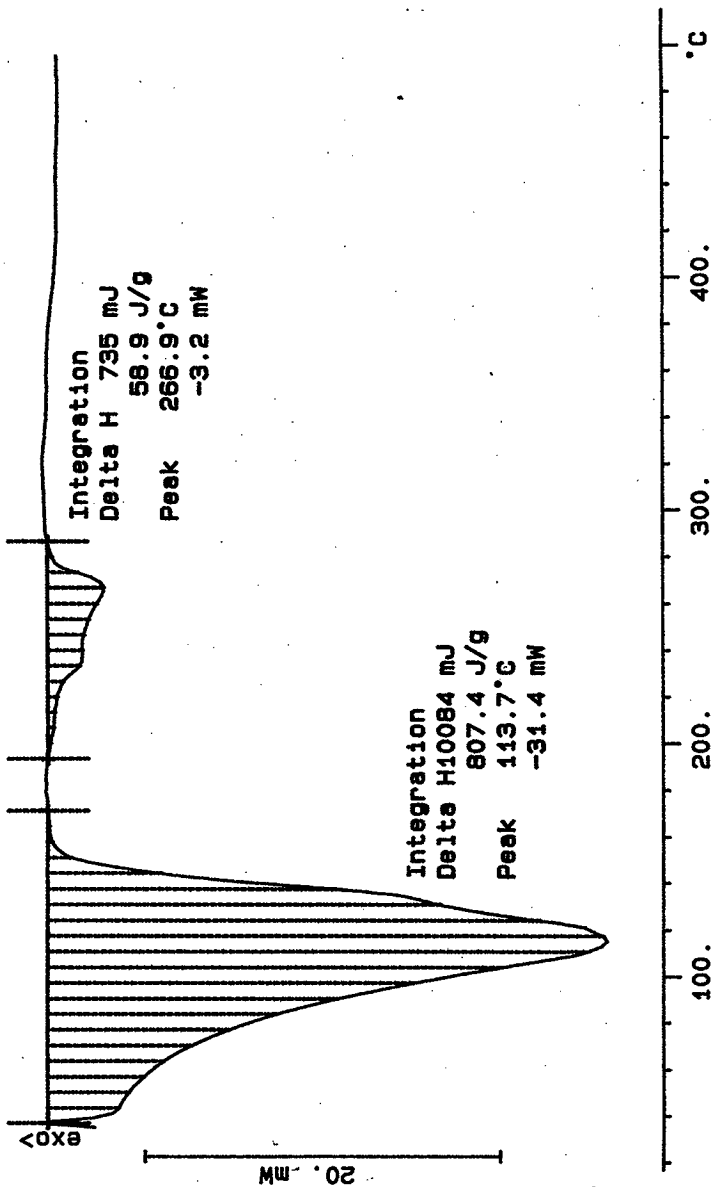


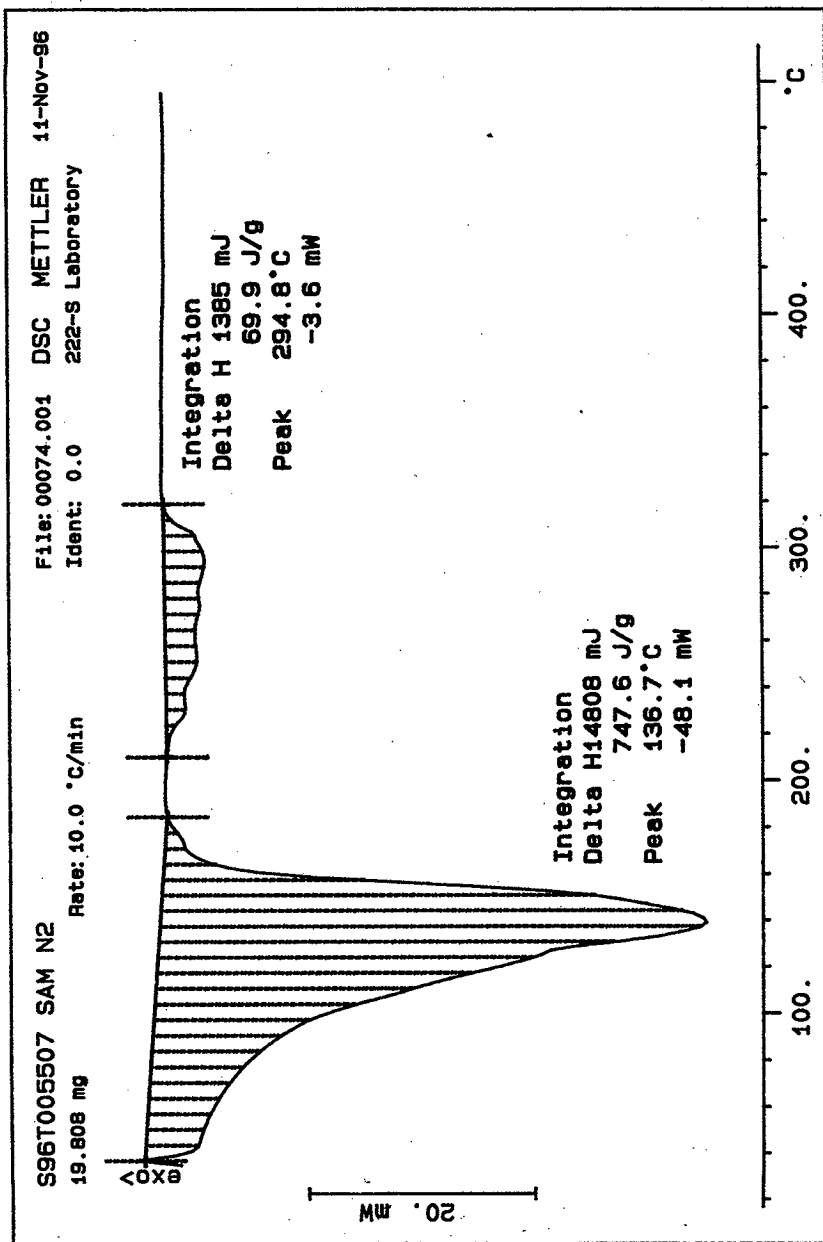




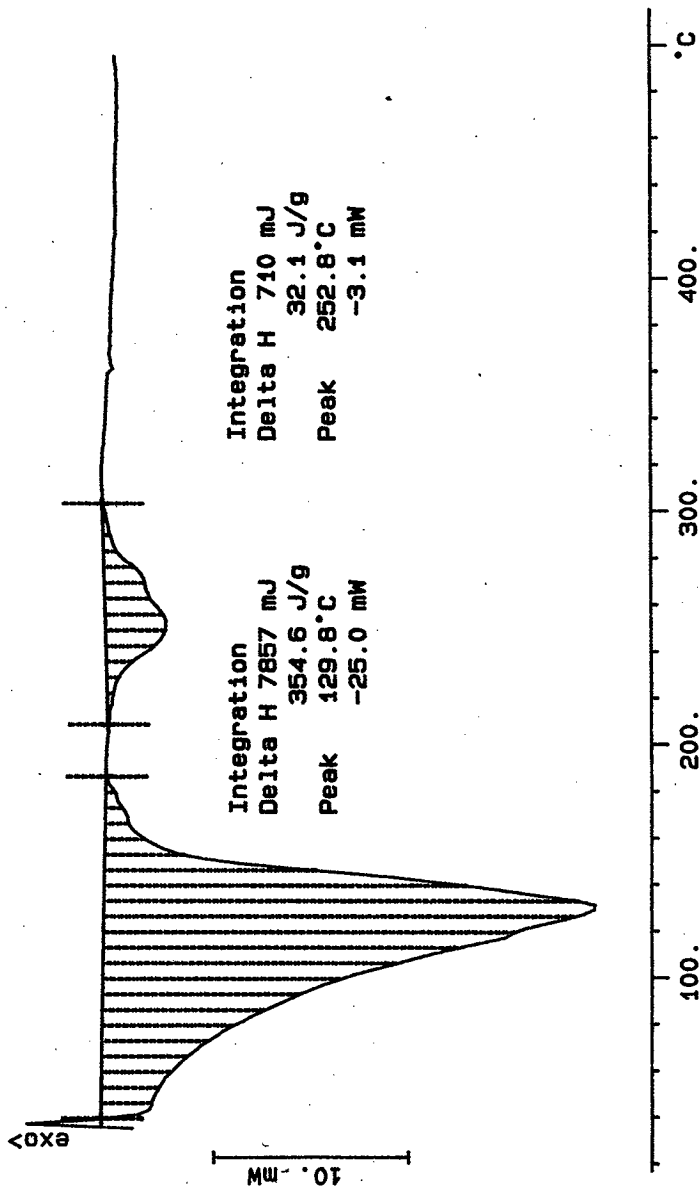


S96T005506 DUP N2
12.490 mg
Rate: 10.0 °C/min
File: 00072.001 DSC METTLER 11-Nov-96
Ident: 0.0 222-S Laboratory





S96T005507 DUP N2
22.161 mg
Rate: 10.0 °C/min
File: 00076.001 DSC METTLER 11-Nov-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 14742

Analyst: BDY Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for B-108. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001379	B-108	1 SAMPLE	S96T005505	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001379	B-108	2 DUP	S96T005505	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001379	B-108	3 SAMPLE	S96T005506	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001379	B-108	4 DUP	S96T005506	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001379	B-108	5 SAMPLE	S96T005507	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001379	B-108	6 DUP	S96T005507	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001380	B-108	7 SAMPLE	S96T005473	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001380	B-108	8 DUP	S96T005473	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001380	B-108	9 SAMPLE	S96T005474	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001380	B-108	10 DUP	S96T005474	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001380	B-108	11 SAMPLE	S96T005485	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001380	B-108	12 DUP	S96T005485	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001379	B-108	13 SAMPLE	S96T005463	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96001379	B-108	14 DUP	S96T005463	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96001379	B-108	15 SAMPLE	S96T005523	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96001379	B-108	16 DUP	S96T005523	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96001380	B-108	17 SAMPLE	S96T005466	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001380	B-108	18 DUP	S96T005466	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 14742

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

Final page for worklist # 14742

Blandina Valenzuela 11-20-96
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.

Dry DSC for B-108

HNF-SD-WM-DP-219, REV. 0

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
996T005505	Ø	—	Ø
5505D	Ø	—	Ø
5506	Ø	—	Ø
5506D	Ø	—	Ø
5507	Ø	—	Ø
5507D	Ø	—	Ø
5473	Ø ^{11/2/96}	14383	Ø
5473D	Ø ^{11/2/96}	14883	Ø
5474	Ø	43.78	Ø
5474D	Ø	43.78	Ø
5485	Ø	35.30	Ø
5485D	Ø	35.30	Ø
5463	Ø	99.56	Ø
5463D	Ø	99.56	Ø
5523	14715 Ø	14707	Ø
5523D	14715 Ø	14707	Ø
5466	Ø	14383	Ø
5466D	Ø	14383	Ø

need
TGA

need
both

need
TGA

LABCORE Data Entry Template for Worklist# 14377

Analyst: SJS Instrument: TGA0 1 Book # 82N8A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: TGA-01 FOR B-108 PLEASE RUN UNDER N2

RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>59.09</u>	<u>N/A</u>	%
96001379	B-108	2 SAMPLE	S96T005463	0	TGA-01	LIQUID	<u>N/A</u>	<u>99.42</u>		%
96001379	B-108	3 DUP	S96T005463	0	TGA-01	LIQUID	<u>99.42</u>	<u>99.69</u>	<u>N/A</u>	%

Final page for worklist # 14377

SJS 11-2-96
Analyst Signature Date

RJ 11-8-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
11-12-96

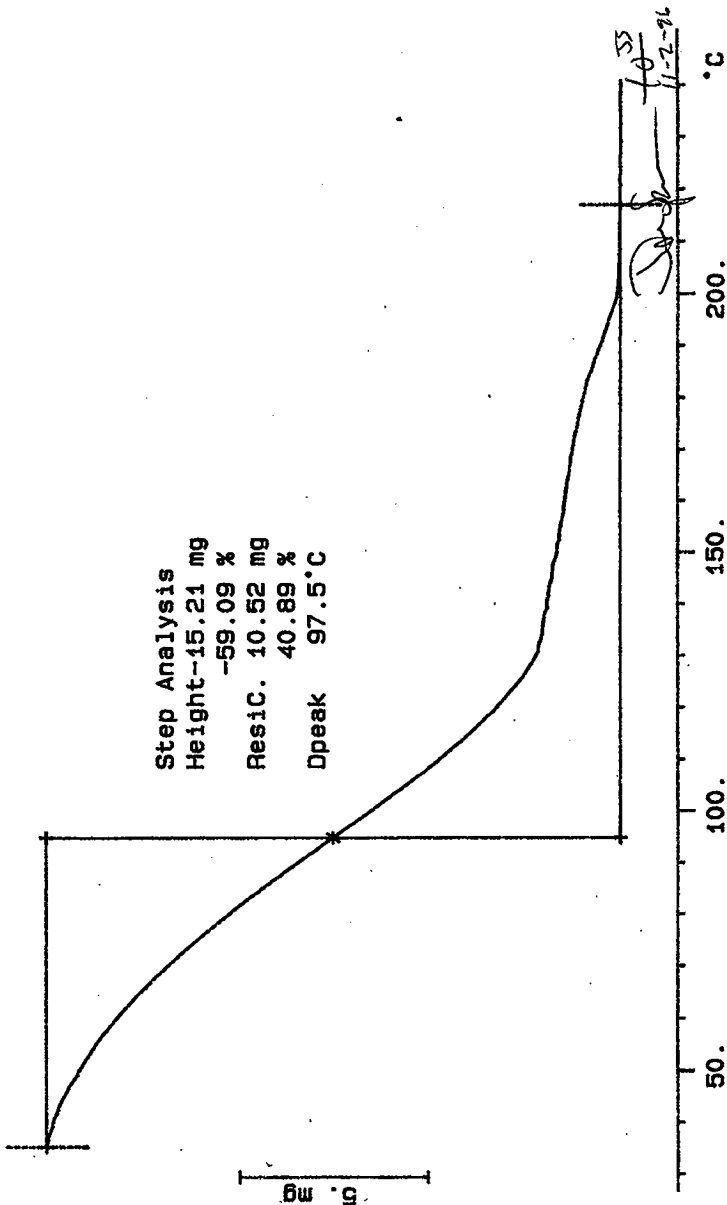
Data Entry Comments:

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 225 TO 227

TGA STD 82N8A N2 File: 00020.001 TG METTLER 01-Nov-96
25.736 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

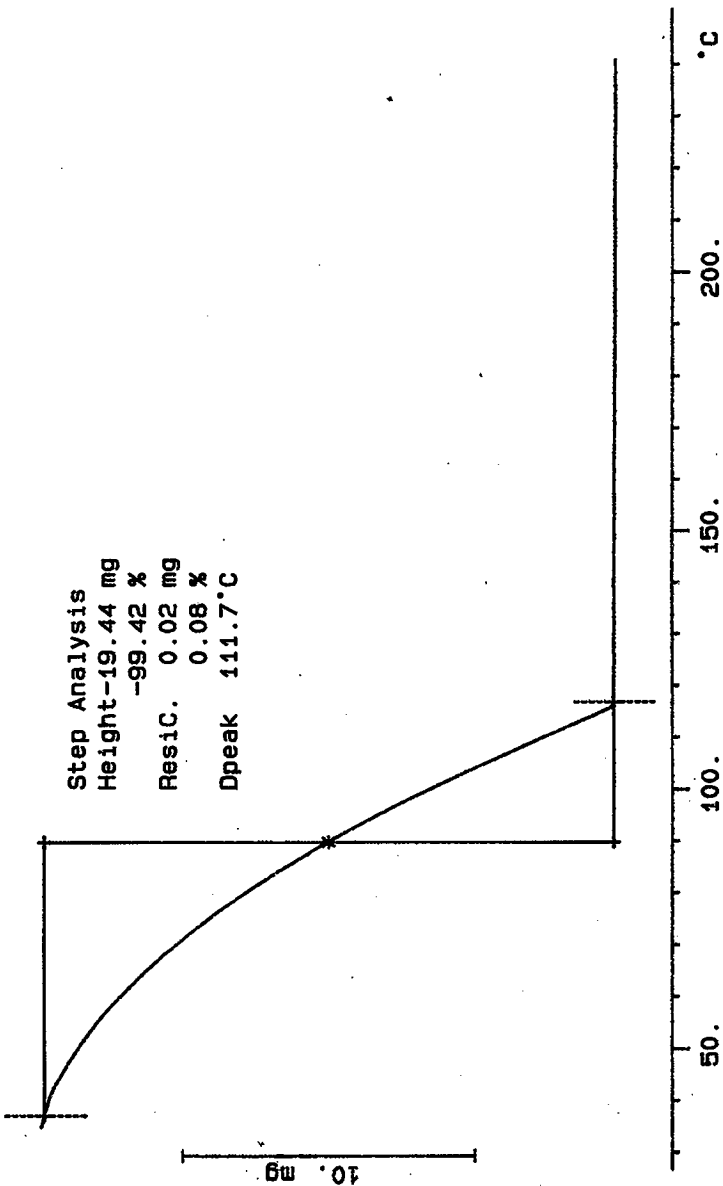
Step Analysis
Height--15.21 mg
-59.09 %
ResidC. 10.52 mg
40.89 %
Dpeak 97.5°C



File: 00022.001 TG METTLER 02-Nov-96
Ident: 0.0 222-S Laboratory

S96T005463 N2
19.549 mg Rate: 10.0 °C/min

Step Analysis
Height-19.44 mg
-99.42 %
Resid. 0.02 mg
0.08 %
Dpeak 111.7 °C

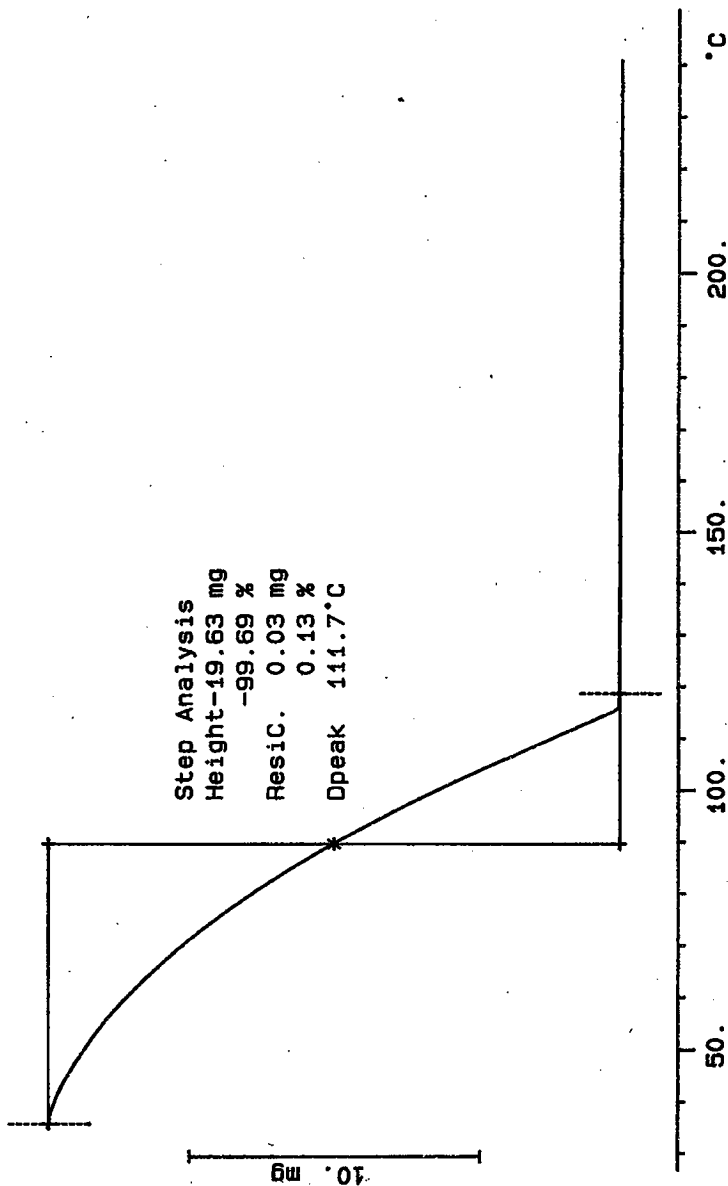


S96T005463 DUP N2
19.693 mg

Rate: 10.0 °C/min

File: 00024.001 TG METTLER 02-Nov-98
Ident: 0.0 222-S Laboratory

Step Analysis
Height-19.63 mg
-99.69 %
Resid. 0.03 mg
0.13 %
Dpeak 111.7°C



LABCORE Data Entry Template for Worklist# 14383

Analyst: SMF Instrument: TGA0 1 Book # 82N8-A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: TGA-01 FOR B-108 PLEASE RUN UNDER N2 RTS

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.02</u>	<u>N/A</u>	%
96001380	B-108	2 SAMPLE	S96T005466	0	TGA-01	SOLID	<u>N/A</u>	<u>18.38</u>		%
96001380	B-108	3 DUP	S96T005466	0	TGA-01	SOLID	<u>18.38</u>	<u>18.34</u>	<u>N/A</u>	%
96001380	B-108	4 SAMPLE	S96T005473	0	TGA-01	SOLID	<u>N/A</u>	<u>34.86</u>		%
96001380	B-108	5 DUP	S96T005473	0	TGA-01	SOLID	<u>34.86</u>	<u>36.85</u>	<u>N/A</u>	%

Final page for worklist # 14383

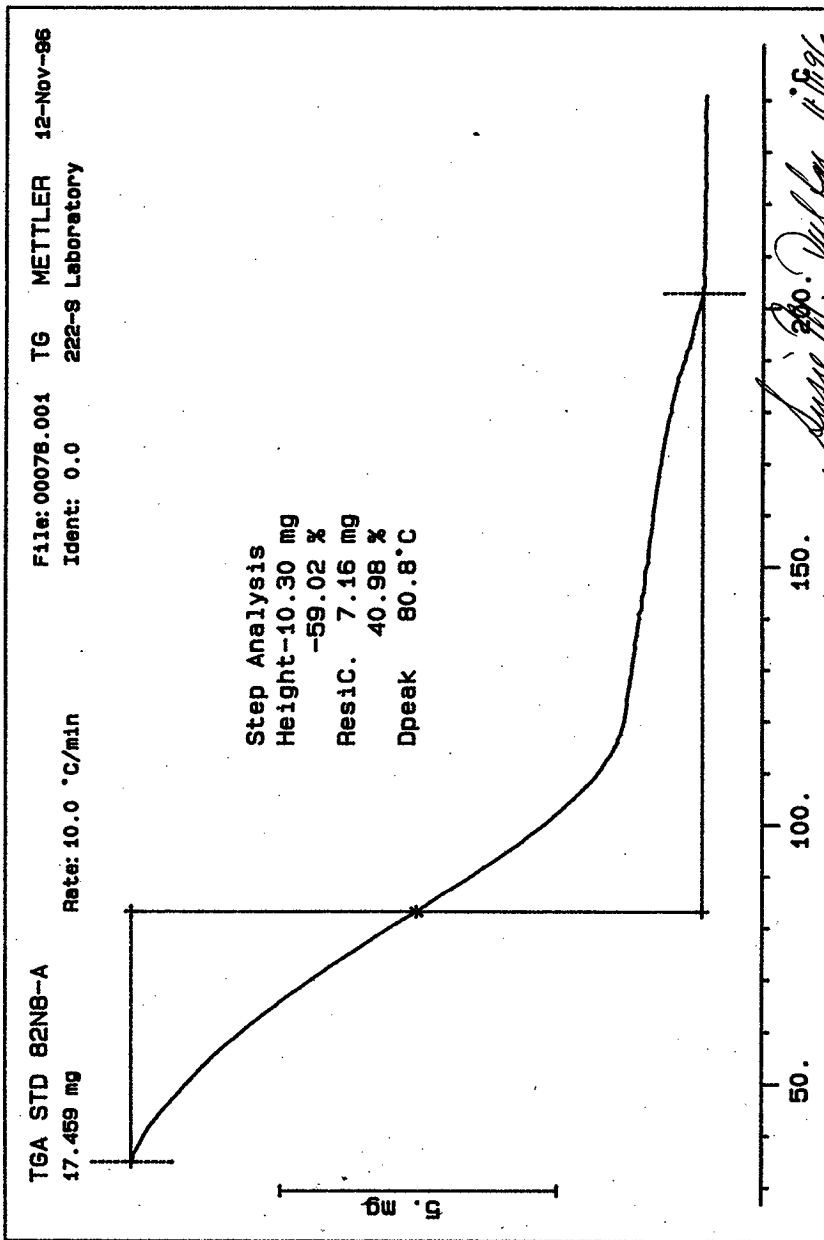
Lucie M. Sullivan 11/12/98
Analyst Signature Date

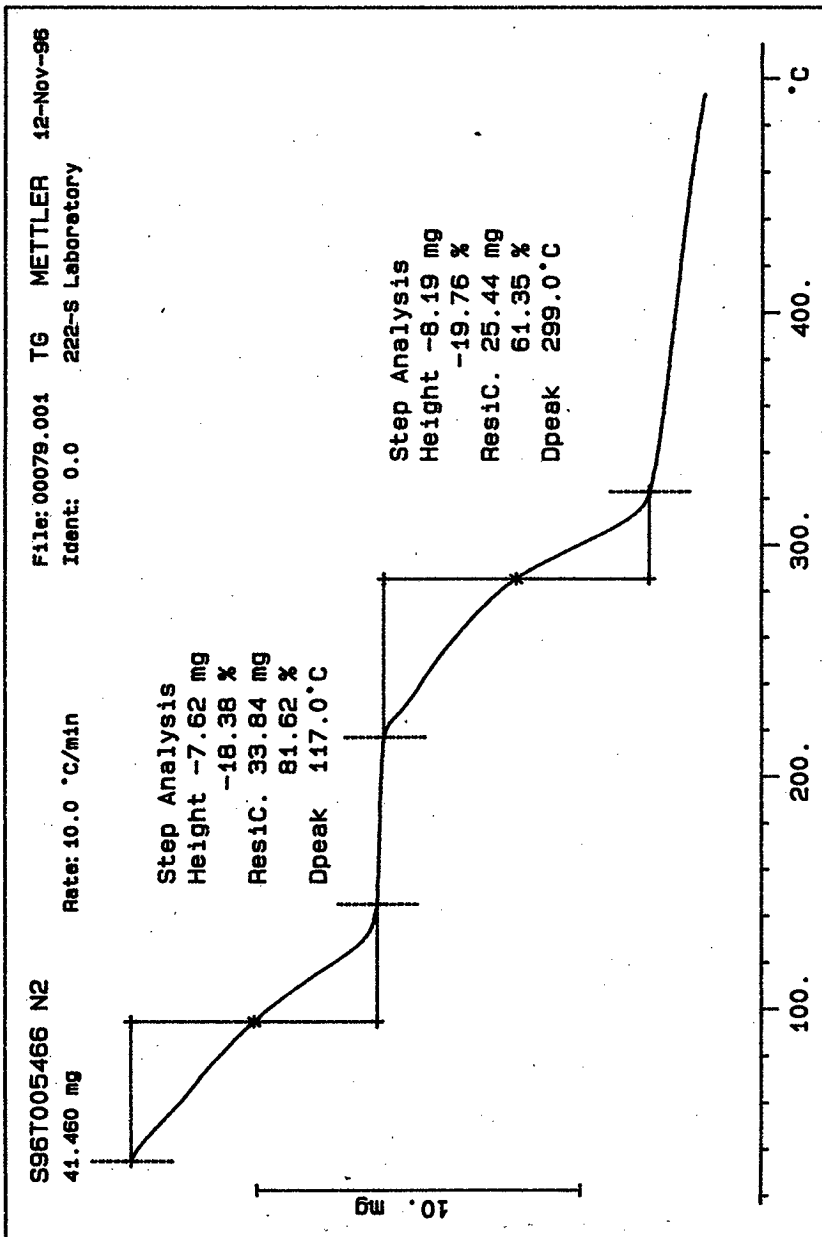
Analyst Signature Date

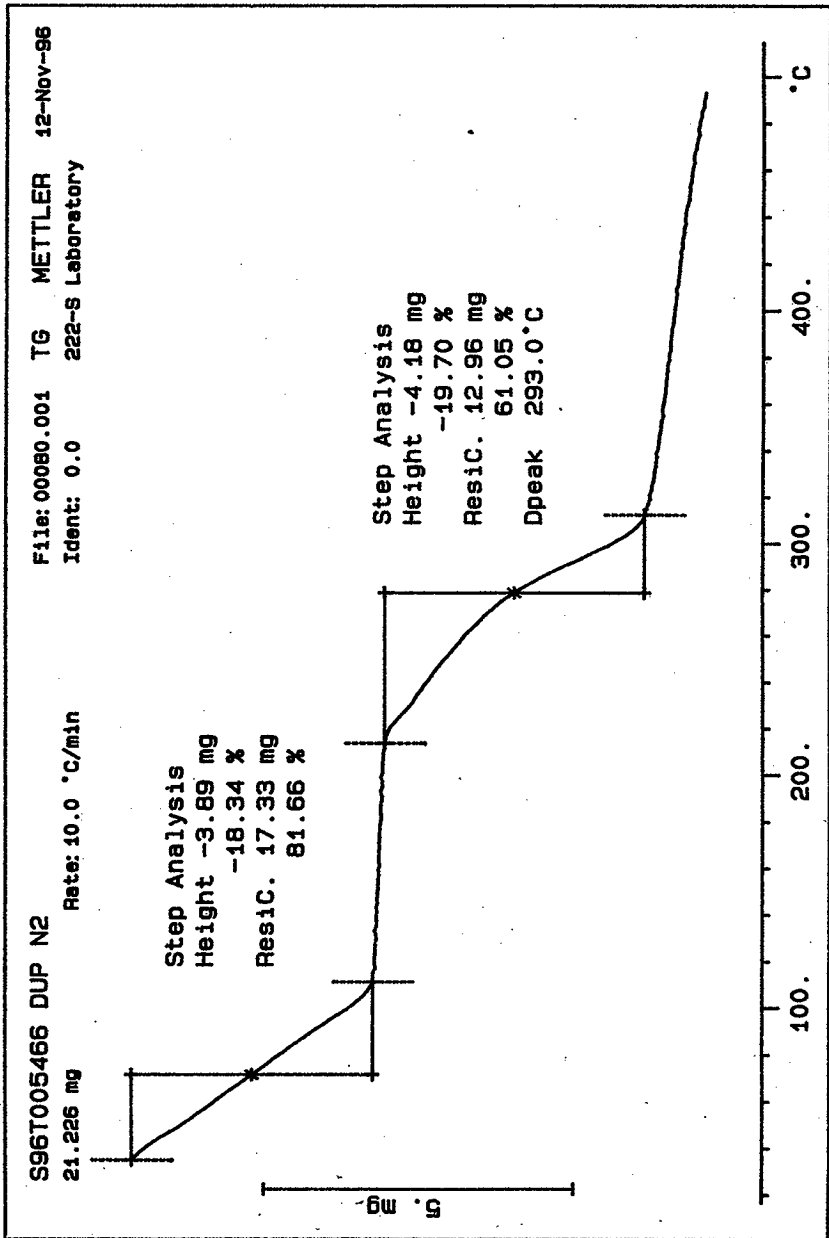
Data Entry Comments:

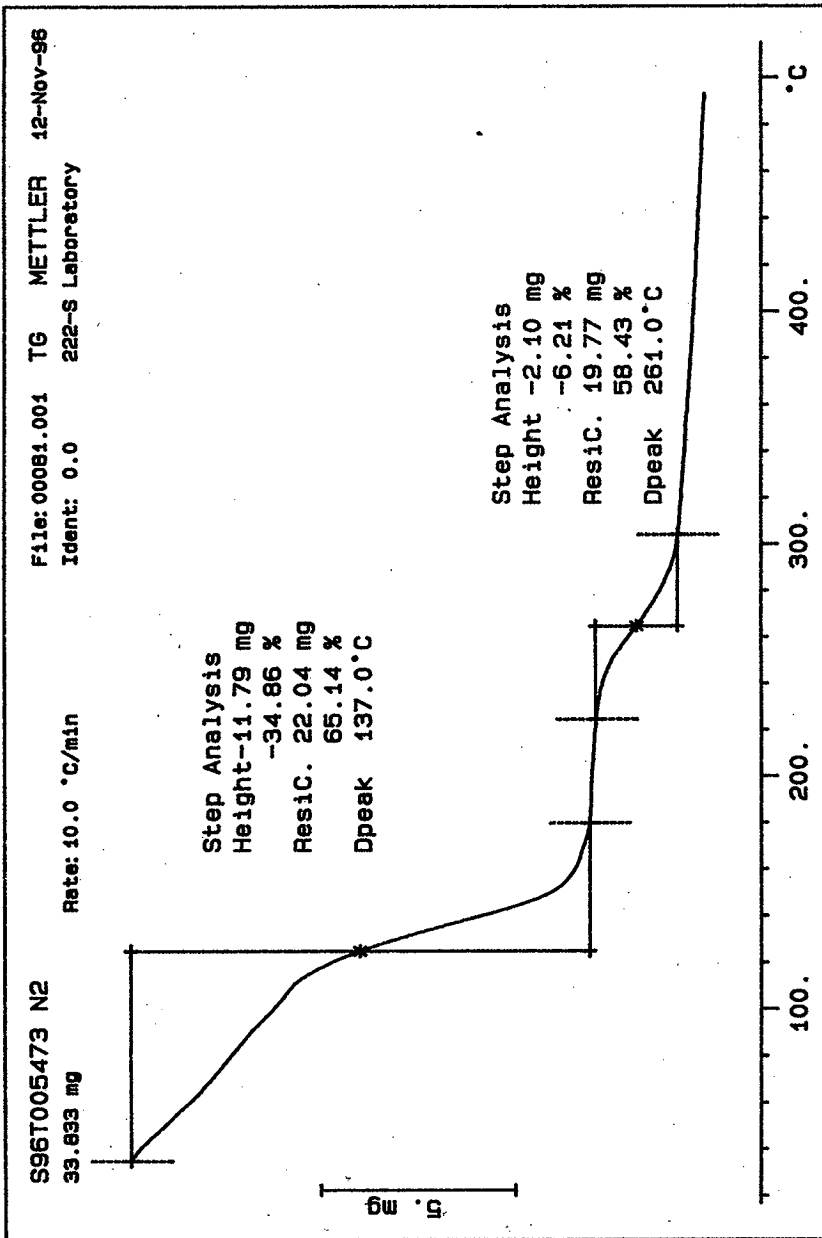
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

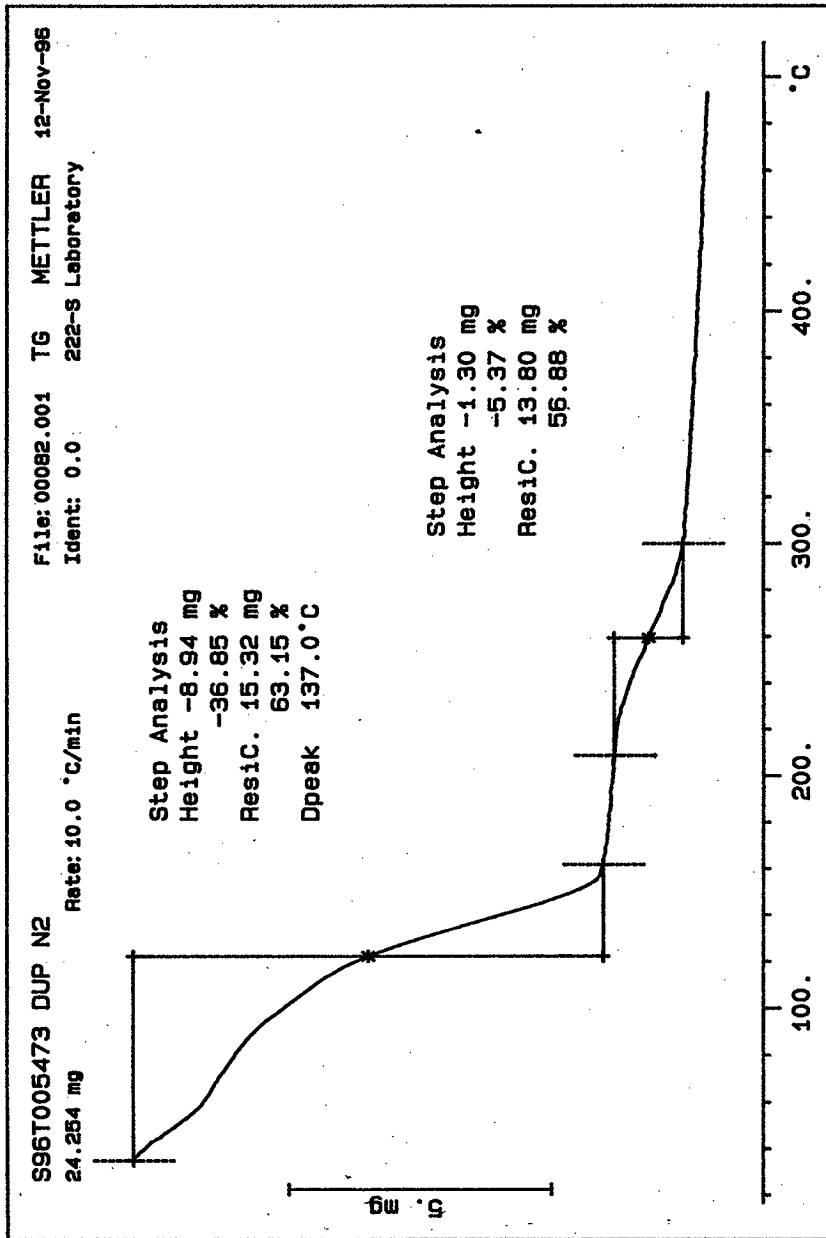
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 229 TO 233.











LABCORE Data Entry Template for Worklist# 14384

Analyst: KRM Instrument: TGA0 1 Book # 8248A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: TGA-01 FOR B-108 PLEASE RUN UNDER N2

RTS

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	<u>59.2</u>	<u>58.66</u>	<u>N/A</u>	%
96001380	B-108	2	SAMPLE	S96T005474	0		TGA-01	SOLID	<u>N/A</u>	<u>44.53</u>		%
96001380	B-108	3	DUP	S96T005474	0		TGA-01	SOLID	<u>44.53</u>	<u>43.03</u>	<u>N/A</u>	%
96001380	B-108	4	SAMPLE	S96T005485	0		TGA-01	SOLID	<u>N/A</u>	<u>39.65</u>		%
96001380	B-108	5	DUP	S96T005485	0		TGA-01	SOLID	<u>39.65</u>	<u>30.95</u>	<u>N/A</u>	%

Final page for worklist # 14384

Analyst Signature

Date

10-29-96

Analyst Signature

Date

11-1-96

Verified/Validated by

Brandina Valenzuela
11-8-96

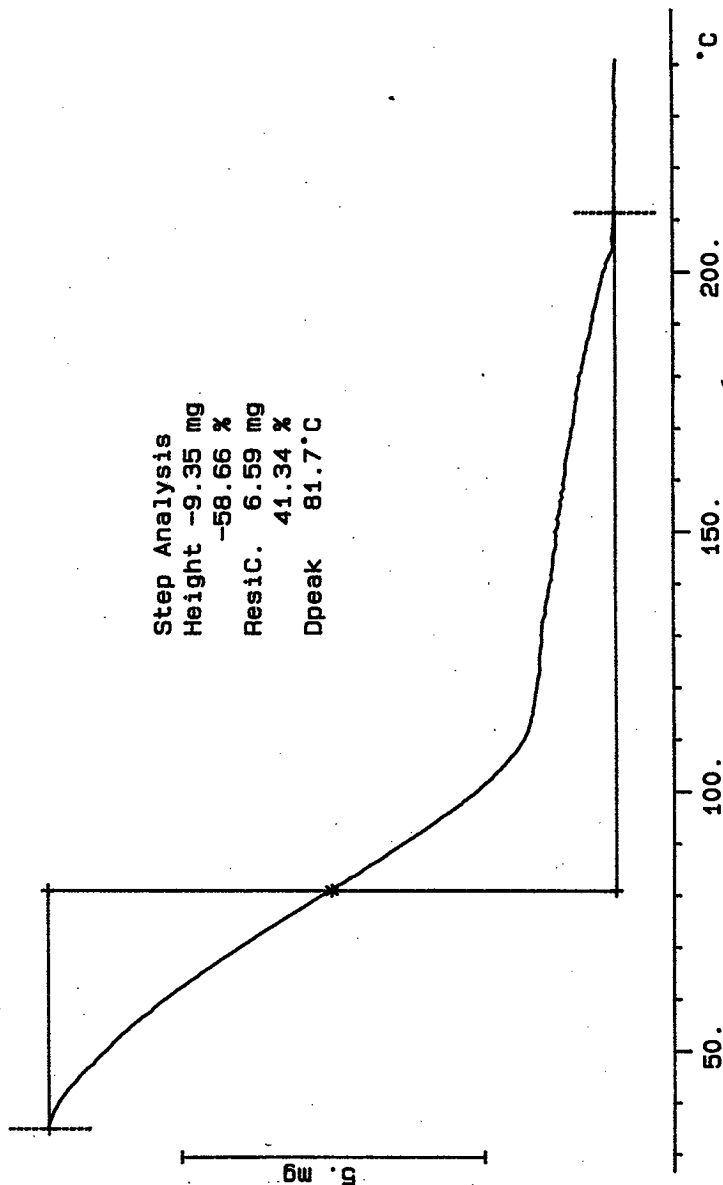
Data Entry Comments:

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 235 TO 239.

TGA STD B2NBA N2 File: 00008.001 TG METTLER 29-Oct-96
15.936 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.35 mg
-58.66 %
Resid. 6.59 mg
41.34 %
Dpeak 81.7 °C



[Signature] 10-29-96

S96T005474 N2

52.329 mg

Rate: 10.0 °C/min

File: 00010.001

TG

METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-23.30 mg
-44.53 %
Resic. 29.02 mg
55.47 %
Dpeak 159.0 °C

10. mg

°C

400.

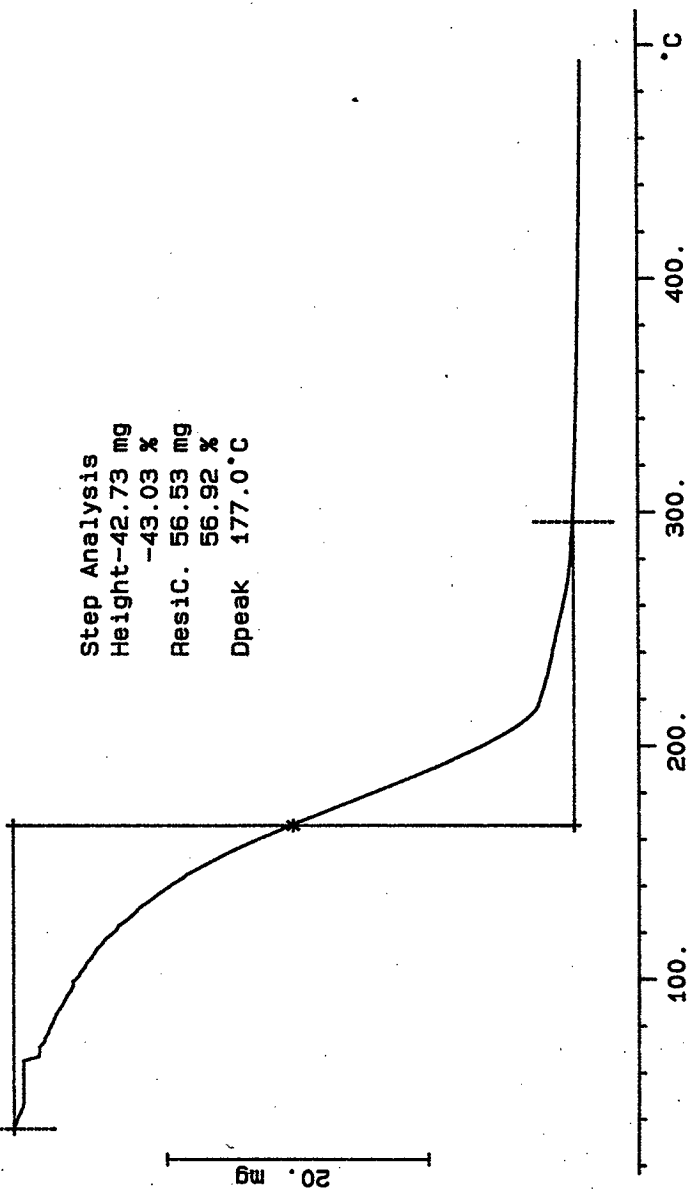
300.

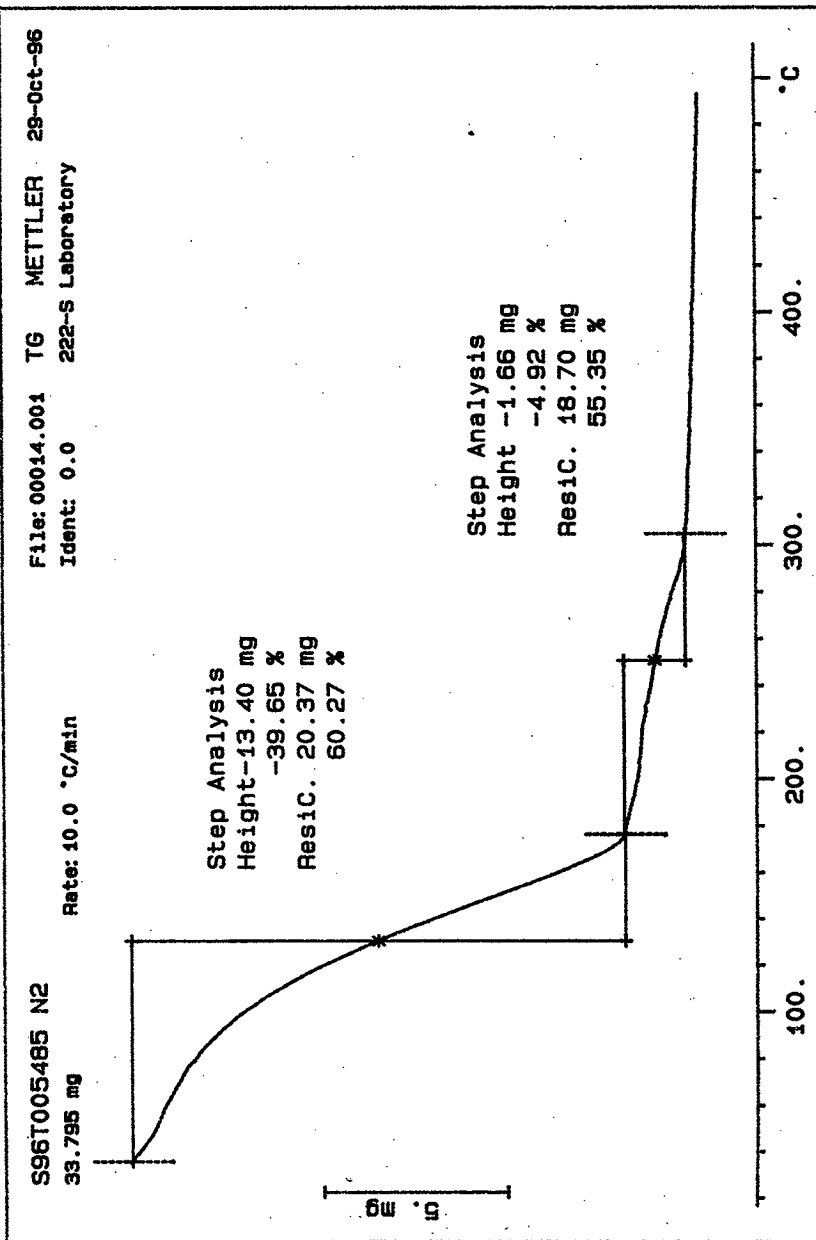
200.

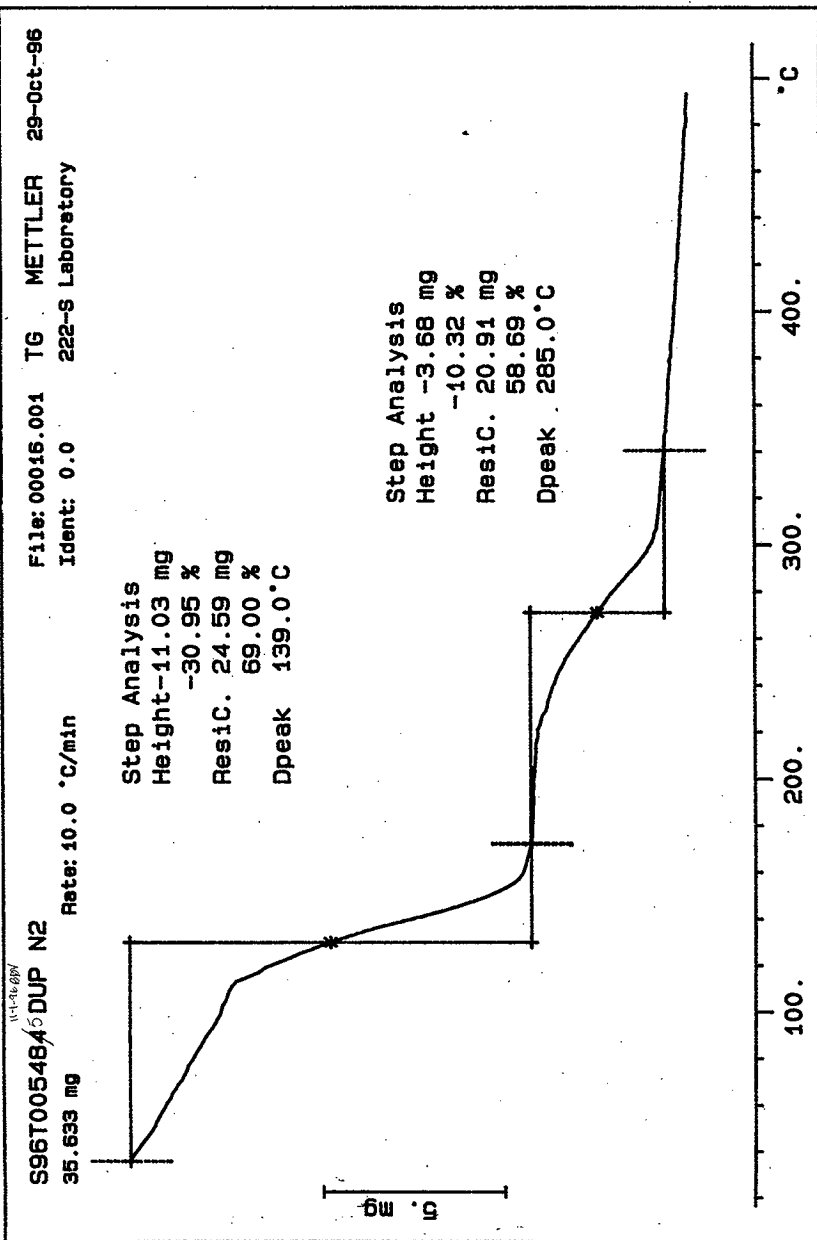
100.

S96T005474 DUP N2
99.307 mg
Rate: 10.0 °C/min
File: 00012.001 TG METTLER 29-Oct-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-42.73 mg
-43.03 %
Resid. 56.53 mg
56.92 %
Dpeak 177.0 °C







LABCORE Data Entry Template for Worklist# 14707

Analyst: DCD Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: B-108 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.45</u>	<u>*</u>	<u>N/A</u> %
96001379	B-108	2 SAMPLE	S96T005523	0	TGA-03	LIQUID	<u>N/A</u>	<u>78.50</u>		%
96001379	B-108	3 DUP	S96T005523	0	TGA-03	LIQUID	<u>78.50</u>	<u>79.39</u>	<u>N/A</u>	%

Final page for worklist # 14707

See attached for signatures

Analyst Signature Date 11-20-96
BOY

Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 11-21-96

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.

worklistprt Version 2.1 05/15/95
11/11/96 10:53

Page: 1

LABCORE Data Entry Template for Worklist# 14707

Analyst: DeD Instrument: TGA0 Book # B2N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: B-108 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96001379	B-108	2 SAMPLE	S96T005523	0	TGA-01	LIQUID	N/A			%
96001379	B-108	3 DUP	S96T005523	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 14707

Daniel C. Dunham 11-19-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

11-20-96

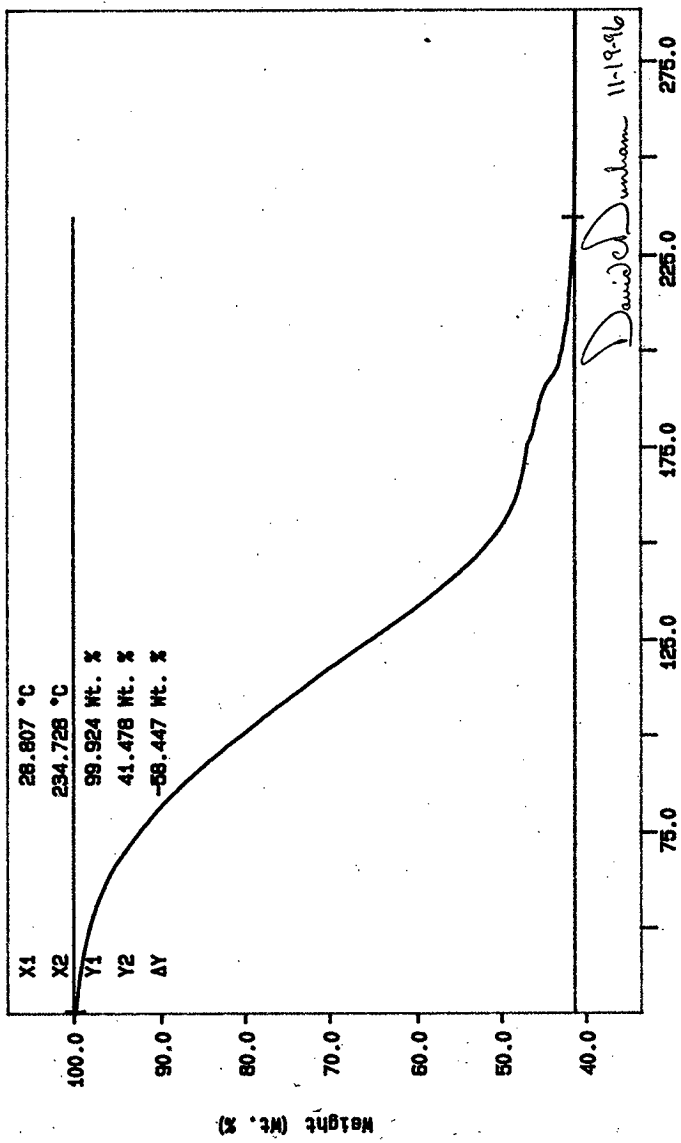
Blandina
Valenzuela

Data Entry Comments:

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

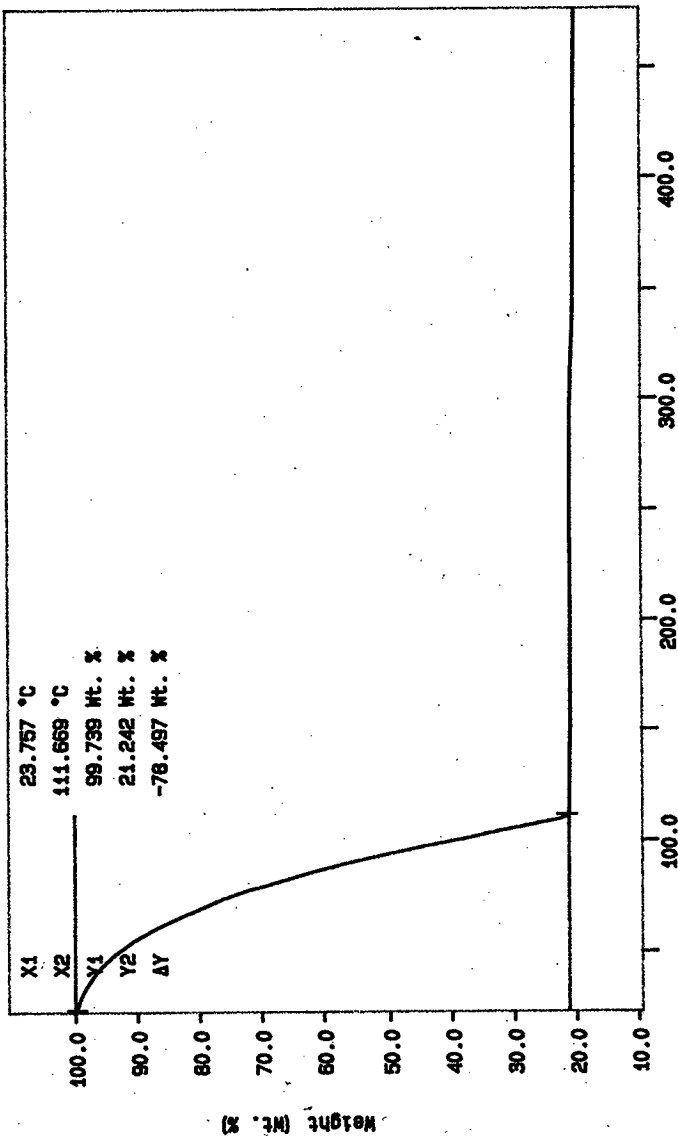
Curve 1: TGA
 File info: ter111901 Tue Nov 19 11:16:20 1996
 Sample Weight: 20.479 mg
 TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 242 TO 244.



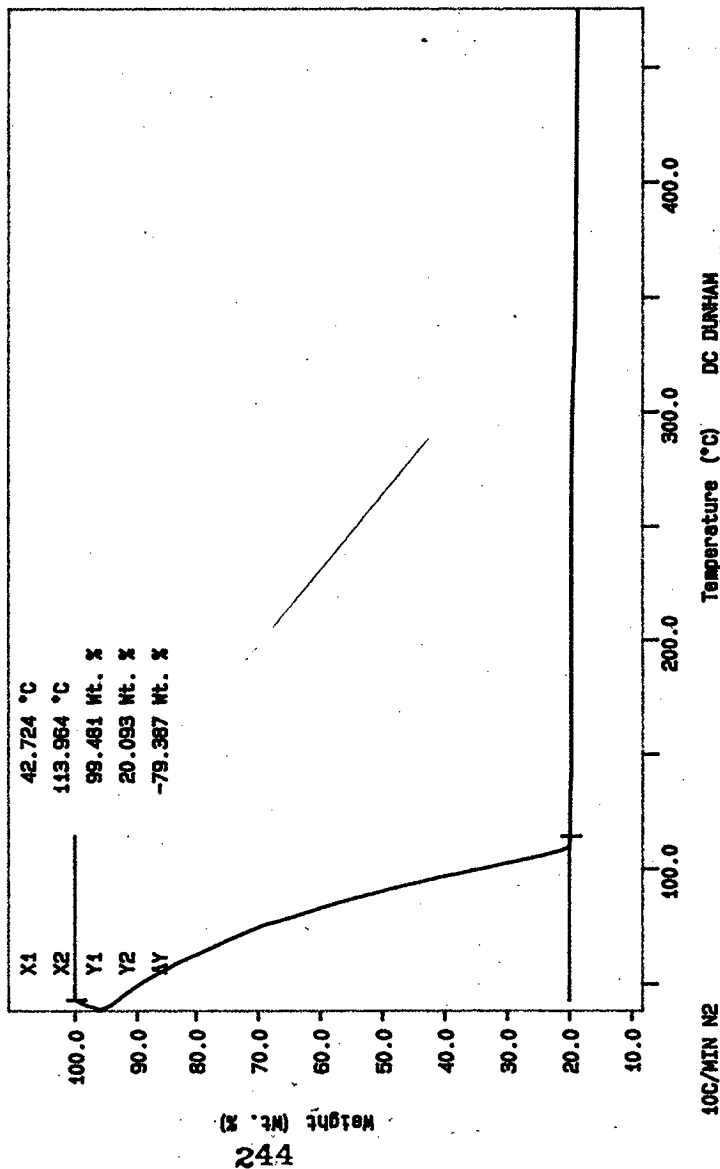
N2 10C/MIN
 TIME: 58:58
 0.0 MIN RATE: 10.0 g/min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Nov 20 00:16:47 1996

Curve 1: TGA
 File Info: SAM11907 Wed Nov 20 03:23:19 1996
 Sample Weight: 10.709 mg
 S96T005523 SAM



10C/MIN N2
 TIME: 660.8
 0.0 min RATE: 10.0 C/min
 DC DUNHAM
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Nov 20 03:24:14 1996

Curve 1: TGA
 File Info: SAM11908 Wed Nov 20 04:26:12 1996
 Sample Weight: 10.768 mg
 S96T005523 DUP



DC DUNHAM
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Nov 20 09:47:11 1996

LABCORE Data Entry Template for Worklist# 14711

Analyst: DPB Instrument: TGA0 1 Book # 82N8-A

Method: LA-560-112 Rev/Mod C-0

Worklist Comment: B-108 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.2	59.36	N/A	%
96001379	B-108	2 SAMPLE	S96T005505	0	TGA-01	SOLID	N/A	34.40		%
96001379	B-108	3 DUP	S96T005505	0	TGA-01	SOLID	34.40	32.63	N/A	%
96001379	B-108	4 SAMPLE	S96T005506	0	TGA-01	SOLID	N/A	34.10		%
96001379	B-108	5 DUP	S96T005506	0	TGA-01	SOLID	34.10	34.68	N/A	%
96001379	B-108	6 SAMPLE	S96T005507	0	TGA-01	SOLID	N/A	22.96	18.54	%
96001379	B-108	7 DUP	S96T005507	0	TGA-01	SOLID	18.54 11-21-96 22.96	20.12	11-21-96 20.12	%

Final page for worklist # 14711

Analyst Signature 11/11/96
Date

Analyst Signature 11-12-96
Date

Verified/Validated by
Blandina Valenzuela
11-12-96

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.

14.366 mg

Rate: 10.0 °C/min

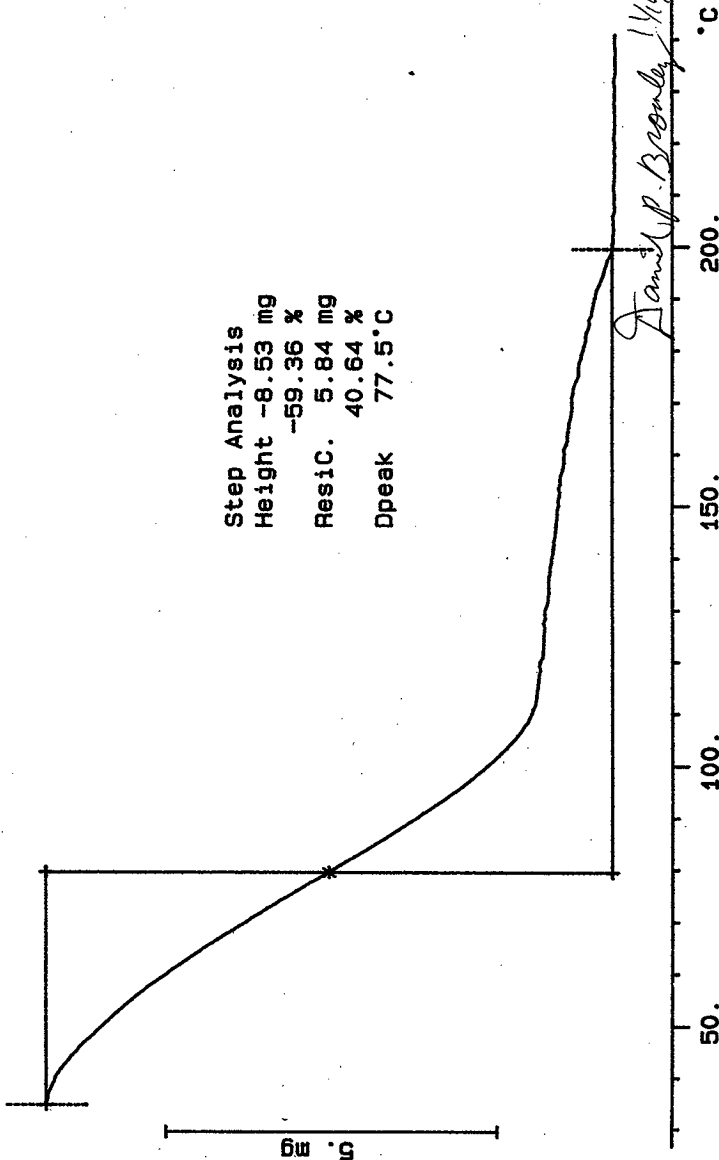
File: 00065.001

Ident: 0.0

METTLER

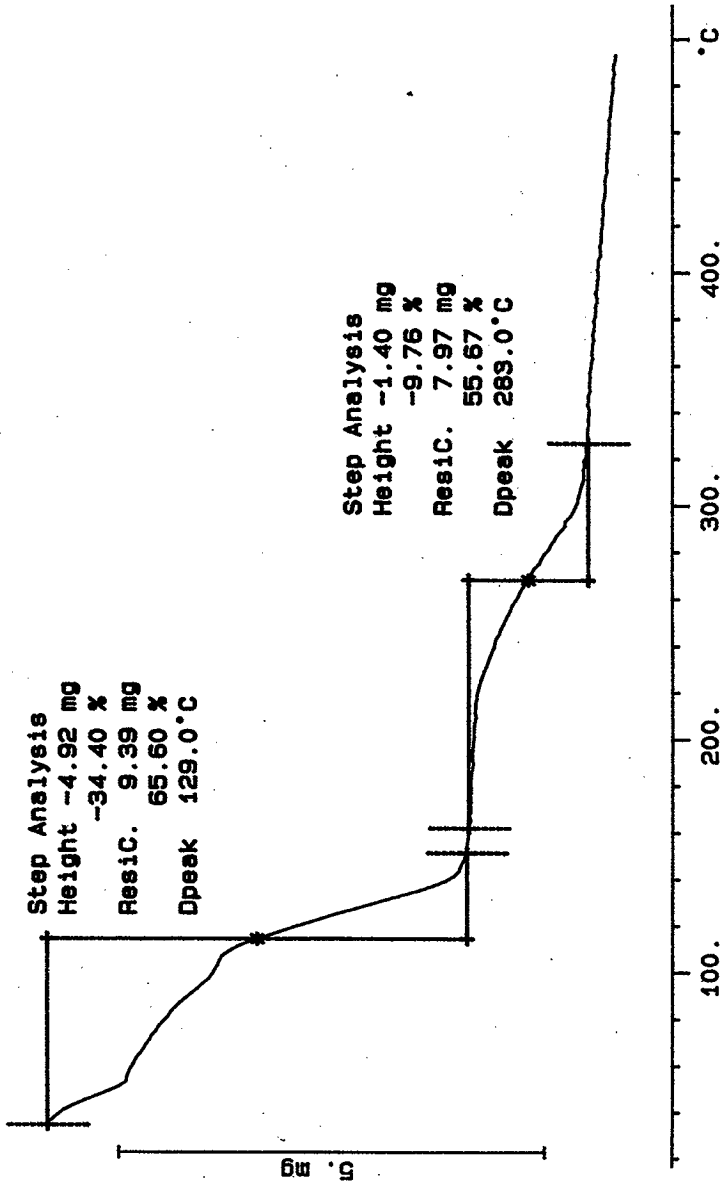
222-S Laboratory

10-Nov-96



David P. Bradley 11/10/86

S96T005505 SAM N2
 14.309 mg
 Rate: 10.0 °C/min
 File: 00067.001 TG METTLER 10-Nov-96
 Ident: 0.0 222-S Laboratory



S96T005505 DUP N2
12.030 mg
Rate: 10.0 °C/min
File: 00069.001 TG METTLER 11-Nov-96
Ident: 0.0 222-S Laboratory

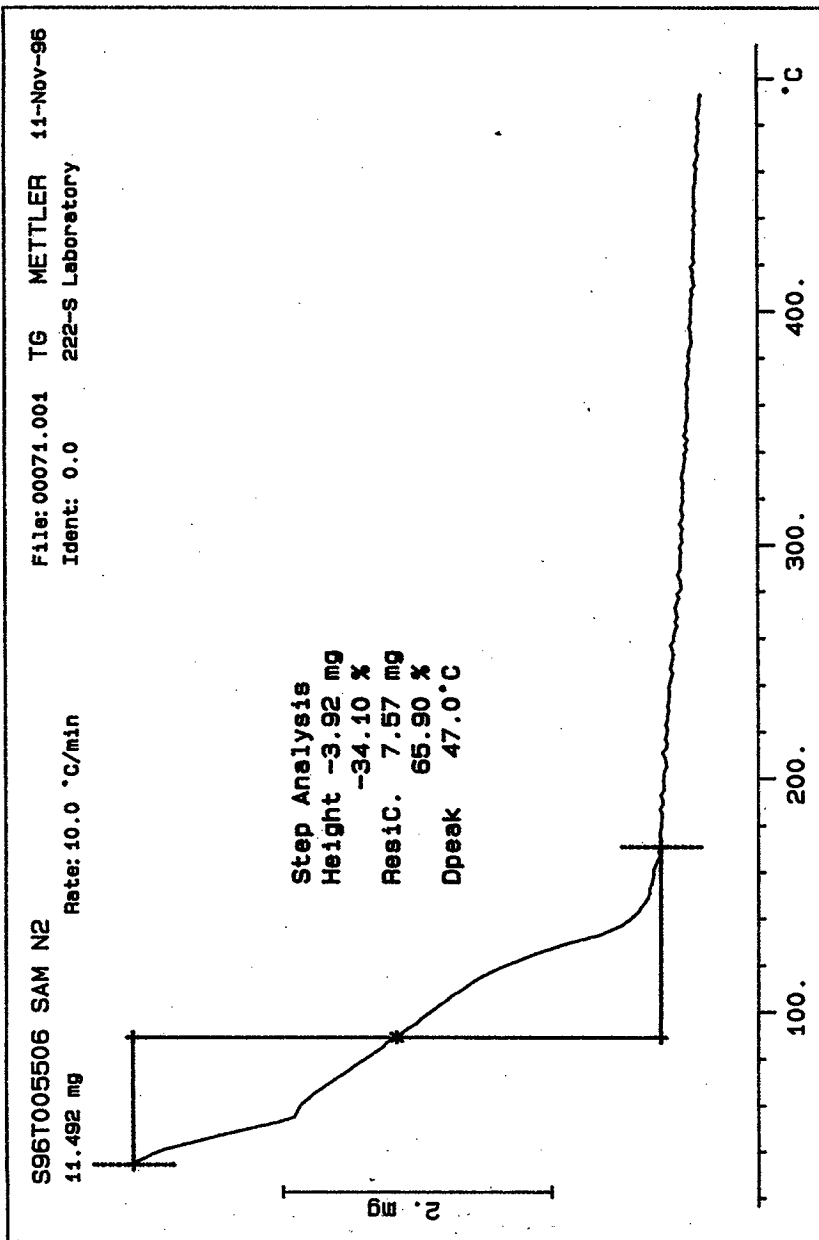
Step Analysis

Height -3.93 mg
-32.63 %
Resid. 8.10 mg
67.37 %
Dpeak 123.0 °C

Step Analysis
Height -1.16 mg
-9.64 %
Resid. 6.83 mg
56.77 %

2. mg

100. 200. 300. 400. °C



S96T005506 DUP N2

10.813 mg

Rate: 10.0 °C/min

File: 00073.001

Ident: 0.0

TG

11-Nov-96

222-S Laboratory

Step Analysis

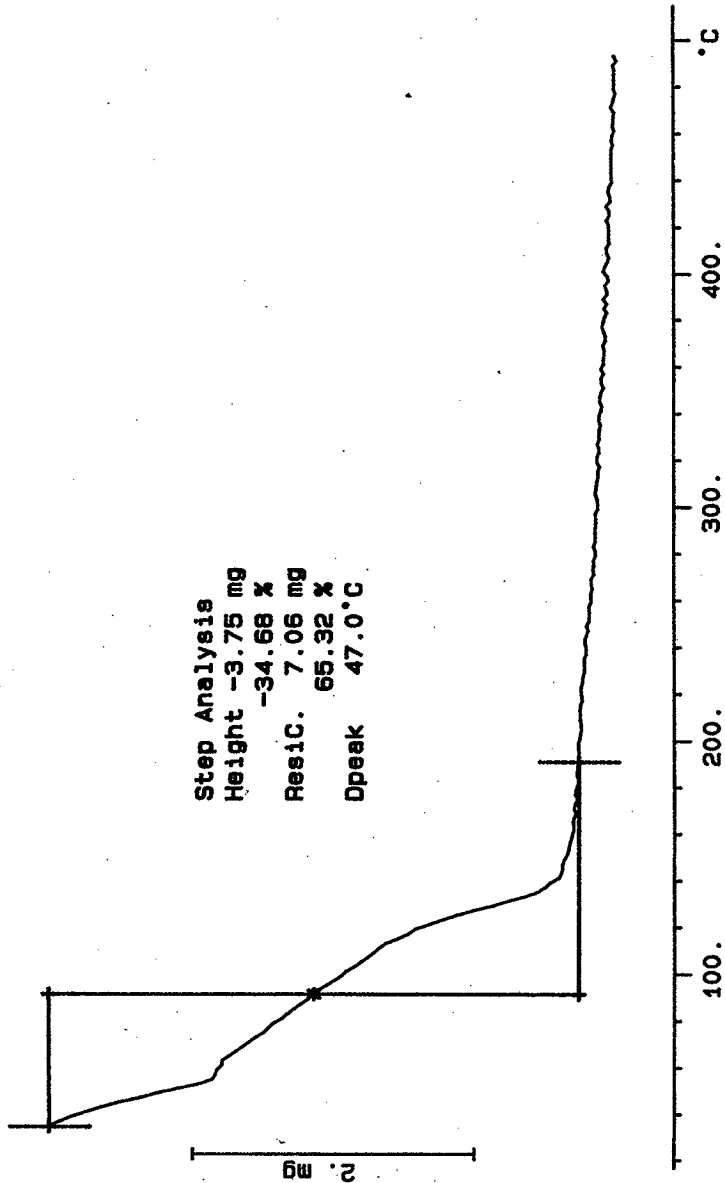
Height -3.75 mg

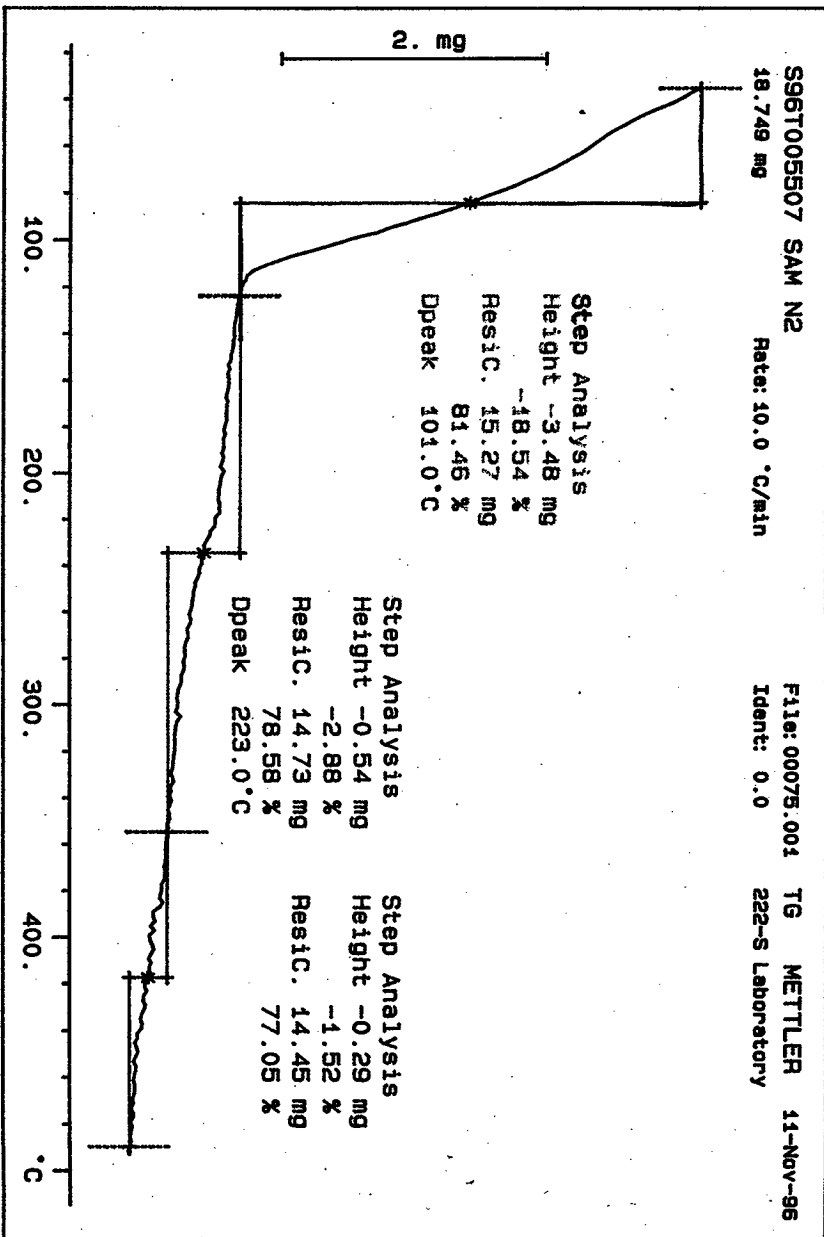
-34.68 %

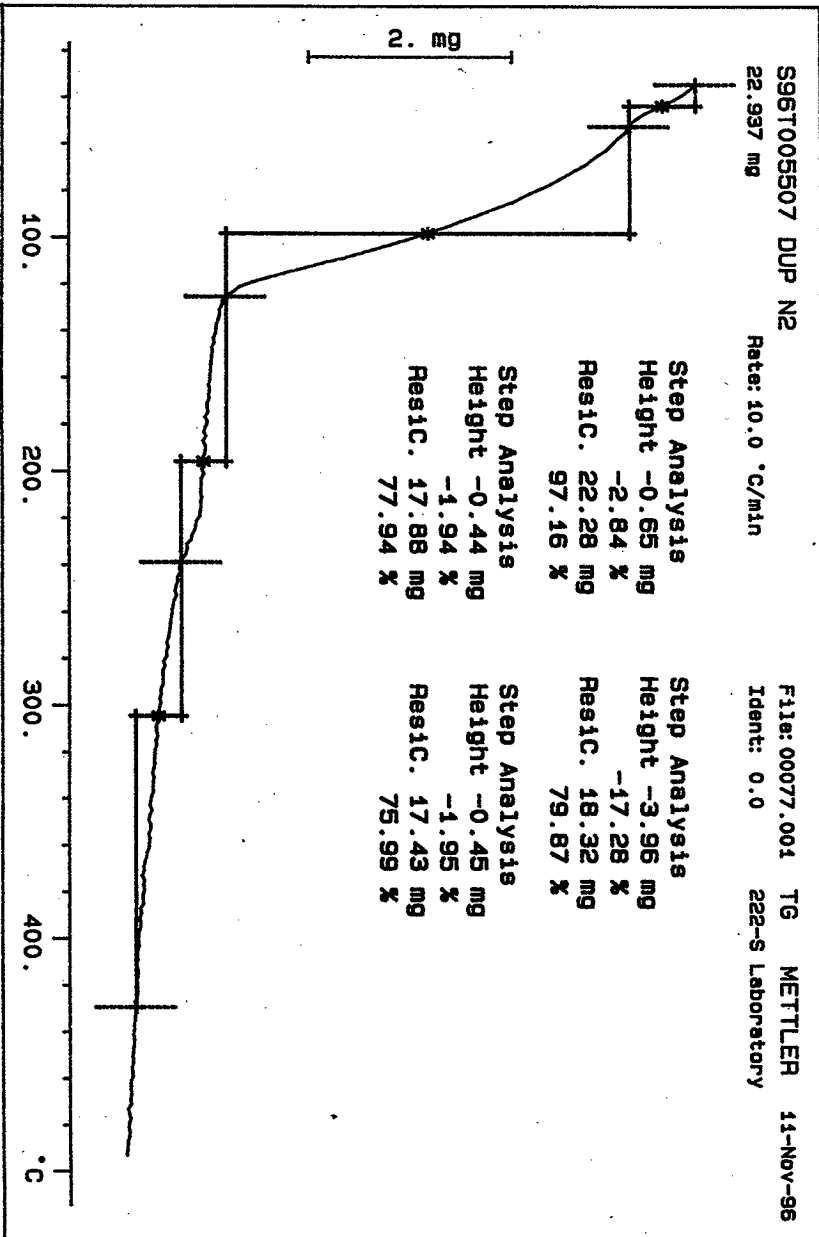
ResidC. 7.06 mg

65.32 %

Dpeak 47.0 °C







LABCORE Data Entry Template for Worklist# 14392

Analyst: DCD Instrument: BA001 Book # 133N16-A

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

Worklist Comment: SPG-01 FOR AN-103 & B-108 SAMPLES RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.398</u>	<u>1.394</u>	<u>N/A</u>	Sp.G.
96001318	AN-103	2 SAMPLE	S96T005406	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.016</u>	<u>0.010</u>	Sp.G.
96001318	AN-103	3 DUP	S96T005406	0	SPG-01	LIQUID	<u>1.016</u>	<u>1.056</u>	<u>N/A</u>	Sp.G.
96001339	AN-103	4 SAMPLE	S96T005420	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.404</u>	<u>0.010</u>	Sp.G.
96001339	AN-103	5 DUP	S96T005420	0	SPG-01	LIQUID	<u>1.404</u>	<u>1.402</u>	<u>N/A</u>	Sp.G.
96001339	AN-103	6 SAMPLE	S96T005421	0	SPG-01	LIQUID	<u>N/A</u>	<u>2.669</u>	<u>0.010</u>	Sp.G.
96001339	AN-103	7 DUP	S96T005421	0	SPG-01	LIQUID	<u>2.669</u>	<u>2.767</u>	<u>N/A</u>	Sp.G.
96001379	B-108	8 SAMPLE	S96T005463	0	SPG-01	LIQUID	<u>N/A</u>	<u>2.270</u>	<u>0.010</u>	Sp.G.
96001379	B-108	9 DUP	S96T005463	0	SPG-01	LIQUID	<u>2.270</u>	<u>2.298</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 14392

David C Dunham 1-10-97
Analyst Signature Date

Frank Mark 1-10-97
Analyst Signature Date

Approved RW Schuech 1/14/97

Data Entry Comments:

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

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

WORKLIST
#ANALYST
INITIALSANALYSIS
DATEINSTRUMENT
CODE

14392

DCD

1-10-97

☒ SAMPLE
☒ STANDARD☐ DUPLICATE

SAMPLE # =

STD # = 133N16A

REPLICATE
1.8459
1.9809
2.0853
.07538

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

1.8459
1.9572
.07538

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

254

SAMPLE # = 396T005406

STD # =

DUPLICATE
1.8921
1.9683
1.9953
.07538

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

1.8921
1.9683
.07538

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # = 396T005420

STD # =

DUPLICATE
1.8931
1.9889
.07538

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

1.8964
1.9889
.07538

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # = 396T005421

STD # =

DUPLICATE
1.9077
2.11089
.07538

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

1.9077
2.11089
.07538

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # = 396T005463

STD # =

DUPLICATE
1.9271
2.1003
.07538

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

1.8628
2.0339
.07538

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # =

STD # =

REPLICATE

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # =

STD # =

REPLICATE

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

☒ SAMPLE
☒ STANDARD☒ DUPLICATE

SAMPLE # =

STD # =

REPLICATE

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

RWS 1/14/97
pwsRWS 1/14/97
pwsRWS 1/14/97
pws

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

Type		STD	REPLICATE
STD	Gross Weight (W2)	1.9512	2.0857
Work List	Tare Weight (W1)	1.8459	1.9809
14392	Weight of Solution (W2-W1)	0.1053	0.1048
Test Code	Volume of Solution μ L	75.3800	75.3800
SPG-01	Specific Gravity	1.3969	1.3903
Matrix	Specific Gravity (Average)	1.3936	
LIQUID			
Sample #			
STD# 133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
01/10/97	v RESULT v		
Time	Specific Gravity Average =	1.394	
05:30 AM			

Data Entry by:

Date:

01/10/97

Approved by:

Date:

1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

DATA
NOT USED

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

Type		SAMP	REPLICATE
SAMP	Gross Weight (W2)	1.9687	
Work List	Tare Weight (W1)	1.8921	
14392	Weight of Solution (W2-W1)	0.0766	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	1.0162	NA
Matrix			
LIQUID			
Sample #			
S96T005406			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
01/10/97	$\vee$ RESULT $\vee$		
Time	Specific Gravity =	1.016	
05:30 AM			

Data Entry by:	<i>Jim Myle</i>	Date:	01/10/97
Approved by:	<i>RW Schurden</i>	Date:	1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

**DATA
NOT USED****SPECIFIC GRAVITY : LA-510-112 (C-3)**

Type	SAMP-DUP	REPLICATE
SAMP-DUP	Gross Weight (W2)	1.9953
Work List	Tare Weight (W1)	1.9157
14392	Weight of Solution (W2-W1)	0.0796
Test Code	Volume of Solution μ L	75.3800
SPG-01	Specific Gravity	1.0560
Matrix		NA
LIQUID		
Sample #		
S96T005406		
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution	
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton	
Analyst		
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$	
Date	v RESULT v	
01/10/97	Specific Gravity =	1.056
Time		
05:30 AM		

Data Entry by:

Date: 01/10/97

Approved by:

Date: 1/14/97

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

DATA
NOT USED

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

Type		SAMP	REPLICATE
SAMP	Gross Weight (W2)	2.0022	
Work List	Tare Weight (W1)	1.8964	
14392	Weight of Solution (W2-W1)	0.1058	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	1.4036	NA
Matrix			
LIQUID			
Sample #			
S96T005420			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97			
Time	Specific Gravity =	1.404	
05:30 AM			

Data Entry by:

Date: 01/10/97

Approved by:

Date: 1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

**DATA
NOT USED****SPECIFIC GRAVITY : LA-510-112 (C-3)**

Type		SAMP-DUP	REPLICATE
SAMP-DUP	Gross Weight (W2)	1.9888	
Work List	Tare Weight (W1)	1.8831	
14392	Weight of Solution (W2-W1)	0.1057	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	1.4022	NA
Matrix			
LIQUID			
Sample #			
S96T005420			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97	Specific Gravity =	1.402	
Time			
05:30 AM			

Data Entry by:

Date:

01/10/97

Approved by:

Date:

1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

DATA
NOT USED

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

Type		SAMP	REPLICATE
SAMP	Gross Weight (W2)	2.1089	
Work List	Tare Weight (W1)	1.9077	
14392	Weight of Solution (W2-W1)	0.2012	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	2.6691	NA
Matrix			
LIQUID			
Sample #			
S96T005421			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
01/10/97	v RESULT v		
Time	Specific Gravity =	2.669	
05:30 AM			

Data Entry by: *Leah Smith* Date: 01/10/97
 Approved by: *BW & Wood* Date: 1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

DATA
NOT USED

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

Type		SAMP-DUP	REPLICATE
SAMP-DUP	Gross Weight (W2)	2.1642	
Work List	Tare Weight (W1)	1.9556	
14392	Weight of Solution (W2-W1)	0.2086	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	2.7673	NA
Matrix			
LIQUID			
Sample #			
S96T005421			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
01/10/97	v RESULT v		
Time	Specific Gravity =	2.767	
05:30 AM			

Data Entry by:

Date:

01/10/97

Approved by:

Date:

1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

Type		SAMP	REPLICATE
SAMP	Gross Weight (W2)	2.0339	
Work List	Tare Weight (W1)	1.8628	
14392	Weight of Solution (W2-W1)	0.1711	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	2.2698	NA
Matrix			
LIQUID			
Sample #			
S96T006463			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97			
Time	Specific Gravity =	2.270	
05:30 AM			

Data Entry by:

Date:

01/10/97

Approved by:

Date:

1/14/97

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		SAMP-DUP	REPLICATE
SAMP-DUP	Gross Weight (W2)	2.1003	
Work List	Tare Weight (W1)	1.9271	
14392	Weight of Solution (W2-W1)	0.1732	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	2.2977	NA
Matrix			
LIQUID			
Sample #			
S96T005463			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
DCD	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97			
Time	Specific Gravity =	2.298	
05:30 AM			

Data Entry by: *Jim M...* Date: 01/10/97
 Approved by: *Don Sch...* Date: 1/14/97

LABCORE Data Entry Template for Worklist# 14659

Analyst: ASD Instrument: BA001 Book # 133N16-A

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

Worklist Comment: SPG-01 FOR B-108

RTS!

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.39155</u>	<u>1.393</u>	<u>N/A</u>	Sp.G.
96001379	B-108	2 SAMPLE	S96T005523	0	SPG-01	LIQUID	<u>N/A</u>	<u>1.387</u>	<u>0.010</u>	Sp.G.
96001379	B-108	3 DUP	S96T005523	0	SPG-01	LIQUID	<u>1.387</u>	<u>1.374</u>	<u>N/A</u>	Sp.G.

Final page for worklist # 14659

Anthony Purinton 12-5-96
Analyst Signature Date

R. Jones 12-5-96
Analyst Signature Date

Approved R. Schuech 12/6/96

Data Entry Comments:

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

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

WORKLIST
#ANALYST
INITIALSANALYSIS
DATEANALYSIS
TIMEINSTRUMENT
CODE

14659

ADP

12-5-96

☒ SAMPLE
STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

133N16A

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)REPLICATE
1.8876
2.0268
1.00121.8876
2.0268
1.0012☒ SAMPLE
STANDARD☐ DUPLICATE

SAMPLE # = 5967005523 STD # =

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)REPLICATE
1.9396
2.0735
1.00121.9396
2.0735
1.0012☐ SAMPLE
STANDARD☒ DUPLICATE

SAMPLE # = 5967005523 STD # =

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)REPLICATE
1.8485
1.9361
1.00121.8485
1.9361
1.0012☐ SAMPLE
STANDARD☐ DUPLICATE

SAMPLE # =

STD # =

TARE WEIGHT (g)
GROSS WEIGHT (g)
VOL. of SOLUTION (mL)

REPLICATE

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

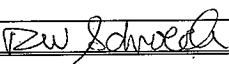
Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	2.0268	1.9867
Work List	Tare Weight (W1)	1.8876	1.8469
14659	Weight of Solution (W2-W1)	0.1392	0.1398
Test Code	Volume of Solution μ L	100.1200	100.1200
SPG-01	Specific Gravity	1.3903	1.3963
Matrix	Specific Gravity (Average)	1.3933	
LIQUID			
Sample #			
133N16A			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
12/05/96	v RESULT v		
Time	Specific Gravity Average =	1.393	
08:30 AM			

Data Entry by: <i>RG</i>	Date: 12/05/96
Approved by: <i>R. W. Schaefer</i>	Date: 12/6/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	2.0785	
Work List	Tare Weight (W1)	1.9396	
14659	Weight of Solution (W2-W1)	0.1389	0
Test Code	Volume of Solution μ L	100.1200	
SPG-01	Specific Gravity	1.3873	NA
Matrix			
LIQUID			
Sample #			
S96T005523			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
12/05/96	Specific Gravity =	1.387	
Time			
08:30 AM			

Data Entry by: 	Date: 12/05/96
Approved by: 	Date: 12/6/96
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)	1.9861	
Work List	Tare Weight (W1)	1.8485	
14659	Weight of Solution (W2-W1)	0.1376	0
Test Code	Volume of Solution μ L	100.1200	
SPG-01	Specific Gravity	1.3744	NA
Matrix			
LIQUID			
Sample #			
S96T005523DUP			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
ADP	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
12/05/96	Specific Gravity =	1.374	
Time			
08:30 AM			

Data Entry by: <i>RG</i>	Date: 12/05/96
Approved by: <i>DW Schneider</i>	Date: 12/6/96

LABCORE Completed Worklist Report for Worklist# 14375

Analyst: smf

Instrument: IC01

Book# 36120C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: @IC-01 FOR B-108

RTS!

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	@IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	@IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	@IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	@IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	@IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	@IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	@IC-QC F	QC	5.90e01	5.90e+01	100.000 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.43e+01	94.051 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.41e02	5.05e+02	93.346 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.77e+02	97.963 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	5.66e+02	95.286 % Recovery	
2 CCV	0	@IC-QC P04	QC	5.44e02	5.09e+02	93.566 % Recovery	
2 CCV	0	@IC-QC SO4	QC	6.31e02	6.12e+02	96.989 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.25e02	5.38e+02	102.476 % Recovery	
3 SAMPLE	S96T005463 0	@IC-01 F-02	LIQUID	N/A	2.540e-01	1.20e-002	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 CL-02	LIQUID	N/A	1.005e-01	1.717	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 NO2-02	LIQUID	N/A	1.270e-01	0.108	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 BR-02	LIQUID	N/A	4.330e-01	0.125	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 NO3-02	LIQUID	N/A	5.109e+02	0.139	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 P04-02	LIQUID	N/A	< 1.200e-01	0.120	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 SO4-02	LIQUID	N/A	1.609e+01	0.138	ug/mL
3 SAMPLE	S96T005463 0	@IC-01 OXALATE2	LIQUID	N/A	< 1.050e-01	0.105	ug/mL
4 DUP	S96T005463 0	@IC-01 F-02	LIQUID	2.54e-01	2.63e-01		3.482 RPD
4 DUP	S96T005463 0	@IC-01 CL-02	LIQUID	1.01e+01	1.21e+01		18.018 RPD
4 DUP	S96T005463 0	@IC-01 NO2-02	LIQUID	1.97e+01	1.98e+01		0.506 RPD
4 DUP	S96T005463 0	@IC-01 BR-02	LIQUID	4.33e-01	4.33e-01		0.000 RPD
4 DUP	S96T005463 0	@IC-01 NO3-02	LIQUID	5.11e+01	5.14e+01		0.585 RPD
4 DUP	S96T005463 0	@IC-01 P04-02	LIQUID	<1.20e-1	1.51e-01		RPD
4 DUP	S96T005463 0	@IC-01 SO4-02	LIQUID	1.61e+01	1.62e+01		0.619 RPD
4 DUP	S96T005463 0	@IC-01 OXALATE2	LIQUID	<1.05e-1	<1.05e-1		RPD

Final page for worklist# 14375

Analyst Signature Date

Analyst Signature Date

James M. Lyle 2/6/97

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 14375

Analyst: SMF Instrument: IC0 IC01 Book# 36N2D-C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: @IC-01 FOR B-108

RTS!

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005463 0	@IC-01	LIQUID	96001379 B-108		
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005463 0	@IC-01	LIQUID			

Final page for worklist # 14375

Susie M. Julten 1-7-97
Analyst Signature Date

Analyst Signature Date

14375.jy.sch
14375.jy.csv received 1/28/97 OK M. Farland

Uploaded 2/5/97 SMF

Validated 2/6/97 SMF

Data Entry Comments:

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				28-Jan-97			
Worklist#: 14375				Data File: 14375JY.CSV							
		Seq	Type	Sample #		Seq#	Data File		Sample Name		Dilution
-	=>	1	CCB	S96T005463 S96T005463		-	1	97010651.d21	CCB ELUENT BLANK		1.00
	=>	2	CCV			2	97010651.d22	CCV STD 36N20-C		101.00	
	=>	3	SAMPLE			3	97010651.d25	S96T005463 SAM		101.00	
	=>	4	DUP			3	97010651.d26	S96T005463 SAM		1.00	
						4	97010651.d27	S96T005463 DUP		101.00	
						4	97010651.d28	S96T005463 DUP		1.00	
+						+					

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Data Reprocessed On 01/28/1997 13:22:41

```

=====
Sample Name: CCB ELUENT BLANK          Date: 01/07/1997 04:19:18
Data File  : F:\DATA\97010651.d21
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1  System: 1  Inject#: 21  Detector: CDM-1
Analyst    : Janey          Column: AG4A/AS4A anion column
=====

```

```

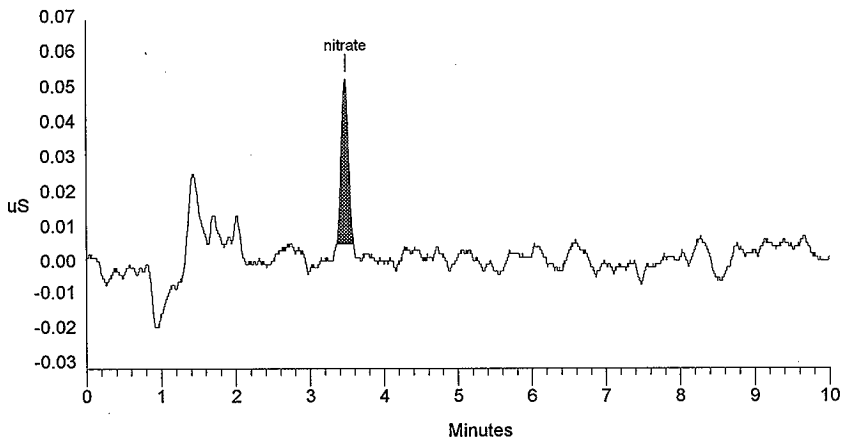
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.48	nitrate	0.033	47	316	1	-2.79
Totals			0.033	47	316		

File: 97010651.d21 Sample: CCB ELUENT BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 272 TO 277.

Data Reprocessed On 01/28/1997 13:22:44

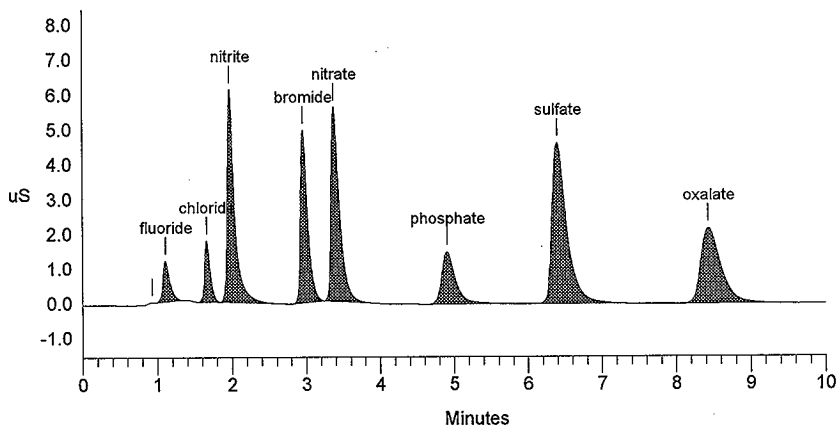
```
=====
| Sample Name: CCV STD 36N20-C                      Date: 01/07/1997 04:30:12 |
| Data File  : F:\DATA\97010651.d22                 |
| Method     : C:\DX\METHOD\KIT.MET                 |
| ACI Address: 1 System: 1 Inject#: 22                Detector: CDM-1 |
| Analyst    :                      Column: AG4A/AS4A anion column |
=====
```

```
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000   5Hz   0.00 10.00          50
-----
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.11	fluoride	59.034	1192	7790	1	2.47
3	1.66	chloride	74.324	1776	9338	1	-0.40
4	1.97	nitrite	504.809	6117	42281	1	-2.95
5	2.96	bromide	577.085	4967	33705	1	0.00
6	3.37	nitrate	565.516	5576	44519	1	-5.77
7	4.91	phosphate	508.855	1521	20263	1	-1.08
8	6.40	sulfate	612.146	4636	64955	1	-3.23
9	8.43	oxalate	538.276	2175	41174	1	-3.07
Totals			3440.043	27960	264025		

File: 97010651.d22 Sample: CCV STD 36N20-C



Data Reprocessed On 01/28/1997 13:22:46

```

=====
Sample Name: S96T005463 SAM                      Date: 01/07/1997 04:55:21
Data File  : F:\DATA\97010651.d25
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 25              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

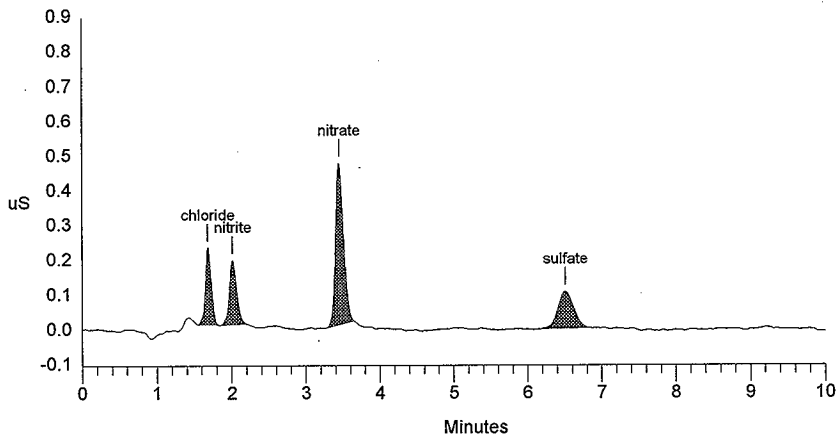
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000  5Hz   0.00 10.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.68	chloride	10.046	219	1203	1	0.80
2	2.01	nitrite	28.847	184	1263	1	-0.98
3	3.45	nitrate	43.721	463	3450	1	-3.54
4	6.51	sulfate	6.189	106	1545	1	-1.61
Totals			88.803	971	7462		

File: 97010651.d25 Sample: S96T005463 SAM



Data Reprocessed On 01/28/1997 13:22:48

```

=====
| Sample Name: S96T005463 SAM                               Date: 01/07/1997 05:08:17 |
| Data File  : F:\DATA\97010651.d26                         |
| Method     : C:\DX\METHOD\KIT.MET                         |
| ACI Address: 1 System: 1 Inject#: 26                       Detector: CDM-1 |
| Analyst    :                                               Column: AG4A/AS4A anion column          |
=====

```

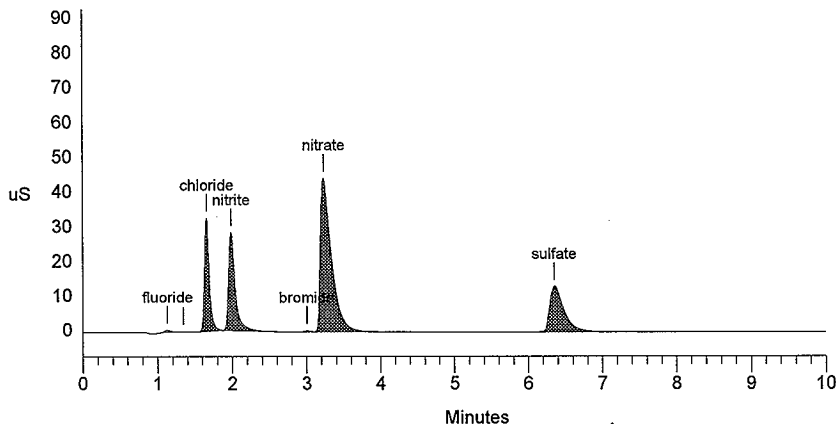
Calibration Volume Dilution Points Rate Start Stop Area Reject

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.13	fluoride	0.254	542	2958	2	4.32
2	1.35		0.000	125	877	2	
3	1.66	chloride	9.421	32641	147428	1	-0.40
4	1.99	nitrite	19.697	28201	176060	1	-2.30
5	3.01	bromide	0.433	347	1934	1	-3.32
6	3.23	nitrate	51.089	44163	463884	1	0.10
7	6.35	sulfate	16.090	12980	176451	1	-4.03
Totals			96.984	118999	969592		

File: 97010651.d26 Sample: S96T005463 SAM



Data Reprocessed On 01/28/1997 13:22:50

```

=====
| Sample Name: S96T005463  DUP                               Date: 01/07/1997 05:21:25 |
| Data File  : F:\DATA\97010651.d27                         |
| Method     : C:\DX\METHOD\KIT.MET                         |
| ACI Address: 1  System: 1  Inject#: 27                     Detector: CDM-1 |
| Analyst    :                               Column: AG4A/AS4A anion column |
=====

```

```

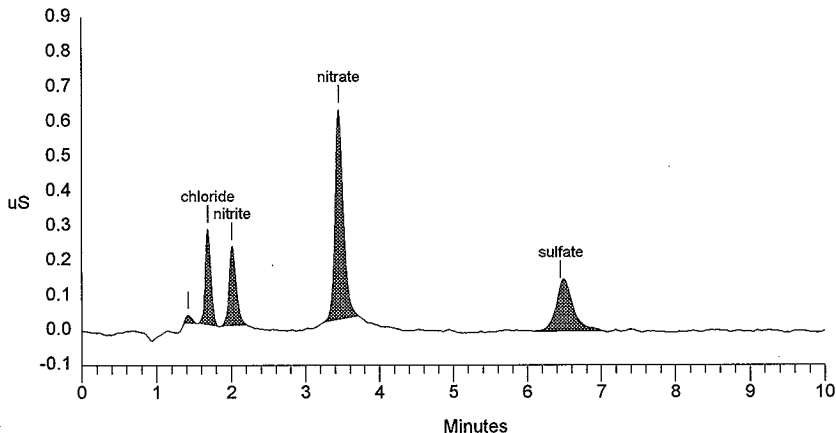
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.43		0.000	22	126	1	
2	1.69	chloride	12.110	275	1462	1	1.20
3	2.01	nitrite	31.888	227	1523	1	-0.98
4	3.45	nitrate	61.182	602	4808	1	-3.54
5	6.45	sulfate	14.897	134	2440	1	-2.42
Totals			120.077	1260	10359		

File: 97010651.d27 Sample: S96T005463 DUP



Data Reprocessed On 01/28/1997 13:22:52

```

=====
| Sample Name: S96T005463  DUP                               Date: 01/07/1997 05:32:10 |
| Data File  : F:\DATA\97010651.d28                         |
| Method     : C:\DX\METHOD\KIT.MET                         |
| ACI Address: 1 System: 1 Inject#: 28                       Detector: CDM-1 |
| Analyst    :                               Column: AG4A/AS4A anion column |
=====

```

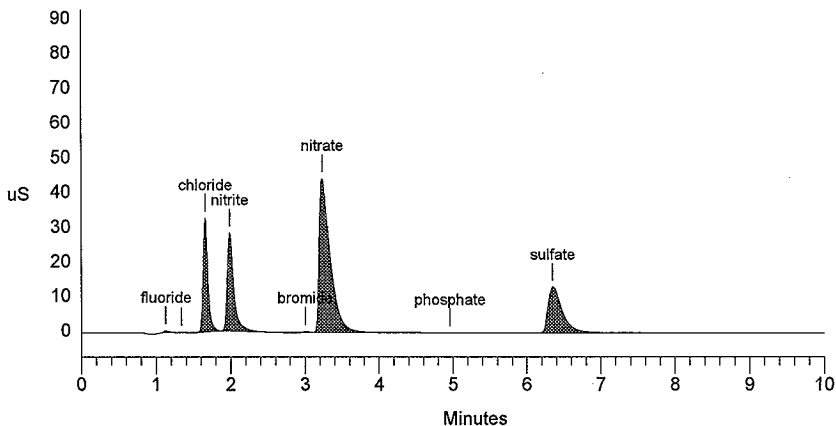
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	1	3000	5Hz	0.00	10.00		50
----------	---	---	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.13	fluoride	0.263	556	3095	2	4.32
2	1.34		0.000	121	891	2	
3	1.66	chloride	9.509	32737	149255	1	-0.40
4	1.99	nitrite	19.788	28239	176915	1	-2.30
5	3.01	bromide	0.433	350	1936	1	-3.32
6	3.23	nitrate	51.374	44250	466962	1	0.10
7	4.96	phosphate	0.151	19	258	1	0.00
8	6.35	sulfate	16.235	12986	178116	1	-4.03
Totals			97.753	119259	977429		

File: 97010651.d28 Sample: S96T005463 DUP



LABCORE Completed Worklist Report for Worklist# 14415

Analyst: smf Instrument: IC02 Book# 36N20-C

Method: LA533105 Rev/Mod D-1

Worklist Comment: ic-01 for b-108

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	④IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	④IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	④IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	④IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	④IC-QC NO3	QC	1	1.46e-01	0.146	ug/mL
1 CCB	0	④IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	④IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	④IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	④IC-QC F	QC	5.90e01	6.03e+01	102.203 % Recovery	
2 CCV	0	④IC-QC CL	QC	7.90e01	8.17e+01	103.418 % Recovery	
2 CCV	0	④IC-QC NO2	QC	5.41e02	5.49e+02	101.479 % Recovery	
2 CCV	0	④IC-QC BR	QC	5.89e02	5.86e+02	99.491 % Recovery	
2 CCV	0	④IC-QC NO3	QC	5.94e02	5.99e+02	100.842 % Recovery	
2 CCV	0	④IC-QC PO4	QC	5.44e02	5.37e+02	98.713 % Recovery	
2 CCV	0	④IC-QC SO4	QC	6.31e02	6.45e+02	102.219 % Recovery	
2 CCV	0	④IC-QC OXALATE2	QC	5.25e02	5.61e+02	106.857 % Recovery	
3 BLNK-PREP	0	④IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	④IC-01 CL-02	SOLID	1	<1.70e-2		ug/g
3 BLNK-PREP	0	④IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	④IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	④IC-01 NO3-02	SOLID	1	1.94e-01	0.194	ug/g
3 BLNK-PREP	0	④IC-01 PO4-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	④IC-01 SO4-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	④IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S96T005469	④IC-01 F-02	SOLID	N/A	2.315e+03	12.800	ug/g
4 SAMPLE	S96T005469	④IC-01 CL-02	SOLID	N/A	9.083e+02	18.140	ug/g
4 SAMPLE	S96T005469	④IC-01 NO2-02	SOLID	N/A	1.440e+04	115.200	ug/g
4 SAMPLE	S96T005469	④IC-01 BR-02	SOLID	N/A	1.355e+02	133.400	ug/g
4 SAMPLE	S96T005469	④IC-01 NO3-02	SOLID	N/A	5.254e+04	148.300	ug/g
4 SAMPLE	S96T005469	④IC-01 PO4-02	SOLID	N/A	1.531e+04	128.000	ug/g
4 SAMPLE	S96T005469	④IC-01 SO4-02	SOLID	N/A	5.907e+03	147.200	ug/g
4 SAMPLE	S96T005469	④IC-01 OXALATE2	SOLID	N/A	1.406e+02	112.000	ug/g
5 DUP	S96T005469	④IC-01 F-02	SOLID	2.32e+03	2.01e+03	14.319 RPD	
5 DUP	S96T005469	④IC-01 CL-02	SOLID	9.08e+02	8.79e+02	3.246 RPD	
5 DUP	S96T005469	④IC-01 NO2-02	SOLID	1.44e+04	1.38e+04	4.255 RPD	
5 DUP	S96T005469	④IC-01 BR-02	SOLID	1.36e+02	<1.36e2	RPD	
5 DUP	S96T005469	④IC-01 NO3-02	SOLID	5.28e+04	5.18e+04	1.912 RPD	
5 DUP	S96T005469	④IC-01 PO4-02	SOLID	1.53e+04	1.32e+04	14.737 RPD	
5 DUP	S96T005469	④IC-01 SO4-02	SOLID	5.91e+03	5.72e+03	3.267 RPD	
5 DUP	S96T005469	④IC-01 OXALATE2	SOLID	1.41e+02	1.39e+02	1.429 RPD	
6 BPK	S96T005469	④IC-01 F-02	SOLID	5.90e01	5.64e+01	95.593 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 14415

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S96T005469	0 W	0IC-01	CL-02	SOLID	7.90e01	8.23e+01	104.177 % Recovery
6 SPK	S96T005469	0 W	0IC-01	NO2-02	SOLID	5.41e02	5.59e+02	103.327 % Recovery
6 SPK	S96T005469	0 W	0IC-01	BR-02	SOLID	5.89e02	5.90e+02	100.170 % Recovery
6 SPK	S96T005469	0 W	0IC-01	NO3-02	SOLID	5.94e02	6.14e+02	103.367 % Recovery
6 SPK	S96T005469	0 W	0IC-01	PO4-02	SOLID	5.44e02	5.95e+02	109.375 % Recovery
6 SPK	S96T005469	0 W	0IC-01	SO4-02	SOLID	6.31e02	6.87e+02	108.875 % Recovery
6 SPK	S96T005469	0 W	0IC-01	OxALATE2	SOLID	5.25e02	5.53e+02	109.333 % Recovery
7 SAMPLE	S96T005479	0 W	0IC-01	F-02	SOLID	N/A	2.694e+04	89.870 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	CL-02	SOLID	N/A	8.975e+02	127.300 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	NO2-02	SOLID	N/A	1.275e+04	808.900 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	BR-02	SOLID	N/A	9.361e+02	936.000 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	NO3-02	SOLID	N/A	4.850e+04	1041.000 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	PO4-02	SOLID	N/A	1.278e+05	898.700 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	SO4-02	SOLID	N/A	6.537e+04	1034.000 ug/g
7 SAMPLE	S96T005479	0 W	0IC-01	OxALATE2	SOLID	N/A	7.863e+02	786.400 ug/g
8 DUP	S96T005479	0 W	0IC-01	F-02	SOLID	2.69e+04	2.68e+04	0.372 RPD
8 DUP	S96T005479	0 W	0IC-01	CL-02	SOLID	8.98e+02	8.14e+02	9.813 RPD
8 DUP	S96T005479	0 W	0IC-01	NO2-02	SOLID	1.28e+04	1.07e+04	17.872 RPD
8 DUP	S96T005479	0 W	0IC-01	BR-02	SOLID	<9.36e2	<9.35e2	RPD
8 DUP	S96T005479	0 W	0IC-01	NO3-02	SOLID	4.85e+04	4.10e+04	16.760 RPD
8 DUP	S96T005479	0 W	0IC-01	PO4-02	SOLID	1.28e+05	1.39e+05	8.240 RPD
8 DUP	S96T005479	0 W	0IC-01	SO4-02	SOLID	6.54e+04	5.99e+04	8.779 RPD
8 DUP	S96T005479	0 W	0IC-01	OxALATE2	SOLID	<7.86e2	<7.86e2	RPD

Final page for worklist# 14415

Analyst Signature

Date

Analyst Signature

Date

J. Anastos
Reviewer Signature

1-10-97
Date

Validated 1-10-97

LABCORE Data Entry Template for Worklist# 14415

Analyst: SMF Instrument: IC0 IC02 Book# 36020-C

Method: LA-533-105 Rev/Mod _____

Worklist Comment: ic-01 for b-108

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S96T005469 0 W		@IC-01	SOLID	96001380	B-108
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S96T005469 0 W		@IC-01	SOLID		
6 SPK	S96T005469 0 W		@IC-01	SOLID		
7 SAMPLE	S96T005479 0 W		@IC-01	SOLID	96001380	B-108
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
8 DUP	S96T005479 0 W		@IC-01	SOLID		

Final page for worklist # 14415

Lucie M. Dalton 1-7-96
Analyst Signature Date

Analyst Signature Date

14415JA.CSV uploaded 1-10-97 Hea

Data Entry Comments:

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				10-Jan-97			
Worklist#: 14415				Data File: 14415JA.CSV							
		Seq	Type	Sample #		Seq#		Data File	Sample Name		Dilution
-	=>	1	CCB	S96T005469 S96T005469 S96T005469 S96T005479 S96T005479		-	1	97010671.d14	CCB ELUENT BLANK		1.00
	=>	2	CCV			2	97010671.d15	CCV STD 36N20-C		101.00	
	=>	3	BLNK-PREP				97010671.d16	S96T005469 SAM		41.00	
	=>	4	SAMPLE			3	97010671.d17	PREP BLANK		1.00	
	=>	5	DUP			7	97010671.d18	S96T005479 SAM		41.00	
	=>	6	SPK			4	97010671.d19	S96T005469 SAM		6.00	
	=>	7	SAMPLE			8	97010671.d20	S96T005479 DUP		41.00	
	=>	8	DUP			5	97010671.d21	S96T005469 DUP		6.00	
					6	97010671.d22	S96T005469 SPK		6.00		
+						+					

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

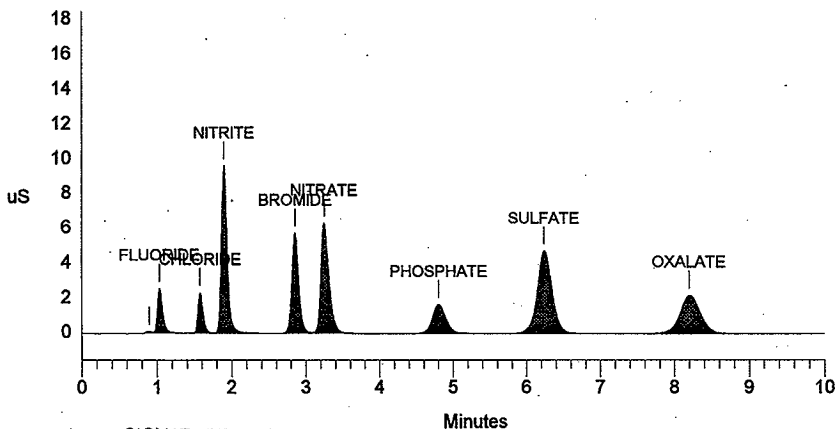
Sample Name: CCV STD 36N20-C Date: 01/07/1997 02:59:04
 Data File : C:\DX\DATA\97010671.D15
 Method : C:\DX\METHOD\ANIONS.MET
 ACI Address: 1 System: 1 Inject#: 15 Detector: CDM-1
 Analyst : *Jessie M. Delfino* Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	60	255	2	
2	1.04	FLUORIDE	60.296	2547	11647	2	-1.27
3	1.58	CHLORIDE	81.685	2329	10719	1	-0.21
4	1.90	NITRITE	549.173	9651	51338	1	-1.22
5	2.86	BROMIDE	586.029	5749	35764	2	-2.17
6	3.25	NITRATE	599.488	6342	47417	2	-3.56
7	4.80	PHOSPHATE	536.896	1682	20853	1	-4.32
8	6.24	SULFATE	645.422	4751	65785	1	-5.51
9	8.20	OXALATE	561.161	2222	41383	1	-5.46
Totals			3620.149	35333	285160		

File: 97010671.D15 Sample: CCV STD 36N20-C



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 282 TO 290.

Sample Name: CCB ELUENT BLANK

Date: 01/07/1997 02:48:20

Data File : C:\DX\DATA\97010671.D14

Method : C:\DX\METHOD\ANIONS.MET

ACI Address: 1 System: 1 Inject#: 14

Detector: CDM-1

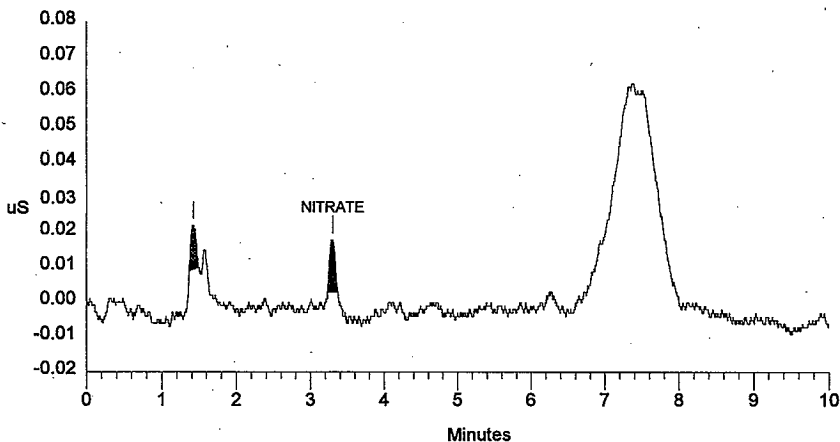
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.42		0.000	13	59	1	
2	3.30	NITRATE	0.146	15	73	1	-1.98
Totals			0.146	28	133		

File: 97010671.D14 Sample: CCB ELUENT BLANK



Sample Name: PREP BLANK

Date: 01/07/1997 03:20:55

Data File : C:\DX\DATA\97010671.D17

Method : C:\DX\METHOD\ANIONS.MET

ACI Address: 1 System: 1 Inject#: 17

Detector: CDM-1

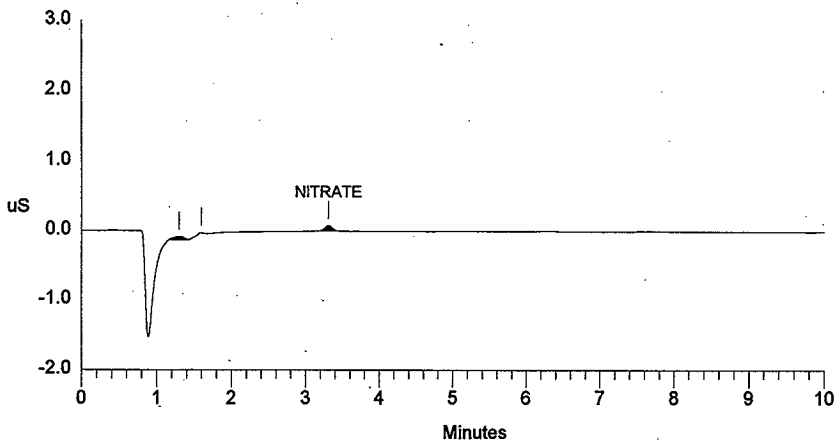
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	1	3000	5Hz	0.00	10.00		50
----------	---	---	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.30		0.000	44	429	1	
3	3.31	NITRATE	0.194	73	456	1	-1.78
Totals			0.194	117	885		

File: 97010671.D17 Sample: PREP BLANK

Sample Name: S96T005469 SAM

Date: 01/07/1997 03:10:02

Data File : C:\DX\DATA\97010671.D16

Method : C:\DX\METHOD\ANIONS.MET.

ACI Address: 1 System: 1 Inject#: 16

Detector: CDM-1

Analyst :

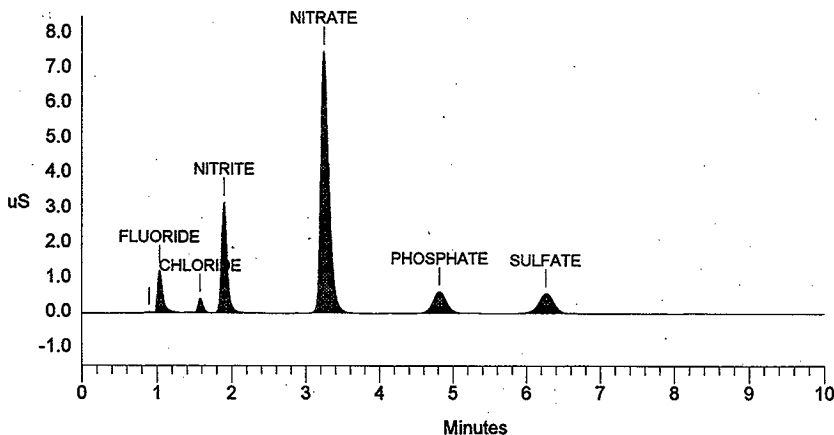
Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	41	3000	5Hz	0.00	10.00		50
----------	---	----	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	23	105	2	
2	1.04	FLUORIDE	12.672	1223	5881	2	-1.27
3	1.58	CHLORIDE	5.856	408	1811	1	-0.21
4	1.90	NITRITE	75.357	3178	16565	1	-1.22
5	3.24	NITRATE	289.649	7514	56841	1	-3.76
6	4.82	PHOSPHATE	85.149	623	7759	1	-4.05
7	6.26	SULFATE	34.878	573	7969	1	-5.10
Totals			503.561	13542	96931		

File: 97010671.D16 Sample: S96T005469 SAM2-10
DFU

Data Reprocessed On 01/09/1997 14:45:21

```

=====
Sample Name: S96T005469 SAM                      Date: 01/07/1997 04:32:19
Data File  : E:\DATA\97010671.D19
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 19
Analyst    :                      Column:
Detector: CDM-1
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           6    3000  5Hz   0.00 10.00      50
=====

```

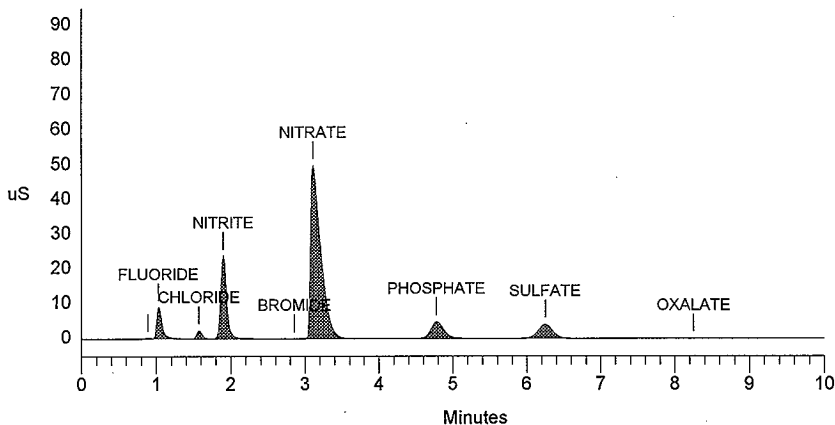
```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	124	503	2	
2	1.03	FLUORIDE	13.021	8878	44217	2	-1.90
3	1.57	CHLORIDE	5.108	2320	11297	1	-0.63
4	1.90	NITRITE	81.005	23724	130957	1	-1.22
5	2.86	BROMIDE	0.762	16	80	1	-2.17
6	3.11	NITRATE	297.187	49916	476966	1	0.00
7	4.78	PHOSPHATE	86.122	4849	59062	1	-4.85
8	6.25	SULFATE	33.219	4091	56737	1	-5.30
9	8.25	OXALATE	0.791	36	543	1	-4.84
Totals			517.215	93954	780360		

File: 97010671.D19 Sample: S96T005469 SAM



Data Reprocessed On 01/09/1997 14:46:26

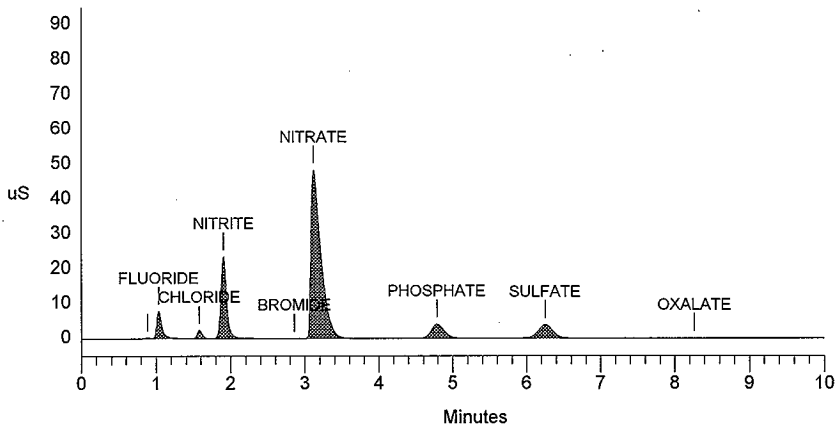
Sample Name: S96T005469 DUP	Date: 01/07/1997 04:57:26
Data File : E:\DATA\97010671.D21	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 21	Detector: CDM-1
Analyst :	Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	6	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	131	598	2	
2	1.04	FLUORIDE	11.125	7814	37523	2	-1.27
3	1.58	CHLORIDE	4.855	2362	10725	1	-0.21
4	1.90	NITRITE	76.260	23447	123037	1	-0.87
5	2.86	BROMIDE	0.746	16	63	1	-2.17
6	3.12	NITRATE	286.369	48274	455427	1	-0.11
7	4.78	PHOSPHATE	73.043	4083	49604	1	-4.71
8	6.25	SULFATE	31.578	3903	53850	1	-5.30
9	8.26	OXALATE	0.770	33	517	1	-4.69
Totals			484.747	90062	731344		

File: 97010671.D21 Sample: S96T005469 DUP



Data Reprocessed On 01/09/1997 14:47:40

```

=====
Sample Name: S96T005469 SPK                      Date: 01/07/1997 05:08:18
Data File  : E:\DATA\97010671.D22
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 22              Detector: CDM-1
Analyst    :                      Column:
=====
  
```

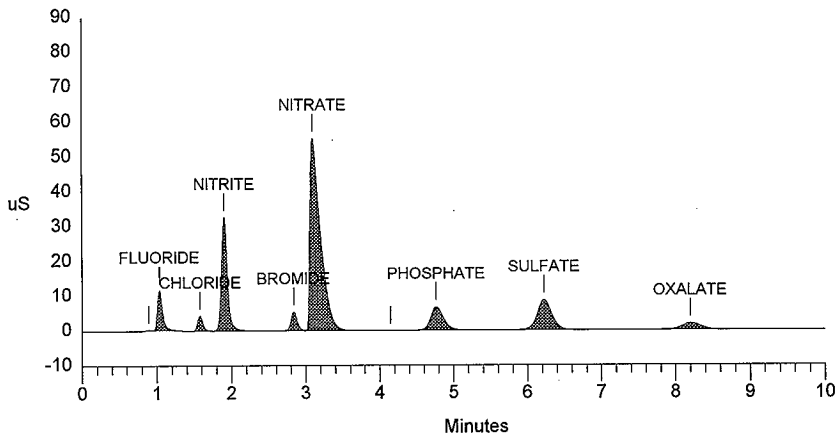
```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1           6    3000  5Hz   0.00 10.00      50
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	168	658	2	
2	1.04	FLUORIDE	15.842	11469	54331	2	-1.27
3	1.58	CHLORIDE	9.221	4300	20704	2	-0.21
4	1.90	NITRITE	108.934	32553	178069	2	-0.87
5	2.84	BROMIDE	30.268	5401	30910	2	-2.85
6	3.10	NITRATE	327.892	55120	540953	2	-0.11
7	4.15		0.000	17	129	1	
8	4.76	PHOSPHATE	115.851	6750	81204	1	-5.11
9	6.22	SULFATE	67.566	8663	118416	1	-5.71
10	8.20	OXALATE	28.429	1901	35157	1	-5.46
Totals			704.002	126343	1060530		

File: 97010671.D22 Sample: S96T005469 SPK



```

=====
Sample Name: S96T005479 SAM                      Date: 01/07/1997 04:20:39
Data File  : C:\DX\DATA\97010671.D18
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 18              Detector: CDM-1
Analyst    :                                     Column:
=====

```

```

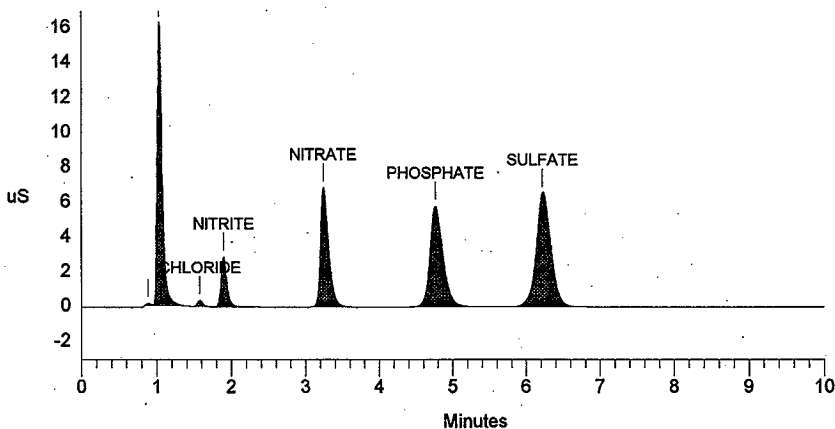
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          41    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	82	308	1	
2	1.04	FLUORIDE	147.485	16203	75527	1	-1.27
3	1.58	CHLORIDE	4.914	335	1507	1	-0.21
4	1.90	NITRITE	69.807	2857	15266	1	-1.22
5	3.24	NITRATE	265.534	6867	51924	1	-3.76
6	4.77	PHOSPHATE	699.947	5823	71095	1	-4.98
7	6.22	SULFATE	357.921	6563	90843	1	-5.71
Totals			1545.609	38730	306471		

File: 97010671.D18 Sample: S96T005479 SAM



Sample Name: S96T005479 DUP

Date: 01/07/1997 04:45:43

Data File : C:\DX\DATA\97010671.D20

Method : C:\DX\METHOD\ANIONS.MET.

ACI Address: 1 System: 1 Inject#: 20

Detector: CDM-1

Analyst : Column:

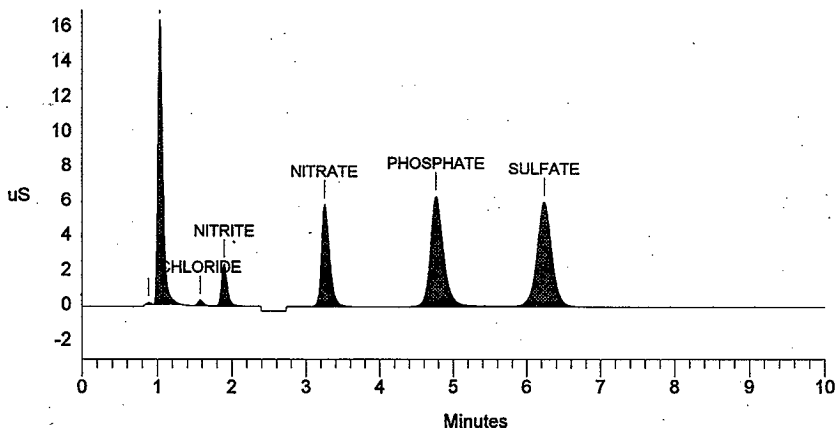
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	41	3000	5Hz	0.00	10.00		50
----------	---	----	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	90	363	2	
2	1.04	FLUORIDE	147.012	16349	75267	2	-1.27
3	1.58	CHLORIDE	4.461	311	1361	1	-0.21
4	1.90	NITRITE	58.865	2413	12707	1	-1.22
5	3.25	NITRATE	224.847	5839	43667	1	-3.56
6	4.76	PHOSPHATE	763.884	6326	78123	2	-5.11
7	6.24	SULFATE	328.489	6016	83112	2	-5.51
Totals			1527.559	37343	294599		

File: 97010671.D20 Sample: S96T005479 DUP



LABCORE Completed Worklist Report for Worklist# 14416

Analyst: rag Instrument: IC01 Book# 36N20C

Method: LA533105 Rev/Mod 0-1

Worklist Comment: ic-01 for b-108

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	01C-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	01C-QC	CL	QC	1	<1.70e-2	ug/mL
1 CCB	0	0	01C-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	01C-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	01C-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	0	01C-QC	PO4	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	01C-QC	S04	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	01C-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	01C-QC	F	QC	5.90e01	6.53e+01	110.678 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	7.51e+01	95.063 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.41e02	5.19e+02	95.933 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	5.81e+02	98.642 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	5.80e+02	97.643 % Recovery
2 CCV	0	0	01C-QC	PO4	QC	5.44e02	5.13e+02	94.301 % Recovery
2 CCV	0	0	01C-QC	S04	QC	6.31e02	6.25e+02	99.049 % Recovery
2 CCV	0	0	01C-QC	OXALATE2	QC	5.25e02	5.47e+02	104.190 % Recovery
3 BLNK-PREP	0	0	01C-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	01C-01	CL-02	SOLID	1	2.70e-02	0.027 ug/g
3 BLNK-PREP	0	0	01C-01	NO2-02	SOLID	1	<1.08e-1	ug/g
3 BLNK-PREP	0	0	01C-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	01C-01	NO3-02	SOLID	1	<1.39e-1	ug/g
3 BLNK-PREP	0	0	01C-01	PO4-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	01C-01	S04-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	01C-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S96T005480	0 W	01C-01	F-02	SOLID	N/A	3.899e+04	86.140 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	CL-02	SOLID	N/A	4.574e+02	122.100 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	NO2-02	SOLID	N/A	7.127e+03	775.300 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	BR-02	SOLID	N/A	< 8.974e+02	897.500 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	NO3-02	SOLID	N/A	3.835e+04	997.900 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	PO4-02	SOLID	N/A	2.141e+05	861.400 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	S04-02	SOLID	N/A	7.210e+04	990.600 ug/g
4 SAMPLE	S96T005480	0 W	01C-01	OXALATE2	SOLID	N/A	< 7.538e+02	754.000 ug/g
5 DUP	S96T005480	0 W	01C-01	F-02	SOLID	3.90e+04	3.53e+04	9.960 RPD
5 DUP	S96T005480	0 W	01C-01	CL-02	SOLID	4.57e+02	5.28e+02	14.416 RPD
5 DUP	S96T005480	0 W	01C-01	NO2-02	SOLID	7.11e+03	6.21e+03	13.793 RPD
5 DUP	S96T005480	0 W	01C-01	BR-02	SOLID	<8.97e2	<9.23e2	RPD
5 DUP	S96T005480	0 W	01C-01	NO3-02	SOLID	3.84e+04	3.39e+04	12.448 RPD
5 DUP	S96T005480	0 W	01C-01	PO4-02	SOLID	2.14e+05	1.87e+05	13.466 RPD
5 DUP	S96T005480	0 W	01C-01	S04-02	SOLID	7.21e+04	6.57e+04	9.289 RPD
5 DUP	S96T005480	0 W	01C-01	OXALATE2	SOLID	<7.54e2	<7.75e2	RPD
6 SPR	S96T005480	0 W	01C-01	F-02	SOLID	5.90e01	-2.21e1	-37.458 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 14416

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S96T005480 0 W @IC-01	CL-02	SOLID	7.90e01	7.81e+01	98.861 % Recovery	
6 SPK	S96T005480 0 W @IC-01	NO2-02	SOLID	5.41e02	5.14e+02	95.009 % Recovery	
6 SPK	S96T005480 0 W @IC-01	BR-02	SOLID	5.89e02	5.91e+02	100.340 % Recovery	
6 SPK	S96T005480 0 W @IC-01	NO3-02	SOLID	5.94e02	5.62e+02	94.613 % Recovery	
6 SPK	S96T005480 0 W @IC-01	PO4-02	SOLID	5.44e02	1.57e+02	28.860 % Recovery	
6 SPK	S96T005480 0 W @IC-01	SO4-02	SOLID	6.31e02	5.53e+02	87.639 % Recovery	
6 SPK	S96T005480 0 W @IC-01	OXALATE2	SOLID	5.25e02	5.74e+02	109.333 % Recovery	
7 SAMPLE	S96T005488 0 W @IC-01	F-02	SOLID	N/A	1.920e+04	235.700 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	CL-02	SOLID	N/A	8.816e+03	333.900 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	NO2-02	SOLID	N/A	5.332e+03	2121.000 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	BR-02	SOLID	N/A	2.455e+03	2455.000 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	NO3-02	SOLID	N/A	1.935e+04	2730.000 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	PO4-02	SOLID	N/A	1.302e+05	2357.000 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	SO4-02	SOLID	N/A	2.246e+04	2711.000 ug/g	
7 SAMPLE	S96T005488 0 W @IC-01	OXALATE2	SOLID	N/A	2.062e+03	2062.000 ug/g	
8 DUP	S96T005488 0 W @IC-01	F-02	SOLID	1.92e+04	4.556e+04	81.481 RPD	
8 DUP	S96T005488 0 W @IC-01	CL-02	SOLID	8.84e+03	1.14e+03	154.309 RPD	
8 DUP	S96T005488 0 W @IC-01	NO2-02	SOLID	5.33e+03	1.05e+04	65.319 RPD	
8 DUP	S96T005488 0 W @IC-01	BR-02	SOLID	<2.45e3	<2.44e3	RPD	
8 DUP	S96T005488 0 W @IC-01	NO3-02	SOLID	1.94e+04	4.05e+04	70.451 RPD	
8 DUP	S96T005488 0 W @IC-01	PO4-02	SOLID	1.30e+05	7.64e+04	51.938 RPD	
8 DUP	S96T005488 0 W @IC-01	SO4-02	SOLID	2.25e+04	1.65e+05	152.000 RPD	
8 DUP	S96T005488 0 W @IC-01	OXALATE2	SOLID	<2.06e3	<2.05e3	RPD	
9 SPK	S96T005488 0 W @IC-01	F-02	SOLID	5.90e01	1.07e+02	181.356 % Recovery	
9 SPK	S96T005488 0 W @IC-01	CL-02	SOLID	7.90e01	3.47e+01	43.924 % Recovery	
9 SPK	S96T005488 0 W @IC-01	NO2-02	SOLID	5.41e02	5.23e+02	96.673 % Recovery	
9 SPK	S96T005488 0 W @IC-01	BR-02	SOLID	5.89e02	6.01e+02	102.037 % Recovery	
9 SPK	S96T005488 0 W @IC-01	NO3-02	SOLID	5.94e02	6.11e+02	102.862 % Recovery	
9 SPK	S96T005488 0 W @IC-01	PO4-02	SOLID	5.44e02	8.20e+02	150.735 % Recovery	
9 SPK	S96T005488 0 W @IC-01	SO4-02	SOLID	6.31e02	6.46e+02	102.377 % Recovery	
9 SPK	S96T005488 0 W @IC-01	OXALATE2	SOLID	5.25e02	5.65e+02	107.613 % Recovery	

Final page for worklist# 14416

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

H. Anastas
Reviewer Signature _____ Date *1-30-97*

*S96T005488 should be repressed
and reran.
Validated 1-30-97 Hea*

LABCORE Data Entry Template for Worklist# 14416

Analyst: Rae Instrument: IC0 IC01 Book# 36N20-C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: ic-01 for b-108

S Type	Sample#	R A	Test	Matrix	Group#	Project
✓ 1 CCB			@IC-QC	QC		
✓ 2 CCV			@IC-QC	QC		
✓ 3 BLNK-PREP			@IC-01	SOLID		
✓ 4 SAMPLE	S96T005480 0 W	@IC-01	SOLID		96001380 B-108	
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
✓ 5 DUP	S96T005480 0 W	@IC-01	SOLID			
✓ 6 SPK	S96T005480 0 W	@IC-01	SOLID			
✓ 7 SAMPLE	S96T005488 0 W	@IC-01	SOLID		96001380 B-108	
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
✓ 8 DUP	S96T005488 0 W	@IC-01	SOLID			
✓ 9 SPK	S96T005488 0 W	@IC-01	SOLID			

Final page for worklist # 14416

Rae Ann Green 1-7-97
Analyst Signature Date

Analyst Signature Date

S96T005488 should be repressed and
reanalyzed. Hla 1-29-97

Data Entry Comments: S96T005480
Run at dilution factors 41 for Bromide
101 for all others

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

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

29-Jan-97

Worklist#: 14416

Data File: 14416JA.CSV

		Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution
-	=v	1	CCB	S96T005480 S96T005480 S96T005488 S96T005488 S96T005488 S96T005488	-	1 97010661.d01	CCB	1.00
	=v	2	CCV		2 97010671.d02	CCV 36N20-C	101.00	
	=v	3	BLNK-PREP		3 97010671.d03	PREP-BLANK	1.00	
	=v	4	SAMPLE		4 97010671.d04	S96T005480	41.00	
	=v	5	DUP		5 97010671.d16	S96T005480 DUP	41.00	
	=v	6	SPK		6 97010671.d10	S96T005480 SPIKE	41.00	
	=v	7	SAMPLE		97010671.d07	S96T005480	101.00	
	=v	8	DUP		97010671.d17	S96T005480 DUP	101.00	
	=v	9	SPK		97010671.d09	S96T005480 SPIKE	101.00	
					97010671.d11	S96T005488	41.00	
					97010671.d12	S96T005488 DUP	41.00	
					7 97010671.d13	S96T005488	101.00	
					8 97010671.d14	S96T005488 DUP	101.00	
					9 97010671.d15	S96T005488 SPIKE	101.00	
+					+			

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

=====

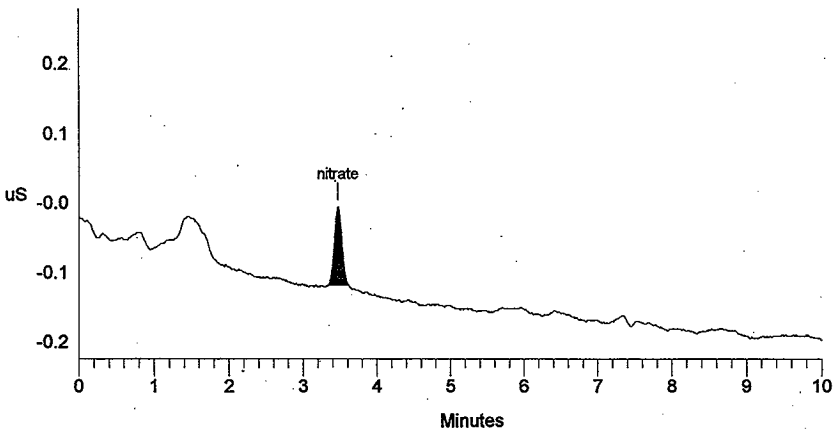
Sample Name: CCB	Date: 01/07/1997 07:01:13
Data File : C:\DX\DATA\97010661.D01	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 1	Detector: CDM-1
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column

=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.47	nitrate	0.094	112	790	1	-3.17
Totals			0.094	112	790		

File: 97010661.D01 Sample: CCB

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES *295* TO *302*

Data Reprocessed On 01/17/1997 08:07:39

```

=====
Sample Name: CCV 36N20-C                      Date: 01/07/1997 10:38:46
Data File  : F:\DATA\97010671.D02
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2           Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume  Dilution Points Rate  Start  Stop Area Reject
-----
External           1           101    3000  5Hz    0.00  10.00      50
=====

```

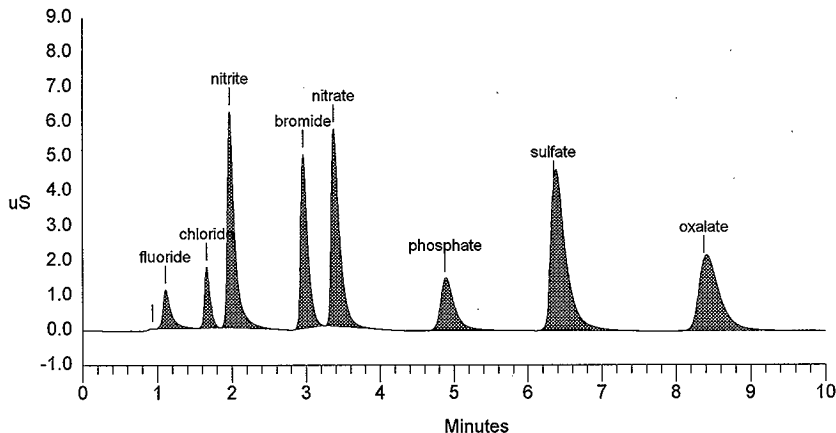
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***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.11	fluoride	65.338	1120	8715	2	2.47
3	1.66	chloride	75.138	1749	9442	1	-0.40
4	1.97	nitrite	519.020	6228	43519	1	-2.95
5	2.96	bromide	580.868	5022	33934	1	0.00
6	3.37	nitrate	579.942	5690	45669	1	-5.77
7	4.88	phosphate	512.928	1502	20431	1	-1.61
8	6.35	sulfate	625.379	4198	66365	1	-4.03
9	8.37	oxalate	547.322	2042	41880	1	-3.68
Totals			3505.935	27551	269956		

File: 97010671.D02 Sample: CCV 36N20-C



Sample Name: PREP-BLANK

Date: 01/07/1997 11:01:03

Data File : C:\DX\DATA\97010671.D03

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 3

Detector: CDM-1

Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

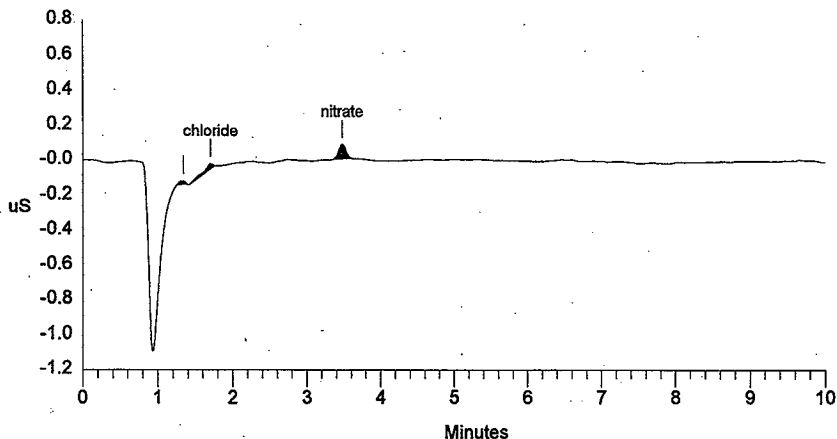
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	1	3000	5Hz	0.00	10.00	50	
----------	---	---	------	-----	------	-------	----	--

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.34		0.000	21	117	1	
2	1.70	chloride	0.027	31	283	1	2.00
3	3.47	nitrate	0.065	83	566	1	-2.98
Totals			0.092	135	966		

File: 97010671.D03 Sample: PREP-BLANK



use for Bromide

HNF-SD-WM-DP-219, REV. 0

Sample Name: S96T005480 Date: 01/07/1997 13:39:38
Data File : C:\DX\DATA\97010671.D04
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 4 Detector: CDM-1
Analyst : Rae Ann Green Column: AG4A/AS4A anion column

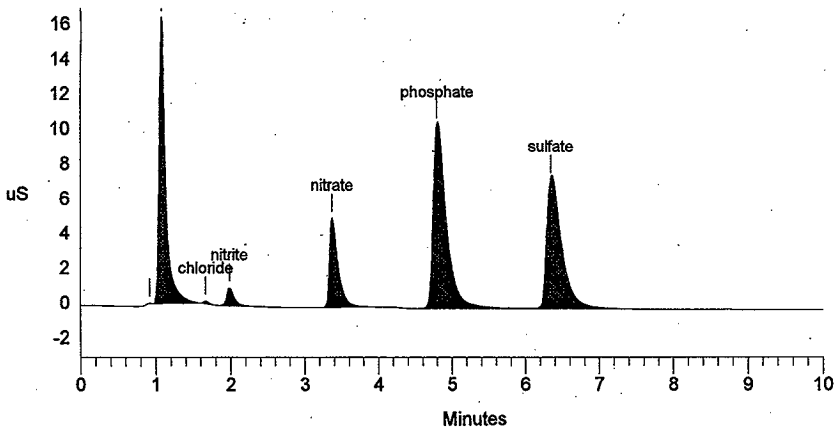
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 41 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.92		0.000	36	98	1	
2	1.08	fluoride	222.690	16434	99252	1	-0.00
3	1.67	chloride	2.612	153	751	1	0.00
4	1.99	nitrite	40.700	1028	7365	1	-2.30
5	3.37	nitrate	218.992	5144	42445	1	-5.77
6	4.80	phosphate	1222.493	10547	133310	1	-3.23
7	6.35	sulfate	411.787	7427	108356	1	-4.03
Totals			2119.274	40769	391577		

File: 97010671.D04 Sample: S96T005480



Use For Bromide

Sample Name: S96T005480 DUP Date: 01/07/1997 17:20:46
 Data File : C:\DX\DATA\97010671.D16 HNF-SD-WM-DP-219, REV. 0
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 16 Detector: CDM-1
 Analyst : Rae Ann Green Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject

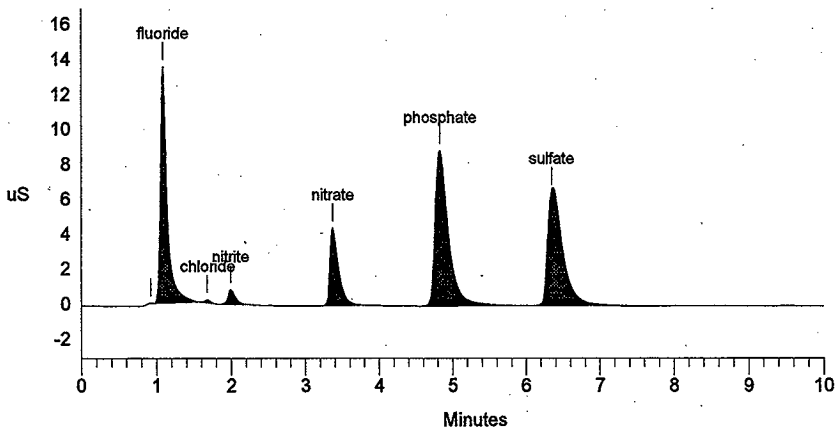
External 1 41 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	25	68	1	
2	1.09	fluoride	195.945	13539	83307	1	0.62
3	1.68	chloride	2.934	174	851	1	0.80
4	1.99	nitrite	34.464	840	6051	1	-1.97
5	3.37	nitrate	188.415	4454	36461	1	-5.77
6	4.83	phosphate	1039.330	8907	111196	1	-2.69
7	6.35	sulfate	364.822	6528	95760	1	-4.03

Totals 1825.911 34468 333694

File: 97010671.D16 Sample: S96T005480 DUP



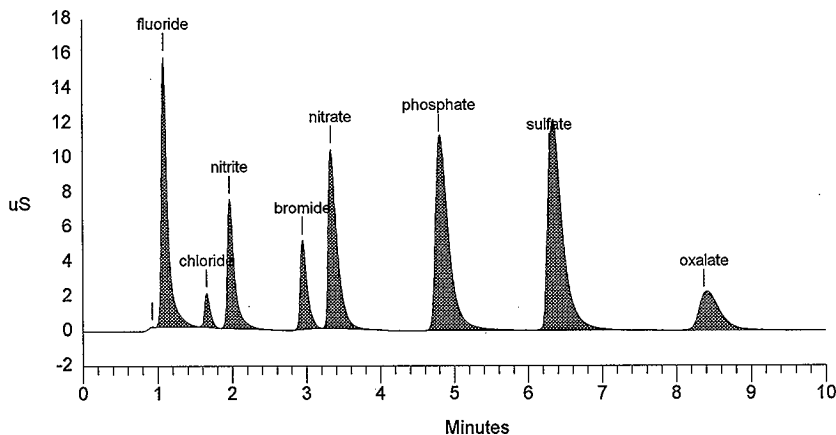
Sample Name: S96T005480 SPIKE	Date: 01/07/1997 14:42:12
Data File : F:\DATA\97010671.D10	HNF-SD-WM-DP-219, REV. 0
Method : C:\DX\METHOD\KIT.MET	
ACT Address: 1 System: 1 Inject#: 10	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	38	100	1	
2	1.09	fluoride	213.845	15556	93754	1	0.62
3	1.65	chloride	33.852	1940	10500	1	-0.80
4	1.97	nitrite	246.103	7434	51134	1	-3.28
5	2.95	bromide	236.236	5112	34000	1	-0.11
6	3.33	nitrate	443.844	10317	87132	1	-6.89
7	4.80	phosphate	1285.451	11118	141130	1	-3.23
8	6.29	sulfate	633.044	9961	168998	1	-4.84
9	8.37	oxalate	229.655	2137	43319	1	-3.68
Totals			3322.031	63614	630066		

File: 97010671.D10 Sample: S96T005480 SPIKE



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Sample Name: S96T005488                      Date: 01/07/1997 16:45:25
Data File  : C:\DX\DATA\97010671.D13
Method     : C:\DX\METHOD\KIT.MET           HNF-SD-WM-DP-219, REV. 0
ACI Address: 1 System: 1 Inject#: 13         Detector: CDM-1
Analyst    : Rae Ann Green                Column: AG4A/AS4A anion column
=====

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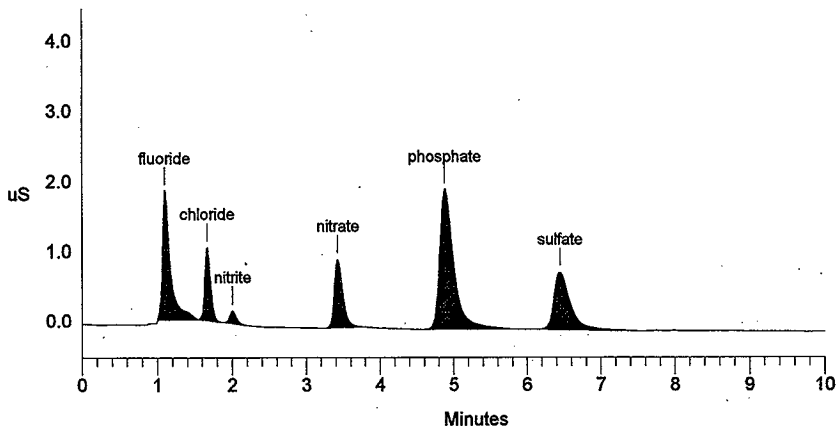
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      101      3000 5Hz      0.00 10.00      50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	fluoride	98.722	1836	13683	1	1.85
2	1.67	chloride	45.433	1046	5660	1	0.00
3	2.01	nitrite	27.418	181	1142	1	-1.31
4	3.43	nitrate	99.480	980	7791	1	-4.28
5	4.88	phosphate	669.580	2006	26914	1	-1.61
6	6.45	sulfate	115.466	822	12814	1	-2.42
Totals			1056.099	6871	68003		

File: 97010671.D13 Sample: S96T005488



Sample Name: S96T005488 DUP Date: 01/07/1997 16:58:47
 Data File : C:\DX\DATA\97010671.D14
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-219, REV. 0
 ACI Address: 1 System: 1 Inject#: 14 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject

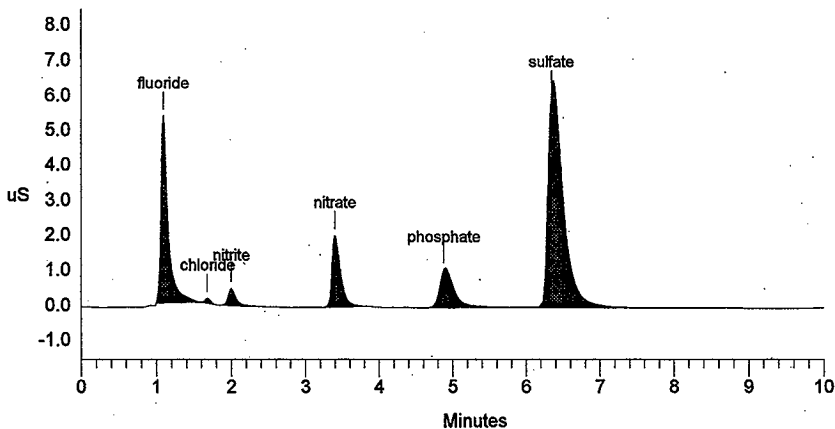
External 1 101 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	235.963	5344	35511	1	1.23
2	1.68	chloride	5.888	137	683	1	0.80
3	2.00	nitrite	54.485	480	3452	1	-1.64
4	3.40	nitrate	209.734	2034	16408	1	-5.03
5	4.88	phosphate	395.296	1077	15606	1	-1.61
6	6.35	sulfate	856.573	6088	91196	1	-4.03

Totals 1757.939 15160 162855

File: 97010671.D14 Sample: S96T005488 DUP



Data Reprocessed On 01/17/1997 08:11:38

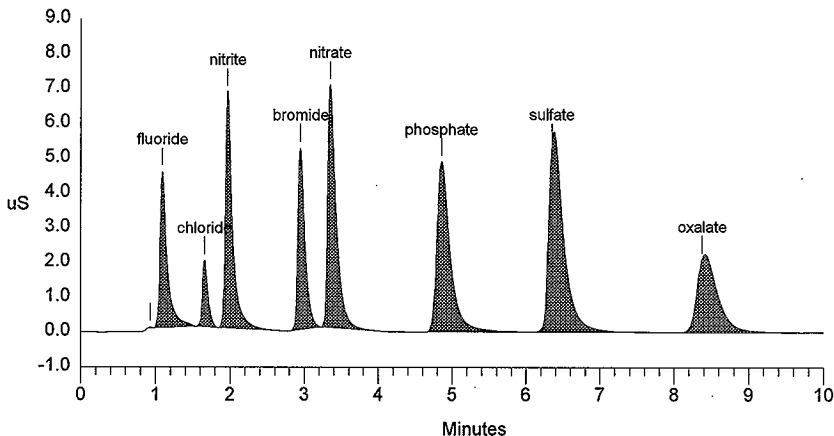
Sample Name: S96T005488 SPIKE	Date: 01/07/1997 17:09:41
Data File : F:\DATA\97010671.D15	HNF-SD-WM-DP-219, REV. 0
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 15	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	23	65	1	
2	1.09	fluoride	205.789	4479	30495	1	1.23
3	1.65	chloride	80.100	1890	10078	1	-0.80
4	1.97	nitrite	550.059	6775	46225	1	-3.28
5	2.95	bromide	600.810	5221	35144	1	-0.11
6	3.35	nitrate	710.568	6968	56119	1	-6.52
7	4.85	phosphate	1489.548	4890	61998	1	-2.15
8	6.35	sulfate	761.707	5302	80964	1	-4.03
9	8.37	oxalate	565.164	2101	43275	1	-3.68
Totals			4963.745	37650	364362		

File: 97010671.D15 Sample: S96T005488 SPIKE



HNF-SD-WM-DP-219, REV. 0

LABCORE Completed Worklist Report for Worklist# 14654

Analyst: kgh

Instrument: IC01

Book# 36A20C

Method: WA-533-105 Rev/Mod D-1

Worklist Comment: @IC-01 FOR B-108

RTS!

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	@IC-QC CL	QC	1	2.00e-02	0.020	ug/mL
1 CCB	0	@IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	@IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	@IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	@IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC S04	QC	1	<1.38e-1		ug/mL
1 CCB	0	@IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	@IC-QC F	QC	5.90e01	6.06e+01	102.712 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.56e+01	95.696 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.41e02	5.16e+02	95.379 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.86e+02	99.491 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	5.83e+02	98.148 % Recovery	
2 CCV	0	@IC-QC P04	QC	5.44e02	5.21e+02	95.772 % Recovery	
2 CCV	0	@IC-QC S04	QC	6.31e02	6.36e+02	100.792 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.25e02	5.57e+02	106.095 % Recovery	
3 SAMPLE	S96T005523 0	@IC-01 F-02	LIQUID	N/A	5.943e+02	122.400	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 CL-02	LIQUID	N/A	4.786e+03	173.400	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 NO2-02	LIQUID	N/A	5.431e+04	1102.000	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 BR-02	LIQUID	N/A	< 1.275e+03	1275.000	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 NO3-02	LIQUID	N/A	3.753e+05	1418.000	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 P04-02	LIQUID	N/A	2.740e+03	1224.000	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 S04-02	LIQUID	N/A	1.377e+04	1408.000	ug/mL
3 SAMPLE	S96T005523 0	@IC-01 OXALATE2	LIQUID	N/A	< 1.071e+03	1071.000	ug/mL
4 DUP	S96T005523 0	@IC-01 F-02	LIQUID	5.94e+02	<1.22e2		RPD
4 DUP	S96T005523 0	@IC-01 CL-02	LIQUID	4.79e+03	4.38e+03	9.942	RPD
4 DUP	S96T005523 0	@IC-01 NO2-02	LIQUID	5.43e+04	5.31e+04	2.235	RPD
4 DUP	S96T005523 0	@IC-01 BR-02	LIQUID	<1.28e3	<1.28e3		RPD
4 DUP	S96T005523 0	@IC-01 NO3-02	LIQUID	3.75e+05	3.78e+05	0.797	RPD
4 DUP	S96T005523 0	@IC-01 P04-02	LIQUID	2.74e+03	3.22e+03	16.107	RPD
4 DUP	S96T005523 0	@IC-01 S04-02	LIQUID	1.38e+04	1.34e+04	2.941	RPD
4 DUP	S96T005523 0	@IC-01 OXALATE2	LIQUID	<1.07e3	< 1.07e3		RPD
5 SPK	S96T005523 0	@IC-01 F-02	LIQUID	5.90e01	4.60e+01	77.966 % Recovery	
5 SPK	S96T005523 0	@IC-01 CL-02	LIQUID	7.90e01	6.90e+01	87.342 % Recovery	
5 SPK	S96T005523 0	@IC-01 NO2-02	LIQUID	5.41e02	5.05e+02	93.346 % Recovery	
5 SPK	S96T005523 0	@IC-01 BR-02	LIQUID	5.89e02	5.14e+02	87.267 % Recovery	
5 SPK	S96T005523 0	@IC-01 NO3-02	LIQUID	5.94e02	4.90e+02	82.492 % Recovery	
5 SPK	S96T005523 0	@IC-01 P04-02	LIQUID	5.44e02	5.05e+02	92.831 % Recovery	
5 SPK	S96T005523 0	@IC-01 S04-02	LIQUID	6.31e02	6.27e+02	99.366 % Recovery	
5 SPK	S96T005523 0	@IC-01 OXALATE2	LIQUID	5.25e02	5.41e+02	103.048 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 14654

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
-----	------	---------	---	---	------	--------	--------	-------	-------------	------

Final page for worklist# 14654

Analyst Signature Date

Analyst Signature Date

John L. Lyle 2/4/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 14654

Analyst: KPH Instrument: IC0 ECO1 Book# 36120-C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: @IC-01 FOR B-108

RTS!

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S96T005523 0	@IC-01	LIQUID		96001379 B-108	
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S96T005523 0	@IC-01	LIQUID			
5 SPK	S96T005523 0	@IC-01	LIQUID			

Final page for worklist # 14654

Devin Shapiro 1-7-97
Analyst Signature Date

Stu Pter 1-29-97
Analyst Signature Date
uploaded 1-29-97 when?

14654 ja.csv

Validated 2/4/97 gm fuge

Data Entry Comments:

A-0010-IC				DATA FILE/WORKLIST RESOLUTION				29-Jan-97			
Worklist#: 14654				Data File: 14654JA.CSV							
		Seq	Type	Sample #		Seq#		Data File	Sample Name		Dilution
-	=>	1	CCB	S96T005523 S96T005523 S96T005523		-	1	97010681.d01	BLANK		1.00
	=>	2	CCV				2	97010681.d02	36N20-C STD		101.00
	=>	3	SAMPLE				3	97010681.d05	S96T005523SAM		10201.00
	=>	4	DUP				4	97010681.d06	S96T005523DUP		10201.00
	=>	5	SPK				5	97010681.d07	S96T005523SPK		10201.00
+						+					

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

=====

Sample Name: BLANK	Date: 01/07/1997 22:33:09
Data File : C:\DX\DATA\97010681.D01	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 1	Detector: CDM-1
Analyst <i>J. Martinez</i>	Column: AG4A/AS4A anion column

=====

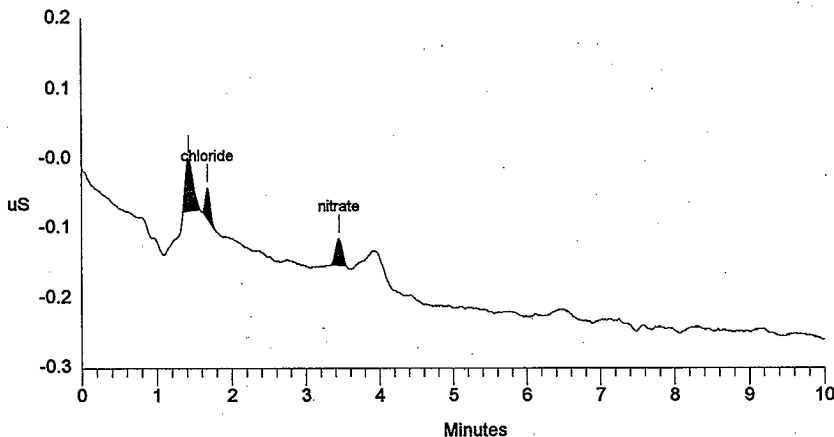
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.43		0.000	75	537	1	
2	1.68	chloride	0.020	44	194	1	0.80
3	3.45	nitrate	0.023	38	231	1	-3.54
Totals			0.042	156	962		

File: 97010681.D01 Sample: BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 308 TO 312

Data Reprocessed On 01/17/1997 08:00:23

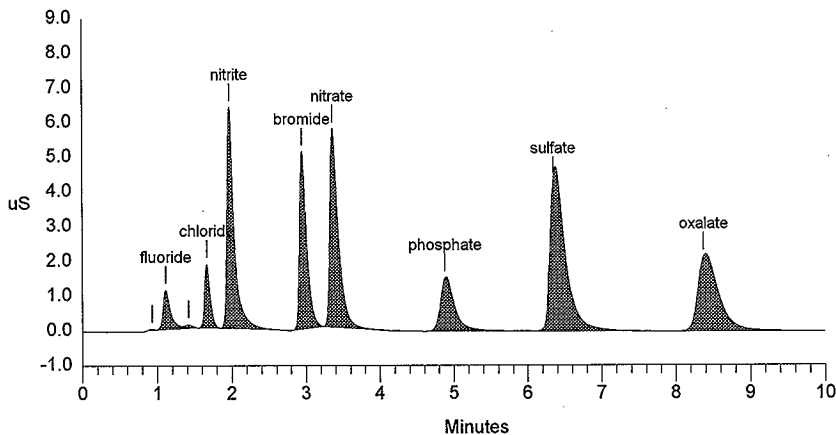
Sample Name: 36N20-C STD	Date: 01/07/1997 22:44:48
Data File : F:\DATA\97010681.D02	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 2	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	23	89	1	
2	1.11	fluoride	60.583	1122	8017	3	3.09
3	1.42		0.000	81	576	4	
4	1.67	chloride	75.637	1827	9506	1	0.00
5	1.97	nitrite	516.497	6366	43299	1	-2.95
6	2.95	bromide	585.679	5098	34226	1	-0.11
7	3.36	nitrate	582.950	5705	45909	1	-6.15
8	4.88	phosphate	520.973	1522	20762	1	-1.61
9	6.35	sulfate	636.254	4321	67525	1	-4.03
10	8.37	oxalate	557.451	2140	42672	1	-3.68
Totals			3536.025	28205	272582		

File: 97010681.D02 Sample: 36N20-C STD



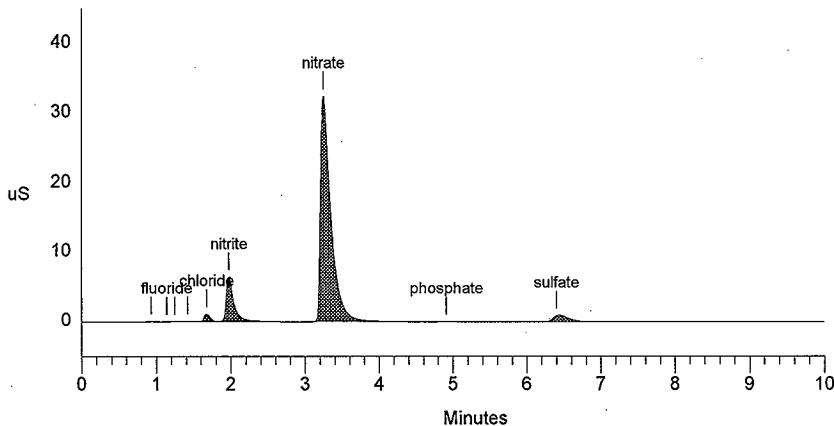
Data Reprocessed On 01/17/1997 08:01:47

Sample Name: S96T005523SAM	Date: 01/07/1997 23:28:37
Data File : F:\DATA\97010681.D05	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 5	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	10201	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	92	636	1	
2	1.14	fluoride	594.328	32	147	2	5.56
3	1.25		0.000	31	152	2	
4	1.42		0.000	69	566	2	
5	1.67	chloride	4785.800	1067	5907	1	0.40
6	1.97	nitrite	54313.797	6376	45152	1	-2.95
7	3.25	nitrate	375293.480	32469	318235	1	-0.10
8	4.91	phosphate	2739.602	62	734	1	-1.08
9	6.40	sulfate	13774.903	885	14980	1	-3.23
Totals			451501.910	41083	386510		

File: 97010681.D05 Sample: S96T005523SAM

Data Reprocessed On 01/17/1997 08:03:26

```

=====
Sample Name: S96T005523DUP          Date: 01/07/1997 23:43:47
Data File  : F:\DATA\97010681.D06
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 6   Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume  Dilution Points Rate  Start  Stop Area Reject
-----
External           1          10201   3000  5Hz   0.00  10.00        50
=====

```

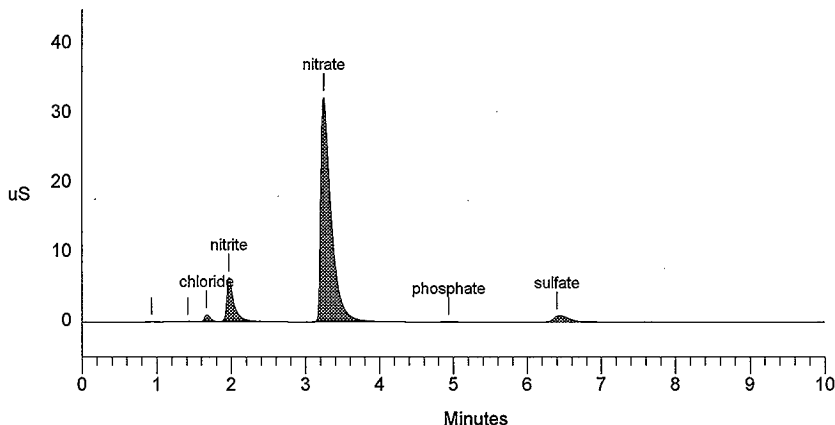
```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	90	634	1	
2	1.41		0.000	62	648	1	
3	1.67	chloride	4380.630	1000	5399	1	0.00
4	1.97	nitrite	53093.084	6284	44099	1	-3.28
5	3.25	nitrate	378222.060	32262	321007	1	-0.10
6	4.93	phosphate	3215.735	73	922	1	-0.54
7	6.40	sulfate	13426.554	868	14623	1	-3.23
Totals			452338.064	40638	387331		

File: 97010681.D06 Sample: S96T005523DUP



Data Reprocessed On 01/17/1997 08:04:48

```

=====
Sample Name: S96T005523SPK                      Date: 01/07/1997 23:55:38
Data File  : F:\DATA\97010681.D07
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 7              Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume  Dilution Points Rate  Start  Stop Area Reject
=====
External           1          10201    3000  5Hz    0.00  10.00        50
=====

```

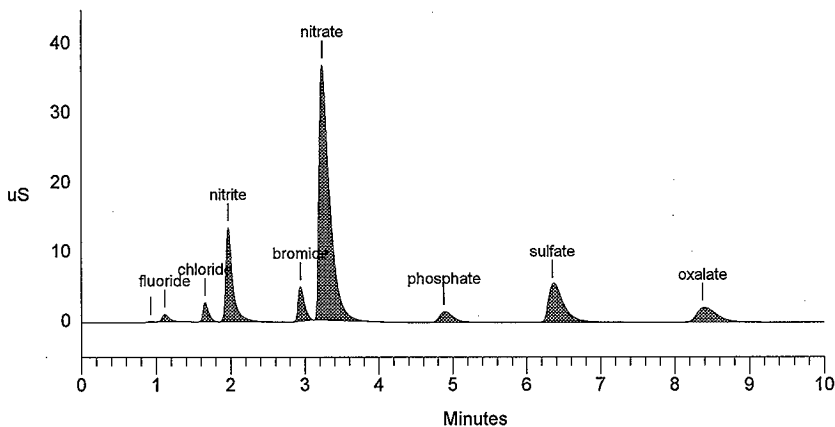
```

***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	61	232	1	
2	1.11	fluoride	5242.048	1070	6749	1	3.09
3	1.65	chloride	11753.259	2780	14757	1	-0.80
4	1.97	nitrite	105318.497	13547	89687	1	-3.28
5	2.94	bromide	51919.282	4988	29894	1	0.00
6	3.23	nitrate	424813.114	36768	365891	1	0.10
7	4.88	phosphate	53709.175	1562	21207	1	-1.61
8	6.35	sulfate	77136.724	5453	81181	1	-4.03
9	8.37	oxalate	54677.360	2095	41415	1	-3.68
Totals			784569.458	68323	651013		

File: 97010681.D07 Sample: S96T005523SPK



LABCORE Completed Worklist Report for Worklist# 14853

Analyst: kgh

Instrument: IC01

Book# 36002

Method: 6A-533-105 Rev/Mod D-1

Worklist Comment: B-108 IC. RCJ

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	0	01C-QC	F	QC	1	<1.20e-2	ug/mL
1 CCB	0	0	01C-QC	CL	QC	1	3.00e-02	0.030 ug/mL
1 CCB	0	0	01C-QC	NO2	QC	1	<1.08e-1	ug/mL
1 CCB	0	0	01C-QC	BR	QC	1	<1.25e-1	ug/mL
1 CCB	0	0	01C-QC	NO3	QC	1	<1.39e-1	ug/mL
1 CCB	0	0	01C-QC	P04	QC	1	<1.20e-1	ug/mL
1 CCB	0	0	01C-QC	S04	QC	1	<1.38e-1	ug/mL
1 CCB	0	0	01C-QC	OXALATE2	QC	1	<1.05e-1	ug/mL
2 CCV	0	0	01C-QC	F	QC	5.90e01	6.10e+01	103.390 % Recovery
2 CCV	0	0	01C-QC	CL	QC	7.90e01	7.69e+01	97.342 % Recovery
2 CCV	0	0	01C-QC	NO2	QC	5.41e02	5.21e+02	96.303 % Recovery
2 CCV	0	0	01C-QC	BR	QC	5.89e02	5.91e+02	100.340 % Recovery
2 CCV	0	0	01C-QC	NO3	QC	5.94e02	5.82e+02	97.980 % Recovery
2 CCV	0	0	01C-QC	P04	QC	5.44e02	5.18e+02	95.221 % Recovery
2 CCV	0	0	01C-QC	S04	QC	6.31e02	6.34e+02	100.475 % Recovery
2 CCV	0	0	01C-QC	OXALATE2	QC	5.25e02	5.60e+02	106.667 % Recovery
3 BLNK-PREP	0	0	01C-01	F-02	SOLID	1	<1.20e-2	ug/g
3 BLNK-PREP	0	0	01C-01	CL-02	SOLID	1	4.60e-02	0.046 ug/g
3 BLNK-PREP	0	0	01C-01	NO2-02	SOLID	1	<1.08e-1	ug/g
3 BLNK-PREP	0	0	01C-01	BR-02	SOLID	1	<1.25e-1	ug/g
3 BLNK-PREP	0	0	01C-01	NO3-02	SOLID	1	<1.39e-1	ug/g
3 BLNK-PREP	0	0	01C-01	P04-02	SOLID	1	<1.20e-1	ug/g
3 BLNK-PREP	0	0	01C-01	S04-02	SOLID	1	<1.38e-1	ug/g
3 BLNK-PREP	0	0	01C-01	OXALATE2	SOLID	1	<1.05e-1	ug/g
4 SAMPLE	S96T005514	0 W	01C-01	F-02	SOLID	N/A	3.789e+04	231.100 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	CL-02	SOLID	N/A	1.785e+03	327.400 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	NO2-02	SOLID	N/A	2.229e+04	2080.000 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	NO3-02	SOLID	N/A	1.512e+05	2678.000 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	P04-02	SOLID	N/A	4.087e+04	2311.000 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	S04-02	SOLID	N/A	1.486e+05	2658.000 ug/g
4 SAMPLE	S96T005514	0 W	01C-01	OXALATE2	SOLID	N/A	2.022e+03	2022.000 ug/g
5 DUP	S96T005514	0 W	01C-01	F-02	SOLID	3.79e+04	4.09e+04	7.614 RPD
5 DUP	S96T005514	0 W	01C-01	CL-02	SOLID	1.78e+03	1.88e+03	5.464 RPD
5 DUP	S96T005514	0 W	01C-01	NO2-02	SOLID	2.23e+04	2.40e+04	7.343 RPD
5 DUP	S96T005514	0 W	01C-01	BR-02	SOLID	<2.41e3	<2.61e3	RPD
5 DUP	S96T005514	0 W	01C-01	NO3-02	SOLID	1.51e+05	1.62e+05	7.029 RPD
5 DUP	S96T005514	0 W	01C-01	P04-02	SOLID	4.09e+04	3.60e+04	12.744 RPD
5 DUP	S96T005514	0 W	01C-01	S04-02	SOLID	1.49e+05	1.69e+05	12.579 RPD
5 DUP	S96T005514	0 W	01C-01	OXALATE2	SOLID	<2.02e3	<2.20e3	RPD
6 SPK	S96T005514	0 W	01C-01	F-02	SOLID	5.90e01	6.28e+01	106.441 % Recovery
6 SPK	S96T005514	0 W	01C-01	CL-02	SOLID	7.90e01	7.35e+01	93.038 % Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 14853

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S96T005514	0 W	QIC-01	NO2-02	SOLID	5.41e+02	5.05e+02	93.346 % Recovery
6 SPK	S96T005514	0 W	QIC-01	BR-02	SOLID	5.89e+02	5.58e+02	94.737 % Recovery
6 SPK	S96T005514	0 W	QIC-01	NO3-02	SOLID	5.94e+02	5.35e+02	106.902 % Recovery
6 SPK	S96T005514	0 W	QIC-01	P04-02	SOLID	5.44e+02	5.02e+02	92.279 % Recovery
6 SPK	S96T005514	0 W	QIC-01	S04-02	SOLID	6.31e+02	6.71e+02	106.339 % Recovery
6 SPK	S96T005514	0 W	QIC-01	OxALATE2	SOLID	5.25e+02	5.43e+02	103.429 % Recovery
7 SAMPLE	S96T005513	0 W	QIC-01	F-02	SOLID	N/A	1.483e+04	51.180 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	CL-02	SOLID	N/A	1.756e+03	72.490 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	NO2-02	SOLID	N/A	1.107e+04	460.500 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	BR-02	SOLID	N/A	5.330e+02	533.000 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	NO3-02	SOLID	N/A	7.763e+04	592.600 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	P04-02	SOLID	N/A	1.272e+05	511.800 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	S04-02	SOLID	N/A	8.213e+03	588.400 ug/g
7 SAMPLE	S96T005513	0 W	QIC-01	OxALATE2	SOLID	N/A	4.477e+02	447.700 ug/g
8 DUP	S96T005513	0 W	QIC-01	F-02	SOLID	1.48e+04	1.24e+04	17.647 RPD
8 DUP	S96T005513	0 W	QIC-01	CL-02	SOLID	1.76e+03	8.65e+02	68.190 RPD
8 DUP	S96T005513	0 W	QIC-01	NO2-02	SOLID	1.11e+04	9.88e+03	11.530 RPD
8 DUP	S96T005513	0 W	QIC-01	BR-02	SOLID	<5.33e2	<5.03e2	RPD
8 DUP	S96T005513	0 W	QIC-01	NO3-02	SOLID	7.76e+04	6.31e+04	11.588 RPD
8 DUP	S96T005513	0 W	QIC-01	P04-02	SOLID	1.27e+05	1.05e+05	18.966 RPD
8 DUP	S96T005513	0 W	QIC-01	S04-02	SOLID	8.21e+03	6.85e+03	18.061 RPD
8 DUP	S96T005513	0 W	QIC-01	OxALATE2	SOLID	<4.48e2	<4.23e2	RPD
10 DUP	S96T005515	0 W	QIC-01	F-02	SOLID	5.72e+04	7.60e+04	28.228 RPD
10 DUP	S96T005515	0 W	QIC-01	CL-02	SOLID	8.84e+02	1.25e+03	34.302 RPD
10 DUP	S96T005515	0 W	QIC-01	NO2-02	SOLID	9.74e+03	1.09e+04	11.240 RPD
10 DUP	S96T005515	0 W	QIC-01	BR-02	SOLID	<2.60e3	<2.54e3	RPD
10 DUP	S96T005515	0 W	QIC-01	NO3-02	SOLID	6.14e+04	6.37e+04	12.662 RPD
10 DUP	S96T005515	0 W	QIC-01	P04-02	SOLID	1.19e+05	3.89e+04	101.457 RPD
10 DUP	S96T005515	0 W	QIC-01	S04-02	SOLID	1.92e+05	3.27e+05	52.023 RPD
10 DUP	S96T005515	0 W	QIC-01	OxALATE2	SOLID	<2.19e3	<2.14e3	RPD

Final page for worklist# 14853

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Fyfe
Reviewer Signature _____ Date *2/5/97*

LABCORE Data Entry Template for Worklist# 14853

Analyst: KEN Instrument: IC0 IC01 Book# 36150 C

Method: LA-533-105 Rev/Mod DY

Worklist Comment: B-108 IC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S96T005514 0 W		@IC-01	SOLID	96001379 B-108	
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S96T005514 0 W		@IC-01	SOLID		
6 SPK	S96T005514 0 W		@IC-01	SOLID		
7 SAMPLE	S96T005513 0 W		@IC-01	SOLID	96001379 B-108	
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
8 DUP	S96T005513 0 W		@IC-01	SOLID		
9 SAMPLE	S96T005515 0 W		@IC-01	SOLID	96001379 B-108	
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
10 DUP	S96T005515 0 W		@IC-01	SOLID		

Final page for worklist # 14853

Quinten Lippe 1-8-97
Analyst Signature Date
14853ja.csv

Steve Roberts 1-29-97
Analyst Signature Date
uploaded 1-29-97

Updated, but Br S96T005514
all of S96T005515 out for rerun on 16551 WKL gm Lye

Data Entry Comments:

A-0010-IC

DATA FILE/WORKLIST RESOLUTION

29-Jan-97

Worklist#: 14853

Data File: 14853JA.CSV

		Seq	Type	Sample #	Seq#	Data File	Sample Name	Dilution	
-	=v	1	CCB		-	1	97010681.d08	BLANK	1.00
	=v	2	CCV			2	97010681.d09	36N20-C STD	101.00
	=v	3	BLNK-PREP		3	97010681.d10	BLANK-PREP	1.00	
	=v	4	SAMPLE	S96T005514	4	97010681.d11	S96T005514SAM	101.00	
	=v	5	DUP	S96T005514	5	97010681.d12	S96T005514DUP	101.00	
	=v	6	SPK	S96T005514	6	97010681.d13	S96T005514SPK	101.00	
	=v	7	SAMPLE	S96T005513	7	97010681.d15	S96T005513SAM	21.00	
	=v	8	DUP	S96T005513	8	97010681.d16	S96T005513DUP	21.00	
	=v	9	SAMPLE	S96T005515	9	97010681.d18	S96T005515SAM	101.00	
	=v	10	DUP	S96T005515	10	97010681.d19	S96T005515DUP	101.00	
+					+				

Save (F4) Abort (Shift-F3) ListFiles (Shift-F1) UploadFile (F8)

Sample Name: BLANK Date: 01/08/1997 01:34:36
 Data File : C:\DX\DATA\97010681.D08
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst : *[Signature]* Column: AG4A/AS4A anion column

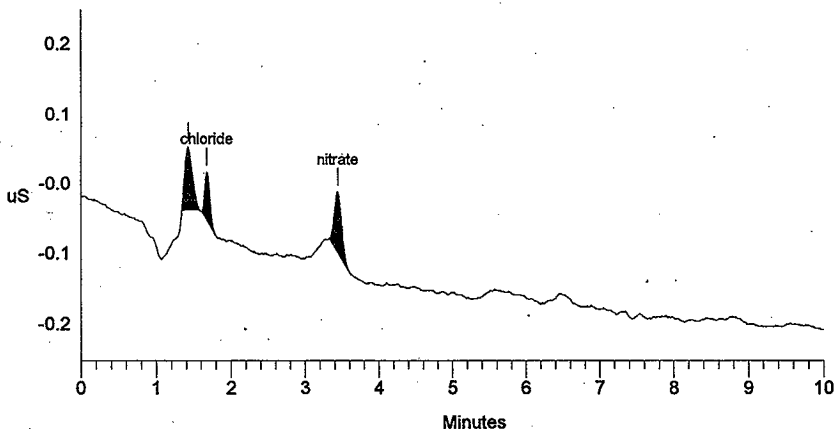
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 1 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.43		0.000	90	639	1	
2	1.67	chloride	0.030	68	324	1	0.40
3	3.44	nitrate	0.067	85	578	1	-3.91
Totals			0.097	243	1541		

File: 97010681.D08 Sample: BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 317 TO 326


```

=====
Sample Name: 36N20-C STD                      Date: 01/08/1997 01:46:34
Data File  : F:\DATA\97010681.D09
Method     : C:\DX\METHOD\KIT.MET             HNF-SD-WM-DP-219, REV. 0
ACI Address: 1 System: 1 Inject#: 9             Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

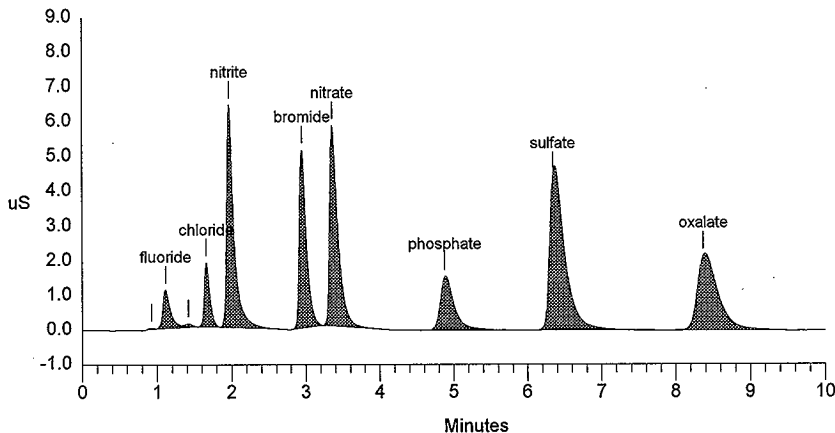
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	27	104	1	
2	1.11	fluoride	60.999	1114	8078	3	3.09
3	1.42		0.000	87	602	4	
4	1.66	chloride	76.883	1850	9665	1	-0.40
5	1.97	nitrite	521.233	6388	43712	1	-2.95
6	2.95	bromide	590.730	5125	34532	1	0.11
7	3.36	nitrate	581.967	5770	45831	1	-6.15
8	4.88	phosphate	517.606	1542	20624	1	-1.61
9	6.35	sulfate	634.023	4433	67287	1	-4.03
10	8.37	oxalate	560.291	2160	42894	1	-3.68
Totals			3543.732	28495	273329		

File: 97010681.D09 Sample: 36N20-C STD



```

=====
Sample Name: BLANK-PREP                      Date: 01/08/1997 01:58:03
Data File  : C:\DX\DATA\97010681.D10
Method     : C:\DX\METHOD\KIT.MET          HNF-SD-WM-DP-219, REV. 0
ACI Address: 1 System: 1 Inject#: 10         Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

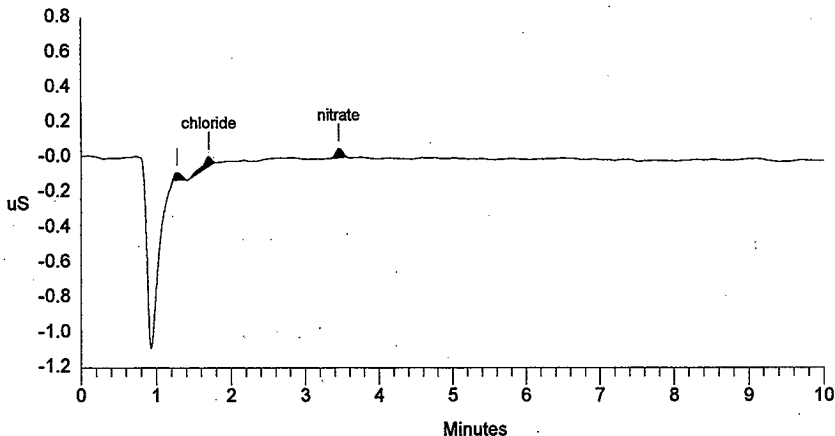
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	1	3000	5Hz	0.00	10.00		50
----------	---	---	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.27		0.000	44	286	1	
2	1.70	chloride	0.046	57	522	1	2.00
3	3.45	nitrate	0.038	54	351	1	-3.54
Totals			0.083	155	1160		

File: 97010681.D10 Sample: BLANK-PREP



```

=====
Sample Name: S96T005514SAM                      Date: 01/08/1997 02:09:29
Data File  : C:\DX\DATA\97010681.D11             HNF-SD-WM-DP-219, REV. 0
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 11              Detector: CDM-1
Analyst    :                                     Column: AG4A/AS4A anion column
=====

```

```

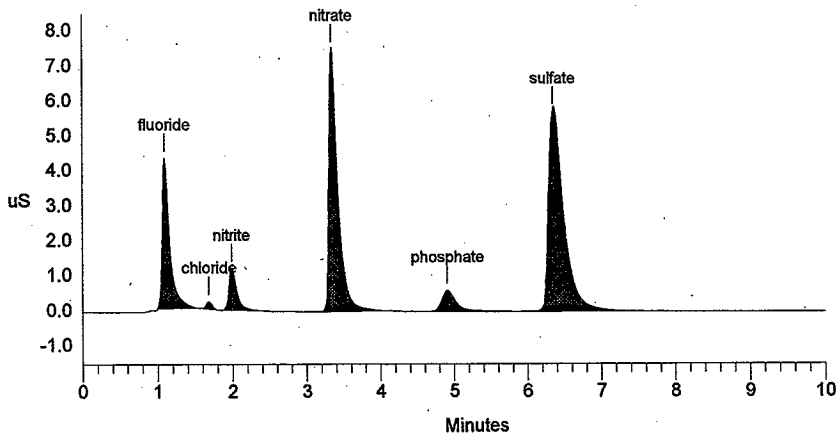
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000   5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	198.677	4306	29332	1	1.23
2	1.68	chloride	9.360	209	1117	1	0.80
3	1.99	nitrite	116.912	1194	8790	1	-2.30
4	3.34	nitrate	793.114	7512	62757	1	-6.70
5	4.91	phosphate	214.323	591	8253	1	-1.08
6	6.35	sulfate	779.098	5737	82835	1	-4.03
Totals			2111.483	19548	193084		

File: 97010681.D11 Sample: S96T005514SAM



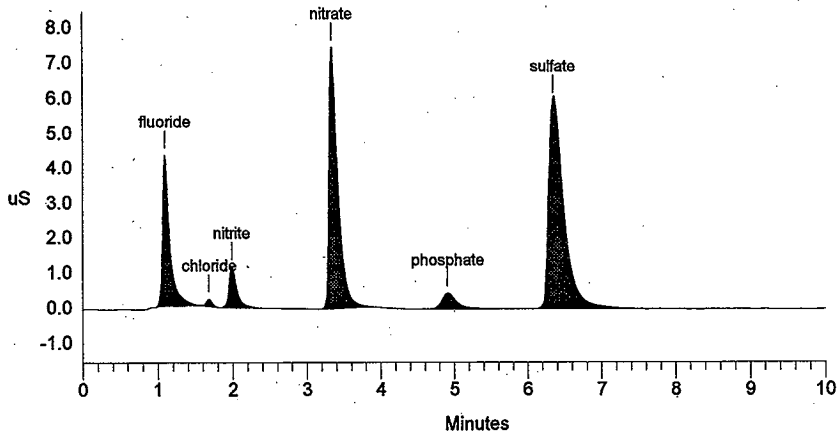
Sample Name: S96T005514DUP Date: 01/08/1997 02:25:38
 Data File : C:\DX\DATA\97010681.D12
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-219, REV.0
 ACI Address: 1 System: 1 Inject#: 12 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	197.557	4342	29150	1	1.23
2	1.68	chloride	9.055	210	1079	1	0.80
3	1.99	nitrite	115.720	1180	8688	1	-2.30
4	3.34	nitrate	782.782	7475	61924	1	-6.70
5	4.91	phosphate	174.050	462	6628	1	-1.08
6	6.35	sulfate	815.743	5999	86785	1	-4.03
Totals			2094.908	19668	194253		

File: 97010681.D12 Sample: S96T005514DUP



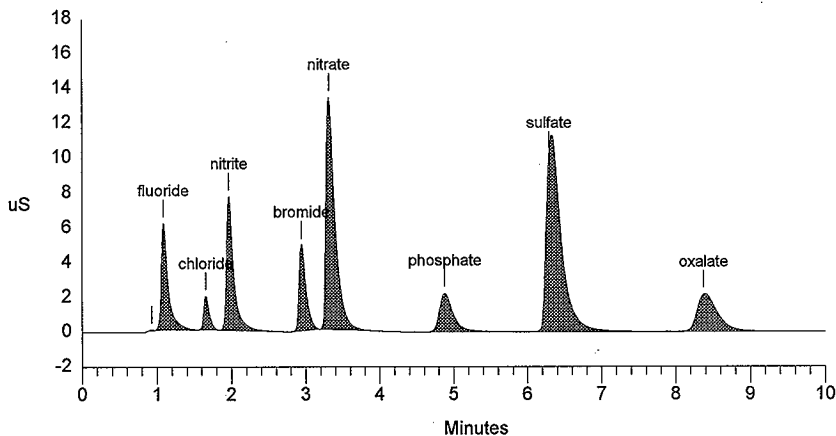
Sample Name: S96T005514SPK	Date: 01/08/1997 02:36:49
Data File : F:\DATA\97010681.D13	
Method : C:\DX\METHOD\KIT.MET	HNF-SD-WM-DP-219, REV. 0
ACI Address: 1 System: 1 Inject#: 13	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	20	58	1	
2	1.09	fluoride	261.527	6125	39870	1	0.62
3	1.65	chloride	82.878	1929	10434	1	-0.80
4	1.97	nitrite	622.077	7682	52518	1	-3.28
5	2.94	bromide	558.153	4941	32559	1	0.00
6	3.31	nitrate	1428.231	13338	114760	1	0.10
7	4.88	phosphate	716.430	2227	28866	1	-1.61
8	6.29	sulfate	1449.946	10103	156635	1	-4.84
9	8.37	oxalate	542.707	2144	41520	1	-3.68
Totals			5661.948	48508	477219		

File: 97010681.D13 Sample: S96T005514SPK



Sample Name: S96T005513SAM

Date: 01/08/1997 04:44:07

Data File : F:\DATA\97010681.D15

Method : C:\DX\METHOD\KIT.MET

HNF-SD-WM-DP-219, REV. 0

ACI Address: 1 System: 1 Inject#: 15

Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

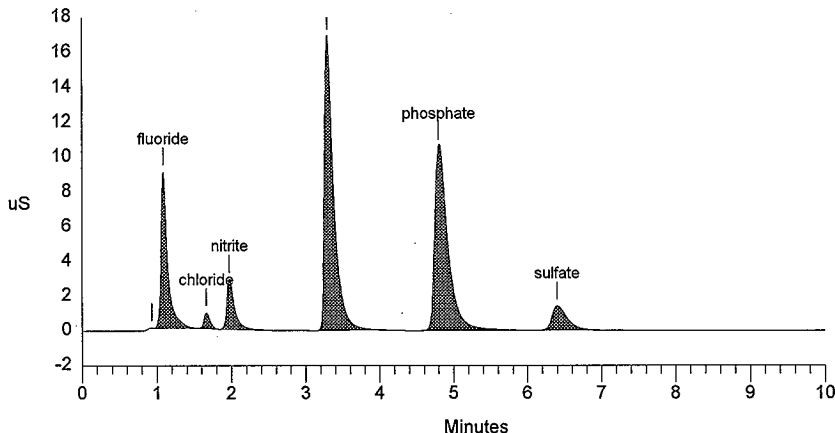
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
-------------	--------	----------	--------	------	-------	------	------	--------

External	1	21	3000	5Hz	0.00	10.00		50
----------	---	----	------	-----	------	-------	--	----

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	29	80	2	
2	1.09	fluoride	73.027	8999	56086	2	0.62
3	1.66	chloride	8.647	920	5173	1	-0.40
4	1.97	nitrite	54.509	2911	21265	1	-2.95
5	3.29	nitrate	382.307	16932	149300	1	0.10
6	4.80	phosphate	626.554	10602	133406	1	-3.23
7	6.40	sulfate	40.450	1404	21014	1	-3.23
Totals			1185.493	41798	386323		

File: 97010681.D15 Sample: S96T005513SAM



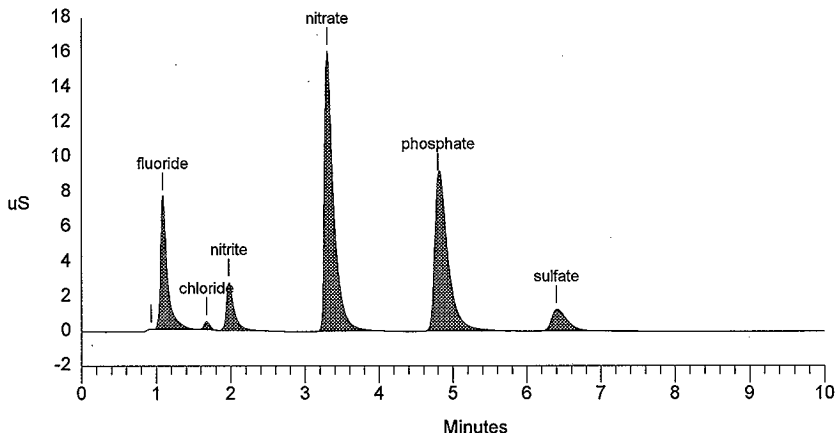
Sample Name: S96T005513DUP	Date: 01/08/1997 04:57:47
Data File : F:\DATA\97010681.D16	
Method : C:\DX\METHOD\KIT.MET	HNF-SD-WM-DP-219, REV.0
ACI Address: 1 System: 1 Inject#: 16	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	26	71	2	
2	1.09	fluoride	64.666	7617	48626	2	0.62
3	1.67	chloride	4.508	480	2662	1	0.40
4	1.97	nitrite	51.512	2743	20024	1	-2.95
5	3.30	nitrate	360.152	16076	140260	1	0.00
6	4.80	phosphate	549.669	8860	115213	1	-3.23
7	6.40	sulfate	35.725	1247	18654	1	-3.23
Totals			1066.232	37050	345510		

File: 97010681.D16 Sample: S96T005513DUP



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Sample Name: S96T005515SAM      Date: 01/08/1997 05:25:42
Data File  : C:\DX\DATA\97010681.D18      HNF-SD-WM-DP-219, REV. 0
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 18      Detector: CDM-1
Analyst    :      Column: AG4A/AS4A anion column
=====

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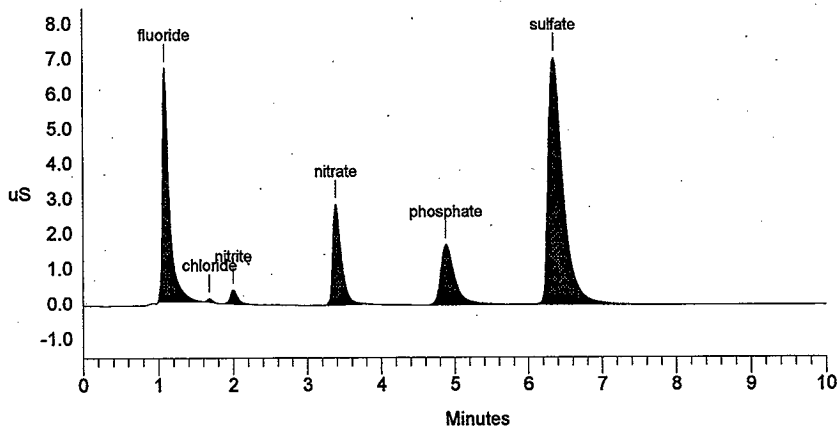
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000   5Hz   0.00 10.00          50
-----

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	277.363	6685	42625	1	0.62
2	1.68	chloride	4.288	98	483	1	0.80
3	2.00	nitrite	47.246	404	2834	1	-1.64
4	3.39	nitrate	297.833	2872	23325	1	-5.40
5	4.88	phosphate	575.096	1711	22996	1	-1.61
6	6.35	sulfate	929.045	7078	99054	1	-4.03
Totals			2130.871	18849	191316		

File: 97010681.D18 Sample: S96T005515SAM



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Sample Name: S96T005515DUP	Date: 01/08/1997 05:36:37
Data File : C:\DX\DATA\97010681.D19	
Method : C:\DX\METHOD\KIT.MET	HNF-SD-WM-DP-219, REV.0
ACI Address: 1 System: 1 Inject#: 19	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

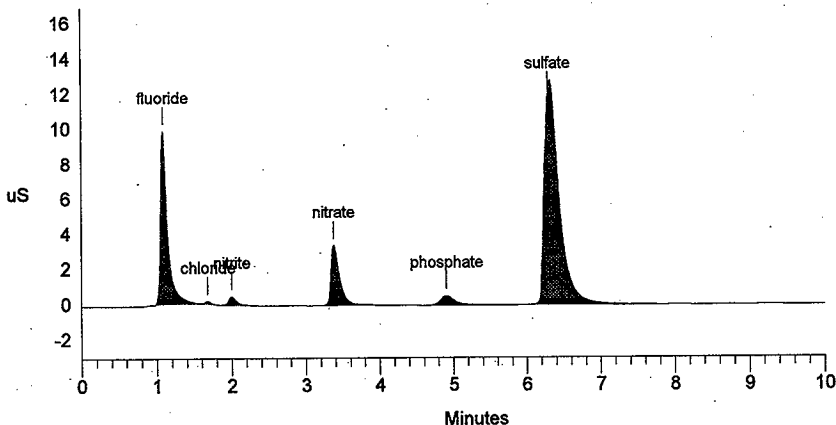
=====

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	377.001	9855	61053	1	0.62
2	1.68	chloride	6.181	148	720	1	0.80
3	2.00	nitrite	54.188	480	3426	1	-1.64
4	3.38	nitrate	345.852	3418	27107	1	-5.59
5	4.91	phosphate	192.789	536	7384	1	-1.08
6	6.29	sulfate	1620.580	11905	175940	1	-4.84
Totals			2596.590	26343	275629		

File: 97010681.D19 Sample: S96T005515DUP



LABCORE Completed Worklist Report for Worklist# 16305

Analyst: dcd

Instrument: IC01

Book# 3 (2120)

Method: 1A-533-05 Rev/Mod D-1

Worklist Comment: B-108. Run per procedure. STD: 0.100-10ml.

new

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	QIC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	QIC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	QIC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	QIC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	QIC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	QIC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	QIC-QC S04	QC	1	<1.38e-1		ug/mL
1 CCB	0	QIC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	QIC-QC F	QC	5.9000e1	5.65e+01	95.763 % Recovery	
2 CCV	0	QIC-QC CL	QC	7.9000e1	7.96e+01	100.759 % Recovery	
2 CCV	0	QIC-QC NO2	QC	5.4200e2	5.96e+02	109.953 % Recovery	
2 CCV	0	QIC-QC BR	QC	5.8900e2	5.84e+02	99.151 % Recovery	
2 CCV	0	QIC-QC NO3	QC	5.9400e2	5.94e+02	100.000 % Recovery	
2 CCV	0	QIC-QC P04	QC	5.4400e2	5.44e+02	100.000 % Recovery	
2 CCV	0	QIC-QC S04	QC	6.3100e2	6.30e+02	99.842 % Recovery	
2 CCV	0	QIC-QC OXALATE2	QC	5.3300e2	5.38e+02	100.938 % Recovery	
3 BLNK-PREP	0	QIC-01 F-02	SOLID	1	<4.92e-1		ug/g
3 BLNK-PREP	0	QIC-01 CL-02	SOLID	1	<6.97e-1		ug/g
3 BLNK-PREP	0	QIC-01 NO2-02	SOLID	1	<4.43e0		ug/g
3 BLNK-PREP	0	QIC-01 BR-02	SOLID	1	<5.12e0		ug/g
3 BLNK-PREP	0	QIC-01 NO3-02	SOLID	1	<5.70e0		ug/g
3 BLNK-PREP	0	QIC-01 P04-02	SOLID	1	<4.92e0		ug/g
3 BLNK-PREP	0	QIC-01 S04-02	SOLID	1	<5.66e0		ug/g
3 BLNK-PREP	0	QIC-01 OXALATE2	SOLID	1	<4.30e0		ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 F-02	SOLID	N/A	2.422e+04	98.560	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 CL-02	SOLID	N/A	4.484e+02	139.600	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 BR-02	SOLID	N/A	1.027e+03	1027.000	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 NO3-02	SOLID	N/A	3.479e+04	1142.000	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 P04-02	SOLID	N/A	1.436e+05	985.600	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 S04-02	SOLID	N/A	4.020e+04	1134.000	ug/g
4 SAMPLE	S97T000015 0 W	QIC-01 OXALATE2	SOLID	N/A	8.626e+02	862.600	ug/g
5 DUP	S97T000015 0 W	QIC-01 F-02	SOLID	2.42e+04	2.23e+04	8.172	RPD
5 DUP	S97T000015 0 W	QIC-01 CL-02	SOLID	4.48e+02	4.18e+02	6.928	RPD
5 DUP	S97T000015 0 W	QIC-01 NO2-02	SOLID	9.53e+03	8.53e+03	11.074	RPD
5 DUP	S97T000015 0 W	QIC-01 BR-02	SOLID	<1.03e3	<1.03e3		RPD
5 DUP	S97T000015 0 W	QIC-01 NO3-02	SOLID	3.48e+04	3.11e+04	11.229	RPD
5 DUP	S97T000015 0 W	QIC-01 P04-02	SOLID	1.44e+05	1.38e+05	4.255	RPD
5 DUP	S97T000015 0 W	QIC-01 S04-02	SOLID	4.02e+04	3.47e+04	14.686	RPD
5 DUP	S97T000015 0 W	QIC-02 OXALATE2	SOLID	<8.62e2	<8.62e2		RPD
6 SPK	S97T000015 0 W	QIC-01 F-02	SOLID	5.9000e1	5.50e+01	93.220 % Recovery	
6 SPK	S97T000015 0 W	QIC-01 CL-02	SOLID	7.9000e1	1.09e+02	137.975 % Recovery	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 16305

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SPK	S97T000015	0 W @IC-01	NO2-02	SOLID	5.4200e2	5.82e+02	107.380 % Recovery
6 SPK	S97T000015	0 W @IC-01	BR-02	SOLID	5.8900e2	5.71e+02	96.944 % Recovery
6 SPK	S97T000015	0 W @IC-01	NO3-02	SOLID	5.9400e2	6.30e+02	106.061 % Recovery
6 SPK	S97T000015	0 W @IC-01	PO4-02	SOLID	5.4400e2	5.95e+02	109.375 % Recovery
6 SPK	S97T000015	0 W @IC-01	SO4-02	SOLID	6.3100e2	6.69e+02	106.022 % Recovery
6 SPK	S97T000015	0 W @IC-01	OXALATE2	SOLID	5.3300e2	5.33e+02	100.000 % Recovery
7 SAMPLE	S97T000017	0 W @IC-01	F-02	SOLID	N/A	3.312e+04	97.660 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	CL-02	SOLID	N/A	3.119e+02	138.400 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	BR-02	SOLID	N/A	1.017e+03	1018.000 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	NO3-02	SOLID	N/A	2.359e+04	1132.000 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	PO4-02	SOLID	N/A	2.142e+05	976.600 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	SO4-02	SOLID	N/A	4.558e+04	1123.000 ug/g
7 SAMPLE	S97T000017	0 W @IC-01	OXALATE2	SOLID	N/A	8.547e+02	854.900 ug/g
8 DUP	S97T000017	0 W @IC-01	F-02	SOLID	3.31e+04	3.46e+04	4.431 RPD
8 DUP	S97T000017	0 W @IC-01	CL-02	SOLID	3.12e+02	3.28e+02	5.000 RPD
8 DUP	S97T000017	0 W @IC-01	NO2-02	SOLID	5.02e+03	6.52e+03	25.997 RPD
8 DUP	S97T000017	0 W @IC-01	BR-02	SOLID	<1.02e3	<1.01e3	RPD
8 DUP	S97T000017	0 W @IC-01	NO3-02	SOLID	2.36e+04	3.26e+04	32.028 RPD
8 DUP	S97T000017	0 W @IC-01	PO4-02	SOLID	2.14e+05	1.85e+05	14.536 RPD
8 DUP	S97T000017	0 W @IC-01	SO4-02	SOLID	4.56e+04	7.16e+04	44.369 RPD
8 DUP	S97T000017	0 W @IC-01	OXALATE2	SOLID	<8.55e2	<8.48e2	RPD
9 SPK	S97T000017	0 W @IC-01	F-02	SOLID	5.9000e1	5.24e+01	88.814 % Recovery
9 SPK	S97T000017	0 W @IC-01	CL-02	SOLID	7.9000e1	7.73e+01	97.848 % Recovery
9 SPK	S97T000017	0 W @IC-01	NO2-02	SOLID	5.4200e2	5.76e+02	106.273 % Recovery
9 SPK	S97T000017	0 W @IC-01	BR-02	SOLID	5.8900e2	5.75e+02	97.623 % Recovery
9 SPK	S97T000017	0 W @IC-01	NO3-02	SOLID	5.9400e2	5.90e+02	99.327 % Recovery
9 SPK	S97T000017	0 W @IC-01	PO4-02	SOLID	5.4400e2	5.39e+02	99.081 % Recovery
9 SPK	S97T000017	0 W @IC-01	SO4-02	SOLID	6.3100e2	6.52e+02	103.328 % Recovery
9 SPK	S97T000017	0 W @IC-01	OXALATE2	SOLID	5.3300e2	5.14e+02	96.435 % Recovery

Final page for worklist# 16305

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature *John Faye* Date *1/28/97*

LABCORE Data Entry Template for Worklist# 16305

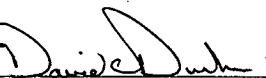
Analyst: Dcd Instrument: IC0 IC01 Book# 36N20-D

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: B-108. Run per procedure. STD: 0.100-10ml. new

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000015 0 W		@IC-01	SOLID	96001380	B-108
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T000015 0 W		@IC-01	SOLID		
5 SPK	S97T000015 0 W		@IC-01	SOLID		
7 SAMPLE	S97T000017 0 W		@IC-01	SOLID	96001380	B-108
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
8 DUP	S97T000017 0 W		@IC-01	SOLID		
9 SPK	S97T000017 0 W		@IC-01	SOLID		

Final page for worklist # 16305

 1-23-97
Analyst Signature Date

Analyst Signature Date

16305-ja.csv

Uploaded by G. Hammit 1/26/97

Validated 1/28/97 JM Faye - NO₂ std failed & Both samples
out for rerun for NO₂ on WKL
16392

Data Entry Comments:

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Sample Name: CCB	Date: 01/23/1997 22:06:38
Data File : C:\DX\DATA\97012321.D12	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 12	Detector: CDM-1
Analyst: <i>[Signature]</i>	Column: AG4A/AS4A anion column

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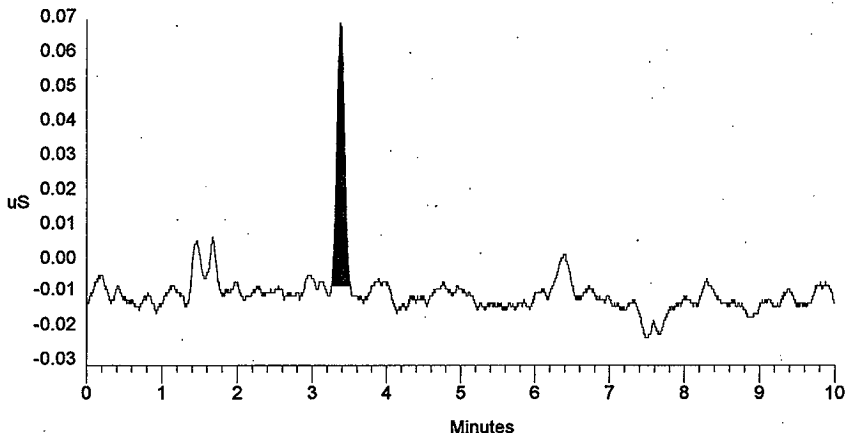
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
Internal	1	1	3000	5Hz	0.00	10.00		50

=====

***** Peak Report: All Peaks *****

Peak Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.39		0.000	76	526	1	
Totals			0.000	76	526		

File: 97012321.D12 Sample: CCB



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 330 TO 340.

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Sample Name: CCV 36N20-D STD	Date: 01/23/1997 21:55:55
Data File : C:\DX\DATA\97012311.D11	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1	System: 1 Inject#: 11
Analyst :	Detector: CDM-1
	Column: AG4A/AS4A anion column

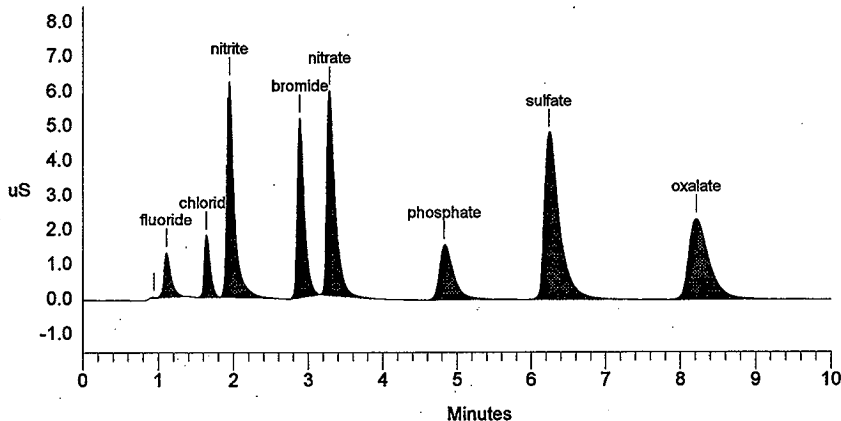
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libration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
ternal	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Ok. um	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.11	fluoride	56.523	1285	8417	1	2.47
3	1.64	chloride	79.630	1782	9771	1	1.23
4	1.95	nitrite	595.572	6226	43491	1	-0.68
5	2.89	bromide	584.141	5169	33647	1	1.64
6	3.29	nitrate	593.709	5906	46198	1	4.01
7	4.83	phosphate	544.341	1570	20891	1	2.26
8	6.24	sulfate	629.807	4805	68144	1	2.63
9	8.21	oxalate	538.163	2325	43424	1	3.36
Totals			3621.887	29068	273983		

File: 97012311.D11 Sample: CCV 36N20-D STD



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Sample Name: PREP-BLANK	Date: 01/23/1997 23:19:10
Data File : C:\DX\DATA\97012321.D14	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 14	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

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Libration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
Internal	1	41	3000	5Hz	0.00	10.00		50

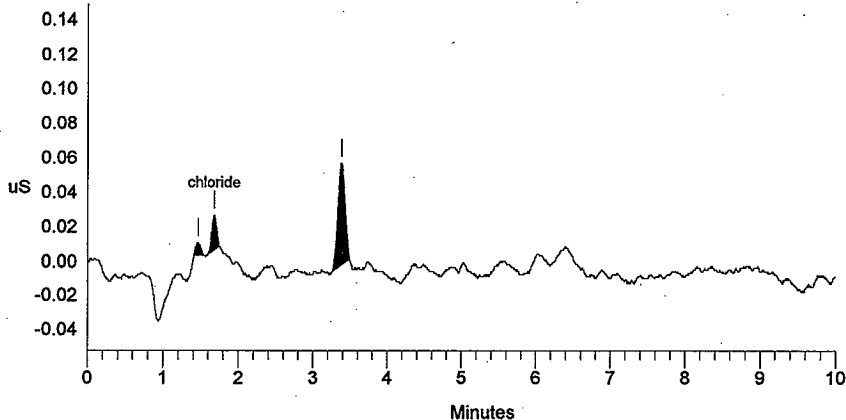
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***** Peak Report: All Peaks *****

Peak	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.68	chloride	-0.187	20	88	1	3.70
3	3.39		0.000	58	388	1	
Totals			-0.187	78	475		

=====

File: 97012321.D14 Sample: PREP-BLANK



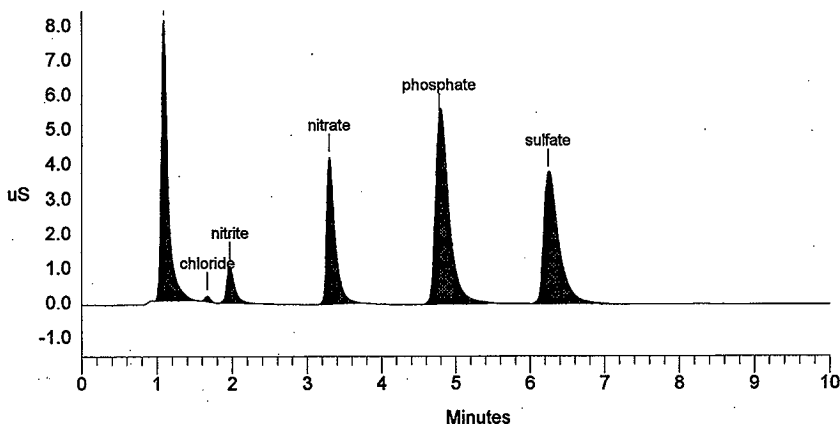
Sample Name: S97T000015 SAM Date: 01/23/1997 23:07:54
Data File : C:\DX\DATA\97012321.D13
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 13 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Libration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
Internal	1	41	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Peak num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	120.895	8096	50441	1	0.62
2	1.67	chloride	2.238	157	798	1	2.88
3	1.97	nitrite	47.546	1074	7876	1	0.34
4	3.29	nitrate	173.637	4205	33196	1	4.22
5	4.77	phosphate	716.554	5387	71121	1	1.13
6	6.24	sulfate	200.663	3765	53647	1	2.63
Totals			1261.533	22684	217079		

File: 97012321.D13 Sample: S97T000015 SAM



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Sample Name: S97T000015 DUP Date: 01/23/1997 23:31:48

Data File : C:\DX\DATA\97012321.D15

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 15 Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

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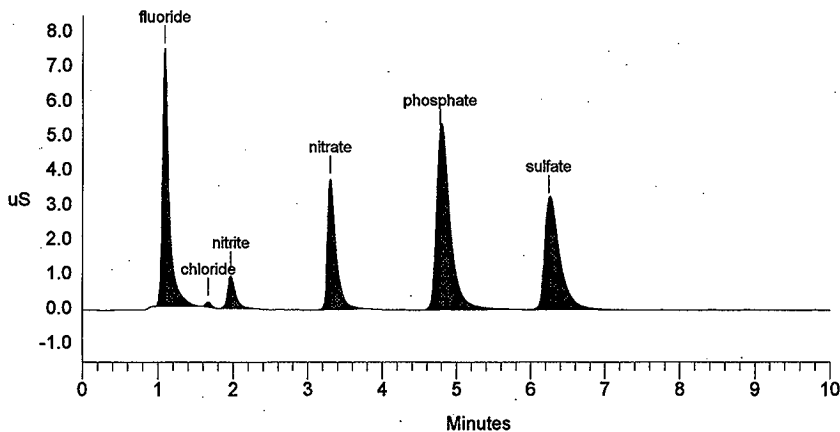
libration Volume Dilution Points Rate Start Stop Area Reject

ternal 1 41 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

k.	Ret	Component	Concentration	Height	Area	Bl.	%Delta
um	Time	Name	ug/ml			Code	
1	1.09	fluoride	111.204	7417	45912	1	0.62
2	1.67	chloride	2.087	149	754	1	2.88
3	1.97	nitrite	42.613	952	6983	1	0.34
4	3.30	nitrate	155.504	3760	29718	1	4.43
5	4.77	phosphate	686.941	5119	67974	1	1.13
6	6.24	sulfate	173.294	3199	46483	1	2.63
Totals			1171.644	20597	197824		

File: 97012321.D15 Sample: S97T000015 DUP



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Sample Name: S97T000015 SPIKE Date: 01/23/1997 23:42:34

Data File : C:\DX\DATA\97012321.D16

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 16 Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

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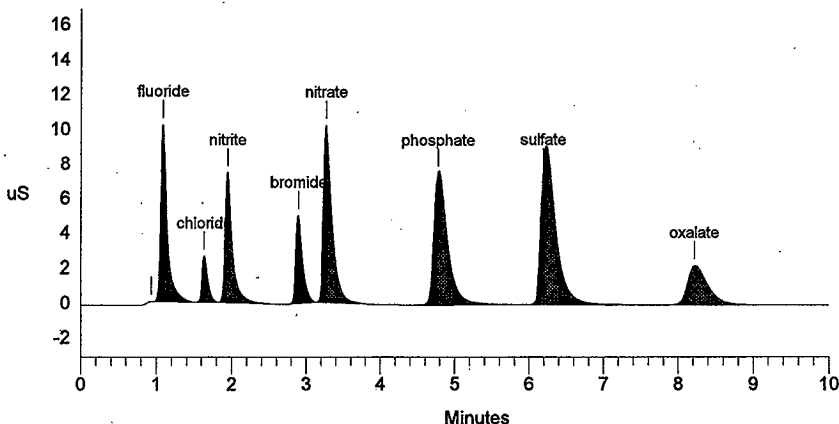
libration Volume Dilution Points Rate Start Stop Area Reject

ternal 1 41 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Ch. um	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.93		0.000	27	69	2	
2	1.09	fluoride	142.883	10191	61103	2	0.62
3	1.63	chloride	45.974	2627	13944	1	0.82
4	1.95	nitrite	280.293	7478	50670	1	-0.68
5	2.89	bromide	228.268	5049	32349	1	1.88
6	3.27	nitrate	425.777	10185	82543	1	3.38
7	4.77	phosphate	954.498	7581	97197	1	1.13
8	6.19	sulfate	468.410	7617	125528	1	1.75
9	8.21	oxalate	213.156	2234	42358	1	3.36
Totals			2759.259	52988	505761		

File: 97012321.D16 Sample: S97T000015 SPIKE



=====

Sample Name: S97T000017 SAM Date: 01/23/1997 23:53:23

Data File : C:\DX\DATA\97012321.D17

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 17 Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

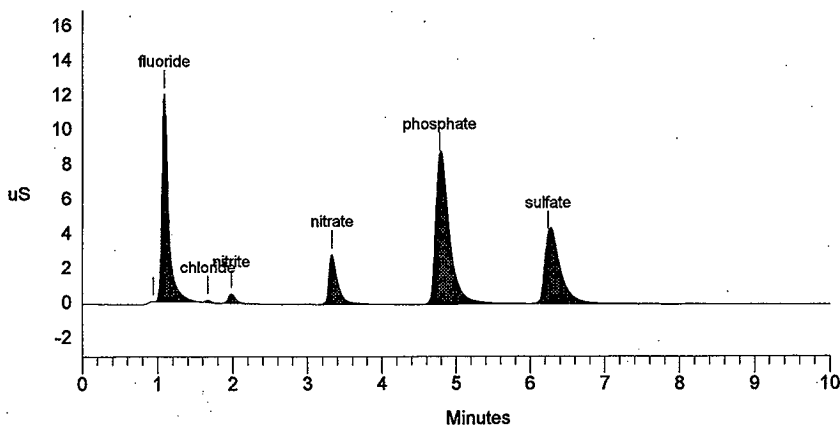
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Libration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
ternal	1	41	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.09 fluoride	166.816	11978	73405	2	0.62
3	1.67 chloride	1.571	121	602	1	2.88
4	1.98 nitrite	25.279	534	3852	1	1.02
5	3.33 nitrate	118.832	2873	22713	1	5.27
6	4.77 phosphate	1078.781	8512	111427	1	1.13
7	6.24 sulfate	229.577	3947	61252	1	2.63
Totals		1620.855	27966	273251		

File: 97012321.D17 Sample: S97T000017 SAM



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Sample Name: S97T000017 DUP Date: 01/24/1997 00:04:04

Data File : C:\DX\DATA\97012321.D18

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 18 Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

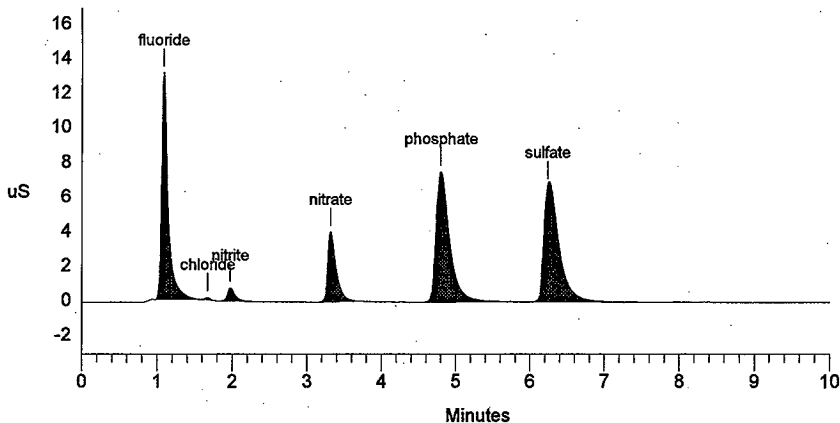
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Libration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
ternal	1	41	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1.09	fluoride	175.626	13099	78146	1	0.62
1.67	chloride	1.667	135	631	1	3.29
1.97	nitrite	33.089	738	5262	1	0.68
3.31	nitrate	165.343	4023	31604	1	4.85
4.80	phosphate	939.641	7526	95525	1	1.69
6.24	sulfate	363.463	6752	96953	1	2.63
Totals		1678.830	32272	308121		

File: 97012321.D18 Sample: S97T000017 DUP



=====

Sample Name: S97T000017 SPIKE Date: 01/24/1997 00:16:35

Data File : C:\DX\DATA\97012321.D19

Method : C:\DX\METHOD\KIT.MET

ACI Address: 1 System: 1 Inject#: 19 Detector: CDM-1

Analyst : Column: AG4A/AS4A anion column

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Libration Volume Dilution Points Rate Start Stop Area Reject

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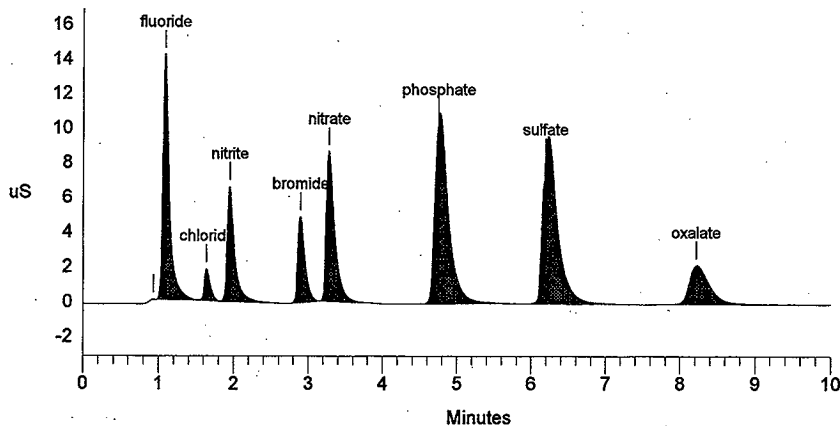
Cernal 1 41 3000 5Hz 0.00 10.00 50

=====

***** Peak Report: All Peaks *****

Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
0.93		0.000	29	72	2	
1.09	fluoride	187.776	14146	84896	2	0.62
1.64	chloride	32.486	1816	9820	1	1.23
1.95	nitrite	255.553	6607	46055	1	-0.68
2.89	bromide	230.023	4925	32606	1	1.88
3.27	nitrate	354.680	8637	68435	1	3.59
4.75	phosphate	1294.439	10440	137272	1	0.56
6.19	sulfate	490.261	8128	131546	1	1.75
8.21	oxalate	205.772	2200	40875	1	3.36
Totals		3050.989	56928	551577		

File: 97012321.D19 Sample: S97T000017 SPIKE



FILE # 09611208.TXT

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A-0004-1

LABCORE Data Entry Template for Worklist# 14793

Analyst: B. GOELKE Instrument: ICP01 Book# 628488Method: LA-505-151161 Rev/Mod B-1

Worklist Comment: ICP B-108 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	SAMPLE	S96T005463 0 D	@ICP-D01	LIQUID	96001379	B-108
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
7	DUP	S96T005463 0 D	@ICP-D01	LIQUID		
8	CCV		@ICP-QC	QC		
9	CCB		@ICP-QC	QC		
10	SERDIL	S96T005523 0 D	@ICP-D01	LIQUID		
11	SAMPLE	S96T005523 0 D	@ICP-D01	LIQUID	96001379	B-108
	Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01					
12	DUP	S96T005523 0 D	@ICP-D01	LIQUID		

Data Entry Comments:

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

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A-0004-1

HNF-SD-WM-DP-219, REV. 0

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LABCORE Data Entry Template for Worklist# 14793

S Type	Sample#	R	A	Test	Matrix	Group#	Project
13 SPK, 1 ppm sample x spike 10 ppm	S96T005523	0	D	@ICP-D01	LIQUID		
14 ICSA				@ICP-QC	QC		
15 ICSAB				@ICP-QC	QC		
16 CCV				@ICP-QC	QC		
17 CCB				@ICP-QC	QC		

Final page for worklist # 14793

B. J. Gural 11-20-96
Analyst Signature Date

Renewed by: Bal M. Pang 11/21/96
Analyst Signature Date

S96T00 5463 1st-6ml
5463-D 1st-6ml

D.F.
7
7

S96T00 5523-L 1025ml-10ml-2ml-8ml

2005

5523 1025ml-10ml

401

5523-D 1025ml-10ml

401

5523-A 1025ml-2ml (5525)-8ml

401

5523-X 1025ml-10ml-1ml-2ml

4010

5523-AX 1025ml-10ml-1ml-(1ml-2ml (WATC132))-2ml

4010

Data Entry Comments: spike recovery calculation:

$$S96T005523 \quad \text{Recovery} = \left(\frac{1344}{401} \right) - \left(\frac{882 \pm 1}{401} \right) \times 100 = 115.2\%$$

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

Note: spike true value is 1.0 ppm for all elements except for U = 2.0 ppm

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	961120B	ICP2	11/20/96	10:37	BJG	Q	CONC
2	ICB	961120B	ICP2	11/20/96	10:40	BJG	Q	CONC
3	LLS	961120B	ICP2	11/20/96	10:43	BJG	Q	CONC
4	IGSA	961120B	ICP2	11/20/96	10:46	BJG	Q	CONC
5	IGSAB	961120B	ICP2	11/20/96	10:48	BJG	Q	CONC
6	S96T005463	961120B	ICP2	11/20/96	10:52	BJG	S	CONC
7	S96T005463_D	961120B	ICP2	11/20/96	10:55	BJG	S	CONC
8	CCV	961120B	ICP2	11/20/96	10:58	BJG	Q	CONC
9	CCB	961120B	ICP2	11/20/96	11:01	BJG	Q	CONC
10	S96T005523_L	961120B	ICP2	11/20/96	11:06	BJG	S	CONC
11	S96T005523	961120B	ICP2	11/20/96	11:09	BJG	S	CONC
12	S96T005523-b	961120B	ICP2	11/20/96	11:12	BJG	S	CONC
13	S96T005523_A	961120B	ICP2	11/20/96	11:15	BJG	S	CONC
14	S96T005523-X	961120B	ICP2	11/20/96	11:18	BJG	S	CONC
15	S96T005523-AX	961120B	ICP2	11/20/96	11:22	BJG	S	CONC
16	IGSA	961120B	ICP2	11/20/96	11:25	BJG	Q	CONC
17	IGSAB	961120B	ICP2	11/20/96	11:28	BJG	Q	CONC
18	CCV	961120B	ICP2	11/20/96	11:31	BJG	Q	CONC
19	CCB	961120B	ICP2	11/20/96	11:34	BJG	Q	CONC

11-20-96

B-108 DIRECT

Int-6ml, 1025ml-10ml

S96T005463, 5573

FILE # 0961120B.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 341 TO 344.

HNF-SD-WM-DP-219, REV. C

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.931	4.869	5.178	4.985	4.925	5.137
2	ICB	.0007	.0120	.0061	.0024	.0001	.0003
3	LLS	.0216	.1129	.2111	.1040	.0993	.0104
4	ICSA	.0028	243.5	.0164	.0003	.0002	.0002
5	IC SAB	.9504	238.8	.0070	.0009	.4645	.4718
6	S96T005463	.0029	1.852	.0243	2.082	.0103	.0015
7	S96T005463_D	.0078	1.782	.0935	2.001	.0101	.0009
8	CCV	4.974	4.863	5.165	4.936	4.955	5.108
9	CCB	.0001	.0071	.0036	.0034	.0001	.0003
10	S96T005523_L	11.49	932.5	20.56	26.04	.1148	.4463
11	S96T005523	12.36	882.1	3.613	20.26	.0172	.1077
12	S96T005523_D	12.74	914.9	5.277	21.62	.0358	.0179
13	S96T005523_A	379.6	1344.	419.2	417.7	396.8	406.8
14	S96T005523_X	26.42	959.2	12.03	21.19	1300	1.065
15	S96T005523_AX	38580.	40040.	41830.	39960.	40900.	41990.
16	ICSA	.0184	245.5	.0121	.0032	.0004	.0007
17	IC SAB	.9602	241.5	.0141	.0058	.4762	.4764
18	CCV	5.046	4.964	5.271	5.061	5.129	5.217
19	CCB	.0009	.0132	.0028	.0072	.0002	.0004

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.076	4.956	5.016	4.931	5.031	5.034
2	ICB	-.0091	.0035	.0005	-.0004	.0005	.0002
3	LLS	.1767	.2147	.0109	.2027	.0437	.0208
4	ICSA	-.0027	250.0	.0027	.0155	.0018	.0103
5	IC SAB	-.0037	245.4	.9239	.0122	.4638	.4740
6	S96T005463	.1112	16.99	.0065	.0116	.0088	.0240
7	S96T005463_D	-.1249	16.95	.0183	.0330	.0142	.0249
8	CCV	5.166	5.025	5.035	4.959	5.068	5.075
9	CCB	-.0121	.0003	.0006	-.0049	.0008	-.0006
10	S96T005523_L	38.27	4.217	1.783	16.02	2.728	602.7
11	S96T005523	18.87	4.397	1.448	2.263	7.554	591.4
12	S96T005523_D	16.93	4.389	.5915	-.8913	2.578	.601.9
13	S96T005523_A	415.9	404.6	402.5	402.3	402.2	1037.
14	S96T005523_X	-101.1	25.16	3.117	4.255	10.49	602.5
15	S96T005523_AX	41250.	39860.	40070.	40200.	72.91	40840.
16	ICSA	-.0463	249.9	.0023	.0084	.0034	.0095
17	IC SAB	-.0219	248.9	.9376	.0136	.4713	.4798
18	CCV	5.233	5.105	5.107	5.091	5.138	5.152
19	CCB	-.0256	.0017	.0007	-.0038	.0007	.0004

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.205	-.0018	5.004	5.021	5.010	5.016
2	ICB	-.0000	.0003	.0004	3331	-.0005	-.0001
3	LLS	.0212	.0010	.1038	Q.6770	.1025	.0209
4	ICSA	-.0088	-.0367	94.05	.3387	-.0034	.0023
5	IC SAB	.4735	-.0310	91.96	.2843	-.0046	.9934
6	S96T005463	.0045	.0149	.0031	3.555	.0018	.0024
7	S96T005463_D	.0044	.0178	-.0053	4.277	.0039	.0098

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Analysis Report

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#	Sample Name	Cu	Eu	Fe	K	La	Li
8	CCV	5.189	-.0012	5.005	4.884	5.031	4.970
9	CCB	-.0007	.0000	.0003	.2217	-.0002	.0001
10	S96T005523_L	-.6367	-1.152	.3310	3477.	-2.166	-1.170
11	S96T005523_Δ	.4295	.1099	.2815	3165.	-.2226	-.0008
12	S96T005523_Δ	.1404	-.0593	2.675	3313.	.2466	.1390
13	S96T005523_A	419.0	-.2466	398.7	3823.	408.5	412.8
14	S96T005523_X	3.449	-1.998	-1.415	3379.	.7480	-2.339
15	S96T005523_AX	-7.700	9.424	39890.	43370.	40940.	41230.
16	ICSA	-.0097	-.0341	94.26	.2114	-.0042	.0020
17	ICSAAB	4.794	-.0329	93.04	.3089	-.0052	1.006
18	CCV	5.338	-.0017	5.076	5.077	5.175	5.128
19	CCB	-.0002	-.0003	.0018	.2406	.0006	-.0006

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.814	4.892	5.028	4.824	5.018	5.016
2	ICB	.0063	.0002	.0026	-.0004	-.0035	-.0051
3	LLS	.1995	.0201	.0998	.2093	.1968	.0379
4	ICSA	254.3	-.0061	-.0038	194.2	.0047	-.0124
5	ICSAAB	249.0	.4381	-.0058	190.7	.0030	.9122
6	S96T005463	3.633	.0163	.0259	56.27	-.0255	-.0102
7	S96T005463_D	3.582	.0175	.0138	55.55	-.0212	-.0212
8	CCV	4.786	4.898	5.043	4.810	5.031	5.032
9	CCB	.0009	.0001	.0002	-.0021	-.0038	-.0030
10	S96T005523_L	8.928	-.3959	37.91	177800.	-10.10	16.20
11	S96T005523_Δ	4.148	-.0144	35.25	171700.	-.7174	.3271
12	S96T005523_Δ	3.526	.2510	35.19	175700.	-1.246	-1.298
13	S96T005523_A	383.5	383.3	444.3	185900.	407.2	397.0
14	S96T005523_X	34.99	-1.284	45.60	178300.	-15.08	-1.907
15	S96T005523_AX	40710.	39740.	39580.	218300.	40920.	39840.
16	ICSA	256.0	-.0059	.0016	195.6	.0047	-.0135
17	ICSAAB	251.2	.4451	-.0030	192.5	.0044	.9259
18	CCV	4.874	4.993	5.148	4.919	5.171	5.098
19	CCB	.0124	.0001	.0040	-.0059	-.0034	-.0042

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.984	4.989	4.937	4.787	4.862	4.993
2	ICB	.0083	.0195	.0098	.0083	.0332	.0017
3	LLS	.4124	.2422	.2098	.1091	.2201	.1331
4	ICSA	.0151	.0664	-.0138	-.0057	-.0278	.0059
5	ICSAAB	.0261	.9959	-.0421	.0013	-.0046	.0005
6	S96T005463	.0715	.1145	8.650	.0101	.2885	1.908
7	S96T005463_D	.1757	.1663	8.886	.0746	.2826	1.948
8	CCV	5.051	5.042	5.003	4.816	4.867	5.078
9	CCB	.0007	.0096	.0129	.0077	.0416	.0084
10	S96T005523_L	1139.	51.93	4686.	-7.530	67.46	65.02
11	S96T005523_Δ	1164.	7.123	4685.	3.155	20.86	59.50
12	S96T005523_Δ	1264.	7.608	4816.	-3.232	15.77	81.97
13	S96T005523_A	1661.	409.6	5405.	393.3	432.3	542.9
14	S96T005523_X	1063.	88.61	4766.	13.10	106.6	108.8
15	S96T005523_AX	41980.	40790.	44890.	40230.	39270.	42160.

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#	Sample Name	P	Pb	S	Sb	Se	Si
16	ICSA	.0291	.0705	-.0313	.0040	.0121	.0173
17	ICSAB	.0240	1.034	-.0253	.0082	.0029	.0063
18	CCV	5.151	5.110	5.011	4.885	4.938	5.093
19	CCB	.0070	.0226	.0116	.0067	.0291	.0044

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.857	4.875	.0539	4.851	4.839	9.519
2	ICB	.0039	.0001	.0049	-.0005	.0052	.0040
3	LLS	.2101	.0202	.0008	.0197	.4308	.5424
4	ICSA	.0008	.0020	.0056	.0012	.0232	.0245
5	ICSAB	.0030	.0019	-.0041	-.0000	.0356	.0363
6	S96T005463	-.0151	.0735	.0119	-.0035	.0391	.2000
7	S96T005463_D	.0544	.0735	.0305	-.0035	.1291	.4297
8	CCV	4.862	4.899	.0474	4.921	4.846	9.538
9	CCB	.0018	.0000	.0023	-.0002	-.0177	-.0046
10	S96T005523_L	-18.76	-.3099	3.060	-.9791	49.31	-45.43
11	S96T005523_	.1969	.1241	.8336	-.1025	4.329	14.32
12	S96T005523_Δ	.6435	.2061	1.093	.0869	2.372	32.98
13	S96T005523_A	392.4	394.6	7.830	402.0	383.1	783.9
14	S96T005523_X	-30.11	-.4090	21.52	-.8894	38.80	-116.4
15	S96T005523_AX	39790.	39960.	253.5	36880.	38750.	2992.
16	ICSA	-.0039	.0022	-.0083	-.0003	-.0040	.0106
17	ICSAB	-.0029	.0019	-.0020	-.0000	.0145	.0221
18	CCV	5.009	5.030	.0521	5.020	4.953	9.817
19	CCB	-.0090	-.0000	.0068	-.0005	.0230	-.0295

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.015	.0061	5.076	4.908
2	ICB	.0007	.0001	.0004	.0004
3	LLS	.1057	.0009	.0238	.0222
4	ICSA	.0008	.0070	.0074	-.0022
5	ICSAB	.4640	.0071	.9510	-.0022
6	S96T005463	.0003	-.0006	.0133	-.0015
7	S96T005463_D	.0078	.0015	.0087	.0018
8	CCV	5.038	.0066	5.114	4.930
9	CCB	.0002	-.0001	-.0000	-.0002
10	S96T005523_L	-2.226	-.7665	4.435	-3.057
11	S96T005523_	.4511	-.0061	2.752	.0442
12	S96T005523_Δ	.0410	-.0769	2.923	.0043
13	S96T005523_A	403.6	.3898	414.0	396.4
14	S96T005523_X	-4.409	-1.522	8.310	-5.781
15	S96T005523_AX	26.13	55.62	-129.5	40600.
16	ICSA	.0000	.0068	.0069	-.0026
17	ICSAB	.4705	.0070	.9577	-.0017
18	CCV	5.139	.0062	5.163	5.043
19	CCB	-.0009	-.0005	.0007	-.0012

FUEH 09612118.775

HNF-SD-WM-DP-219, REV. 0

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A-0004-1

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LABCORE Data Entry Template for Worklist# 14797

Analyst: B. GLOCKE Instrument: ICP01 Book# 6464AMethod: LA-505-151/161 Rev/Mod B-1

Worklist Comment: ICP B-108 (FUSION)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPBLKTJA		@ICP-F01	SOLID		
7	SERDIL	S96T005468	0 F	@ICP-F01	SOLID	
8	SAMPLE	S96T005468	0 F	@ICP-F01	SOLID	96001380 B-108
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01, SR-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, ZN-F-01, ZR-F-01						
9	DUP	S96T005468	0 F	@ICP-F01	SOLID	
10	SPK	S96T005468	0 F	@ICP-F01	SOLID	
11	CCV		@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S96T005477	0 F	@ICP-F01	SOLID	96001380 B-108
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01						

Data Entry Comments:

Sample result calculation:

$$S96T005468 \quad Al = \frac{438.1 \text{ ug}}{1} \times \frac{1}{2.082 \text{ g}} \times \frac{16}{1000} = 2.102 \pm 5 \text{ ug/g}$$

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

HNF-SD-WM-DP-219, REV. 0

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LABCORE Data Entry Template for Worklist# 14797

S Type	Sample#	R	A	Test	Matrix	Group#	Project
				SR-F-01 ,	TI-F-01 ,	TL-F-01 ,	U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01
14 DUP	S96T005477	0	F	@ICP-F01	SOLID		
15 SERDIL	S96T005478	0	F	@ICP-F01	SOLID		
16 SAMPLE	S96T005478	0	F	@ICP-F01	SOLID	96001380	B-108
	Analytes Requested:						
				AG-F-01 ,	AL-F-01 ,	AS-F-01 ,	B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01
17 DUP	S96T005478	0	F	@ICP-F01	SOLID		
18 SPK	S96T005478	0	F	@ICP-F01	SOLID		
19 CCV				@ICP-QC	QC		
20 CCB				@ICP-QC	QC		
21 SERDIL	S96T005487	0	F	@ICP-F01	SOLID		
22 SAMPLE	S96T005487	0	F	@ICP-F01	SOLID	96001380	B-108
	Analytes Requested:						
				AG-F-01 ,	AL-F-01 ,	AS-F-01 ,	B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01
23 DUP	S96T005487	0	F	@ICP-F01	SOLID		
24 SPK	S96T005487	0	F	@ICP-F01	SOLID		
25 ICSA				@ICP-QC	QC		
26 ICSAB				@ICP-QC	QC		
27 CCV				@ICP-QC	QC		

Data Entry Comments:

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

HNF-SD-WM-DP-219, REV. 0

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A-0004-I

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LABCORE Data Entry Template for Worklist# 14797

S Type	Sample#	R A Test	Matrix	Group#	Project
28 CCB		@ICP-QC	QC		

Final page for worklist # 14797

[Signature]
 Analyst Signature Date 12-11-96

Revised by:
[Signature] 12/12/96
 Analyst Signature Date

PREPARK TPA	.250 - 9.75	D.E.
		1
596700 5468-L	.250 - 9.75 - 2-8	200
5468	.250 - 9.75	40
5468-D	.250 - 9.75	40
5468-A	.250 - 2(SSA) - 7.75	40
5468-X	.250 - 1-1(WHC100) - 7.75	40
596700 5477	.250 - 9.75	40
5477-D	.250 - 9.75	40
59600 5478-L	.250 - 9.75 - 2-8	200
5478	.250 - 9.75	40
5478-D	.250 - 9.75	40
5478-A	.250 - 2(SSA) - 7.75	40
5478-X	.250 - 1-1(WHC100) - 7.75	40
596700 5487-L	.250 - 9.75 - 2-8	200
5487	.250 - 9.75	40
5487-D	.250 - 9.75	40
5487-A	.250 - 2(SSA) - 7.75	40
5487-X	.250 - 1-1(WHC100) - 7.75	40

Data Entry Comments:

Spike recovery calculation:

$$596700 5468 \quad Al = \frac{(475.6)}{(40)} - \frac{(438.1)}{(40)} \times 100 = 93.8\%$$

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

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm.

HNF-SD-WM-DP-219, REV. 0

Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	961211D	ICP2	12/11/96	12:45	BJG	Q	CONC
2	ICB	961211D	ICP2	12/11/96	12:48	BJG	Q	CONC
3	LLS	961211D	ICP2	12/11/96	12:52	BJG	Q	CONC
4	ICSA	961211D	ICP2	12/11/96	12:55	BJG	Q	CONC
5	ICSAB	961211D	ICP2	12/11/96	12:58	BJG	Q	CONC
6	PREPBLKTJA	961211D	ICP2	12/11/96	13:01	BJG	S	CONC
7	S96T005468 L	961211D	ICP2	12/11/96	13:05	BJG	S	CONC
8	S96T005468-X	961211D	ICP2	12/11/96	13:08	BJG	S	CONC
9	S96T005468-X	961211D	ICP2	12/11/96	13:11	BJG	S	CONC
10	S96T005468-A	961211D	ICP2	12/11/96	13:14	BJG	S	CONC
11	S96T005468-X	961211D	ICP2	12/11/96	13:19	BJG	S	CONC
12	CCV	961211D	ICP2	12/11/96	13:22	BJG	Q	CONC
13	CCB	961211D	ICP2	12/11/96	13:26	BJG	Q	CONC
14	S96T005477	961211D	ICP2	12/11/96	13:29	BJG	S	CONC
15	S96T005477 D	961211D	ICP2	12/11/96	13:32	BJG	S	CONC
16	S96T005478 L	961211D	ICP2	12/11/96	13:35	BJG	S	CONC
17	S96T005478	961211D	ICP2	12/11/96	13:38	BJG	S	CONC
18	S96T005478 D	961211D	ICP2	12/11/96	13:41	BJG	S	CONC
19	S96T005478 A	961211D	ICP2	12/11/96	13:44	BJG	S	CONC
20	S96T005478 X	961211D	ICP2	12/11/96	13:47	BJG	S	CONC
21	CCV	961211D	ICP2	12/11/96	13:51	BJG	Q	CONC
22	CCB	961211D	ICP2	12/11/96	13:58	BJG	Q	CONC
23	S96T005487 L	961211D	ICP2	12/11/96	14:01	BJG	S	CONC
24	S96T005487	961211D	ICP2	12/11/96	14:04	BJG	S	CONC
25	S96T005487 D	961211D	ICP2	12/11/96	14:07	BJG	S	CONC
26	S96T005487 A	961211D	ICP2	12/11/96	14:10	BJG	S	CONC
27	S96T005487 X	961211D	ICP2	12/11/96	14:13	BJG	S	CONC
28	ICSA	961211D	ICP2	12/11/96	14:20	BJG	Q	CONC
29	ICSAB	961211D	ICP2	12/11/96	14:23	BJG	Q	CONC
30	CCV	961211D	ICP2	12/11/96	14:26	BJG	Q	CONC
31	CCB	961211D	ICP2	12/11/96	14:30	BJG	Q	CONC

[Signature]
12-11-96

B-108 Fusion

S96T005468, 5477, 5478, 5479

.250-1- 2.75-1

FILE # 0961211D.TXT

S96T005487 Na failed in the first post spike - A second post spike was made and the results in:

$$Na = \frac{\left(\frac{824.2}{40}\right) - \left(\frac{484.7}{40}\right)}{10} \times 100 = 84.9\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 248 TO 262

HNF-SD-WM-DP-219, REV. 0

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.946	4.794	5.051	4.885	4.881	5.012
2	ICB	.0009	.0061	.0051	.0045	.0002	.0002
3	LLS	.0215	.0896	.1918	.1058	.0947	.0096
4	ICSA	.0028	237.9	.0177	.0019	.0001	.0002
5	ICBAB	.0260	236.7	.0220	.0090	.4481	.4494
6	PREBLKTJA	.0000	.0044	.0056	.0010	.0009	.0001
7	S96T005468 L	.0984	442.0	1.600	.5961	.0009	.0266
8	S96T005468-D	.0285	489.4	.2811	.2003	.0165	.0034
9	S96T005468-D sample	.0249	438.1	.0852	.2000	.0165	.0035
10	S96T005468-A	36.31	475.6	40.11	37.35	36.86	38.26
11	S96T005468-X	359.9	805.9	398.9	377.0	381.4	391.3
12	CCV	4.915	4.647	4.940	4.745	4.714	4.828
13	CCB	Q.0136	.0045	.0273	.0055	.0001	.0001
14	S96T005477	.0723	.120.8	.3110	.2197	.0122	.0034
15	S96T005477 D	.0423	.111.8	.4532	.0804	.0054	.0071
16	S96T005478-L	.1577	37.96	.1222	.4010	.0282	.0612
17	S96T005478	.0203	36.58	.4454	.0801	.0055	.0071
18	S96T005478 D	.0196	161.0	.2464	.1595	.0074	.0106
19	S96T005478-A	35.72	72.49	39.42	36.61	36.35	37.67
20	S96T005478-X	343.5	393.5	388.2	362.3	369.0	378.0
21	CCV	4.930	4.687	4.976	4.779	4.761	4.854
22	CCB	.0005	.0031	.0058	.0010	.0000	.0002
23	S96T005487 L	.2417	41.76	2.853	.5922	.0092	.0702
24	S96T005487	.0348	40.84	.1892	.0005	.0019	.0072
25	S96T005487 D	.0317	147.9	.1655	.0223	.0124	.0053
26	S96T005487-A	34.92	74.86	38.38	35.48	35.27	36.27
27	S96T005487-X	345.3	394.7	384.3	357.7	364.4	372.5
28	ICSA	.0026	224.0	.0108	.0040	.0001	.0004
29	ICBAB	.8972	226.3	.0251	.0034	.4289	.4307
30	CCV	4.885	4.699	5.008	4.785	4.777	4.898
31	CCB	.0011	.0029	.0003	.0060	.0000	.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.027	5.047	5.005	4.916	5.066	5.053
2	ICB	.0259	.0036	.0002	.0054	.0002	.0016
3	LLS	.1910	.2155	.0095	.1969	.0386	.0198
4	ICSA	.0466	246.5	.0001	.0199	.0018	.0097
5	ICBAB	.0027	247.2	.8954	.0173	.4521	.4620
6	PREBLKTJA	.0172	.0020	.0001	.0038	.0009	.0005
7	S96T005468 L	4.655	.7373	.1474	.9024	.2472	.4386
8	S96T005468-D	5.010	.2915	.0195	.1099	.0381	.5152
9	S96T005468-D sample	5.125	.2579	.0225	.0329	.0193	.4341
10	S96T005468-A	44.10	40.45	39.06	37.88	39.39	39.97
11	S96T005468-X	398.8	396.0	387.0	377.8	5901	391.7
12	CCV	4.939	5.039	4.919	4.712	4.992	4.974
13	CCB	.0011	.0050	.0004	.0014	.0006	.0002
14	S96T005477	4.746	.3640	.0117	.2782	.0023	.4142
15	S96T005477 D	4.520	.1632	.0373	.0067	.0067	.4201
16	S96T005478-L	3.081	.0706	.0286	1.398	.3900	.3092
17	S96T005478	1.671	.2714	.0697	.0988	.0503	.2970
18	S96T005478_D	3.200	.2284	.0107	.0965	.2280	.4346

INF-SD-WM-DP-219, REV. 0

Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	S96T005478 A	39.88	40.34	38.81	37.23	39.47	39.46
20	S96T005478 X	386.9	396.4	381.8	365.4	7104	386.6
21	CCV	5.012	5.091	4.957	4.747	5.040	5.020
22	CCB	.0046	.0046	.0018	.0002	.0006	.0005
23	S96T005487 L	-.4853	-.0997	-.3097	-.4922	-.0170	.3152
24	S96T005487 D	2.137	1.715	-.0798	-.4627	.0257	.3228
25	S96T005487 D	3.062	.3318	-.0851	.0435	.0330	.3223
26	S96T005487 A	40.61	39.75	37.94	36.52	38.55	38.58
27	S96T005487 X	386.4	391.8	377.0	360.3	7049	382.1
28	ICSA	-.0364	243.0	.0016	.0179	-.0008	.0084
29	ICSA B	-.0468	244.2	.8718	.0142	.4429	.4521
30	CCV	4.963	5.035	4.924	4.750	5.001	4.976
31	CCB	-.0041	-.0022	-.0023	-.0047	-.0008	.0006

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.107	-.0011	4.982	4.863	5.000	4.844
2	ICB	.0004	.0012	.0007	.0796	.0018	.0012
3	LLS	.0200	.0006	.1117	.5184	.0985	.0202
4	ICSA	-.0090	-.0357	91.79	.1713	-.0031	.0026
5	ICSA B	.4531	-.0339	91.47	.3617	-.0028	.9764
6	PREBELKTJA	.0010	.0004	-.0042	252.0	-.0004	-.0004
7	S96T005468 L	.1805	.0556	1.964	10240	-.1040	-.0001
8	S96T005468 D	.2451	.0398	3.552	7275	.0447	.0282
9	S96T005468 X	.1905	.0465	2.987	10160	.0219	.0424
10	S96T005468 A	38.96	.0738	41.42	10170	38.22	36.52
11	S96T005468 X	.0391	.1821	384.5	10490	384.6	376.3
12	CCV	4.900	.0013	4.847	4.600	4.789	4.584
13	CCB	.0004	.0027	.0003	.2122	.0000	.0026
14	S96T005477	.0612	.0897	1.465	8484	.0747	.0707
15	S96T005477 D	.0713	.0896	.9483	12310	.0099	.0755
16	S96T005478 L	-.0611	.5655	-.9038	8792	.1886	.5424
17	S96T005478	.0803	.1018	.2596	8705	.0122	.1038
18	S96T005478 D	.1722	.0914	1.004	10120	-.0266	.0896
19	S96T005478 A	37.93	.1141	38.38	8788	37.50	35.28
20	S96T005478 X	-.1329	.2396	374.8	9028	371.0	353.2
21	CCV	4.923	.0014	4.897	4.517	4.828	4.608
22	CCB	-.0005	.0025	-.0000	.0266	.0002	.0021
23	S96T005487 L	.1293	.3922	-.4590	9789	-.0415	.4009
24	S96T005487	-.0013	.0786	.2557	9806	-.0579	.0897
25	S96T005487 D	.0693	.1835	6.721	12210	.0230	.1888
26	S96T005487 A	36.69	.1584	37.46	9456	36.34	34.08
27	S96T005487 X	-.1353	.2537	370.4	9973	365.4	350.4
28	ICSA	-.0092	-.0386	87.83	.2691	-.0042	.0056
29	ICSA B	.4265	-.0352	88.48	.1711	-.0044	.9074
30	CCV	4.973	.0010	4.852	4.732	4.842	4.690
31	CCB	.0004	.0022	.0008	.1519	-.0006	.0015

INF-SD-WM-DP-219, REV. C

Analysis Report

Averages

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.698	4.864	5.054	4.744	4.981	4.997
2	ICB	.0053	.0009	.0013	.0124	.0002	.0040
3	LLS	.1864	.0191	.0986	.1996	.1925	.0419
4	ICSA	247.7	-.0059	-.0062	191.0	.0086	.0001
5	IC SAB	245.8	.4246	-.0083	189.4	.0073	.8861
6	PREPBLKTJA	.0014	.0031	.0005	1.511	.0008	1.225
7	S96T005468 L	.3484	.0790	.0363	180.5	-.0109	16.17
8	S96T005468 P	.1119	.0633	-.0481	160.1	.1107	7.781
9	S96T005468 D Sample	-.3191	.0857	.0651	180.6	-.0100	16.31
10	S96T005468 A	35.93	37.36	39.36	215.9	38.03	55.12
11	S96T005468 X	382.3	383.9	383.7	546.6	381.0	398.4
12	CCV	4.569	4.812	4.958	4.539	4.739	4.898
13	CCB	.0004	.0012	-.0004	.0249	.0029	-.0023
14	S96T005477	.1462	.0871	-.0897	365.4	.0494	11.35
15	S96T005477 D	-.0979	.0864	.0019	403.8	.0675	8.464
16	S96T005478 L	.6847	.2789	.0151	487.0	.1431	4.093
17	S96T005478	.0174	.0855	.0157	476.8	.3075	5.653
18	S96T005478 D	-.1924	.1771	-.0412	384.6	.3898	53.48
19	S96T005478 A	35.24	37.11	39.18	512.6	36.92	43.77
20	S96T005478 X	369.9	377.8	379.3	826.0	365.7	383.8
21	CCV	4.607	4.846	4.993	4.561	4.763	4.942
22	CCB	-.0072	.0009	-.0010	.0227	-.0015	-.0122
23	S96T005487 L	-.7947	.2173	-.4505	490.3	.4630	1.948
24	S96T005487	-.4088	.0809	.0441	484.7	-.1038	3.167
25	S96T005487 D	-.1869	.1500	.0323	342.5	.1379	3.227
26	S96T005487 A	35.08	36.10	38.25	500.2	35.59	41.63
27	S96T005487 X	368.2	372.9	373.3	824.2	360.7	376.8
28	ICSA	233.4	-.0044	-.0115	174.8	.0023	.0041
29	IC SAB	235.2	.4134	-.0071	177.4	.0074	.8546
30	CCV	4.584	4.789	4.966	4.579	4.793	4.873
31	CCB	-.0146	.0009	-.0037	.0159	.0004	-.0045

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.924	5.022	4.915	4.799	4.753	4.837
2	ICB	-.0363	.0005	.0038	.0040	.0466	.0055
3	LLS	.3860	.1998	.2016	.0955	.1930	.1455
4	ICSA	-.0176	.0351	-.0154	.0030	-.0203	-.0013
5	IC SAB	-.0189	.9726	-.0327	.0011	.0009	-.0022
6	PREPBLKTJA	-.0181	-.0154	.0048	-.0056	.0151	.0049
7	S96T005468 L	9.522	-.3610	4.536	-1.261	5.955	2.244
8	S96T005468	7.540	.9681	4.785	-.0989	1.058	2.326
9	S96T005468 D	11.85	.3868	4.118	-.6176	1.452	2.029
10	S96T005468 A	51.13	39.94	43.28	37.39	39.40	40.50
11	S96T005468 X	411.2	402.3	398.6	389.8	374.1	397.7
12	CCV	4.761	4.982	4.839	4.692	4.670	4.774
13	CCB	-.0040	-.0072	.0142	-.0111	.0491	.0152
14	S96T005477	76.98	-.1888	34.96	-.1279	1.827	3.977
15	S96T005477 D	85.94	-.2698	33.25	-.1182	2.305	3.974
16	S96T005478 L	118.4	-.5085	48.02	-1.166	7.813	5.554
17	S96T005478	121.7	.1692	47.56	-.4441	1.702	2.435
18	S96T005478 D	48.96	.6135	76.02	-.4665	2.064	2.487

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Analysis Report

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#	Sample Name	P	Pb	S	Sb	Se	Si
19	S96T005478 A	159.3	39.52	86.98	37.00	38.32	40.43
20	S96T005478-X	506.5	401.3	432.5	382.7	360.6	391.6
21	CCV	4.935	5.066	4.869	4.736	4.708	4.809
22	CCB	-.0201	-.0123	.0111	-.0084	.0445	.0106
23	S96T005487 L	112.1	52.52	52.83	1.729	6.600	7.272
24	S96T005487	116.6	-.2668	50.61	-.5062	1.464	5.401
25	S96T005487 D	77.08	.0382	25.35	-.1373	2.717	2.972
26	S96T005487-A	151.2	39.08	87.26	36.46	37.31	42.75
27	S96T005487-X	505.0	396.8	435.7	379.8	357.4	391.6
28	ICSA	-.0214	.0422	-.0376	.0007	.0229	.0134
29	ICSAAB	-.0020	.9479	-.0203	-.0072	-.0066	.0059
30	CCV	4.862	4.974	4.905	4.729	4.682	4.773
31	CCB	-.0111	-.0125	.0010	-.0148	.0580	.0081

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.832	4.853	.0388	4.869	4.730	9.492
2	ICB	.0164	.0005	-.0011	.0007	.0091	.0703
3	LLS	.1991	.0193	-.0007	.0194	.0015	.4949
4	ICSA	.0084	.0020	.0069	.0010	.0079	.0328
5	ICSAAB	.0090	.0020	.0030	.0020	.0369	.0300
6	PREPBLKTJA	.0042	.0009	.0029	.0003	.0240	-.0657
7	S96T005468 L	.6143	.0833	.6991	.1016	.2296	3.200
8	S96T005468-D	.6008	.0811	.0986	.1881	.1725	3.194
9	S96T005468 sample	.5703	.0853	.1921	.1591	.4456	2.236
10	S96T005468-A	37.50	36.96	.3810	37.78	36.29	75.76
11	S96T005468-X	371.1	373.8	1.913	351.1	366.5	33.36
12	CCV	4.624	4.626	.0344	4.715	4.674	9.111
13	CCB	.0394	.0006	-.0086	.0002	.0146	.1534
14	S96T005477	1.226	.0830	.0279	.0491	.9247	4.702
15	S96T005477 D	1.301	.0894	-.1003	.0294	.0534	3.774
16	S96T005478-L	7.345	.1644	-.5293	-.0056	5.055	28.05
17	S96T005478	1.386	.0726	.0272	.0497	.2485	3.974
18	S96T005478 D	1.457	.0893	-.0157	.0893	.2769	3.992
19	S96T005478-A	37.41	36.13	.2275	37.11	35.91	75.14
20	S96T005478-X	357.3	359.7	1.556	341.4	361.0	35.79
21	CCV	4.667	4.661	.0385	4.784	4.728	9.171
22	CCB	.0346	.0005	-.0066	-.0003	.0189	.1424
23	S96T005487 L	5.544	.1442	-2.130	-.0107	4.756	20.91
24	S96T005487	1.258	.0769	-.0198	.0104	.8552	2.542
25	S96T005487 D	2.480	.1140	-.2424	.0087	1.306	7.736
26	S96T005487-A	36.80	34.95	.3225	35.85	37.30	74.90
27	S96T005487-X	352.4	354.8	1.574	337.3	354.7	35.45
28	ICSA	.0400	.0019	-.0069	.0010	-.0034	.1151
29	ICSAAB	.0344	.0019	.0041	.0013	.0332	.0829
30	CCV	4.683	4.690	.0393	4.769	4.674	9.201
31	CCB	.0326	.0005	-.0092	.0002	.0174	.1099

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Analysis Report

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.023	.0069	5.102	4.929
2	ICB	.0031	.0006	.0012	.0018
3	LLS	.1004	.0004	.0217	.0202
4	ICSA	.0011	.0073	.0058	-.0026
5	ICSAB	.4528	.0073	.9296	-.0027
6	PREPBLKTJA	.0001	-.0001	-.0011	-.0001
7	S96T005468 L	-.0438	-.0323	.4169	.0168
8	S96T005468-D	.1062	.0206	.4532	.0599
9	S96T005468-D <i>Sp-91c</i>	.1153	.0210	.4180	.0542
10	S96T005468-A <i>12/12/96</i>	39.10	.0995	40.81	37.98
11	S96T005468-X	.5223	.5973	-.8385	389.1
12	CCV	4.904	.0079	5.074	4.775
13	CCB	.0063	.0017	.0004	.0051
14	S96T005477	.2248	.0513	.2858	.1636
15	S96T005477 D	.2344	.0454	.3347	.1741
16	S96T005478-L	1.345	.3016	.3669	.8615
17	S96T005478-	.2790	.0579	.1228	.1497
18	S96T005478 D	.2489	.0579	.2322	.1671
19	S96T005478-A	38.80	.1217	40.43	37.47
20	S96T005478-X	.7463	.6245	-.9615	379.7
21	CCV	4.950	.0082	5.118	4.810
22	CCB	.0060	.0013	-.0001	.0042
23	S96T005487 L	.9481	.2106	.1577	.7750
24	S96T005487-	.1989	.0491	.2032	.0980
25	S96T005487 D	.4675	.1159	.2718	.3366
26	S96T005487 A	37.90	.1469	39.79	36.43
27	S96T005487-X	.7401	.6277	-.9598	374.0
28	ICSA	.0087	.0087	.0055	.0022
29	ICSAB	.4435	.0083	.9124	.0005
30	CCV	4.931	.0073	5.070	4.808
31	CCB	.0047	.0011	-.0001	.0034

FILE # 09/11/90C.TAT

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A-0004-1

LABCORE Data Entry Template for Worklist# 14798

Analyst: B. Goelcke Instrument: ICP01 Book# 628488

Method: LA-505-157/161 Rev/Mod B-1

Worklist Comment: ICP B-108 (FUSION)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPBLKTJA		@ICP-F01	SOLID		
7	SAMPLE	S96T005510 0 F	@ICP-F01	SOLID	96001379	B-108
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01, SR-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, ZN-F-01, ZR-F-01						
8	DUP	S96T005510 0 F	@ICP-F01	SOLID		
9	CCV		@ICP-QC	QC		
10	CCB		@ICP-QC	QC		
11	SERDIL	S96T005511 0 F	@ICP-F01	SOLID		
12	SAMPLE	S96T005511 0 F	@ICP-F01	SOLID	96001379	B-108
Analytes Requested: AG-F-01, AL-F-01, AS-F-01, B-F-01, BA-F-01, BE-F-01, BI-F-01, CA-F-01, CD-F-01, CE-F-01, CO-F-01, CR-F-01, CU-F-01, FE-F-01, LA-F-01, LI-F-01, MG-F-01, MN-F-01, MO-F-01, NA-F-01, ND-F-01, NI-F-01, P-F-01, PB-F-01, S-F-01, SB-F-01, SE-F-01, SI-F-01, SM-F-01, SR-F-01, TI-F-01, TL-F-01, U-F-01, V-F-01, ZN-F-01, ZR-F-01						

Data Entry Comments:

Sample result calculation:

$$S96T005511 \quad Al = 14.20 \mu g \times \frac{1}{2.21 \times 10^{-4}} = 9.62 \pm 3 \mu g$$

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

Note:

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A-0004-1

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LABCORE Data Entry Template for Worklist# 14798

S Type	Sample#	R A	Test	Matrix	Group#	Project
13 DUP	S96T005511	0 F	@ICP-F01	SOLID		
14 SPK 1 ppb SPK X 10 ppm	S96T005511	0 F	@ICP-F01	SOLID		
15 SAMPLE	S96T005512	0 F	@ICP-F01	SOLID	96001379	B-108
Analytes Requested:						
			AG-F-01	AL-F-01	AS-F-01	B-F-01
			BE-F-01	BI-F-01	CA-F-01	CD-F-01
			CE-F-01	CO-F-01	CR-F-01	CU-F-01
			FE-F-01	LA-F-01	LI-F-01	MG-F-01
			MN-F-01	MO-F-01	NA-F-01	ND-F-01
			NI-F-01	P-F-01	PB-F-01	S-F-01
			SB-F-01	SE-F-01	SI-F-01	SM-F-01
			SR-F-01	TI-F-01	TL-F-01	U-F-01
			V-F-01	ZN-F-01	ZR-F-01	
16 DUP	S96T005512	0 F	@ICP-F01	SOLID		
17 ICSA			@ICP-QC	QC		
18 ICSAB			@ICP-QC	QC		
19 CCV			@ICP-QC	QC		
20 CCB			@ICP-QC	QC		

Final page for worklist # 14798

[Signature] 11-20-96
Analyst Signature Date

Reviewed by:
[Signature] 11/21/96
Analyst Signature Date

PREPARKTJA . 250ml - 10ml
S96T005510 . 250ml - 10ml
5510-D . 250ml - 10ml
S96T005511-L . 250ml - 10ml - 2ml - 8ml
5511 . 250ml - 10ml
5511-D . 250ml - 10ml
5511-A . 250ml - 2.05ml (5511) - 2.95ml
5511-X . 250ml - 1.025ml - 1.025ml (444) - 2.95ml
S96T005512 . 250ml - 10ml
5512-D . 250ml - 10ml

D.F.
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41

Data Entry Comments:

Spiked recovery calculation:

$$S96T005511. \text{al} = \frac{(57.75)}{41} - \frac{(18.20)}{41} \times 100 = 96.5\%$$

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

Note: spike true value is 1.0 ppm for all elements except for U = 2.0 ppm

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	961120C	ICP2	11/20/96	13:12	BJG	Q	CONC
2	ICB	961120C	ICP2	11/20/96	13:15	BJG	Q	CONC
3	LLS	961120C	ICP2	11/20/96	13:18	BJG	Q	CONC
4	ICSA	961120C	ICP2	11/20/96	13:20	BJG	Q	CONC
5	ICSAB	961120C	ICP2	11/20/96	13:23	BJG	Q	CONC
6	PREPBLKTJA	961120C	ICP2	11/20/96	13:28	BJG	S	CONC
7	S96T005510	961120C	ICP2	11/20/96	13:31	BJG	S	CONC
8	S96T005510_D	961120C	ICP2	11/20/96	13:35	BJG	S	CONC
9	CCV	961120C	ICP2	11/20/96	13:38	BJG	Q	CONC
10	CCB	961120C	ICP2	11/20/96	13:41	BJG	Q	CONC
11	S96T005511_L	961120C	ICP2	11/20/96	13:44	BJG	S	CONC
12	S96T005511	961120C	ICP2	11/20/96	13:47	BJG	S	CONC
13	S96T005511_D	961120C	ICP2	11/20/96	13:50	BJG	S	CONC
14	S96T005511_A	961120C	ICP2	11/20/96	13:53	BJG	S	CONC
15	S96T005511_X	961120C	ICP2	11/20/96	13:56	BJG	S	CONC
16	S96T005512	961120C	ICP2	11/20/96	14:00	BJG	S	CONC
17	S96T005512_D	961120C	ICP2	11/20/96	14:03	BJG	S	CONC
18	ICSA	961120C	ICP2	11/20/96	14:07	BJG	Q	CONC
19	ICSAB	961120C	ICP2	11/20/96	14:10	BJG	Q	CONC
20	CCV	961120C	ICP2	11/20/96	14:14	BJG	Q	CONC
21	CCB	961120C	ICP2	11/20/96	14:17	BJG	Q	CONC

11-20-96

B-108 Fusion

, 250-1 - 10-1

S96T005510, 554, 5512

File # 096120C.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 356 TO 360

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Analysis Report

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.904	4.826	5.080	4.916	4.913	5.101
2	ICB	.0000	.0170	.0040	.0024	.0002	.0003
3	LLS	.0226	.1163	.2125	.1045	.0989	.0104
4	ICSA	.0031	243.5	-.0230	.0007	.0002	.0003
5	ICSAB	.9521	239.4	-.0191	.0022	.4691	.4773
6	PREPBLKTJA	.0002	.0193	.0150	.0043	.0002	.0003
7	S96T005510	.0558	203.8	.0810	.1013	.0246	.0091
8	S96T005510_D	.0953	203.4	.2897	.0044	.0338	.0109
9	CCV	4.960	4.893	5.227	5.008	4.985	5.179
10	CCB	.0015	.0170	.0184	.0053	.0002	.0004
11	S96T005511_L	.1161	21.16	-1.237	.1966	.0079	.0367
12	S96T005511-	.0489	18.20	-.4845	.1384	.0071	.0056
13	S96T005511_D	.0417	17.66	-.0523	.0003	.0094	.0146
14	S96T005511-A	37.76	57.75	42.06	40.11	39.31	40.94
15	S96T005511-X	360.1	401.2	416.6	391.2	400.6	411.6
16	S96T005512-	.6966	16.71	-.1197	.1968	.0142	.0110
17	S96T005512_D	.3311	17.81	-.6585	.2366	.0068	.0092
18	ICSA	.0200	244.1	-.0316	-.0040	.0003	.0004
19	ICSAB	.9531	239.1	-.0083	-.0032	.4705	.4752
20	CCV	4.981	4.896	5.205	4.998	5.006	5.162
21	CCB	.0018	.0119	.0023	.0043	.0004	.0006

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.021	4.943	4.968	4.910	4.995	5.002
2	ICB	.0005	.0038	.0008	.0007	.0006	-.0006
3	LLS	.1943	.2180	Q.0132	.2031	.0449	.0215
4	ICSA	-.0038	249.5	.0025	.0151	.0024	.0095
5	ICSAB	-.0177	247.2	.9340	.0085	.4685	.4786
6	PREPBLKTJA	.0003	.0086	.0018	.0064	.0025	.0001
7	S96T005510	6.245	.8633	.0467	.0277	.1026	1.028
8	S96T005510_D	5.329	.8761	.0812	.3079	.0931	1.081
9	CCV	5.089	4.988	5.023	4.978	5.048	5.056
10	CCB	.0053	.0028	.0007	-.0008	.0012	-.0002
11	S96T005511_L	-.9995	1.454	.2537	-.8647	.2024	.4812
12	S96T005511-	2.146	.4814	.0542	.0594	.0394	.5184
13	S96T005511_D	2.200	.5871	.0429	-.1249	.0347	.5189
14	S96T005511-A	42.91	41.14	40.77	40.10	40.84	41.47
15	S96T005511-X	408.4	403.2	398.5	394.8	.7383	.2294
16	S96T005512-	1.529	.2614	.0450	.0598	.1007	.2246
17	S96T005512_D	1.724	.2583	.0070	-.1436	-.0543	.2446
18	ICSA	-.0383	251.7	.0024	.0138	.0014	.0088
19	ICSAB	-.0206	246.3	.9268	.0202	.4695	.4774
20	CCV	5.147	5.055	5.031	4.993	5.070	5.080
21	CCB	-.0195	.0038	.0007	-.0011	-.0004	.0006

HNF-SD-WM-DP-219, REV. C

Analysis Report

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#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.166	-.0019	4.964	4.686	4.991	4.950
2	ICB	-.0005	.0001	.0011	.2146	.0006	.0002
3	LLS	.0208	.0009	.1028	Q.8951	.1020	.0209
4	ICSA	-.0095	-.0364	93.93	.4348	-.0038	.0023
5	ICSAB	.4751	-.0326	92.58	.3485	-.0039	.9916
6	PREPBLKTJA	.0027	.0005	.0022	260.5	.0002	.0001
7	S96T005510	.1754	-.0064	8.359	11130.	.0089	-.0047
8	S96T005510_D	.2029	-.0075	12.71	10830.	.0363	-.0047
9	CCV	5.262	-.0023	5.011	4.916	5.065	5.069
10	CCB	.0000	-.0001	.0015	.2074	.0003	.0000
11	S96T005511 L	.5091	-.0691	2.156	11280.	-.0444	-.0956
12	S96T005511	.1117	-.0009	2.009	11180.	.0061	.0097
13	S96T005511 D	.1577	.0101	1.793	11200.	-.0045	.0145
14	S96T005511 A	41.84	-.0092	42.25	11340.	40.51	39.58
15	S96T005511 X	-.0012	.1228	397.3	11580.	401.5	395.8
16	S96T005512	.1489	.0074	.3177	11150.	.0083	-.0047
17	S96T005512_D	.0848	-.0165	.3598	10920.	.0057	-.0094
18	ICSA	-.0097	-.0390	94.24	.4833	-.0039	.0022
19	ICSAB	.4756	-.0320	92.22	.3176	-.0031	.9937
20	CCV	5.235	-.0011	5.005	5.030	5.064	5.038
21	CCB	.0007	.0002	.0029	.2418	.0005	.0001

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.753	4.828	5.000	4.777	4.984	4.960
2	ICB	.0112	.0003	.0026	.0008	-.0036	-.0017
3	LLS	.2024	.0198	.0958	.2056	.1960	.0386
4	ICSA	254.1	-.0065	-.0030	194.2	.0062	-.0094
5	ICSAB	249.5	.4407	-.0098	191.1	.0023	.9005
6	PREPBLKTJA	.0148	.0008	-.0009	1.671	-.0018	.0857
7	S96T005510	.6340	.0689	-.0003	308.4	-.2175	11.40
8	S96T005510 D	.9046	.0914	.0570	302.8	-.0597	10.02
9	CCV	4.811	4.887	5.054	4.859	5.062	5.036
10	CCB	.0039	.0001	.0030	-.0054	-.0029	-.0080
11	S96T005511 L	2.933	.0216	.2497	436.6	-1.059	2.952
12	S96T005511	.3178	.0377	.0492	435.8	-.0942	3.019
13	S96T005511 D	.5210	.0468	.0925	403.0	-.1103	2.873
14	S96T005511 A	39.11	38.79	40.99	477.4	40.21	43.86
15	S96T005511 X	397.4	394.6	395.3	818.5	400.2	400.8
16	S96T005512	.5891	.0458	.0705	583.7	-.0971	3.483
17	S96T005512_D	.4802	.0275	-.1018	604.3	-.2605	5.770
18	ICSA	254.4	-.0063	-.0039	194.1	.0062	-.0137
19	ICSAB	248.9	.4390	-.0030	190.8	.0060	.9063
20	CCV	4.801	4.913	5.069	4.836	5.064	5.042
21	CCB	.0103	.0004	.0011	-.0034	-.0017	-.0012

HNF-SD-WM-DP-219, REV. 0

Analysis Report

Averages

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.976	4.941	4.897	4.754	4.820	4.943
2	ICB	- .0114	.0223	.0034	.0062	.0469	.0019
3	LLS	.3950	.2411	.2020	.1100	.2446	.1291
4	ICSA	.0098	.0474	- .0193	- .0048	- .0086	.0092
5	ICSAB	.0304	1.003	- .0310	- .0008	- .0013	- .0008
6	PREPBLKTJA	- .0093	.0258	- .0012	.0027	.0397	.0054
7	S96T005510	52.11	1.381	7.036	12.71	2.192	4.290
8	S96T005510_D	51.55	1.081	7.177	3514	1.357	4.506
9	CCV	4.996	5.000	4.963	4.838	4.922	5.005
10	CCB	.0083	.0168	.0117	.0065	.0500	.0019
11	S96T005511 L	13.56	4.440	87.65	2.066	8.314	2.322
12	S96T005511_	16.93	1.203	91.01	- .0893	1.985	2.694
13	S96T005511 D	22.62	.8639	76.19	- .0290	1.858	2.620
14	S96T005511 A	57.89	41.59	132.1	39.12	41.30	43.65
15	S96T005511 X	426.1	410.7	493.3	400.3	388.1	421.0
16	S96T005512_	44.98	.8830	166.1	.5221	1.673	1.326
17	S96T005512 D	24.26	.4971	192.0	- .0387	1.300	1.329
18	ICSA	.0223	.0620	- .0235	- .0037	- .0019	.0053
19	ICSAB	.0193	1.004	- .0172	- .0047	.0203	.0001
20	CCV	4.970	5.042	4.935	4.833	4.884	5.024
21	CCB	- .0063	.0177	.0137	.0009	.0561	.0019

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.827	4.869	.0487	4.858	4.825	9.463
2	ICB	.0026	.0001	.0065	.0000	.0044	.0183
3	LLS	.2092	.0202	.0021	.0195	.4328	.5310
4	ICSA	- .0012	.0020	.0031	.0000	.0147	.0096
5	ICSAB	- .0005	.0020	.0049	.0003	.0208	.0013
6	PREPBLKTJA	.0045	.0012	.0087	- .0004	.0048	- .0646
7	S96T005510	- .2121	.1092	.3926	.0018	.8929	- 1.231
8	S96T005510_D	- .0729	.1113	.5461	.0025	.8300	- .9619
9	CCV	4.898	4.938	.0599	4.931	4.885	9.639
10	CCB	- .0039	.0000	.0058	- .0005	- .0048	- .0179
11	S96T005511 L	- .6858	.0540	1.607	- .1430	.4120	- 6.229
12	S96T005511_	- .0304	.0836	.3097	- .0180	1.132	- 2.019
13	S96T005511 D	.3109	.0793	.3263	.0126	.5714	- 1.574
14	S96T005511 A	39.08	39.23	7563	39.62	38.89	74.74
15	S96T005511 X	387.8	391.3	2.647	365.4	381.6	29.69
16	S96T005512_	- .0109	.0665	.4295	- .0072	.3124	- 2.417
17	S96T005512 D	- .2032	.0559	.2428	- .0482	.5451	- 3.119
18	ICSA	- .0001	.0020	.0015	.0005	.0014	.0042
19	ICSAB	- .0043	.0019	.0090	.0000	.0107	.0031
20	CCV	4.905	4.932	.0476	4.943	4.893	9.631
21	CCB	.0022	.0003	.0057	.0003	.0052	.0087

Analysis Report

Averages

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#	Sample Name	V	Y	Zn	Zr
1	ICV	4.987	.0064	5.040	4.881
2	ICB	.0014	.0000	.0011	.0006
3	LLS	.1053	.0007	.0233	.0214
4	ICSA	.0015	.0070	.0061	-.0027
5	ICSAB	.4680	.0070	.9515	-.0021
6	PREPBLKTJA	.0010	.0001	.0009	-.0006
7	S96T005510	-.0083	-.0091	.1922	-.0425
8	S96T005510_D	.0052	-.0028	.1725	-.0251
9	CCV	5.050	.0061	5.096	4.943
10	CCB	-.0004	-.0003	.0012	-.0008
11	S96T005511_L	-.0704	-.0456	.2803	-.1842
12	S96T005511	.0177	-.0024	.1052	-.0059
13	S96T005511_D	.0629	.0039	.1421	.0068
14	S96T005511_A	40.60	.0550	41.50	39.59
15	S96T005511_X	.4112	.5819	-1.175	402.7
16	S96T005512	.0107	-.0054	.1375	-.0144
17	S96T005512_D	-.0410	-.0115	.1319	-.0434
18	ICSA	.0010	.0070	.0068	-.0030
19	ICSAB	.4660	.0068	.9484	-.0031
20	CCV	5.065	.0063	5.111	4.951
21	CCB	.0005	.0000	.0013	-.0004

FILE No. 961121A.TXT

11/08/96 09:21

A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 14799

Analyst: J. WORRELL Instrument: ICP012 Book# 520488Method: LA-505-151/161 Rev/Mod B-1Worklist Comment: SW 11-21-96 ICP B-108 (SOLID WATER DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICBAB				@ICP-QC	QC		
6	PREPBLKTJA				@ICP-I01	SOLID		
7	SERDIL	S96T005489	0	I	@ICP-I01	SOLID		
8	SAMPLE	S96T005489	0	I	@ICP-I01	SOLID	96001380	B-108
	Analytes Requested: AG-I-01, AL-I-01, AS-I-01, B-I-01, BA-I-01, BE-I-01, BI-I-01, CA-I-01, CD-I-01, CE-I-01, CO-I-01, CR-I-01, CU-I-01, FE-I-01, K-I-01, LA-I-01, LI-I-01, MG-I-01, MN-I-01, MO-I-01, NA-I-01, ND-I-01, NI-I-01, P-I-01, PB-I-01, S-I-01, SB-I-01, SE-I-01, SI-I-01, SM-I-01, SR-I-01, TI-I-01, TL-I-01, U-I-01, V-I-01, ZN-I-01, ZR-I-01							
9	DUP	S96T005489	0	I	@ICP-I01	SOLID		
10	SPK, 1 ppM sample	S96T005489	0	I	@ICP-I01	SOLID		
11	ICSA				@ICP-QC	QC		
12	ICSBAB				@ICP-QC	QC		
13	CCV				@ICP-QC	QC		
14	CCB				@ICP-QC	QC		

Data Entry Comments:

Sample result calculation:

$$S96T005489 \text{ Al} = 1150 \text{ ug} \times \frac{1}{5.009 \text{ g} \times \frac{1 \text{ L}}{1000 \text{ mL}}} = 2.302 \times 2 \text{ ug/g}$$

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

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A-0004-1

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LABCORE Data Entry Template for Worklist# 14799

S Type Sample# R A Test Matrix Group# Project

Final page for worklist # 14799

John W. Hall 11-21-96
Analyst Signature Date

Reviewed by:
Paul M. Pang 12/2/96
Analyst Signature Date

PREP BLK DIRECT DF
3967005489 1
DIL SK 4-4-2-8 10
SAM 4-4 2
DUP 4-4 2
P.SPIC 4-2-2 2
SAM X0.4-9.6 25
10PPM P.SPIC 0.4-1-1-7.6 25

$$\text{Spike true value} = \frac{2(5)}{x} = 8(x) \\ x = 1.25 \text{ ppm}$$

Na, P and Si failed in the first post spike. a second post spike was made and the result was:

$$Na = \frac{\left(\frac{1138}{25}\right) - \left(\frac{885.4}{25}\right)}{10} \times 100 = 101.0\%$$

$$P = \frac{\left(\frac{563.6}{25}\right) - \left(\frac{309.2}{25}\right)}{10} \times 100 = 101.8\%$$

$$Si = \frac{\left(\frac{265.4}{25}\right) - \left(\frac{8.034}{25}\right)}{10} \times 100 = 102.9\%$$

Data Entry Comments:

Spike recovery calculation:

$$3967005489 \text{ Al} = \frac{\left(\frac{3.668}{2}\right) - \left(\frac{1.150}{2}\right)}{1.25} \times 100 = 101.0\%$$

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

Note: Spike true value is 1.25 ppm for all elements except for U = 2.50 ppm.

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Analysis Report

Summary

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	961121A	ICP2	11/21/96	16:27	JHW	Q	CONC
2	ICB	961121A	ICP2	11/21/96	16:31	JHW	Q	CONC
3	LLS	961121A	ICP2	11/21/96	16:35	JHW	Q	CONC
4	ICSA	961121A	ICP2	11/21/96	16:40	JHW	Q	CONC
5	ICSAB	961121A	ICP2	11/21/96	16:43	JHW	Q	CONC
6	PREPBLKTJA	961121A	ICP2	11/21/96	16:53	JHW	S	CONC
7	S96T005489_L	961121A	ICP2	11/21/96	16:57	JHW	S	CONC
8	S96T005489	961121A	ICP2	11/21/96	17:01	JHW	S	CONC
9	S96T005489_D	961121A	ICP2	11/21/96	17:06	JHW	S	CONC
10	S96T005489_A	961121A	ICP2	11/21/96	17:10	JHW	S	CONC
11	S96T005489_X	961121A	ICP2	11/21/96	17:15	JHW	S	CONC
12	S96T005489_10PPM	961121A	ICP2	11/21/96	17:19	JHW	S	CONC
13	ICSA	961121A	ICP2	11/21/96	17:27	JHW	Q	CONC
14	ICSA	961121A	ICP2	11/21/96	17:31	JHW	Q	CONC
15	ICSAB	961121A	ICP2	11/21/96	17:34	JHW	Q	CONC
16	CCV	961121A	ICP2	11/21/96	17:38	JHW	Q	CONC
17	CCB	961121A	ICP2	11/21/96	17:41	JHW	Q	CONC

J. Worell
11-21-96

FILE No: 961121A.TXT

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WORKLIST: 14799

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 302 TO 306.

WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					SAMPLE	
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS	(TC)	15002	GROSS WEIGHT	(W2)	7.6365
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.5461
16256	BACKGROUND in cpm	(BKG)	3.8	NET WEIGHT	(W3)	0.0904
Test Code	SAMPLE VOLUME in mL	(SS)	0.250	DELTA TIME (HOURS)	(DT)	7.00
@SR90-01	DILUTION FACTOR	DF	1			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.0268			
SOLID	SAMPLE COUNT RATE	(Rs)	1496.40	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.17	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97000108	TIME OF SEPARATION	(ST)	03:00	Rmax		N/A
Rerun	DATE OF SEPARATION	(SD)	01/22/97	DETECTION LIMIT	(Ld)	2.44
0	TIME OF COUNT	(TOC)	10:00	Sr-89/90 CONC in µCi/g		3.2562E+00
Sample Prep	DATE OF COUNT	(DOC)	01/22/97			
FUSION01						
Sample #						
S97T000002						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))**SS*(Dg/L)*REC*2220000)					
CJO	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
RGA	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
01/22/97						
Analysis Date						DETECTION LEVEL 5.31E-03 µCi/g
01/22/97	Sr-89/90 CONCENTRATION		3.26E+00	µCi/g		
Analysis Time						
05:00 AM	RELATIVE COUNTING ERROR		1.6%			
Sample Point						
B-108	PERCENT CARRIER RECOVERY		90.4%			

Analyst:	RGA	Date:	22-Jan-97
Signature of Chemist:	<i>SA Cath</i>	SAC	Date: 23 Jan 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: DUP5

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					DUP		
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000	
DUP	TOTAL COUNTS	(TC)	17959	GROSS WEIGHT	(W2)	7.6135	
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.5215	
16256	BACKGROUND in cpm	(BKG)	3.8	NET WEIGHT	(W3)	0.0920	
Test Code	SAMPLE VOLUME in mL	(SS)	0.250	DELTA TIME (HOURS)	(DT)	7.50	
@SR90-01	DILUTION FACTOR	DF	1				
Matrix	DIGEST FACTOR (g/L)	(D g/L)	2.0308				
SOLID	SAMPLE COUNT RATE	(Rs)	1792.10	Sr-90 EFFICIENCY FACTOR	(C1)	0.4180	
Batch Number	CRITICAL LEVEL	(Lc)	1.17	Y-90 EFFICIENCY FACTOR	(C2)	0.4660	
97000108	TIME OF SEPARATION	(ST)	03:00	Rmax		N/A	
ReRun	DATE OF SEPARATION	(SD)	01/22/97	DETECTION LIMIT	(Ld)	2.44	
0	TIME OF COUNT	(TOC)	10:30	Sr-89/90 CONC in µCi/g 3.8047E+00			
Sample Prep	DATE OF COUNT	(DOC)	01/22/97				
FUSION01							
Sample #							
S97T000002							
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)						
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0						
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)						
CJO	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))						
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96						
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100						
Analyst	NOTE: Expected weight = CVA * 0.1						
RGA	Detection Levels and Less Than Values are determined from Procedure LA-508-002.						
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100						
01/22/97							
Analysis Date							
01/22/97	Sr-89/90 CONCENTRATION		3.80E+00	µCi/g	DETECTION LEVEL 5.18E-03 µCi/g		
Analysis Time							
06:00 AM	RELATIVE COUNTING ERROR		1.5%				
Sample Point							
B-108	PERCENT CARRIER RECOVERY		92.0%				

Analyst:	RGA	Date:	22-Jan-97
Signature of Chemist:	SAC	Date:	23-Jan-97
SAMPLE.WB1 REV 2.0 22010NML			

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control	Page 1 of 1
		Date: 03/03/97

Project Title/Work Order HNF-SD-WM-DP-219, Rev. 0 "Tank 241-B-108, Cores 172 and 173 Analytical Results for the Final Report"	EDT NO.: EDT-620388
	ECN NO.: N/A

Name	MSIN	Text With all Attach	EDT/ECN ONLY	
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Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.035	4.994	5.212	5.121	5.115	5.224
2	ICB	-.0003	.0018	.0052	.0020	.0001	-.0001
3	LLS	.0220	.1133	.2220	.1013	.1022	.0101
4	ICSA	.0011	246.0	-.0477	.0015	.0002	-.0003
5	ICSA B	.9667	244.4	-.0451	-.0041	.4824	.4752
6	PREPBLKTJA	.0006	.3006	.0047	4.403	.0019	-.0004
7	S96T005489 L	.0618	1.184	-.0362	2.923	.0036	-.0022
8	S96T005489	.0625	1.150	.0007	2.794	.0017	-.0009
9	S96T005489 D	.0715	4.113	-.0208	8.059	.0038	-.0007
10	S96T005489 A	2.603	3.668	2.716	5.364	2.530	2.597
11	S96T005489 X	.0847	1.268	.0684	2.889	.0116	-.0067
12	S96T005489 10PPM	246.6	240.5	254.2	252.3	252.9	254.5
13	ICSA 8/11/24/96	Q.0022	246.3	-.0292	.0044	Q.0004	Q-.0001
14	ICSA	.0017	245.4	-.0030	.0024	.0003	-.0001
15	ICSA B	.9687	244.6	-.0222	-.0024	.4865	.4789
16	CCV	5.108	4.992	5.263	5.085	5.221	5.215
17	CCB	.0001	-.0029	.0112	.0035	.0003	-.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.154	4.990	5.079	5.123	5.099	5.100
2	ICB	.0288	-.0024	-.0006	-.0019	-.0021	.0002
3	LLS	.1939	.2104	.0113	.2070	.0396	.0208
4	ICSA	-.0056	250.8	.0011	.0079	-.0036	.0069
5	ICSA B	-.0020	249.6	.9376	.0171	.4673	.4810
6	PREPBLKTJA	.0067	.0204	.0003	.0063	-.0029	.0004
7	S96T005489 L	.0886	.3963	.0047	-.0152	-.0141	.3755
8	S96T005489	.1350	.0891	-.0005	.0018	-.0043	.3655
9	S96T005489 D	.0514	.0710	-.0020	-.0233	-.0082	.6451
10	S96T005489 A	2.693	2.685	2.591	2.583	2.583	2.963
11	S96T005489 X	-.0247	1.989	.0253	.1082	-.0228	.3636
12	S96T005489 10PPM	253.5	250.0	247.1	249.4	.3248	249.2
13	ICSA 5/11/24/96	-.0370	250.8	Q.0034	.0129	Q-.0032	Q-.0085
14	ICSA	.0384	251.9	.0024	.0075	-.0031	.0068
15	ICSA B	.0204	253.1	.9485	.0103	.4726	.4816
16	CCV	5.314	5.167	5.161	5.184	5.174	5.184
17	CCB	.0240	.0020	.0009	.0032	-.0038	.0001

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.383	-.0030	5.085	4.886	5.200	5.242
2	ICB	.0009	.0000	-.0004	.0013	-.0004	-.0002
3	LLS	.0221	.0010	.1022	.6132	.1059	.0215
4	ICSA	-.0100	-.0439	94.41	.0223	-.0049	.0031
5	ICSA B	.4865	-.0405	93.60	.0996	-.0037	1.040
6	PREPBLKTJA	.0032	.0009	.0057	.0832	.0006	.0036
7	S96T005489 L	.0158	.0056	-.0070	.8168	.0020	.0095
8	S96T005489	.0044	.0031	.0162	1.647	.0001	.0057
9	S96T005489 D	.0026	.0025	.0644	3.080	-.0021	.0060
10	S96T005489 A	2.658	.0014	2.562	4.507	2.611	2.623
11	S96T005489 X	.0336	.0217	.0508	4.878	.0403	.0148

Analysis Report

Averages

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#	Sample Name	Cu	Eu	Fe	K	La	Li
12	S96T005489-10PPM	-.0414	.0538	245.7	245.1	252.9	249.5
13	ICSA- 8" 11/22/96	Q-.0089	-.0425	94.14	-.1092	-.0042	Q.0030
14	ICSA	-.0089	-.0417	94.16	.1353	-.0049	.0031
15	ICSA B	.4865	-.0431	94.15	.1810	-.0053	1.033
16	CCV	5.375	-.0017	5.118	5.059	5.276	5.165
17	CCB	.0009	.0009	.0004	-.0558	.0002	.0009

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.927	4.941	5.125	5.076	5.233	5.058
2	ICB	-.0062	.0002	.0022	-.0017	-.0001	-.0036
3	LLS	.1979	.0203	.0998	.2163	.2050	.0434
4	ICSA	256.0	-.0062	-.0107	200.2	.0038	-.0063
5	ICSA B	253.8	.4434	-.0115	198.3	.0059	.9184
6	PREPBLKTJA	.0078	.0006	.0002	6.170	.0017	.0019
7	S96T005489-L	-.0312	.0033	.0431	907.5	.0169	-.0146
8	S96T005489-A	.0134	.0015	.0212	890.0	.0086	.0068
9	S96T005489-D	.0001	.0020	.0369	1037.	-.0041	.0122
10	S96T005489-A	2.450	2.464	2.641	889.5	2.610	2.590
11	S96T005489-X	.1443	.0105	.0227	885.4	.0601	.0604
12	S96T005489-10PPM	249.1	245.6	250.6	1138.	253.5	244.9
13	ICSA 8" 11/22/96	255.8	Q-.0061	-.0066	198.5	.0052	Q-.0036
14	ICSA	254.5	-.0062	-.0115	197.7	.0061	.0097
15	ICSA B	253.2	.4476	-.0119	196.1	.0042	.9199
16	CCV	4.880	5.033	5.205	4.965	5.282	5.127
17	CCB	-.0024	.0005	.0020	.0051	.0023	.0068

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.221	5.062	5.038	4.861	4.927	4.914
2	ICB	-.0024	-.0026	.0055	.0057	.0210	.0016
3	LLS	.4007	.2042	.2001	.1127	.2031	.1413
4	ICSA	.0134	.0060	-.0355	.0033	-.0328	-.0007
5	ICSA B	.0165	.9923	-.0401	.0119	-.0311	-.0016
6	PREPBLKTJA	.0005	-.0079	.0420	.0118	.0097	1.953
7	S96T005489-L	306.5	-.1949	36.96	.1171	.1524	7.136
8	S96T005489-A	319.0	-.0195	37.79	.0112	-.0315	8.775
9	S96T005489-D	138.8	-.0437	284.9	.0228	-.0044	62.60
10	S96T005489-A	317.6	2.598	40.18	2.529	2.485	12.16
11	S96T005489-X	309.2	-.1606	37.07	-.0400	.2861	8.034
12	S96T005489-10PPM	563.6	254.8	290.3	252.5	238.3	265.4
13	ICSA 8" 11/22/96	-.0010	Q.0206	-.0412	.0135	-.0309	.0138
14	ICSA	.0176	.0214	-.0478	.0106	-.0259	.0077
15	ICSA B	-.0060	1.011	-.0520	.0107	-.0058	.0073
16	CCV	5.128	5.144	5.025	4.924	4.967	4.972
17	CCB	-.0074	-.0144	.0023	.0106	.0147	.0142

Analysis Report

Averages

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.035	5.069	.0262	4.996	4.914	9.859
2	ICB	.0032	.0000	.0009	.0005	.0123	.0048
3	LLS	.2147	.0208	.0032	.0205	.4083	.5360
4	ICSA	.0078	.0023	.0099	.0010	.0205	.0633
5	ICSA	.0080	.0023	.0017	.0012	.0134	.0606
6	PREPBLKTJA	.0105	.0005	.0015	.0020	.0005	.0342
7	S96T005489 L	.0394	.0026	.0037	.0076	.0288	.0932
8	S96T005489 A	.0457	.0026	.0001	.0036	.0282	.0780
9	S96T005489 D	.0311	.0026	.0045	.0082	.0083	.1233
10	S96T005489 X	2.525	2.521	.0228	2.504	2.491	4.930
11	S96T005489 X	.3080	.0079	.0333	.0192	.2361	.6681
12	S96T005489 10PPM	244.8	246.1	1.013	231.2	239.0	19.62
13	ICSA	.0047	.0023	.0044	.0012	.0279	.0425
14	ICSA	.0063	.0022	.0026	.0010	.0207	.0336
15	ICSA	.0080	.0022	.0007	.0015	.0035	.0407
16	CCV	5.111	5.115	.0271	5.026	4.981	9.953
17	CCB	.0088	.0002	.0016	.0005	.0086	.0360

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.124	.0062	5.131	5.048
2	ICB	.0000	.0001	.0001	.0003
3	LLS	.1060	.0008	.0232	.0222
4	ICSA	.0019	.0073	.0035	.0013
5	ICSA	.4737	.0072	.9566	.0020
6	PREPBLKTJA	.0022	.0005	.0260	.0013
7	S96T005489 L	.0189	.0023	.3208	.0111
8	S96T005489 A	.0193	.0017	.0829	.0087
9	S96T005489 D	.0135	.0013	.0139	.0425
10	S96T005489 X	2.604	.0048	2.680	2.549
11	S96T005489 X	.0608	.0115	1.087	.0330
12	S96T005489 10PPM	2894	.3640	.0707	258.1
13	ICSA	0.0007	.0071	0.0041	.0028
14	ICSA	.0009	.0073	.0041	.0022
15	ICSA	.4770	.0074	.9643	.0010
16	CCV	5.189	.0068	5.211	5.131
17	CCB	.0019	.0005	.0006	.0015

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HNF-SD-WM-DP-219, REV.0

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LABCORE Data Entry Template for Worklist# 15994

Analyst: J. WORRELL Instrument: ICP01 _____ Book# 65048AMethod: LA-505-151/161 Rev/Mod D-3

Worklist Comment: ICP B-108 SOLID WATER DIGEST

S Type	Sample#	R A Test	Matrix	Group#	Project
1 ICV		@ICP-QC	QC		
2 ICB		@ICP-QC	QC		
3 LLS		@ICP-QC	QC		
4 ICSA		@ICP-QC	QC		
5 ICSAB		@ICP-QC	QC		
6 PREPBLK WJA <u>ARC</u>		@ICP-I01	SOLID		
7 SERDIL	S96T005519 0 I	@ICP-I01	SOLID		
8 SAMPLE	S96T005519 0 I	@ICP-I01	SOLID	96001379	B-108
Analytes Requested: AG-I-01, AL-I-01, AS-I-01, B-I-01, BA-I-01, BE-I-01, BI-I-01, CA-I-01, CD-I-01, CE-I-01, CO-I-01, CR-I-01, CU-I-01, FE-I-01, K-I-01, LA-I-01, LI-I-01, MG-I-01, MN-I-01, MO-I-01, NA-I-01, ND-I-01, NI-I-01, P-I-01, PB-I-01, S-I-01, SB-I-01, SE-I-01, SI-I-01, SM-I-01, SR-I-01, TI-I-01, TL-I-01, U-I-01, V-I-01, ZN-I-01, ZR-I-01					
9 DUP	S96T005519 0 I	@ICP-I01	SOLID		
10 SPK <u>DIL X</u> <u>10PPM RSPK</u>	S96T005519 0 I	@ICP-I01	SOLID		
11 ICSA		@ICP-QC	QC		
12 ICSAB		@ICP-QC	QC		
13 CCV		@ICP-QC	QC		
14 CCB		@ICP-QC	QC		

Data Entry Comments:

Sample result calculation:

$$S96T005519 \text{ AL} = 5.675 \mu\text{g} \times \frac{1}{5.108 \frac{\text{g}}{\text{mL}} \times \frac{1\text{L}}{1000\text{mL}}} = 1.112 \times 3 \mu\text{g}$$

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

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A-0004-1

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LABCORE Data Entry Template for Worklist# 15994

S Type	Sample#	R	A	Test	Matrix	Group#	Project
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Final page for worklist # 15994

John Maxwell
 Analyst Signature Date 1-13-97

Revised by:
Paul M. Parag 1/14/97
 Analyst Signature Date

DF
1

PREP BLK DIRECT

S96T005519

DIL SK 1-9-2-8 50

SAM 1-9 10

DUP 1-9 10

P.SPK 1-2-8 10

DL-X .250-9.75 40

10PPM.P.SPK .250-1-1-7.75 40

P, S, and S_i failed in the first post spike. A second post spike was made and the results are:

$$P = \left(\frac{86.330}{40} \right) - \left(\frac{72.343}{40} \right) \times 100 = 10$$

$$P = \left(\frac{510.516}{40} \right) - \left(\frac{93.629}{40} \right) \times 100 = 104.2\%$$

$$S = \left(\frac{708.299}{40} \right) - \left(\frac{316.410}{40} \right) \times 100 = 98.0\%$$

$$S_i = \left(\frac{517.340}{40} \right) - \left(\frac{109.255}{40} \right) \times 100 = 102.0\%$$

Data Entry Comments:

Spike recovery calculation:

$$S96T005519 \quad Al = \left(\frac{15.423}{10} \right) - \left(\frac{5.675}{10} \right) \times 100 = 97.5\%$$

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

Sample ID 76B56 Date/Time 01/24/97/11:23:34
Description LMCS STD Cal Y=1.33E+08X-1.60E+03
Ref. Ratio 1.043 Intensity 7889 (t= 39 us)
Laser Pulses 1000 Conc 8.00E-05 + 2.52E-06 g/L
Lifetime 295 + 1.46 us Dilution Factor 1 mL/mL
R2 .9989
Integrated 151740 FINAL RESULT 8.00E-05 + 2.52E-06 g/L
Range: HIGH

Sample ID BLANK-PREP Date/Time 01/24/97/11:28:07
Description B-108 Cal Y=8.94E+09X0
Ref. Ratio 1.073 Intensity 2455 (t= 39 us)
Laser Pulses 1000 Conc 3.32E-07 + 5.26E-09 g/L
Lifetime 263 + 1.838 us Dilution Factor 1 mL/mL
R2 .9979
Integrated 44801 FINAL RESULT 3.32E-07 + 5.26E-09 g/L
Range: LOW

Sample ID S97T000002 Date/Time 01/24/97/11:32:18
Description B-108 Cal Y=8.94E+09X0
Ref. Ratio 1.095 Intensity 79274 (t= 39 us)
Laser Pulses 1000 Conc 1.03E-05 + 1.45E-07 g/L
Lifetime 260 + 1.282 us Dilution Factor 1 mL/mL
R2 .999
Integrated 137757 FINAL RESULT 1.03E-05 + 1.45E-07 g/L
Range: LOW

Sample ID S97T000002-DUP Date/Time 01/24/97/11:35:56
Description B-108 Cal Y=8.94E+09X0
Ref. Ratio 1.1 Intensity 61772 (t= 39 us)
Laser Pulses 1000 Conc 8.02E-06 + 1.09E-07 g/L
Lifetime 257 + 1.059 us Dilution Factor 1 mL/mL
R2 .9993
Integrated 1066413 FINAL RESULT 8.02E-06 + 1.09E-07 g/L
Range: LOW

Sample ID S97T000002-SPK Date/Time 01/24/97/11:38:51
Description B-108 Cal Y=1.33E+08X-1.60E+03
Ref. Ratio 1.086 Intensity 50707 (t= 39 us)
Laser Pulses 1000 Conc 4.63E-04 + 1.45E-05 g/L
Lifetime 231 + .786 us Dilution Factor 1 mL/mL
R2 .9995
Integrated 806218 FINAL RESULT 4.63E-04 + 1.45E-05 g/L
Range: HIGH