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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
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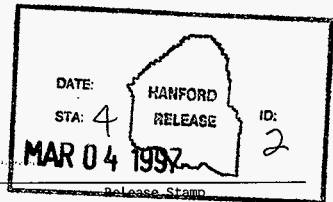
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ANALYTICAL SERVICES

**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.
P.O. Box 700
Richland, Washington**

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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.

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

Customer ID	Segment	Date Sampled	Date Received	Date Extruded	Length (inches)	Recovery (g)	Sample Description
H ₂ O Blank	Blank	9/96	10/11/96	10/16/96	0.0	254±4--drainable	The drainable liquid was clear and colorless. No organic layer.
96-504	1	9/96	10/11/96	10/16/96	13.5	26.9--drainable	The upper half was yellowish-brown and resembled a sludge slurry (D2). The lower half was brown and resembled a mixture of sludge slurry (D2) and salt slurry (M2). The drainable liquid was brown and opaque. No organic layer.
96-505	2	9/96	10/11/96	10/21/96	1.5	0.0	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 1/8 inch in size.

*Approximate Inches Extruded

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

Customer ID	Segment	Date Sampled	Date Received	Date Extruded	Length (inches)	Recovery (g)	Sample Description
96-506	1	9/96	10/11/96	10/16/96	9.0	0.0	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 (D2). 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	2	9/96	10/11/96	10/16/96	5.0	0.0	The lower half was tan, darker at the ends. The solids were slightly crumbly and resembled a dry saltcake (M5).

*Approximate Inches Extruded

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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 repreparation 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 repreparations 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 repreparation 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 re-preparation of the fusion. Consistently high RPDs between the old and new fusion suggest the sample was heterogeneous 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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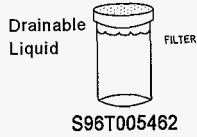
ATTACHMENT 1

B-108 SAMPLE BREAKDOWN

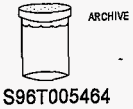
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B-108
Core:172
Field Blank (Blank H2O)
S96T005393

Attachment 1



15



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

Attachment 1

Upper
Half



S96T005502

Lower
Half



S96T005503

16



S96T005505



S96T005508



S96T005510



S96T005513



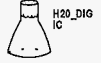
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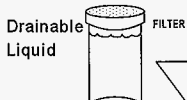
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S96T005514



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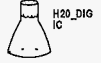
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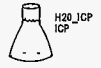
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S96T005511



S96T005514

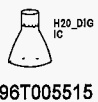
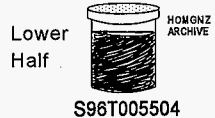


S96T005519

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

B-108
Core:172
Seg: 2 (96-505)
S96T005395

Attachment 1



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

17

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

Attachment 1

Upper
Half



HOMGNZ
BLKDN

S96T005465

Lower
Half



HOMGNZ
BLKDN

S96T005471

18



DSC
TGA

S96T005466



ARCHIVE

S96T005467



FUSION
ICP
GEA

S96T005468



H2O_DIG
IC

S96T005469



DSC
TGA

S96T005473



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S96T005475



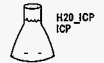
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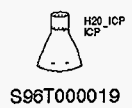
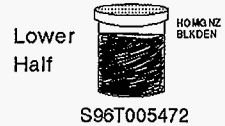


H2O_ICP
ICP

S96T005481

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

B-108
Core:173
Seg: 2 (96-507)
S96T005397



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

Composited:

Segment: Grams:

1	UH	22.6
1	LH	20.2
2	LH	21.0

B-108
Core:173
Composite

Attachment 1



HOMGNZ
COMPOS
BLKDEN

S96T005483



DSC
TGA
TK/TOC

S96T005485



ARCHIVE

S96T005486



FUSION
ALPHA
BETA
SR90
ICP
GEA
U

S96T005487
S97T000002



H2O_DIG
IC

S96T005488
S97T000015



H2O_ICP
ICP

S96T005489
S97T000016

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

ATTACHMENT 2
DATA VERIFICATION AND DELIVERABLE SUMMARY REPORT

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

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

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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Group 96001379


Reviewed by _____


Approved by _____

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

SDG 96001379
 Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
 Tank 241-B-108

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

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:

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

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.

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 (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

W O R K S U M M A R Y

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

M E T H O D B L A N K S

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

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

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.

D U P L I C A T E S

G r o u p 9 6 0 0 1 3 7 9

R E P O R T G U I D E S

Page 1

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

Page 1

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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

GUIDE, cont.

Client TWRS
Tank 241-B-108

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

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

Page 2

SUMMARY DATA SECTION

Page 2

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

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		

Group 96001379

SAMPLE SUMMARY

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SUMMARY DATA SECTION

Page 3

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

SDG 96001379
 Contact L. L. Fritts

Client 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 RCVD	RCVD RPTD			
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	
		B108 C172 FB Direct J116		LIQUID					130	S96T005463	
		B108 C172S1 DL Direct V#		LIQUID					126	S96T005523	
		B108 C172 FB Direct J116		LIQUID					130	S96T005463D	
96001379-L		B108 C172S1 DL Direct V#		LIQUID				126	S96T005523D		
		B108 C172S1 DL Direct V#		LIQUID				126	S96T005523S		
		DI Blank		LIQUID					B14351-2		
		DI Blank		LIQUID					B14608-2		
LIQUID		Lab Control Sample		LIQUID					S14351-1		
		Lab Control Sample		LIQUID					S14608-1		
		Method Blank		SOLID					B14788-2		
		Method Blank		SOLID					B14949-2		
SOLID		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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 Protocol ST
 Version 1.0
 Form DVD-QS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

PREP BATCH SUMMARY

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI- FIERS	
			BATCH	2 σ %	CLIENT	MORE	RE	BLANK		LCS
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 TWRS

Tank 241-B-108

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

Group 96001379

WORK SUMMARY

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SUMMARY DATA SECTION

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Lab id 222-S

Protocol SST

Version 1.0

Form DVD-CWS

Version 3.08

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222-S LABORATORY

TANK 241-B-108, CORE 172

WORK SUMMARY, cont.

Client THRS
Tank 241-B-108SDG 96001379
Contact L. L. Fritts

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

SDG 96001379

Contact L. L. Fritts

Client TWRS

Tank 241-B-108

WORK SUMMARY, cont.

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

Group 96001379

WORK SUMMARY

Page 3

SUMMARY DATA SECTION

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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

Group 96001379

BLANKS
Page 1
SUMMARY DATA SECTION
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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379
 Contact L. L. Fritts

Client THRS
 Tank 241-B-108

BLANKS

Lab sample id <u>B16016-2</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 Beta	12587-47-2	<1.7E-02		1.7E-02		U	TB 96012647

Lab sample id <u>B16018-2</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
Strontium 90	10098-97-2	2.11E-03	120	3.4E-03		U	SR 96012651

Lab sample id <u>B16020-2</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
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

Group 96001379

BLANKS
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222-S LABORATORY

TANK 241-B-108, CORE 172

SDG 96001379

Contact L. L. Fritts

Client THRS

Tank 241-B-108

BLANKS

Lab sample id <u>B16140-2</u>		Client sample id <u>Method Blank</u>					
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. Fritts

Client 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	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ADDED uCi/ml	2σ ERR %	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS	PREP BATCH
Total Alpha	1.82E-04	15	7.31E-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	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS	TEST	ADDED uCi/ml	2σ ERR %	REC %	3σ 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	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	1.29E-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	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	1.04E-01	15	4.2E-04			AT	1.22E-1	5.0	85	79-121	70-130	96011553

Group 96001379

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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

LAB CONTROL SAMPLES

SDG 96001379

Contact L. L. Fritts

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 _____ 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	BATCH PREP
Total Beta	1.71E-00	15	1.72E-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 _____ 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	BATCH PREP
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 _____ 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	BATCH PREP
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

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 Protocol SST
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 Form DVD-LCS
 Version 3.08
 Report date 02/24/97

222-S LABORATORY

TANK 241-B-108, CORE 172

LAB CONTROL SAMPLES

SDG 96001379
 Contact L. L. Fritts

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	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	3.84E 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

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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 <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>S96T005463D</u>	Lab sample id <u>S96T005463</u>
Dept sample id _____	Client sample id <u>B108 C172 FB Direct J116</u>
	Location/Matrix <u>R: 6 S: Field Blank C: 1 LIQUID</u>
	Received <u>10/17/96</u>
	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

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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>

222-S LABORATORY

TANK 241-B-108, CORE 172

S96T0055100

B108 C172S1 UH Fusion

DUPLICATE

SDG 96001379 Client TWRS
 Contact L. L. Fritts Tank 241-B-108
 DUPLICATE ORIGINAL
 Lab sample id S96T0055100 Lab sample id S96T005510 Client sample id B108 C172S1 UH 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	2σ TPU	MDA	RDL	QUALI-	ORIGINAL	2σ TPU	MDA	QUALI-	RPD	3σ	PROT
	uCi/g	%	uCi/g	uCi/g	FIERS TEST		uCi/g	%	uCi/g	FIERS %	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		U	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		

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DUPLICATES

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 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

S96T005511D

B108 C172S1 LH Fusion

DUPLICATE

SDG <u>96001379</u>	Client <u>IWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T005511D</u>	Lab sample id <u>S96T005511</u>
Dept sample id _____	Client sample id <u>B108 C172S1 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 6 S: 1 C: 172</u> <u>SOLID</u>
	Received <u>10/21/96</u>
	Collected _____
	Chain of custody id <u>ny/a</u>

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	-	

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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>02/26/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 172

DUPLICATE

S96T005512D

B108 C172S2 LH Fusion

SDG <u>96001379</u>	Client <u>IWR5</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T005512D</u>	Lab sample id <u>S96T005512</u>
Dept sample id _____	Dept sample id _____
Received <u>10/21/96</u>	Client sample id <u>B108 C172S2 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 6 S: 2 C: 172</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	DUPLICATE	2σ TPU	MDA	RDL	QUALI-	TEST	ORIGINAL	2σ TPU	MDA	QUALI-	RPD	3σ	PROT
	uCi/g	%	uCi/g	uCi/g	FIERS		uCi/g	%	uCi/g	FIERS	%	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			

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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>

222-S LABORATORY

TANK 241-B-108, CORE 172

DUPLICATE

S96T005523D

B108 C172S1 DL Direct V#

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>S96T005523D</u>	Lab sample id <u>S96T005523</u>
Dept sample id _____	Dept sample id _____
	Received <u>10/21/96</u>
	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 _____

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	<6.9E-03		6.9E-03		U	AT	<6.9E-03		6.9E-03	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>

TANK 241-B-108, CORE 172

S96T005511S

B108 C172S1 LH Fusion

MATRIX SPIKE

SDG <u>96001379</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S96T005511S</u>	Lab sample id <u>S96T005511</u>
Dept sample id _____	Dept sample id _____
Received <u>10/21/96</u>	Client sample id <u>B108 C172S1 LH Fusion</u> FUSION
	Location/Matrix <u>R: 6 S: 1 C: 172</u> SOLID
	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	SPIKE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	ORIGINAL uCi/g	2σ TPU %	REC 3σ % (TOTAL)	LMTS LIMITS
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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Protocol <u>SST</u>
Version <u>1.0</u>
Form <u>DVD-MS</u>
Version <u>3.08</u>
Report date <u>02/24/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 172

MATRIX SPIKE

596T005523S

B108 C172S1 DL Direct V#

SDG <u>96001379</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S96T005523S</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 LIQUID</u>
	Received <u>10/21/96</u>
	Collected _____
	Chain of custody id _____

ANALYTE	SPIKE uCi/ml	2σ TPU %	MDA uCi/ml	RDL uCi/ml	QUALI- FIERS TEST	ADDED uCi/ml	2σ ERR %	ORIGINAL uCi/ml	2σ TPU %	REC 3σ % (TOTAL)	LMTS LIMITS	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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Protocol <u>SST</u>
Version <u>1.0</u>
Form <u>DVD-MS</u>
Version <u>3.08</u>
Report date <u>02/24/97</u>

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 172

S96T005463

B108 C172 FB Direct J116

D A T A S H E E T

SDG 96001379 Client TWRS
 Contact L. L. Fritts Tank 241-B-108
 Lab sample id S96T005463 Client sample id B108 C172 FB Direct J116
 Dept sample id _____ Location/Matrix R: 6 S: Field Blank C: 1 LIQUID
 Received 10/17/96 Collected _____
 Chain of custody id _____

ANALYTE	CAS NO	RESULT uCi/ml	2σ 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

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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

S96T005523

B108 C172S1 DL Direct V#

D A T A S H E E T

SDG 96001379
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

Lab 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

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222 - S LABORATORY
TANK 241-B-108, CORE 172

S96T005511

B108 C172S1 LH Fusion

DATA SHEET

SDG <u>96001379</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
Lab sample id <u>S96T005511</u>	Client sample id <u>B108 C172S1 LH Fusion</u> <u>FUSION</u>
Dept sample id _____	Location/Matrix <u>R: 6 S: 1 C: 172</u> <u>SOLID</u>
Received <u>10/21/96</u>	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	CAS NO	RESULT uCi/g	2σ 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

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2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 172

S96T005510

B108 C172S1 UH Fusion

D A T A S H E E T

SDG 96001379
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

Lab sample id S96T005510
Dept sample id _____
Received 10/21/96

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	CAS NO	RESULT uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST
GEA Analytes							
Cobalt 60	10198-40-0	<1.2E-02		1.2E-02		U	GEA
Cesium 137	10045-97-3	5.08E-02	15	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

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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	RDL uCi/g	QUALI- FIERS	TEST
Total Alpha GEA Analytes	12587-46-1	3.85E-03	49	1.8E-03			AT
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

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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 TRRS
 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- uCi/g	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL- 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	528	1.00		70	42	10					01/08/97	W82781112	
Lab Control Sample	S16018-1		1.6E-03	1.00	528	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
 L0-160-103 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
 Revision 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

Client THRS
 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		2: Sum, Alpha		RESULT RATIO (%)	
					Alpha	Emitters	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
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	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			1.00	1.00	1.00	1.00		21	30				11/06/96	WB27809
DI Blank	B14608-2			6.9E-03	1.00	1.00	10200		21	30				11/06/96	WB27809
Lab Control Sample	S14608-1			6.8E-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

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

METHOD SUMMARIES
 Page 2
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222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY, cont.

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test <u>AT</u> Matrix _____
SDG <u>96001379</u> _____
Contact <u>L. L. Fritts</u> _____

Client <u>THRS</u> _____
Tank <u>241-B-108</u> _____

PROCEDURES	REFERENCE	222-S Lab Analytical Procedure
	LO-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 ± 2 SD	MDA <u>2.6E-03</u> ± <u>7.1E-03</u>
FOR 9 SAMPLES	EFFICIENCY <u>22</u> ± <u>2.1</u>

Group 96001379

METHOD SUMMARIES

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

222-S LABORATORY

TANK 241-B-108, CORE 172

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test AT Matrix SOLID
SDG 96001379
Contact L. L. Fritts

Client THRS
Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	1: Total	2: Sum, Alpha	RESULT RATIO (%)	
					Alpha	Emitters	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 RDLs (uCi/g)

Average 80

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	FMHM keV	DRIFT KeV	DAYS HELD	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

Page 4

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

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
	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-508-11NA	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 SDMDA 2.8E-03 \pm 3.7E-03

FOR 9 SAMPLES

EFFICIENCY 26 \pm 2.1

Group 96001379

METHOD SUMMARIES

Page 5

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 IB Matrix SOLID
 SDG 96001379
 Contact L. L. Fritts

Client THRS
 Tank 241-B-108

METHOD SUMMARY

BETA ANALYSIS
 GAS PROPORTIONAL COUNTING

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	1: Total	2: Sum, Beta	RESULT RATIO (%)	
					Beta	Emitters	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			16016-2	U			
Lab Control Sample	S16016-1			16016-1	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	YZED	DETECTOR
Preparation batch 96012647 2σ prep error 15.0 % Reference																
B108 C172S1 LH Fusion FU	S96T005511			1.7E-02	0.100	5.3E5	1.00		42	30			11/08/96	01/09	WB26872	
B108 C172S1 LH Fusion-DU	S96T005511D			1.8E-02	0.100	5.7E5	1.00		42	30			11/08/96	01/09	WB26872	
B108 C172S1 LH Fusion-SP	S96T005511S			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
 Page 6
 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 GEA Matrix SOLID
 SDG 96001379
 Contact L. L. Fritts

Client THRS
 Tank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
 GAMMA ENERGY ANALYSIS

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	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	SUF- FIX	MAX MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FMHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZED	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			8.1E-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-s
 Protocol SS1
 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.

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSIS

Test GEA Matrix _____
SDG 96001379
Contact L. L. Fritts

Client TWRS
Tank 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 MDA 2.6E-01 \pm 2.6E-01
FOR 8 SAMPLES YIELD _____ \pm _____

Group 96001379

METHOD SUMMARIES

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SUMMARY DATA SECTION

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

2 2 2 - S LABORATORY
TANK 241-B-108, CORE 172SDG 96001379
Contact L. L. Fritts

REPORT GUIDE

Client TWRS
Tank 241-B-108

SAMPLE SUMMARY

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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SUMMARY DATA SECTION

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

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 172SDG 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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Protocol	<u>SST</u>
Version	<u>1.0</u>
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Version	<u>3.08</u>
Report date	<u>02/24/97</u>

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 172SDG 96001379
Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
Tank 241-B-108

W O R K S U M M A R Y

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.

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REPORT GUIDES

Page 3

SUMMARY DATA SECTION

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Protocol	<u>SST</u>
Version	<u>1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.08</u>
Report date	<u>02/24/97</u>

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

D A T A S H E E T

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.

G r o u p 9 6 0 0 1 3 7 9

R E P O R T G U I D E S

Page 4

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

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

SDG 96001379
 Contact L. L. Fritts

G U I D E , c o n t .

Client TWRS
 Tank 241-B-108

D A T A S H E E T

- 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

G r o u p 9 6 0 0 1 3 7 9

R E P O R T G U I D E S

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

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

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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SUMMARY DATA SECTION

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 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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SUMMARY DATA SECTION

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 Protocol SST
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TANK 241-B-108, CORE 172

SDG 96001379
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

G U I D E , c o n t .

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

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

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Version 1.0
Form DVD-RG
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

D U P L I C A T E

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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REPORT GUIDES

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SUMMARY DATA SECTION

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Protocol SST
Version 1.0
Form DVD-RG
Version 3.08
Report date 02/24/97

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

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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SUMMARY DATA SECTION

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

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

M A T R I X S P I K E

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.

Group 96001379

REPORT GUIDES

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SUMMARY DATA SECTION

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

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 A T R I X S P I K E

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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Protocol SST
Version 1.0
Form DVD-RG
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 172SDG 96001379
Contact L. L. Fritts

R E P O R T G U I D E

Client TWRS
Tank 241-B-108

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

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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SUMMARY DATA SECTION

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 Protocol SST
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 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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SUMMARY DATA SECTION

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Lab id 222-S
 Protocol SST
 Version 1.0
 Form DVD-RG
 Version 3.08
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TANK 241-B-108, CORE 172

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Contact L. L. Fritts

G U I D E , c o n t .

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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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SUMMARY DATA SECTION

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Protocol SST
Version 1.0
Form DVD-RG
Version 3.08
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TANK 241-B-108, CORE 172SDG 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

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 GUIDES

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SUMMARY DATA SECTION

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

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 173

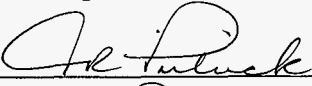
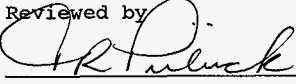
SDG 96001380
Contact L. L. Fritts

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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Group 96001380


Reviewed by _____

Approved by _____

Lab id 222-S
Protocol SST
Version 1.0
Form DVD-TOC
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

SAMPLE SUMMARY

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB		RECEIVED
				SAMPLE ID	PRIORITY COLLECTED	
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		

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SAMPLE SUMMARY

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SUMMARY DATA SECTION

Page 1

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 HWRS
 Tank 241-B-108

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

Group 96001380

SAMPLE SUMMARY

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SUMMARY DATA SECTION

Page 2

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	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS FROM/TO		LAB SAMPLE ID	DEPARTMENT SAMPLE ID		
							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	S97T000002D		
		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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SUMMARY DATA SECTION

Page 3

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



222-S LABORATORY

TANK 241-B-108, CORE 173

QC SUMMARY, cont.

SDG 96001380
 Contact L. L. Fritts

Client TMRS
 Tank 241-B-108

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	RPTD		
		Lab Control Sample	SOLID						S16362-1	
		Lab Control Sample	SOLID						S16409-1	

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QC SUMMARY

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SUMMARY DATA SECTION

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

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				QUALI- FIERS	
			BATCH	2 σ %	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

SDG 96001380

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

WORK SUMMARY

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 n/a	FUSION SOLID	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 n/a	FUSION SOLID	S97T000002 01/06/97	16409-4 16258-5 16256-4	AB GEA SR	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	FUSION SOLID	S97T000002D 01/06/97	16409-5 16258-6 16256-5	AB GEA SR	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	FUSION SOLID	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	FUSION SOLID	S96T005487D 10/17/96	14725-5 15416-4 15952-5	AB GEA SR	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	FUSION SOLID	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

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TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

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Contact L. L. Fritts

Client THRS

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		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	01/26/97 01/28/97		SLF LLF	Alpha Analysis Gamma Spectroscopy
B108 C173S2 LH Fusion Re R: 3 S: 2 C: 173		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		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		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		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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TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

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Contact L. L. Fritts

Client TWRS

Tank 241-B-108

CLIENT SAMPLE ID	MATRIX	LAB SAMPLE ID	COLLECTED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
LOCATION	Priority	RECEIVED								
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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TANK 241-B-108, CORE 173

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 Contact L. L. Fritts

Client TWRS
 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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TANK 241-B-108, CORE 173

WORK SUMMARY, cont.

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Contact L. L. Fritts

Client THRS

Tank 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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TANK 241-B-108, CORE 173

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 Contact L. L. Fritts

Client TWRS
 Tank 241-B-108

BLANKS

Lab sample id <u>B14361-2</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	<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 _____ 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	<1.9E-02		1.9E-02		U	AB 96011318
Total Beta	12587-47-2	<3.7E-02		3.7E-02		U	AB 96011318

Lab sample id <u>B15416-2</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
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

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380
Contact L. L. Fritts

BLANKS

Client IWRS
Tank 241-B-108

Lab sample id <u>B15952-2</u>		Client sample id <u>Method Blank</u>					
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	<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 _____ 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	<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 _____ 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	<u>8.20E-03</u>	51	<u>4.9E-03</u>			SR 96012650

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222-S LABORATORY

TANK 241-B-108, CORE 173

SDG 96001380

Contact L. L. Fritts

BLANKS

Client TWRSTank 241-B-108

Lab sample id <u>B16019-2</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
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 <u>B16256-2</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
Strontium 90	10098-97-2	1.72E-02	34	5.3E-03			SR 97000108

Lab sample id <u>B16258-2</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
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

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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 _____ 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	<3.2E-03		3.2E-03		U	AT 97000208

Lab sample id <u>B16362-2</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
GEA Analytes							
Cobalt 60	10198-40-0	<1.1E-02		1.1E-02		U	GEA 97000227
Cesium 137	10045-97-3	<2.3E-02		2.3E-02		U	GEA 97000227
Europium 154	15585-10-1	<3.6E-02		3.6E-02		U	GEA 97000227
Europium 155	14391-16-3	<3.0E-02		3.0E-02		U	GEA 97000227
Americium 241	14596-10-2	<8.2E-02		8.2E-02		U	GEA 97000227

Lab sample id <u>B16409-2</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	3.06E-03	100	4.1E-03		U	AB 97000273
Total Beta	12587-47-2	9.06E-02	22	1.8E-02			AB 97000273

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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>S14361-1</u>							Client sample id <u>Lab Control Sample</u>					
Dept sample id _____							Material/Matrix _____ SOLID					
ANALYTE	RESULT	2 σ TPU	MDA	RDL	QUALI- FIERS	TEST	ADDED	2 σ ERR	REC	3 σ LMTS	PROTOCOL	
	uCi/g	%	uCi/g	uCi/g			uCi/g	%	%	(TOTAL)	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 _____ SOLID					
ANALYTE	RESULT	2 σ TPU	MDA	RDL	QUALI- FIERS	TEST	ADDED	2 σ ERR	REC	3 σ LMTS	PROTOCOL	
	uCi/g	%	uCi/g	uCi/g			uCi/g	%	%	(TOTAL)	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	2 σ TPU	MDA	RDL	QUALI- FIERS	TEST	ADDED	2 σ ERR	REC	3 σ LMTS	PROTOCOL	
	uCi/g	%	uCi/g	uCi/g			uCi/g	%	%	(TOTAL)	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

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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	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	8.10E-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	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	1.41E-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	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	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>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	3.71E-03	15				GEA	3.72E03	5.0	100	76-124		96012648
Cesium 137	3.61E-03	15				GEA	3.69E03	5.0	98	76-124	80-120	96012648

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-03	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

Group 96001380

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 173

S96T005468D

B108 C173S1 UH Fusion

DUPLICATE

SDG <u>96001380</u>	Client <u>THRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T005468D</u>	Lab sample id <u>S96T005468</u>
Dept sample id _____	Dept sample id _____
	Received <u>10/17/96</u>
	Client sample id <u>B108 C173S1 UH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: 1 C: 173</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	DUPLICATE	2 σ TPU	MDA	RDL	QUALI-	ORIGINAL	2 σ TPU	MDA	QUALI-	RPD	3 σ	PROT
	uCi/g	%	uCi/g	uCi/g	FIERS		TEST	uCi/g	%	uCi/g	FIERS	
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	U	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	-		

Group 96001380

DUPLICATES

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SUMMARY DATA SECTION

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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>

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T005477D

B108 C173S1 LH Fusion

DUPLICATE

SDG <u>96001380</u>	Client <u>THRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T005477D</u>	Lab sample id <u>S96T005477</u>
Dept sample id _____	Dept sample id _____
	Received <u>10/17/96</u>
	Client sample id <u>B108 C173S1 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: 1 C: 173</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>

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	-		

Group 96001380

DUPLICATES

Page 2

SUMMARY DATA SECTION

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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>

222-S LABORATORY

TANK 241-B-108, CORE 173

S96T0054780

B108 C173S2 LH Fusion

DUPLICATE

SDG <u>96001380</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T0054780</u>	Lab sample id <u>S96T005478</u>
Dept sample id _____	Client sample id <u>B108 C173S2 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: 2 C: 173</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>

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	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 <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>

222-S LABORATORY
TANK 241-B-108, CORE 173

S96T005487D

B108 C173 COMP Fusion

DUPLICATE

SDG <u>96001380</u>	Client <u>THRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S96T005487D</u>	Lab sample id <u>S96T005487</u>
Dept sample id _____	Dept sample id _____
	Received <u>10/17/96</u>
	Client sample id <u>B108 C173 COMP Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: Core Composite C</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>

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 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 <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>

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000001D

B108 C173S2 LH Fusion Re

DUPLICATE

SDG <u>96001380</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S97T000001D</u>	Lab sample id <u>S97T000001</u>
Dept sample id _____	Client sample id <u>B108 C173S2 LH Fusion Re FUSION</u>
	Location/Matrix <u>R: 3 S: 2 C: 173 SOLID</u>
	Received <u>01/06/97</u>
	Collected _____
	Chain of custody id <u>n/a</u>

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

Page 23

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>

222-S LABORATORY

TANK 241-B-108, CORE 173

S97T000020

B108 C173 Comp Fusion Re

DUPLICATE

SDG 96001380

Contact L. L. Fritts

DUPLICATE

Lab sample id S97T000020

Dept sample id

ORIGINAL

Lab sample id S97T000020

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/g

ANALYTE	DUPLICATE	2σ TPU	MDA	RDL	QUALI-	ORIGINAL	2σ TPU	MDA	QUALI-	RPD	3σ	PROT
	uCi/g	%	uCi/g	uCi/g	FIERS TEST		uCi/g	%	uCi/g	FIERS	%	TOT 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

TANK 241-B-108, CORE 173

B108 C173S1 LH Fusion

S96T005477S

MATRIX SPIKE

SDG <u>96001380</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S96T005477S</u>	Lab sample id <u>S96T005477</u>
Dept sample id _____	Client sample id <u>B108_C173S1 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: 1 C: 173</u> <u>SOLID</u>
	Received <u>10/17/96</u>
	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	SPIKE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS TEST	ADDED uCi/g	2σ ERR %	ORIGINAL uCi/g	2σ TPU %	REC 3σ % (TOTAL)	LMTS LIMITS	PROTOCOL
Total Beta	9.68E-01				B TB	6.67E01	5.0	2.85E-01	15	103	65-135	75-125

Group 96001380

MATRIX SPIKES

Page 1

SUMMARY DATA SECTION

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Lab id <u>222-S</u>
Protocol <u>SST</u>
Version <u>1.0</u>
Form <u>DVD-HS</u>
Version <u>3.08</u>
Report date <u>02/26/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 173

MATRIX SPIKE

S961005478S

B108 C173S2 LH Fusion

SDG <u>96001380</u>	Client <u>TWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S961005478S</u>	Lab sample id <u>S961005478</u>
Dept sample id _____	Client sample id <u>B108 C173S2 LH Fusion</u> <u>FUSION</u>
	Location/Matrix <u>R: 3 S: 2 C: 173</u> <u>SOLID</u>
	Collected _____
	Received <u>10/17/96</u>
	Chain of custody id <u>n/a</u>

ANALYTE	SPIKE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS TEST	ADDED uCi/g	2σ ERR %	ORIGINAL uCi/g	2σ TPU %	REC 3σ % (TOTAL)	LMTS LIMITS	PROTOCOL
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 <u>222-s</u>
Protocol <u>SST</u>
Version <u>1.0</u>
Form <u>DVD-MS</u>
Version <u>3.08</u>
Report date <u>02/24/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 173

MATRIX SPIKE

S96T005487S

B108 C173 COMP Fusion

SDG <u>96001380</u>	Client <u>THRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S96T005487S</u>	Lab sample id <u>S96T005487</u>
Dept sample id _____	Client sample id <u>B108 C173 COMP Fusion</u> <u>FUSION</u>
	Location/Matrix <u>B: 3 S: Core Composite C</u> <u>SOLID</u>
	Collected _____
	Chain of custody id <u>n/a</u>
	Received <u>10/17/96</u>

ANALYTE	SPIKE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS	TEST	ADDED uCi/g	2σ ERR %	ORIGINAL uCi/g	2σ TPU %	REC 3σ % (TOTAL)	LMTS LIMITS	PROTOCOL	
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

Page 3

SUMMARY DATA SECTION

Page 27

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

222-S LABORATORY

TANK 241-B-108, CORE 173

MATRIX SPIKE

S97T000001S

B108 C173S2 LH Fusion Re

SDG <u>96001380</u>	Client <u>IWRS</u>
Contact <u>L. L. Fritts</u>	Tank <u>241-B-108</u>
MATRIX SPIKE	ORIGINAL
Lab sample id <u>S97T000001S</u>	Lab sample id <u>S97T000001</u>
Dept sample id _____	Client sample id <u>B108 C173S2 LH Fusion Re FUSION</u>
	Location/Matrix <u>R: 3 S: 2 C: 173 SOLID</u>
	Received <u>01/06/97</u>
	Collected _____
	Chain of custody id <u>n/a</u>

ANALYTE	SPIKE uCi/g	2σ TPU %	MDA uCi/g	RDL uCi/g	QUALI- FIERS TEST	ADDED uCi/g	2σ ERR %	ORIGINAL uCi/g	2σ TPU %	REC 3σ % (TOTAL)	LIMITS 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 <u>222-S</u>
Protocol <u>SST</u>
Version <u>1.0</u>
Form <u>DVD-MS</u>
Version <u>3.08</u>
Report date <u>02/24/97</u>

222-S LABORATORY

TANK 241-B-108, CORE 173

MATRIX SPIKE

S97T000002S

B108 C173 Comp Fusion Re

SDG 96001380

Contact L. L. Fritte

MATRIX SPIKE

Lab sample id S97T000002S

Dept sample id _____

ORIGINAL

Lab sample id S97T000002

Dept sample id _____

Received 01/06/97

Client JWRS

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

2 2 2 - S L A B O R A T O R Y
TANK 241-B-108, CORE 173

S97T000002

B108 C173 Comp Fusion Re

D A T A S H E E T

SDG 96001380
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

Lab sample id S97T000002
Dept sample id _____
Received 01/06/97

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	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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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. Fritts

Client TWRS
Tank 241-B-108

Lab sample id S96T005477
Dept sample id _____
Received 10/17/96

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

2 2 2 - S LABORATORY
TANK 241-B-108, CORE 173

S96T005468

B108 C173S1 UH Fusion

DATA SHEET

SDG 96001380
Contact L. L. Fritts

Client TWRs
Tank 241-B-108

Lab sample id S96T005468
Dept sample id _____
Received 10/17/96

Client sample id B108 C173S1 UH Fusion FUSION
Location/Matrix R: 3 S: 1 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
GEA Analytes							
Cobalt 60	10198-40-0	<1.8E-02		1.8E-02		U	GEA
Cesium 137	10045-97-3	2.30E 01	15	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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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

B108 C173S2 LH Fusion

DATA SHEET

SDG 96001380
Contact L. L. Fritts

Client TWRS
Tank 241-B-108

Lab sample id S96T005478
Dept sample id _____
Received 10/17/96

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

222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY

STRONTIUM-89/90

GAS PROPORTIONAL COUNTING

Test SR 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	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 RDIs (uCi/g)

Group 96001380

METHOD SUMMARIES

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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 173

METHOD SUMMARY

STRONTIUM-89/90

GAS PROPORTIONAL COUNTING

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

Client THRS
 Tank 241-B-108

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		2σ 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		2σ 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		2σ 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 ± 2 SD MDA 3.3E-03 ± 2.9E-03
 FOR 12 SAMPLES YIELD 86 ± 18
 EFFICIENCY 41 ± 0.98

Group 96001380

METHOD SUMMARIES
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Lab id 222-S
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222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

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

Client INRS
 Tank 241-B-108

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 RATIOS (%)				
									3+1	2 α	4+2	2 α	
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	S97T0000002	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	

Group 96001380

METHOD SUMMARIES

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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 173

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

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

Client THRS
 Tank 241-B-108

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MAX uCi/g	MDA	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT keV	DAYS HELD	ANAL- 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	S97T000002	01		1.8E-02	0.100	493		1.00		42	30			01/15/97	01/29	WB27806	
B108 C173 Comp Fusion Re	S97T000002D	01		1.8E-02	0.100	492		1.00		42	30			01/15/97	01/29	WB27806	
B108 C173 Comp Fusion Re	S97T000002S	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 ± 2 SD MDA 2.9E-02 ± 4.9E-02
 FOR 10 SAMPLES EFFICIENCY 44 ± 3.2

Group 96001380

METHOD SUMMARIES

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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 173

METHOD SUMMARY

ALPHA ANALYSIS

GAS PROPORTIONAL COUNTING

Test AT Matrix SOLID

SDG 96001380

Contact L. L. Fritts

Client THRS

Tank 241-B-108

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	1: Total	2: Sum, Alpha	RESULT RATIO (%)	
					Alpha	Emitters	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 RDLs (uCi/g)

80

Average

Group 96001380

METHOD SUMMARIES

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Lab id 222-S

Protocol SST

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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	SUF- FIX	MDA uCi/g	ALIQ ml	PREP FAC	DILU- TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- YZED	DETECTOR
Preparation batch 96010903		2σ 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	4.4E5	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		2σ 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-508-11NA 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 ± 2 SD MDA 6.6E-03 ± 1.1E-02
 FOR 12 SAMPLES EFFICIENCY 26 ± 2.1

Group 96001380

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 THRS
 Tank 241-B-108

METHOD SUMMARY

BETA ANALYSIS

GAS PROPORTIONAL COUNTING

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	1: Total	2: Sum, Beta	RESULT RATIO (%)	
					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	FMHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	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

Group 96001380

METHOD SUMMARIES

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222-S LABORATORY

TANK 241-B-108, CORE 173

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

Client Twrs
 Tank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
 GAMMA ENERGY ANALYSIS

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	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)

Group 96001380

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 173

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

Client THRS
 Tank 241-B-108

METHOD SUMMARY

GAMMA SPECTROSCOPY
 GAMMA ENERGY ANALYSIS

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	MAX MDA uc/g	ALIQ ml	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	ANAL- PREPARED	YZED	DETECTOR
Preparation batch 96012029		2σ 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						GEA03
Lab Control Sample	S15416-1				1.00	4.8E5	1.00			50						GEA03
Preparation batch 96012648		2σ 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		2σ 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		2σ 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

Group 96001380

METHOD SUMMARIES

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 Protocol SST
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 Version 3.08
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222-S LABORATORY

TANK 241-B-108, CORE 173

METHOD SUMMARY, cont.

GAMMA SPECTROSCOPY
GAMMA ENERGY ANALYSISTest GEA Matrix _____SDG 96001380 _____Contact L. L. Fritts _____Client TWRS _____Tank 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 _____

Group 96001380

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 _____

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

SAMPLE DATA SUMMARY

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Table 3. Data Summary Table
B-108

CORE NUMBER: 172
SEGMENT #: Field Blank

SEGMENT PORTION: Field Blank

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005463			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
S96T005463			DSC Exotherm on Perkin Elmer	Joules/g	100.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T005463			Specific Gravity	Sp.G.	99.75	n/a	2.270	2.298	2.284	1.23	n/a	1.00e-03	n/a
S96T005463			% Water by TGA using Mettler	%	99.81	n/a	99.42	99.69	99.56	0.27	n/a	n/a	n/a
S96T005463	D		Silver-ICP-Acid Dil.	ug/ml	98.60	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Aluminum-ICP-Acid Dil.	ug/ml	97.40	<5.00e-02	1.850	1.780	1.815	3.86	n/a	3.50e-01	n/a
S96T005463	D		Arsenic-ICP-Acid Dil.	ug/ml	103.6	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Boron-ICP-Acid Dil.	ug/ml	99.80	<5.00e-02	2.080	2.000	2.040	3.92	n/a	3.50e-01	n/a
S96T005463	D		Barium-ICP-Acid Dil.	ug/ml	98.40	<5.00e-02	<3.50e-01	<3.50e-1	n/a	n/a	n/a	3.50e-01	n/a
S96T005463	D		Beryllium-ICP-Acid Dil.	ug/ml	102.8	<5.00e-01	<3.50e-02	<3.50e-2	n/a	n/a	n/a	3.50e-02	n/a
S96T005463	D		Bismuth-ICP-Acid Dil.	ug/ml	101.6	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Calcium-ICP-Acid Dil.	ug/ml	99.20	<1.00e-01	17.00	17.00	17.00	0.00	n/a	7.00e-01	n/a
S96T005463	D		Cadmium-ICP-Acid Dil.	ug/ml	100.4	<5.00e-03	<3.50e-02	<3.50e-2	n/a	n/a	n/a	3.50e-02	n/a
S96T005463	D		Cerium-ICP-Acid Dil.	ug/ml	98.60	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Cerium-ICP-Acid Dil.	ug/ml	100.6	<2.00e-02	<1.40e-01	<1.40e-1	n/a	n/a	n/a	1.40e-01	n/a
S96T005463	D		Cobalt-ICP-Acid Dil.	ug/ml	100.6	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Chromium-ICP-Acid Dil.	ug/ml	104.2	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Copper-ICP-Acid Dil.	ug/ml	100.0	<5.00e-02	<3.50e-01	<3.50e-1	n/a	n/a	n/a	3.50e-01	n/a
S96T005463	D		Iron-ICP-Acid Dil.	ug/ml	100.4	<5.00e-01	3.560	4.280	3.920	18.4	n/a	3.500	n/a
S96T005463	D		Potassium-ICP-Acid Dil.	ug/ml	100.2	<5.00e-02	<3.50e-01	<3.50e-1	n/a	n/a	n/a	3.50e-01	n/a
S96T005463	D		Lanthanum-ICP-Acid Dil.	ug/ml	100.4	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Lithium-ICP-Acid Dil.	ug/ml	100.4	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Magnesium-ICP-Acid Dil.	ug/ml	96.20	<1.00e-01	3.630	3.580	3.605	1.39	n/a	7.00e-01	n/a
S96T005463	D		Manganese-ICP-Acid Dil.	ug/ml	97.80	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Manganese-ICP-Acid Dil.	ug/ml	100.6	<5.00e-02	<3.50e-01	<3.50e-1	n/a	n/a	n/a	3.50e-01	n/a
S96T005463	D		Molybdenum-ICP-Acid Dil.	ug/ml	96.40	<1.00e-01	56.30	55.50	55.90	1.43	n/a	7.00e-01	n/a
S96T005463	D		Sodium-ICP-Acid Dil.	ug/ml	100.4	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Neodymium-ICP-Acid Dil.	ug/ml	100.4	<2.00e-02	<1.40e-01	<1.40e-1	n/a	n/a	n/a	1.40e-01	n/a
S96T005463	D		Nickel-ICP-Acid Dil.	ug/ml	99.60	<2.00e-01	< 1.400	<1.40e0	n/a	n/a	n/a	1.400	n/a
S96T005463	D		Phosphorus-ICP-Acid Dil.	ug/ml	99.80	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Lead-ICP-Acid Dil.	ug/ml	98.80	<1.00e-01	8.650	8.890	8.770	2.74	n/a	7.00e-01	n/a
S96T005463	D		Sulfur-ICP-Acid Dil.	ug/ml	95.80	<6.00e-02	<6.20e-01	<6.20e-1	n/a	n/a	n/a	4.20e-01	n/a
S96T005463	D		Antimony-ICP-Acid Dil.	ug/ml	97.20	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Selenium-ICP-Acid Dil.	ug/ml	99.80	<5.00e-02	1.910	1.950	1.930	2.07	n/a	3.50e-01	n/a
S96T005463	D		Silicon-ICP-Acid Dil.	ug/ml	97.20	<1.00e-01	<7.00e-01	<7.00e-1	n/a	n/a	n/a	7.00e-01	n/a
S96T005463	D		Samarium-ICP-Acid Dil.	ug/ml	97.60	<1.00e-02	7.35e-02	7.35e-02	7.35e-02	0.00	n/a	7.00e-02	n/a
S96T005463	D		Strontium-ICP-Acid Dil.	ug/ml	97.00	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Titanium-ICP-Acid Dil.	ug/ml	96.80	<2.00e-01	< 1.400	<1.40e0	n/a	n/a	n/a	1.400	n/a
S96T005463	D		Thallium-ICP-Acid Dil.	ug/ml	95.20	<5.00e-01	< 3.500	<3.50e0	n/a	n/a	n/a	3.500	n/a
S96T005463	D		Vanadium-ICP-Acid Dil.	ug/ml	100.2	<5.00e-02	<3.50e-01	<3.50e-1	n/a	n/a	n/a	3.50e-01	n/a
S96T005463	D		Zinc-ICP-Acid Dil.	ug/ml	101.6	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Zinc-ICP-Acid Dil.	ug/ml	98.20	<1.00e-02	<7.00e-02	<7.00e-2	n/a	n/a	n/a	7.00e-02	n/a
S96T005463	D		Fluoride-IC-Dionex 4000/4500	ug/ml	100.0	<1.20e-02	2.54e-01	2.63e-01	2.59e-01	3.48	n/a	1.20e-02	n/a
S96T005463	D		Chloride-IC-Dionex 4000/4500	ug/ml	94.05	<1.70e-02	10.05	12.10	11.07	18.0	n/a	1.717	n/a
S96T005463	D		Nitrite-IC - Dionex 4000/4500	ug/ml	93.35	<1.08e-01	19.70	19.80	19.75	0.51	n/a	1.08e-01	n/a

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

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	1.25e-01	n/a
S96T005463			Nitrate by IC-Dionex 4000/4500	ug/mL	95.29	<1.39e-01	51.09	51.40	51.25	0.59	n/a	1.39e-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	1.20e-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	102.51	<1.05e-01	<1.05e-01	<1.05e-1	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-6	n/a	n/a	n/a	7.13e-06	5.00E+02

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Table 3. Data Summary Table
B-108

CORE NUMBER: 172
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005502		BULK Density of Sample	g/mL	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01		n/a
S96T005505		DSC Exotherm using Mettler	Joules/g	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a		n/a
S96T005505		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
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	5.55e+03	4.87e+03	5.21e+03	13.1	n/a	n/a	399.0	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	n/a	200.0	n/a
S96T005510	F	Aluminium -ICP-Fusion	ug/g	96.60	<5.00e-02	9.92e+04	9.89e+04	9.90e+04	0.30	n/a	n/a	996.0	n/a
S96T005510	F	Arsenic -ICP-Fusion	ug/g	101.6	<1.00e-01	<2.00e+03	<1.99e3	n/a	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	n/a	996.0	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	n/a	996.0	n/a
S96T005510	F	Beryllium -ICP-Fusion	ug/g	102.0	<5.00e-03	< 99.80	<9.97e1	n/a	n/a	n/a	n/a	99.60	n/a
S96T005510	F	Bismuth -ICP-Fusion	ug/g	100.4	<1.00e-01	3.04e+03	2.59e+03	2.82e+03	16.0	n/a	n/a	2.00e+03	n/a
S96T005510	F	Calcium -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	< 99.80	<9.97e1	n/a	n/a	n/a	n/a	99.60	n/a
S96T005510	F	Cerium -ICP-Fusion	ug/g	98.20	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Cobalt -ICP-Fusion	ug/g	99.80	<2.00e-02	<3.99e+02	<3.99e2	n/a	n/a	n/a	n/a	399.0	n/a
S96T005510	F	Chromium -ICP-Fusion	ug/g	100.0	<1.00e-02	5.00e+02	526.0	513.0	5.07	n/a	n/a	200.0	n/a
S96T005510	F	Copper -ICP-Fusion	ug/g	103.4	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Iron -ICP-Fusion	ug/g	99.20	<5.00e-02	4.07e+03	6.18e+03	5.12e+03	41.2	n/a	n/a	996.0	n/a
S96T005510	F	Lanthanum -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.98e+02	<9.97e2	n/a	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Lithium -ICP-Fusion	ug/g	99.00	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	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	n/a	2.00e+03	n/a
S96T005510	F	Manganese -ICP-Fusion	ug/g	96.60	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Molybdenum -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.98e+02	<9.97e2	n/a	n/a	n/a	n/a	996.0	n/a
S96T005510	F	Sodium -ICP-Fusion	ug/g	95.60	<1.670	1.50e+05	1.47e+05	1.48e+05	2.02	n/a	n/a	2.00e+03	n/a
S96T005510	F	Neodymium -ICP-Fusion	ug/g	99.60	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Neodymium -ICP	ug/g	99.60	<2.00e-01	2.54e+04	2.51e+04	2.52e+04	1.19	n/a	n/a	3.99e+03	n/a
S96T005510	F	Phosphorus -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Lead -ICP-Fusion	ug/g	98.00	<1.00e-01	3.43e+03	3.49e+03	3.46e+03	1.73	n/a	n/a	2.00e+03	n/a
S96T005510	F	Sulfur -ICP-Fusion	ug/g	95.00	<6.00e-02	<1.20e+03	<1.20e3	n/a	n/a	n/a	n/a	1.20e+03	n/a
S96T005510	F	Antimony -ICP-Fusion	ug/g	96.40	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Selenium -ICP-Fusion	ug/g	98.80	<5.00e-02	2.09e+03	2.19e+03	2.14e+03	4.67	n/a	n/a	996.0	n/a
S96T005510	F	Silicon -ICP-Fusion	ug/g	96.60	<1.00e-01	<2.00e+03	<1.99e3	n/a	n/a	n/a	n/a	2.00e+03	n/a
S96T005510	F	Samarium -ICP-Fusion	ug/g	97.40	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Strontium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Titanium -ICP-Fusion	ug/g	96.40	<2.00e-01	<3.99e+03	<3.99e3	n/a	n/a	n/a	n/a	3.99e+03	n/a
S96T005510	F	Thallium -ICP-Fusion	ug/g	94.60	<5.00e-01	<9.98e+03	<9.97e3	n/a	n/a	n/a	n/a	9.96e+03	n/a
S96T005510	F	Uranium -ICP-Fusion	ug/g	99.80	<5.00e-02	<9.98e+02	<9.97e2	n/a	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	n/a	200.0	n/a
S96T005510	F	Zinc -ICP-Fusion	ug/g	97.60	<1.00e-02	<2.00e+02	<1.99e2	n/a	n/a	n/a	n/a	200.0	n/a
S96T005510	F	Zirconium -ICP-Fusion	ug/g	98.72	<1.35e-02	<1.18e-02	<1.41e-2	n/a	n/a	n/a	n/a	1.20e-02	n/a
S96T005510	F	Cobalt-60 by GEA	uCi/g										0.960
S96T005510	F	Cesium-137 by GEA	uCi/g										0.960
S96T005510	F	Cesium-154 by GEA	uCi/g										0.960
S96T005510	F	Europium-155 by GEA	uCi/g										0.960

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005510	F		Americium-241 by GFA	uCi/g	n/a	<7.02e-02	<3.14e-01	<3.08e-01	n/a	n/a	n/a	3.14e-01	n/a	n/a
S96T005513	W		Fluoride-IC-Dionex 4000/4500	ug/g	103.4	<1.20e-02	1.40e+04	1.24e+04	1.36e+04	17.6	n/a	51.18	n/a	n/a
S96T005513	W		Chloride-IC-Dionex 4000/4500	ug/g	97.34	4.60e-02	1.76e+03	865.0	1.31e+03	68.2	n/a	72.49	n/a	n/a
S96T005513	W		Nitrite-IC - Dionex 4000/4500	ug/g	96.30	<1.08e-01	1.11e+04	9.88e+03	1.05e+04	11.6	n/a	460.5	n/a	n/a
S96T005513	W		Bromide by Ion Chromatograph	ug/g	100.3	<1.25e-01	<5.35e+02	<5.03e+02	n/a	n/a	n/a	533.0	n/a	n/a
S96T005513	W		Nitrate by IC-Dionex 4000/4500	ug/g	97.98	<1.39e-01	7.76e+04	6.91e+04	7.34e+04	11.6	n/a	592.6	n/a	n/a
S96T005513	W		Phosphate-IC-Dionex 4000/4500	ug/g	95.22	<1.20e-01	1.27e+05	1.05e+05	1.16e+05	19.0	n/a	511.8	n/a	n/a
S96T005513	W		Sulfate by IC-Dionex 4000/4500	ug/g	100.5	<1.58e-01	8.21e+03	6.85e+03	7.53e+03	18.1	n/a	588.4	n/a	n/a
S96T005513	W		Oxalate by IC-Dionex 4000/4500	ug/g	106.7	<1.05e-01	<4.48e+02	<4.23e+02	n/a	n/a	n/a	447.7	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005503			Bulk Density of Sample	g/ml	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T005506			DSC Exotherm using Mettler	Joules/g	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005506			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005506			% Water by TGA using Mettler	%	100.3	n/a	34.10	34.68	34.39	1.69	n/a	n/a	n/a	n/a
S96T005511	F		Uranium by Phosphorescence	ug/g	100.3	4.580	1.28e+03	1.26e+03	1.27e+03	1.57	111.7	1.950	1.31e+00	n/a
S96T005511	F		U-Phosphorescence Inst. Error	% Inst Error	3.22	2.310	1.310	1.330	1.320	1.33	n/a	n/a	n/a	n/a
S96T005511	F		Strontium-89/90 High Level	uCi/g	100.6	2.00e-03	4.25e-01	3.88e-01	4.06e-01	9.30	n/a	3.00e-03	3.28e+00	n/a
S96T005511	F		Nickel -ICP-Fusion	ug/g	99.20	8.60e-02	1.59e+03	1.64e+03	1.62e+03	3.10	99.60	435.0	n/a	n/a
S96T005511	F		Silver -ICP-Fusion	ug/g	98.00	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	92.10	216.0	n/a
S96T005511	F		Aluminium -ICP-Fusion	ug/g	96.60	<5.00e-02	9.61e+03	1.01e+04	9.80e+03	4.97	96.30	1.08e+03	n/a	n/a
S96T005511	F		Arsenic -ICP-Fusion	ug/g	101.6	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	103.0	2.16e+03	n/a
S96T005511	F		Boron -ICP-Fusion	ug/g	98.40	<5.00e-02	<1.08e+03	<1.17e3	n/a	n/a	n/a	97.80	1.08e+03	n/a
S96T005511	F		Boron -ICP-Fusion	ug/g	98.20	<5.00e-02	<1.08e+03	<1.17e3	n/a	n/a	n/a	95.90	1.08e+03	n/a
S96T005511	F		Barium -ICP-Fusion	ug/g	98.40	<5.00e-03	<1.08e+02	<1.17e2	n/a	n/a	n/a	99.90	108.0	n/a
S96T005511	F		Beryllium -ICP-Fusion	ug/g	102.0	<5.00e-03	<1.08e+02	<1.17e2	n/a	n/a	n/a	105.0	2.16e+03	n/a
S96T005511	F		Bismuth -ICP-Fusion	ug/g	100.4	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	100.0	2.16e+03	n/a
S96T005511	F		Calcium -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	99.40	108.0	n/a
S96T005511	F		Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	<1.08e+02	<1.17e2	n/a	n/a	n/a	97.80	2.16e+03	n/a
S96T005511	F		Cerium -ICP-Fusion	ug/g	98.20	<1.00e-02	<2.16e+03	<2.34e3	n/a	n/a	n/a	99.60	435.0	n/a
S96T005511	F		Cobalt -ICP-Fusion	ug/g	99.80	<2.00e-02	<4.33e+02	<4.69e2	n/a	n/a	n/a	99.90	216.0	n/a
S96T005511	F		Chromium -ICP-Fusion	ug/g	100.0	<1.00e-02	2.74e+02	296.0	285.0	7.72	99.90	216.0	n/a	n/a
S96T005511	F		Copper -ICP-Fusion	ug/g	103.4	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	102.0	216.0	n/a
S96T005511	F		Iron -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.08e+03	<1.17e3	n/a	n/a	n/a	103.0	1.08e+03	n/a
S96T005511	F		Iron -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.08e+03	<1.17e3	n/a	n/a	n/a	98.80	1.08e+03	n/a
S96T005511	F		Lanthanum -ICP-Fusion	ug/g	99.00	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	96.50	216.0	n/a
S96T005511	F		Lithium -ICP-Fusion	ug/g	95.00	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	95.40	2.16e+03	n/a
S96T005511	F		Magnesium -ICP-Fusion	ug/g	96.60	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	94.60	216.0	n/a
S96T005511	F		Molybdenum -ICP-Fusion	ug/g	100.0	<5.00e-02	<1.08e+03	<1.17e3	n/a	n/a	n/a	100.0	1.08e+03	n/a
S96T005511	F		Sodium -ICP-Fusion	ug/g	95.60	1.670	2.30e+05	2.30e+05	2.30e+05	0.00	102.0	2.16e+03	n/a	n/a
S96T005511	F		Neodymium -ICP-Fusion	ug/g	99.60	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	98.10	2.16e+03	n/a
S96T005511	F		Phosphorus -ICP-Fusion	ug/g	99.60	<2.00e-01	8.93e+03	1.29e+04	1.09e+04	36.4	99.90	4.35e+03	n/a	n/a
S96T005511	F		Lead -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	101.0	2.16e+03	n/a
S96T005511	F		Sulfur -ICP-Fusion	ug/g	98.00	<1.00e-01	4.80e+04	4.35e+04	4.58e+04	9.84	100.0	2.16e+03	n/a	n/a
S96T005511	F		Antimony -ICP-Fusion	ug/g	95.00	<6.00e-02	<1.30e+03	<1.41e3	n/a	n/a	n/a	95.40	1.30e+03	n/a
S96T005511	F		Selenium -ICP-Fusion	ug/g	96.40	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	101.0	2.16e+03	n/a
S96T005511	F		Silicon -ICP-Fusion	ug/g	98.80	<5.00e-02	1.42e+03	1.50e+03	1.46e+03	5.48	99.90	1.08e+03	n/a	n/a
S96T005511	F		Samarium -ICP-Fusion	ug/g	96.60	<1.00e-01	<2.16e+03	<2.34e3	n/a	n/a	n/a	95.30	2.16e+03	n/a
S96T005511	F		Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	95.70	216.0	n/a
S96T005511	F		Titanium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.16e+02	<2.34e2	n/a	n/a	n/a	96.60	216.0	n/a

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Sample#	R	A#	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	<4.35e+03	<4.69e3	n/a	n/a	94.90	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	<1.08e+03	<1.17e3	n/a	n/a	99.00	1.08e+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	216.0	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	216.0	n/a
S96T005511	F		Cobalt-60 by GEA	uci/g	98.72	<1.35e-02	<1.21e-02	<1.70e-2	n/a	n/a	n/a	1.20e-02	n/a
S96T005511	F		Cesium-137 by GEA	uci/g	99.09	<2.89e-02	7.65e-02	39.00	19.34	3.28	n/a	n/a	4.03e+01
S96T005511	F		Europium-154 by GEA	uci/g	n/a	<3.45e-02	<3.90e-02	<2.91e-2	n/a	n/a	n/a	3.90e-02	n/a
S96T005511	F		Europium-155 by GEA	uci/g	n/a	<3.14e-02	<1.65e-01	<1.65e-1	n/a	n/a	n/a	1.56e-01	n/a
S96T005511	F		Americium-241 by GEA	uci/g	n/a	<7.02e-02	<4.09e-01	<4.17e-1	n/a	n/a	n/a	4.09e-01	n/a
S96T005511	F		Beta of Solid Sample	uci/g	109.5	<0.38e-02	41.40	35.90	38.65	14.2	95.36	1.70e-02	4.24E-01
S96T005511	F		Alpha of Digested Solid	uci/g	85.28	<1.69e-03	3.99e-03	3.84e-03	3.92e-03	3.83	45.40	4.00e-03	9.19E+01
S96T005514	W		Fluoride-IC-Dionex 4000/4500	ug/g	103.4	<1.20e-02	3.79e+04	4.09e+04	3.94e+04	7.61	106.4	251.1	n/a
S96T005514	W		Chloride-IC-Dionex 4000/4500	ug/g	97.34	4.60e-02	1.78e+03	1.88e+03	1.83e+03	5.46	93.04	277.4	n/a
S96T005514	W		Nitrite-IC - Dionex 4000/4500	ug/g	96.30	<1.08e-01	2.23e+04	2.40e+04	2.31e+04	7.34	93.35	2.08e+03	n/a
S96T005514	W		Bromide by Ion Chromatograph	ug/g	96.27	<12.60	<9.77e+02	<1.06e3	n/a	n/a	90.32	977.4	n/a
S96T005514	W		Nitrate by IC-Dionex 4000/4500	ug/g	97.98	<1.39e-01	1.51e+05	1.62e+05	1.57e+05	7.03	104.9	2.68e+03	n/a
S96T005514	W		Phosphate-IC-Dionex 4000/4500	ug/g	95.22	<1.20e-01	4.09e+04	3.60e+04	3.84e+04	12.7	92.28	2.31e+03	n/a
S96T005514	W		Sulfate by IC-Dionex 4000/4500	ug/g	100.5	<1.38e-01	1.49e+05	1.69e+05	1.59e+05	12.6	106.3	2.66e+03	n/a
S96T005514	W		Oxalate by IC-Dionex 4000/4500	ug/g	106.7	<1.05e-01	<2.02e+03	<2.20e3	n/a	n/a	104.4	2.02e+03	n/a
S96T005519	I		Silver -ICP-H20 Dig/Acid	ug/g	97.40	<1.00e-02	<19.60	<2.13e1	n/a	n/a	98.70	19.60	n/a
S96T005519	I		Aluminium -ICP-H20 Dig/Acid	ug/g	100.0	3.39e-01	1.11e+03	1.15e+03	1.13e+03	3.54	97.50	97.90	n/a
S96T005519	I		Arsenic -ICP-H20 Dig/Acid	ug/g	103.6	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	105.0	196.0	n/a
S96T005519	I		Boron -ICP-H20 Dig/Acid	ug/g	101.0	3.570	2.18e+03	2.37e+03	2.28e+03	8.35	103.0	97.90	n/a
S96T005519	I		Barium -ICP-H20 Dig/Acid	ug/g	103.6	<5.00e-02	<9.790	<1.06e2	n/a	n/a	103.0	97.90	n/a
S96T005519	I		Beryllium -ICP-H20 Dig/Acid	ug/g	101.4	<5.00e-03	<9.790	<1.06e1	n/a	n/a	102.0	9.790	n/a
S96T005519	I		Bismuth -ICP-H20 Dig/Acid	ug/g	105.8	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	109.0	196.0	n/a
S96T005519	I		Calcium -ICP-H20 Dig/Acid	ug/g	98.00	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	98.70	196.0	n/a
S96T005519	I		Cadmium -ICP-H20 Dig/Acid	ug/g	96.20	<5.00e-03	<9.790	<1.06e1	n/a	n/a	101.0	9.790	n/a
S96T005519	I		Cerium -ICP-H20 Dig/Acid	ug/g	107.8	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	102.0	196.0	n/a
S96T005519	I		Cobalt -ICP-H20 Dig/Acid	ug/g	99.40	<2.00e-02	59.70	70.70	65.20	16.9	102.0	39.20	n/a
S96T005519	I		Cromium -ICP-H20 Dig/Acid	ug/g	96.80	<1.00e-02	2.54e+02	281.0	267.5	10.1	99.50	19.60	n/a
S96T005519	I		Chromium -ICP-H20 Dig/Acid	ug/g	104.0	<1.00e-02	<19.60	<2.13e1	n/a	n/a	104.0	19.60	n/a
S96T005519	I		Copper -ICP-H20 Dig/Acid	ug/g	98.00	<5.00e-02	<9.790	<1.06e2	n/a	n/a	96.00	97.90	n/a
S96T005519	I		Iron -ICP-H20 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
S96T005519	I		Potassium -ICP-H20 Dig/Acid	ug/g	99.60	<5.00e-02	<9.790	<1.06e2	n/a	n/a	100.0	97.90	n/a
S96T005519	I		Lanthanum -ICP-H20 Dig/Acid	ug/g	102.4	<1.00e-02	<19.60	<2.13e1	n/a	n/a	96.80	19.60	n/a
S96T005519	I		Lithium -ICP-H20 Dig/Acid	ug/g	96.60	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	98.90	196.0	n/a
S96T005519	I		Magnesium -ICP-H20 Dig/Acid	ug/g	97.40	<1.00e-02	<19.60	<2.13e1	n/a	n/a	101.0	19.60	n/a
S96T005519	I		Manganese -ICP-H20 Dig/Acid	ug/g	100.8	<5.00e-02	<9.790	<1.06e2	n/a	n/a	104.0	97.90	n/a
S96T005519	I		Molybdenum -ICP-H20 Dig/Acid	ug/g	108.2	5.150	2.16e+05	2.23e+05	2.20e+05	3.19	118.0	196.0	n/a
S96T005519	I		Sodium -ICP-H20 Dig/Acid	ug/g	100.8	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	99.10	196.0	n/a
S96T005519	I		Neodymium -ICP-H20 Dig/Acid	ug/g	97.60	<2.00e-02	<39.20	<4.25e1	n/a	n/a	101.0	39.20	n/a
S96T005519	I		Nickel -ICP-H20 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
S96T005519	I		Phosphorus -ICP-H20 Dig/Acid	ug/g	96.40	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	104.0	196.0	n/a
S96T005519	I		Lead -ICP-H20 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
S96T005519	I		Sulfur -ICP-H20 Dig/Acid	ug/g	101.6	<6.00e-02	<1.79e+02	<1.28e2	n/a	n/a	99.50	117.0	n/a
S96T005519	I		Antimony -ICP-H20 Dig/Acid	ug/g	101.8	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	107.0	196.0	n/a
S96T005519	I		Selenium -ICP-H20 Dig/Acid	ug/g	99.20	7.280	1.68e+04	1.85e+04	1.76e+04	9.63	140.0	97.90	n/a
S96T005519	I		Silicon -ICP-H20 Dig/Acid	ug/g	104.6	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	106.0	196.0	n/a
S96T005519	I		Samarium -ICP-H20 Dig/Acid	ug/g	99.20	<1.00e-01	<1.96e+02	<2.13e2	n/a	n/a	104.0	196.0	n/a
S96T005519	I		Strontium -ICP-H20 Dig/Acid	ug/g	103.4	<1.00e-02	<19.60	<2.13e1	n/a	n/a	104.0	19.60	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005519	I		Titanium-ICP-H2O Dig/Acid	ug/g	97.80	<1.00e-02	< 19.60	<2.13e1	n/a	n/a	99.00	19.60	n/a	n/a
S96T005519	I		Thallium-ICP-H2O Dig/Acid	ug/g	99.00	<2.00e-01	<3.92e+02	<4.25e2	n/a	n/a	99.10	392.0	n/a	n/a
S96T005519	I		Uranium-ICP-H2O Dig/Acid	ug/g	105.0	<5.00e-01	<9.79e+02	<1.06e3	n/a	n/a	111.0	979.0	n/a	n/a
S96T005519	I		Vanadium-ICP-H2O Dig/Acid	ug/g	100.4	<5.00e-02	< 97.90	<1.06e2	n/a	n/a	103.0	97.90	n/a	n/a
S96T005519	I		Zinc-ICP-H2O Dig/Acid	ug/g	100.6	2.30e-02	< 19.60	<2.70e1	n/a	n/a	105.0	19.60	n/a	n/a
S96T005519	I		Zirconium-ICP-H2O Dig/Acid	ug/g	101.0	<1.00e-02	< 19.60	<2.13e1	n/a	n/a	103.0	19.60	n/a	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	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	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	n/a
S96T005523			Specific Gravity	Sp.G.	99.67	n/a	1.387	1.374	1.381	0.94	n/a	1.00e-03	n/a	n/a
S96T005523			% Water by TGA on Perkin Elmer	%	98.73	n/a	78.50	79.39	78.94	1.13	n/a	n/a	n/a	n/a
S96T005523	D		Silver-ICP-Acid Dil.	ug/mL	98.60	<1.00e-02	12.40	12.70	12.55	2.39	91.60	4.010	20.10	n/a
S96T005523	D		Aluminium-ICP-Acid Dil.	ug/mL	97.40	<5.00e-02	8.82e+02	915.0	898.5	3.67	115.0	8.020	20.10	n/a
S96T005523	D		Arsenic-ICP-Acid Dil.	ug/mL	103.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	105.0	40.10	20.10	n/a
S96T005523	D		Boron-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	< 20.30	<2.03e1	20.39	6.21	99.10	20.10	20.10	n/a
S96T005523	D		Barium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.0	2.000	20.10	n/a
S96T005523	D		Beryllium-ICP-Acid Dil.	ug/mL	102.8	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	104.0	40.10	20.10	n/a
S96T005523	D		Bismuth-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	101.0	40.10	20.10	n/a
S96T005523	D		Calcium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.0	2.000	20.10	n/a
S96T005523	D		Cadmium-ICP-Acid Dil.	ug/mL	100.4	<5.00e-03	< 2.000	<2.00e0	n/a	n/a	100.0	40.10	20.10	n/a
S96T005523	D		Cerium-ICP-Acid Dil.	ug/mL	98.60	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	100.0	8.020	20.10	n/a
S96T005523	D		Cobalt-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	< 8.020	<8.02e0	n/a	n/a	100.0	4.010	20.10	n/a
S96T005523	D		Chromium-ICP-Acid Dil.	ug/mL	100.6	<1.00e-02	5.91e+02	602.0	596.5	1.84	111.0	4.010	20.10	n/a
S96T005523	D		Copper-ICP-Acid Dil.	ug/mL	104.2	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	105.0	4.010	20.10	n/a
S96T005523	D		Iron-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	99.40	20.10	20.10	n/a
S96T005523	D		Iron-ICP-Acid Dil.	ug/mL	100.4	<5.00e-01	3.16e+03	3.31e+03	3.24e+03	4.64	164.0	200.0	20.10	n/a
S96T005523	D		Potassium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	102.0	20.10	20.10	n/a
S96T005523	D		Lanthanum-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	103.0	4.010	20.10	n/a
S96T005523	D		Lithium-ICP-Acid Dil.	ug/mL	96.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	95.70	40.10	20.10	n/a
S96T005523	D		Magnesium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	95.60	4.010	20.10	n/a
S96T005523	D		Manganese-ICP-Acid Dil.	ug/mL	100.6	<5.00e-02	35.30	35.20	35.25	0.28	102.0	20.10	20.10	n/a
S96T005523	D		Molybdenum-ICP-Acid Dil.	ug/mL	96.40	<1.00e-01	1.72e+05	1.76e+05	1.74e+05	2.30	3.55e+03	40.10	20.10	n/a
S96T005523	D		Sodium-ICP-Acid Dil.	ug/mL	100.4	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	20.10	n/a
S96T005523	D		Neodymium-ICP-Acid Dil.	ug/mL	100.4	<2.00e-02	< 8.020	<8.02e0	n/a	n/a	99.00	8.020	20.10	n/a
S96T005523	D		Nickel-ICP-Acid Dil.	ug/mL	99.60	<2.00e-01	1.16e+03	1.26e+03	1.21e+03	8.26	124.0	80.20	20.10	n/a
S96T005523	D		Phosphorus-ICP-Acid Dil.	ug/mL	99.80	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	102.0	40.10	20.10	n/a
S96T005523	D		Lead-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	20.10	n/a
S96T005523	D		Sulfur-ICP-Acid Dil.	ug/mL	95.80	<6.00e-02	< 24.10	<2.41e1	n/a	n/a	98.10	24.10	20.10	n/a
S96T005523	D		Antimony-ICP-Acid Dil.	ug/mL	97.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	108.0	40.10	20.10	n/a
S96T005523	D		Selenium-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	59.50	82.00	70.75	31.8	121.0	20.10	20.10	n/a
S96T005523	D		Silicon-ICP-Acid Dil.	ug/mL	97.20	<1.00e-01	< 40.10	<4.01e1	n/a	n/a	97.90	40.10	20.10	n/a
S96T005523	D		Samarium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.40	4.010	20.10	n/a
S96T005523	D		Strontium-ICP-Acid Dil.	ug/mL	97.00	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	100.0	4.010	20.10	n/a
S96T005523	D		Titanium-ICP-Acid Dil.	ug/mL	96.80	<2.00e-01	< 80.20	<8.02e1	n/a	n/a	95.50	80.20	20.10	n/a
S96T005523	D		Thallium-ICP-Acid Dil.	ug/mL	95.20	<5.00e-01	<2.00e+02	<2.00e2	n/a	n/a	98.00	200.0	20.10	n/a
S96T005523	D		Uranium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	< 20.10	<2.01e1	n/a	n/a	101.0	20.10	20.10	n/a
S96T005523	D		Vanadium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	103.0	4.010	20.10	n/a
S96T005523	D		Zinc-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	< 4.010	<4.01e0	n/a	n/a	98.90	4.010	20.10	n/a

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Sample#	R/A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005523		Fluoride-IC-Dionex 4000/4500	ug/mL	102.7	<1.20e-02	5.94e+02	<1.22e2	n/a	n/a	77.97	122.4	n/a
S96T005523		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
S96T005523		Nitrite-IC - Dionex 4000/4500	ug/mL	95.38	<1.08e-01	5.43e+04	5.31e+04	5.37e+04	2.23	93.35	1.10e+03	n/a
S96T005523		Bromide by Ion Chromatograph	ug/mL	99.49	<1.25e-01	<1.28e+03	<1.28e3	n/a	n/a	87.27	1.28e+03	n/a
S96T005523		Nitrate by IC-Dionex 4000/4500	ug/mL	98.15	<1.39e-01	3.75e+05	3.78e+05	3.77e+05	0.80	82.49	1.42e+03	n/a
S96T005523		Phosphate-IC-Dionex 4000/4500	ug/mL	95.77	<1.20e-01	2.74e+03	3.22e+03	2.98e+03	16.1	92.83	1.22e+03	n/a
S96T005523		Sulfate by IC-Dionex 4000/4500	ug/mL	100.8	<1.38e-01	1.38e+04	1.34e+04	1.36e+04	2.94	99.37	1.41e+03	n/a
S96T005523		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
S96T005523		Alpha in Liquid Samples	uCi/mL	113.0	<5.78e-03	<5.04e-03	<2.85E-3	n/a	n/a	98.53	7.00e-03	5.00E+02

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Table 3. Data Summary Table
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CORE NUMBER: 172
SEGMENT #: 2

SEGMENT PORTION: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005507		DSC Exotherm using Mettler	Joules/g	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	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	n/a	n/a
S96T005507		% Water by TGA using Mettler	%	100.3	n/a	18.54	20.12	19.33	8.17	n/a	n/a	n/a	n/a
S96T005512	F	Nickel -ICP-Fusion	ug/g	99.20	8.60e-02	1.79e+03	2.84e+03	2.31e+03	45.9	n/a	n/a	418.0	n/a
S96T005512	F	Silver -ICP-Fusion	ug/g	98.00	<1.00e-02	3.56e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Aluminium -ICP-Fusion	ug/g	96.60	<5.00e-02	8.53e+03	8.76e+03	8.64e+03	2.66	n/a	n/a	1.05e+03	n/a
S96T005512	F	Arsenic -ICP-Fusion	ug/g	101.6	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Boron -ICP-Fusion	ug/g	98.40	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Barium -ICP-Fusion	ug/g	98.20	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Beryllium -ICP-Fusion	ug/g	102.0	<5.00e-03	<1.05e+02	<1.01e2	n/a	n/a	n/a	n/a	105.0	n/a
S96T005512	F	Bismuth -ICP-Fusion	ug/g	100.4	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Calcium -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Cadmium -ICP-Fusion	ug/g	99.40	<5.00e-03	<1.05e+02	<1.01e2	n/a	n/a	n/a	n/a	105.0	n/a
S96T005512	F	Cerium -ICP-Fusion	ug/g	98.20	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Cobalt -ICP-Fusion	ug/g	99.80	<2.00e-02	<4.19e+02	<4.03e2	n/a	n/a	n/a	n/a	105.0	n/a
S96T005512	F	Chromium -ICP-Fusion	ug/g	100.0	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Copper -ICP-Fusion	ug/g	103.4	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Iron -ICP-Fusion	ug/g	99.20	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Lanthanum -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Lithium -ICP-Fusion	ug/g	99.00	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Magnesium -ICP-Fusion	ug/g	95.00	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Manganese -ICP-Fusion	ug/g	96.60	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Molybdenum -ICP-Fusion	ug/g	100.0	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Sodium -ICP-Fusion	ug/g	95.60	1.670	2.98e+05	2.97e+05	2.98e+05	0.34	n/a	n/a	2.09e+03	n/a
S96T005512	F	Neodymium -ICP-Fusion	ug/g	99.60	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Phosphorus -ICP-Fusion	ug/g	99.60	<2.00e-01	2.30e+04	1.19e+04	1.74e+04	63.6	n/a	n/a	4.18e+03	n/a
S96T005512	F	Lead -ICP-Fusion	ug/g	98.80	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Sulfur -ICP-Fusion	ug/g	98.00	<1.00e-01	8.48e+04	9.44e+04	8.96e+04	10.7	n/a	n/a	2.09e+03	n/a
S96T005512	F	Antimony -ICP-Fusion	ug/g	95.00	<6.00e-02	<1.26e+03	<1.21e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Selenium -ICP-Fusion	ug/g	96.40	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Silicon -ICP-Fusion	ug/g	98.80	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Samarium -ICP-Fusion	ug/g	96.60	<1.00e-01	<2.09e+03	<2.02e3	n/a	n/a	n/a	n/a	2.09e+03	n/a
S96T005512	F	Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Titanium -ICP-Fusion	ug/g	97.20	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Thallium -ICP-Fusion	ug/g	96.40	<2.00e-01	<4.19e+03	<4.03e3	n/a	n/a	n/a	n/a	4.18e+03	n/a
S96T005512	F	Uranium -ICP-Fusion	ug/g	94.60	<5.00e-01	<1.05e+04	<1.01e4	n/a	n/a	n/a	n/a	1.05e+04	n/a
S96T005512	F	Vanadium -ICP-Fusion	ug/g	99.80	<5.00e-02	<1.05e+03	<1.01e3	n/a	n/a	n/a	n/a	1.05e+03	n/a
S96T005512	F	Zinc -ICP-Fusion	ug/g	100.8	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Zirconium -ICP-Fusion	ug/g	97.60	<1.00e-02	<2.09e+02	<2.02e2	n/a	n/a	n/a	n/a	209.0	n/a
S96T005512	F	Cobalt-60 by GEA	uci/g	97.36	<1.15e-02	<1.12e-02	<8.63e-3	n/a	n/a	n/a	n/a	1.10e-02	n/a
S96T005512	F	Cesium-137 by GEA	uci/g	97.83	<3.00e-02	15.62	19.60	17.61	22.7	n/a	n/a	n/a	1.25
S96T005512	F	Europium-154 by GEA	uci/g	n/a	<2.81e-02	<4.46e-02	<4.25e-2	n/a	n/a	n/a	n/a	4.50e-02	n/a
S96T005512	F	Europium-155 by GEA	uci/g	n/a	<3.42e-02	<9.91e-02	<1.07e-1	n/a	n/a	n/a	n/a	9.90e-02	n/a
S96T005512	F	Americium-241 by GEA	uci/g	n/a	<8.09e-02	<2.63e-01	<2.81e-1	n/a	n/a	n/a	n/a	2.63e-01	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005512	F		Alpha of Digested Solid	uCi/g	98.70	<3.16e-03	3.85e-03	4.42e-03	4.13e-03	13.8	n/a	2.00e-03	4.63E+01
S96T005515	W		Fluoride-IC-Dionex 4000/4500	ug/g	87.29	<1.210	5.89e+04	7.02e+04	6.46e+04	17.5	129.0	249.9	n/a
S96T005515	W		Chloride-IC-Dionex 4000/4500	ug/g	101.8	<1.720	5.33e+02	887.0	709.9	49.9	113.9	353.9	n/a
S96T005515	W		Nitrite-IC - Dionex 4000/4500	ug/g	103.9	<10.90	9.65e+03	1.02e+04	9.93e+03	5.54	120.5	2.25e+03	n/a
S96T005515	W		Bromide by Ion Chromatograph	ug/g	96.27	<12.60	<1.06e+03	<1.03e3	n/a	n/a	110.9	1.06e+03	n/a
S96T005515	W		Nitrate by IC-Dionex 4000/4500	ug/g	100.8	<14.00	7.24e+04	7.72e+04	7.48e+04	6.42	120.0	2.89e+03	n/a
S96T005515	W		Phosphate-IC-Dionex 4000/4500	ug/g	93.38	<12.10	1.33e+05	3.77e+04	8.54e+04	112	126.3	2.50e+03	n/a
S96T005515	W		Sulfate by IC-Dionex 4000/4500	ug/g	100.2	<13.90	2.10e+05	3.23e+05	2.67e+05	42.4	130.7	2.87e+03	n/a
S96T005515	W		Oxalate by IC-Dionex 4000/4500	ug/g	102.1	<10.60	<2.19e+03	<2.14e3	n/a	n/a	118.1	2.19e+03	n/a

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

SEGMENT PORTION: Core Composite

Sample#	R	A#	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	1.790	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T005485			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
S96T005485			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005485			% Water by TGA using Mettler	%	99.09	n/a	39.65	30.95	35.30	24.6	n/a	n/a	n/a	n/a
S96T005485			TIC by Acid/Coulometry	ug/g	100.2	4,200	1.51e+03	1.26e+03	1.38e+03	18.1	96.00	5,000	n/a	n/a
S96T005485			TOC by Persulfate/Coulometry	ug/g	95.67	3,500	3.39e+02	294.0	316.5	14.2	92.60	40,000	n/a	n/a
S96T005487	F		Uranium by Phosphorescence	ug/g	107.7	104.0	8.09e+02	1.12e+03	964.5	32.2	91.80	1,780	1,24e+00	n/a
S96T005487	F		U-Phosphorescence Inst. Error	% Inst Error	3.50	1.150	1.240	1.540	1.390	1.54	n/a	n/a	n/a	n/a
S96T005487	F		Strontium-89/90 High Level	uCi/g	99.41	2,00e-03	4.30e-01	5.800	3.115	172	n/a	2,00e-03	2,29e+00	n/a
S96T005487	F		Nickel -ICP-Fusion	ug/g	100.0	1.220	1.53e+03	1.58e+03	1.56e+03	3.22	96.20	386.0	n/a	n/a
S96T005487	F		Silver -ICP-Fusion	ug/g	99.00	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	87.50	193.0	n/a	n/a
S96T005487	F		Aluminium -ICP-Fusion	ug/g	95.80	<5.00e-02	1.97e+04	7.23e+04	4.60e+04	114	85.10	964.0	n/a	n/a
S96T005487	F		Arsenic -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	95.90	1,93e+03	n/a	n/a
S96T005487	F		Boron -ICP-Fusion	ug/g	97.80	<5.00e-02	<9.64e+02	<9.78e2	n/a	n/a	88.70	964.0	n/a	n/a
S96T005487	F		Barium -ICP-Fusion	ug/g	97.60	<5.00e-02	<9.64e+02	<9.78e2	n/a	n/a	88.20	964.0	n/a	n/a
S96T005487	F		Beryllium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 96.40	<1.96e3	n/a	n/a	90.70	96.40	n/a	n/a
S96T005487	F		Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	102.0	1,93e+03	n/a	n/a
S96T005487	F		Calcium -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	99.40	1,93e+03	n/a	n/a
S96T005487	F		Cadmium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 96.40	<9.78e1	n/a	n/a	94.90	96.40	n/a	n/a
S96T005487	F		Cerium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	91.30	1,93e+03	n/a	n/a
S96T005487	F		Cerium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	96.40	386.0	n/a	n/a
S96T005487	F		Cobalt -ICP-Fusion	ug/g	101.4	<2.00e-02	<3.89e+02	<3.91e2	n/a	n/a	96.50	193.0	n/a	n/a
S96T005487	F		Chromium -ICP-Fusion	ug/g	101.0	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	91.70	193.0	n/a	n/a
S96T005487	F		Copper -ICP-Fusion	ug/g	102.0	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	93.70	964.0	n/a	n/a
S96T005487	F		Iron -ICP-Fusion	ug/g	99.60	<5.00e-02	<9.64e+02	<3.29e+03	n/a	n/a	90.90	964.0	n/a	n/a
S96T005487	F		Lanthanum -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.64e+02	<9.78e2	n/a	n/a	85.20	193.0	n/a	n/a
S96T005487	F		Lithium -ICP-Fusion	ug/g	96.80	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	87.70	1,93e+03	n/a	n/a
S96T005487	F		Magnesium -ICP-Fusion	ug/g	97.20	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	90.30	193.0	n/a	n/a
S96T005487	F		Manganese -ICP-Fusion	ug/g	101.0	<5.00e-02	<9.64e+02	<9.78e2	n/a	n/a	95.60	964.0	n/a	n/a
S96T005487	F		Molybdenum -ICP-Fusion	ug/g	94.80	1.510	2.34e+05	1.67e+05	2.00e+05	33.4	38.60	1,93e+03	n/a	n/a
S96T005487	F		Sodium -ICP-Fusion	ug/g	99.60	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	89.00	1,93e+03	n/a	n/a
S96T005487	F		Neodymium -ICP-Fusion	ug/g	98.40	<2.00e-01	5.62e+04	3.52e+04	4.57e+04	46.0	86.50	3,86e+03	n/a	n/a
S96T005487	F		Phosphorus -ICP-Fusion	ug/g	100.4	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	97.70	1,93e+03	n/a	n/a
S96T005487	F		Lead -ICP-Fusion	ug/g	98.20	<1.00e-01	2.44e+04	1.24e+04	1.84e+04	65.2	91.60	1,93e+03	n/a	n/a
S96T005487	F		Sulfur -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.16e+03	<1.17e3	n/a	n/a	91.10	1,16e+03	n/a	n/a
S96T005487	F		Antimony -ICP-Fusion	ug/g	95.00	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	93.30	1,93e+03	n/a	n/a
S96T005487	F		Selenium -ICP-Fusion	ug/g	96.80	<5.00e-02	2.60e+03	1.45e+03	2.02e+03	56.8	93.40	964.0	n/a	n/a
S96T005487	F		Silicon -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.93e+03	<1.96e3	n/a	n/a	92.00	1,93e+03	n/a	n/a
S96T005487	F		Samarium -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	87.40	193.0	n/a	n/a
S96T005487	F		Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	89.60	193.0	n/a	n/a
S96T005487	F		Titanium -ICP-Fusion	ug/g	94.60	<2.00e-01	<3.85e+03	<3.91e3	n/a	n/a	93.30	3,86e+03	n/a	n/a
S96T005487	F		Thallium -ICP-Fusion	ug/g	94.90	<5.00e-01	<9.64e+03	<9.78e3	n/a	n/a	93.50	9,64e+03	n/a	n/a
S96T005487	F		Uranium -ICP-Fusion	ug/g	100.4	<5.00e-02	<9.64e+02	<9.78e2	n/a	n/a	94.70	964.0	n/a	n/a
S96T005487	F		Vanadium -ICP-Fusion	ug/g	102.0	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	99.50	193.0	n/a	n/a
S96T005487	F		Zinc -ICP-Fusion	ug/g	102.0	<1.00e-02	<1.93e+02	<1.96e2	n/a	n/a	99.50	193.0	n/a	n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005487	F		Zirconium -ICP-Fusion	ug/g	98.60	<1.00e-02	<1.95e+02	<1.96e2	n/a	n/a	91.10	193.0	n/a	
S96T005487	F		Cobalt-60 by GEA	uCi/g	97.49	<1.15e-02	<1.41e+02	<1.18e+2	n/a	n/a	n/a	1.40e+02	n/a	
S96T005487	F		Cesium-137 by GEA	uCi/g	100.5	<1.72e-03	10.89	15.30	13.10	33.6	n/a	n/a	n/a	1.45
S96T005487	F		Europium-154 by GEA	uCi/g	n/a	<5.21e-05	<2.89e-02	<3.76e-2	n/a	n/a	n/a	2.90e+02	n/a	
S96T005487	F		Europium-155 by GEA	uCi/g	n/a	<3.11e-03	<8.40e-02	<1.00e-1	n/a	n/a	n/a	8.40e+02	n/a	
S96T005487	F		Americium-241 by GEA	uCi/g	n/a	<7.26e-03	<2.10e-01	<2.47e+1	n/a	n/a	n/a	2.10e+01	n/a	
S96T005487	F		Alpha of Digested Solid	uCi/g	92.64	<1.24e-03	<1.24e+02	<1.19e+02	n/a	n/a	74.37	1.90e+02	2.45E+02	
S96T005487	F		Beta of Solid Sample	uCi/g	99.66	<2.81e-02	10.70	25.60	17.15	75.2	92.76	5.70e+02	1.63E+00	
S96T005488	W		Fluoride-IC-Dionex 4000/4500	ug/g	110.7	<1.20e-03	1.92e+04	4.56e+04	3.24e+04	81.5	181.4	235.7	n/a	
S96T005488	W		Chloride-IC-Dionex 4000/4500	ug/g	95.06	<2.70e-02	8.94e+03	1.14e+03	4.99e+03	154	43.92	333.9	n/a	
S96T005488	W		Nitrite-IC - Dionex 4000/4500	ug/g	95.95	<1.08e-01	5.35e+03	1.05e+04	7.92e+03	65.3	96.67	2.12e+03	n/a	
S96T005488	W		Bromide by Ion Chromatograph	ug/g	98.64	<1.25e-01	<2.46e+03	<2.44e3	n/a	n/a	102.0	2.46e+03	n/a	
S96T005488	W		Nitrate by IC-Dionex 4000/4500	ug/g	97.64	<1.20e-01	1.30e+04	4.05e+04	2.99e+04	70.5	102.9	2.73e+03	n/a	
S96T005488	W		Phosphate-IC-Dionex 4000/4500	ug/g	94.50	<1.20e-01	7.64e+04	1.65e+05	9.37e+04	152	102.4	2.71e+03	n/a	
S96T005488	W		Sulfate by IC-Dionex 4000/4500	ug/g	99.05	<1.35e-01	2.25e+04	1.65e+05	9.37e+04	152	102.4	2.71e+03	n/a	
S96T005488	W		Oxalate by IC-Dionex 4000/4500	ug/g	104.2	<1.00e-01	<2.05e+03	<2.05e3	n/a	n/a	107.6	2.05e+03	n/a	
S96T005489	I		Silver -ICP-H2O Dig/Acid	ug/g	100.8	<1.00e-02	12.50	14.20	13.35	12.7	102.0	4.00	n/a	
S96T005489	I		Aluminium -ICP-H2O Dig/Acid	ug/g	99.80	<3.01e-01	2.30e+02	816.0	523.0	112	101.0	20.00	n/a	
S96T005489	I		Arsenic -ICP-H2O Dig/Acid	ug/g	104.2	<1.00e-01	<39.90	<3.97e1	n/a	n/a	109.0	40.00	n/a	
S96T005489	I		Boron -ICP-H2O Dig/Acid	ug/g	102.4	<4.400	5.58e+02	1.60e+03	1.08e+03	96.6	103.0	20.00	n/a	
S96T005489	I		Barium -ICP-H2O Dig/Acid	ug/g	102.4	<5.00e-02	<2.000	<1.98e1	n/a	n/a	101.0	20.00	n/a	
S96T005489	I		Beryllium -ICP-H2O Dig/Acid	ug/g	104.4	<5.00e-03	<2.000	<1.98e0	n/a	n/a	104.0	2.000	n/a	
S96T005489	I		Bismuth -ICP-H2O Dig/Acid	ug/g	103.0	<1.00e-01	<39.90	<3.97e1	n/a	n/a	108.0	40.00	n/a	
S96T005489	I		Bismuth -ICP-H2O Dig/Acid	ug/g	99.80	<1.00e-01	<39.90	<3.97e1	n/a	n/a	107.0	40.00	n/a	
S96T005489	I		Calcium -ICP-H2O Dig/Acid	ug/g	102.0	<5.00e-03	<2.000	<1.98e0	n/a	n/a	104.0	2.000	n/a	
S96T005489	I		Cadmium -ICP-H2O Dig/Acid	ug/g	101.6	<1.00e-01	<39.90	<3.97e1	n/a	n/a	104.0	40.00	n/a	
S96T005489	I		Cerium -ICP-H2O Dig/Acid	ug/g	102.0	<2.00e-02	<7.990	<7.93e0	n/a	n/a	103.0	7.980	n/a	
S96T005489	I		Cobalt -ICP-H2O Dig/Acid	ug/g	102.0	<1.00e-02	73.00	128.0	100.5	54.7	104.0	4.000	n/a	
S96T005489	I		Chromium -ICP-H2O Dig/Acid	ug/g	102.0	<1.00e-02	<3.990	<3.97e0	n/a	n/a	106.0	4.000	n/a	
S96T005489	I		Copper -ICP-H2O Dig/Acid	ug/g	101.8	<5.00e-02	<2.000	<1.98e1	n/a	n/a	102.0	20.00	n/a	
S96T005489	I		Iron -ICP-H2O Dig/Acid	ug/g	97.80	<5.00e-01	3.29e+02	611.0	470.0	60.0	114.0	200.0	n/a	
S96T005489	I		Potassium -ICP-H2O Dig/Acid	ug/g	104.0	<5.00e-02	<2.000	<1.98e1	n/a	n/a	104.0	20.00	n/a	
S96T005489	I		Lanthanum -ICP-H2O Dig/Acid	ug/g	104.8	<1.00e-02	<3.990	<3.97e0	n/a	n/a	105.0	4.000	n/a	
S96T005489	I		Lithium -ICP-H2O Dig/Acid	ug/g	98.60	<1.00e-01	<39.90	<3.97e1	n/a	n/a	98.00	40.00	n/a	
S96T005489	I		Magnesium -ICP-H2O Dig/Acid	ug/g	98.80	<1.00e-02	<3.990	<3.97e0	n/a	n/a	98.60	4.000	n/a	
S96T005489	I		Manganese -ICP-H2O Dig/Acid	ug/g	102.4	<5.00e-02	<2.000	<1.98e1	n/a	n/a	106.0	20.00	n/a	
S96T005489	I		Molybdenum -ICP-H2O Dig/Acid	ug/g	101.6	6.170	1.78e+05	2.06e+05	1.92e+05	14.6	-1.920e1	40.00	n/a	
S96T005489	I		Sodium -ICP-H2O Dig/Acid	ug/g	104.6	<1.00e-01	<39.90	<3.97e1	n/a	n/a	104.0	40.00	n/a	
S96T005489	I		Neodymium -ICP-H2O Dig/Acid	ug/g	101.2	<2.00e-02	<7.990	<7.93e0	n/a	n/a	104.0	7.980	n/a	
S96T005489	I		Nickel -ICP-H2O Dig/Acid	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	I		Phosphorus -ICP-H2O Dig/Acid	ug/g	101.2	<1.00e-01	<39.90	<3.97e1	n/a	n/a	104.0	40.00	n/a	
S96T005489	I		Lead -ICP-H2O Dig/Acid	ug/g	100.8	<1.00e-01	7.55e+03	5.65e+04	3.20e+04	153	95.60	40.00	n/a	
S96T005489	I		Sulfur -ICP-H2O Dig/Acid	ug/g	97.20	<6.00e-02	<24.00	<2.38e1	n/a	n/a	101.0	24.00	n/a	
S96T005489	I		Antimony -ICP-H2O Dig/Acid	ug/g	98.60	<1.00e-01	<39.90	<3.97e1	n/a	n/a	99.40	40.00	n/a	
S96T005489	I		Selenium -ICP-H2O Dig/Acid	ug/g	98.20	<1.950	1.75e+03	1.24e+04	7.08e+03	151	136.0	20.00	n/a	
S96T005489	I		Silicon -ICP-H2O Dig/Acid	ug/g	100.8	<1.00e-01	<39.90	<3.97e1	n/a	n/a	101.0	40.00	n/a	
S96T005489	I		Samarium -ICP-H2O Dig/Acid	ug/g	101.4	<1.00e-02	<3.990	<3.97e0	n/a	n/a	101.0	4.000	n/a	
S96T005489	I		Strontium -ICP-H2O Dig/Acid	ug/g	100.0	<1.00e-02	<3.990	<3.97e0	n/a	n/a	100.0	4.000	n/a	
S96T005489	I		Titanium -ICP-H2O Dig/Acid	ug/g	98.20	<2.00e-01	<79.90	<7.93e1	n/a	n/a	99.70	79.80	n/a	
S96T005489	I		Thallium -ICP-H2O Dig/Acid	ug/g	98.60	<5.00e-01	<2.00e+02	<1.98e2	n/a	n/a	98.50	200.0	n/a	
S96T005489	I		Uranium -ICP-H2O Dig/Acid	ug/g	102.4	<5.00e-02	<20.00	<1.98e1	n/a	n/a	104.0	20.00	n/a	
S96T005489	I		Vanadium -ICP-H2O Dig/Acid	ug/g	102.4	<5.00e-02	<20.00	<1.98e1	n/a	n/a	104.0	20.00	n/a	

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NHF-SD-WM-DR-219, REV. 0

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005489	I	Zinc -ICP-H2O 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	n/a
S96T005489	I	Zirconium -ICP-H2O Dig/Acid	ug/g	101.0	<1.00e-02	< 3.990	8.420	n/a	n/a	n/a	102.0	4.000	n/a	n/a
S97T000002	F	Uranium by Phosphorescence	ug/g	104.4	16.40	5.08e02	395.0	451.5	25.0	82.51	1,850	1.41E+00	n/a	n/a
S97T000002	F	U-Phosphorescence Inst. Error %	% Inst Error	3.15	1.580	1.410	1.360	1.365	1.36	n/a	n/a	n/a	n/a	n/a
S97T000002	F	Srntium-89/90 High Level	uCi/g	96.45	1.70e-02	3.260	3.800	3.550	15.3	n/a	n/a	5.00e-03	1.61E+00	n/a
S97T000002	F	Silver -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	85.80	197.0	n/a	n/a
S97T000002	F	Aluminium -ICP-Fusion	ug/g	99.20	<5.00e-02	6.34e+04	7.92e+04	7.13e+04	22.2	n/a	n/a	77.70	988.0	n/a
S97T000002	F	Arsenic -ICP-Fusion	ug/g	102.4	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	87.40	1.97e+03	n/a	n/a
S97T000002	F	Boron -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	87.70	988.0	n/a	n/a
S97T000002	F	Barium -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	89.40	988.0	n/a	n/a
S97T000002	F	Beryllium -ICP-Fusion	ug/g	103.2	<5.00e-03	< 98.70	<9.85e1	n/a	n/a	n/a	91.90	98.80	n/a	n/a
S97T000002	F	Bismuth -ICP-Fusion	ug/g	102.0	<1.00e-01	<1.97e+03	2.02e+03	n/a	n/a	n/a	103.0	1.97e+03	n/a	n/a
S97T000002	F	Calcium -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	99.40	1.97e+03	n/a	n/a
S97T000002	F	Cadmium -ICP-Fusion	ug/g	100.0	<5.00e-03	< 98.70	<9.85e1	n/a	n/a	n/a	96.70	98.80	n/a	n/a
S97T000002	F	Cerium -ICP-Fusion	ug/g	103.2	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	92.50	1.97e+03	n/a	n/a
S97T000002	F	Cobalt -ICP-Fusion	ug/g	100.4	<2.00e-02	<3.95e+02	<3.94e2	n/a	n/a	n/a	96.70	395.0	n/a	n/a
S97T000002	F	Chromium -ICP-Fusion	ug/g	100.2	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	97.60	197.0	n/a	n/a
S97T000002	F	Copper -ICP-Fusion	ug/g	106.8	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	92.50	197.0	n/a	n/a
S97T000002	F	Iron -ICP-Fusion	ug/g	101.2	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	97.20	988.0	n/a	n/a
S97T000002	F	Lanthanum -ICP-Fusion	ug/g	102.4	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	91.40	988.0	n/a	n/a
S97T000002	F	Lithium -ICP-Fusion	ug/g	99.60	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	81.90	197.0	n/a	n/a
S97T000002	F	Magnesium -ICP-Fusion	ug/g	101.6	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	91.20	1.97e+03	n/a	n/a
S97T000002	F	Manganese -ICP-Fusion	ug/g	98.40	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	92.40	197.0	n/a	n/a
S97T000002	F	Molybdenum -ICP-Fusion	ug/g	101.4	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	97.00	988.0	n/a	n/a
S97T000002	F	Sodium -ICP-Fusion	ug/g	105.6	1.600	1.93e+05	1.76e+05	1.84e+05	9.21	49.40	1.97e+03	n/a	n/a	n/a
S97T000002	F	Neodymium -ICP-Fusion	ug/g	102.6	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	90.40	1.97e+03	n/a	n/a
S97T000002	F	Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	4.86e+04	3.84e+04	4.35e+04	23.4	93.50	3.95e+03	n/a	n/a	n/a
S97T000002	F	Lead -ICP-Fusion	ug/g	98.00	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	97.60	1.97e+03	n/a	n/a
S97T000002	F	Sulfur -ICP-Fusion	ug/g	98.00	<1.00e-01	1.06e+04	1.47e+04	1.26e+04	32.4	93.90	1.97e+03	n/a	n/a	n/a
S97T000002	F	Antimony -ICP-Fusion	ug/g	96.40	<6.00e-01	1.18e+03	<1.18e3	n/a	n/a	n/a	91.40	1.18e+03	n/a	n/a
S97T000002	F	Selenium -ICP-Fusion	ug/g	95.80	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	96.40	1.97e+03	n/a	n/a
S97T000002	F	Silicon -ICP-Fusion	ug/g	97.20	<5.00e-02	1.16e+03	1.96e+03	1.56e+03	51.3	94.30	988.0	n/a	n/a	n/a
S97T000002	F	Samarium -ICP-Fusion	ug/g	101.2	<1.00e-01	<1.97e+03	<1.97e3	n/a	n/a	n/a	94.10	1.97e+03	n/a	n/a
S97T000002	F	Titanium -ICP-Fusion	ug/g	101.4	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	89.70	197.0	n/a	n/a
S97T000002	F	Strontium -ICP-Fusion	ug/g	99.20	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	91.00	197.0	n/a	n/a
S97T000002	F	Titanium-ICP-Fusion	ug/g	97.20	<2.00e-01	<3.95e+03	<3.94e3	n/a	n/a	n/a	90.20	3.95e+03	n/a	n/a
S97T000002	F	Thallium -ICP-Fusion	ug/g	98.30	<5.00e-01	<9.87e+02	<9.85e3	n/a	n/a	n/a	94.00	9.88e+03	n/a	n/a
S97T000002	F	Uranium -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.87e+02	<9.85e2	n/a	n/a	n/a	95.20	988.0	n/a	n/a
S97T000002	F	Vanadium -ICP-Fusion	ug/g	100.8	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	100.0	197.0	n/a	n/a
S97T000002	F	Zinc -ICP-Fusion	ug/g	100.2	<1.00e-02	<1.97e+02	<1.97e2	n/a	n/a	n/a	92.50	197.0	n/a	n/a
S97T000002	F	Zirconium -ICP-Fusion	ug/g	99.18	<1.64e-02	<1.33e-02	<1.56e-2	n/a	n/a	n/a	n/a	1.30e-02	n/a	n/a
S97T000002	F	Cobalt-60 by GEA	uCi/g	98.25	<2.29e-02	12.48	15.20	13.84	19.5	n/a	n/a	n/a	1.37	n/a
S97T000002	F	Cesium-137 by GEA	uCi/g	n/a	<3.74e-02	<3.49e-02	<5.04e-2	n/a	n/a	n/a	n/a	3.50e-02	n/a	n/a
S97T000002	F	Europium-154 by GEA	uCi/g	n/a	<3.35e-02	<8.88e-02	<9.77e-2	n/a	n/a	n/a	n/a	8.90e-02	n/a	n/a
S97T000002	F	Europium-155 by GEA	uCi/g	n/a	<6.82e-02	<2.27e-01	<2.56e-1	n/a	n/a	n/a	n/a	2.27e-01	n/a	n/a
S97T000002	F	Americium-241 by GEA	uCi/g	n/a	3.00e-03	1.33e-02	1.37e-02	1.35e-02	2.96	80.50	4.00e-03	3.43E+01	n/a	n/a
S97T000002	F	Alpha of Digested Solid	uCi/g	93.91	9.10e-02	19.40	24.10	21.75	21.6	110.6	1.80e-02	5.95E-01	n/a	n/a
S97T000002	F	Beta of Solid Sample	uCi/g	107.7	4.92e-01	2.42e+04	2.23e+04	2.33e+04	8.17	93.22	98.56	n/a	n/a	n/a
S97T000015	F	Fluoride-IC-Dionex 4000/4500	ug/g	100.8	<6.97e-01	4.48e+02	418.0	433.2	6.93	138.0	139.6	n/a	n/a	n/a
S97T000015	F	Chloride-IC-Dionex 4000/4500	ug/g	103.1	2.47e-01	9.66e+03	8.85e+03	9.26e+03	8.75	107.0	887.2	n/a	n/a	n/a
S97T000015	F	Nitrite-IC - Dionex 4000/4500	ug/g	99.15	<5.120	<1.03e+03	<1.03e3	n/a	n/a	n/a	96.94	1.03e+03	n/a	n/a
S97T000015	F	Bromide by Ion Chromatograph	ug/g											

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

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000015	W		Nitrate-IC-Dionex 4000/4500	ug/g	100.0	<5.700	3.48e+04	3.11e+04	3.29e+04	11.2	106.1	1.14e+03	n/a	n/a
S97T000015	W		Phosphate-IC-Dionex 4000/4500	ug/g	100.0	<6.920	1.44e+05	1.38e+05	1.41e+05	4.26	109.4	985.6	n/a	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	14.7	106.0	1.13e+03	n/a	n/a
S97T000015	W		Oxalate by IC-Dionex 4000/4500	ug/g	100.9	<6.300	<8.63e+02	<8.62e2	n/a	n/a	n/a	862.6	n/a	n/a
S97T000016	I		Silver -ICP-H20 Dig/Acid	ug/g	98.40	<1.00e-02	13.60	12.50	13.05	8.43	98.60	6.180	n/a	n/a
S97T000016	I		Aluminium -ICP-H20 Dig/Acid	ug/g	99.00	1.74e-01	8.49e+02	785.0	817.0	7.83	96.50	30.90	n/a	n/a
S97T000016	I		Arsenic -ICP-H20 Dig/Acid	ug/g	103.8	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	104.0	61.80	n/a	n/a
S97T000016	I		Boron -ICP-H20 Dig/Acid	ug/g	101.2	2.230	8.51e+02	858.0	844.5	1.54	99.60	30.90	n/a	n/a
S97T000016	I		Barium -ICP-H20 Dig/Acid	ug/g	102.6	<5.00e-02	< 30.90	<3.08e1	n/a	n/a	102.0	30.90	n/a	n/a
S97T000016	I		Beryllium -ICP-H20 Dig/Acid	ug/g	102.4	<5.00e-03	< 3.090	<3.08e0	n/a	n/a	102.0	3.090	n/a	n/a
S97T000016	I		Bismuth -ICP-H20 Dig/Acid	ug/g	102.2	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	110.0	61.80	n/a	n/a
S97T000016	I		Calcium -ICP-H20 Dig/Acid	ug/g	97.60	<1.00e-01	70.70	<6.17e1	n/a	n/a	91.60	61.80	n/a	n/a
S97T000016	I		Cadmium -ICP-H20 Dig/Acid	ug/g	100.4	<5.00e-03	< 3.090	<3.08e0	n/a	n/a	101.0	3.090	n/a	n/a
S97T000016	I		Cerium -ICP-H20 Dig/Acid	ug/g	100.4	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	102.0	61.80	n/a	n/a
S97T000016	I		Cobalt -ICP-H20 Dig/Acid	ug/g	101.2	<2.00e-02	< 12.30	<1.23e1	n/a	n/a	102.0	12.30	n/a	n/a
S97T000016	I		Chromium -ICP-H20 Dig/Acid	ug/g	99.40	<1.00e-02	1.26e+02	117.0	121.5	7.41	100.0	6.180	n/a	n/a
S97T000016	I		Copper -ICP-H20 Dig/Acid	ug/g	107.4	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	107.0	6.180	n/a	n/a
S97T000016	I		Iron -ICP-H20 Dig/Acid	ug/g	100.2	<5.00e-02	< 30.90	<3.08e1	n/a	n/a	103.0	30.90	n/a	n/a
S97T000016	I		Potassium -ICP-H20 Dig/Acid	ug/g	106.6	<5.00e-01	7.47e+02	628.0	687.5	17.3	80.20	309.0	n/a	n/a
S97T000016	I		Lanthanum -ICP-H20 Dig/Acid	ug/g	102.0	<5.00e-02	< 30.90	<3.08e1	n/a	n/a	103.0	30.90	n/a	n/a
S97T000016	I		Lithium -ICP-H20 Dig/Acid	ug/g	101.2	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	101.0	6.180	n/a	n/a
S97T000016	I		Magnesium -ICP-H20 Dig/Acid	ug/g	101.2	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	100.0	61.80	n/a	n/a
S97T000016	I		Manganese -ICP-H20 Dig/Acid	ug/g	97.60	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	96.90	6.180	n/a	n/a
S97T000016	I		Molybdenum -ICP-H20 Dig/Acid	ug/g	101.2	<5.00e-02	< 30.90	<3.08e1	n/a	n/a	104.0	30.90	n/a	n/a
S97T000016	I		Sodium -ICP-H20 Dig/Acid	ug/g	104.4	3.640	1.74e+05	1.68e+05	1.71e+05	3.51	-5.100e2	61.80	n/a	n/a
S97T000016	I		Neodymium -ICP-H20 Dig/Acid	ug/g	102.0	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	104.0	61.80	n/a	n/a
S97T000016	I		Nickel -ICP-H20 Dig/Acid	ug/g	100.6	<2.00e-02	< 12.30	<1.23e1	n/a	n/a	100.0	12.30	n/a	n/a
S97T000016	I		Phosphorus -ICP-H20 Dig/Acid	ug/g	103.2	<2.00e-01	4.77e+04	4.77e+04	4.77e+04	0.00	-2.590e1	123.0	n/a	n/a
S97T000016	I		Lead -ICP-H20 Dig/Acid	ug/g	97.60	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	101.0	61.80	n/a	n/a
S97T000016	I		Sulfur -ICP-H20 Dig/Acid	ug/g	92.60	<1.00e-01	1.42e+04	1.29e+04	1.36e+04	9.59	63.60	61.80	n/a	n/a
S97T000016	I		Antimony -ICP-H20 Dig/Acid	ug/g	96.00	<6.00e-02	< 3.070	<3.70e1	n/a	n/a	97.20	36.90	n/a	n/a
S97T000016	I		Selenium -ICP-H20 Dig/Acid	ug/g	94.20	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	93.80	61.80	n/a	n/a
S97T000016	I		Silicon -ICP-H20 Dig/Acid	ug/g	97.20	5.92e-01	4.25e+03	4.23e+03	4.24e+03	0.47	153.0	30.90	n/a	n/a
S97T000016	I		Samarium -ICP-H20 Dig/Acid	ug/g	101.0	<1.00e-01	< 61.70	<6.17e1	n/a	n/a	301.0	61.80	n/a	n/a
S97T000016	I		Strontium -ICP-H20 Dig/Acid	ug/g	101.0	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	101.0	6.180	n/a	n/a
S97T000016	I		Titanium -ICP-H20 Dig/Acid	ug/g	99.00	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	99.40	6.180	n/a	n/a
S97T000016	I		Thallium -ICP-H20 Dig/Acid	ug/g	97.00	<2.00e-01	<1.23e+02	<1.23e2	n/a	n/a	95.00	123.0	n/a	n/a
S97T000016	I		Thalium -ICP-H20 Dig/Acid	ug/g	98.00	<5.00e-01	<3.09e+02	<3.08e2	n/a	n/a	100.5	309.0	n/a	n/a
S97T000016	I		Uranium -ICP-H20 Dig/Acid	ug/g	100.8	<5.00e-02	< 30.90	<3.08e1	n/a	n/a	103.0	30.90	n/a	n/a
S97T000016	I		Vanadium -ICP-H20 Dig/Acid	ug/g	101.6	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	104.0	6.180	n/a	n/a
S97T000016	I		Zinc -ICP-H20 Dig/Acid	ug/g	100.2	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	101.0	6.180	n/a	n/a
S97T000016	I		Zirconium -ICP-H20 Dig/Acid	ug/g	100.2	<1.00e-02	< 6.170	<6.17e0	n/a	n/a	101.0	6.180	n/a	n/a

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Table 3. Data Summary Table
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CORE NUMBER: 173
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005465		Bulk Density of Sample	g/mL	n/a	n/a	1.910	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T005466		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	n/a
S96T005466		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005466		% Water by TGA using Mettler	%	92.70	n/a	18.38	18.34	18.36	0.22	n/a	n/a	n/a	n/a
S96T005468	F	Nickel -ICP-Fusion	ug/g	101.0	1.220	7.83e+03	3.67e+03	5.75e+03	72.3	97.00	384.0	n/a	n/a
S96T005468	F	Silver -ICP-Fusion	ug/g	99.00	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	90.80	192.0	n/a	n/a
S96T005468	F	Aluminum -ICP-Fusion	ug/g	95.80	<5.00e-02	2.10e+05	2.31e+05	2.20e+05	9.52	93.80	960.0	n/a	n/a
S96T005468	F	Arsenic -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	100.0	1.92e+03	n/a	n/a
S96T005468	F	Boron -ICP-Fusion	ug/g	97.80	<5.00e-02	<9.60e+02	<9.42e2	n/a	n/a	93.40	960.0	n/a	n/a
S96T005468	F	Boron -ICP-Fusion	ug/g	97.60	<5.00e-02	<9.60e+02	<9.42e2	n/a	n/a	92.20	960.0	n/a	n/a
S96T005468	F	Barium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 96.00	<9.42e1	n/a	n/a	95.60	96.00	n/a	n/a
S96T005468	F	Beryllium -ICP-Fusion	ug/g	100.6	<1.00e-01	2.46e+03	2.36e+03	2.41e+03	4.15	97.40	1.92e+03	n/a	n/a
S96T005468	F	Bismuth -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	101.0	1.92e+03	n/a	n/a
S96T005468	F	Calcium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 96.00	<9.42e1	n/a	n/a	97.60	96.00	n/a	n/a
S96T005468	F	Cadmium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	94.70	1.92e+03	n/a	n/a
S96T005468	F	Cerium -ICP-Fusion	ug/g	101.4	<2.00e-02	<3.84e+02	<3.77e2	n/a	n/a	98.50	384.0	n/a	n/a
S96T005468	F	Cobalt -ICP-Fusion	ug/g	101.0	<1.00e-02	2.08e+02	243.0	225.5	15.5	98.80	192.0	n/a	n/a
S96T005468	F	Chromium -ICP-Fusion	ug/g	102.2	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	97.40	192.0	n/a	n/a
S96T005468	F	Copper -ICP-Fusion	ug/g	99.60	<5.00e-02	1.43e+03	1.67e+03	1.55e+03	15.5	96.10	960.0	n/a	n/a
S96T005468	F	Iron -ICP-Fusion	ug/g	100.0	<5.00e-02	<9.60e+02	<9.42e2	n/a	n/a	95.60	960.0	n/a	n/a
S96T005468	F	Lanthanum -ICP-Fusion	ug/g	96.80	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	91.30	192.0	n/a	n/a
S96T005468	F	Lithium -ICP-Fusion	ug/g	94.00	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	89.80	1.92e+03	n/a	n/a
S96T005468	F	Magnesium -ICP-Fusion	ug/g	97.20	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	93.40	192.0	n/a	n/a
S96T005468	F	Manganese -ICP-Fusion	ug/g	101.0	<5.00e-02	<9.60e+02	<9.42e2	n/a	n/a	98.40	960.0	n/a	n/a
S96T005468	F	Molybdenum -ICP-Fusion	ug/g	94.80	<1.510	8.67e+04	7.54e+04	8.10e+04	13.9	88.40	1.92e+03	n/a	n/a
S96T005468	F	Neodymium -ICP-Fusion	ug/g	99.60	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	95.10	1.92e+03	n/a	n/a
S96T005468	F	Phosphorus -ICP-Fusion	ug/g	98.40	<2.00e-01	5.69e+03	<3.77e3	n/a	n/a	98.20	3.84e+03	n/a	n/a
S96T005468	F	Lead -ICP-Fusion	ug/g	100.4	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	99.80	1.92e+03	n/a	n/a
S96T005468	F	Sulfur -ICP-Fusion	ug/g	98.20	<1.00e-01	1.98e+03	2.25e+03	2.12e+03	12.8	97.90	1.92e+03	n/a	n/a
S96T005468	F	Antimony -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.15e+03	<1.13e3	n/a	n/a	93.50	1.15e+03	n/a	n/a
S96T005468	F	Selenium -ICP-Fusion	ug/g	95.00	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	98.50	1.92e+03	n/a	n/a
S96T005468	F	Silicon -ICP-Fusion	ug/g	96.80	<5.00e-02	9.74e+02	1.10e+03	1.04e+03	12.2	96.20	960.0	n/a	n/a
S96T005468	F	Samarium -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.92e+03	<1.88e3	n/a	n/a	93.80	1.92e+03	n/a	n/a
S96T005468	F	Strontium -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	92.40	192.0	n/a	n/a
S96T005468	F	Titanium-ICP-Fusion	ug/g	97.40	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	94.50	192.0	n/a	n/a
S96T005468	F	Thallium -ICP-Fusion	ug/g	94.60	<2.00e-01	<3.84e+03	<3.77e3	n/a	n/a	90.70	3.84e+03	n/a	n/a
S96T005468	F	Uranium -ICP-Fusion	ug/g	94.90	<5.00e-01	<9.60e+03	<9.42e3	n/a	n/a	94.50	9.60e+03	n/a	n/a
S96T005468	F	Vanadium -ICP-Fusion	ug/g	100.4	<5.00e-02	<9.60e+02	<9.42e2	n/a	n/a	97.80	960.0	n/a	n/a
S96T005468	F	Zinc -ICP-Fusion	ug/g	102.0	<1.00e-02	2.01e+02	213.0	207.0	5.80	101.0	192.0	n/a	n/a
S96T005468	F	Zirconium -ICP-Fusion	ug/g	98.60	<1.00e-02	<1.92e+02	<1.88e2	n/a	n/a	95.00	192.0	n/a	n/a
S96T005468	F	Cobalt-60 by GEA	uCi/g	99.75	<1.65e-02	<1.75e-02	<1.35e-2	n/a	n/a	n/a	1.80e-02	n/a	n/a
S96T005468	F	Cesium-137 by GEA	uCi/g	98.05	<3.35e-02	23.00	22.90	22.95	0.44	n/a	n/a	1.11	n/a
S96T005468	F	Europium-154 by GEA	uCi/g	n/a	<5.01e-02	<5.94e-02	<5.51e-2	n/a	n/a	n/a	5.90e-02	n/a	n/a
S96T005468	F	Europium-155 by GEA	uCi/g	n/a	<4.31e-02	<1.48e-01	<1.47e-1	n/a	n/a	n/a	1.48e-01	n/a	n/a

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Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005468	F	Americium-241 by GEA	uCi/g	n/a	<8.16e-02	<3.16e-01	<3.09e-1	n/a	n/a	n/a	3.16e-01	n/a	n/a
S96T005469	F	Fluoride-IC-Dionex 4000/4500	ug/g	102.2	<1.20e-02	2.32e+03	2.01e+03	2.16e+03	14.3	95.59	12.80	n/a	n/a
S96T005469	F	Chloride-IC-Dionex 4000/4500	ug/g	103.4	<1.70e-02	9.08e+02	879.0	893.6	3.25	104.2	18.14	n/a	n/a
S96T005469	F	Nitrite-IC - Dionex 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	n/a
S96T005469	F	Bromide by Ion Chromatograph	ug/g	99.49	<1.25e-01	1.36e+02	<1.36e2	n/a	n/a	100.2	133.4	n/a	n/a
S96T005469	F	Nitrate by Ion Chromatograph	ug/g	100.8	1.94e-01	5.28e-04	5.18e-04	5.23e+04	1.91	103.4	148.3	n/a	n/a
S96T005469	F	Nitrate by IC-Dionex 4000/4500	ug/g	98.71	<1.20e-01	1.53e+04	1.32e+04	1.43e+04	14.7	109.4	128.0	n/a	n/a
S96T005469	F	Phosphate-IC-Dionex 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	n/a
S96T005469	F	Sulfate by IC-Dionex 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	n/a
S96T005469	F	Oxalate by IC-Dionex 4000/4500	ug/g	106.9	<1.05e-01	1.41e+02	139.0	139.8	1.43	105.3	112.0	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005471		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	n/a
S96T005473		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	n/a
S96T005473		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T005473		% Water by TGA using Mettler	%	99.70	n/a	34.86	36.85	35.86	5.55	n/a	n/a	n/a	n/a
S96T005477	F	Uranium by Phosphorescence	ug/g	109.3	5.93e-05	1.49e+03	1.47e+03	1.48e+03	1.35	111.3	1.640	1.28E+00	n/a
S96T005477	F	U-Phosphorescence Inst. Error	% Inst Error	3.32	1.160	1.280	1.240	1.260	1.24	n/a	n/a	n/a	n/a
S96T005477	F	Strontium-89/90 High Level	uCi/g	86.39	8.00e-05	4.740	4.090	4.415	14.7	n/a	3.00e-03	8.29E-01	n/a
S96T005477	F	Nickel -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	n/a
S96T005477	F	Silver -ICP-Fusion	ug/g	99.00	<1.00e-02	<1.77e+02	<1.78e2	n/a	n/a	n/a	177.0	n/a	n/a
S96T005477	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	n/a
S96T005477	F	Arsenic -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	n/a
S96T005477	F	Boron -ICP-Fusion	ug/g	97.80	<5.00e-02	<8.84e+02	<8.88e2	n/a	n/a	n/a	884.0	n/a	n/a
S96T005477	F	Barium -ICP-Fusion	ug/g	97.60	<5.00e-02	<8.84e+02	<8.88e2	n/a	n/a	n/a	884.0	n/a	n/a
S96T005477	F	Beryllium -ICP-Fusion	ug/g	100.2	<5.00e-05	< 88.40	<8.88e1	n/a	n/a	n/a	88.40	n/a	n/a
S96T005477	F	Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	2.10e+03	2.01e+03	2.06e+03	4.38	n/a	1.77e+03	n/a	n/a
S96T005477	F	Calcium -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	n/a
S96T005477	F	Cadmium -ICP-Fusion	ug/g	100.2	<5.00e-05	< 88.40	<8.88e1	n/a	n/a	n/a	88.40	n/a	n/a
S96T005477	F	Cerium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.77e+03	<1.78e3	n/a	n/a	n/a	1.77e+03	n/a	n/a
S96T005477	F	Cobalt -ICP-Fusion	ug/g	101.4	<2.00e-02	<3.54e+02	<3.55e2	n/a	n/a	n/a	354.0	n/a	n/a
S96T005477	F	Chromium -ICP-Fusion	ug/g	101.0	<1.00e-02	1.83e+02	187.0	185.0	2.16	n/a	177.0	n/a	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	F	Lithium -ICP-Fusion	ug/g	96.80	<1.00e-02	<1.77e+02	<1.78e2	n/a	n/a	n/a	177.0	n/a	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	F	Sodium -ICP-Fusion	ug/g	94.80	1.510	1.62e+05	1.79e+05	1.70e+05	9.97	n/a	1.77e+03	n/a	n/a
S96T005477	F	Neodymium -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	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	F	Antimony -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.06e+03	<1.07e3	n/a	n/a	n/a	1.06e+03	n/a	n/a
S96T005477	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	n/a
S96T005477	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	n/a
S96T005477	F	Samarium -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	n/a
S96T005477	F	Strontium -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.77e+02	<1.78e2	n/a	n/a	n/a	177.0	n/a	n/a
S96T005477	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	n/a

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Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005477	F	Thallium -ICP-Fusion	ug/g	94.60	<2.00e-01	<3.54e+03	<3.55e3	n/a	n/a	n/a	3.54e+03	n/a	n/a
S96T005477	F	Uranium -ICP-Fusion	ug/g	94.90	<5.00e-01	<8.88e+03	<8.88e3	n/a	n/a	n/a	8.84e+03	n/a	n/a
S96T005477	F	Vanadium -ICP-Fusion	ug/g	100.4	<5.00e-02	<8.84e+02	<8.88e2	n/a	n/a	n/a	884.0	n/a	n/a
S96T005477	F	Zinc -ICP-Fusion	ug/g	102.0	<1.00e-02	<1.77e+02	<1.78e2	n/a	n/a	n/a	177.0	n/a	n/a
S96T005477	F	Zirconium -ICP-Fusion	ug/g	98.60	<1.00e-02	<1.77e+02	<1.78e2	n/a	n/a	n/a	177.0	n/a	n/a
S96T005477	F	Cobalt-60 by GEA	uCi/g	99.75	<1.65e-02	<1.27e-02	<1.19e-2	n/a	n/a	n/a	1.30e-02	n/a	n/a
S96T005477	F	Cesium-137 by GEA	uCi/g	98.05	<3.35e-02	17.42	16.60	17.01	4.71	n/a	n/a	n/a	1.21
S96T005477	F	Europium-154 by GEA	uCi/g	n/a	<5.01e-02	<3.66e-02	<3.56e-2	n/a	n/a	n/a	3.70e-02	n/a	n/a
S96T005477	F	Europium-155 by GEA	uCi/g	n/a	<4.31e-02	<1.24e-01	<1.23e-1	n/a	n/a	n/a	1.26e-01	n/a	n/a
S96T005477	F	Americium-241 by GEA	uCi/g	n/a	<8.16e-02	<2.59e-01	<2.49e-1	n/a	n/a	n/a	2.59e-01	n/a	n/a
S96T005477	F	Beta of Solid Sample	uCi/g	107.8	3.30e-02	28.30	26.20	26.25	15.6	102.6	1.60e-02	4.66E+01	n/a
S96T005477	F	Alpha of Digested Solid	uCi/g	80.09	<4.50e-05	1.08e-02	7.34e-03	9.07e-03	38.1	n/a	8.00e-03	6.04E+01	n/a
S96T005479	W	Fluoride-IC-Dioxex 4000/4500	ug/g	102.2	<1.20e-02	2.69e+04	2.68e+04	2.69e+04	0.37	n/a	89.87	n/a	n/a
S96T005479	W	Chloride-IC-Dioxex 4000/4500	ug/g	103.4	<1.70e-02	8.98e+02	814.0	855.8	9.81	n/a	127.3	n/a	n/a
S96T005479	W	Nitrite-IC - Dioxex 4000/4500	ug/g	101.5	<1.08e-01	1.28e+04	1.07e+04	1.17e+04	17.9	n/a	808.9	n/a	n/a
S96T005479	W	Bromide by Ion Chromatograph	ug/g	99.49	<1.25e-01	<9.36e+02	<9.35e2	n/a	n/a	n/a	936.0	n/a	n/a
S96T005479	W	Nitrate by IC-Dioxex 4000/4500	ug/g	100.8	1.96e-01	4.85e+04	4.10e+04	4.48e+04	16.8	n/a	1.04e+03	n/a	n/a
S96T005479	W	Phosphate-IC-Dioxex 4000/4500	ug/g	98.71	<1.20e-01	1.28e+05	1.39e+05	1.33e+05	8.24	n/a	898.7	n/a	n/a
S96T005479	W	Sulfate by IC-Dioxex 4000/4500	ug/g	102.2	<1.38e-01	6.54e+04	5.99e+04	6.26e+04	8.78	n/a	1.03e+03	n/a	n/a
S96T005479	W	Oxalate by IC-Dioxex 4000/4500	ug/g	106.9	<1.05e-01	<7.86e+02	<7.86e2	n/a	n/a	n/a	786.4	n/a	n/a
S96T005481	1	Silver -ICP-H2O Dig/Acid	ug/g	99.60	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	98.40	18.80	n/a	n/a
S96T005481	1	Aluminum -ICP-H2O Dig/Acid	ug/g	96.00	3.81e+01	8.98e+02	483.0	690.5	60.1	93.60	93.80	n/a	n/a
S96T005481	1	Arsenic -ICP-H2O Dig/Acid	ug/g	107.4	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	106.0	188.0	n/a	n/a
S96T005481	1	Boron -ICP-H2O Dig/Acid	ug/g	100.0	< 4.430	1.30e+03	714.0	1.01e+03	58.2	100.0	93.80	n/a	n/a
S96T005481	1	Beryllium -ICP-H2O Dig/Acid	ug/g	103.2	<5.00e-02	< 93.80	<9.37e1	n/a	n/a	102.0	93.80	n/a	n/a
S96T005481	1	Bismuth -ICP-H2O Dig/Acid	ug/g	103.2	<5.00e-03	< 9.380	<9.37e0	n/a	n/a	103.0	9.380	n/a	n/a
S96T005481	1	Bismuth -ICP-H2O Dig/Acid	ug/g	110.6	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	109.0	188.0	n/a	n/a
S96T005481	1	Calcium -ICP-H2O Dig/Acid	ug/g	97.40	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	98.00	188.0	n/a	n/a
S96T005481	1	Cadmium -ICP-H2O Dig/Acid	ug/g	101.4	<5.00e-03	< 9.380	<9.37e0	n/a	n/a	100.0	9.380	n/a	n/a
S96T005481	1	Cerium -ICP-H2O Dig/Acid	ug/g	100.6	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	95.90	188.0	n/a	n/a
S96T005481	1	Cobalt -ICP-H2O Dig/Acid	ug/g	101.8	<2.00e-02	47.30	51.20	49.25	7.92	98.90	37.50	n/a	n/a
S96T005481	1	Chromium -ICP-H2O Dig/Acid	ug/g	98.60	<1.00e-02	1.82e+02	149.0	165.5	19.9	96.30	18.80	n/a	n/a
S96T005481	1	Copper -ICP-H2O Dig/Acid	ug/g	100.6	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	102.0	18.80	n/a	n/a
S96T005481	1	Iron -ICP-H2O Dig/Acid	ug/g	100.8	<5.00e-02	< 93.80	<9.37e1	n/a	n/a	98.30	93.80	n/a	n/a
S96T005481	1	Potassium -ICP-H2O Dig/Acid	ug/g	100.0	<5.00e-01	<9.38e+02	<9.37e2	n/a	n/a	151.0	938.0	n/a	n/a
S96T005481	1	Lanthanum -ICP-H2O Dig/Acid	ug/g	99.60	<5.00e-02	< 93.80	<9.37e1	n/a	n/a	99.50	93.80	n/a	n/a
S96T005481	1	Lithium -ICP-H2O Dig/Acid	ug/g	94.40	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	92.90	18.80	n/a	n/a
S96T005481	1	Magnesium -ICP-H2O Dig/Acid	ug/g	103.2	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	102.0	188.0	n/a	n/a
S96T005481	1	Manganese -ICP-H2O Dig/Acid	ug/g	100.4	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	99.80	18.80	n/a	n/a
S96T005481	1	Molybdenum -ICP-H2O Dig/Acid	ug/g	103.6	<5.00e-02	< 93.80	<9.37e1	n/a	n/a	102.0	93.80	n/a	n/a
S96T005481	1	Sodium -ICP-H2O Dig/Acid	ug/g	98.80	6.210	1.74e+05	1.69e+05	1.72e+05	2.92	62.90	188.0	n/a	n/a
S96T005481	1	Neodymium -ICP-H2O Dig/Acid	ug/g	99.00	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	98.30	188.0	n/a	n/a
S96T005481	1	Nickel -ICP-H2O Dig/Acid	ug/g	100.2	<2.00e-02	< 37.50	<3.75e1	n/a	n/a	100.0	37.50	n/a	n/a
S96T005481	1	Phosphorus -ICP-H2O Dig/Acid	ug/g	106.0	<2.00e-01	4.16e+04	4.37e+04	4.26e+04	4.92	118.0	375.0	n/a	n/a
S96T005481	1	Lead -ICP-H2O Dig/Acid	ug/g	99.20	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	102.0	188.0	n/a	n/a
S96T005481	1	Sulfur -ICP-H2O Dig/Acid	ug/g	102.0	<1.00e-01	2.07e+04	1.86e+04	1.96e+04	10.7	113.0	188.0	n/a	n/a
S96T005481	1	Antimony -ICP-H2O Dig/Acid	ug/g	111.6	<6.00e-02	<1.13e+02	<1.12e2	n/a	n/a	98.40	113.0	n/a	n/a
S96T005481	1	Selenium -ICP-H2O Dig/Acid	ug/g	84.20	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	79.90	188.0	n/a	n/a
S96T005481	1	Silicon -ICP-H2O Dig/Acid	ug/g	98.00	4.480	8.32e+03	2.19e+03	5.26e+03	117	117.0	93.80	n/a	n/a
S96T005481	1	Samarium -ICP-H2O Dig/Acid	ug/g	109.0	<1.00e-01	<1.88e+02	<1.87e2	n/a	n/a	110.0	188.0	n/a	n/a
S96T005481	1	Strontium -ICP-H2O Dig/Acid	ug/g	105.2	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	105.0	18.80	n/a	n/a

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

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005481	I		Titanium-ICP-H2O Dig/Acid	ug/g	97.00	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	95.90	18.80		n/a
S96T005481	I		Thallium -ICP-H2O Dig/Acid	ug/g	102.4	<2.00e-01	<3.75e+02	<3.75e2	n/a	n/a	96.30	375.0		n/a
S96T005481	I		Uranium -ICP-H2O Dig/Acid	ug/g	105.0	<5.00e-01	<9.38e+02	<9.37e2	n/a	n/a	112.0	938.0		n/a
S96T005481	I		Vanadium -ICP-H2O Dig/Acid	ug/g	103.2	<5.00e-02	< 93.80	<9.37e1	n/a	n/a	103.0	93.80		n/a
S96T005481	I		Zinc -ICP-H2O Dig/Acid	ug/g	104.0	<1.00e-02	< 39.40	<1.87e1	n/a	n/a	103.0	18.80		n/a
S96T005481	I		Zirconium -ICP-H2O Dig/Acid	ug/g	104.0	<1.00e-02	< 18.80	<1.87e1	n/a	n/a	105.0	18.80		n/a

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Table 3. Data Summary Table
B-108

CORE NUMBER: 173
SEGMENT #: 2

SEGMENT PORTION: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S96T005472		Bulk Density of Sample	g/mL		n/a	1.570	n/a	n/a			5.00e-01		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
S96T005474		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
S96T005474		% Water by TGA using Mettler	%	99.09	n/a	64.53	43.03	43.78	3.43	n/a	n/a		n/a
S96T005478	F	Nickel -ICP-Fusion	ug/g	100.0	1.20	2.52e+03	2.41e+04	1.33e+04	162	95.30	356.0		n/a
S96T005478	F	Silver -ICP-Fusion	ug/g	95.80	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	89.30	178.0		n/a
S96T005478	F	Aluminum -ICP-Fusion	ug/g	95.80	<5.00e-02	1.63e+04	7.25e+04	4.44e+04	127	89.80	888.0		n/a
S96T005478	F	Arsenic -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	98.60	1.78e+03		n/a
S96T005478	F	Boron -ICP-Fusion	ug/g	97.80	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	91.50	888.0		n/a
S96T005478	F	Barium -ICP-Fusion	ug/g	97.60	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	90.90	888.0		n/a
S96T005478	F	Beryllium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 89.00	<9.01e1	n/a	n/a	94.20	88.80		n/a
S96T005478	F	Bismuth -ICP-Fusion	ug/g	100.6	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	99.70	1.78e+03		n/a
S96T005478	F	Bismuth -ICP-Fusion	ug/g	101.0	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	101.0	1.78e+03		n/a
S96T005478	F	Calcium -ICP-Fusion	ug/g	100.2	<5.00e-03	< 89.00	<9.01e1	n/a	n/a	97.00	88.80		n/a
S96T005478	F	Cadmium -ICP-Fusion	ug/g	98.40	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	93.10	1.78e+03		n/a
S96T005478	F	Cerium -ICP-Fusion	ug/g	101.4	<2.00e-02	<3.56e+02	<3.60e2	n/a	n/a	98.70	356.0		n/a
S96T005478	F	Cobalt -ICP-Fusion	ug/g	101.0	<1.00e-02	<1.78e+02	196.0	n/a	n/a	98.60	178.0		n/a
S96T005478	F	Chromium -ICP-Fusion	ug/g	102.2	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	94.80	178.0		n/a
S96T005478	F	Copper -ICP-Fusion	ug/g	99.60	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	95.90	888.0		n/a
S96T005478	F	Iron -ICP-Fusion	ug/g	100.0	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	93.70	888.0		n/a
S96T005478	F	Lanthanum -ICP-Fusion	ug/g	96.80	<1.00e-01	<1.78e+02	<1.80e2	n/a	n/a	88.20	178.0		n/a
S96T005478	F	Lithium -ICP-Fusion	ug/g	94.00	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	88.10	1.78e+03		n/a
S96T005478	F	Magnesium -ICP-Fusion	ug/g	97.20	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	92.80	178.0		n/a
S96T005478	F	Manganese -ICP-Fusion	ug/g	101.0	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	98.00	888.0		n/a
S96T005478	F	Molybdenum -ICP-Fusion	ug/g	94.80	1.510	2.12e+05	1.73e+05	1.92e+05	20.3	89.70	1.78e+03		n/a
S96T005478	F	Sodium -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
S96T005478	F	Neodymium -ICP-Fusion	ug/g	98.40	<2.00e-01	5.42e+04	2.21e+04	3.82e+04	84.1	94.00	3.56e+03		n/a
S96T005478	F	Phosphorus -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
S96T005478	F	Lead -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
S96T005478	F	Sulfur -ICP-Fusion	ug/g	96.00	<6.00e-02	<1.07e+03	<1.08e3	n/a	n/a	92.50	1.07e+03		n/a
S96T005478	F	Antimony -ICP-Fusion	ug/g	95.00	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	95.80	1.78e+03		n/a
S96T005478	F	Selenium -ICP-Fusion	ug/g	96.80	<5.00e-02	1.08e+03	1.12e+03	1.10e+03	3.64	95.00	888.0		n/a
S96T005478	F	Silicon -ICP-Fusion	ug/g	96.60	<1.00e-01	<1.78e+03	<1.80e3	n/a	n/a	93.50	1.78e+03		n/a
S96T005478	F	Samarium -ICP-Fusion	ug/g	97.00	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	90.30	178.0		n/a
S96T005478	F	Strontium -ICP-Fusion	ug/g	97.40	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	92.80	178.0		n/a
S96T005478	F	Titanium -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
S96T005478	F	Uranium -ICP-Fusion	ug/g	94.90	<5.00e-01	<8.90e+03	<9.01e3	n/a	n/a	94.00	8.88e+03		n/a
S96T005478	F	Vanadium -ICP-Fusion	ug/g	100.4	<5.00e-02	<8.90e+02	<9.01e2	n/a	n/a	97.00	888.0		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
S96T005478	F	Zirconium -ICP-Fusion	ug/g	98.60	<1.00e-02	<1.78e+02	<1.80e2	n/a	n/a	93.70	178.0		n/a
S96T005478	F	Alpha of Digested Solid	uCi/g	80.09	4.50e-03	9.37e-03	1.37e-02	1.15e-02	37.5	108.1	1.60e-02		1.06e+02
S96T005480	W	Fluoride-IC-Dionex 4000/4500	ug/g	110.7	<1.20e-02	3.90e+04	3.53e+04	3.71e+04	9.96	-3.750e1	86.14		n/a
S96T005480	W	Chloride-IC-Dionex 4000/4500	ug/g	95.06	2.70e-02	4.57e+02	528.0	492.7	14.4	98.86	122.1		n/a
S96T005480	W	Nitrite-IC - Dionex 4000/4500	ug/g	95.93	<1.08e-01	7.13e+03	6.21e+03	6.67e+03	13.8	95.01	775.3		n/a

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Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T005480	W		Bromide by Ion Chromatograph	ug/g	98.64	<1.25e-01	<8.97e+02	<9.23e2	n/a	n/a	100.3	897.5	n/a
S96T005480	W		Nitrate by IC-Dionex 4000/4500	ug/g	97.64	<1.39e-01	3.84e+04	3.39e+04	3.61e+04	12.4	94.61	997.9	n/a
S96T005480	W		Phosphate-IC-Dionex 4000/4500	ug/g	94.30	<1.20e-01	2.14e+05	1.87e+05	2.01e+05	13.5	28.86	861.4	n/a
S96T005480	W		Sulfate by IC-Dionex 4000/4500	ug/g	99.05	<1.38e-01	7.21e+04	6.57e+04	6.89e+04	9.29	87.64	990.6	n/a
S96T005480	W		Oxalate by IC-Dionex 4000/4500	ug/g	104.2	<1.05e-01	<7.54e+02	<7.75e2	n/a	n/a	109.3	754.0	n/a
S97T000001	F		Silver -ICP-Fusion	ug/g	97.80	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	85.60	196.0	n/a
S97T000001	F		Aluminium -ICP-Fusion	ug/g	99.20	<5.00e-02	2.39e+04	1.24e+04	1.82e+04	63.4	95.50	980.0	n/a
S97T000001	F		Arsenic -ICP-Fusion	ug/g	102.4	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	101.0	1.96e+03	n/a
S97T000001	F		Boron -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	95.50	980.0	n/a
S97T000001	F		Barium -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	94.50	980.0	n/a
S97T000001	F		Beryllium -ICP-Fusion	ug/g	103.2	<5.00e-03	< 98.00	<9.80e1	n/a	n/a	97.70	98.00	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	1.96e+03	n/a
S97T000001	F		Calcium -ICP-Fusion	ug/g	98.60	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	98.70	1.96e+03	n/a
S97T000001	F		Cadmium -ICP-Fusion	ug/g	100.0	<5.00e-03	< 98.00	<9.80e1	n/a	n/a	97.90	98.00	n/a
S97T000001	F		Cerium -ICP-Fusion	ug/g	103.2	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	99.60	1.96e+03	n/a
S97T000001	F		Cobalt -ICP-Fusion	ug/g	100.4	<2.00e-02	<3.92e+02	<3.92e2	n/a	n/a	98.00	392.0	n/a
S97T000001	F		Chromium -ICP-Fusion	ug/g	100.2	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	99.10	196.0	n/a
S97T000001	F		Copper -ICP-Fusion	ug/g	106.8	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	100.0	196.0	n/a
S97T000001	F		Iron -ICP-Fusion	ug/g	101.2	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	98.60	980.0	n/a
S97T000001	F		Lanthanum -ICP-Fusion	ug/g	102.4	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	97.20	980.0	n/a
S97T000001	F		Lithium -ICP-Fusion	ug/g	99.60	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	91.30	196.0	n/a
S97T000001	F		Magnesium -ICP-Fusion	ug/g	101.6	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	98.00	1.96e+03	n/a
S97T000001	F		Manganese -ICP-Fusion	ug/g	98.40	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	94.30	196.0	n/a
S97T000001	F		Molybdenum -ICP-Fusion	ug/g	101.4	<5.00e-02	<9.80e+02	<9.80e2	n/a	n/a	99.80	980.0	n/a
S97T000001	F		Sodium -ICP-Fusion	ug/g	105.6	1.600	2.44e+05	2.46e+05	2.45e+05	0.82	83.90	1.96e+03	n/a
S97T000001	F		Neodymium -ICP-Fusion	ug/g	102.6	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	97.00	1.96e+03	n/a
S97T000001	F		Phosphorus -ICP-Fusion	ug/g	101.0	<2.00e-01	5.72e+04	6.73e+04	6.22e+04	16.2	104.0	3.92e+03	n/a
S97T000001	F		Lead -ICP-Fusion	ug/g	98.00	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	99.90	1.96e+03	n/a
S97T000001	F		Sulfur -ICP-Fusion	ug/g	98.00	<1.00e-01	2.14e+04	1.43e+04	1.78e+04	39.8	98.60	1.96e+03	n/a
S97T000001	F		Antimony -ICP-Fusion	ug/g	96.40	<6.00e-02	<1.18e+03	<1.18e3	n/a	n/a	94.70	1.18e+03	n/a
S97T000001	F		Selenium -ICP-Fusion	ug/g	95.80	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	96.40	1.96e+03	n/a
S97T000001	F		Silicon -ICP-Fusion	ug/g	97.20	<5.00e-02	1.01e+03	<9.80e2	n/a	n/a	96.50	980.0	n/a
S97T000001	F		Samarium -ICP-Fusion	ug/g	101.2	<1.00e-01	<1.96e+03	<1.96e3	n/a	n/a	95.10	1.96e+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	196.0	n/a
S97T000001	F		Titanium -ICP-Fusion	ug/g	99.20	<1.00e-02	<1.96e+02	<1.96e2	n/a	n/a	94.80	196.0	n/a
S97T000001	F		Thallium -ICP-Fusion	ug/g	97.20	<2.00e-01	<3.92e+03	<3.92e3	n/a	n/a	92.70	3.92e+03	n/a
S97T000001	F		Uranium -ICP-Fusion	ug/g	98.50	<5.00e-01	<9.80e+03	<9.80e3	n/a	n/a	90.00	9.80e+03	n/a
S97T000001	F		Vanadium -ICP-Fusion	ug/g	100.8	<5.00e-02	<9.80e+02	<9.80e2	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	196.0	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	196.0	n/a
S97T000001	F		Cobalt-60 by GEA	uc1/g	100.4	<1.13e-02	<1.12e-02	<9.76e-3	n/a	n/a	n/a	1.10e-02	n/a
S97T000001	F		Cesium-137 by GEA	uc1/g	103.5	<2.29e-02	10.68	7.150	8.915	39.8	n/a	n/a	1.47
S97T000001	F		Europium-154 by GEA	uc1/g	n/a	<3.55e-02	<3.84e-02	<4.16e-2	n/a	n/a	n/a	3.80e-02	n/a
S97T000001	F		Europium-155 by GEA	uc1/g	n/a	<2.98e-02	<8.45e-02	<6.86e-2	n/a	n/a	n/a	8.50e-02	n/a
S97T000001	F		Americium-241 by GEA	uc1/g	n/a	<8.16e-02	<2.13e-01	<1.70e-1	n/a	n/a	n/a	2.13e-01	n/a
S97T000001	F		Alpha of Digested Solid	uc1/g	101.3	<3.02e-03	4.66e-03	1.80e-03	3.23e-03	88.5	65.46	3.00e-03	8.21E+01
S97T000017	W		Fluoride-IC-Dionex 4000/4500	ug/g	95.76	<4.92e-01	3.31e+04	3.46e+04	3.39e+04	4.43	88.81	97.66	n/a
S97T000017	W		Chloride-IC-Dionex 4000/4500	ug/g	100.8	<6.97e-01	3.12e+02	328.0	319.9	5.00	97.85	138.4	n/a
S97T000017	W		Nitrite-IC - Dionex 4000/4500	ug/g	103.1	2.47e-01	5.08e+03	6.86e+03	5.97e+03	29.8	110.0	879.0	n/a
S97T000017	W		Bromide by Ion Chromatograph	ug/g	99.15	<5.120	<1.02e+03	<1.01e3	n/a	n/a	97.62	1.02e+03	n/a
S97T000017	W		Nitrate by IC-Dionex 4000/4500	ug/g	100.0	<5.700	2.36e+04	3.26e+04	2.81e+04	32.0	99.33	1.13e+03	n/a

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

Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000017	W	Phosphate-IC-Dionex 4000/4500	µg/g	100.0	<4.970	2.14e+05	1.89e+05	2.00e+05	14.5	99.08	976.6		N/A
S97T000017	W	Sulfate by IC-Dionex 4000/4500	µg/g	99.84	<5.260	4.56e+04	7.16e+04	5.86e+04	44.4	103.3	1.12e+03		N/A
S97T000017	W	Oxalate by IC-Dionex 4000/4500	µg/g	100.9	<4.300	<8.55e+02	<8.48e2		N/A	96.44	894.9		N/A

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

CHAIN OF CUSTODY FORMS

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Oct. 11. 1996

11:47AM

WHC 222S LAB ROOM 2F BACKSIDE

No. 5792 P. 2/5

Shipment Number 200w-08-TF (2) Sample Number 96-504 (3) Supervisor M. C. Jones
 Tank B-108 (5) Riser 6 (6) Segment 1 (7) Core 172 (8) Cask Serial Number 2005

Identification Survey Data:

(3) FIELD (33) LABORATORY

Over Top Dose Rate 6.5 mc/hr (34) Shipment Description

Side Dose Rate 4.2 mc/hr A. Work Package Number ES-96-00692

Bottom Dose Rate 3.0 mc/hr B. Cask Seal Number 11165

Smearable Contamination 2.20 dpm/100cm² (Alpha) C. Sampler Serial Number 96-084

1.000 dpm/100cm² (Beta-Gamma) D. Date and Time Sampler Unseated 9-29-96 0215

ECT (HPT) Doug Smith (Signature) ECT (HPT) 20%

ECT (HPT) [Signature] (Signature) F. Expected Solid Content 20%

G. Dose Rate Through Drill String 250 mR/hr

H. Expected Sample Length 15"

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

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

(2) Field Comments

(34) Laboratory Comments

(17) Sender Comments

(18) Seal Intact Upon Release? Yes No

(31) Seal Intact Upon Receipt? Yes No

(32) Seal Data Consistent with this Record? Yes No

Shipment No. Yes No

Sample No. Yes No

(15) Sender Name (Sign and PRINT) James Sicket

(16) Date/Time 10-11-96

(20) Received By (Sign and PRINT) [Signature]

(21) Date/Time 10-11-96

(24) Received By (Sign and PRINT) [Signature]

(25) Date/Time 10-11-96

(28) Received By (Sign and PRINT) [Signature]

(29) Date/Time 10-11-96

(30) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-TF (2) Sample Number 96-505 (3) Supervisor M. C. Jones
 4) Tank B-108 (5) Riser 6 (6) Segment 2 (7) Core 172 (8) Cask Serial Number C-1027

Radiation Survey Date: Over Top Dose Rate <u>0.5 mR/hr</u> Side Dose Rate <u>0.5 mR/hr</u> Bottom Dose Rate <u>1.0 mR/hr</u> Smearable Contamination (Alpha) <u>< 20 dpm/100cm²</u> (Beta-Gamma) <u>< 1000 dpm/100cm²</u> RCT* (HPT) <u>[Signature]</u> (Signature)	(33) LABORATORY <u>0.5</u> <u>1</u> <u>1</u> (Alpha) <u>< 100 dpm/Lar</u> (Alpha) <u>< 1000 dpm/Lar</u> (Beta-Gamma) <u>[Signature]</u> (Signature)	(10) Shipment Description A. Work Package Number <u>ES-96-00692</u> B. Cask Seal Number <u>11163</u> C. Sampler Serial Number <u>96-070</u> D. Date and Time Sampler Unseated <u>9-4-96 / 0325</u> E. Expected Liquid Content <u>30%</u> F. Expected Solid Content <u>70%</u> G. Dose Rate Through Drill String <u>35 MR/HR</u> H. Expected Sample Length <u>1 1/2"</u>
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1) INFORMATION (Include statement of laboratory tests to be performed.)

2) Field Comments <p style="font-size: 1.2em;">Sample was only pushed 1 1/2" before HDB went off.</p>	(34) Laboratory Comments
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HNF-SD-WM-DR-219, REV. 0

3) Point of Origin <u>B-Farm</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickett James Sickett</u>	(16) Date/Time <u>10/11/96</u>	(17) Sender Comments
4) Relinquished By (Sign and PRINT) <u>James Sickett James Sickett</u>		(20) Received By (Sign and PRINT) <u>Steve Knight</u>	(21) Date/Time <u>10-11-96</u>	(22) Receiver Comments
5) Relinquished By (Sign and PRINT) <u>Steve Knight Steve Knight</u>		(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>10-11-96</u>	(26) Receiver Comments
6) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(32) Seal Data Consistent with this Record? Shipment No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cask Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Oct. 11, 1996 11:48AM WHC 222S LAB ROOM 2F BACKSIDE No. 5792 P. 3/5

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-506 (3) Supervisor Dennis Johnson
 (4) Tank B 108 (5) Riser 3 (6) Segment 1 (7) Core 173 (8) Cask Serial Number C 2012

irradiation Survey Data:
 (9) FIELD (33) LABORATORY
 Over Top Dose Rate 4.5 mR/hr 40.5
 Side Dose Rate 3.0 mR/hr 2
 Bottom Dose Rate 1.2 mR/hr 1
 Smearable Contamination 220 dpm/100cm² <1800 Low LAR
 (Alpha) (Alpha)
<1000 dpm/100cm² <1000 dpm LAR
 (Beta-Gamma) (Beta-Gamma)
 RCT* Dennis Johnson RCT* [Signature]
 (HPT) (Signature) (HPT) (Signature)

(10) Shipment Description
 A. Work Package Number ES-96-00691
 B. Cask Seal Number 11277
 C. Sampler Serial Number 96-012
 D. Date and Time Sampler Unseated 9-5-96 1730
 E. Expected Liquid Content 10%
 F. Expected Solid Content 90%
 G. Dose Rate Through Drill String 110 MR/HR
 H. Expected Sample Length 19"

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

2) Field Comments

(34) Laboratory Comments

(1) Point of Origin <u>B 108</u>	(14) Destination <u>222S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickels James Sickels</u>	(16) Date/Time <u>9-11-96</u>	(17) Sender Comments
(18) Relinquished By (Sign and PRINT) <u>James Sickels James Sickels</u>		(20) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>9-11-96</u>	(22) Receiver Comments
(19) Relinquished By (Sign and PRINT) <u>[Signature] EE Byrd</u>		(24) Received By (Sign and PRINT) <u>[Signature] [Signature]</u>	(25) Date/Time <u>9-11-96</u>	(26) Receiver Comments
(21) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

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

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

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

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-TT (2) Sample Number 96-507 (3) Supervisor M.C. JONES
 Tank B-108 (5) Riser 3 (6) Segment 2 (7) Core HTZ 173 (8) Cask Serial Number C-1028

(9) FIELD
 Over Top Dose Rate 4.5 m/hr
 Side Dose Rate 1.5 m/hr
 Bottom Dose Rate 1.9 m/hr
 Smearable Contamination 120 dpm/100cm²
 (Alpha)
41000 dpm/100cm²
 (Beta-Gamma)
 RCT* [Signature]
 (HPT) (Signature)

(33) LABORATORY
 Over Top Dose Rate 4.5
 Side Dose Rate 1.5
 Bottom Dose Rate 2
 Smearable Contamination <100 dpm LAS
 (Alpha)
<1000 dpm LAS
 (Beta-Gamma)
 RCT* [Signature]
 (HPT) (Signature)

(10) Shipment Description
 A. Work Package Number ES-96-00691
 B. Cask Seal Number 11167
 C. Sampler Serial Number 96-138
 D. Date and Time Sampler Unsetted 9-6-96/0130
 E. Expected Liquid Content 30%
70%
 F. Expected Solid Content
 G. Dose Rate Through Drill String 60 MR/HR
 H. Expected Sample Length 14"

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

2) Field Comments
DAILY pushed 14" DO TO hitting high sound force.

34) Laboratory Comments

3) Point of Origin <u>B-Farm</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sicket</u>	(16) Date/Time <u>09-08 10-1-96</u>	(17) Sender Comments
3) Relinquished By (Sign and PRINT) <u>James Sicket</u>	(20) Received By (Sign and PRINT) <u>[Signature]</u>	(18) Date/Time <u>09-08 10-11-96</u>	(22) Receiver Comments	
7) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>09-30 10-11-96</u>	(28) Receiver Comments	
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? Yes No

(31) Seal Intact Upon Receipt? Yes No

(32) Seal Data Consistent with this Record?
 Shipment No. Yes No
 Cask Seal No. Yes No
 Sample No. Yes No

Oct 11 1996 11:49AM WEC 222S LAB ROOM 2F BACKSIDE HNF-SD-WM-DP-219, REV.0 No. 5792 P. 5/5

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number H2O BLANK (3) Supervisor M. C. Jones
 (4) Tank 108-B-farm (5) Riser 6 (6) Segment BLANK (7) Core 173 (8) Cask Serial Number C-1042

(9) FIELD Over Top Dose Rate <u>2.5 mc/hr</u> Side Dose Rate <u>2.5 mc/hr</u> Bottom Dose Rate <u>2.5 mc/hr</u> Smearable Contamination <u>220 dpm/100cm</u> (Alpha) <u><1000 dpm/100cm</u> (Beta-Gamma) RCT* <u>[Signature]</u> (HPT) (Signature)		(33) LABORATORY Over Top Dose Rate <u>2.0-5</u> Side Dose Rate <u>2.0-5</u> Bottom Dose Rate <u>2.0-5</u> Smearable Contamination <u>220 dpm LAS</u> (Alpha) <u><1000 dpm LAS</u> (Beta-Gamma) RCT* <u>[Signature]</u> (HPT) (Signature)	
(10) Shipment Description A. Work Package Number <u>ES-96-00693</u> B. Cask Seal Number <u>11164</u> C. Sampler Serial Number <u>96-078</u> D. Date and Time Sampler Unseated <u>9-4-96 0215</u> E. Expected Liquid Content <u>100%</u> F. Expected Solid Content <u>0%</u> G. Dose Rate Through Drill String <u>2.5 MC/HR</u> H. Expected Sample Length <u>100 ML</u>			

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

2) Field Comments <u>Field Blank.</u>	(34) Laboratory Comments
--	--------------------------

3) Point of Origin <u>B-Farm</u>	(14) Destination <u>222-5</u>	(15) Sender Name (Sign and PRINT) <u>James Sicketts James Sicketts</u>	(16) Date/Time <u>10-11-96</u>	(17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>James Sicketts James Sicketts</u>		(20) Received By (Sign and PRINT) <u>[Signature]</u>		(22) Receiver Comments
3) Relinquished By (Sign and PRINT) <u>[Signature]</u>		(24) Received By (Sign and PRINT) <u>[Signature]</u>		(26) Receiver Comments
7) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT) <u>[Signature]</u>		(30) Receiver Comments

(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(32) Seal Date Consistent with this Record? Shipment No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cask Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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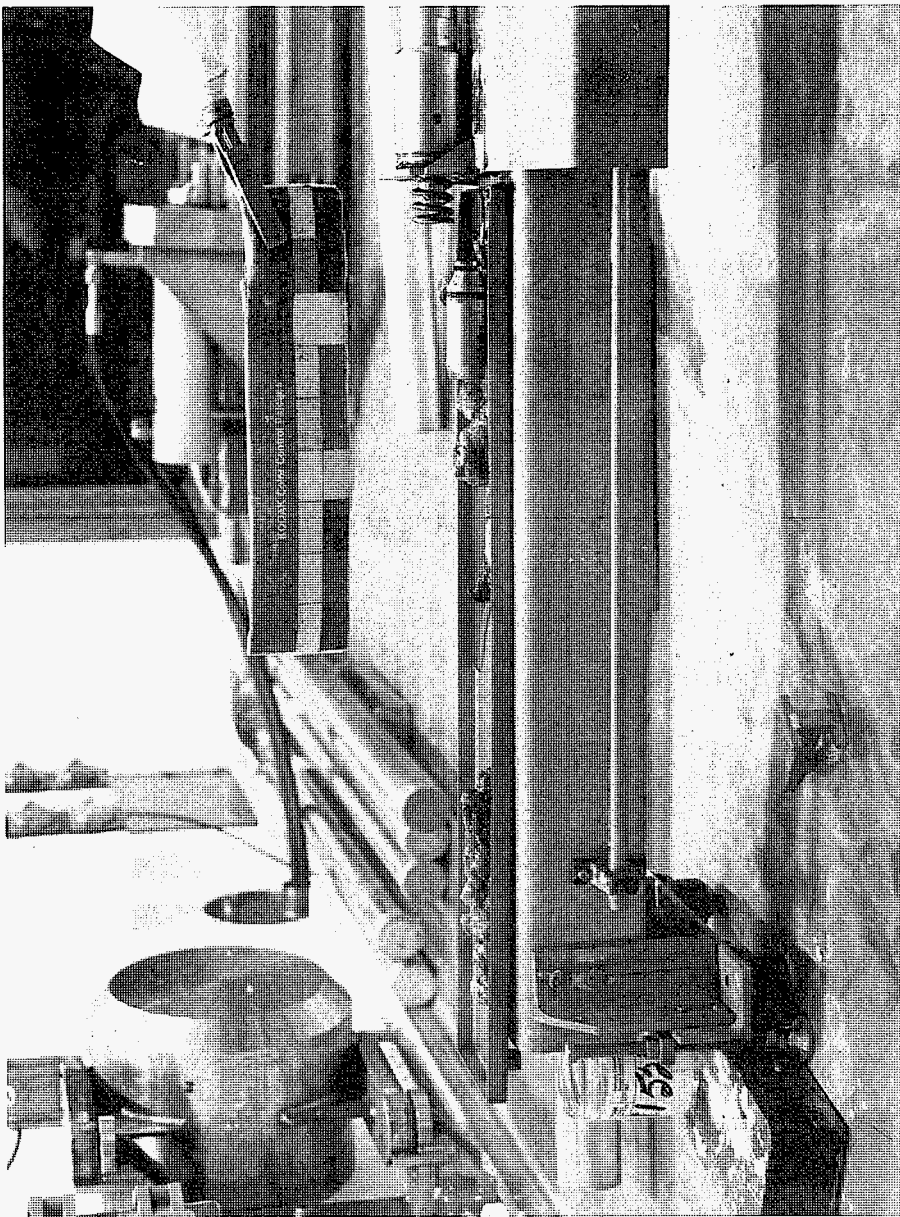
Oct. 11, 1996 11:47AM WHC 2225 LAB ROOM 2F BACKSIDE
 HNF-SD-WM-DR-219, REV. 0
 No. 5792 P. 1/5

PHOTOGRAPHS

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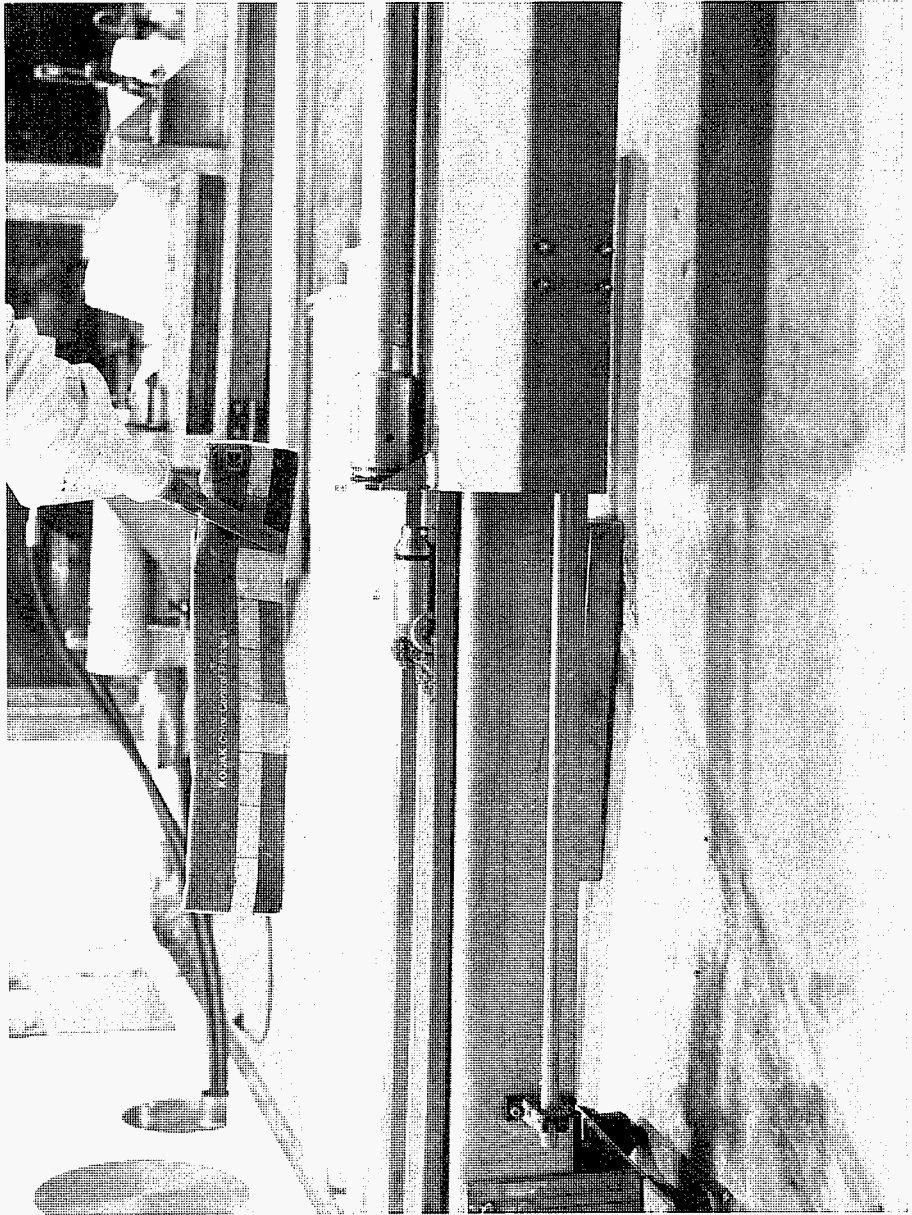
B-105 Core 172 Segment #1

10-16-96



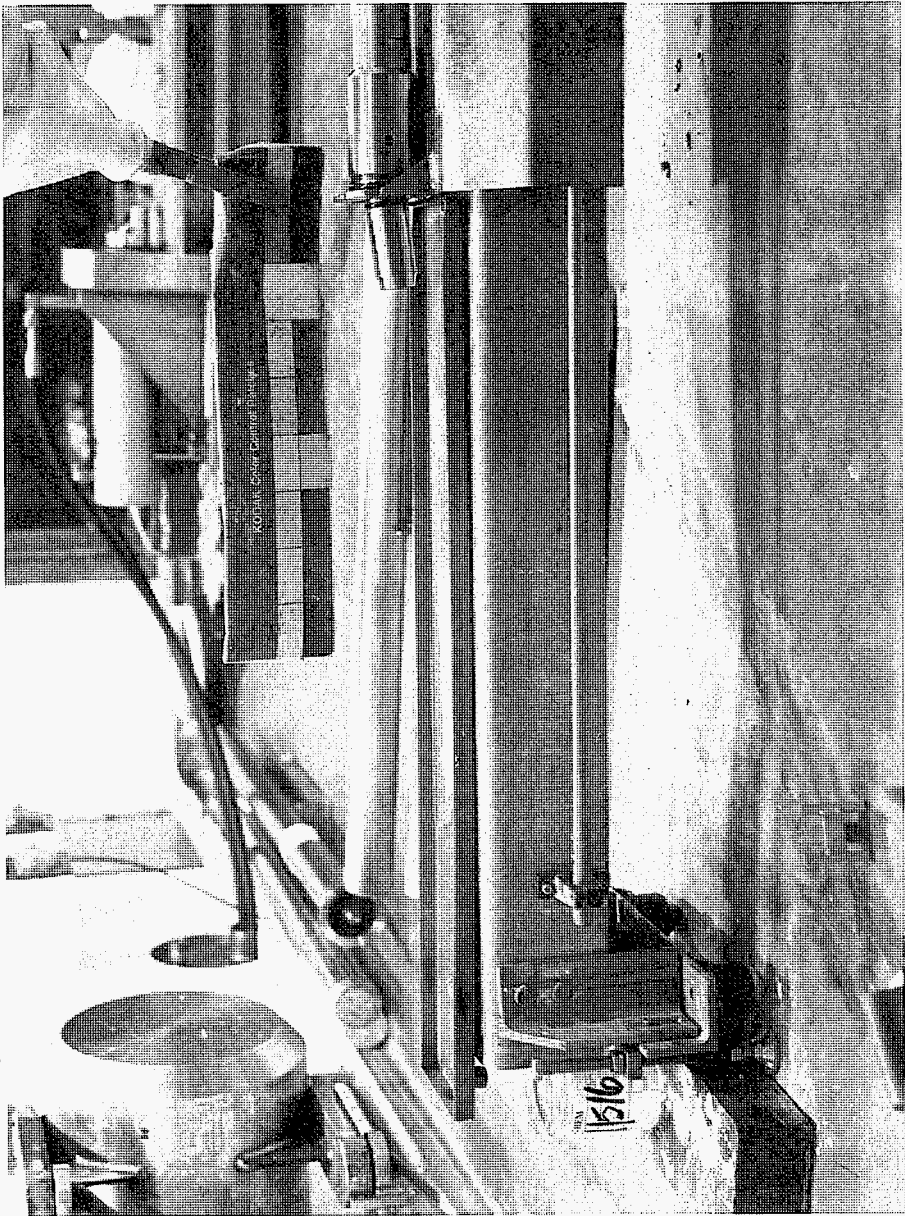
B-108 Core 172 Segment #2 10-21-96

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



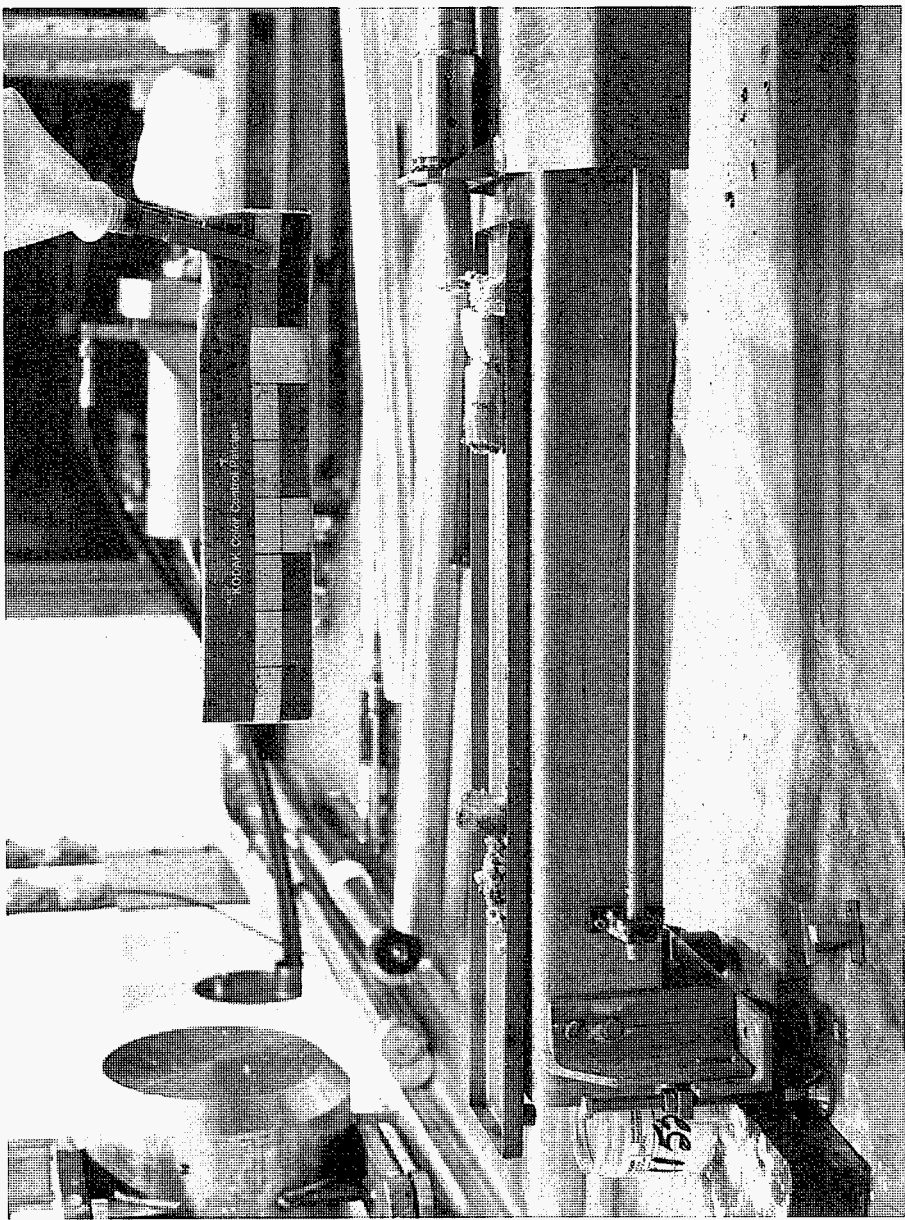
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B-108 Ore 172 Field Blank



B-108 Core 173 Segment #1

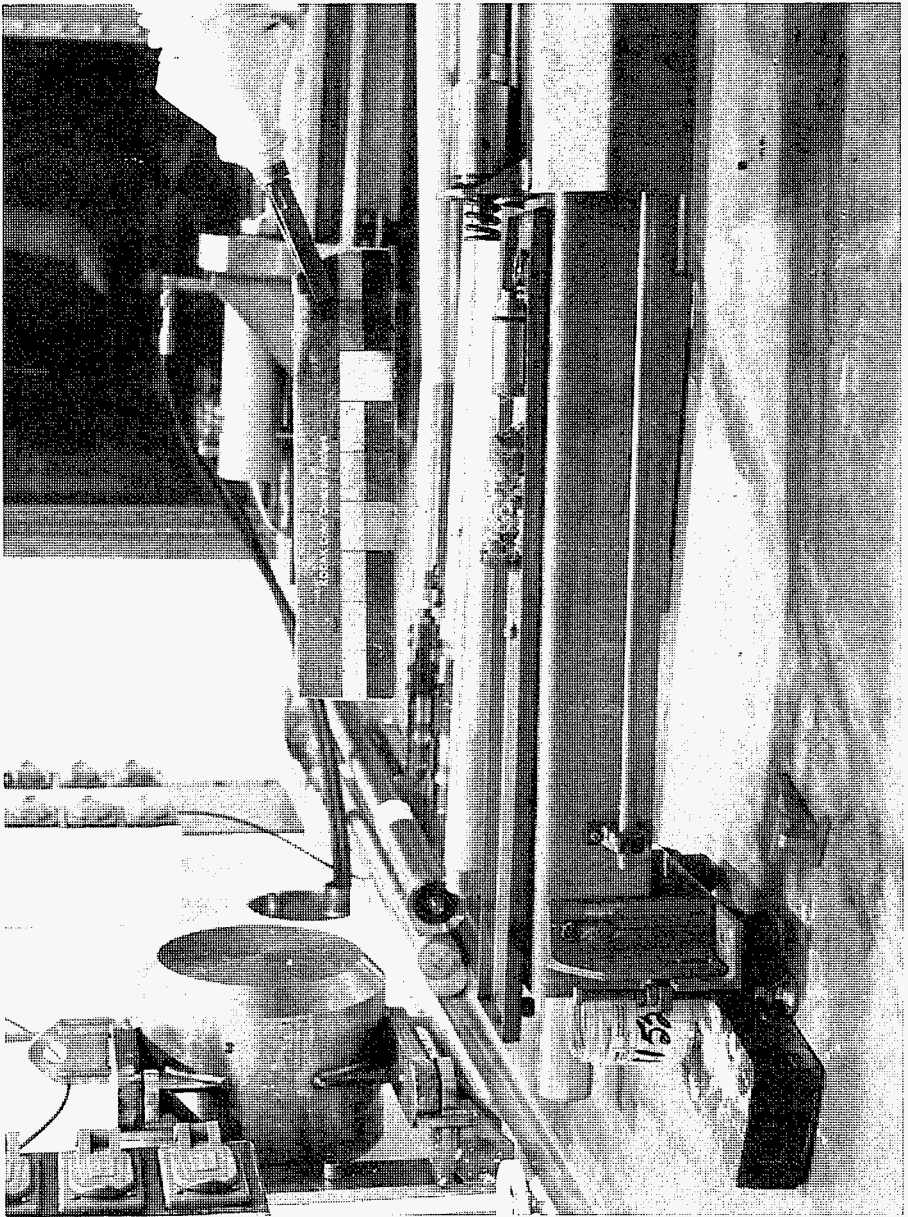
10-16-98



10-16-96

Segment #2

B-108 one 173



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

CORE COMPOSITE WORKSHEETS

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

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Final Composite Calculation Sheet

Date: 10/19/96 Technician: A. J. Tallat

Total number of jars used to build the composite: 3

Composite 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: AJ Lott

1) 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 # 11506 :

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

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 # _____ :

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

10/19/96
AL

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 Buff II
10-21-96

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 14038

Analyst: SC 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	DLIQVOL1	SOLID	<u>N/A</u>	<u>20</u>		ml
96001379	B-108	4 SAMPLE	S96T005394	0	DLIQWT01	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	LLIQWT01	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

 SC 10-18-96
Analyst Signature Date



 SC 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

CSL 10-22-96
Analyst Signature Date

CSL 10-22-96
Analyst Signature Date

B. Diffin II
10-23-96

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>20.01</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	S96T005396	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>	<u>ml</u>
96001380	B-108	4	SAMPLE	S96T005396	0	DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>	<u>g</u>
96001380	B-108	5	SAMPLE	S96T005396	0	EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>	<u>g/ml</u>
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>	<u>g</u>
96001380	B-108	8	SAMPLE	S96T005396	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>N-179</u>	
96001380	B-108	9	SAMPLE	S96T005396	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>	<u>ml</u>
96001380	B-108	10	SAMPLE	S96T005396	0	SLDWT-01	SOLID	<u>N/A</u>	<u>203.0</u>	<u>g</u>
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>	<u>ml</u>

Final page for worklist # 14042

EC 10-18-96
Analyst Signature Date
Bertrand Diff' II
10-21-96

✓ EC 10-18-96
Analyst Signature Date

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 14043

Analyst: BC

Instrument: BA000

Book # NA

Method: LO-160-103 Rev/Mod 00

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

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001380	B-108	3 SAMPLE	961005397	0		SOLID	N/A	0		ml
96001380	B-108	4 SAMPLE	961005397	0		SOLID	N/A	0		g
96001380	B-108	5 SAMPLE	961005397	0		SOLID	N/A	0		g/ml
96001380	B-108	6 SAMPLE	961005397	0		SOLID	N/A	Complete		
96001380	B-108	7 SAMPLE	961005397	0		SOLID	N/A	<5		g
96001380	B-108	8 SAMPLE	961005397	0		SOLID	N/A	N-1179		
96001380	B-108	9 SAMPLE	961005397	0		SOLID	N/A	NA		ml
96001380	B-108	10 SAMPLE	961005397	0		SOLID	N/A	140.4		g
96001380	B-108	11 SAMPLE	961005397	0		SOLID	N/A	Complete		
96001380	B-108	12 SAMPLE	961005397	0		SOLID	N/A	0		ml
		2 INSTCHK02				SOLID	500	500/11	N/A	
		1 INSTCHK01				SOLID	20	20.01	N/A	

Final page for worklist # 14043

Analyst Signature BC Date 10-18-96

Analyst Signature BC Date 10-18-96

Data Entry Comments:

10-21-96
B.H. II

SAMPLE PREPARATION

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LABCORE Data Entry Template for Worklist# 14104

Analyst: JAL Instrument: FUS01 Book # N/A

Method: 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>	N/A	g/L
96001380	B-108	2 SAMPLE	S96T005468	0 F	FUSION01	SOLID	N/A	<u>2.0824</u>		g/L
96001380	B-108	3 SAMPLE	S96T005468	0 F	DOSE-02	SOLID	N/A	<u>12.5</u>		mrad/hour
96001380	B-108	4 DUP	S96T005468	0 F	FUSION01	SOLID	<u>2.0824</u>	<u>2.1228</u>	N/A	g/L
96001380	B-108	5 DUP	S96T005468	0 F	DOSE-02	SOLID	<u>12.5</u>	<u>12.5</u>	N/A	mrad/hour
96001380	B-108	6 SAMPLE	S96T005477	0 F	FUSION01	SOLID	N/A	<u>2.2624</u>		g/L
96001380	B-108	7 SAMPLE	S96T005477	0 F	DOSE-02	SOLID	N/A	<u>9</u>		mrad/hour
96001380	B-108	8 DUP	S96T005477	0 F	FUSION01	SOLID	<u>2.2624</u>	<u>2.2524</u>	N/A	g/L
96001380	B-108	9 DUP	S96T005477	0 F	DOSE-02	SOLID	<u>9</u>	<u>7.5</u>	N/A	mrad/hour
96001380	B-108	10 SAMPLE	S96T005478	0 F	FUSION01	SOLID	N/A	<u>2.2476</u>		g/L
96001380	B-108	11 SAMPLE	S96T005478	0 F	DOSE-02	SOLID	N/A	<u>2.5</u>		mrad/hour
96001380	B-108	12 DUP	S96T005478	0 F	FUSION01	SOLID	<u>2.2476</u>	<u>2.2204</u>	N/A	g/L
96001380	B-108	13 DUP	S96T005478	0 F	DOSE-02	SOLID	<u>2.5</u>	<u>6.5</u>	N/A	mrad/hour
96001380	B-108	14 SAMPLE	S96T005487	0 F	FUSION01	SOLID	N/A	<u>2.0756</u>		g/L
96001380	B-108	15 SAMPLE	S96T005487	0 F	DOSE-02	SOLID	N/A	<u>2.5</u>		mrad/hour
96001380	B-108	16 DUP	S96T005487	0 F	FUSION01	SOLID	<u>2.0756</u>	<u>2.0460</u>	N/A	g/L
96001380	B-108	17 DUP	S96T005487	0 F	DOSE-02	SOLID	<u>2.5</u>	<u>7.5</u>	N/A	mrad/hour

Data Entry Comments: weighed by John 10-26-96 All samples have
5mg 4/4 HCL & 5mg 1/1 H₂O₂ color is absent and all
are clear. HPT: Joe Valdez OT: 9mrad/5mrad
containing 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
-------	---------	--------	---------	-----	----------------	--------	--------	-------	----	------

Final page for worklist # 14104

A. Lampel
 Analyst Signature Date 10-26-96

Susan Bee
 Analyst Signature Date 10/26/96

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>	<u>g/L</u>
96001379	B-108	2	SAMPLE S96T005510	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.054</u>		<u>g/L</u>
			<u>.5135 → .250L</u>							
96001379	B-108	3	SAMPLE S96T005510	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>10</u>		<u>mrad/hour</u>
96001379	B-108	4	DUP S96T005510	0 F	FUSION01	SOLID	<u>2.054</u>	<u>2.056</u>	<u>N/A</u>	<u>g/L</u>
			<u>.5140 → .250L</u>							
96001379	B-108	5	DUP S96T005510	0 F	DOSE-02	SOLID	<u>10</u>	<u>10</u>	<u>N/A</u>	<u>mrad/hour</u>
96001379	B-108	6	SAMPLE S96T005511	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.895</u>		<u>g/L</u>
			<u>.41737 → .250L</u>							
96001379	B-108	7	SAMPLE S96T005511	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>5</u>		<u>mrad/hour</u>
96001379	B-108	8	DUP S96T005511	0 F	FUSION01	SOLID	<u>1.895</u>	<u>1.750</u>	<u>N/A</u>	<u>g/L</u>
			<u>.4374 → .250L</u>							
96001379	B-108	9	DUP S96T005511	0 F	DOSE-02	SOLID	<u>5</u>	<u>5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001379	B-108	10	SAMPLE S96T005512	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.959</u>		<u>g/L</u>
			<u>.4897 → .250L</u>							
96001379	B-108	11	SAMPLE S96T005512	0 F	DOSE-02	SOLID	<u>N/A</u>	<u>5</u>		<u>mrad/hour</u>
96001379	B-108	12	DUP S96T005512	0 F	FUSION01	SOLID	<u>1.959</u>	<u>2.034</u>	<u>N/A</u>	<u>g/L</u>
			<u>.5086 → .250L</u>							
96001379	B-108	13	DUP S96T005512	0 F	DOSE-02	SOLID	<u>5</u>	<u>5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 14172

OS Griffin 11-8-96
Analyst Signature Date

Susan Bee 11/08/96
Analyst Signature Date

S96T005505 → S96T005510
5506 → 5511
5507 → 5512

Validated
by RK Zeller
11/11/96

Data Entry Comments:

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

Submitted by Dan Griffin, 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 _____

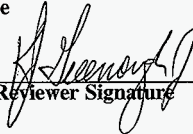
Worklist Comment: B-108 C173S2LH & COMP lad Repreps. Originals showed hi RPD

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 3/4/97

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

LABCORE Data Entry Template for Worklist# 14105

Analyst: ^{GRT} JAM Instrument: H2001 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			H2001G01	SOLID	<u>1</u>	<u>0.100</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005469	0 W	H2001G01	SOLID	<u>N/A</u>	<u>5.6240</u>		<u>g/L</u>
			<u>0.5524g</u>					<u>→ 0.100L</u>		
96001380	B-108	3 SAMPLE	S96T005469	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>3.5</u>		<u>mrad/hour</u>
96001380	B-108	4 DUP	S96T005469	0 W	H2001G01	SOLID	<u>5.6240</u>	<u>5.5240</u>	<u>N/A</u>	<u>g/L</u>
			<u>0.5524g</u>					<u>→ 0.100L</u>		
96001380	B-108	5 DUP	S96T005469	0 W	DOSE-02	SOLID	<u>3.5</u>	<u>3</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	6 SAMPLE	S96T005479	0 W	H2001G01	SOLID	<u>N/A</u>	<u>5.4750</u>		<u>g/L</u>
			<u>0.5475g</u>					<u>→ 0.100L</u>		
96001380	B-108	7 SAMPLE	S96T005479	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>3</u>		<u>mrad/hour</u>
96001380	B-108	8 DUP	S96T005479	0 W	H2001G01	SOLID	<u>5.4750</u>	<u>5.4800</u>	<u>N/A</u>	<u>g/L</u>
			<u>0.5480g</u>					<u>→ 0.100L</u>		
96001380	B-108	9 DUP	S96T005479	0 W	DOSE-02	SOLID	<u>3</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	10 SAMPLE	S96T005470	0 I	H201CP01	SOLID	<u>N/A</u>	<u>5.4782</u>		<u>g/L</u>
			<u>5.6240 + 1.0266</u>							
96001380	B-108	11 SAMPLE	S96T005470	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		<u>mrad/hour</u>
96001380	B-108	12 DUP	S96T005470	0 I	H201CP01	SOLID	<u>5.4782</u>	<u>5.3808</u>	<u>N/A</u>	<u>g/L</u>
			<u>5.5240 + 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>	<u>mrad/hour</u>
96001380	B-108	14 SAMPLE	S96T005481	0 I	H201CP01	SOLID	<u>N/A</u>	<u>5.3331</u>		<u>g/L</u>
			<u>5.4750 + 1.0266</u>							
96001380	B-108	15 SAMPLE	S96T005481	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>0.5</u>		<u>mrad/hour</u>
96001380	B-108	16 DUP	S96T005481	0 I	H201CP01	SOLID	<u>5.3331</u>	<u>5.3380</u>	<u>N/A</u>	<u>g/L</u>
			<u>5.4800 + 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>	<u>mrad/hour</u>

Data Entry Comments:

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

Worklist Version 2.1 05/15/95
10/28/96 15:32

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

PK Fullin
for
TA Murphy 10/28/96
Analyst Signature Date

Paula Mack 10-28-96
Analyst Signature Date

Performed 10/26/96

3967005466 → 5469 → 5470
5473 → 5479 → 5481

Reviewed: JF Beahf *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.

LABCORE Data Entry Template for Worklist# 14105

Analyst: JAM Instrument: H2001 Book # N/A

Method: LA-504-101 Rev/Mod ED

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			H20D1G01	SOLID	<u>1</u>	<u>100</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005469	0 W	H20D1G01	SOLID	<u>N/A</u>	<u>5.6240</u>		<u>g/L</u>
96001380	B-108	3 SAMPLE	S96T005469	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>3.5</u>		<u>mrad/hour</u>
96001380	B-108	4 DUP	S96T005469	0 W	H20D1G01	SOLID	<u>5.6240</u>	<u>5.5240</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	5 DUP	S96T005469	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>3</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	6 SAMPLE	S96T005479	0 W	H20D1G01	SOLID	<u>N/A</u>	<u>5.4750</u>		<u>g/L</u>
96001380	B-108	7 SAMPLE	S96T005479	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>3</u>		<u>mrad/hour</u>
96001380	B-108	8 DUP	S96T005479	0 W	H20D1G01	SOLID	<u>5.4750</u>	<u>5.4800</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	9 DUP	S96T005479	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>2.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	10 SAMPLE	S96T005470	0 I	H201CP01	SOLID	<u>N/A</u>			<u>g/L</u>
96001380	B-108	11 SAMPLE	S96T005470	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		<u>mrad/hour</u>
96001380	B-108	12 DUP	S96T005470	0 I	H201CP01	SOLID	<u>N/A</u>		<u>N/A</u>	<u>g/L</u>
96001380	B-108	13 DUP	S96T005470	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	14 SAMPLE	S96T005481	0 I	H201CP01	SOLID	<u>N/A</u>			<u>g/L</u>
96001380	B-108	15 SAMPLE	S96T005481	0 I	DOSE-02	SOLID	<u>N/A</u>	<u>.5</u>		<u>mrad/hour</u>
96001380	B-108	16 DUP	S96T005481	0 I	H201CP01	SOLID			<u>N/A</u>	<u>g/L</u>
96001380	B-108	17 DUP	S96T005481	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 int: 5mrad

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
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Final page for worklist # 14105

(Signature) 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.

LABCORE Data Entry Template for Worklist# 14106

Analyst: QRT for TAM Instrument: H2001 Book # N/A

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

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>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005480	0 W	H2001G01	SOLID	<u>N/A</u>	<u>5.7110</u>		<u>g/L</u>
		<u>0.5711g → 0.100L</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	H2001G01	SOLID	<u>5.7110</u>	<u>5.5540</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5554g → 0.100L</u>								
96001380	B-108	5 DUP	S96T005480	0 W	DOSE-02	SOLID	<u>2</u>	<u>1.5</u>	<u>N/A</u>	<u>mrad/hour</u>
96001380	B-108	6 SAMPLE	S96T005488	0 W	H2001G01	SOLID	<u>N/A</u>	<u>5.1420</u>		<u>g/L</u>
		<u>0.5142g → 0.100L</u>								
96001380	B-108	7 SAMPLE	S96T005488	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		<u>mrad/hour</u>
96001380	B-108	8 DUP	S96T005488	0 W	H2001G01	SOLID	<u>5.1420</u>	<u>5.1170</u>	<u>N/A</u>	<u>g/L</u>
		<u>0.5117g → 0.100L</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	H201CP01	SOLID	<u>N/A</u>	<u>5.5630</u>		<u>g/L</u>
		<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>		<u>mrad/hour</u>
96001380	B-108	12 DUP	S96T005482	0 I	H201CP01	SOLID	<u>5.5630</u>	<u>5.4100</u>	<u>N/A</u>	<u>g/L</u>
		<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>	<u>mrad/hour</u>
96001380	B-108	14 SAMPLE	S96T005489	0 I	H201CP01	SOLID	<u>N/A</u>	<u>5.0087</u>		<u>g/L</u>
		<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>		<u>mrad/hour</u>
96001380	B-108	16 DUP	S96T005489	0 I	H201CP01	SOLID	<u>5.0087</u>	<u>5.0488</u>	<u>N/A</u>	<u>g/L</u>
		<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>	<u>mrad/hour</u>

~~S96T005466 → S96T005469 → S96T005470~~ Rx7 10/28/96
 S96T005474 → S96T005480 → S96T005482
 S96T005485 → S96T005488 → S96T005489

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

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

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 Murphy*

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: AM Instrument: H2001 Book # N/A

Method: LA-504-101 Rev/Mod ZO

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			H20D1G01	SOLID	<u>1</u>	<u>100</u>	<u>N/A</u>	<u>g/L</u>
96001380	B-108	2 SAMPLE	S96T005480	0 W	H20D1G01	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	H20D1G01	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	H20D1G01	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	H20D1G01	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 Am 10.26.96 HPT: *Joe Valdez on 2.5 mrad/h*

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

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

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	1	.100	N/A	g/L
96001379	B-108	2	SAMPLE S96T005513 0 W .4925 → .100L		H2ODIG01	SOLID	N/A	4.925		g/L
96001379	B-108	3	SAMPLE S96T005513 0 W		DOSE-02	SOLID	N/A	20.5		mrad/hour
96001379	B-108	4	DUP S96T005513 0 W .5214 → .100L		H2ODIG01	SOLID	4.925	5.214	N/A	g/L
96001379	B-108	5	DUP S96T005513 0 W		DOSE-02	SOLID	20.5	20.5	N/A	mrad/hour
96001379	B-108	6	SAMPLE S96T005516 0 I 4.925 ÷ 1.0267 → 100L KT 11-8-96		H2OICP01	SOLID	N/A	4.7969		g/L
96001379	B-108	7	SAMPLE S96T005516 0 I		DOSE-02	SOLID	N/A	20.5		mrad/hour
96001379	B-108	8	DUP S96T005516 0 I 5.214 ÷ 1.0267 → 100L KT 11-8-96		H2OICP01	SOLID	4.7969	5.0784	N/A	g/L
96001379	B-108	9	DUP S96T005516 0 I		DOSE-02	SOLID	20.5	20.5	N/A	mrad/hour
96001379	B-108	10	SAMPLE S96T005514 0 W .5244 → .100L		H2ODIG01	SOLID	N/A	5.244		g/L
96001379	B-108	11	SAMPLE S96T005514 0 W		DOSE-02	SOLID	N/A	6		mrad/hour
96001379	B-108	12	DUP S96T005514 0 W 4.829 → .100L		H2ODIG01	SOLID	5.244	4.829	N/A	g/L
96001379	B-108	13	DUP S96T005514 0 W		DOSE-02	SOLID	6	7	N/A	mrad/hour
96001379	B-108	14	SAMPLE S96T005519 0 I 5.244 ÷ 1.0267 → 100L KT 11-8-96		H2OICP01	SOLID	N/A	5.1076		g/L
96001379	B-108	15	SAMPLE S96T005519 0 I		DOSE-02	SOLID	N/A	20.5		mrad/hour
96001379	B-108	16	DUP S96T005519 0 I 4.829 ÷ 1.0267		H2OICP01	SOLID	5.1076	4.7034	N/A	g/L
96001379	B-108	17	DUP S96T005519 0 I		DOSE-02	SOLID	20.5	20.5	N/A	mrad/hour
96001379	B-108	18	SAMPLE S96T005515 0 W .4851 → .100L		H2ODIG01	SOLID	N/A	4.851		g/L

596T005505 → 596T.005513 → 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	H2ODIG01	SOLID	1	0.100	0.100	g/L
2	SAMPLE	S97T000015	0	W	H2ODIG01	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	H2ODIG01	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	H2OICP01	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	H2OICP01	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	H2ODIG01	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	H2ODIG01	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	H2OICP01	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	H2OICP01	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 3/4/97

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

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	4.951	4.962	N/A	g/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
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
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

Lucinda Mack 11-8-96
Analyst Signature Date

S96T005507 → S96T005515 → S96T005520

Validated
Scudell 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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Requestor: FRIT

Bulk Density Worksheet

Date: 10-30-96

Tank: B-108
Core: 172
Seg: 1 LH
Auger:
Sample ID: 596T005503



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

Jar#: 11162
Jar/Vial Size: 125 mL
Initial Weight: g
Final Weight: 7.5 g
Net Weight: 14.0 g

184



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

Sample ID: 596T005503

Appearance/Narrative:
BLK Denot = 14.0 / 8.3 = 1.69 g/mL

Tank: B-108
Core: 172
Seg: 1 LH
Auger:
Sample ID: 596T005502



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

Jar#: 11161
Jar/Vial Size: 125 mL
Initial Weight: g
Final Weight: 17.3 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: 596T005502

Appearance/Narrative:
BLK Denot = 17.3 / 10.2 = 1.70 g/mL

Bulk Density Worksheet

Date: 12/18/96

Requestor: FRITTS

Tank: 6/108

Core: 173

Seg: 1004

Auger:

Sample ID:



185

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: 9.0 mL

Initial Weight: 7.45 g

Final Weight: 24.69 g

Net Weight: 17.24 g

Sample ID:

Appearance/Narrative:

$$\frac{17.24}{9.0} = 1.91 \text{ g/mL}$$

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-MM-DP-219, REV. 0

Oct 19 1996 2:08PM WHC 2225 LAB ROOM 2F BACKSIDE 6053 P. 2/12

Bulk Density Worksheet

Requestor: FRITTS

Date: 10/10/96

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

186



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 = 1.74 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:

13.05/7.5 = 1.74

Bulk Density Worksheet

Requestor: Fri T15

Date: 10-16-96

Tank: B-108
Core: 173
Seg: 2 LH
Auger:
Sample ID: 596T005442

Tank:
Core:
Seg:
Auger:
Sample ID:

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

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



Jar#: 11157
Jar/Vial Size: 125 mL
Initial Weight: g
Final Weight: ~~10.296~~ 17.3 g
Net Weight: g

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

187



Cone#: 11157
Final Vol: 11.0 mL
Initial Weight: 7.5 g
Final Weight: 24.8 g
Net Weight: 17.3 g



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

10-19-96
M

Appearance/Narrative:

$Bulk\ Density = 17.3 / 11.0 = 1.57\ g/cc$

Appearance/Narrative:

DID NOT PACK WELL DUE TO
CONSISTENCY OF SAMPLE.

Bulk Density Worksheet

Date: 10-19-96

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

Requestor: FEIT'S

Tank: B-108
 Core: 143
 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

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: _____

AR 0.1796



Requestor: FEIT'S

Tank: B-108
 Core: 143
 Seg: _____
 Auger: _____
 Sample ID: 5961005483

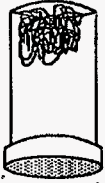
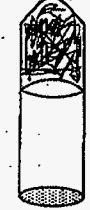
Start Time: _____
 End Time: _____
 Homogenization Time (Min.): _____

Jar# 15211
 Jar/Vial Size: 60 mL
 Initial Weight: 27.1 g
 Final Weight: 19.7 g
 Net Weight: _____ g

Cone# 07
 Final Vol: 11.0 mL
 Initial Weight: 27.4 g
 Final Weight: 19.7 g
 Net Weight: _____ g

Sample ID: 5961005483
 Appearance/Narrative: Bulk Dens = 19.7/11.0 = 1.79 g/cc

10-19-96 AR



181

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

INORGANIC ANALYSIS

HNH-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 RTSI

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 192.

DSC STD 12N14B N2

34.640 mg

Rate: 10.0 °C/min

File: 00019.001

DSC METTLER

01-Nov-96

Ident: 0.0

222-S Laboratory

EXO >

20. mW

Integration

Delta H 948 mJ

27.4 J/g

Peak 159.9°C

-42.1 mW

120.

130.

140.

150.

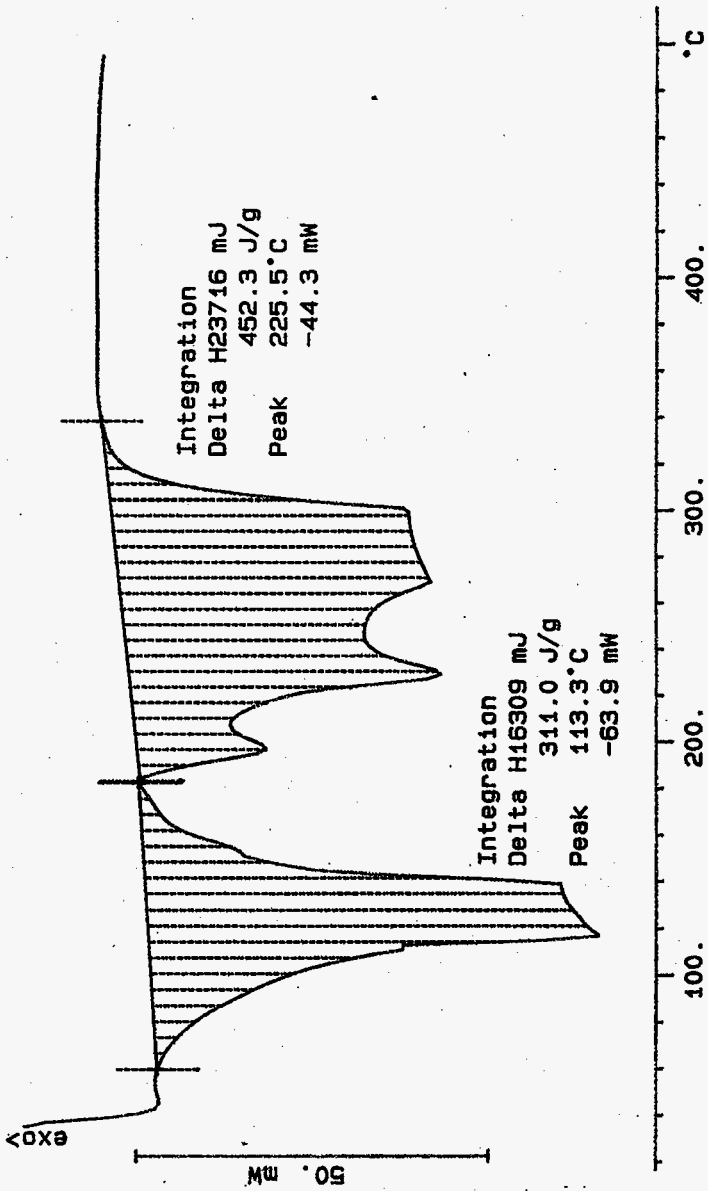
160.

170.

°C

John Sp... 11-2-96

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

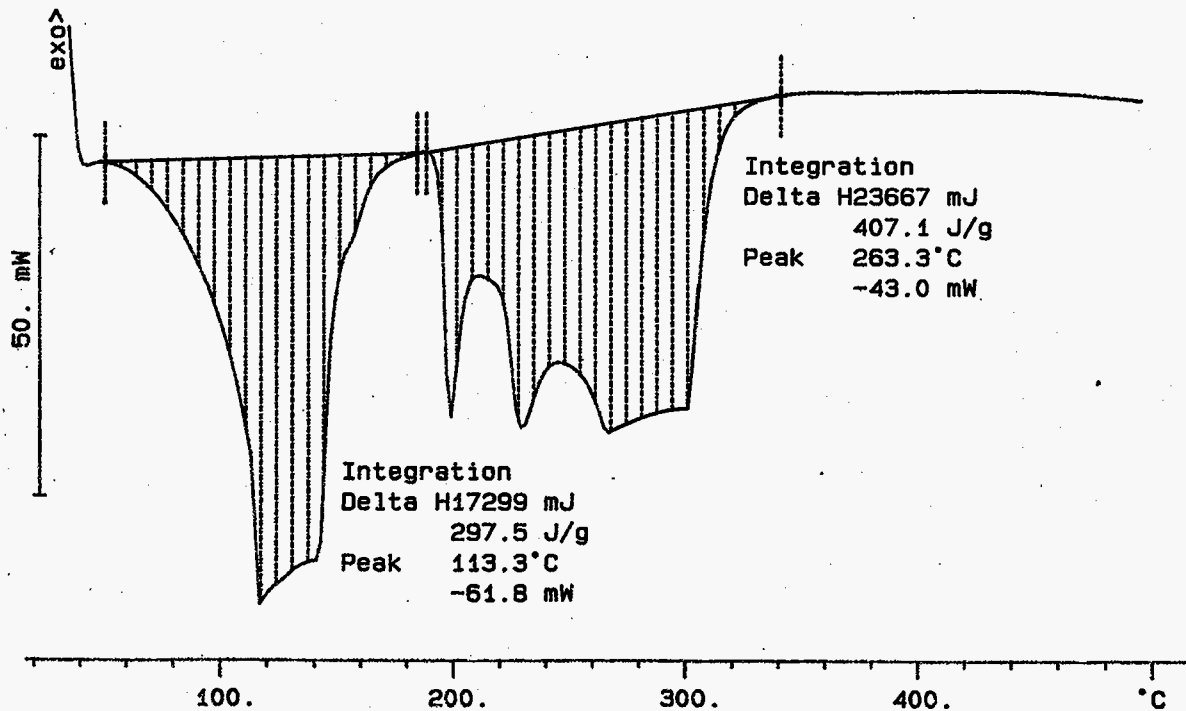
File: 00029.001

DSC METTLER

02-Nov-96

Ident: 0.0

222-S Laboratory



194

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

11-16-86

S96T0054673 N2

29.590 mg

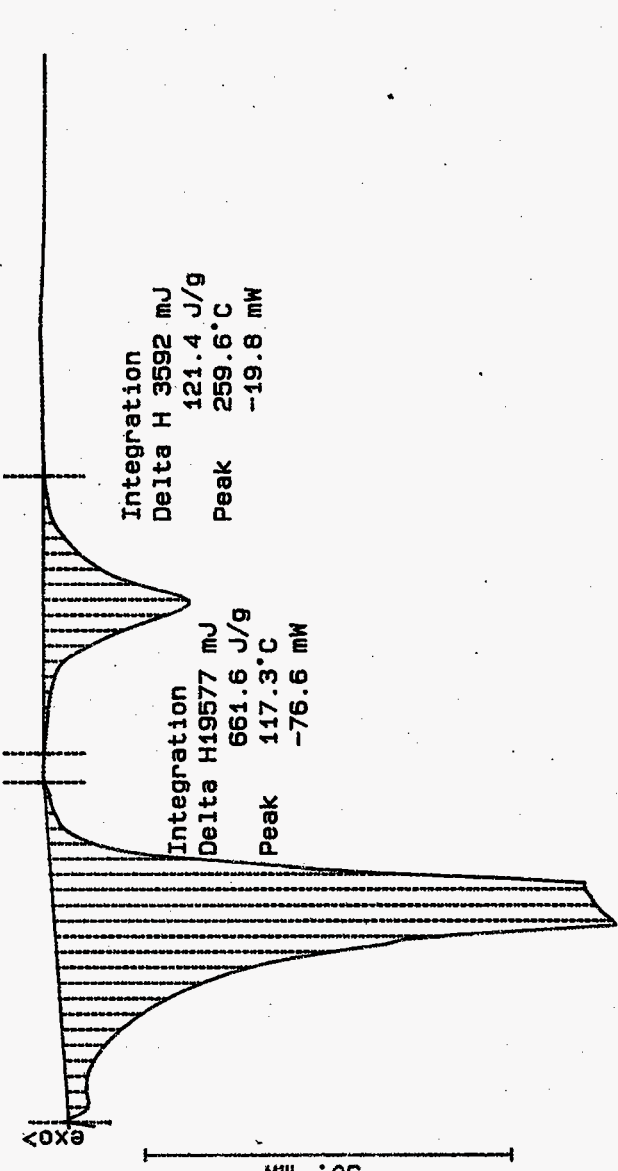
File: 00025.001 DSC METTLER 02-Nov-86

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo >

50 mW



Integration

Delta H 3592 mJ
121.4 J/g

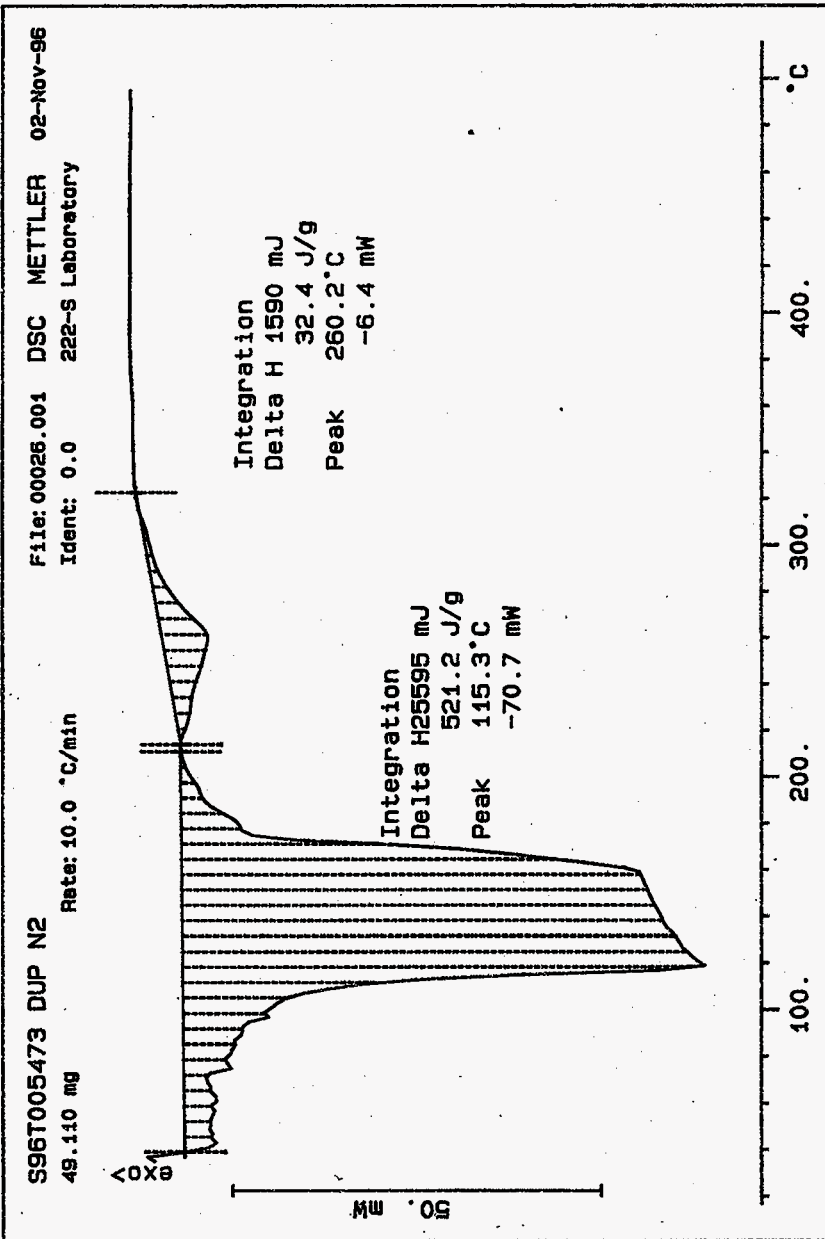
Peak 259.6°C
-19.8 mW

Integration

Delta H19577 mJ
661.6 J/g

Peak 117.3°C
-76.6 mW

100. 200. 300. 400. °C



LABCORE Data Entry Template for Worklist# 14391

Analyst: KRM

Instrument: DSC0 1

Book # 14N 14B
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

[Signature] 10-29-96
 Analyst Signature Date

[Signature] 11-1-96
 Analyst Signature Date

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 198 TO 202.

DSC STD 12N14B N2

34.640 mg

Rate: 10.0 °C/min

File: 00007.001

DSC METTLER

29-Oct-96

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

John M. Miller 10-29-96

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

198

S96T005474 N2

73.358 mg

Rate: 10.0 °C/min

File: 00009.001

DSC METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory

199

50 mW

exo

Integration
Delta H23651 mJ
322.4 J/g
Peak 113.3°C
-65.6 mW

Integration
Delta H 3432 mJ
46.8 J/g
Peak 227.2°C
-19.8 mW

100.

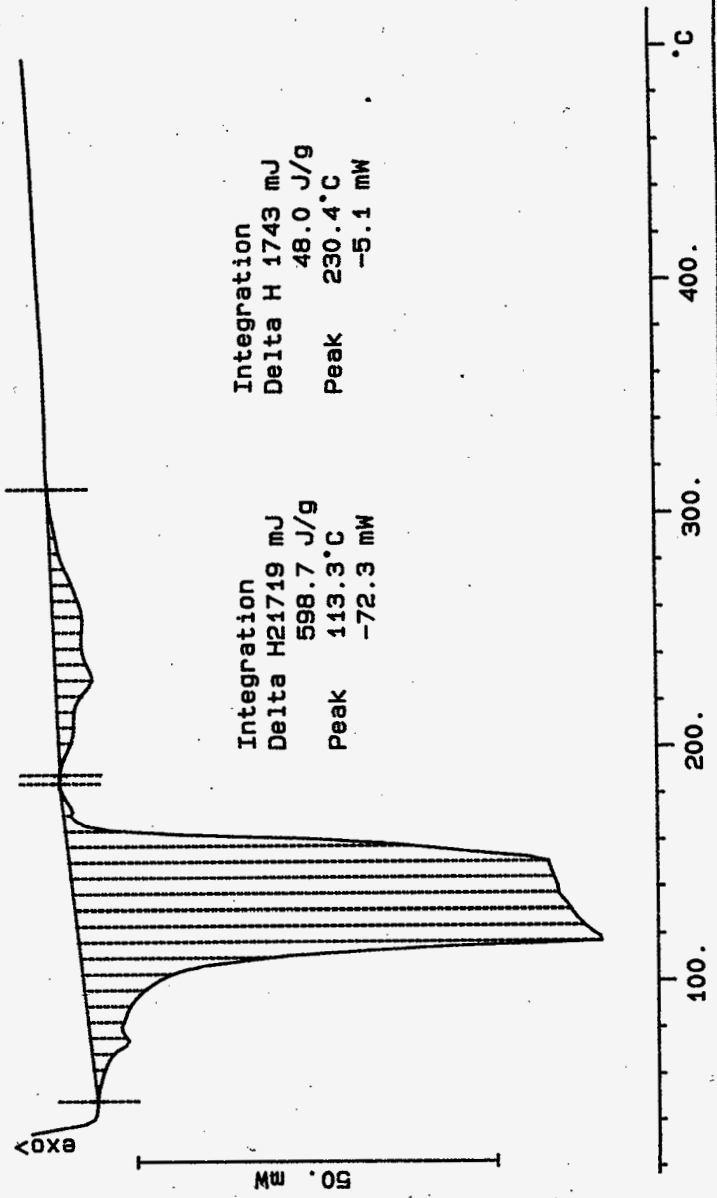
200.

300.

400.

°C

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



Integration
Delta H21719 mJ
598.7 J/g
Peak 113.3°C
-72.3 mW

Integration
Delta H 1743 mJ
48.0 J/g
Peak 230.4°C
-5.1 mW

50 mW

S96T005485 N2

27.214 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory

exo

50. mW

201

Integration

Delta H 18154 mJ
667.1 J/g
Peak 119.3 °C
-74.5 mW

Integration

Delta H 7265 mJ
266.9 J/g
Peak 259.1 °C
-27.8 mW

100.

200.

300.

400.

°C

S96T005484 DUP N2

46.540 mg

Rate: 10.0 °C/min

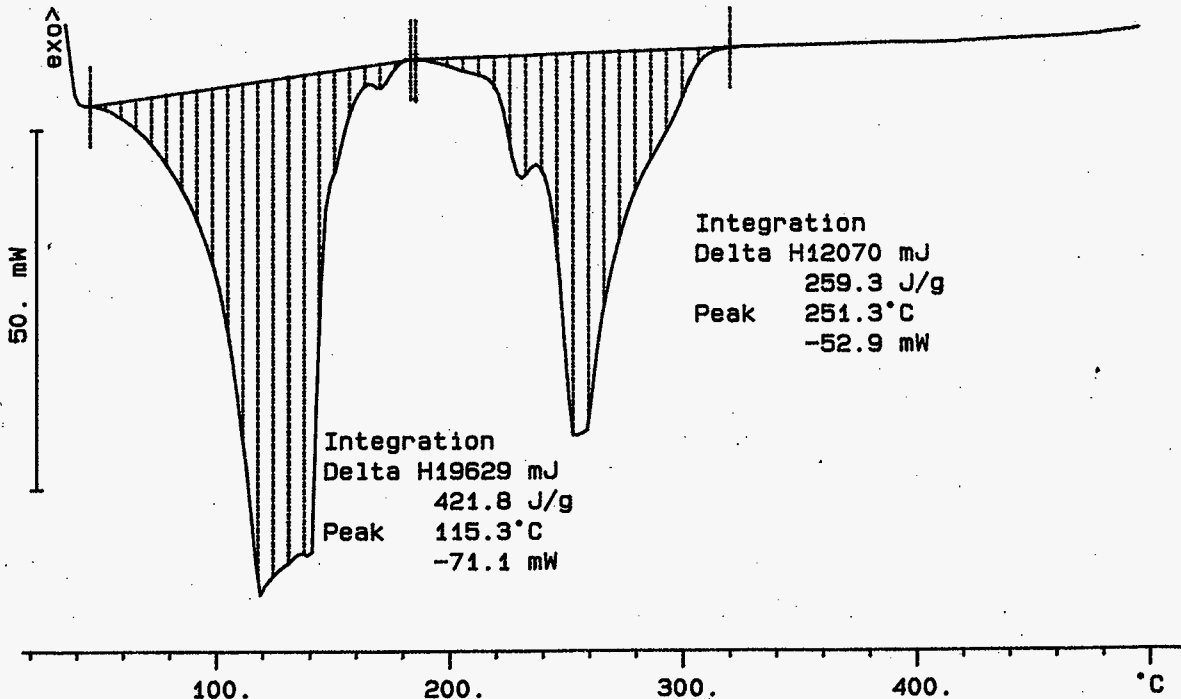
File: 00015.001

DSC METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory



202

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

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
Analyst Signature _____ Date 11/12/96

Verified/Validated by
Blandina
Valeznula _____ 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 2D

LABCORE Data Entry Template for Worklist# 14656

Analyst: SME Instrument: DSC0 Book # 12N14B

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

Jessie M. Fulton 11-10-96
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

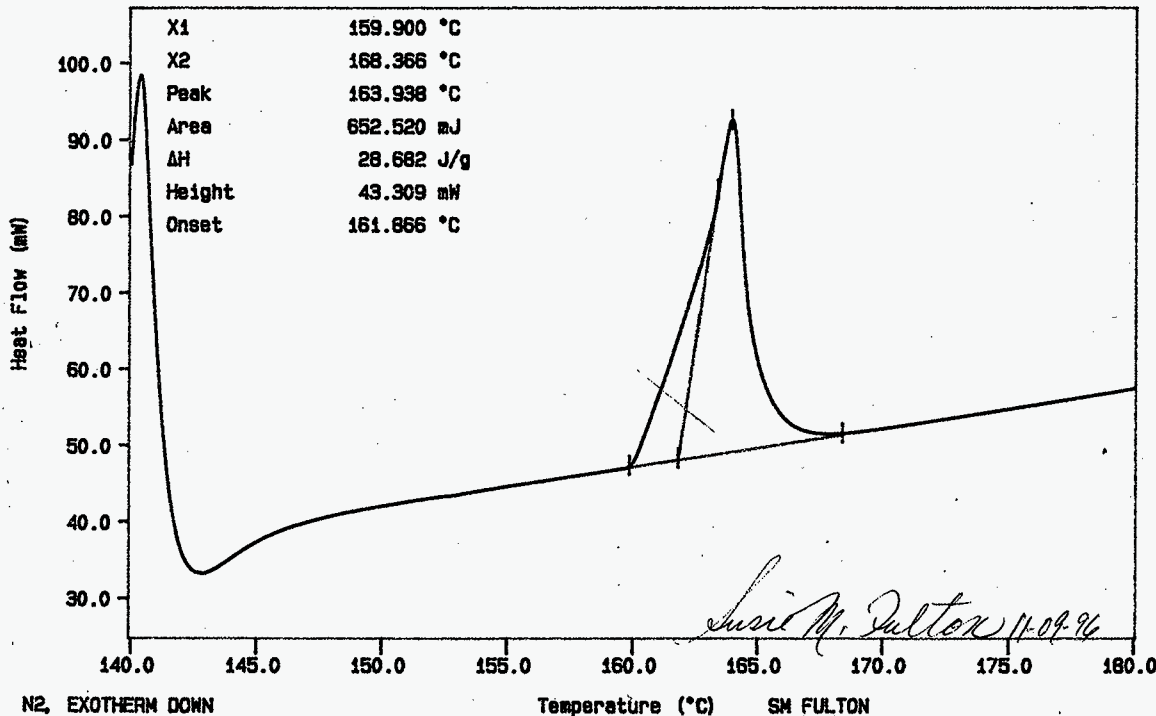
File info: IND110901 Sat Nov 9 17:36:36 1996

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.

205



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

N2, EXOTHERM DOWN

TEMP: 148.8 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON

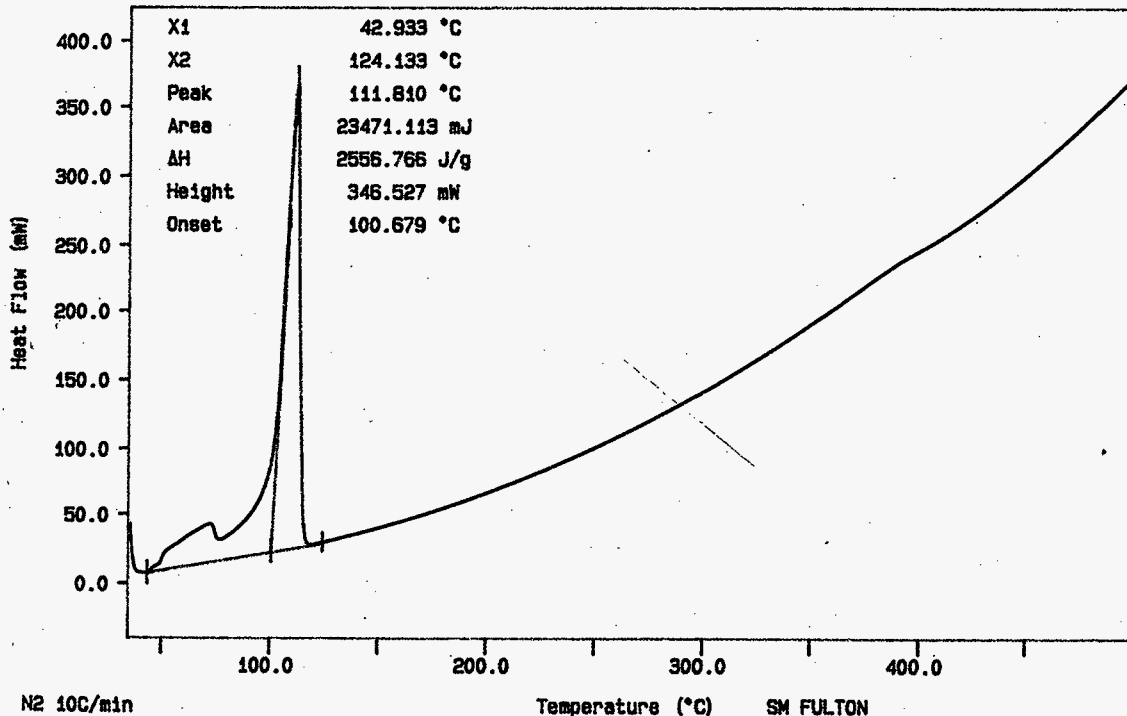
PERKIN-ELMER

7 Series Thermal Analysis System

Sat Nov 9 17:37:40 1996

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

902

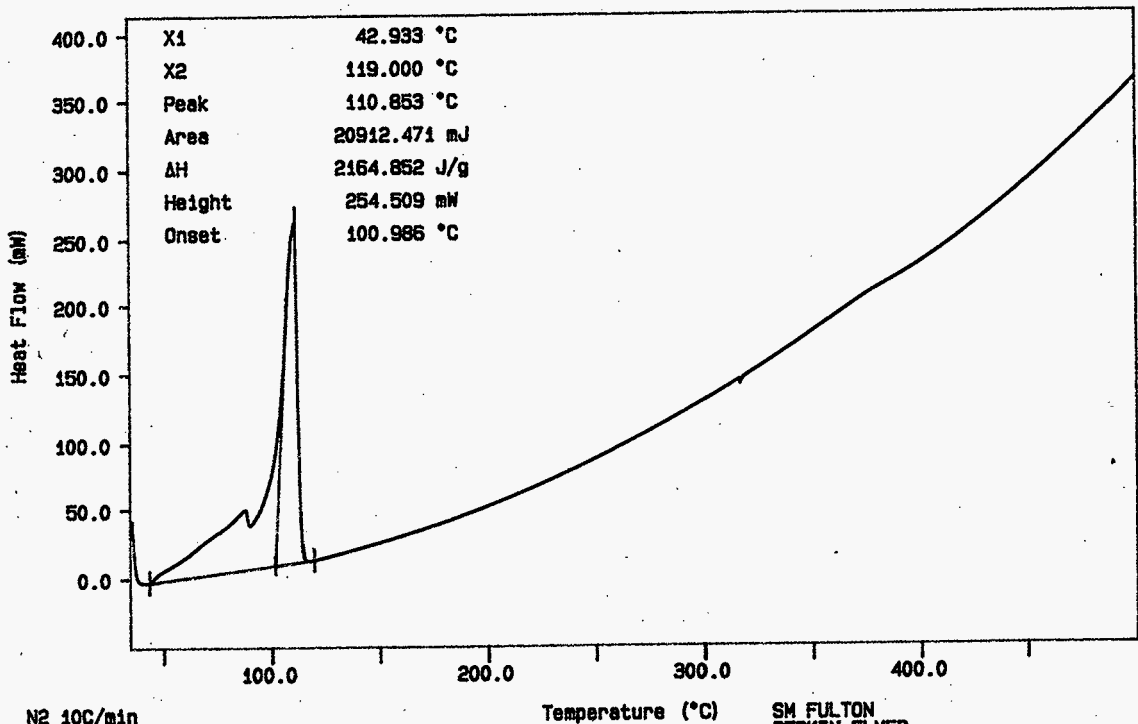


N2 10C/min
WEIGHT: 9.180 g TIME: 0.0 min RATE: 10.0 C/min

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

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

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



207

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

N2 10C/min
TIME: 55:8 8
TIME: 0.0 min RATE: 10.0 C/min

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

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>0</u>		Joules/g
96001379	B-108	3 DUP	S96T005523	0	DSC-03	LIQUID	<u>0</u>	<u>0</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: DGD 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.

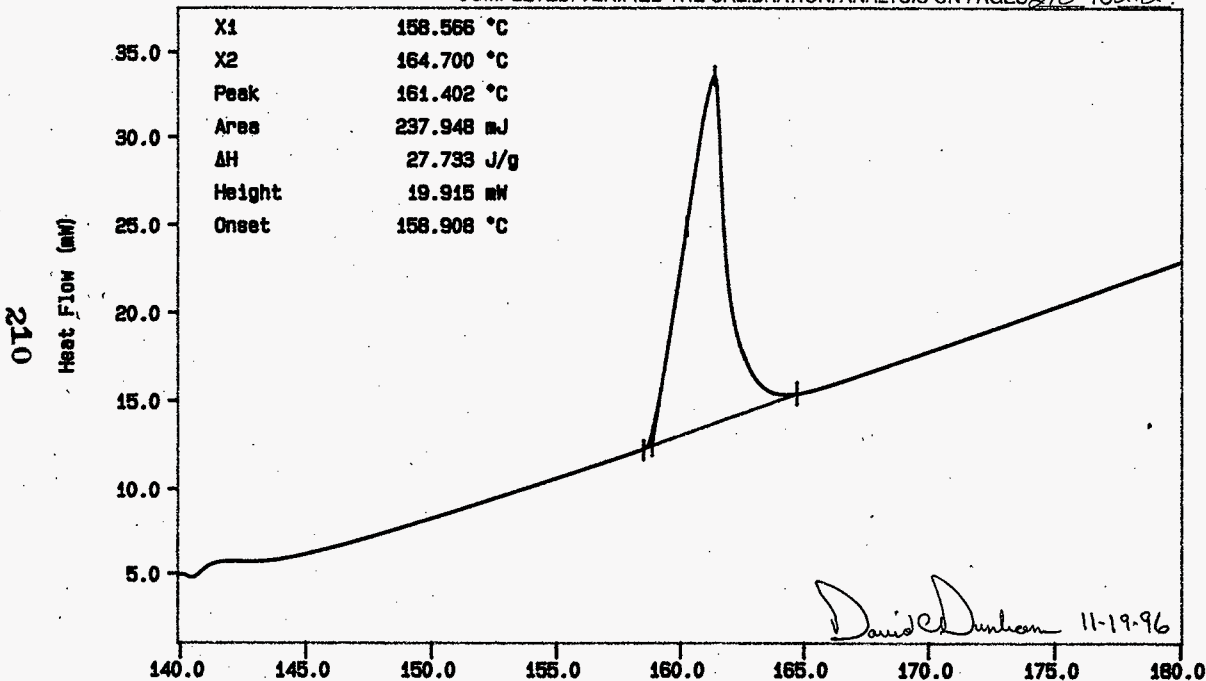
Curve 1: DSC

File info: IND111901 Tue Nov 19 14: 49: 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.



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

N2, EXOTHERM DOWN

TIME: 143:8 8

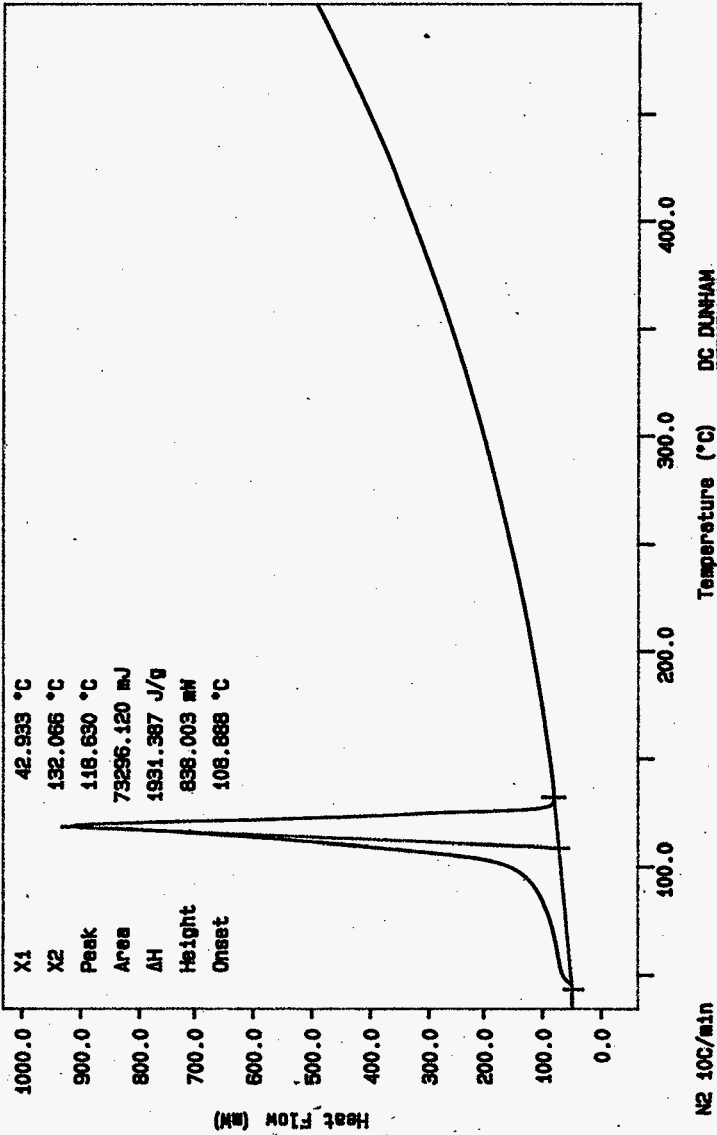
TIME: 1

0.0 min RATE: 10.0 C/min

Temperature (°C)

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
S96T005323 SAM



N2 100/min
TEMP: 55.8 g
TIME: 0.0 min RATE: 10.0 C/min
DC DUNHAM
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Nov 20 03:30:05 1996

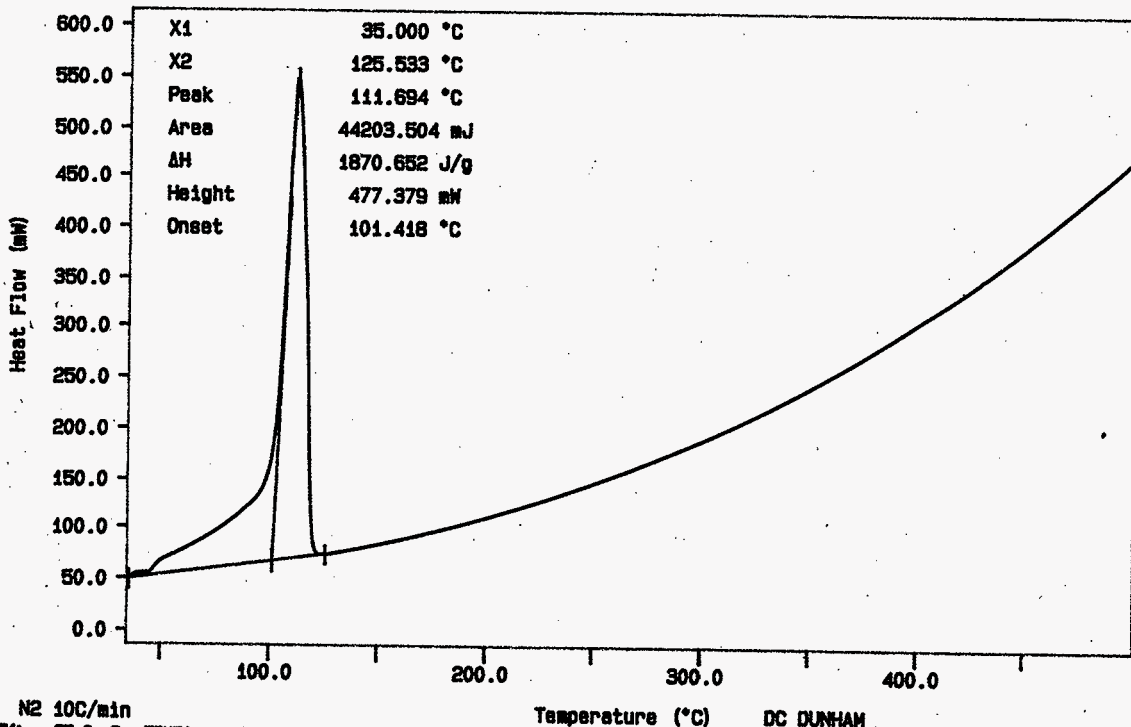
Curve 1: DSC

File info: SAM111908 Wed Nov 20 04: 25: 55 1996

Sample Weight: 23.630 mg

S96T005523 DUP

212



N2 10C/min
WEIGHT: 23.630 g

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

DC DUNHAM
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Nov 20 09: 52: 37 1996

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

LABCORE Data Entry Template for Worklist# 14718

Analyst: DPB Instrument: DSC0 1 Book # 12/11/4-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

L. 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

DSC METTLER

10-Nov-96

Ident: 0.0

222-S Laboratory

exo >

20. mW

Integration
Delta H 993 mJ
28.7 J/g
Peak 158.8 °C
-51.0 mW

120.

140.

160.

180.

°C

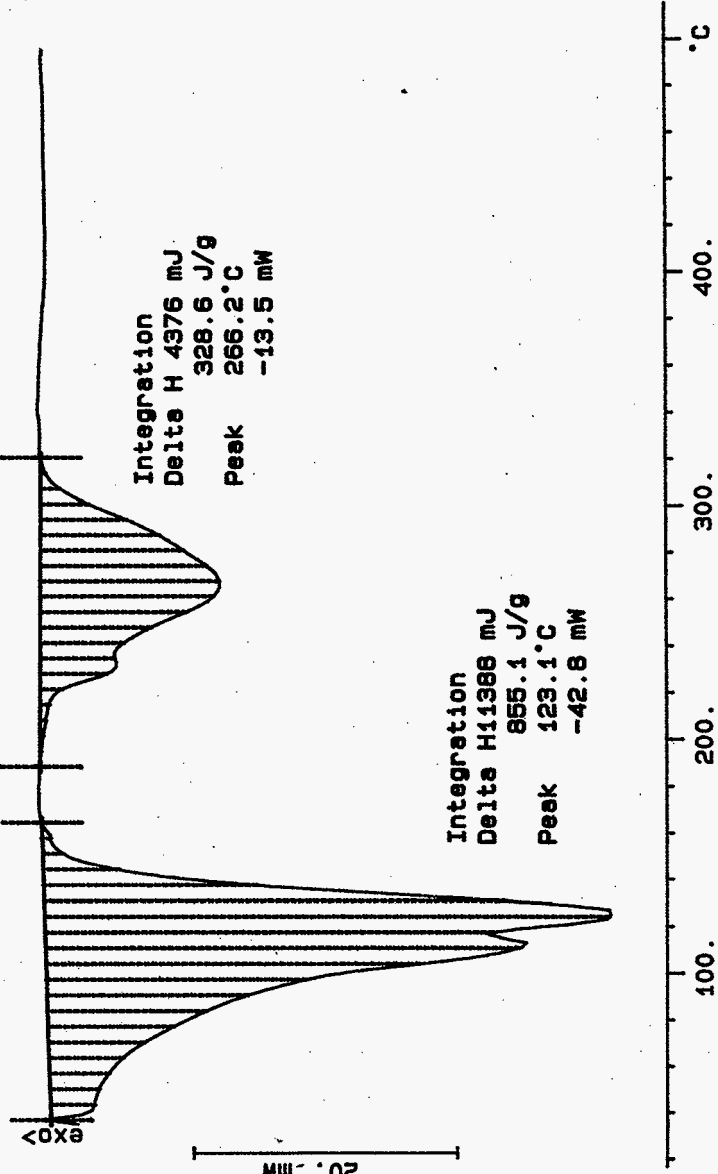
Daniel P. Bromley 11/6/96

214

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

File: 00066.001 DSC METTLER 10-Nov-96
Ident: 0.0 222-S Laboratory

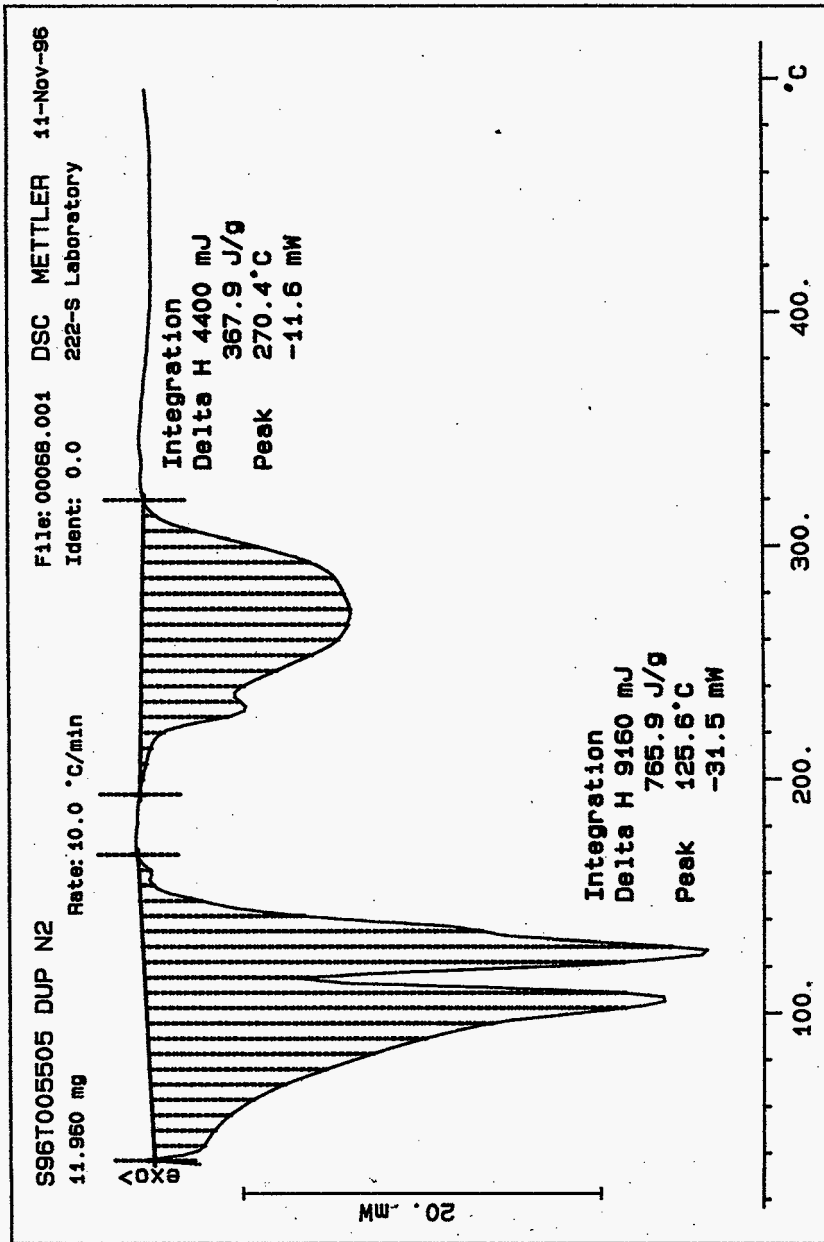
S96T005505 SAM N2
13.318 mg Rate: 10.0 °C/min



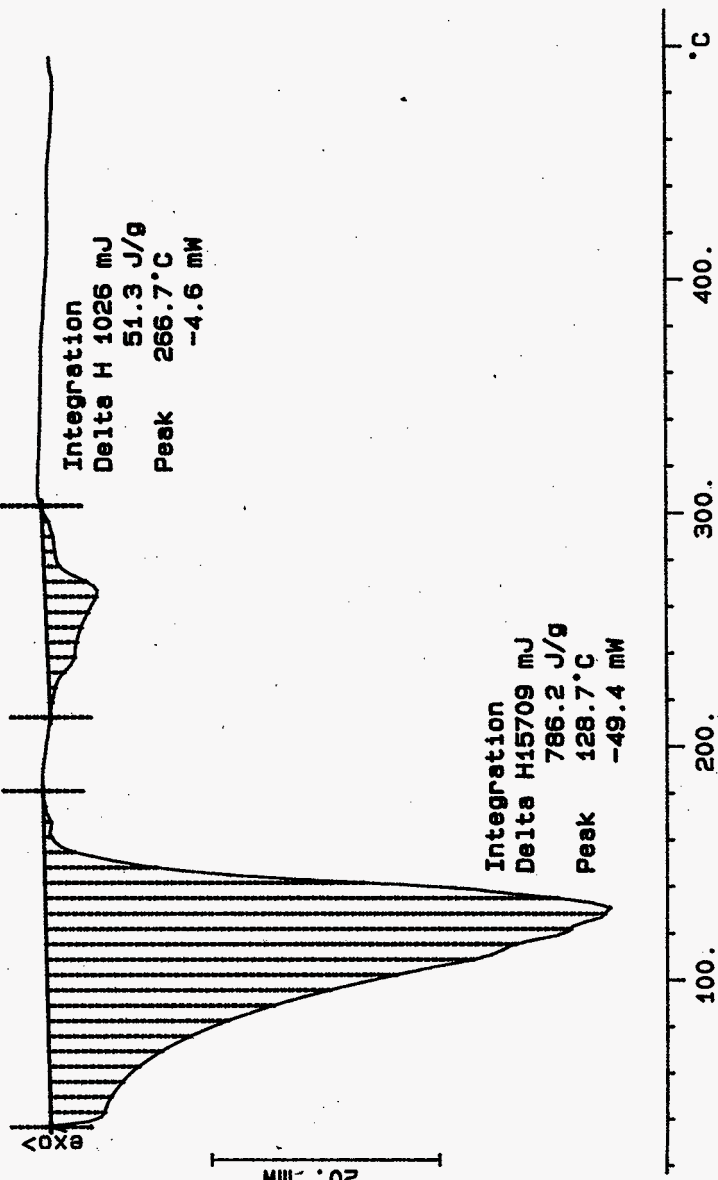
Integration
Delta H1388 mJ
855.1 J/g
Peak 123.1 °C
-42.8 mW

Integration
Delta H 4976 mJ
328.6 J/g
Peak 266.2 °C
-13.5 mW

20 mW

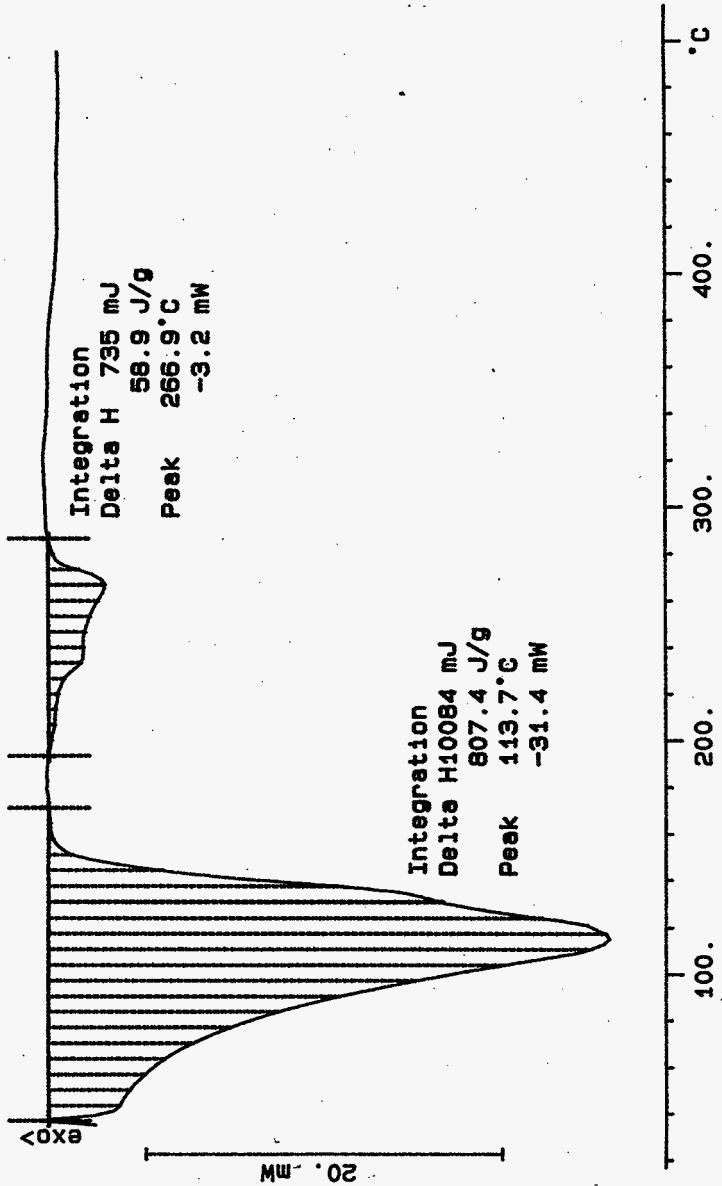


S96T005506 SAM N2
19.980 mg
Rate: 10.0 °C/min
File: 00070.001 DSC METTLER 11-Nov-96
Ident: 0.0 222-S Laboratory



20 mW

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 SAM N2

19.808 mg

Rate: 10.0 °C/min

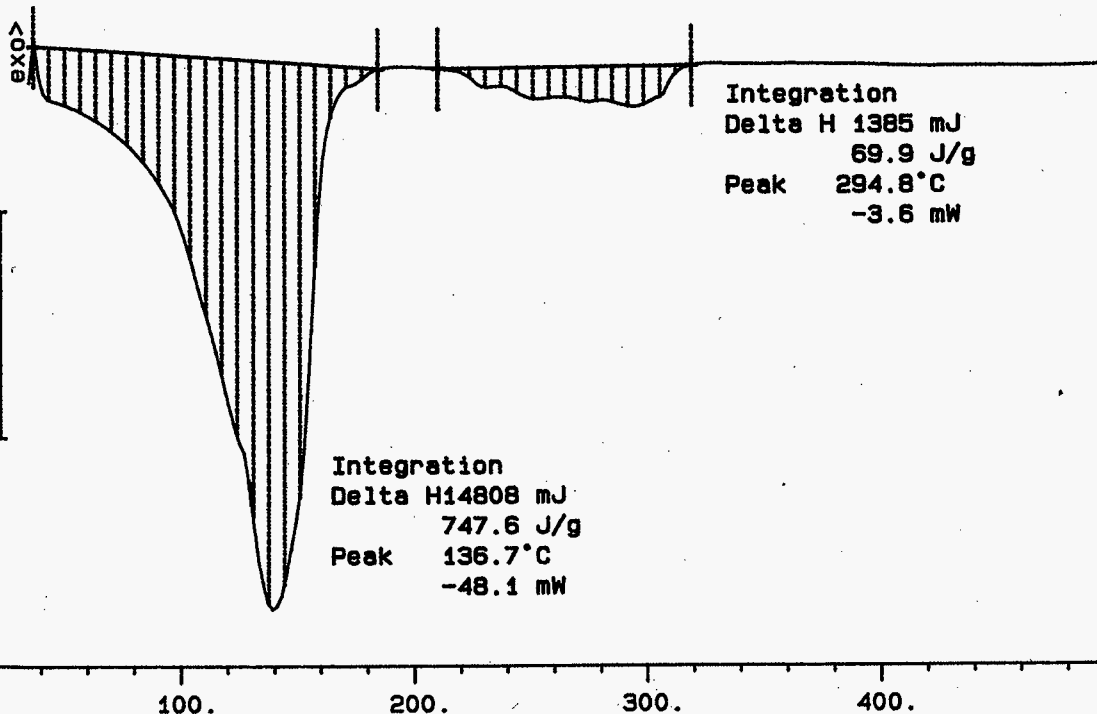
File: 00074.001

DSC METTLER

11-Nov-96

Ident: 0.0

222-S Laboratory



219

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

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

EXO

10. mW

Integration

Delta H 7857 mJ

354.6 J/g

Peak 129.8°C

-25.0 mW

Integration

Delta H 710 mJ

32.1 J/g

Peak 252.8°C

-3.1 mW

100.

200.

300.

400.

°C

220

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
896T005505	∅	—	∅
5505D	∅	—	∅
5506	∅	—	∅
5506D	∅	—	∅
5507	∅	—	∅
5507D	∅	—	∅
5473	∅ ^{11/2/96}	14383	∅
5473D	∅ ^{11/2/96}	14883	∅
5474	∅	43.78	∅
5474D	∅	43.78	∅
5485	∅	35.30	∅
5485D	∅	35.30	∅
5463	∅	99.56	∅
5463D	∅	99.56	∅
5523	14715 ∅	14707	∅
5523D	14715 ∅	14707	∅
5466	∅	14383	∅
5466D	∅	14383	∅

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>	<u>%</u>
96001379	B-108	2 SAMPLE	S96T005463	0	TGA-01	LIQUID	<u>N/A</u>	<u>99.42</u>	<u></u>	<u>%</u>
96001379	B-108	3 DUP	S96T005463	0	TGA-01	LIQUID	<u>99.42</u>	<u>99.69</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 14377

SJS 11-8-96
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 225 TO 227

TGA STD 82N8A N2

25.736 mg

Rate: 10.0 °C/min

File: 00020.001

TG

METTLER

01-Nov-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-15.21 mg

-59.09 %

Resid. 10.52 mg

40.89 %

Dpeak 97.5 °C

5. mg

50.

100.

150.

200.

°C

[Signature]
10/26
11-2-96

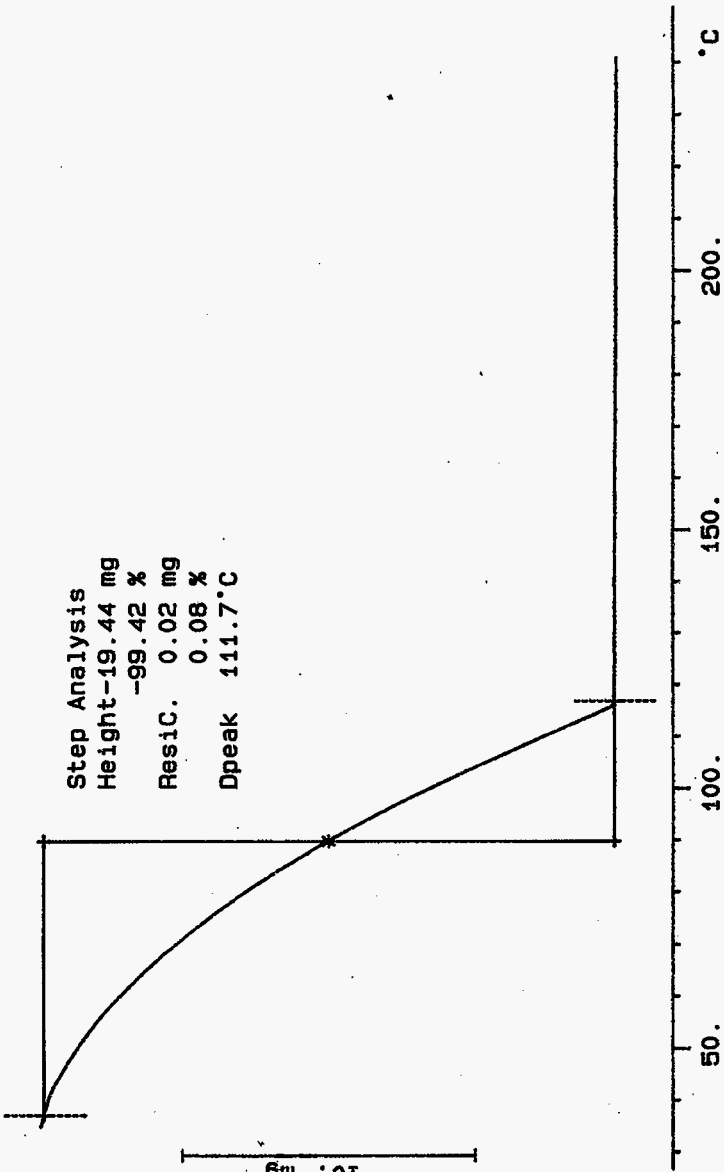
225

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

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 %
Resic. 0.02 mg
0.08 %
Dpeak 111.7°C



S96T005463 DUP N2

19.693 mg

Rate: 10.0 °C/min

File: 00024.001

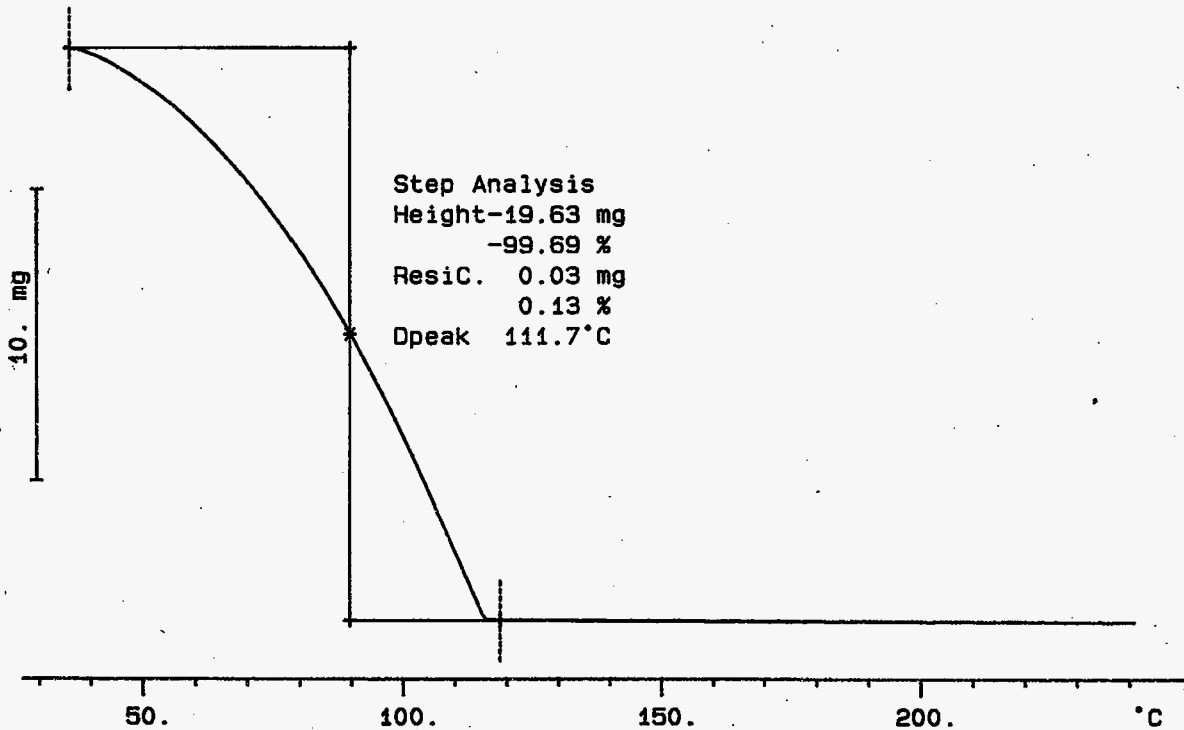
TG

METTLER

02-Nov-98

Ident: 0.0

222-S Laboratory



227

HNF-SD-MM-DR-219, REV. 0

LABCORE Data Entry Template for Worklist# 14383

Analyst: SMA 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

Suzie 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.

TGA STD 82N8-A

17.459 mg

Rate: 10.0 °C/min

File: 00078.001

TG

METTLER

12-Nov-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.30 mg

-59.02 %

ResidC. 7.16 mg

40.98 %

Dpeak 80.8 °C

5. mg

50.

100.

150.

200.

°C

Luis M. Dulon 11/19/96

229

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

S96T005466 N2

41.460 mg

Rate: 10.0 °C/min

File: 00079.001

TG

METTLER

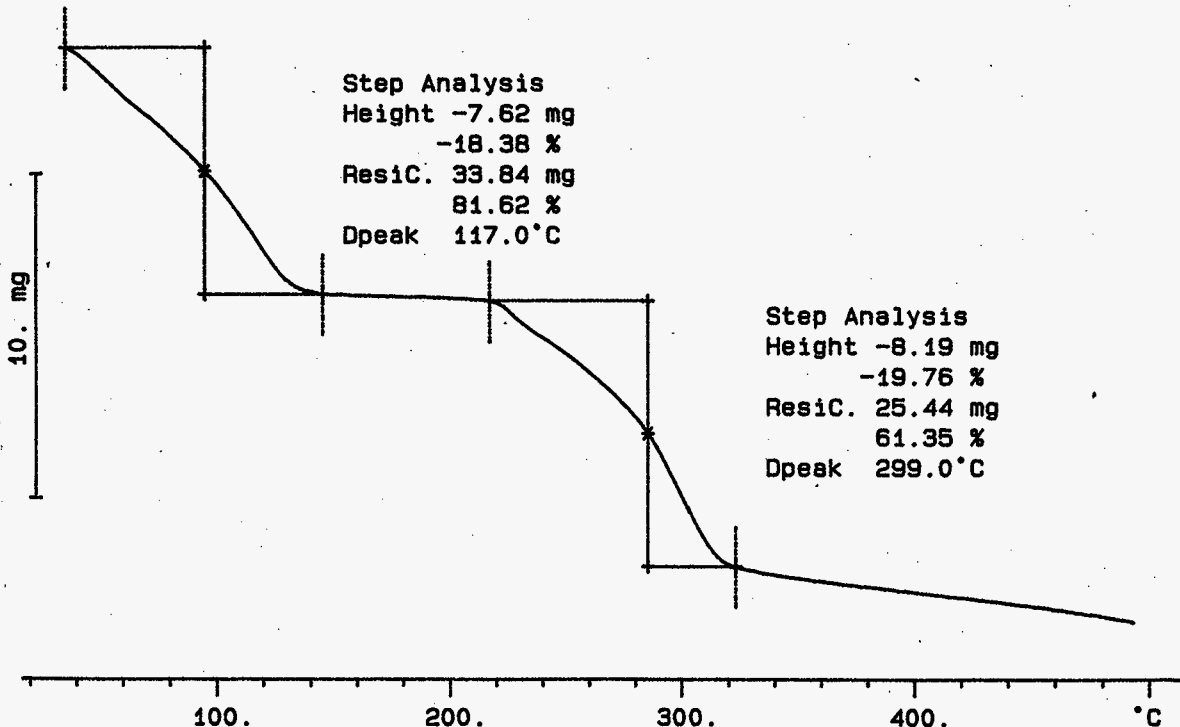
12-Nov-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -7.62 mg
-18.38 %
ResidC. 33.84 mg
81.62 %
Dpeak 117.0 °C

Step Analysis
Height -8.19 mg
-19.76 %
ResidC. 25.44 mg
61.35 %
Dpeak 299.0 °C



230

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

S96T005466 DUP N2

21.226 mg

Rate: 10.0 °C/min

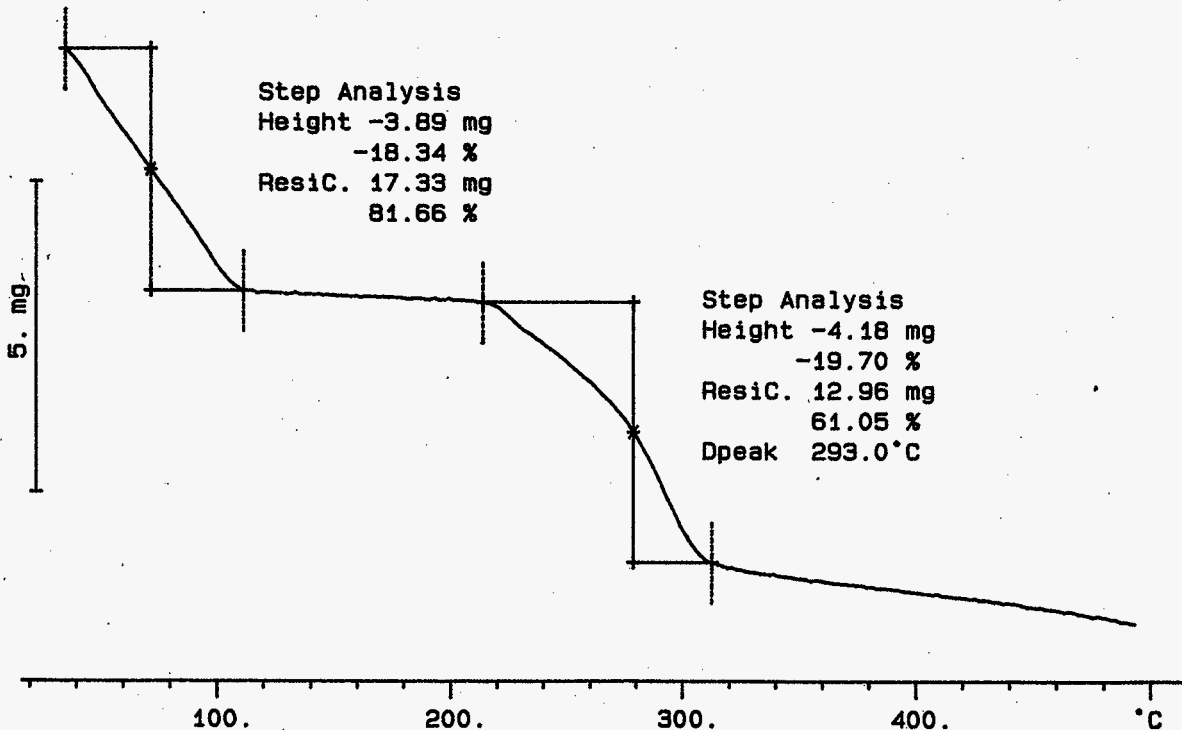
File: 00080.001 TG METTLER 12-Nov-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -3.89 mg
-18.34 %
ResidC. 17.33 mg
81.66 %

Step Analysis
Height -4.18 mg
-19.70 %
ResidC. 12.96 mg
61.05 %
Dpeak 293.0 °C



231

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

S96T005473 N2

33.833 mg

Rate: 10.0 °C/min

File: 00081.001 TG METTLER 12-Nov-98

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.79 mg

-34.86 %

Resid. 22.04 mg

65.14 %

Dpeak 137.0 °C

Step Analysis

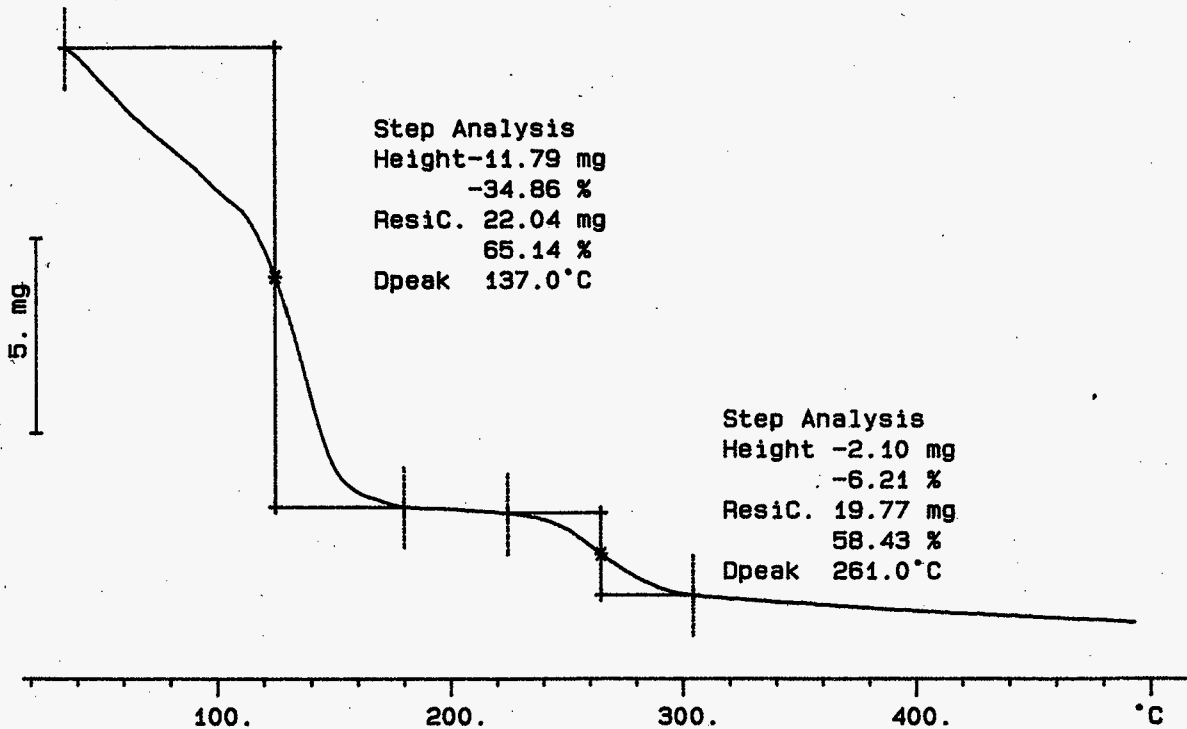
Height -2.10 mg

-6.21 %

Resid. 19.77 mg

58.43 %

Dpeak 261.0 °C



232

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

S96T005473 DUP N2

24.254 mg

Rate: 10.0 °C/min

File: 00082.001

TG

METTLER

12-Nov-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.94 mg

-36.85 %

Resid. 15.32 mg

63.15 %

Dpeak 137.0 °C

Step Analysis

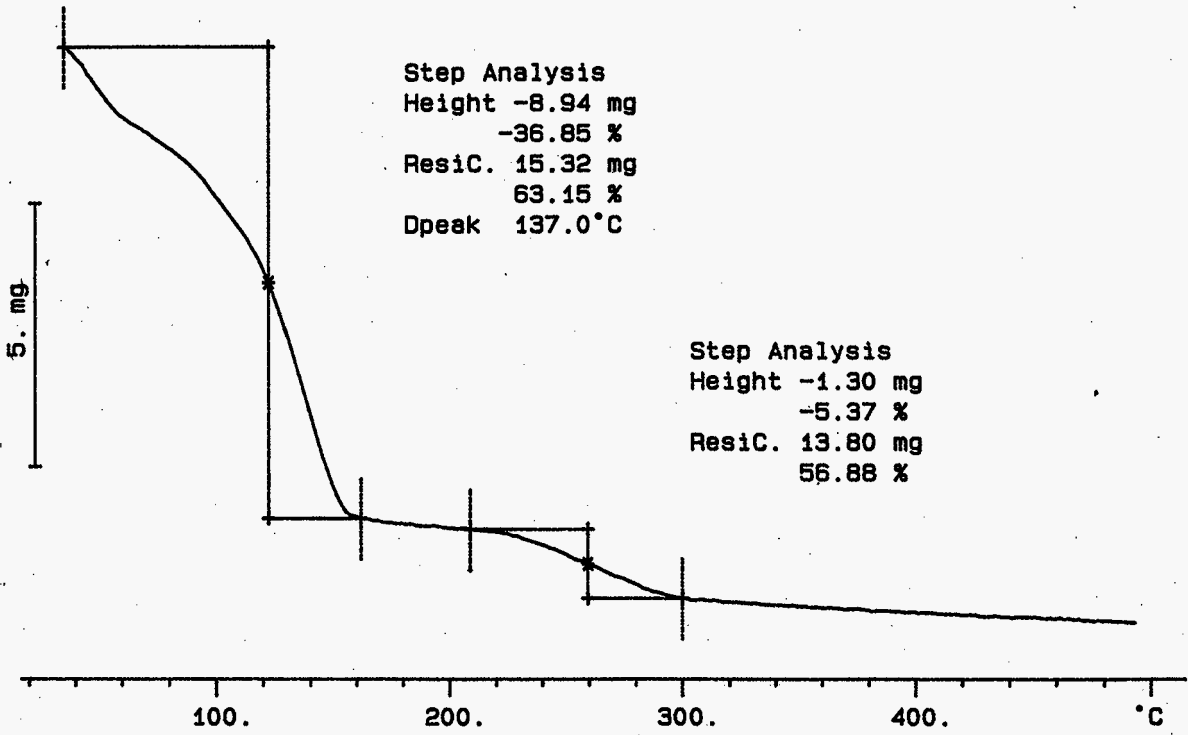
Height -1.30 mg

-5.37 %

Resid. 13.80 mg

56.88 %

233



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

LABCORE Data Entry Template for Worklist# 14384

Analyst: KRM Instrument: TGA0 1 Book # 8228A

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>	<u>%</u>
96001380	B-108	2 SAMPLE	S96T005474	0	TGA-01	SOLID	<u>N/A</u>	<u>44.53</u>		<u>%</u>
96001380	B-108	3 DUP	S96T005474	0	TGA-01	SOLID	<u>44.53</u>	<u>43.03</u>	<u>N/A</u>	<u>%</u>
96001380	B-108	4 SAMPLE	S96T005485	0	TGA-01	SOLID	<u>N/A</u>	<u>39.65</u>		<u>%</u>
96001380	B-108	5 DUP	S96T005485	0	TGA-01	SOLID	<u>39.65</u>	<u>30.95</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 14384

[Signature]
Analyst Signature Date 10-29-96

[Signature]
Analyst Signature Date 11-1-96

Verified/Validated by
[Signature]
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 B2N8A N2

15.936 mg

Rate: 10.0 °C/min

File: 00008.001

TG

METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

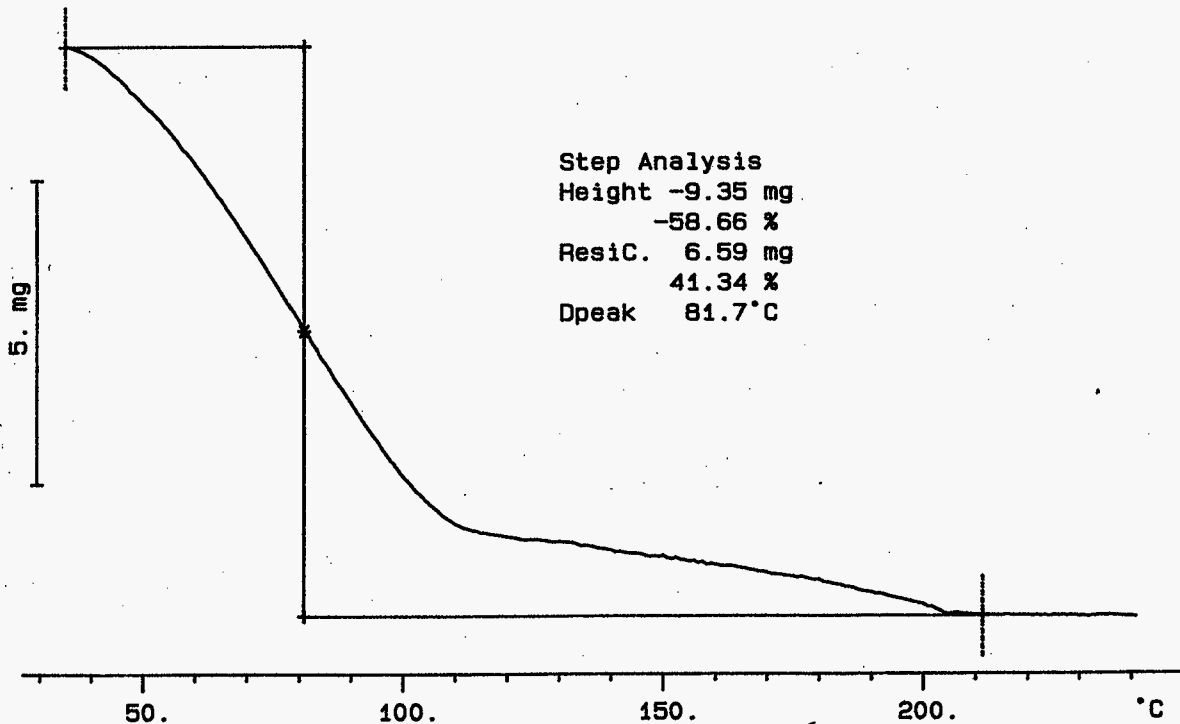
Height -9.35 mg

-58.66 %

ResidC. 6.59 mg

41.34 %

Dpeak 81.7 °C



235

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

John M. [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

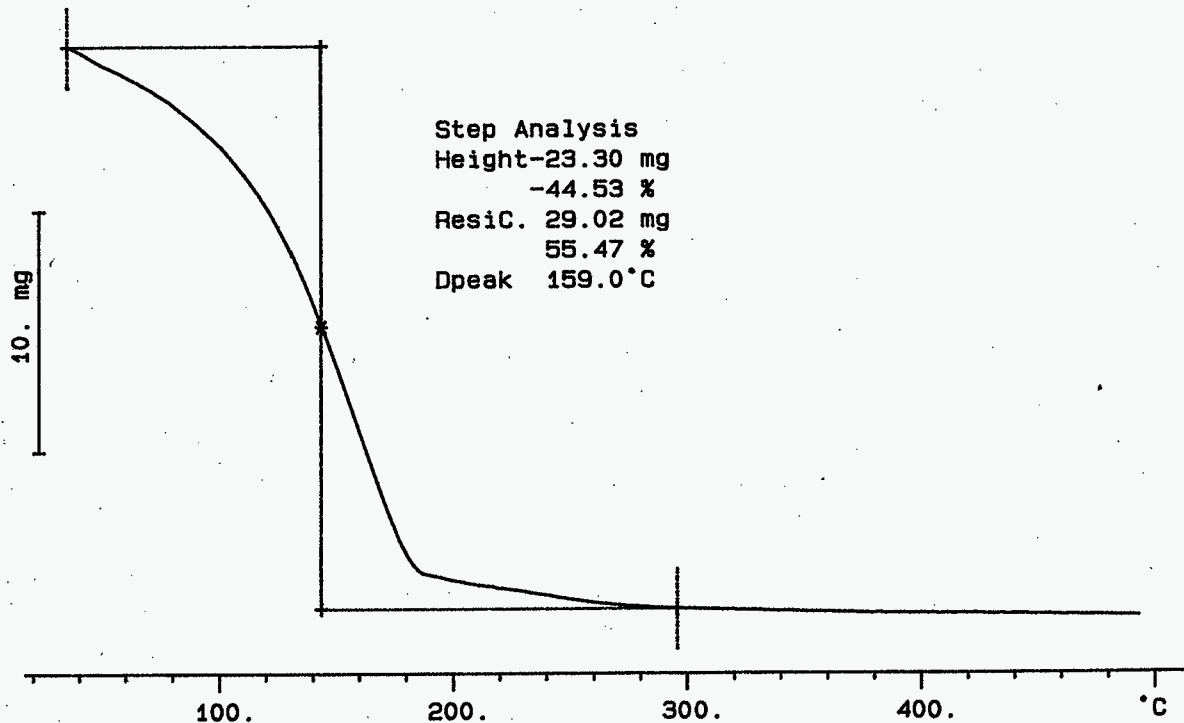
Height-23.30 mg

-44.53 %

Resid. 29.02 mg

55.47 %

Dpeak 159.0 °C



236

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

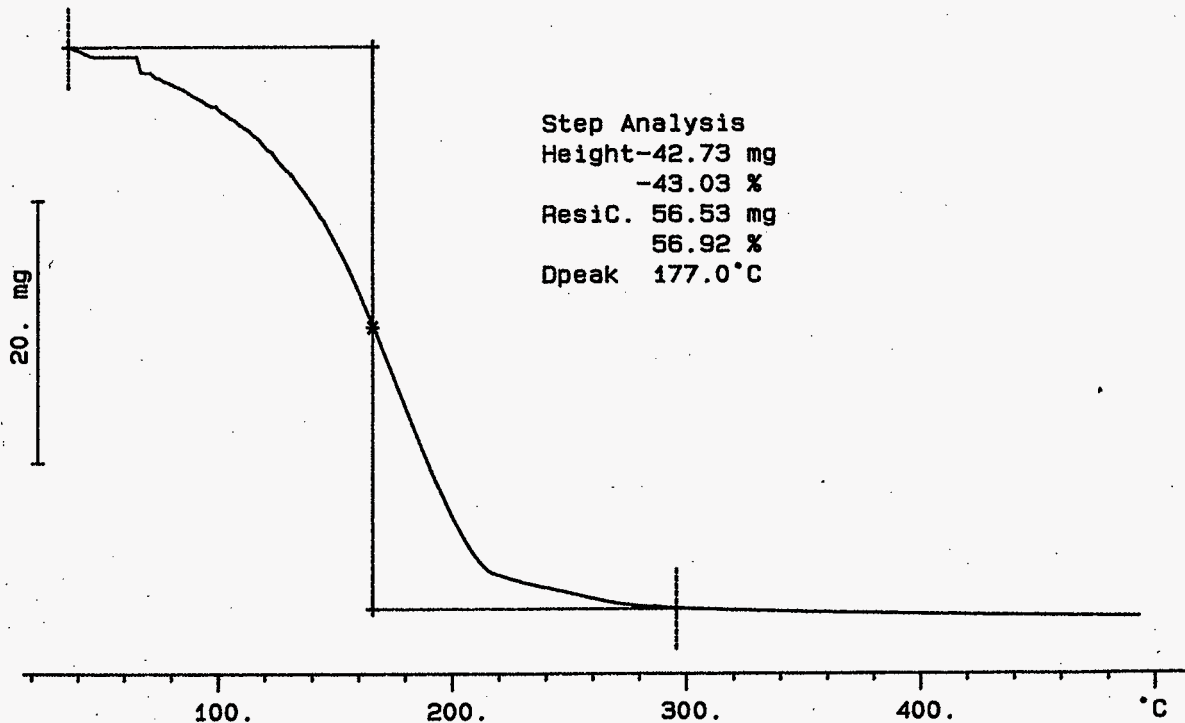
Height-42.73 mg

-43.03 %

ResidC. 56.53 mg

56.92 %

Dpeak 177.0 °C



237

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

S96T005485 N2

33.795 mg

Rate: 10.0 °C/min

File: 00014.001 TG METTLER 29-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-13.40 mg

-39.65 %

ResidC. 20.37 mg

60.27 %

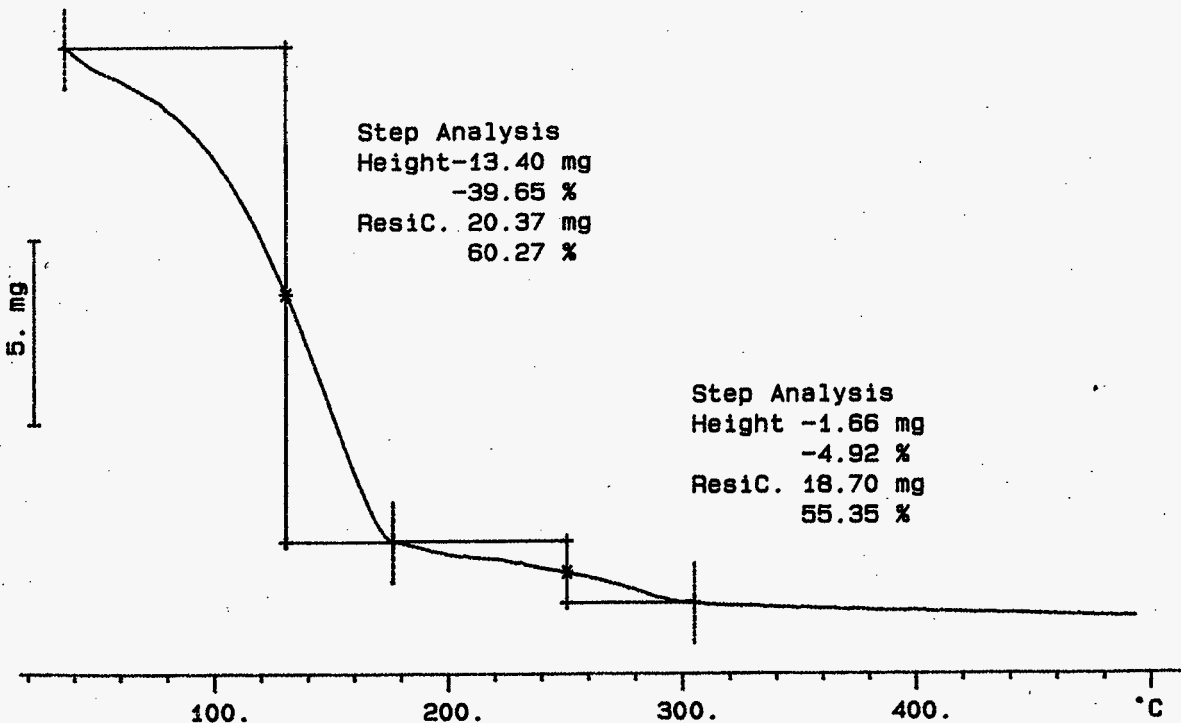
Step Analysis

Height -1.66 mg

-4.92 %

ResidC. 18.70 mg

55.35 %



238

239

S96T005484^{11-1-96 037}5 DUP N2

35.633 mg

Rate: 10.0 °C/min

File: 00016.001

TG

METTLER

29-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -11.03 mg

-30.95 %

Resid. 24.59 mg

69.00 %

Dpeak 139.0 °C

Step Analysis

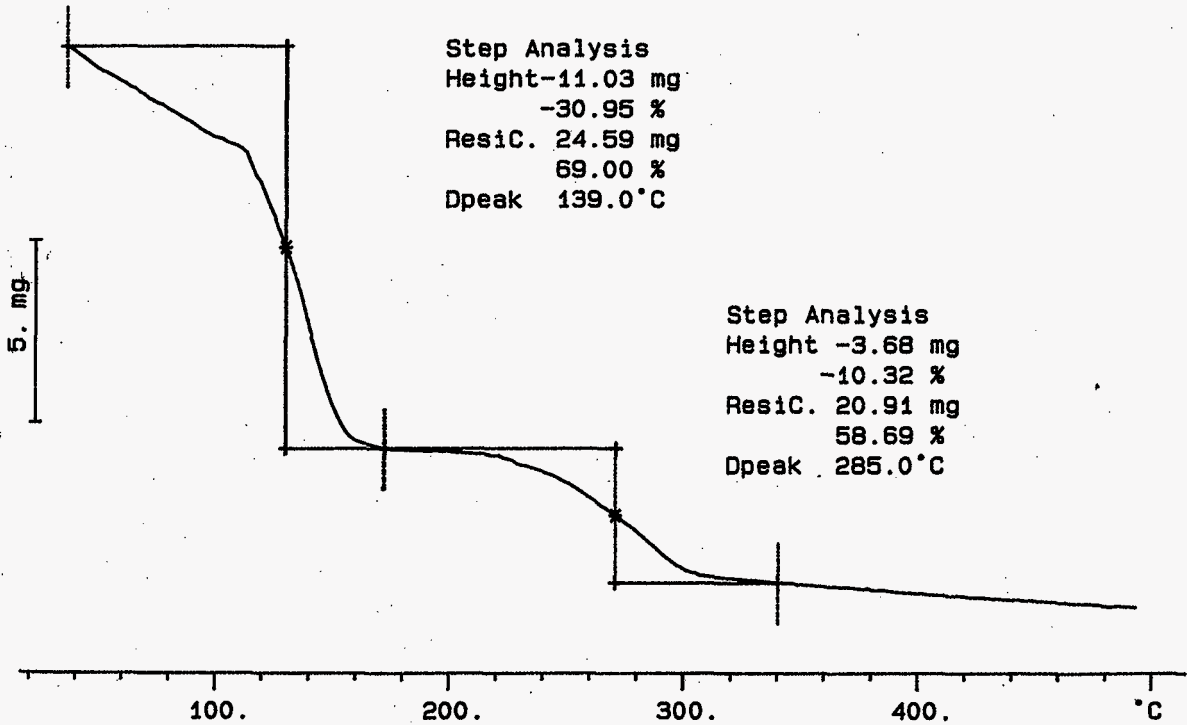
Height -3.68 mg

-10.32 %

Resid. 20.91 mg

58.69 %

Dpeak 285.0 °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>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
80Y

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# 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

David D. 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

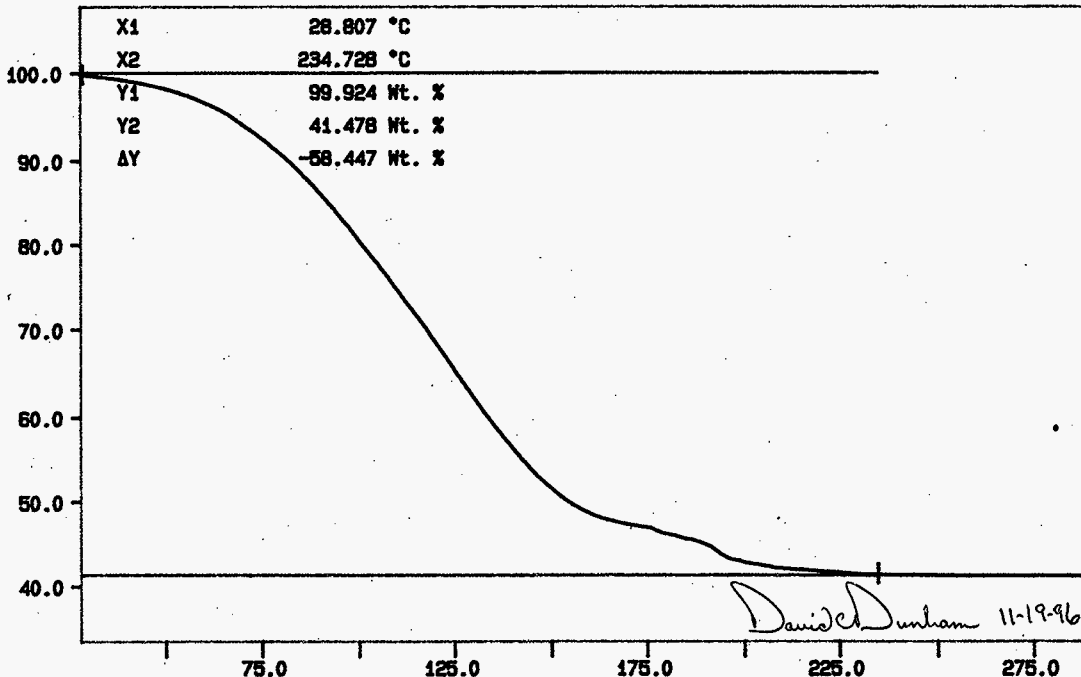
Sample Weight: 20.479 mg

TGA STD 82N8-A

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

242

Weight (Wt. %)



HMF-SD-MM-DR-219, REV. 0

N2 10C/MIN

TIME: 88:8 8

TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

JD SPELLMAN

PERKIN-ELMER

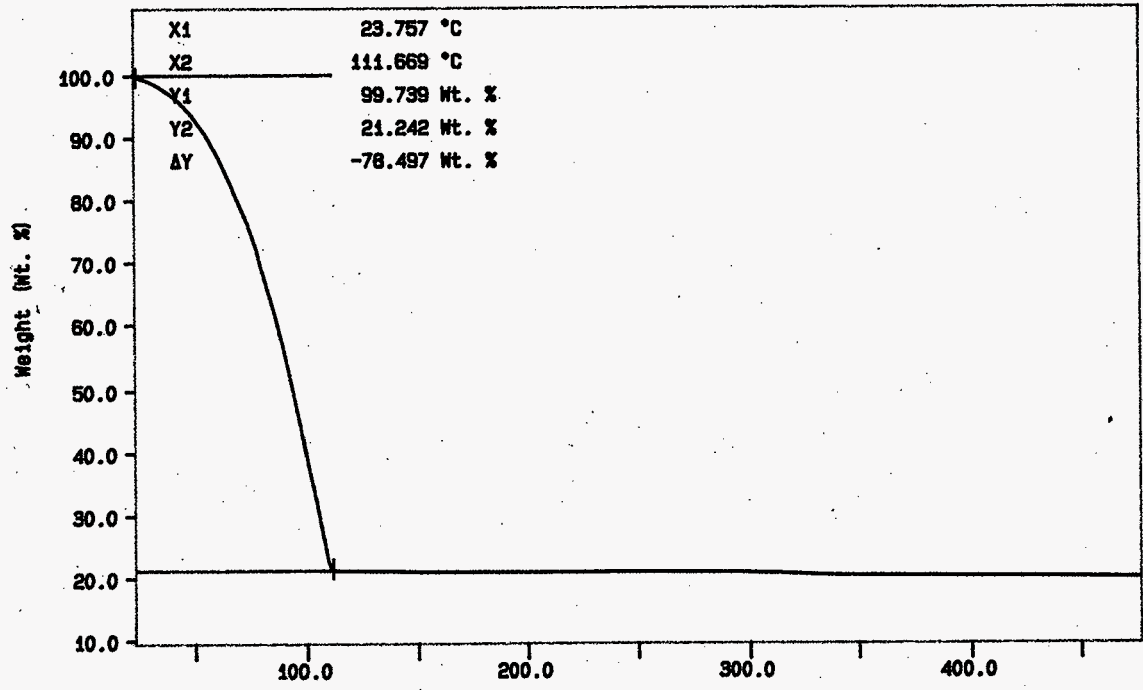
7 Series Thermal Analysis System

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

243

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

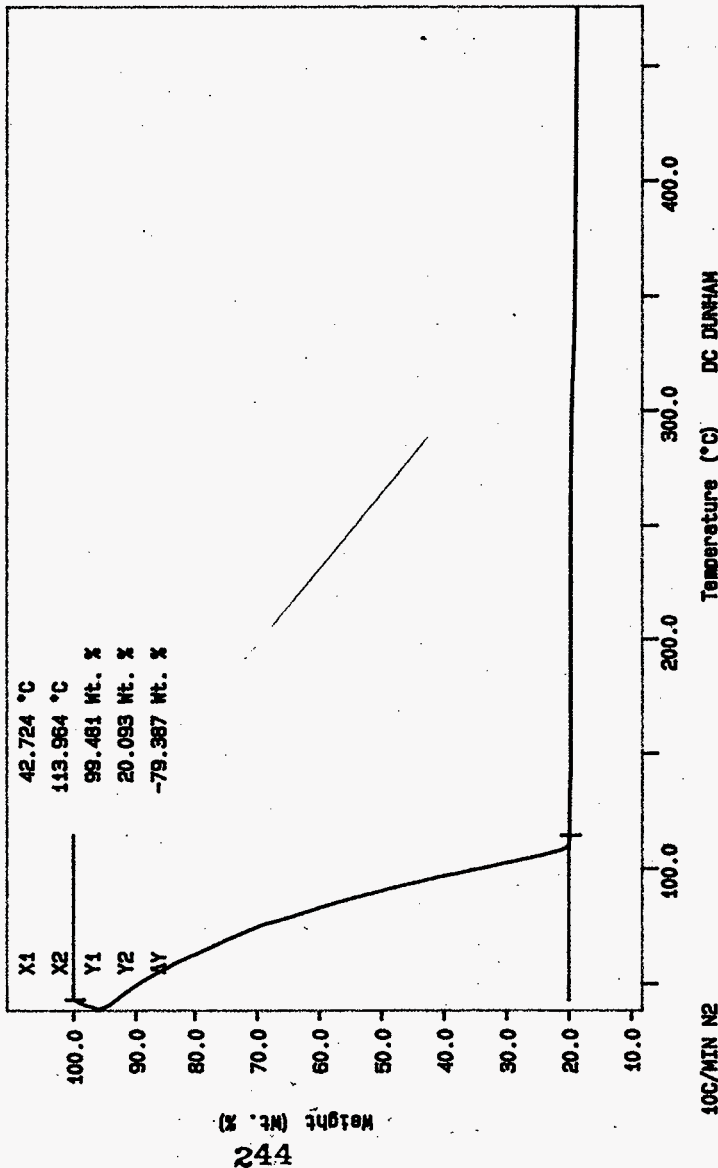


10C/MIN N2
 TEMP: 25.8 C
 TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

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
S96T005823 DUP



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

10C/MIN N2
TEMPERATURE 800.0
TIME 8
0.0 min RATE 40.0 C/min

244

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 22.96	N/A %

Final page for worklist # 14711

James P. Bromby 11/14/96
 Analyst Signature Date

R Jones 11-12-96
 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 246 TO 252.

TGA STD 82N8-A N2

File: 00065.001 TG METTLER 10-Nov-96

14.366 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

246

5. mg

Step Analysis

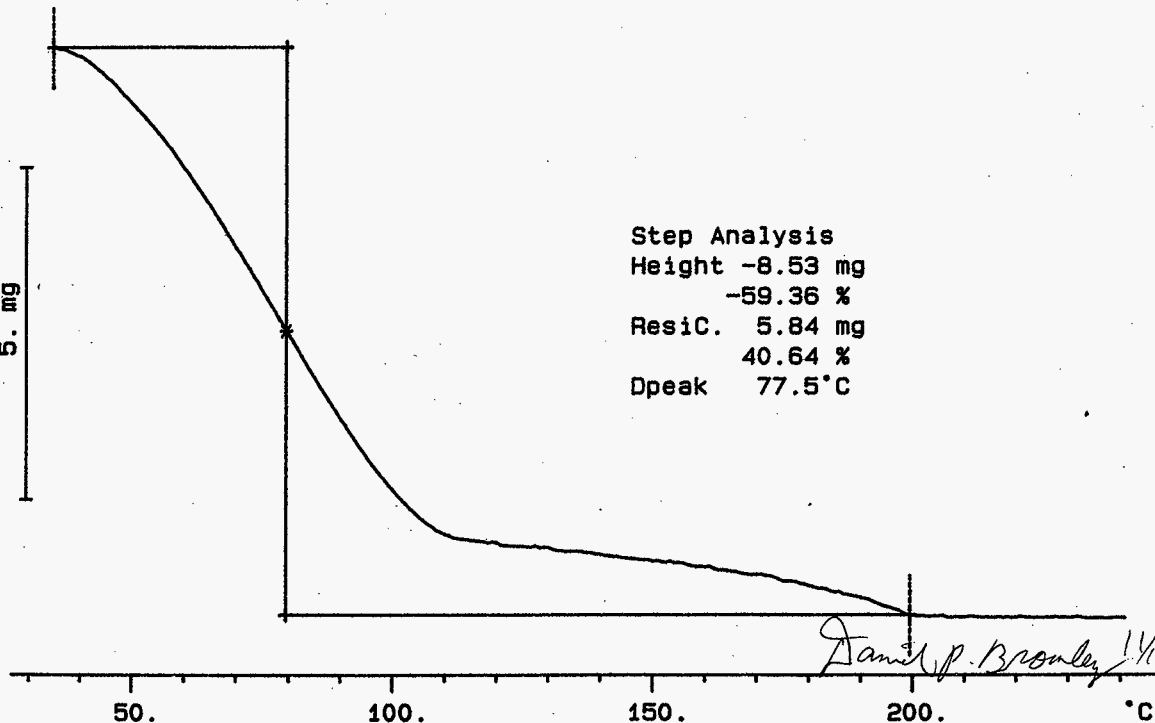
Height -8.53 mg

-59.36 %

ResidC. 5.84 mg

40.64 %

Dpeak 77.5 °C



HNF-SD-MM-DP-219, REV. C

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

Step Analysis

Height -4.92 mg

-34.40 %

Resid. 9.39 mg

65.60 %

Dpeak 129.0 °C

Step Analysis

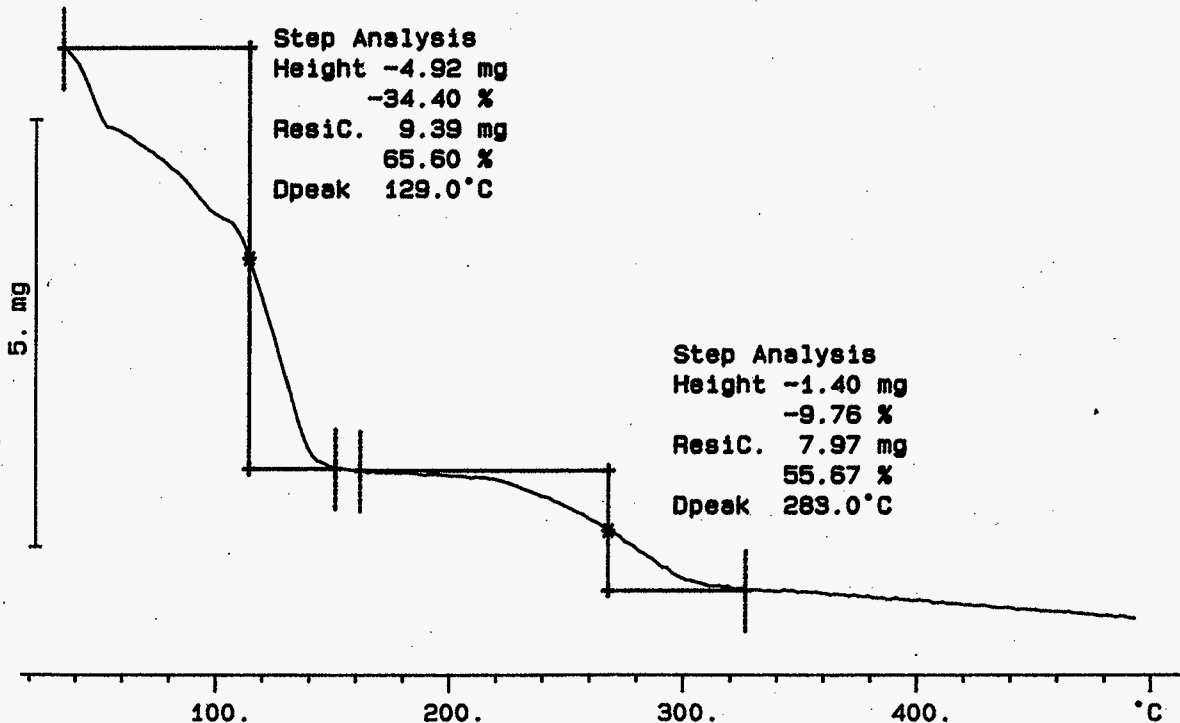
Height -1.40 mg

-9.76 %

Resid. 7.97 mg

55.67 %

Dpeak 269.0 °C



247

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

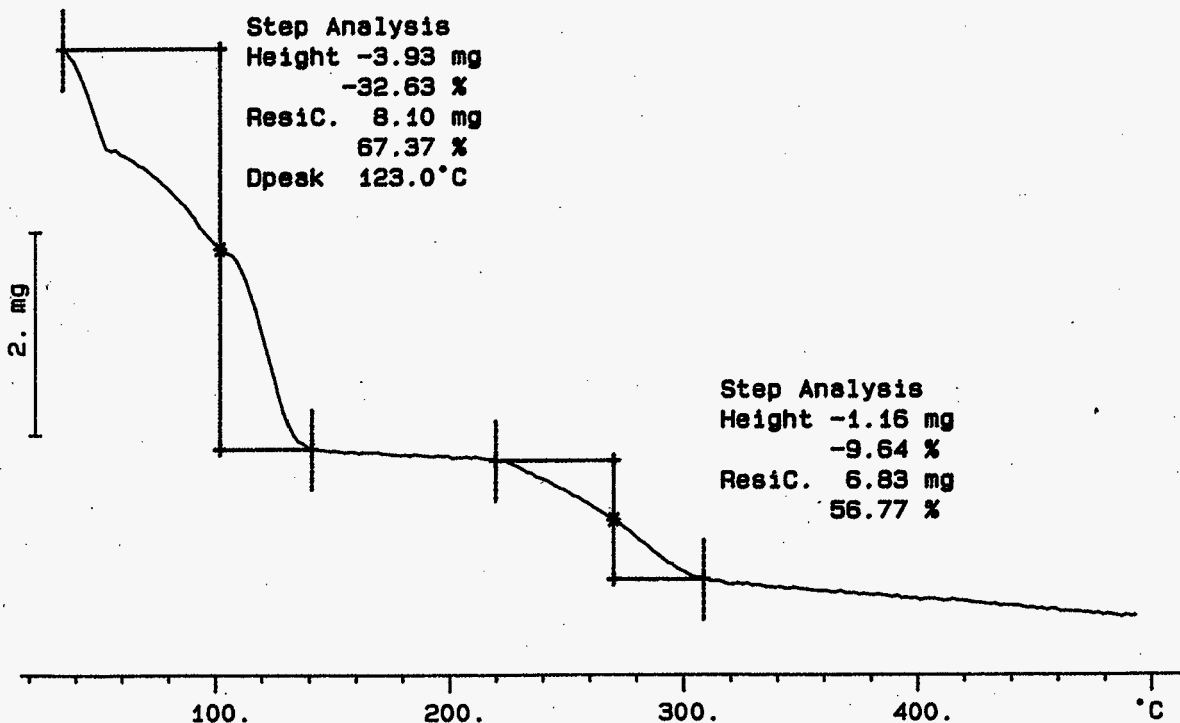
Step Analysis

Height -1.16 mg

-9.64 %

Resid. 6.83 mg

56.77 %



248

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

S96T005506 SAM N2

11.492 mg

Rate: 10.0 °C/min

File: 00071.001

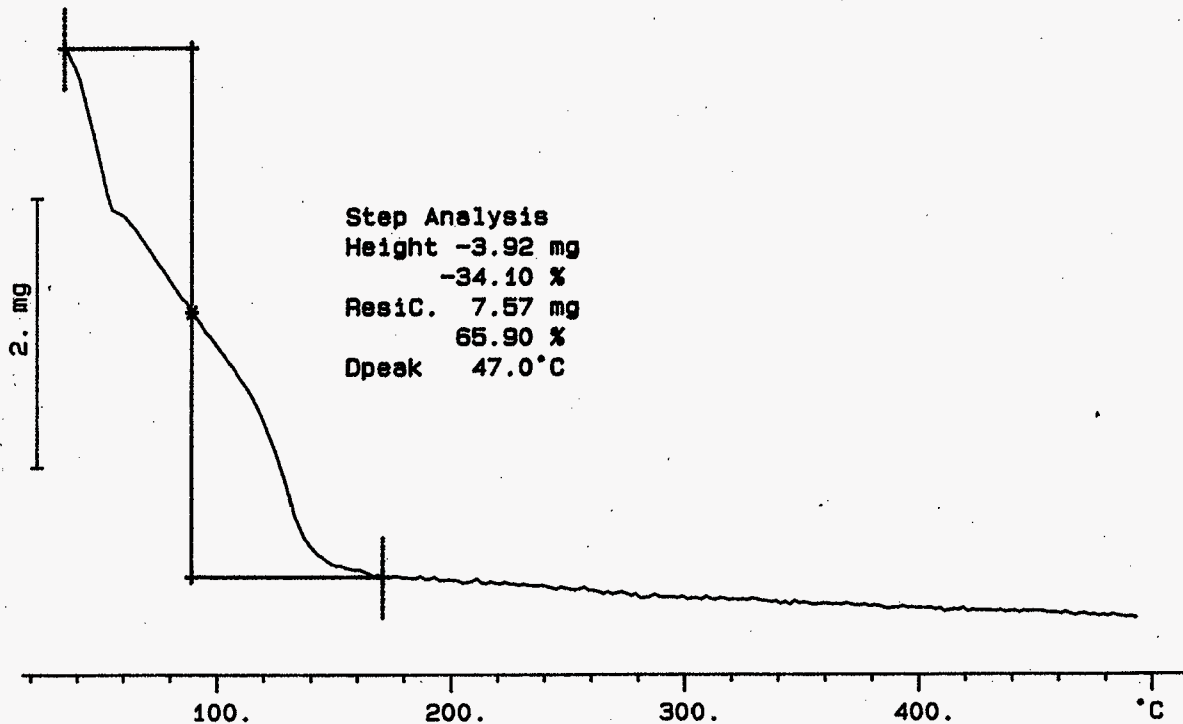
TG

METTLER

11-Nov-96

Ident: 0.0

222-S Laboratory



249

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

S96T005506 DUP N2

10.813 mg

Rate: 10.0 °C/min

File: 00073.001

TG

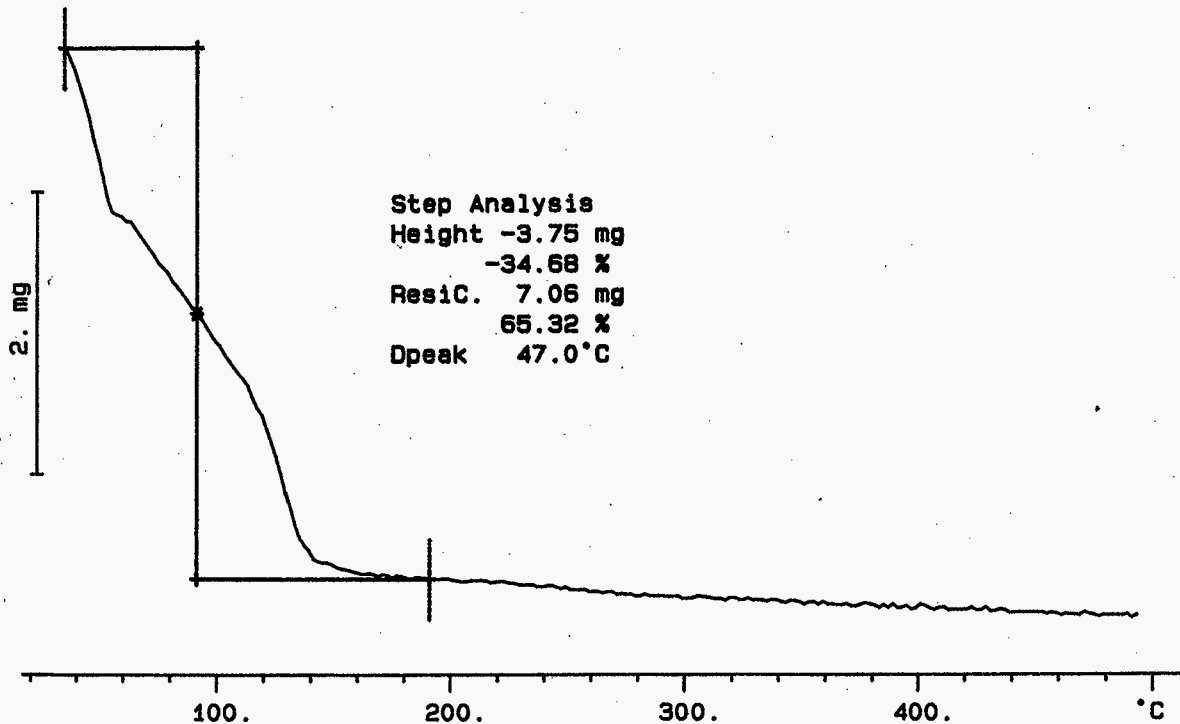
METTLER

11-Nov-96

Ident: 0.0

222-S Laboratory

250



S96T005507 SAM N2

18.749 mg

Rate: 10.0 °C/min

File: 00075.001

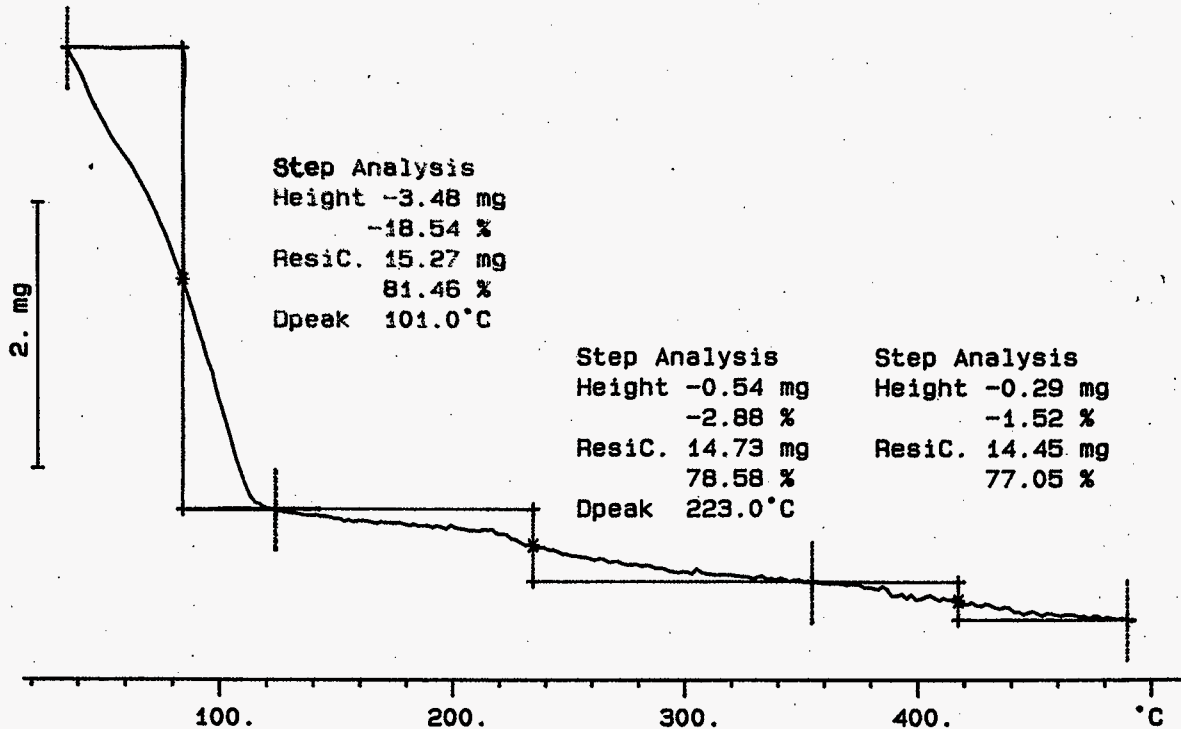
TG

METTLER

11-Nov-96

Ident: 0.0

222-S Laboratory



S96T005507 DUP N2

22.937 mg

Rate: 10.0 °C/min

File: 00077.001 TG METTLER 11-Nov-96

Ident: 0.0

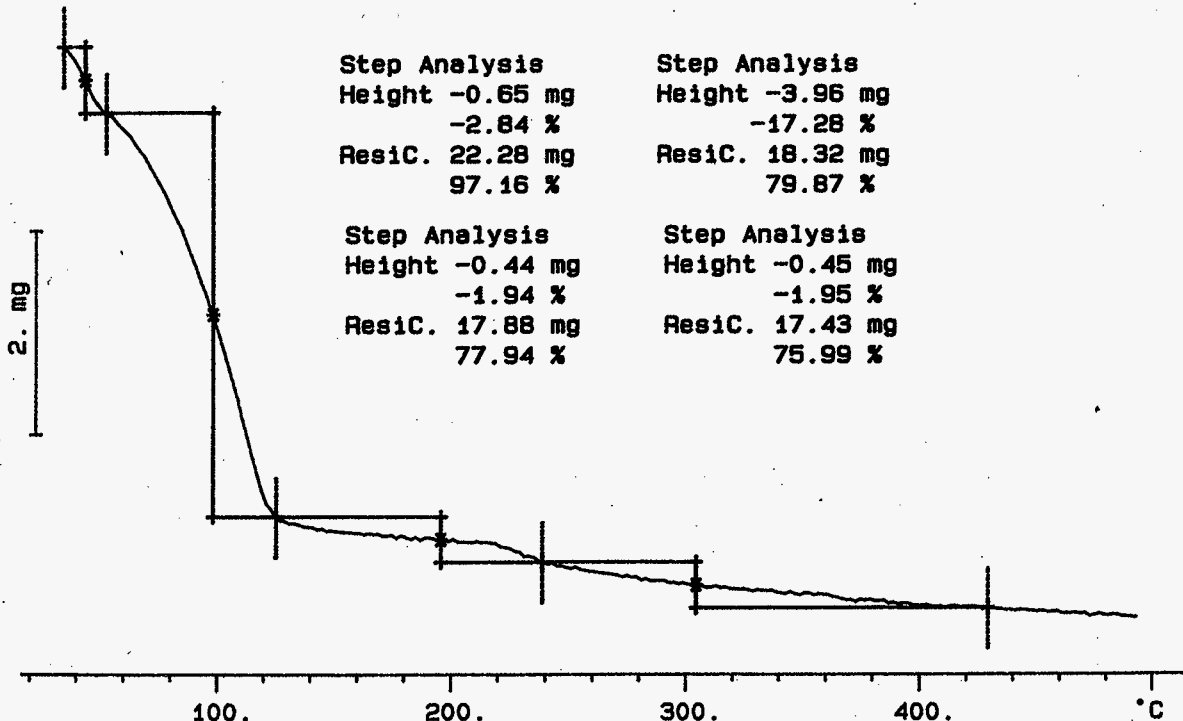
222-S Laboratory

Step Analysis
Height -0.65 mg
-2.84 %
ResidC. 22.28 mg
97.16 %

Step Analysis
Height -3.96 mg
-17.28 %
ResidC. 18.32 mg
79.87 %

Step Analysis
Height -0.44 mg
-1.94 %
ResidC. 17.88 mg
77.94 %

Step Analysis
Height -0.45 mg
-1.95 %
ResidC. 17.43 mg
75.99 %



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 Dunbar 1-10-97
Analyst Signature Date

Frank Mark 1-10-97
Analyst Signature Date

Approved RW Schwach 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 INITIALS

ANALYSIS DATE

ANALYSIS TIME

INSTRUMENT CODE

14392

DCD

1-10-97

0530

SAMPLE STANDARD DUPLICATE

SAMPLE # =

STD # = 133N16A

TARE WEIGHT (g) 1.8459
 GROSS WEIGHT (g) 1.9512
 VOL. of SOLUTION (mL) .07538

REPLICATE
1.7807
2.0857
.07538

SAMPLE STANDARD DUPLICATE

SAMPLE # = 396T005463

STD # =

TARE WEIGHT (g) 1.8628
 GROSS WEIGHT (g) 2.0339
 VOL. of SOLUTION (mL) .07538

DUPLICATE
 REPLICATE
1.9271
2.1003
.07538

RWS VIA 1/16/97 RWS

SAMPLE STANDARD DUPLICATE

254

SAMPLE # = 396T005406

STD # =

TARE WEIGHT (g) 1.8921
 GROSS WEIGHT (g) 1.9687
 VOL. of SOLUTION (mL) .07538

DUPLICATE
 REPLICATE
1.9157
1.9953
.07538

RWS VIA 1/16/97 RWS

SAMPLE STANDARD DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

SAMPLE STANDARD DUPLICATE

SAMPLE # = 396T005420

STD # =

TARE WEIGHT (g) 1.8964
 GROSS WEIGHT (g) 2.0222
 VOL. of SOLUTION (mL) .07538

DUPLICATE
 REPLICATE
1.8831
1.9880
.07538

RWS VIA 1/16/97 RWS

SAMPLE STANDARD DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

SAMPLE STANDARD DUPLICATE

SAMPLE # = 396T005421

STD # =

TARE WEIGHT (g) 1.9077
 GROSS WEIGHT (g) 2.1089
 VOL. of SOLUTION (mL) .07538

DUPLICATE
 REPLICATE
1.9556
2.1642
.07538

RWS VIA 1/16/97 RWS

SAMPLE STANDARD DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

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

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

Type		STD	REPLICATE
STD	Gross Weight (W2)	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:	<i>Janis Mark</i>	Date:	01/10/97
Approved by:	<i>RW Schrieder</i>	Date:	1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

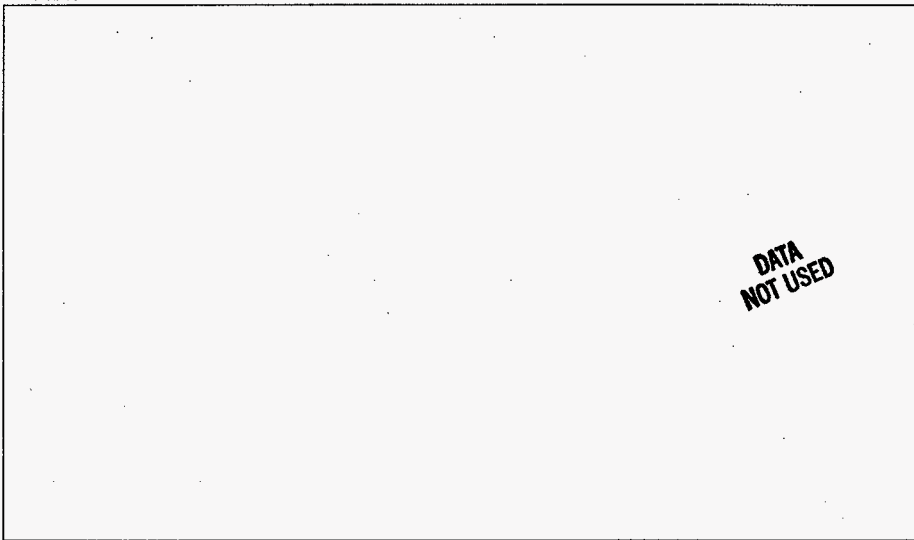
DATA
NOT USED

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

Type		SAMP	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	v RESULT v		
Time	Specific Gravity =	1.016	
05:30 AM			

Data Entry by:	<i>Janis D. Myle</i>	Date:	01/10/97
Approved by:	<i>RW Schneider</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	0
Test Code	Volume of Solution μ L	75.3800	
SPG-01	Specific Gravity	1.0560	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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g}/\text{mL}]$		
Date			
01/10/97	v RESULT v		
Time	Specific Gravity =	1.056	
05:30 AM			

Data Entry by:	<i>Jane O'Mark</i>	Date:	01/10/97
Approved by:	<i>DW Simedra</i>	Date:	1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

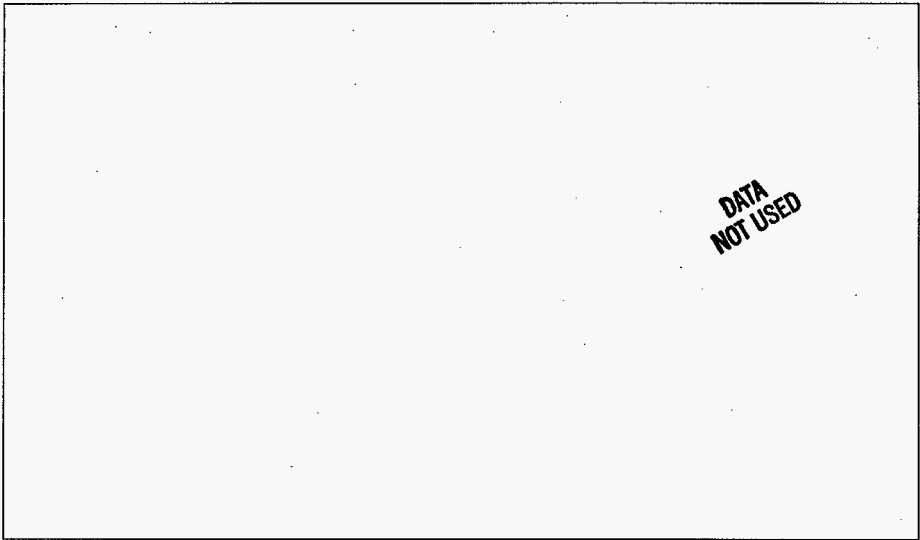
**DATA
NOT USED**

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

Type		SAMP	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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97	Specific Gravity =	1.404	
Time			
05:30 AM			

Data Entry by:	<i>Janis O'Malley</i>	Date:	01/10/97
Approved by:	<i>RW Schmedt</i>	Date:	1/14/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER



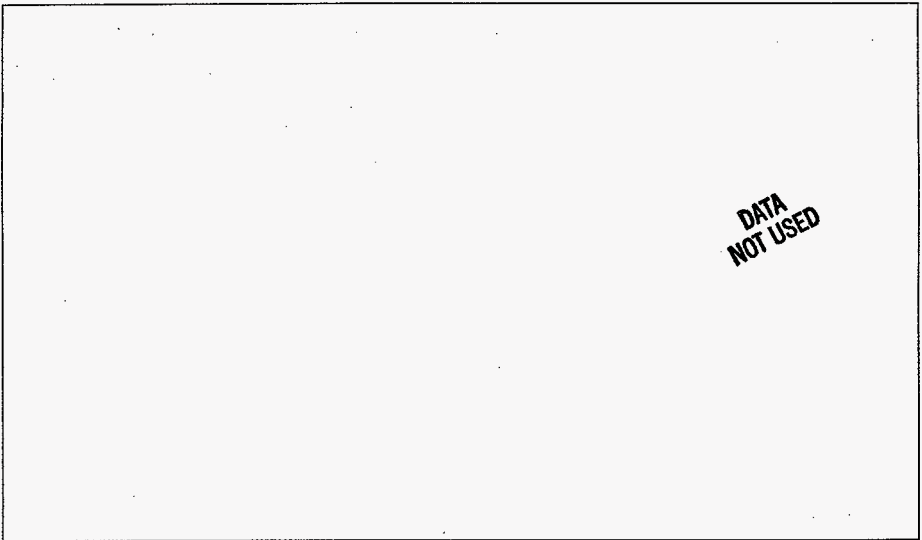
**DATA
NOT USED**

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

Type		SAMP-DUP	REPLICATE
SAMP-DUP	Gross Weight (W2)	1.9888	
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 = $[(W2-W1) \cdot 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} \cdot 1.000 \text{ g/mL}]$		
Date	v RESULT v		
01/10/97	Specific Gravity =	1.402	
Time			
05:30 AM			

Data Entry by:	<i>Frank Smith</i>	Date:	01/10/97
Approved by:	<i>Reinhold Schneider</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	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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g}/\text{mL}]$		
Date			
01/10/97	v RESULT v		
Time	Specific Gravity =	2.669	
05:30 AM			

Data Entry by:	<i>[Signature]</i>	Date:	01/10/97
Approved by:	<i>[Signature]</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)	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:	<i>Janis Mueh</i>	Date:	01/10/97
Approved by:	<i>D. J. ...</i>	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 #			
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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g}/\text{mL}]$		
Date	v RESULT v		
01/10/97	Specific Gravity =	2.270	
Time			
05:30 AM			

Data Entry by:

Date:

01/10/97

Approved by:

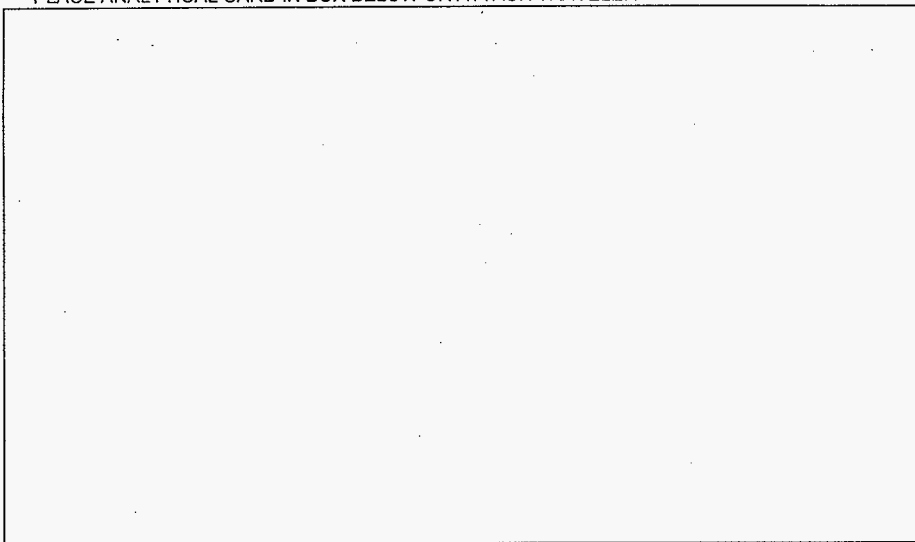
Date:

1/14/97

Form 510112L1 Rev. 1.1

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER



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			
01/10/97	v RESULT v		
Time	Specific Gravity =	2.298	
05:30 AM			

Data Entry by:	<i>[Signature]</i>	Date:	01/10/97
Approved by:	<i>[Signature]</i>	Date:	1/14/97

LABCORE Data Entry Template for Worklist# 14659


Analyst: ADD 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>1.39755</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

 12-5-96
Analyst Signature Date

 12-5-96
Analyst Signature Date

Approved RW 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
INITIALS

ANALYSIS
DATE

ANALYSIS
TIME

INSTRUMENT
CODE

#

14659

ADP

12-5-96

0830

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # =

STD # = 133N16A

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

1.8876
2.0268
.10012

REPLICATE
1.8469
1.9867
.10012

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # = 596T005523 STD # =

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

1.9396
2.10735
.10012

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # = 596T005523 STD # =

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

1.8485
1.9361
.10012

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # =

STD # =

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

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

SAMPLE # = STD # =

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

REPLICATE

SAMPLE
 STANDARD

DUPLICATE

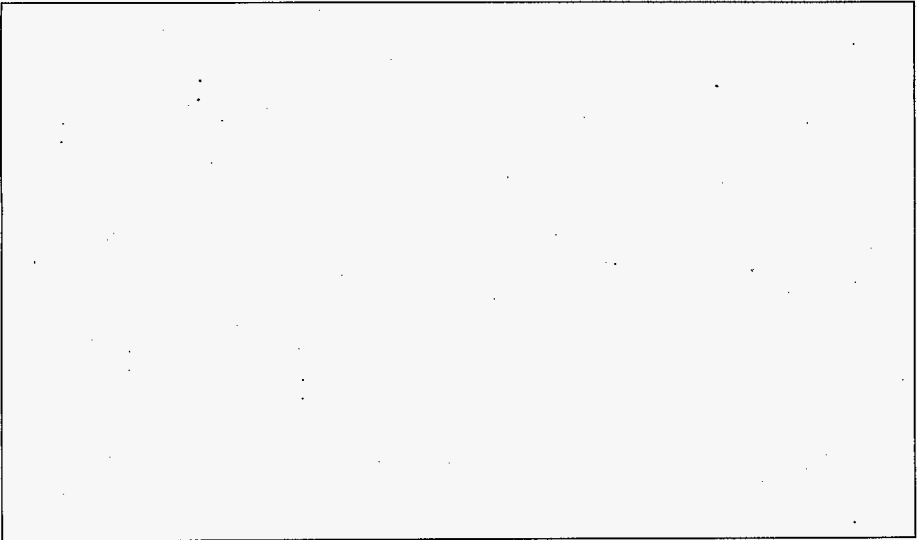
SAMPLE # =

STD # =

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

REPLICATE

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

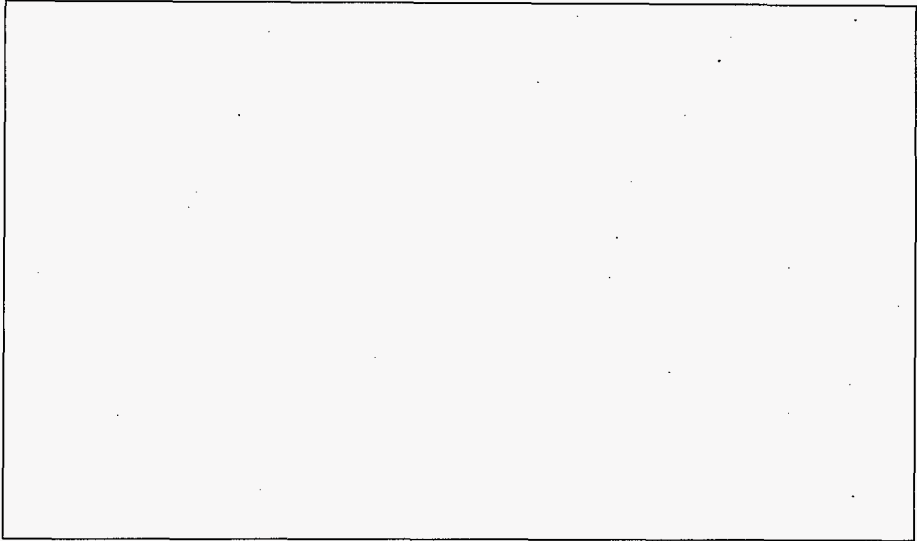


SPECIFIC GRAVITY : LA-510-112 (C-3)

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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
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. Schwed</i>	Date: 12/6/96

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

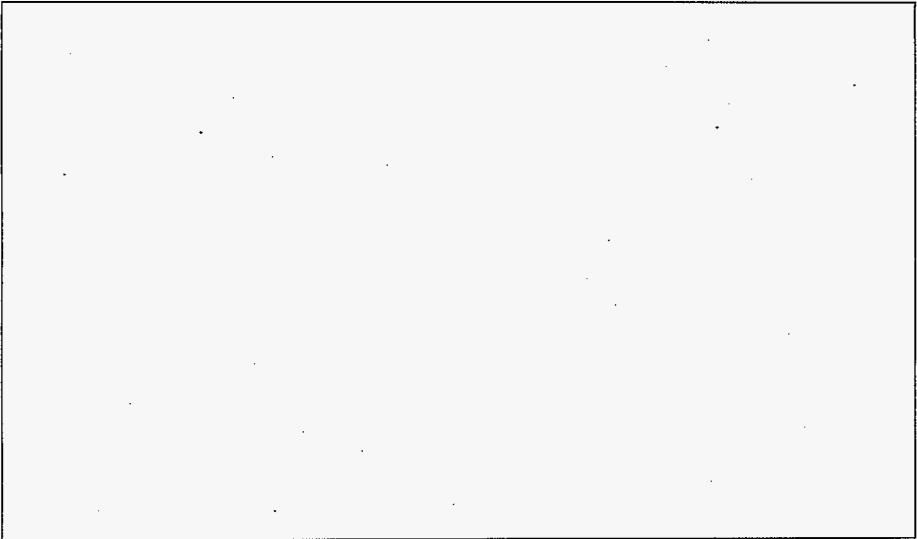


SPECIFIC GRAVITY : LA-510-112 (C-3)

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 = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
12/05/96	v RESULT v		
Time	Specific Gravity =	1.387	
08:30 AM			

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

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			
12/05/96	v RESULT v		
Time	Specific Gravity =	1.374	
08:30 AM			

Data Entry by: <i>[Signature]</i>	Date: 12/05/96
Approved by: <i>[Signature]</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 PO4	QC	1	<1.20e-1		ug/mL
1	CCB	0	@IC-QC SO4	QC	1	<1.38e-1		ug/mL
1	CCB	0	@IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV	0	@IC-QC F	QC	5.90e01	5.90e+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 PO4	QC	5.44e02	5.09e+02	93.566 %	Recovery
2	CCV	0	@IC-QC SO4	QC	6.31e02	5.12e+02	56.989 %	Recovery
2	CCV	0	@IC-QC OXALATE2	QC	5.25e02	5.38e+02	102.476 %	Recovery
3	SAMPLE	S96T005463	@IC-01 F-02	LIQUID	N/A	2.540e-01	1.20e-002	ug/mL
3	SAMPLE	S96T005463	@IC-01 CL-02	LIQUID	N/A	1.005e+01	1.717	ug/mL
3	SAMPLE	S96T005463	@IC-01 NO2-02	LIQUID	N/A	1.970e+01	0.108	ug/mL
3	SAMPLE	S96T005463	@IC-01 BR-02	LIQUID	N/A	4.330e-01	0.125	ug/mL
3	SAMPLE	S96T005463	@IC-01 NO3-02	LIQUID	N/A	5.109e+01	0.139	ug/mL
3	SAMPLE	S96T005463	@IC-01 PO4-02	LIQUID	N/A	< 1.200e-01	0.120	ug/mL
3	SAMPLE	S96T005463	@IC-01 SO4-02	LIQUID	N/A	1.609e+01	0.138	ug/mL
3	SAMPLE	S96T005463	@IC-01 OXALATE2	LIQUID	N/A	< 1.050e-01	0.105	ug/mL
4	DUP	S96T005463	@IC-01 F-02	LIQUID	2.54e-01	2.63e-01		3.492 RPD
4	DUP	S96T005463	@IC-01 CL-02	LIQUID	1.01e+01	1.21e+01		18.018 RPD
4	DUP	S96T005463	@IC-01 NO2-02	LIQUID	1.97e+01	1.78e+01		0.505 RPD
4	DUP	S96T005463	@IC-01 BR-02	LIQUID	4.33e-01	4.33e-01		0.000 RPD
4	DUP	S96T005463	@IC-01 NO3-02	LIQUID	5.11e+01	5.14e+01		0.585 RPD
4	DUP	S96T005463	@IC-01 PO4-02	LIQUID	<1.20e-1	1.51e-01		RPD
4	DUP	S96T005463	@IC-01 SO4-02	LIQUID	1.61e+01	1.62e+01		0.619 RPD
4	DUP	S96T005463	@IC-01 OXALATE2	LIQUID	<1.05e-1	<1.05e-1		RPD

Final page for worklist# 14375

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lutz 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# 36WZD-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. Fulton 1-7-97
Analyst Signature Date

Analyst Signature Date

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

Uploaded 2/6/97 SMF

Validated 2/6/97 SMF

Data Entry Comments:

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

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		-	1	97010651.d21	CCB ELUENT BLANK	1.00
	=>	2	CCV			2	97010651.d22	CCV STD 36N20-C	101.00
	=>	3	SAMPLE	S96T005463		3	97010651.d25	S96T005463 SAM	101.00
	=>	4	DUP	S96T005463		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
|
=====

```

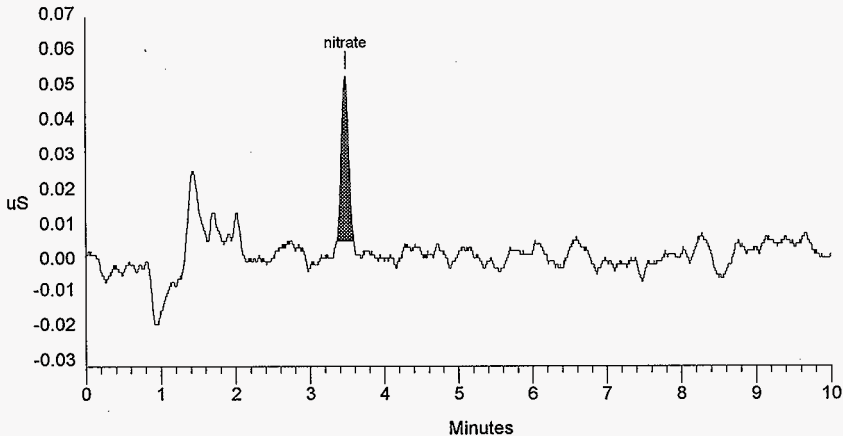
Janey
for SMF 2/26/97

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

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

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	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
=====
    
```

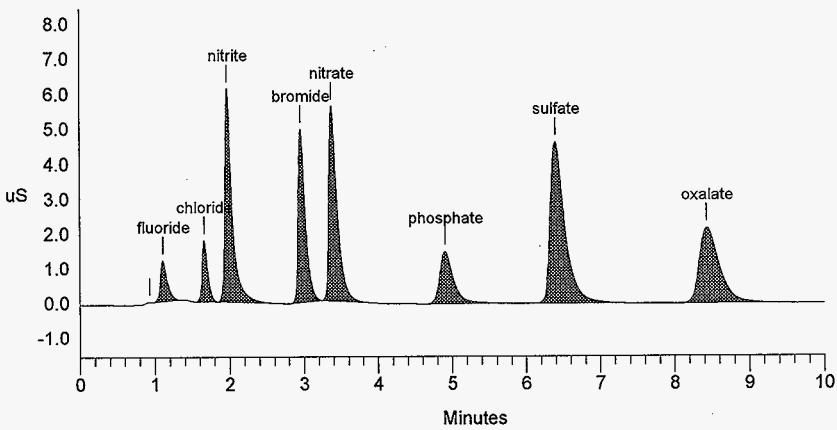
```

-----
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
=====
    
```

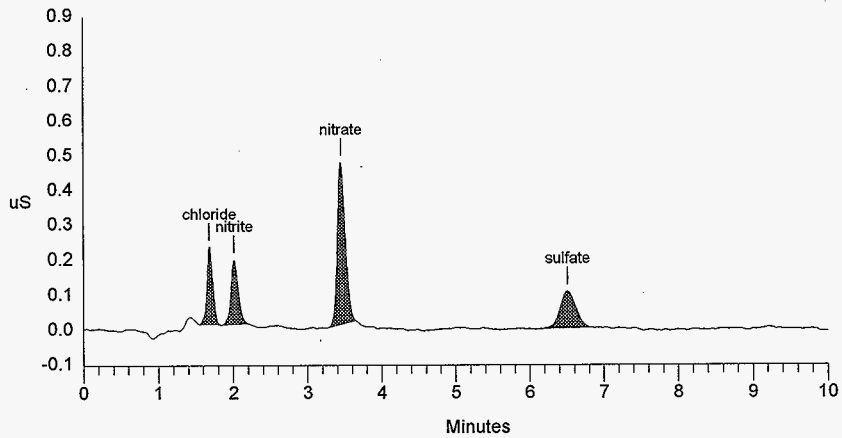
```

-----
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
=====
  
```

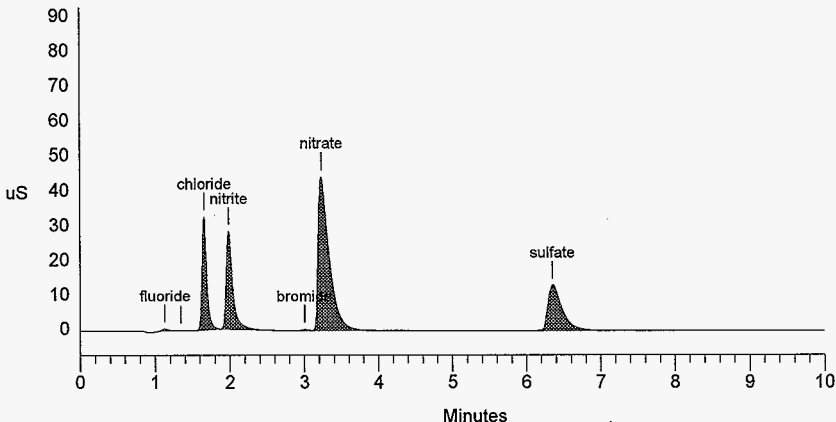
```

-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
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 |
=====
  
```

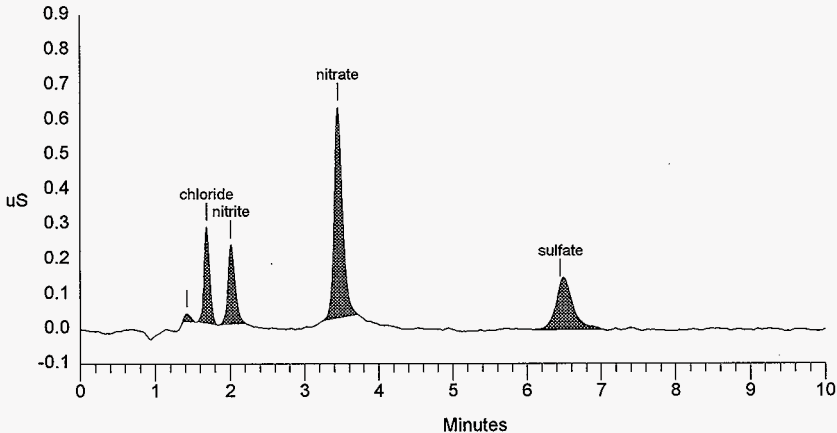
```

-----
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
=====

```

```

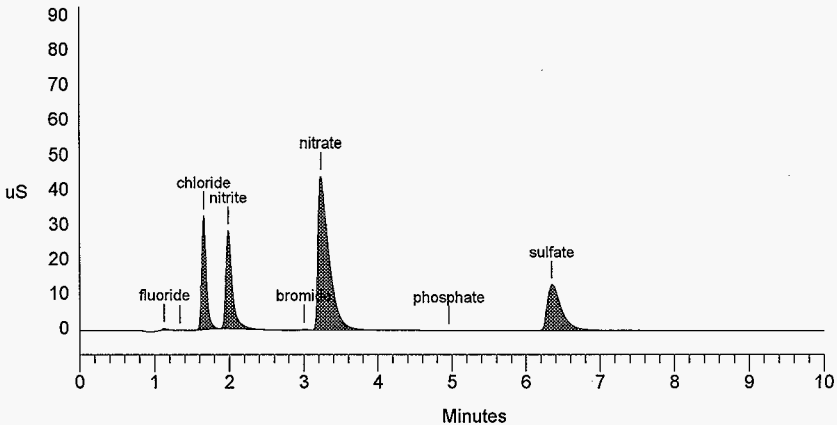
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           1 3000 5Hz 0.00 10.00          50
-----

```

***** 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	①IC-QC	F	QC	1	<1.20e-2	ug/mL	
1	CCB	0	①IC-QC	CL	QC	1	<1.70e-2	ug/mL	
1	CCB	0	①IC-QC	NO2	QC	1	<1.08e-1	ug/mL	
1	CCB	0	①IC-QC	BR	QC	1	<1.25e-1	ug/mL	
1	CCB	0	①IC-QC	NO3	QC	1	1.46e-01	0.146 ug/mL	
1	CCB	0	①IC-QC	PO4	QC	1	<1.20e-1	ug/mL	
1	CCB	0	①IC-QC	SO4	QC	1	<1.38e-1	ug/mL	
1	CCB	0	①IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL	
2	CCV	0	①IC-QC	F	QC	5.90e01	6.03e+01	102.203 % Recovery	
2	CCV	0	①IC-QC	CL	QC	7.90e01	8.17e+01	103.418 % Recovery	
2	CCV	0	①IC-QC	NO2	QC	5.41e02	5.49e+02	101.479 % Recovery	
2	CCV	0	①IC-QC	BR	QC	5.89e02	5.86e+02	99.491 % Recovery	
2	CCV	0	①IC-QC	NO3	QC	5.94e02	5.99e+02	100.842 % Recovery	
2	CCV	0	①IC-QC	PO4	QC	5.44e02	5.37e+02	98.713 % Recovery	
2	CCV	0	①IC-QC	SO4	QC	5.31e02	6.45e+02	102.219 % Recovery	
2	CCV	0	①IC-QC	OXALATE2	QC	5.25e02	5.61e+02	106.857 % Recovery	
3	BLNK-PREP	0	①IC-01	F-02	SOLID	1	<1.20e-2	ug/g	
3	BLNK-PREP	0	①IC-01	CL-02	SOLID	1	<1.70e-2	ug/g	
3	BLNK-PREP	0	①IC-01	NO2-02	SOLID	1	<1.08e-1	ug/g	
3	BLNK-PREP	0	①IC-01	BR-02	SOLID	1	<1.25e-1	ug/g	
3	BLNK-PREP	0	①IC-01	NO3-02	SOLID	1	1.94e-01	0.194 ug/g	
3	BLNK-PREP	0	①IC-01	PO4-02	SOLID	1	<1.20e-1	ug/g	
3	BLNK-PREP	0	①IC-01	SO4-02	SOLID	1	<1.38e-1	ug/g	
3	BLNK-PREP	0	①IC-01	OXALATE2	SOLID	1	<1.05e-1	ug/g	
4	SAMPLE	S96T005469	0 W	①IC-01	F-02	SOLID	N/A	2.315e+03	12.800 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	CL-02	SOLID	N/A	9.083e+02	18.140 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	NO2-02	SOLID	N/A	1.440e+04	115.200 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	BR-02	SOLID	N/A	1.355e+02	133.400 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	NO3-02	SOLID	N/A	5.284e+04	148.300 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	PO4-02	SOLID	N/A	1.531e+04	128.000 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	SO4-02	SOLID	N/A	5.907e+03	147.200 ug/g
4	SAMPLE	S96T005469	0 W	①IC-01	OXALATE2	SOLID	N/A	1.406e+02	112.000 ug/g
5	DUP	S96T005469	0 W	①IC-01	F-02	SOLID	2.32e+03	2.01e+03	14.319 RPD
5	DUP	S96T005469	0 W	①IC-01	CL-02	SOLID	9.08e+02	8.79e+02	3.246 RPD
5	DUP	S96T005469	0 W	①IC-01	NO2-02	SOLID	1.44e+04	1.38e+04	4.255 RPD
5	DUP	S96T005469	0 W	①IC-01	BR-02	SOLID	1.36e+02	<1.36e2	RPD
5	DUP	S96T005469	0 W	①IC-01	NO3-02	SOLID	5.28e+04	5.18e+04	1.912 RPD
5	DUP	S96T005469	0 W	①IC-01	PO4-02	SOLID	1.53e+04	1.32e+04	14.737 RPD
5	DUP	S96T005469	0 W	①IC-01	SO4-02	SOLID	5.91e+03	5.72e+03	1.257 RPD
5	DUP	S96T005469	0 W	①IC-01	OXALATE2	SOLID	1.41e+02	1.39e+02	1.429 RPD
6	SPK	S96T005469	0 W	①IC-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	@IC-01	CL-02	SOLID	7.90e01	8.23e+01	104.177 % Recovery
6	SPK	S96T005469	0	W	@IC-01	NO2-02	SOLID	5.41e02	5.59e+02	103.327 % Recovery
6	SPK	S96T005469	0	W	@IC-01	BR-02	SOLID	5.89e02	5.90e+02	100.170 % Recovery
6	SPK	S96T005469	0	W	@IC-01	NO3-02	SOLID	5.94e02	6.14e+02	103.367 % Recovery
6	SPK	S96T005469	0	W	@IC-01	PO4-02	SOLID	5.44e02	5.95e+02	109.375 % Recovery
6	SPK	S96T005469	0	W	@IC-01	SO4-02	SOLID	6.31e02	6.87e+02	108.875 % Recovery
6	SPK	S96T005469	0	W	@IC-01	OXALATE2	SOLID	5.25e02	5.53e+02	105.333 % Recovery
7	SAMPLE	S96T005479	0	W	@IC-01	F-02	SOLID	N/A	2.694e+04	89.870 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	CL-02	SOLID	N/A	8.975e+02	127.300 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	NO2-02	SOLID	N/A	1.275e+04	808.900 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	BR-02	SOLID	N/A	< 9.361e+02	936.000 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	NO3-02	SOLID	N/A	4.850e+04	1041.000 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	PO4-02	SOLID	N/A	1.278e+05	898.700 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	SO4-02	SOLID	N/A	6.537e+04	1034.000 ug/g
7	SAMPLE	S96T005479	0	W	@IC-01	OXALATE2	SOLID	N/A	< 7.863e+02	786.400 ug/g
8	DUP	S96T005479	0	W	@IC-01	F-02	SOLID	2.69e+04	2.68e+04	0.372 RPD
8	DUP	S96T005479	0	W	@IC-01	CL-02	SOLID	8.98e+02	8.14e+02	9.813 RPD
8	DUP	S96T005479	0	W	@IC-01	NO2-02	SOLID	1.28e+04	1.07e+04	17.872 RPD
8	DUP	S96T005479	0	W	@IC-01	BR-02	SOLID	<9.36e2	<9.35e2	RPD
8	DUP	S96T005479	0	W	@IC-01	NO3-02	SOLID	4.85e+04	4.10e+04	16.760 RPD
8	DUP	S96T005479	0	W	@IC-01	PO4-02	SOLID	1.28e+05	1.39e+05	8.240 RPD
8	DUP	S96T005479	0	W	@IC-01	SO4-02	SOLID	6.54e+04	5.99e+04	8.779 RPD
8	DUP	S96T005479	0	W	@IC-01	OXALATE2	SOLID	<7.86e2	<7.86e2	RPD

Final page for worklist# 14415

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Hhnasto
Reviewer Signature _____ Date 1-10-97

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
			OXALATE2	PO4-02	SO4-02	NO3-02
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
			OXALATE2	PO4-02	SO4-02	NO3-02
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	-	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
			S96T005469		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. DeLoren Column:
=====
    
```

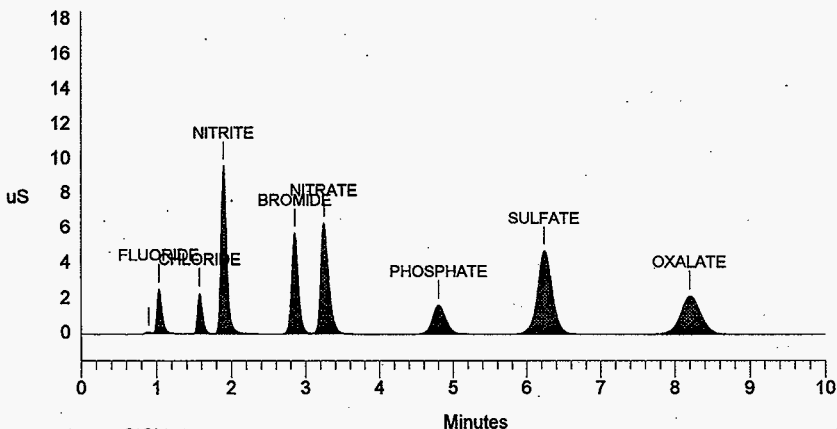
```

-----
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:
=====
    
```

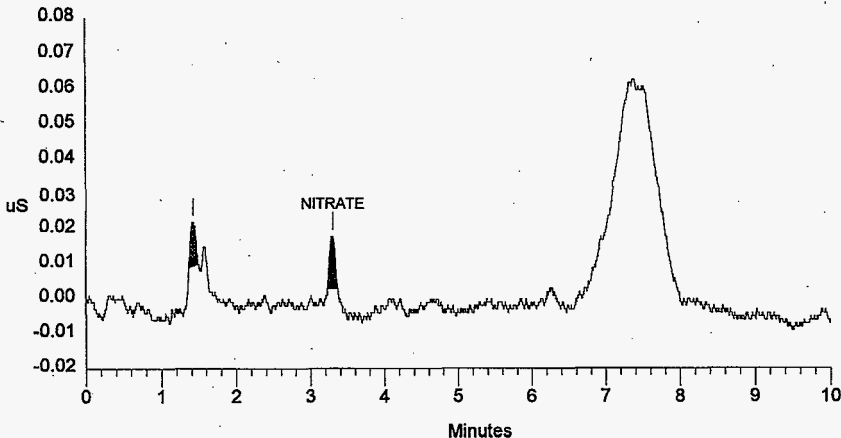
```

-----
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:
=====

```

```

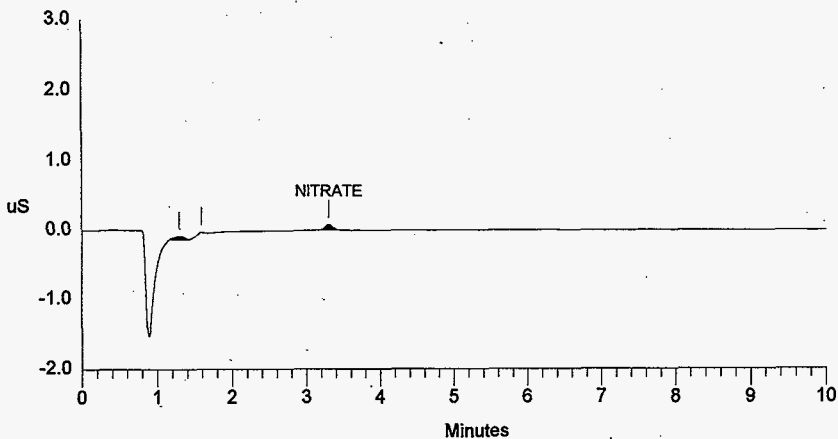
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1    3000 5Hz   0.00 10.00      50
-----

```

***** 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
ACTI Address: 1 System: 1 Inject#: 16                     Detector: CDM-1
Analyst    :                                             Column:
=====
    
```

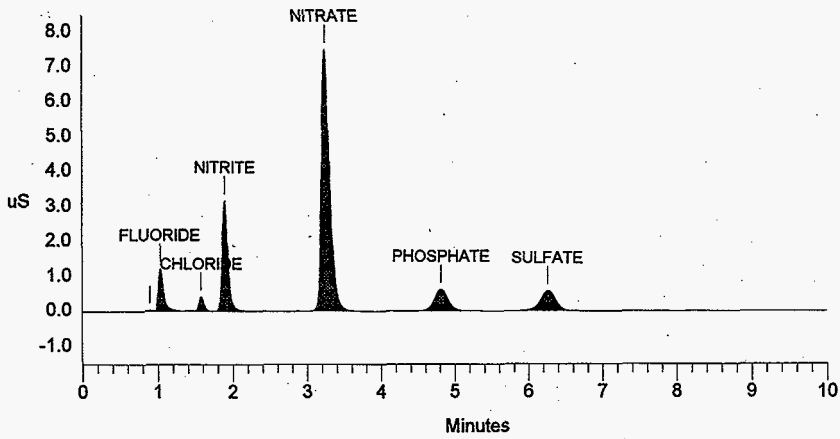
```

-----
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 SAM



2-10
DFL

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
=====
    
```

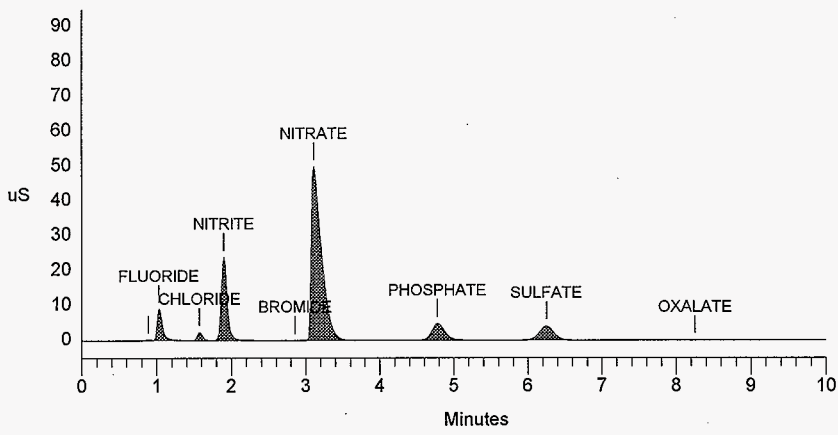
```

-----
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:
=====
    
```

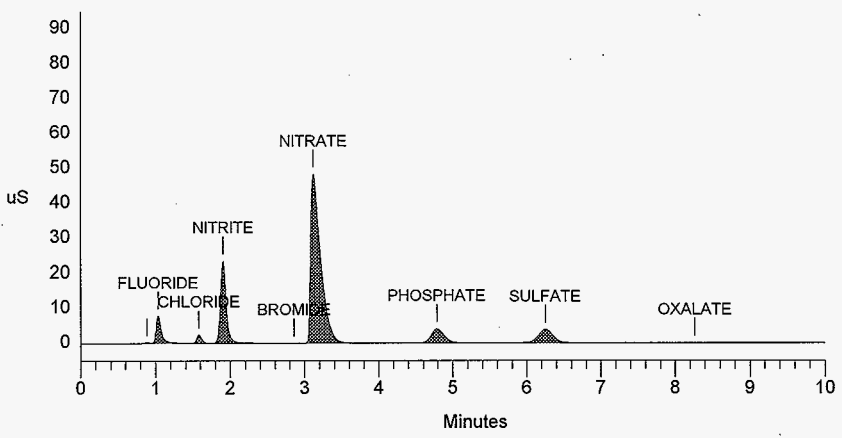
```

-----
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

```

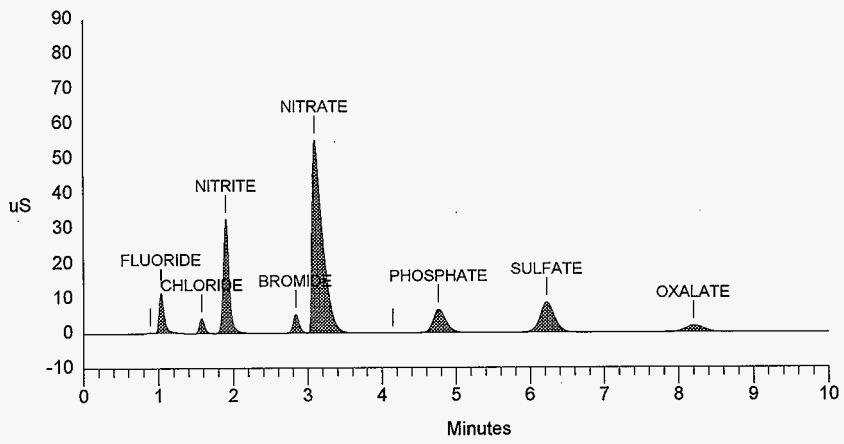
=====
Sample Name: S96T005469 SPK           Date: 01/07/1997 05:08:18
Data File  : E:\DATA\97010671.D22
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 22
Analyst    :                          Column:
Detector: CDM-1
=====
    
```

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	0.89		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:
=====
    
```

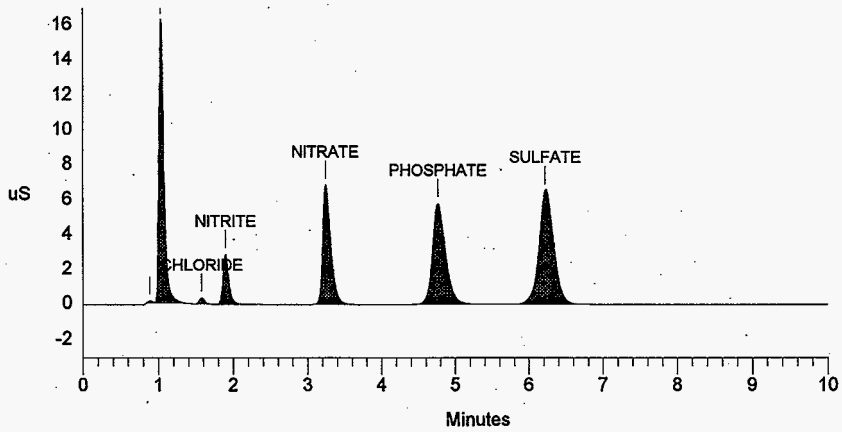
```

-----
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:
=====

```

```

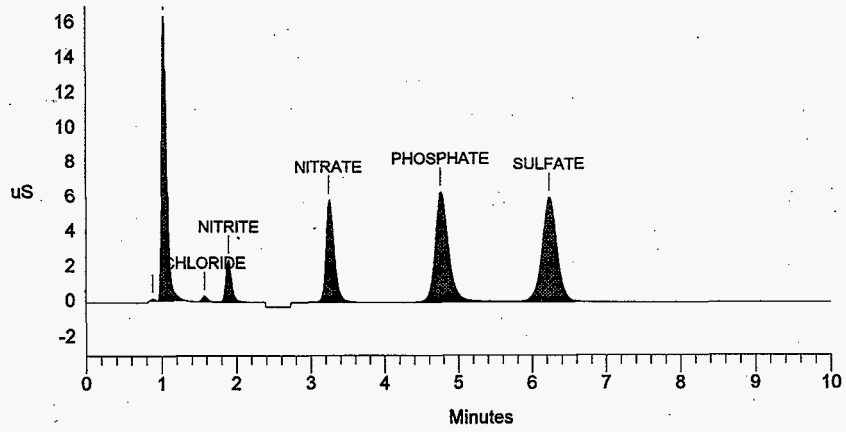
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
External          1          41    3000 5Hz  0.00 10.00          50
-----

```

***** 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# 36WZOC
Method: LA53105 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	⊖IC-QC F	QC	1	<1.20e-2		ug/mL
1	CCB	0	⊖IC-QC CL	QC	1	<1.70e-2		ug/mL
1	CCB	0	⊖IC-QC NO2	QC	1	<1.08e-1		ug/mL
1	CCB	0	⊖IC-QC BR	QC	1	<1.25e-1		ug/mL
1	CCB	0	⊖IC-QC NO3	QC	1	<1.39e-1		ug/mL
1	CCB	0	⊖IC-QC P04	QC	1	<1.20e-1		ug/mL
1	CCB	0	⊖IC-QC S04	QC	1	<1.38e-1		ug/mL
1	CCB	0	⊖IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV	0	⊖IC-QC F	QC	5.90e01	6.53e+01	110.678 % Recovery	
2	CCV	0	⊖IC-QC CL	QC	7.90e01	7.51e+01	95.063 % Recovery	
2	CCV	0	⊖IC-QC NO2	QC	5.41e02	5.19e+02	95.933 % Recovery	
2	CCV	0	⊖IC-QC BR	QC	5.89e02	5.81e+02	98.642 % Recovery	
2	CCV	0	⊖IC-QC NO3	QC	5.94e02	5.80e+02	97.643 % Recovery	
2	CCV	0	⊖IC-QC P04	QC	5.44e02	5.13e+02	94.301 % Recovery	
2	CCV	0	⊖IC-QC S04	QC	6.31e02	6.25e+02	99.049 % Recovery	
2	CCV	0	⊖IC-QC OXALATE2	QC	5.25e02	5.47e+02	104.190 % Recovery	
3	BLNK-PREP	0	⊖IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3	BLNK-PREP	0	⊖IC-01 CL-02	SOLID	1	2.70e-02	0.027	ug/g
3	BLNK-PREP	0	⊖IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3	BLNK-PREP	0	⊖IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3	BLNK-PREP	0	⊖IC-01 NO3-02	SOLID	1	<1.39e-1		ug/g
3	BLNK-PREP	0	⊖IC-01 P04-02	SOLID	1	<1.20e-1		ug/g
3	BLNK-PREP	0	⊖IC-01 S04-02	SOLID	1	<1.38e-1		ug/g
3	BLNK-PREP	0	⊖IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 F-02	SOLID	N/A	3.899e+04	85.140	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 CL-02	SOLID	N/A	4.574e+02	122.100	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 NO2-02	SOLID	N/A	7.127e+03	775.300	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 BR-02	SOLID	N/A	< 8.974e+02	897.500	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 NO3-02	SOLID	N/A	3.835e+04	997.900	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 P04-02	SOLID	N/A	2.141e+05	861.400	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 S04-02	SOLID	N/A	7.210e+04	990.600	ug/g
4	SAMPLE	S96T005480	0 W ⊖IC-01 OXALATE2	SOLID	N/A	< 7.538e+02	754.000	ug/g
5	DUP	S96T005480	0 W ⊖IC-01 F-02	SOLID	3.90e+04	3.53e+04	9.360	RPD
5	DUP	S96T005480	0 W ⊖IC-01 CL-02	SOLID	4.57e+02	5.28e+02	14.416	RPD
5	DUP	S96T005480	0 W ⊖IC-01 NO2-02	SOLID	7.13e+03	6.21e+03	13.793	RPD
5	DUP	S96T005480	0 W ⊖IC-01 BR-02	SOLID	<8.97e2	<9.23e2		RPD
5	DUP	S96T005480	0 W ⊖IC-01 NO3-02	SOLID	3.84e+04	3.39e+04	12.448	RPD
5	DUP	S96T005480	0 W ⊖IC-01 P04-02	SOLID	2.14e+05	1.87e+05	13.466	RPD
5	DUP	S96T005480	0 W ⊖IC-01 S04-02	SOLID	7.21e+04	6.57e+04	9.289	RPD
5	DUP	S96T005480	0 W ⊖IC-01 OXALATE2	SOLID	<7.54e2	<7.75e2		RPD
6	SFX	S96T005480	0 W ⊖IC-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	01C-01	CL-02	SOLID	7.90e01	7.81e+01	98.861 % Recovery
6 SPK	S96T005480 0 W	01C-01	NO2-02	SOLID	5.41e02	5.14e+02	95.009 % Recovery
6 SPK	S96T005480 0 W	01C-01	BR-02	SOLID	5.89e02	5.91e+02	100.340 % Recovery
6 SPK	S96T005480 0 W	01C-01	NO3-02	SOLID	5.94e02	5.62e+02	94.613 % Recovery
6 SPK	S96T005480 0 W	01C-01	PO4-02	SOLID	5.44e02	1.97e+02	28.860 % Recovery
6 SPK	S96T005480 0 W	01C-01	SO4-02	SOLID	6.31e02	5.53e+02	87.639 % Recovery
6 SPK	S96T005480 0 W	01C-01	OXALATE2	SOLID	5.25e02	5.74e+02	109.333 % Recovery
7 SAMPLE	S96T005488 0 W	01C-01	F-02	SOLID	N/A	1.920e+04	235.700 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	CL-02	SOLID	N/A	8.835e+03	333.800 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	NO2-02	SOLID	N/A	5.332e+03	2121.000 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	BR-02	SOLID	N/A	2.455e+03	2455.000 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	NO3-02	SOLID	N/A	1.935e+04	2730.000 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	PO4-02	SOLID	N/A	1.302e+05	2357.000 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	SO4-02	SOLID	N/A	2.246e+04	2711.000 ug/g
7 SAMPLE	S96T005488 0 W	01C-01	OXALATE2	SOLID	N/A	2.062e+03	2062.000 ug/g
8 DUP	S96T005488 0 W	01C-01	F-02	SOLID	1.92e+04	4.55e+04	81.481 RPD
8 DUP	S96T005488 0 W	01C-01	CL-02	SOLID	8.84e+03	1.14e+03	154.309 RPD
8 DUP	S96T005488 0 W	01C-01	NO2-02	SOLID	5.33e+03	1.05e+04	65.313 RPD
8 DUP	S96T005488 0 W	01C-01	BR-02	SOLID	<2.45e3	<2.44e3	RPD
8 DUP	S96T005488 0 W	01C-01	NO3-02	SOLID	1.94e+04	4.05e+04	70.451 RPD
8 DUP	S96T005488 0 W	01C-01	PO4-02	SOLID	1.30e+05	7.64e+04	51.938 RPD
8 DUP	S96T005488 0 W	01C-01	SO4-02	SOLID	2.25e+04	1.65e+05	152.000 RPD
8 DUP	S96T005488 0 W	01C-01	OXALATE2	SOLID	<2.06e3	<2.05e3	RPD
9 SPK	S96T005488 0 W	01C-01	F-02	SOLID	5.90e01	1.07e+02	181.356 % Recovery
9 SPK	S96T005488 0 W	01C-01	CL-02	SOLID	7.90e01	3.47e+01	43.924 % Recovery
9 SPK	S96T005488 0 W	01C-01	NO2-02	SOLID	5.41e02	5.23e+02	96.673 % Recovery
9 SPK	S96T005488 0 W	01C-01	BR-02	SOLID	5.89e02	6.01e+02	102.037 % Recovery
9 SPK	S96T005488 0 W	01C-01	NO3-02	SOLID	5.94e02	6.11e+02	102.862 % Recovery
9 SPK	S96T005488 0 W	01C-01	PO4-02	SOLID	5.44e02	8.20e+02	150.735 % Recovery
9 SPK	S96T005488 0 W	01C-01	SO4-02	SOLID	6.31e02	6.46e+02	102.377 % Recovery
9 SPK	S96T005488 0 W	01C-01	OXALATE2	SOLID	5.25e02	5.65e+02	107.619 % Recovery

Final page for worklist# 14416

Analyst Signature

Date

Analyst Signature

Date

H Anastas
 Reviewer Signature Date

*S96T005488 should be repressed
 and reran.
 Validated 1-30-97 Hea*

10/29/96 10:42
A-0004-1

LBCORE Data Entry Template for Worklist# 14416

Analyst: BY 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 reprocessed and reanalyzed. Hla 1-29-97

Data Entry Comments: S96T005480

Ran 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
-	=>	1	CCB	1	97010661.d01	CCB	1.00
	=>	2	CCV	2	97010671.d02	CCV 36N20-C	101.00
	=>	3	BLNK-PREP	3	97010671.d03	PREP-BLANK	1.00
	=>	4	SAMPLE	4	97010671.d04	S96T005480	41.00
	=>	5	DUP	5	97010671.d16	S96T005480 DUP	41.00
	=>	6	SPK	6	97010671.d10	S96T005480 SPIKE	41.00
	=>	7	SAMPLE		97010671.d07	S96T005480	101.00
	=>	8	DUP		97010671.d17	S96T005480 DUP	101.00
	=>	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    : Rae Ann Green                 Column: AG4A/AS4A anion column
=====
    
```

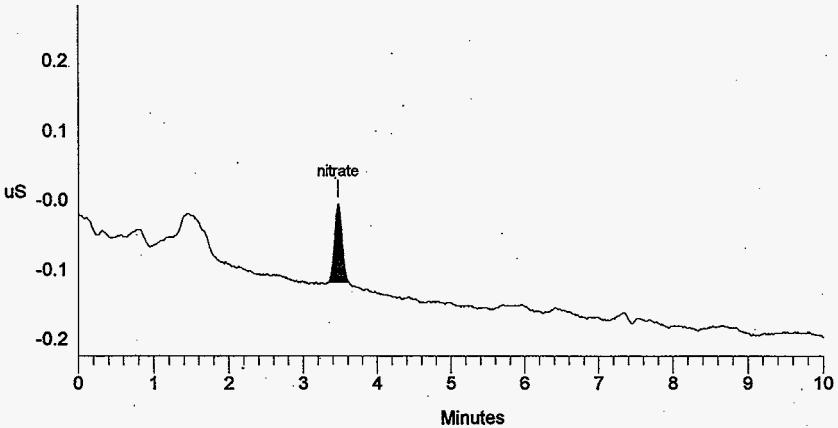
```

-----
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	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
=====
    
```

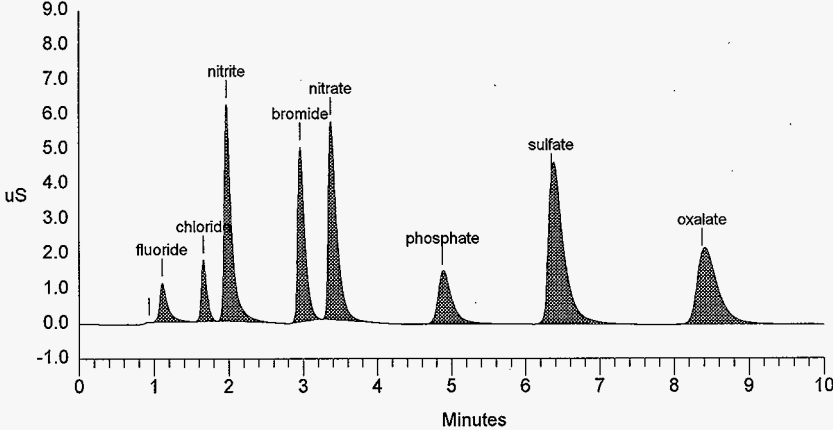
```

-----
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	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
=====
    
```

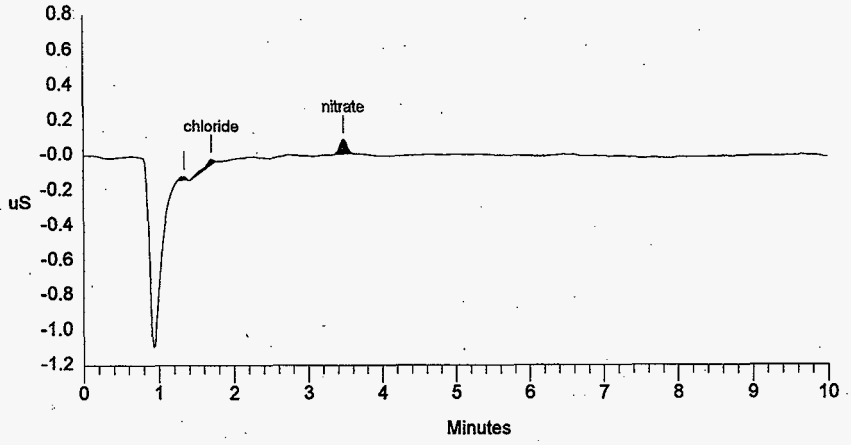
```

-----
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

```

=====
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
=====

```

```

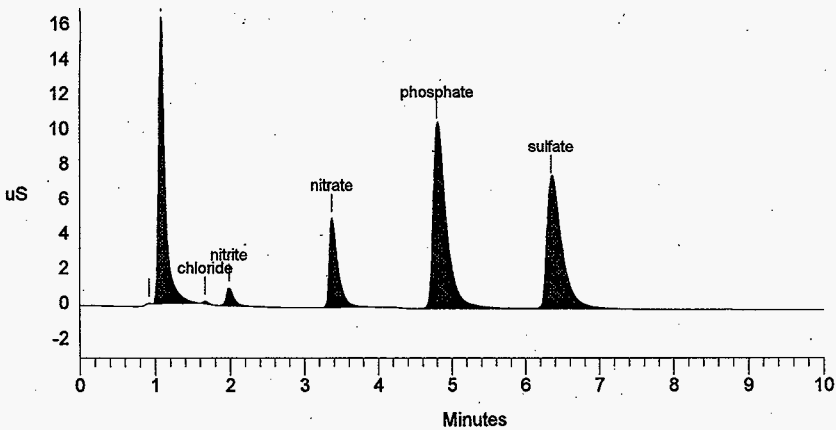
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          41    3000  5Hz   0.00 10.00          50
-----

```

***** 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

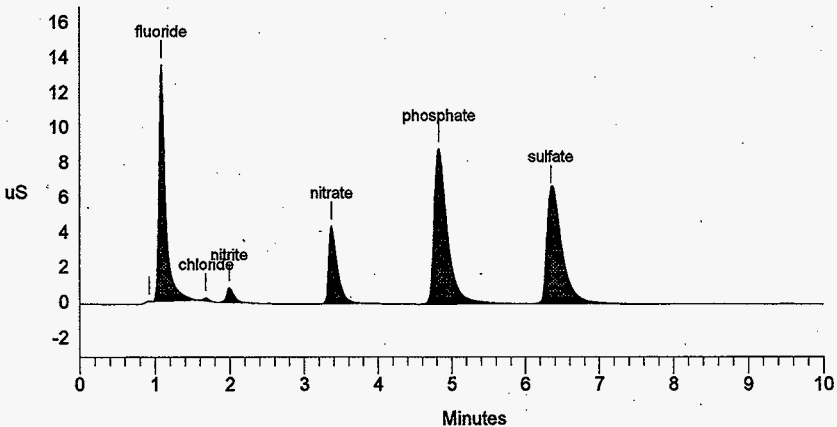
Sample Name: S96T005480 DUP Date: 01/07/1997 17:20:46
Data File : C:\DX\DATA\97010671.D16 HNF-SD-WM-DP-219, REV. 0
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 16 Detector: CDM-1
Analyst : Rae Ann Green Column: AG4A/AS4A anion column

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



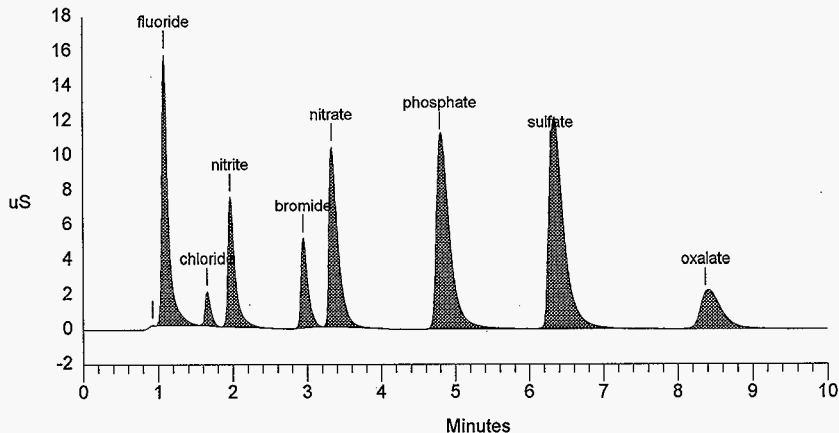
Sample Name: S96T005480 SPIKE	Date: 01/07/1997 14:42:12
Data File : F:\DATA\97010671.D10	HNF-SD-WM-DP-219, REV. 0
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 10	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	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                 HNF-SD-WM-DP-219, REV. 0
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 13                 Detector: CDM-1
Analyst    : Rae Ann Green                          Column: AG4A/AS4A anion column
=====

```

```

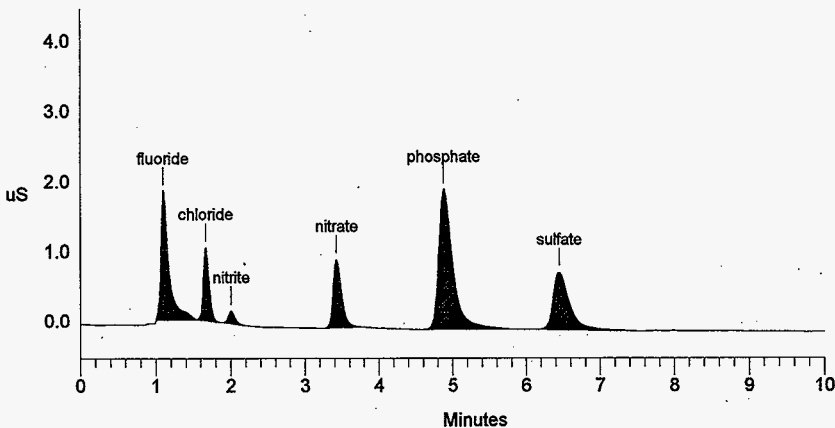
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External      1      101      3000 5Hz  0.00 10.00      50
-----

```

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

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	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



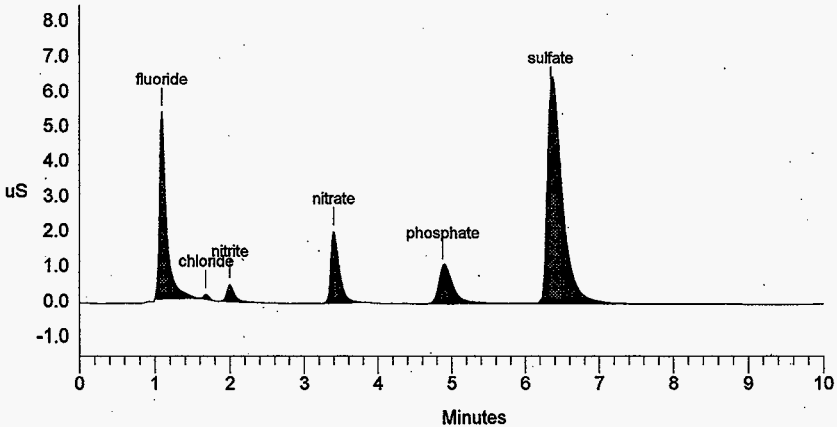
Sample Name: S96T005488 DUP Date: 01/07/1997 16:58:47
 Data File : C:\DX\DATA\97010671.D14
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-219, REV. 0
 ACI Address: 1 System: 1 Inject#: 14 Detector: CDM-1
 Analyst : *Rae Ann Green* Column: AG4A/AS4A anion column

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



```

=====
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
=====
    
```

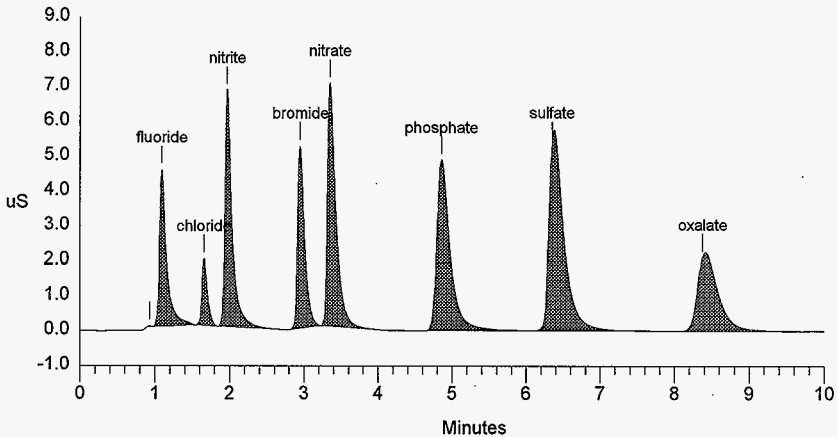
```

-----
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# 34220C

Method: 6A-533-105 Rev/Mod D/-

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	PO4	QC	1	<1.20e-1	ug/mL		
1	CCB	0	@IC-QC	SO4	QC	1	<1.36e-1	ug/mL		
1	CCB	0	@IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL		
2	CCV	0	@IC-QC	F	QC	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	PO4	QC	5.44e02	5.21e+02	95.772 % Recovery		
2	CCV	0	@IC-QC	SO4	QC	6.31e02	6.26e+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	PO4-02	LIQUID	N/A	2.740e+03	1224.000 ug/mL	
3	SAMPLE	S96T005523	0	@IC-01	SO4-02	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	8.942 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	PO4-02	LIQUID	2.74e+03	3.22e+03	16.107 RPD	
4	DUP	S96T005523	0	@IC-01	SO4-02	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	77.366 % 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	PO4-02	LIQUID	5.44e02	5.05e+02	92.831 % Recovery	
5	SPK	S96T005523	0	@IC-01	SO4-02	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 _____

David J. Jure 2/4/97
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 14654

Analyst: KPH Instrument: IC0 IC01 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

Christina Schaefer 1-7-97
 Analyst Signature Date

John P. ... 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	-	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
			S96T005523					
			S96T005523					
			S96T005523					
+				+				

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: *J. J. [Signature]* Column: AG4A/AS4A anion column

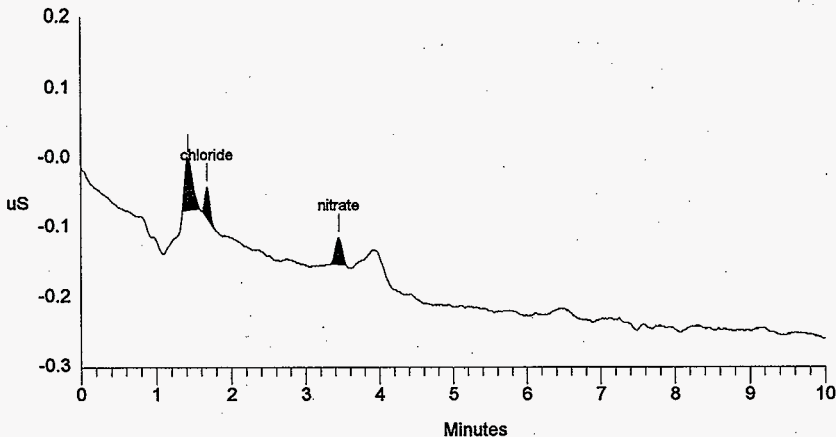
690 K6H 2/20/97

External	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
1	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
=====
    
```

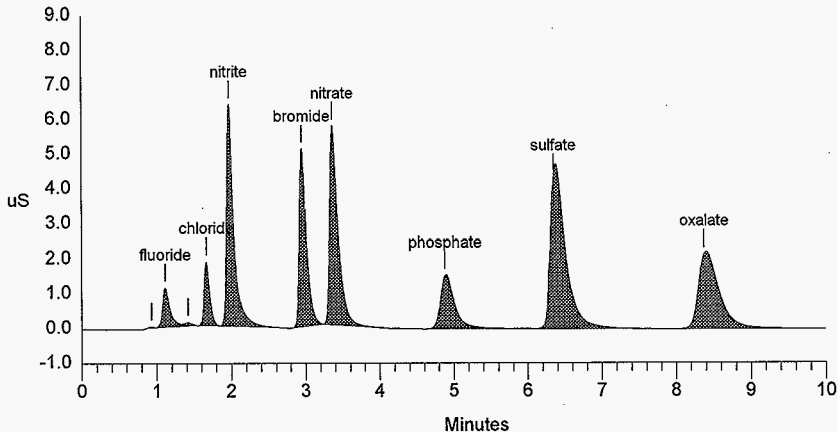
```

-----
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
=====
    
```

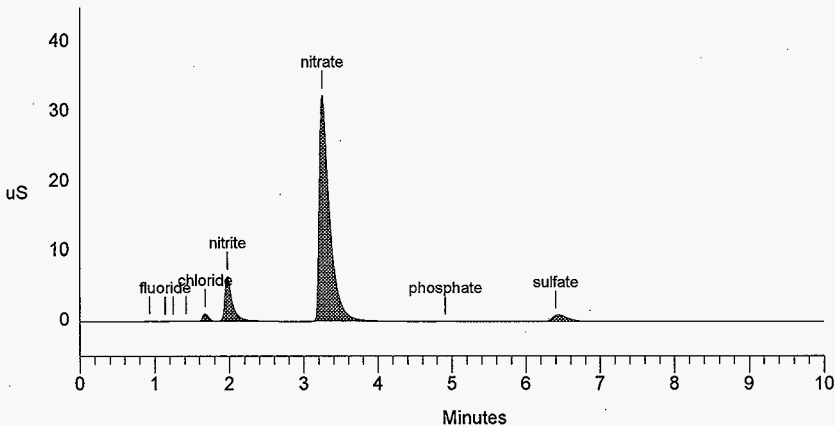
```

-----
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
=====
    
```

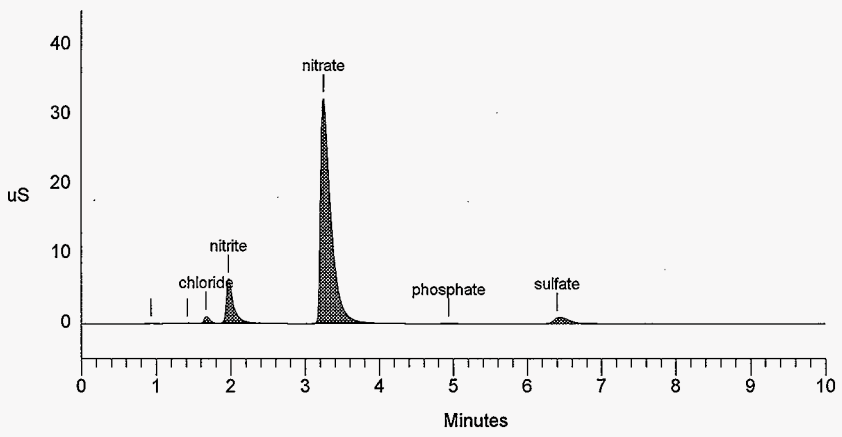
```

=====
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
=====
    
```

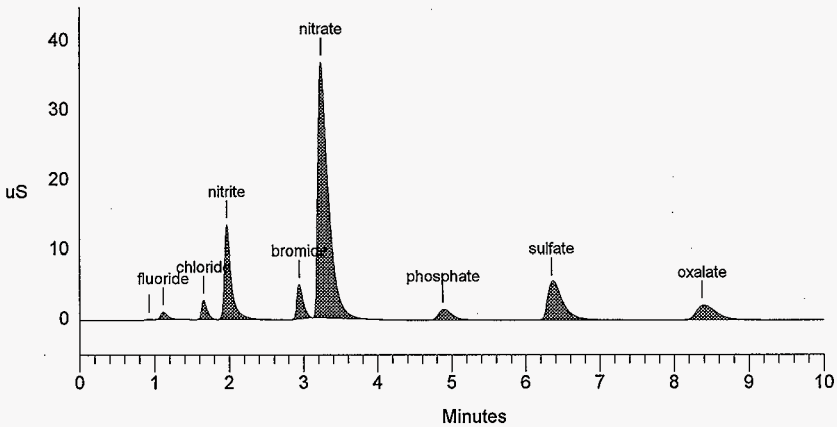
```

-----
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# 36802

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	@IC-QC	F	QC	1	<1.20e-2	ug/mL			
1	CCB	0	@IC-QC	CL	QC	1	3.00e-02	0.030 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	<1.39e-1	ug/mL			
1	CCB	0	@IC-QC	OXALATE2	QC	1	<1.05e-1	ug/mL			
2	CCV	0	@IC-QC	F	QC	5.99e01	6.10e+01	103.390 % Recovery			
2	CCV	0	@IC-QC	CL	QC	7.90e01	7.69e+01	97.342 % Recovery			
2	CCV	0	@IC-QC	NO2	QC	5.41e02	5.21e+02	96.303 % Recovery			
2	CCV	0	@IC-QC	BR	QC	5.89e02	5.91e+02	100.340 % Recovery			
2	CCV	0	@IC-QC	NO3	QC	5.94e02	5.82e+02	97.980 % Recovery			
2	CCV	0	@IC-QC	P04	QC	5.44e02	5.18e+02	95.221 % Recovery			
2	CCV	0	@IC-QC	S04	QC	6.31e02	6.24e+02	100.475 % Recovery			
2	CCV	0	@IC-QC	OXALATE2	QC	5.25e02	5.60e+02	106.667 % Recovery			
3	BLNK-PREP	0	@IC-01	F-02	SOLID	1	<1.20e-2	ug/g			
3	BLNK-PREP	0	@IC-01	CL-02	SOLID	1	4.60e-02	0.046 ug/g			
3	BLNK-PREP	0	@IC-01	NO2-02	SOLID	1	<1.08e-1	ug/g			
3	BLNK-PREP	0	@IC-01	BR-02	SOLID	1	<1.25e-1	ug/g			
3	BLNK-PREP	0	@IC-01	NO3-02	SOLID	1	<1.39e-1	ug/g			
3	BLNK-PREP	0	@IC-01	P04-02	SOLID	1	<1.20e-1	ug/g			
3	BLNK-PREP	0	@IC-01	S04-02	SOLID	1	<1.39e-1	ug/g			
3	BLNK-PREP	0	@IC-01	OXALATE2	SOLID	1	<1.05e-1	ug/g			
4	SAMPLE	S96T005514	0	W	@IC-01	F-02	SOLID	N/A	3.789e+04	231.100	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	CL-02	SOLID	N/A	1.785e+03	327.400	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	NO2-02	SOLID	N/A	2.229e+04	2080.000	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	NO3-02	SOLID	N/A	1.512e+05	2678.000	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	P04-02	SOLID	N/A	4.087e+04	2311.000	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	S04-02	SOLID	N/A	1.486e+05	2658.000	ug/g
4	SAMPLE	S96T005514	0	W	@IC-01	OXALATE2	SOLID	N/A	2.022e+03	2022.000	ug/g
5	DUP	S96T005514	0	W	@IC-01	F-02	SOLID	3.79e+04	4.09e+04	7.614	RPD
5	DUP	S96T005514	0	W	@IC-01	CL-02	SOLID	1.78e+03	1.88e+03	5.464	RPD
5	DUP	S96T005514	0	W	@IC-01	NO2-02	SOLID	2.23e+04	2.40e+04	7.343	RPD
5	DUP	S96T005514	0	W	@IC-01	BR-02	SOLID	<2.41e3	<2.61e3		RPD
5	DUP	S96T005514	0	W	@IC-01	NO3-02	SOLID	1.51e+05	1.62e+05	7.029	RPD
5	DUP	S96T005514	0	W	@IC-01	P04-02	SOLID	4.09e+04	3.60e+04	12.744	RPD
5	DUP	S96T005514	0	W	@IC-01	S04-02	SOLID	1.49e+05	1.69e+05	12.579	RPD
5	DUP	S96T005514	0	W	@IC-01	OXALATE2	SOLID	<2.02e3	<2.20e3		RPD
6	SPK	S96T005514	0	W	@IC-01	F-02	SOLID	5.90e01	6.28e+01	106.441	% Recovery
6	SPK	S96T005514	0	W	@IC-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	@IC-01 N02-02	SOLID	5.41e02	5.05e+02	93.346 %	Recovery
6 SPK	S96T005514	0 W	@IC-01 BR-02	SOLID	5.89e02	5.58e+02	94.737 %	Recovery
6 SPK	S96T005514	0 W	@IC-01 N03-02	SOLID	5.94e02	5.35e+02	105.902 %	Recovery
6 SPK	S96T005514	0 W	@IC-01 P04-02	SOLID	5.44e02	5.02e+02	92.279 %	Recovery
6 SPK	S96T005514	0 W	@IC-01 S04-02	SOLID	6.31e02	6.71e+02	106.339 %	Recovery
6 SPK	S96T005514	0 W	@IC-01 OXALATE2	SOLID	5.25e02	5.43e+02	103.429 %	Recovery
7 SAMPLE	S96T005513	0 W	@IC-01 F-02	SOLID	N/A	1.483e+04	51.180	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 CL-02	SOLID	N/A	1.756e+03	72.490	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 N02-02	SOLID	N/A	1.107e+04	460.500	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 BR-02	SOLID	N/A	5.330e+02	533.000	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 N03-02	SOLID	N/A	7.763e+04	592.600	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 P04-02	SOLID	N/A	1.272e+05	511.800	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 S04-02	SOLID	N/A	8.213e+03	588.400	ug/g
7 SAMPLE	S96T005513	0 W	@IC-01 OXALATE2	SOLID	N/A	4.477e+02	447.700	ug/g
8 DUP	S96T005513	0 W	@IC-01 F-02	SOLID	1.48e+04	1.24e+04	17.647	RPD
8 DUP	S96T005513	0 W	@IC-01 CL-02	SOLID	1.76e+03	8.65e+02	68.190	RPD
8 DUP	S96T005513	0 W	@IC-01 N02-02	SOLID	1.11e+04	3.88e+03	11.530	RPD
8 DUP	S96T005513	0 W	@IC-01 BR-02	SOLID	<5.33e2	<5.03e2		RPD
8 DUP	S96T005513	0 W	@IC-01 N03-02	SOLID	7.76e+04	6.31e+04	11.588	RPD
8 DUP	S96T005513	0 W	@IC-01 P04-02	SOLID	1.27e+05	1.05e+05	18.966	RPD
8 DUP	S96T005513	0 W	@IC-01 S04-02	SOLID	8.21e+03	6.85e+03	18.061	RPD
8 DUP	S96T005513	0 W	@IC-01 OXALATE2	SOLID	<4.48e2	<4.23e2		RPD
10 DUP	S96T005515	0 W	@IC-01 F-02	SOLID	5.72e+04	7.60e+04	28.228	RPD
10 DUP	S96T005515	0 W	@IC-01 CL-02	SOLID	8.84e+02	1.25e+03	34.302	RPD
10 DUP	S96T005515	0 W	@IC-01 N02-02	SOLID	9.74e+03	1.09e+04	11.240	RPD
10 DUP	S96T005515	0 W	@IC-01 BR-02	SOLID	<2.60e3	<2.54e3		RPD
10 DUP	S96T005515	0 W	@IC-01 N03-02	SOLID	6.14e+04	6.97e+04	12.662	RPD
10 DUP	S96T005515	0 W	@IC-01 P04-02	SOLID	1.19e+05	3.89e+04	101.457	RPD
10 DUP	S96T005515	0 W	@IC-01 S04-02	SOLID	1.32e+05	3.27e+05	52.023	RPD
10 DUP	S96T005515	0 W	@IC-01 OXALATE2	SOLID	<2.19e3	<2.14e3		RPD

Final page for worklist# 14853

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Jan M. Lopez 2/5/97
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 14853

Analyst: KJA 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

(Quinn Hughes) 1-8-97
Analyst Signature: _____ Date: _____
14853ja.csv

Steve Peters 1-29-97
Analyst Signature: _____ Date: _____
uploaded 1-29-97

Updated, but Br S96T005514 &
all of S96T005515 out for resrun on 16551 *wxl gm Luge*

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
-	=>	1	CCB		1	97010681.d08	BLANK	1.00
	=>	2	CCV		2	97010681.d09	36N20-C STD	101.00
	=>	3	BLNK-PREP		3	97010681.d10	BLANK-PREP	1.00
	=>	4	SAMPLE	S96T005514	4	97010681.d11	S96T005514SAM	101.00
	=>	5	DUP	S96T005514	5	97010681.d12	S96T005514DUP	101.00
	=>	6	SPK	S96T005514	6	97010681.d13	S96T005514SPK	101.00
	=>	7	SAMPLE	S96T005513	7	97010681.d15	S96T005513SAM	21.00
	=>	8	DUP	S96T005513	8	97010681.d16	S96T005513DUP	21.00
	=>	9	SAMPLE	S96T005515	9	97010681.d18	S96T005515SAM	101.00
	=>	10	DUP	S96T005515	10	97010681.d19	S96T005515DUP	101.00
+					+			

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

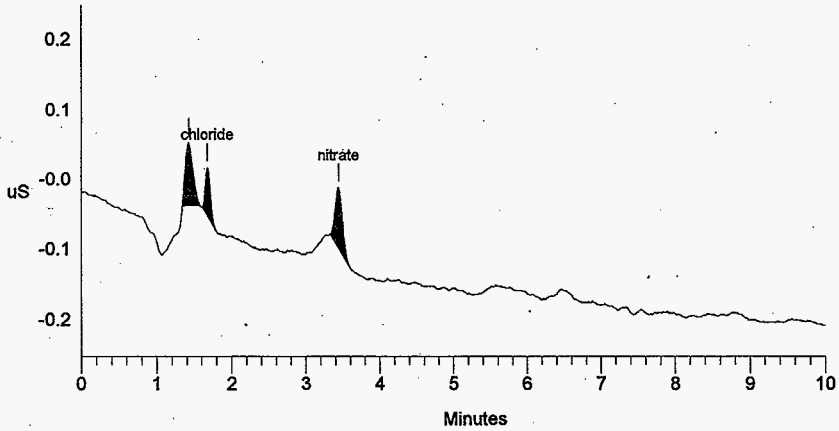
Sample Name: BLANK Date: 01/08/1997 01:34:36
 Data File : C:\DX\DATA\97010681.D08
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst : *J. [Signature]* Column: AG4A/AS4A anion column

Calibration Volume *6.67* 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
=====
    
```

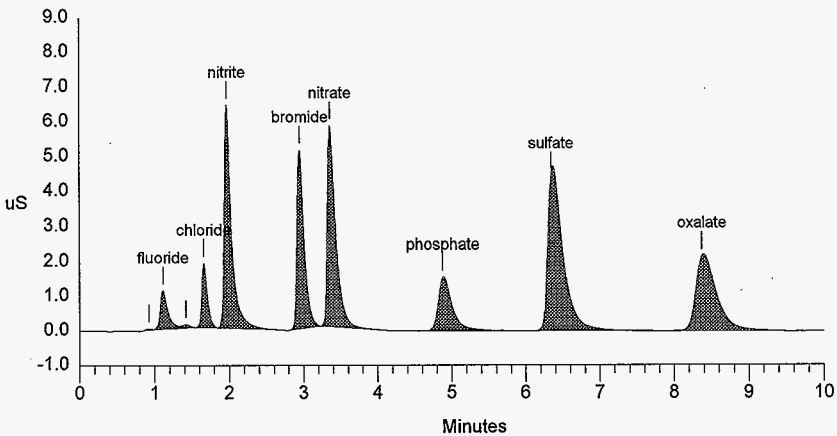
```

-----
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
=====

```

```

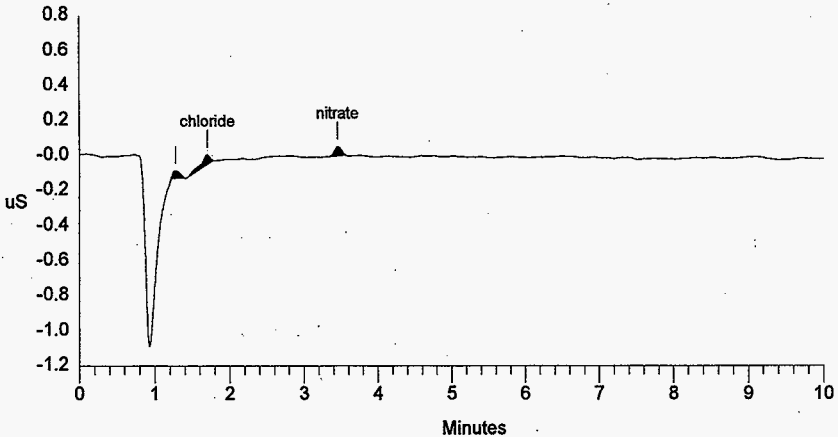
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External           1           1 3000 5Hz 0.00 10.00           50
-----

```

***** 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
=====

```

```

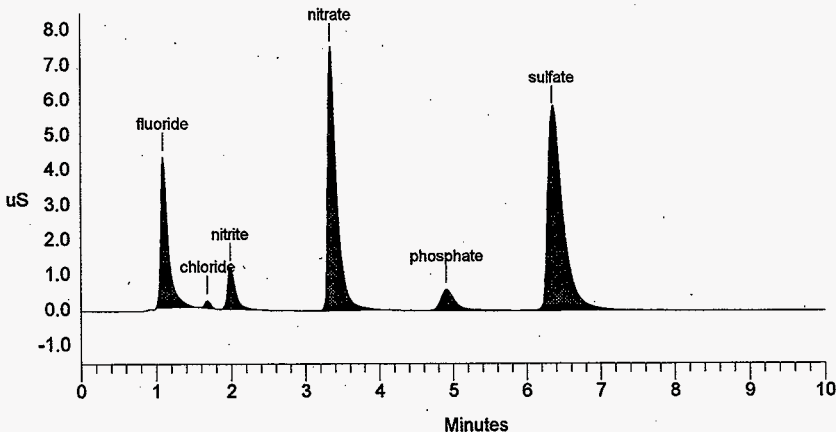
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000  5Hz   0.00 10.00          50
-----

```

***** 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



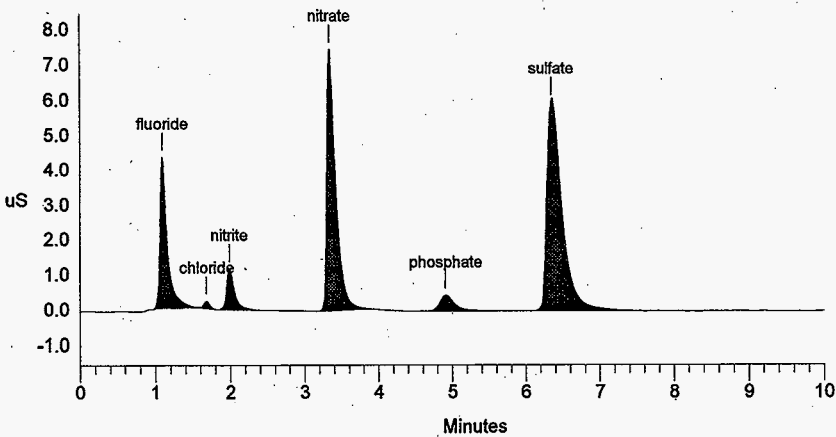
Sample Name: S96T005514DUP Date: 01/08/1997 02:25:38
 Data File : C:\DX\DATA\97010681.D12
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-219, REV. 0
 ACI Address: 1 System: 1 Inject#: 12 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

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
=====
    
```

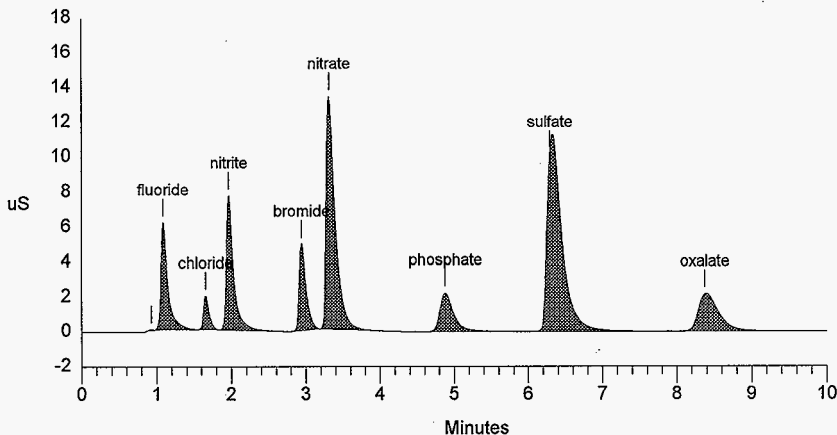
```

-----
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



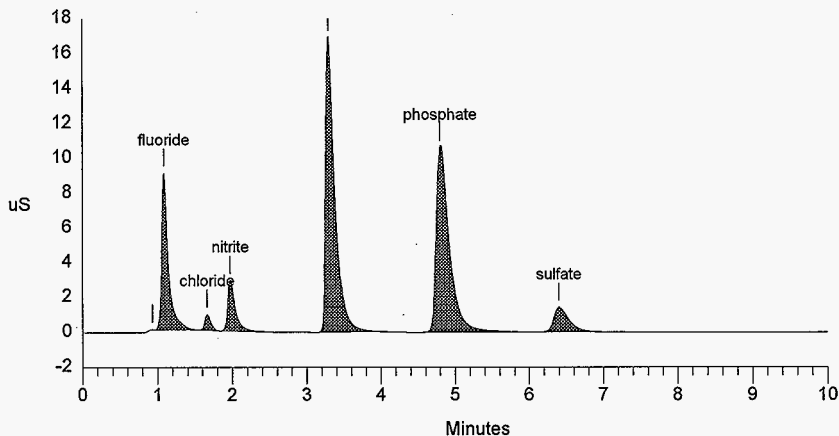
Sample Name: S96T005513SAM	Date: 01/08/1997 04:44:07
Data File : F:\DATA\97010681.D15	
Method : C:\DX\METHOD\KIT.MET	HNF-SD-WM-DP-219, REV. 0
ACI Address: 1 System: 1 Inject#: 15	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

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
=====
    
```

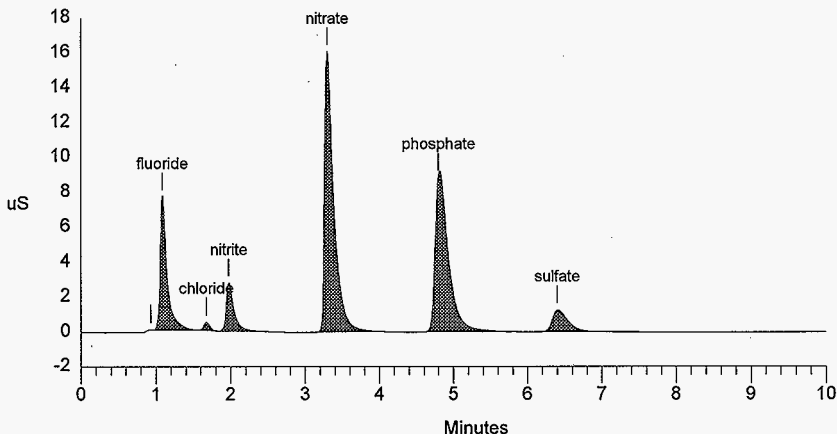
```

-----
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



```

=====
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
=====

```

```

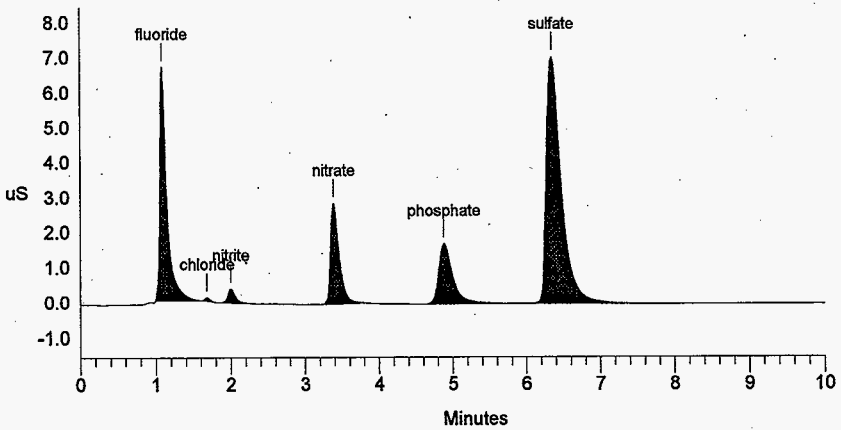
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000  5Hz   0.00 10.00          50
-----

```

***** 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



```

=====
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
=====

```

```

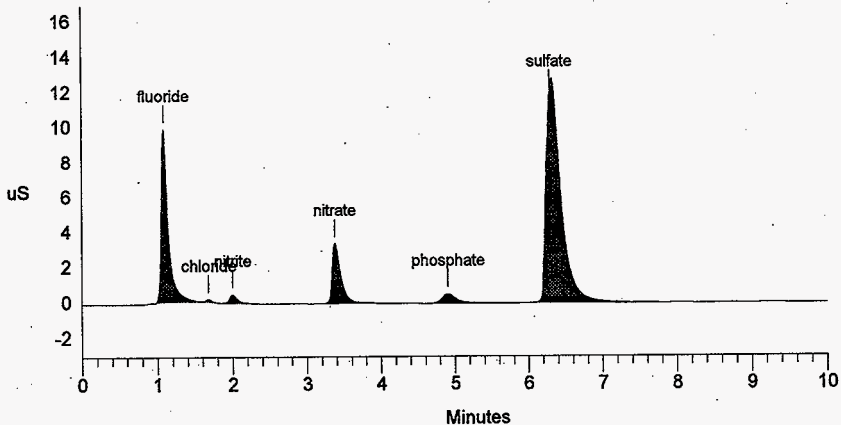
-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101  3000  5Hz  0.00 10.00          50
-----

```

***** 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 (ALB20)

Method: LA-533-705 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	@IC-QC	F	QC	1	<1.20e-2	ug/mL	
1	CCB	0	@IC-QC	CL	QC	1	<1.70e-2	ug/mL	
1	CCB	0	@IC-QC	NO2	QC	1	<1.08e-1	ug/mL	
1	CCB	0	@IC-QC	BR	QC	1	<1.25e-1	ug/mL	
1	CCB	0	@IC-QC	NO3	QC	1	<1.39e-1	ug/mL	
1	CCB	0	@IC-QC	PO4	QC	1	<1.20e-1	ug/mL	
1	CCB	0	@IC-QC	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	5.9000e1	5.65e+01	95.763 % Recovery	
2	CCV	0	@IC-QC	CL	QC	7.9000e1	7.96e+01	100.759 % Recovery	
2	CCV	0	@IC-QC	NO2	QC	5.4200e2	5.96e+02	109.953 % Recovery	
2	CCV	0	@IC-QC	BR	QC	5.8900e2	5.84e+02	99.151 % Recovery	
2	CCV	0	@IC-QC	NO3	QC	5.9400e2	5.94e+02	100.000 % Recovery	
2	CCV	0	@IC-QC	PO4	QC	5.4400e2	5.44e+02	100.000 % Recovery	
2	CCV	0	@IC-QC	S04	QC	6.3100e2	6.30e+02	99.842 % Recovery	
2	CCV	0	@IC-QC	OXALATE2	QC	5.3300e2	5.38e+02	100.938 % Recovery	
3	BLNK-PREP	0	@IC-01	F-02	SOLID	1	<4.92e-1	ug/g	
3	BLNK-PREP	0	@IC-01	CL-02	SOLID	1	<6.97e-1	ug/g	
3	BLNK-PREP	0	@IC-01	NO2-02	SOLID	1	<4.43e0	ug/g	
3	BLNK-PREP	0	@IC-01	BR-02	SOLID	1	<5.12e0	ug/g	
3	BLNK-PREP	0	@IC-01	NO3-02	SOLID	1	<5.70e0	ug/g	
3	BLNK-PREP	0	@IC-01	PO4-02	SOLID	1	<4.92e0	ug/g	
3	BLNK-PREP	0	@IC-01	S04-02	SOLID	1	<5.66e0	ug/g	
3	BLNK-PREP	0	@IC-01	OXALATE2	SOLID	1	<4.30e0	ug/g	
4	SAMPLE	S97T000015	0 W	@IC-01	F-02	SOLID	N/A	2.422e+04	98.560 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	CL-02	SOLID	N/A	4.484e+02	139.600 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	BR-02	SOLID	N/A	<1.027e+03	1027.000 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	NO3-02	SOLID	N/A	3.479e+04	1142.000 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	PO4-02	SOLID	N/A	1.436e+05	985.600 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	S04-02	SOLID	N/A	4.020e+04	1134.000 ug/g
4	SAMPLE	S97T000015	0 W	@IC-01	OXALATE2	SOLID	N/A	<8.626e+02	862.600 ug/g
5	DUP	S97T000015	0 W	@IC-01	F-02	SOLID	2.42e+04	2.23e+04	8.172 RPD
5	DUP	S97T000015	0 W	@IC-01	CL-02	SOLID	4.48e+02	4.18e+02	6.928 RPD
5	DUP	S97T000015	0 W	@IC-01	NO2-02	SOLID	9.53e+03	8.53e+03	11.074 RPD
5	DUP	S97T000015	0 W	@IC-01	BR-02	SOLID	<1.03e3	<1.03e3	RPD
5	DUP	S97T000015	0 W	@IC-01	NO3-02	SOLID	3.48e+04	3.11e+04	11.229 RPD
5	DUP	S97T000015	0 W	@IC-01	PO4-02	SOLID	1.44e+05	1.38e+05	4.255 RPD
5	DUP	S97T000015	0 W	@IC-01	S04-02	SOLID	4.02e+04	3.47e+04	14.686 RPD
5	DUP	S97T000015	0 W	@IC-01	OXALATE2	SOLID	<8.63e2	<8.63e2	RPD
6	SPK	S97T000015	0 W	@IC-01	F-02	SOLID	5.9000e1	5.50e+01	93.220 % Recovery
6	SPK	S97T000015	0 W	@IC-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
		<i>John Faye</i>	1/28/97
		Reviewer Signature	Date

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-PRRP			@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


Analyst Signature Date 1-23-97

Analyst Signature Date

16305 ja.esv
Uploaded by G. Hammit 1/26/97
Validated 1/28/97 JM Fuge - NO₂ std failed & both samples
out for reason for NO₂ on WKL
16392

Data Entry Comments:

=====
 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 *Anna June* Column: AG4A/AS4A anion column
 =====

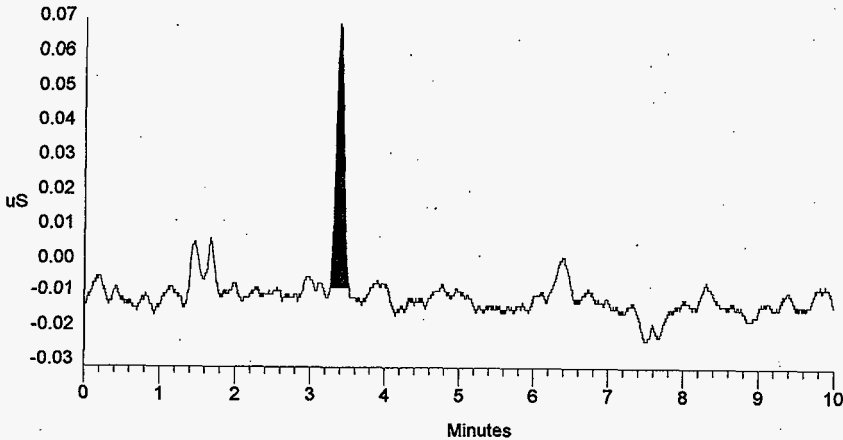
=====
 libration Volume Dilution Points Rate Start Stop Area Reject

 Internal 1 1 3000 5Hz 0.00 10.00 50
 =====

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

Peak #	Ret Time	Component Name	Concentration ug/ml	Height	Area	El. 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 230 TO 240.

```

=====
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
LACI Address: 1 System: 1 Inject#: 11   Detector: CDM-1
Analyst    :                          Column: AG4A/AS4A anion column
=====
    
```

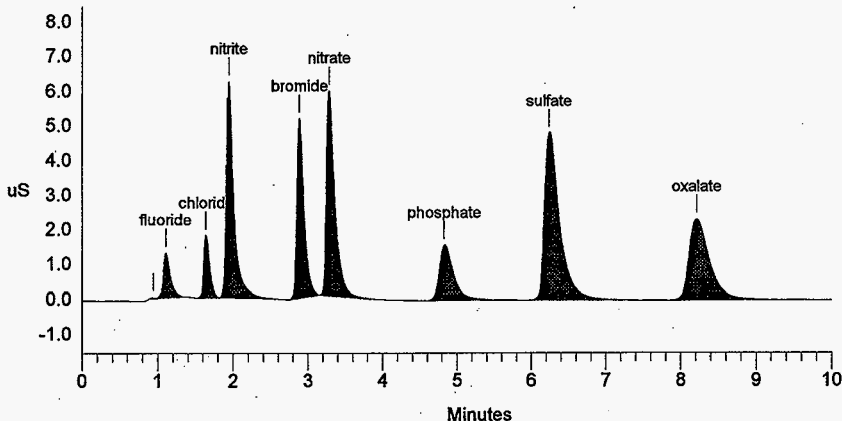
```

-----
libration Volume Dilution Points Rate Start Stop Area Reject
-----
ternal          1          101    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
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



```

=====
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
=====
    
```

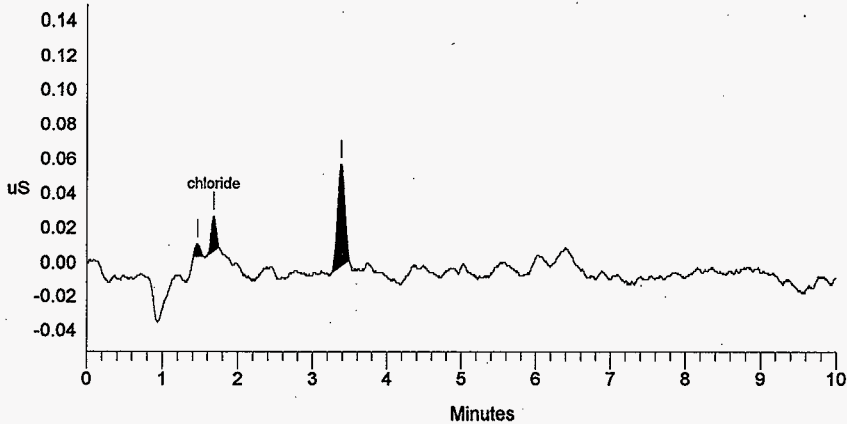
```

-----
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
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



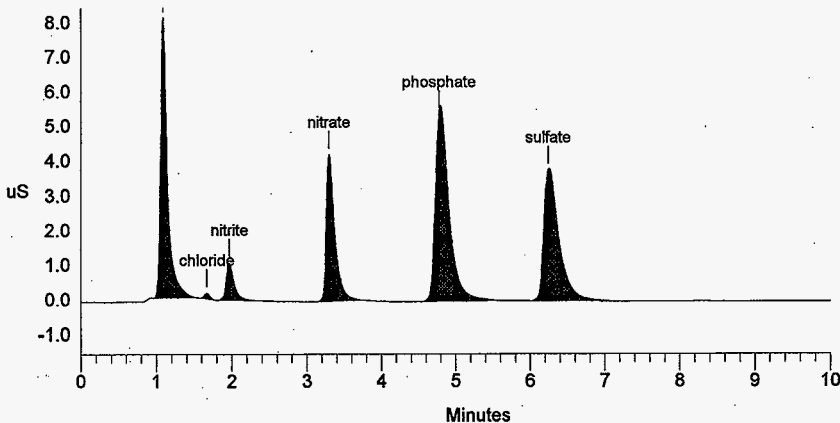
Sample Name: S97T000015 SAM Date: 01/23/1997 23:07:54
 Data File : C:\DX\DATA\97012321.D13
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 13 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Libration Volume Dilution Points Rate Start Stop Area Reject
 Internal 1 41 3000 5Hz 0.00 10.00 50

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

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



```

=====
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
=====
    
```

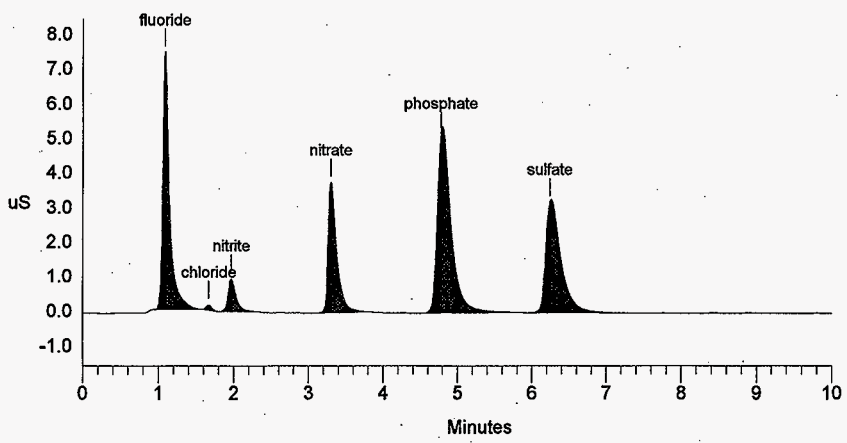
```

-----
libration Volume Dilution Points Rate Start Stop Area Reject
-----
ternal          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	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



```

=====
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
=====
    
```

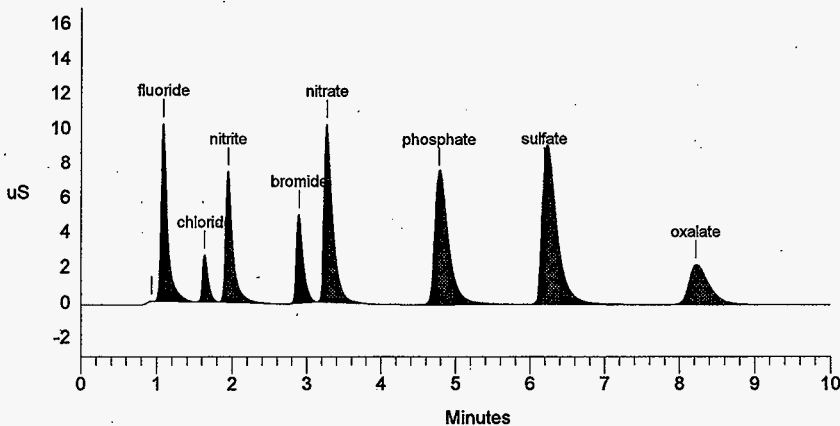
```

-----
libration Volume Dilution Points Rate Start Stop Area Reject
-----
ternal          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	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
=====
    
```

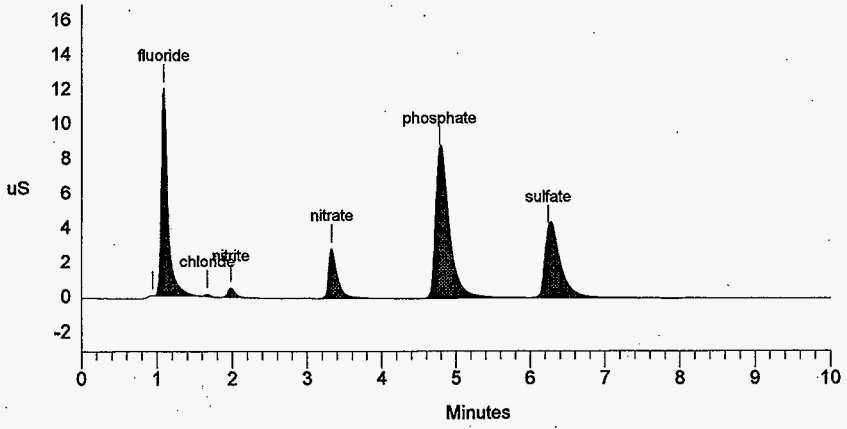
```

-----
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
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



```

=====
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
=====
    
```

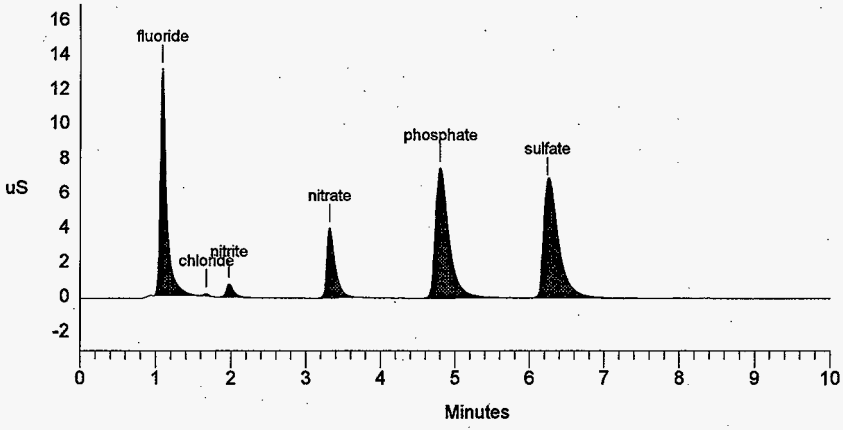
```

-----
Libration Volume Dilution Points Rate Start Stop Area Reject
-----
ternal          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	175.626	13099	78146	1	0.62
2	1.67	chloride	1.667	135	631	1	3.29
3	1.97	nitrite	33.089	738	5262	1	0.68
4	3.31	nitrate	165.343	4023	31604	1	4.85
5	4.80	phosphate	939.641	7526	95525	1	1.69
6	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
=====
    
```

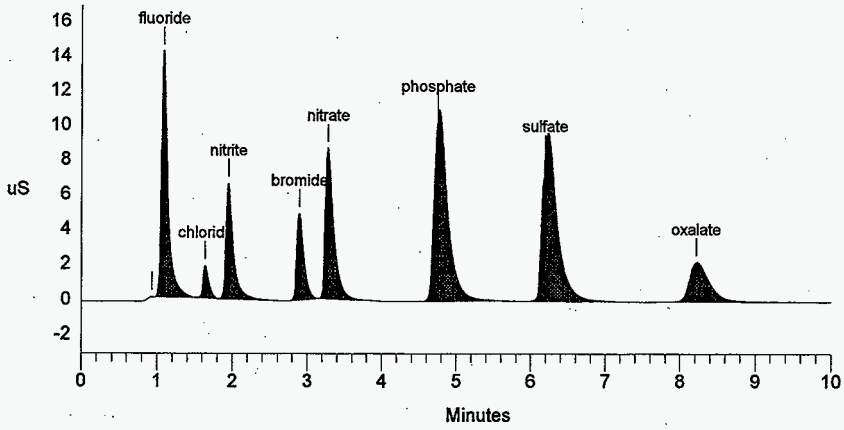
```

=====
Libration Volume  Dilution Points Rate  Start  Stop Area Reject
-----
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

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

Page: 1

11/08/96 08:47

A-0004-1

LABCORE Data Entry Template for Worklist# 14793

Analyst: B. GOELKE Instrument: ^{ICP02}ICP01 Book# 628488Method: LA-505-¹⁵¹1161 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 , PE-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01							
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 , PE-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01							
12	DUP	S96T005523	0	D	@ICP-D01	LIQUID			

Data Entry Comments:

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

11/08/96 08:47
A-0004-1

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

Page: 2

LABCORE Data Entry Template for Worklist# 14793

S Type	Sample#	R	A	Test	Matrix	Group#	Project
13	SPK, 1 ppm sample X	S96T005523	0	D	@ICP-D01	LIQUID	
14	SPK 10 ppm ICSA				@ICP-QC	QC	
15	ICSAB				@ICP-QC	QC	
16	CCV				@ICP-QC	QC	
17	CCB				@ICP-QC	QC	

Final page for worklist # 14793

[Signature] 11-20-96
Analyst Signature Date

Reviewed by:
[Signature] 11/21/96
Analyst Signature Date

Sample#	Matrix	Dr.F.
596 T00 5463	1ml-6ml	7
5463-D	1ml-6ml	7
596T00 5523-L	1025ml-10ml-2ml-8ml	2005
5523	1025ml-10ml	401
5523-D	1025ml-10ml	401
5523-A	1025ml-2ml(5523)-8ml	401
5523-X	1025ml-10ml-1ml-2ml	4010
5523-AX	1025ml-10ml-1ml-(1ml-1ml)WTC(12)-2ml	4010

Data Entry Comments:

spike recovery calculation:

$$596T005523 \quad \text{Recovery} = \left(\frac{1344}{401} \right) - \left(\frac{882 \cdot 1}{401} \right) \times 100 = 115.2\%$$

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

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

Analysis Report

Summary

Wed 11-20-96 11:37:07 AM

page 1

#	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	ICSA	961120B	ICP2	11/20/96	10:46	BJG	Q	CONC
5	ICSAB	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	ICSA	961120B	ICP2	11/20/96	11:25	BJG	Q	CONC
17	ICSAB	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

BJG

11-20-96

B-108 DIRECT

Int-Gen, 10721-10-1

S96T005463, S523

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	ICSA B	.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	4.956	4.955	5.108
9	CCB	.0001	.0071	-.0036	.0034	.0001	.0003
10	S96T005523_L	11.49	92.5	20.56	26.04	-.1148	.4463
11	S96T005523_D	12.36	882.1	-3.613	20.26	-.0172	.1077
12	S96T005523_A	12.74	914.9	-5.277	21.62	.0358	.0179
13	S96T005523_X	379.6	1344.	419.2	417.7	396.8	406.8
14	S96T005523_X	26.42	959.2	-12.03	21.19	1.300	1.065
15	S96T005523_AX	38580.	40040.	41830.	39960.	40900.	41990.
16	ICSA	.0184	245.5	-.0121	.0032	.0004	.0007
17	ICSA B	.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	-.0037	250.0	.0027	.0155	.0018	.0103
5	ICSA B	-.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_D	18.87	4.397	.1448	-2.263	.7554	591.4
12	S96T005523_A	16.93	4.389	.5915	-.8913	.2578	601.9
13	S96T005523_X	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	ICSA B	-.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	ICSA B	.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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#	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	.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	IC SAB	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	IC SAB	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	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	IC SAB	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	IC SAB	.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	.0077	4.816	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	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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Analysis Report

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#	Sample Name	P	Pb	S	Sb	Se	Si
16	ICSA	.0291	.0705	-.0313	.0040	.0121	.0173
17	IC SAB	.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	IC SAB	.0030	.0019	-.0041	-.0000	.0356	.0363
6	S96T005463	-.0151	.0735	.0119	-.0035	.0391	.2000
7	S96T005463_D	.0544	.0735	.0305	-.0035	.1291	4.297
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	IC SAB	-.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	IC SAB	.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	IC SAB	.4705	.0070	.9577	-.0017
18	CCV	5.139	.0062	5.163	5.043
19	CCB	-.0009	-.0005	.0007	-.0012

FILE# 09612118.775

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LABCORE Data Entry Template for Worklist# 14797

Analyst: B. GOECKE Instrument: ^{ICP01} ICP01 Book# 6464AMethod: ^{LA} LA-505-151/161 Rev/Mod 2-1

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	O F	@ICP-F01	SOLID	
8	SAMPLE	S96T005468	O 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	O F	@ICP-F01	SOLID	
10	SPK	S96T005468	O F	@ICP-F01	SOLID	
11	CCV		@ICP-QC	QC		
12	CCB		@ICP-QC	QC		
13	SAMPLE	S96T005477	O 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:

$$S96T005468 \quad Al = \frac{438.1 \text{ ug}}{\text{ml}} \times \frac{1}{2.082 \text{ g}} \times \frac{1 \text{ L}}{1000 \text{ ml}} = 2.102 + 5 \text{ ug/g}$$

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

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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	O F	@ICP-F01	SOLID		
15 SERDIL	S96T005478	O F	@ICP-F01	SOLID		
16 SAMPLE	S96T005478	O 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 , PE-F-01 , S-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01
17 DUP	S96T005478	O F	@ICP-F01	SOLID		
18 SPK	S96T005478	O F	@ICP-F01	SOLID		
19 CCV			@ICP-QC	QC		
20 CCB			@ICP-QC	QC		
21 SERDIL	S96T005487	O F	@ICP-F01	SOLID		
22 SAMPLE	S96T005487	O 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 , PE-F-01 , S-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01
23 DUP	S96T005487	O F	@ICP-F01	SOLID		
24 SPK	S96T005487	O 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.

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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 12-11-96
Date

Revised by:
[Signature] 12/12/96
Analyst Signature Date

		DF
PREPBLK TST	.250 - 9.75	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(SSPT) - 2.75	40
5468-X	.250 - 1-(WHC100) - 2.75	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(SSPT) - 7.75	40
5478-X	.250 - 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(SSPT) - 2.75	40
5487-X	.250 - 1-(WHC100) - 2.75	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 1.00 for all elements except for U-235 ppb.

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	ICSA	961211D	ICP2	12/11/96	12:58	BJG	Q	CONC
6	FRFPBLKTJA	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-D	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	ICSA	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
.250-1-2.2-1
FILE # 0961211D.TXT

S96T005487 Na failed in the first pot spike - A second pot spike was made and the results in:

$$Na = \frac{(824.2)}{40} - \frac{(484.7)}{40} \times 100 = 84.9\%$$

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 248 TO 262.

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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	ICSAB	.9260	236.7	-.0220	-.0090	.4481	.4494
6	PREBLKTJA	.0000	.0044	.0056	.0010	.0000	.0265
7	S96T005468 L	-.0984	442.0	1.600	.5961	.0009	
8	S96T005468 D	-.0285	489.4	.2811	.2003	.0165	.0034
9	S96T005468 A <i>sample</i>	.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	<i>30 12/12/96</i> 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 A	.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	378.0	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	-.2617	41.76	2.853	.5922	-.0092	.0702
24	S96T005487 A	-.0348	40.84	.1892	.0019	.0019	.0072
25	S96T005487 D	-.0317	147.9	.1655	.2223	.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	ICSAB	.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	ICSAB	-.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 A <i>sample</i>	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	<i>30 12/12/96</i> 398.8	396.0	387.0	377.8	391.7	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 A	1.671	.2714	-.0697	.0988	.0503	.2970
18	S96T005478 D	3.200	.2284	-.0107	-.0965	.2280	.4346

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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	710.4	386.6
21	CCV	5.012	5.091	4.957	4.747	5.040	5.020
22	CCB	.0046	.0044	-.0018	-.0002	-.0006	-.0005
23	S96T005487 L	-.4853	-.0997	-.3097	-.4922	-.0170	.3152
24	S96T005487	2.137	1.715	-.0798	-.4627	-.0257	.2328
25	S96T005487 D	3.062	3.318	-.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	704.9	382.1
28	ICSA	-.0364	243.0	.0016	-.0179	-.0008	.0084
29	IC5AB	-.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	IC5AB	.4531	-.0339	91.47	.3617	-.0028	.9764
6	PREPELKTJA	.0010	.0004	-.0042	252.0	-.0004	-.0004
7	S96T005468 L	.1805	.0556	1.964	1024.0	-.1040	-.0001
8	S96T005468 D	.2451	.0398	3.552	7275	.0447	.0282
9	S96T005468 D Sample	.1905	.0465	2.987	1016.0	.0219	.0424
10	S96T005468 A	38.96	.0738	41.42	1017.0	38.22	36.52
11	S96T005468 X	.0391	.1821	384.5	1049.0	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	IC5AB	.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

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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	.5484	.0790	.0368	180.5	-.0109	16.17
8	S96T005468 P	.1119	.0633	-.0481	160.1	.1107	7.781
9	S96T005468 D	-.2191	.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	398.8	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	-.1166	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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#	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	-.5252	52.83	-1.729	6.600	7.272
24	S96T005487	116.6	-.2668	50.61	-.5062	1.464	5.401
25	S96T005487 D	72.08	-.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	ICSAB	-.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	1.991	.0193	-.0007	.0194	.4015	.4949
4	ICSA	.0084	.0020	.0069	.0010	.0079	.0328
5	ICSAB	.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 D 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	ICSAB	.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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#	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	IGSAB	.4528	.0073	.9296	-.0027
6	PREPBLKTTJA	.0001	-.0001	-.0011	-.0001
7	S96T005468 L	-.0438	-.0323	.4169	.0168
8	S96T005468 D	.1062	.0206	.4532	.0599
9	S96T005468 Pr <i>Sp-glc</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 L	.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	IGSAB	.4435	.0083	.9124	.0005
30	CCV	4.931	.0073	5.070	4.808
31	CCB	.0047	.0011	-.0001	.0034

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LBCORE Data Entry Template for Worklist# 14798

Analyst: B. Goelcke Instrument: ^{ICP02} ICP01 Book# 628448

Method: LA-505-151/161 Rev/Mod ¹¹⁻²⁰⁻⁹⁴ 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 weight calculation:

$$S96T005511 \quad Al = 18.20 \mu g \times \frac{1}{2.61 \times 1.895 \frac{g}{L} \times \frac{1L}{1000 \mu L}} = 9.6 \times 10^{-3} \mu g$$

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

Note:

11/08/96 09:10
A-0004-1

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 10ppm	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, 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			
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

Analyst Signature	Date	Analyst Signature	Date
<i>[Signature]</i>	11-20-96	<i>[Signature]</i>	11/21/96
PRESIDENTIAL	.250ml - 10ml	D.F.	
S96T005510	.250ml - 10ml	/	
5510-D	.250ml - 10ml	41	
S96T005511-L	.250ml - 10ml - 2ml - 8ml	41	
5511	.250ml - 10ml	41	
5511-D	.250ml - 10ml	41	
5511-A	.250ml - 2.05ml (SSIT) - 2.95ml	41	
5511-X	.250ml - 1.025ml - 1.025ml (WHC 100) - 2.95ml	41	
S96T005512	.250ml - 10ml	41	
5512-D	.250ml - 10ml	41	

Data Entry Comments:

Spike 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 Cl = 2.0 ppm

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

Analysis Report

Summary

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page 1

#	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

BJG

11-20-96

B-108 Fusion

.250-1-10-1

S96T005510, 5511, 5512

FILE # 0561120C, 78T

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 256 TO 260

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

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.904	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	IC SAB	.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	IC SAB	.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	IC SAB	-.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	383	402.3
16	S96T005512	1.529	.2614	.0450	.0598	-.1007	.2294
17	S96T005512_D	1.724	.2583	.0070	-.1436	-.0543	.2446
18	ICSA	-.0383	251.7	.0024	.0138	.0014	.0088
19	IC SAB	-.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. 0

Analysis Report

Averages

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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	IGSA	-.0095	-.0364	93.93	4348	-.0038	.0023
5	IGSAB	4.751	-.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	5.262	-.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	IGSA	-.0097	-.0390	94.24	4833	-.0039	.0022
19	IGSAB	4.756	-.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	IGSA	254.1	-.0065	-.0030	194.2	.0062	-.0094
5	IGSAB	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	IGSA	254.4	-.0063	-.0039	194.1	.0062	-.0137
19	IGSAB	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	IC SAB	.0304	1.003	-.0310	-.0008	-.0013	-.0008
6	PREPBLKTJA	-.0093	.0258	-.0012	.0027	.0397	.0054
7	S96T005510	52.11	1.381	7.036	.1271	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	37.89	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	IC SAB	.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	IC SAB	-.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	-9.619
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	IC SAB	-.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	.0015	-.0004

FILE No: 961121A.TXT

11/08/96 09:21
A-0004-1

LABCORE Data Entry Template for Worklist# 14799

Analyst: J. WORRELL Instrument: ICP012 Book# 520488

Method: LA-505-151/161 Rev/Mod B-1

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	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 pp ^m Spike X	S96T005489 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:

$$S96T005489 \text{ Cd} = 1.150 \text{ ug} \times \frac{1}{5.009 \frac{\text{g}}{\text{g}} \times \frac{1\text{L}}{1000\text{mL}}} = 2.30 \pm 2 \text{ ug}$$

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. Howell 11-21-96
Analyst Signature Date

Requested by:
Paul M. Pang 12/2/96
Analyst Signature Date

	DF
PREP BLK DIRECT	1
3967005489	
DIL 5X 4-4-2-8	10
BAM 4-4	2
DOP 4-4	2
P.SPK 4-2-2	2
SAM X0.4-9.6	25
10PPM PSPK 0.4-1-1-7.6	25

$$\text{Spike true value} = \frac{2(5) = 8(x)}{x = 1.25 \text{ ppm}}$$

Ma, Pa and Si failed in the first port spike. a second port spike was made and the result are:

$$Ma = \frac{\left(\frac{1138}{25}\right) - \left(\frac{885.4}{25}\right)}{10} \times 100 = 101.0\%$$

$$P = \frac{\left(\frac{563.6}{25}\right) - \left(\frac{309.2}{25}\right)}{10} \times 100 = 101.8\%$$

$$Si = \frac{\left(\frac{265.4}{25}\right) - \left(\frac{8.034}{25}\right)}{10} \times 100 = 102.9\%$$

Data Entry Comments:

Spike recovery calculation:

$$5967005489 \quad Al = \frac{\left(\frac{3.668}{2}\right) - \left(\frac{1.150}{2}\right)}{1.25} \times 100 = 101.0\%$$

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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#	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 30-31 TO 31-06.

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
Run	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						DETECTION LEVEL 5.31E-03 µCi/g
Analysis Date						
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:	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
Run	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						DETECTION LEVEL
01/22/97	Sr-89/90 CONCENTRATION		3.80E+00	µCi/g		
Analysis Time						5.18E-03 µCi/g
05:00 AM	RELATIVE COUNTING ERROR		1.5%			
Sample Point						
B-108	PERCENT CARRIER RECOVERY		92.0%			

Analyst:	RGA	Date:	22-Jan-97
Signature of Chemist:	<i>S.A. Collins</i>	SAC	Date: 23 Jan 97

SAMPLE.WB1 REV 2.0

22010NML

#	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 A	.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	254.3
13	ICSA 8/11/22/96	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	5.089	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 A	.1350	.0891	-.0005	.0018	-.0043	.3655
9	S96T005489 D	.0514	.0710	-.0020	-.0233	-.0082	.6451
10	S96T005489 A	2.693	2.685	2.591	2.588	2.583	2.963
11	S96T005489 X	-.0247	1.989	.0253	1.082	-.0928	.3636
12	S96T005489 10PPM	253.5	250.0	247.1	249.4	.3248	249.2
13	ICSA 5/11/22/96	-.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	.4826	.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 A	.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	Q-.0089	-.0425	94.14	-.1092	-.0042	Q.0030
14	ICSA <i>50 11/22/96</i>	-.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	.0167	.2250	.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	.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	255.8	Q-.0061	-.0066	198.5	.0052	Q-.0036
14	ICSA <i>50 11/22/96</i>	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	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	-.0010	Q.0206	-.0412	.0135	-.0309	.0138
14	ICSA <i>50 11/22/96</i>	.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	ICSAB	.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 -IOPPM	.3080	.0079	.0333	.0192	.2361	.6681
12	S96T005489 -IOPPM	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	ICSAB	.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	ICSAB	.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 -IOPPM	.0608	.0115	1.087	.0330
12	S96T005489 -IOPPM	.2894	.3640	-.0707	258.1
13	ICSA	0.0007	.0071	0.0041	-.0028
14	ICSA	.0009	.0073	.0041	-.0022
15	ICSAB	.4770	.0074	.9643	-.0010
16	CCV	5.189	.0068	5.211	5.131
17	CCB	.0019	.0005	.0006	.0015

LABCORE Data Entry Template for Worklist# 15994

Analyst: J. Worrell Instrument: ICP01 Book# 65048A

Method: LA-505-151/167 Rev/Mod D-3
2/1-13-97

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 97A <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	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:

$$\frac{596T005519}{ml} \times \frac{Al = 5.675 \mu g}{5.108 \frac{g}{L} \times \frac{1L}{1000ml}} = 1.11 \pm 3 \mu g$$

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

01/06/97 14:33
A-0004-1

Page: 2

LABCORE Data Entry Template for Worklist# 15994

S Type Sample# R A Test Matrix Group# Project

Final page for worklist # 15994

John Howell 1-13-97
Analyst Signature Date

Revised by:
Saul M. Perry 1/14/97
Analyst Signature Date

PREP BLK DIRECT

DF
1

S96T005519

DIL 5X	1-9-2-8	50
SAM	1-9	10
DVP	1-9	10
P.SPK	1-2-8	10
BIL-X	.250-9.75	40
10PPM.PSPK	.250-1-1-7.75	40

P_i, S_i, and S_i failed in the first post spike. A second post spike was made and the results are:

$$P = \frac{(86.330)}{40} - \frac{(72.343)}{40} \times 100 =$$

$$P = \frac{(510.516)}{40} - \frac{(93.629)}{40} \times 100 = 104.2\%$$

$$S = \frac{(708.299)}{40} - \frac{(316.410)}{40} \times 100 = 98.0\%$$

$$S_i = \frac{(517.340)}{40} - \frac{(109.255)}{40} \times 100 = 102.0\%$$

Data Entry Comments:

Spike recovery calculation:

$$S96T005519 \quad Al = \frac{(15.423)}{10} - \frac{(5.675)}{10} \times 100 = 97.5\%$$

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

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Sample ID 76856	Date/Time 01/24/97/11:23:34
Description LMDS STD	Cal Y=1.33E+08X-1.60E+03
Ref. Ratio 1.045	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 597T000002	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 597T000002-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 597T000002-GPK	Date/Time 01/24/97/11:38:51
Description B-108	Cal Y=1.33E+08X-1.60E+03
Ref. Ratio 1.086	Intensity 56707 (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	