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Tank 241-A-101, Cores 154 and 156 Analytical Results for the 45 Day Report

Fran H. Steen

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ANALYTICAL SERVICES

**TANK 241-A-101, CORES 154 AND 156
ANALYTICAL RESULTS FOR THE 45 DAY REPORT**

Project Coordinator: FRANCISKA H. STEEN

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

by

**222-S Laboratory
Westinghouse Hanford Company
Box 1970
Richland, Washington**

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222-S ANALYTICAL SERVICES

TANK 241-A-101, CORES 154 AND 156, ANALYTICAL RESULTS FOR THE 45 DAY REPORT

This document is the 45-day laboratory report for tank 241-A-101 push mode core segments collected between July 11, 1996 and July 25, 1996. The segments were subsampled and analyzed in accordance with the *Tank 241-A-101 Push Mode Core Sampling and Analysis Plan* (TSAP) (Field, 1996) and the *Safety Screening Data Quality Objective* (DQO) (Dukelow, et al., 1995). The analytical results are included in the data summary table (Table 1).

None of the samples submitted for Total Alpha Activity (AT) or Differential Scanning Calorimetry (DSC) analyses exceeded notification limits as stated in the Safety Screening DQO (Dukelow, et al., 1995). Statistical evaluation on results by calculating the 95% upper confidence limit is not performed by the 222-S Laboratory and is not considered in this report.

Primary safety screening results and the raw data from thermogravimetric analysis (TGA) and DSC analyses are included in this report.

Appearance and Sample Handling

Attachment 1 is a cross reference to relate the tank farm identification numbers to the 222-S Laboratory LabCore/LIMS sample numbers. The subsamples generated in the laboratory for analyses are identified in these diagrams with their sources shown. The diagram identifying the hydrostatic head fluid (HHF) blank is also included.

Core 154

Nineteen push mode core segments were removed from tank 241-A-101 riser 15 between July 11, 1996 and July 18, 1996. Segments were received by the 222-S Laboratory between July 16, 1996 and August 21, 1996. Table 2 summarizes the extrusion information.

Selected segments (5, 8 and 12) were sampled using the Retained Gas Sampler (RGS) and extruded by the Process Chemistry and Statistical Analysis Group. Segment 19 was originally identified as a RGS sample. However since the integrity of the sample was compromised due to a leaking sampler seal it was extruded as a non-RGS sample. The analytical results for these segments will be included in a revision to this document.

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Core 156

Nineteen push mode core segments were removed from tank 241-A-101 riser 24 between July 22, 1996 and July 25, 1996. Segments were received by the 222-S Laboratory between July 23, 1996 and August 19, 1996. Table 3 summarizes the extrusion information.

Selected segments (2, 9, 16 and 19) were sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. The analytical results for these segments will be included in a revision to this document.

Field Blank

A field blank was provided to the 222-S laboratory with core 154. It underwent the same analysis as the drainable liquid as instructed by the TSAP (Field, 1996).

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Table 2. Sample Receipt and Extrusion Information for 241-A-101, Core 154.

Customer Id	Segment	Date Sampled	Date Received	Date Extruded	Inches Extruded*	Liquid Recovered (g)	Solids Recovered (g)	Sample Description
96-297	1	7/11/96	8/20/96	8/26/96	11	0	80.7-Upper half 176.0-Lower half	The solids were yellowish brown in color. The upper five inches resembled a dry salt and the lower six inches resembled a moist salt.
96-298	2	7/11/96	8/20/96	8/26/96	17	0	186.4-Upper half 202.5-Lower half	The solids were dark gray in color and resembled a moist salt.
96-299	3	7/11/96	8/20/96	8/26/96	19	0	222.1-Upper half 205.4-Lower half	The solids were dark gray in color and resembled a moist salt.
96-300	4	7/11/96	8/20/96	8/26/96	19	0	225.3-Upper half 197.0-Lower half	The solids were dark gray in color and resembled a moist salt.
96-301	5	7/12/96	7/16/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-302	6	7/12/96	8/20/96	8/26/96	17	0	202.8-Upper half 203.4-Lower half	The solids were dark gray in color and resembled a moist salt.
96-303	7	7/12/96	7/22/96	7/24/96	19	0	197.8-Upper half 212.7-Lower half	The solids were dark gray in color and resembled a moist salt.
96-304	8	7/12/96	7/16/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-305	9	7/12/96	8/21/96	8/26/96	17	0	161.8-Upper half 225.5-Lower half	The solids were dark gray in color and resembled a moist salt.
96-306	10	7/12/96	7/22/96	7/24/96	14	0	97.8-Upper half 158.6-Lower half	The solids were light gray in color and resembled a salt slurry. Extruded less than 5 ml of yellow opaque liquid. The liquid was subsampled with the solids.
96-307	11	7/17/96	7/22/96	7/24/96	0	58.1-Drainable	0	The liquid was colorless and opaque. Collected approximately 60 ml of liquid. No organic layer was observed.
96-308	12	7/16/96	7/19/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.

Table 2. Sample Receipt and Extrusion Information for 241-A-101, Core 154.

Customer	Id	Segment	Date Sampled	Date Received	Date Extruded	Date Extruded*	Inches Extruded*	Liquid Recovered (g)	Solids Recovered (g)	Sample Description
96-309	13		7/17/96	7/22/96	7/24/96		5.5	314.0-Drainable	90.5-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. Collected approximately 230 ml of liquid. No organic layer was observed.
96-310	14		7/17/96	7/22/96	7/24/96		3	248.0-Drainable	52.1-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. Collected approximately 175 ml of liquid. No organic layer was observed.
96-311	15		7/18/96	7/19/96	7/24/96		4.0	286.5-Drainable	134.8-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. No organic layer was observed.
96-312	16		7/18/96	7/22/96	7/25/96		6.5	297.6-Drainable	133.3-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. No organic layer was observed.
96-313	17		7/18/96	8/19/96	8/21/96		0.0	289.3-Drainable	0.0	The solids were white in color and resembled a salt slurry. The liquid was white in color and opaque. No organic layer was observed.
96-314	18		7/18/96	8/20/96	8/26/96		5.0	324.2-Drainable	113.8-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. No organic layer was observed.
96-315	19		7/18/96	7/19/96	8/21/96		3.0	48.0-Drainable	87.4-Lower half	The solids were light gray in color and resembled a salt slurry. The liquid was yellow in color and opaque. No organic layer was observed.
Field Blank	FB		7/18/96	8/21/96	8/26/96		0.0	239.5-Drainable	0.0	The liquid was colorless and clear.

*Approximate Inches Extruded

Table 3. Sample Receipt and Extrusion Information for 241-A-101, Core 156.

Customer Id	Segment	Date Sampled	Date Received	Date Extruded	Inches Extruded*	Liquid Recovered (g)	Solids Recovered (g)	Sample Description
96-336	1	7/22/96	8/19/96	8/20/96	1.0	0.0	33.3-Lower half	The solids were green-brown in color and resembled a salt slurry. The liquid was green-brown in color and opaque. The liquid was subsampled with the solids. No organic layer was observed.
96-337	2	7/22/96	7/23/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-338	3	7/22/96	8/14/96	8/16/96	19.0	0.0	214.4-Upper half 212.3-Lower half	The solids were dark gray in color and resembled a moist salt.
96-339	4	7/22/96	8/16/96	8/20/96	18.0	0.0	216.6-Upper half 203.9-Lower half	The solids were gray in color and resembled a moist salt.
96-340	5	7/22/96	8/14/96	8/16/96	18.0	0.0	196.9-Upper half 211.9-Lower half	The solids were dark gray in color and resembled a moist salt.
96-341	6	7/22/96	8/16/96	8/20/96	19.0	0.0	226.3-Upper half 194.2-Lower half	The solids were dark gray in color and resembled a moist salt.
96-342	7	7/23/96	8/14/96	8/16/96	16.0	0.0	214.4-Upper half 140.4-Lower half	The solids were light to dark gray in color and resembled a moist salt.
96-343	8	7/23/96	8/09/96	8/14/96	19.0	0.0	188.9-Upper half 179.9-Lower half	The solids were gray in color and resembled a moist salt.
96-344	9	7/23/96	7/25/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-345	10	7/23/96	8/19/96	8/21/96	7.0	163.9-Drainable	134.2-Upper half 17.9-Lower half	The solids were white to gray in color and resembled a salt slurry. The liquid was yellow in color and opaque. Collected approximately 110 mL of liquid. No organic layer was observed.
96-346	11	7/23/96	8/09/96	8/14/96	5.0	322.5-Drainable	96.3-Lower half	The solids were white in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 220 mL of liquid. No organic layer was observed.
96-347	12	7/24/96	8/09/96	8/14/96	2.0	305.9-Drainable	101.4-Lower half	The solids were white in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 230 mL of liquid. No organic layer was observed.

Table 3. Sample Receipt and Extrusion Information for 241-A-101, Core 156.

Customer Id	Segment	Date Sampled	Date Received	Date Extruded	Extruded* Inches	Liquid Recovered (g)	Solids Recovered (g)	Sample Description
96-348	13	7/24/96	7/26/96	7/31/96	5.0	350.5-Drainable	69.9-Lower half	The solids were white in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 250 mL of liquid. No organic layer was observed.
96-349	14	7/24/96	8/16/96	8/21/96	3.5	348.0-Drainable	82.7-Lower half	The solids were white in color and resembled a salt slurry. The liquid was yellow in color and opaque. Collected approximately 245 mL of liquid. No organic layer was observed.
96-350	15	7/24/96	8/12/96	8/14/96	2.0	335.8-Drainable	81.2-Lower half	The solids were white in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 240 mL of liquid. No organic layer was observed.
96-351	16	7/24/96	7/25/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-352	17	7/24/96	8/12/96	8/16/96	1.0	345.3-Drainable	65.6-Lower half	The solids were white in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 250 mL of liquid. No organic layer was observed.
96-353	18	7/25/96	7/26/96	7/31/96	7.0	282.9-Drainable	118.4-Lower half	The solids were white to light gray in color and resembled a salt slurry. The liquid was green in color and opaque. Collected approximately 200 mL of liquid. No organic layer was observed.
96-354	19	7/25/96	7/26/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.

*Approximate Inches Extruded

Analytical Results Summary

Table 1 compiles the safety screening analytical results and applicable action limits associated with each subsample submitted.

Differential Scanning Calorimetry (DSC)

None of the samples submitted for DSC analysis exceeded notification limits as stated in the Safety Screening DQO (Dukelow, et al., 1995).

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

The results for fifteen of the fifty-one subsamples were the sum of two or more exotherms. More information may be obtained by examining the raw data. The field blank result was 0.00 Joules/g.

Relative percent differences (RPD) greater than 20% were reported for thirteen of the sixty-two subsamples. The high RPDs can be attributed to the small exotherms and the heterogenous nature of the samples. Selected samples were reanalyzed. The results did not improve the quality control parameters. Thermograms for several samples showed small sharp peaks near 200°C which indicated an inhomogeneous distribution of a pure compound throughout the tank samples.

Thermogravimetric Analysis (TGA)

The TGA analyses were performed in duplicate on direct subsamples. The results for tank 241-A-101 were determined by summing the weight loss steps which occurred below 300°C; weight loss steps above this were not used to determine the result. More information may be obtained by examining the raw data.

The field blank resulted in a mean of 99.46% moisture. RPDs greater than 20% were reported for six of the sixty-two subsamples. The high RPDs were due to sample inhomogeneity and selected samples had reruns performed with improved precision. The rerun for sample S96T004702 resulted in an RPD of 41%. The standard recoveries for this analysis were within the required limits.

Density

Bulk density was performed on the solid subsamples as required by the TSAP (Field, 1996). Segments 10 and 11 of core 156 did not yield enough material to perform the bulk density analysis. The results of the bulk density test ranged from 1.31 g/mL to 1.75 g/mL. The highest bulk density of 1.75 g/mL was used to calculate the solid total alpha activity action limit for the tank.

Total alpha results for liquids do not require correction for density. The specific gravity results for the liquid samples will be reported in a revision to this document.

Total Alpha (AT)

The total alpha (AT) analyses were performed in duplicate on direct subsamples for the liquids. Solid subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion digest is indicated with an "F" in the aliquot class (A#) column in Table 1.

All liquid AT results were below the total alpha activity action limit of 61.5 $\mu\text{Ci/mL}$. All solid AT results were below the total alpha activity limit of 35.1 $\mu\text{Ci/g}$ (based on a bulk density of 1.75 g/mL). The field blank result was less than the detection limit of 7.82e-5 $\mu\text{Ci/mL}$. A high RPD was reported for seven of the forty-four subsamples submitted for analyses. The sample results were near the detection limit which decreased the precision of the analyses. No rerun was requested due to the low alpha activity in the samples. Low spike recoveries were reported for two samples and was due to matrix interference. No reruns were requested. The standard recoveries for this analysis were within the required limits.

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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. C-1
TGA	Solid/Liquid	N/A	LA-514-114, Rev. C-1 LA-560-112, Rev. B-1
AT	Solid Liquid	LA-549-141, Rev. F-0 N/A	LA-508-101, Rev. D-2
Bulk Density	Solid	N/A	LO-160-103, Rev. B-0

Notes:

+ = preparation procedure is for fusion digest on solid

Abbreviations:

N/A = not applicable (these are direct samples)

DSC = differential scanning calorimetry

TGA = thermogravimetric analysis

AT = total alpha activity

References

Field, J. G., 1996, *Tank 241-A-101 Push Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-100, Rev.0-B, Westinghouse Hanford Company, Richland, WA 99352.

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

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ATTACHMENT 1

A-101 SAMPLE BREAKDOWN

WHC-SD-WM-DP-200, REV. 0

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A-101
Core:154
Seg: 1
S96T004486

Attachment 1

A-101
Core:154
Seg: 2
S96T004487

Attachment 1

A-101
Core:154
Seg: 3
S96T004488

Attachment 1

16

A-101
Core:154
Seg: 4
S96T004489

Attachment 1

Upper
Half

BULK DENSITY

S96T004666

Lower
Half

BULK DENSITY

S96T004659

TIC/TOC
DSC
TGA

S96T004694

ARCHIVE

S96T004683

TIC/TOC
DSC
TGA

S96T004698

ARCHIVE

S96T004684

FUSION
GEA

S96T004714

ACID
DIGEST
ICP

S96T004720

H2O
DIGEST
IC-ANIONS

S96T004726

FUSION
GEA
ALPHA/BETA
SR90
U

S96T004730

ACID
DIGEST
ICP

S96T004736

H2O
DIGEST
IC-ANIONS

S96T004742

A-101
Core:154
Seg: 6
S96T004490

Attachment 1

A-101
Core:154
Seg: 7
S96T004005

Attachment 1

Upper
Half

BULK DENSITY

S96T004053

Lower
Half

BULK DENSITY

S96T004051

TIC/TOC
DSC
TGA

S96T004067

ARCHIVE

S96T004068

TIC/TOC
DSC
TGA

S96T004074

ARCHIVE

S96T004079

FUSION
GEA

S96T004069

ACID
DIGEST
ICP

S96T004070

H2O
DIGEST
IC-ANIONS

S96T004071

FUSION
GEA
ALPHA

S96T004086

ACID
DIGEST
ICP

S96T004093

H2O
DIGEST
IC-ANIONS

S96T004100

19

A-101
Core:154
Seg: 9
S96T004516

Attachment 1

A-101
Core:154
Seg: 10
S96T004006

Attachment 1

WHC-SD-WM-DP-200, REV. 0

Upper
Half

BULK DENSITY

S96T004054

Lower
Half

BULK DENSITY

S96T004055

S96T004072

S96T004080

S96T004073

S96T004081

S96T004087

S96T004094

S96T004101

S96T004088

S96T004095

S96T004102

A-101
Core:154
Seg: 11
S96T004007

Attachment 1

22

WHC-SD-WM-DP-200, REV. 0

A-101
Core:154
Seg: 13
S96T004008

Attachment 1

A-101
Core:154
Seg: 14
S96T004009

Attachment 1

Lower
Half

BULK DENSITY

S96T004057

TK/TOC
DSC
TGA

S96T004076

ARCHIVE

S96T004083

FUSION
GEA
ALPHA/BETA
SR90
U

S96T004090

ACID
DIGEST
ICP

S96T004097

H2O
DIGEST
IC-ANIONS

S96T004104

Drainable
Liquid

FILTER

S96T004061

DSC
TGA
TK/TOC
ALPHA
IC-ANIONS
ICP
SPG

S96T004116

ARCHIVE

S96T004112

WHC-SD-WM-DP-200, REV. 0

A-101
Core:154
Seg: 15
S96T004004

Attachment 1

25

A-101
Core:154
Seg: 16
S96T004010

Attachment 1

Lower
Half

BULK DENSITY

S96T004059

TK/TOC
DSC
TGA

S96T004078

ARCHIVE

S96T004085

FUSION
GEA
ALPHA

S96T004092

ACID
DIGEST
ICP

S96T004099

H2O
DIGEST
IC-ANIONS

S96T004106

26

Drainable
Liquid

FILTER

S96T004063

DSC
TGA
TK/TOC
ALPHA
IC-ANIONS
ICP
SFG

S96T004118

ARCHIVE

S96T004114

WHC-SD-WM-DP-200, REV. 0

A-101
Core:154
Seg: 17
S96T004471

Attachment 1

27

WHC-SD-WM-DP-200, REV. 0

A-101
Core:154
Seg: 18
S96T004491

Attachment 1

A-101
Core:154
Seg: 19
S96T004470

Attachment 1

29

A-101
Core:154
Seg: FB
S96T004517

Attachment 1

30

Attachment 1

A-101
Core:154
Seg: HHF
S96T004015

A-101
Core:156
Seg: 1
S96T004472

Attachment 1

WHC-SD-WM-DP-200, REV. 0

A-101
Core:156
Seg: 3
S96T004422

Attachment 1

A-101
Core:156
Seg: 4
S96T004450

Attachment 1

A-101
Core:156
Seg: 5
S96T004423

Attachment 1

A-101
Core:156
Seg: 6
S96T004451

Attachment 1

A-101
Core:156
Seg: 7
S96T004424

Attachment 1

A-101
Core:156
Seg: 8
S96T004354

Attachment 1

A-101
Core:156
Seg: 10
S96T004473

Attachment 1

A-101
Core:156
Seg: 11
S96T004355

Attachment 1

Lower
Half

S96T004461

TK/TOC
DSC
TGA

S96T004548

ARCHIVE

S96T004577

FUSION
GEA
ALPHA

S96T004629

ACID
DIGEST
ICP

S96T004639

H2O
DIGEST
IC-ANIONS

S96T004649

Drainable
Liquid

FILTER

S96T004466

DSC
TGA
TK/TOC
ALPHA
IC-ANIONS
ICP
SFG

S96T004583

ARCHIVE

S96T004589

A-101
Core:156
Seg: 12
S96T004356

Attachment 1

41

WHC-SD-WM-DP-200, REV. 0

A-101
Core:156
Seg: 13
S96T004065

Attachment 1

42

S96T004289

DSC
TGA
TICT OC
ALPHA
IC-ANIONS
ICP
SPQ

S96T005330

AM241
GEA
PU239
SF90
OH
PH

S96T004291

WHC-SD-WM-DP-200, REV. 0

A-101
Core:156
Seg: 14
S96T004452

Attachment 1

WHC-SD-WM-DP-200, REV. 0

A-101
Core:156
Seg: 15
S96T004387

Attachment 1

44

A-101
Core:156
Seg: 17
S96T004388

Attachment 1

45

S96T004587

DSC
TGA
TIC/TOC

ALPHA
IC-ANIONS
ICP
SFG

S96T005332

AM241
GEA
PU239
SFR0

OH
PH

S96T004593

A-101
Core:156
Seg: 18
S96T004066

Attachment 1

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WHC-SD-WM-DP-200, REV. 0

WHC-SD-WM-DP-200, REV. 0

SAMPLE DATA SUMMARY

WHC-SD-WM-DP-200, REV. 0

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INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004663			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004691			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004691			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	95.96	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004691			% Water by TGA on Perkin Elmer	%	None	None	98.99	n/a	29.94	28.36	29.15	5.42	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004656			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004689			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.9	n/a	44.50	51.30	47.90	14.2	n/a	n/a	n/a
S96T004689			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	65.80	75.90	70.85	14.3	n/a	n/a	n/a
S96T004689			% Water by TGA using Mettler	%	None	None	98.80	n/a	31.89	32.93	32.41	3.21	n/a	n/a	n/a
S96T004705	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	113.4	4.14e-03	1.48e-01	1.07e-01	1.12e-01	9.78	100.8	1.00e-02	1.73E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004664			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.730	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004693			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	96.66	n/a	41.40	35.90	38.65	14.2	n/a	n/a	n/a	n/a
S96T004693			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	61.40	53.20	57.30	14.3	n/a	n/a	n/a	n/a
S96T004693			% Water by TGA using Mettler	%	None	None	98.21	n/a	32.42	32.64	32.53	0.68	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004657			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004697			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	101.6	n/a	74.80	103.3	89.05	32.0	n/a	n/a	n/a	n/a
S96T004697			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.08e+02	149.0	128.5	31.9	n/a	n/a	n/a	n/a
S96T004697			% Water by TGA using Mettler	%	None	None	99.92	n/a	30.15	30.70	30.42	1.81	n/a	n/a	n/a	n/a
S96T004697			% Water by TGA on Perkin Elmer	%	None	None	99.32	n/a	26.61	37.05	31.83	32.8	n/a	n/a	n/a	n/a
S96T004729	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	104.8	<1.01e-02	7.62e-02	9.75e-02	8.69e-02	24.5	n/a	2.40e-02	3.27E+01	n/a

=> Limit violated

=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004665			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004692			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004692			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.98	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004692			% Water by TGA on Perkin Elmer	%	None	None	99.27	n/a	32.98	30.59	31.78	7.52	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004658			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004690			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.9	n/a	59.40	43.70	51.55	30.5	n/a	n/a	n/a
S96T004690			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	89.60	66.90	78.25	29.0	n/a	n/a	n/a
S96T004690			% Water by TGA using Mettler	%	None	None	98.86	n/a	33.48	33.86	33.67	1.13	n/a	n/a	n/a
S96T004706	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	104.8	<1.01e-02	1.47e-01	1.20e-01	1.18e-01	2.53	78.83	2.40e-02	2.46E+01

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-200, REV. 0

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004666			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004694			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	96.66	n/a	60.00	47.00	53.50	24.3	n/a	n/a	n/a	n/a
S96T004694			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	91.60	71.80	81.70	24.2	n/a	n/a	n/a	n/a
S96T004694			% Water by TGA using Mettler	%	None	None	98.21	n/a	35.61	33.40	34.50	6.40	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004659			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004698			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	101.6	n/a	64.20	58.40	61.30	9.46	n/a	n/a	n/a	n/a
S96T004698			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	96.90	88.10	92.50	9.51	n/a	n/a	n/a	n/a
S96T004698			% Water by TGA using Mettler	%	None	None	99.78	n/a	33.13	34.30	33.72	3.47	n/a	n/a	n/a	n/a
S96T004698			% Water by TGA on Perkin Elmer	%	None	None	99.32	n/a	36.88	22.39	29.64	48.9	n/a	n/a	n/a	n/a
S96T004730	F		Alpha of Digested Solid	uCi/g	None	None	111.3	<7.22e-03	9.93e-02	1.11e-01	1.05e-01	11.1	88.58	9.00e-03	1.76E+01	n/a

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004667			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.710	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004695			DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.8	101.6	n/a	70.70	71.30	71.00	0.85	n/a	n/a	n/a
S96T004695			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.8	n/a	n/a	1.07e+02	108.0	107.5	0.93	n/a	n/a	n/a
S96T004695			% Water by TGA using Mettler	%	None	None	98.89	n/a	33.51	34.52	34.02	2.97	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004660			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004699			DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.8	95.25	n/a	70.60	70.60	70.60	0.00	n/a	n/a	n/a
S96T004699			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.8	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004699			% Water by TGA using Mettler	%	None	None	99.54	n/a	31.39	24.75	28.07	23.7	n/a	n/a	n/a
S96T004731	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	112.1	7.00e+03	1.0e-01	1.23e-01	1.12e-01	19.6	92.48	1.10e-02	1.87E+01

=> Limit violated
=> Selected Limit

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INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004053			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.710	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004067			DSC Exotherm using Mettler	Joules/g	-1.0e+03	488.0	99.12	n/a	52.60	63.30	57.95	18.5	n/a	n/a	n/a
S96T004067			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	488.0	n/a	n/a	84.10	101.0	92.55	18.3	n/a	n/a	n/a
S96T004067			% Water by TGA using Mettler	%	None	None	99.27	n/a	33.37	41.54	37.45	21.8	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004051			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.738	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004074			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	488.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004074			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	488.0	102.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004074			% Water by TGA on Perkin Elmer	%	None	None	99.16	n/a	36.35	35.70	36.03	1.80	n/a	n/a	n/a
S96T004086	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	93.75	3.00e-03	7.76e-02	7.11e-02	7.43e-02	8.74	74.09	4.00e-03	1.38E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 9

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004668			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.690	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004696			DSC Exotherm using Mettler	Joules/g	-1.0e+03	488.3	101.6	n/a	68.90	74.40	71.65	7.68	n/a	n/a	n/a
S96T004696			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	488.3	n/a	n/a	98.40	106.3	102.3	7.72	n/a	n/a	n/a
S96T004696			% Water by TGA using Mettler	%	None	None	98.89	n/a	30.94	29.07	30.01	6.23	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004661			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.708	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004700			DSC Exotherm using Mettler	Joules/g	-1.0e+03	488.3	95.25	n/a	98.70	50.90	74.80	63.9	n/a	n/a	n/a
S96T004700			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	488.3	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004700			% Water by TGA using Mettler	%	None	None	99.54	n/a	26.43	27.84	27.13	5.20	n/a	n/a	n/a
S96T004732	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	100.4	<7.33e-03	7.24e-02	6.16e-02	6.70e-02	16.1	77.44	1.20e-02	2.08E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004054			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.570	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004072			DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.3	99.12	n/a	1.15e+02	137.0	126.0	17.5	n/a	n/a	n/a
S96T004072			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.3	n/a	n/a	1.85e+02	221.0	203.0	17.7	n/a	n/a	n/a
S96T004072			% Water by TGA using Mettler	%	None	None	99.27	n/a	37.34	38.62	37.98	3.37	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004055			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.548	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004073			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.3	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004073			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	486.3	102.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004073			% Water by TGA on Perkin Elmer	%	None	None	99.16	n/a	38.81	38.50	38.66	0.80	n/a	n/a	n/a
S96T004088	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	106.5	<2.02e-03	2.02e-02	2.15e-02	2.09e-02	6.24	79.94	4.00e-03	30.5

Legend:

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S961004110		DSC Exotherm using Mettler	Joules/g	-1.0e+03	Upper	91.74	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961004110		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	None	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961004110		% Water by TGA using Mettler	%	None	None	99.27	n/a	93.67	93.07	93.37	0.64	n/a	n/a	n/a
S961004110		Alpha In Liquid Samples	uCl/mL	-1.0e+03	None	56.09	<9.89e-03	<2.94e-04	<2.94E-4	n/a	n/a	n/a	1.00e-03	5.00E+02

==> Limit Violated
==> Selected Limit

WHC-SD-WM-DP-200, REV. 0

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 13

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004056			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.750	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004075			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.9	n/a	16.00	22.10	19.05	32.0	n/a	n/a	n/a	n/a
S96T004075			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	28.20	38.90	33.55	31.9	n/a	n/a	n/a	n/a
S96T004075			% Water by TGA using Mettler	%	None	None	99.43	n/a	42.71	43.61	43.16	2.09	n/a	n/a	n/a	n/a
S96T004089	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	106.5	<2.02e-03	<1.55e-03	<3.29E-3	n/a	n/a	74.65	4.00e-03	500	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004115			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	91.74	n/a	26.10	25.50	25.80	2.33	n/a	n/a	n/a	n/a
S96T004115			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	50.48	49.20	49.80	2.41	n/a	n/a	n/a	n/a
S96T004115			% Water by TGA using Mettler	%	None	None	99.27	n/a	48.17	48.14	48.16	0.06	n/a	n/a	n/a	n/a
S96T004115			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	120.3	<2.50e-02	<2.86e-02	<2.50E-2	n/a	n/a	113.6	3.50e-02	1.65E+02	n/a

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-200, REV. 0

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 14

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004057			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004076			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.9	n/a	19.20	21.60	20.40	11.8	n/a	n/a	n/a
S96T004076			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	34.50	38.80	36.65	11.7	n/a	n/a	n/a
S96T004076			% Water by TGA using Mettler	%	None	None	99.43	n/a	45.70	42.98	44.34	6.13	n/a	n/a	n/a
S96T004090	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	106.5	<2.02e-03	<1.55e-03	<1.54e-03	n/a	n/a	n/a	4.00e-03	5.00E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004116			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	90.69	n/a	29.70	30.80	30.25	3.64	n/a	n/a	n/a
S96T004116			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	63.00	65.40	64.20	3.74	n/a	n/a	n/a
S96T004116			% Water by TGA using Mettler	%	None	None	98.82	n/a	52.91	52.87	52.89	0.08	n/a	n/a	n/a
S96T004116			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	96.09	<9.89e-03	<2.10e-02	<1.56E-2	n/a	n/a	n/a	2.60e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 15

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004058			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.720	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004077			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	53.40	55.80	54.60	4.40	n/a	n/a	n/a
S96T004077			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	106.3	n/a	30.55	31.91	31.23	4.35	n/a	n/a	n/a
S96T004077			% Water by TGA on Perkin Elmer	%	None	None	99.44	n/a	44.13	41.50	42.81	6.14	n/a	n/a	n/a
S96T004091	F		Alpha of Digested Solid	uCi/g	-1.0e+03	39.10	115.2	<7.37e-04	<1.21e-03	<1.31E-3	n/a	n/a	90.25	2.00e-03	3.03E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004117			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	90.69	n/a	34.90	30.20	32.55	14.4	n/a	n/a	n/a
S96T004117			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	64.80	56.10	60.45	14.4	n/a	n/a	n/a
S96T004117			% Water by TGA using Mettler	%	None	None	98.82	n/a	45.54	46.69	46.11	2.49	n/a	n/a	n/a
S96T004117			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	96.09	<9.89e-03	<1.29e-02	<9.89E-3	n/a	n/a	n/a	2.60e-02	5.00E+02

=> Limit violated
=> Selected Limit

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INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 16

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004059			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.650	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004078			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	38.90	35.90	37.40	8.02	n/a	n/a	n/a
S96T004078			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	106.3	n/a	20.95	19.34	20.14	7.99	n/a	n/a	n/a
S96T004078			% Water by TGA on Perkin Elmer	%	None	None	99.12	n/a	46.34	45.81	46.09	1.19	n/a	n/a	n/a
S96T004092	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	115.2	<7.37e-04	<1.07e-03	<1.79E-3	n/a	n/a	n/a	2.00e-03	5.00E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004118			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	90.69	n/a	29.50	29.40	29.45	0.34	n/a	n/a	n/a
S96T004118			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	56.40	56.20	56.30	0.36	n/a	n/a	n/a
S96T004118			% Water by TGA using Mettler	%	None	None	99.29	n/a	47.47	47.95	47.71	1.01	n/a	n/a	n/a
S96T004118			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	96.09	<9.89e-03	<9.89e-03	<9.89E-3	n/a	n/a	n/a	2.60e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 17

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004671			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.50	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a		n/a
S96T004671			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a		n/a
S96T004671			% Water by TGA using Mettler	%		None	100.2	n/a	93.44	93.54	93.49	0.11	n/a	n/a		n/a
S96T004671			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.58	93.51	<2.32e-02	<1.27e-03	1.67e-03	n/a	n/a	94.71	2.00e-03		5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 18

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004662			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.720	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004702			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	94.20	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T004702			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T004702			% Water by TGA using Mettler	%	None	None	99.34	n/a	15.66	22.63	19.14	36.4	n/a	n/a	n/a	n/a
S96T004702 1			% Water by TGA on Perkin Elmer	%	None	None	99.22	n/a	11.66	17.68	14.67	41.0	n/a	n/a	n/a	n/a
S96T004733	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	100.4	<7.33e-03	<8.84e-03	<1.25E-2	n/a	n/a	n/a	1.10e-02	5.00E+02	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004669			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	71.00	83.00	77.00	15.6	n/a	n/a	n/a	n/a
S96T004669			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.95	n/a	38.40	44.90	41.65	15.6	n/a	n/a	n/a	n/a
S96T004669			% Water by TGA on Perkin Elmer	%	None	None	99.49	n/a	45.44	46.40	45.92	2.09	n/a	n/a	n/a	n/a
S96T004669			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	93.51	<2.32e-02	<2.70e-02	<2.70E-2	n/a	n/a	n/a	3.20e-02	5.00E+02	n/a

=> Limit violated

=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: 19

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004522			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004701			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	94.20	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004701			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004701			% Water by TGA using Mettler	%	None	None	99.34	n/a	72.15	68.73	70.44	4.86	n/a	n/a	n/a
S96T004734	F		Alpha of Digested Solid	uCi/g	None	None	103.0	7.00e-03	1.18e-02	1.11e-02	1.15e-02	6.11	79.94	5.00e-03	5.78E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004672			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	88.93	n/a	17.20	31.40	24.30	58.4	n/a	n/a	n/a
S96T004672			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	68.00	124.0	96.00	58.3	n/a	n/a	n/a
S96T004672			% Water by TGA using Mettler	%	None	None	99.81	n/a	76.59	72.84	74.72	5.02	n/a	n/a	n/a
S96T004672			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	93.51	2.32e-02	6.95e-03	8.41e-03	7.68e-03	19.0	n/a	8.00e-03	8.43E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 154
SEGMENT #: FB

SEGMENT PORTION: Field Blank

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004670			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.8	93.50	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004670			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.8	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004670			% Water by TGA using Mettler	%	None	None	100.2	n/a	1.01e+02	98.27	99.48	2.44	n/a	n/a	n/a
S96T004670			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.58	93.51	<2.32e-02	4.71e-05	<5.75E-5	n/a	n/a	n/a	7.82e-05	1.30E+02

=> Limit violated
=> Selected Limit

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INTERIM

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 1

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004533			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	430.0	n/a	n/a	1.06e+02	0.00e+00	53.00	200	n/a	n/a		n/a
S96T004533			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	430.0	99.33	n/a	65.70	0.00e+00	32.85	200	n/a	n/a		n/a
S96T004533			% Water by TGA on Perkin Elmer	%		None	99.07	n/a	38.69	37.71	38.20	2.57	n/a	n/a		n/a
S96T004594	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	98.70	<1.74e-02	6.59e-02	7.62e-02	7.11e-02	14.5	79.94	2.20e-02		3.67E+01

=> Limit violated
=> Selected Limit

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INTERIM

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 3

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004454			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.720	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004536			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	89.63	n/a	62.40	62.30	62.35	0.16	n/a	n/a	n/a
S96T004536			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	89.70	89.60	89.65	0.11	n/a	n/a	n/a
S96T004536			% Water by TGA using Mettler	%	None	None	98.34	n/a	29.49	31.37	30.43	6.18	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004453			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004534			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004534			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.33	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004534			% Water by TGA on Perkin Elmer	%	None	None	99.07	n/a	34.10	35.61	34.86	4.33	n/a	n/a	n/a
S96T004595	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	98.70	<1.74e-02	7.35e-02	7.22e-02	7.28e-02	1.78	n/a	2.60e-02	3.36E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 4

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004524			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004537			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004537			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	96.66	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004537			% Water by TGA on Perkin Elmer	%	None	None	99.27	n/a	29.72	35.83	32.77	18.6	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004523			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004538			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004538			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	96.66	n/a	0.00e+00	0.00e+00	0.00e+00	200	n/a	n/a	n/a
S96T004538			% Water by TGA on Perkin Elmer	%	None	None	99.27	n/a	25.83	28.81	27.32	10.9	n/a	n/a	n/a
S96T004624	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	98.27	1.22e-02	9.17e-02	1.11e-01	1.01e-01	19.0	91.64	1.40e-02	2.46E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 5

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004455			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004539			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	88.58	n/a	43.50	41.80	42.65	3.99	n/a	n/a	n/a
S96T004539			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	67.80	65.10	66.45	4.06	n/a	n/a	n/a
S96T004539			% Water by TGA using Mettler	%	None	None	99.17	n/a	37.20	34.40	35.80	7.82	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004456			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.750	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004540			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	88.58	n/a	61.70	51.90	56.80	17.3	n/a	n/a	n/a
S96T004540			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	88.80	74.70	81.75	17.2	n/a	n/a	n/a
S96T004540			% Water by TGA using Mettler	%	None	None	99.17	n/a	30.65	30.36	30.50	0.95	n/a	n/a	n/a
S96T004625	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	98.27	1.22e-02	1.26e-01	1.29e-01	1.28e-01	2.35	n/a	1.50e-02	2.26E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 6

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004526			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004541			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	88.93	n/a	84.30	71.90	78.10	15.9	n/a	n/a	n/a
S96T004541			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.27e+02	109.0	118.0	15.3	n/a	n/a	n/a
S96T004541			% Water by TGA using Mettler	%	None	None	98.34	n/a	31.18	36.23	33.70	15.0	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004525			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004542			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	88.93	n/a	67.90	74.80	71.35	9.67	n/a	n/a	n/a
S96T004542			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.03e+02	114.0	108.5	10.1	n/a	n/a	n/a
S96T004542			% Water by TGA using Mettler	%	None	None	98.34	n/a	33.74	34.50	34.12	2.23	n/a	n/a	n/a
S96T004626	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	99.57	<1.11e-02	9.97e-02	9.84e-02	9.90e-02	1.31	n/a	2.70e-02	3.19E+01

=> Limit violated
=> Selected Limit

70

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004458			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004543			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	95.25	n/a	57.80	64.00	60.90	10.2	n/a	n/a	n/a
S96T004543			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	86.20	95.50	90.85	10.2	n/a	n/a	n/a
S96T004543			% Water by TGA using Mettler	%	None	None	99.49	n/a	31.50	34.40	32.95	8.80	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004457			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004535			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	89.63	n/a	55.30	56.50	55.90	2.15	n/a	n/a	n/a
S96T004535			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	83.20	85.00	84.10	2.14	n/a	n/a	n/a
S96T004535			% Water by TGA using Mettler	%	None	None	98.34	n/a	36.06	31.05	33.55	14.9	n/a	n/a	n/a
S96T004596	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	99.57	<1.11e-02	6.01e-02	4.68e-02	5.34e-02	24.9	97.49	2.60e-02	5.00E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004459			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.630	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004544			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004544			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004544			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	26.34	32.32	29.33	20.4	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004460			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.620	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004545			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	95.25	n/a	1.14e+02	100.9	107.3	12.0	n/a	n/a	n/a
S96T004545			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.71e+02	152.0	161.5	11.8	n/a	n/a	n/a
S96T004545 1			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.94e+02	0.00e+00	97.00	200	n/a	n/a	n/a
S96T004545			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.82	n/a	1.29e+02	0.00e+00	64.50	200	n/a	n/a	n/a
S96T004545			% Water by TGA using Mettler	%	None	None	99.92	n/a	31.66	32.22	31.94	1.75	n/a	n/a	n/a
S96T004545			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	40.81	29.55	35.18	32.0	n/a	n/a	n/a
S96T004627	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	108.7	<6.44e-03	7.37e-02	7.69e-02	7.53e-02	4.25	87.19	1.00e-02	2.11E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156

SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004528			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.580	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004546			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004546			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004546			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	21.13	16.53	18.83	24.4	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004547			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.28e+02	196.0	162.0	42.0	n/a	n/a	n/a
S96T004547			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.82	n/a	73.10	112.0	92.55	42.0	n/a	n/a	n/a
S96T004547			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	43.08	42.48	42.78	1.40	n/a	n/a	n/a
S96T004628	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	108.7	<6.44e-03	1.54e-02	6.68e-03	1.10e-02	79.0	n/a	1.00e-02	5.59E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004582			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.2	n/a	28.50	27.80	28.15	2.49	n/a	n/a	n/a
S96T004582			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	53.80	52.40	53.10	2.64	n/a	n/a	n/a
S96T004582			% Water by TGA using Mettler	%	None	None	99.56	n/a	47.02	46.95	46.98	0.15	n/a	n/a	n/a
S96T004582			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	113.9	<2.35e-02	<2.35e-02	<2.35E-2	n/a	n/a	108.9	5.50e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 11

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004548			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	97.36	n/a	22.90	59.90	41.40	89.4	n/a	n/a	n/a	n/a
S96T004548			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	42.90	112.0	77.45	89.2	n/a	n/a	n/a	n/a
S96T004548			% Water by TGA using Mettler	%	None	None	98.45	n/a	46.63	46.57	46.59	0.09	n/a	n/a	n/a	n/a
S96T004629	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	96.97	5.00e-03	3.42e-03	4.90e-03	4.16e-03	35.6	74.37	5.00e-03	1.01E+02	

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004583			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	100.2	n/a	26.10	45.20	35.65	53.6	n/a	n/a	n/a	n/a
S96T004583			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	49.10	85.00	67.05	53.5	n/a	n/a	n/a	n/a
S96T004583			% Water by TGA using Mettler	%	None	None	99.56	n/a	46.75	46.87	46.81	0.26	n/a	n/a	n/a	n/a
S96T004583			Alpha in Liquid Samples	uCi/mL	-1.0e+03	41.80	113.9	<2.35e-02	<2.35e-02	<2.35E-2	n/a	n/a	n/a	5.50e-02	5.00E+02	

=> Limit violated

=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 12

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004462			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004549			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	96.66	n/a	22.30	10.30	16.30	73.6	n/a	n/a	n/a	n/a
S96T004549			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	40.50	18.70	29.60	73.6	n/a	n/a	n/a	n/a
S96T004549			% Water by TGA using Mettler	%	None	None	98.21	n/a	45.89	44.06	44.98	4.07	n/a	n/a	n/a	n/a
S96T004630	F		Alpha of Digested Solid	uCi/g	-1.0e+03	39.10	101.7	5.00e-03	1.07e-02	9.61e-03	1.02e-02	10.7	76.04	9.00e-03	9.03E+01	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T004584			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.24e+02	73.70	98.85	50.9	n/a	n/a	n/a	n/a
S96T004584			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.95	n/a	66.20	39.20	52.70	51.2	n/a	n/a	n/a	n/a
S96T004584			% Water by TGA on Perkin Elmer	%	None	None	99.49	n/a	47.00	46.60	46.80	0.85	n/a	n/a	n/a	n/a
S96T004584			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	113.9	<2.35e-02	<2.35e-02	<2.35E-2	n/a	n/a	n/a	5.50e-02	5.00E+02	n/a

⇒ Limit violated
⇒ Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 13

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004277			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.610	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004279			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.50	n/a	70.10	62.70	66.40	11.1	n/a	n/a	n/a
S96T004279			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	1.33e+02	119.0	126.0	11.1	n/a	n/a	n/a
S96T004279			% Water by TGA using Mettler	%	None	None	98.26	n/a	47.48	47.00	47.24	1.02	n/a	n/a	n/a
S96T004283	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.16	110.0	8.00e-03	1.61e-02	1.06e-02	1.34e-02	41.2	97.77	1.00e-02	7.11E+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004289			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004289			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	99.19	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004289			% Water by TGA on Perkin Elmer	%	None	None	99.76	n/a	47.09	46.98	47.03	0.23	n/a	n/a	n/a
S96T004289			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.98	95.31	1.10e-02	<7.10e-03	<1.20E-2	n/a	n/a	85.52	1.80e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 14

SEGMENT PORTION: L Lower Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T004529		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.580	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004550		DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	96.66	n/a	16.30	29.50	22.90	57.6	n/a	n/a	n/a
S96T004550		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	28.50	51.60	40.05	57.7	n/a	n/a	n/a
S96T004550		% Water by TGA using Mettler	%	None	None	98.21	n/a	41.33	44.21	42.77	6.73	n/a	n/a	n/a
S96T004631	F	Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	101.7	5.00e-03	1.11e-02	7.19e-03	9.15e-03	42.8	n/a	1.10e-02	1.01E+02

Drainable Liquid: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T004585		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	131.0	65.50	200	n/a	n/a	n/a
S96T004585		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.95	n/a	0.00e+00	70.40	35.20	200	n/a	n/a	n/a
S96T004585		% Water by TGA on Perkin Elmer	%	None	None	99.49	n/a	46.02	46.25	46.14	0.50	n/a	n/a	n/a
S96T004585		Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	113.9	<2.35e-02	<2.35e-02	<2.35e-2	n/a	n/a	n/a	5.50e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-C-200, REV. 0

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 15

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004464			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004551			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004551			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.54	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004551			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	45.26	42.98	44.12	5.17	n/a	n/a	n/a
S96T004632	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	116.0	<1.06e-02	<9.62e-03	<9.63E-3	n/a	n/a	77.16	1.20e-02	5.00E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004586			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	89.63	n/a	25.50	27.30	26.40	6.82	n/a	n/a	n/a
S96T004586			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	48.30	51.70	50.00	6.80	n/a	n/a	n/a
S96T004586			% Water by TGA using Mettler	%	None	None	99.92	n/a	46.82	47.53	47.17	1.51	n/a	n/a	n/a
S96T004586			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	103.0	<7.23e-03	<7.23e-03	<7.23E-3	n/a	n/a	103.1	1.50e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 17

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004465			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004552			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004552			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	97.54	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004552			% Water by TGA on Perkin Elmer	%	None	None	99.46	n/a	44.10	41.92	43.01	5.07	n/a	n/a	n/a
S96T004633	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.10	116.0	<1.06e-02	<4.73e-03	<9.56E-3	n/a	n/a	n/a	1.20e-02	5.00E+02

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004587			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	78.60	0.00e+00	39.30	200	n/a	n/a	n/a
S96T004587			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	98.95	n/a	42.12	0.00e+00	21.06	200	n/a	n/a	n/a
S96T004587			% Water by TGA on Perkin Elmer	%	None	None	99.49	n/a	46.46	46.41	46.44	0.11	n/a	n/a	n/a
S96T004587			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.50	113.9	<2.35e-02	<2.35e-02	<2.35E-2	n/a	n/a	n/a	5.50e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. 45-Day Data Summary Report
A-101 (P)

CORE NUMBER: 156
SEGMENT #: 18

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004278			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.600	n/a	n/a	n/a	n/a	5.00e-01	n/a
S96T004280			DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.0	93.50	n/a	51.70	43.90	47.80	16.3	n/a	n/a	n/a
S96T004280			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	93.30	79.20	86.25	16.3	n/a	n/a	n/a
S96T004280			% Water by TGA using Mettler	%	None	None	98.26	n/a	42.11	47.08	44.59	11.1	n/a	n/a	n/a
S96T004284	F		Alpha of Digested Solid	uCi/g	-1.0e+03	35.18	110.0	8.00e-03	1.24e-02	6.35e-03	9.37e-03	64.5	n/a	1.00e-02	9.03e+01

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T004290			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004290			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	480.0	103.2	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S96T004290			% Water by TGA on Perkin Elmer	%	None	None	99.76	n/a	47.29	47.63	47.46	0.72	n/a	n/a	n/a
S96T004290			Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.58	95.31	1.10e-02	<1.03e-02	<7.10E-3	n/a	n/a	91.64	1.80e-02	5.00e+02

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-200, REV. 0

CHAIN OF CUSTODY FORMS

WHC-SD-WM-DP-200, REV. 0

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number: 200W-08-TF (2) Sample Number: 46-278 (3) Supervisor: BOGEN
 (4) Tank: A-101 (5) Riser: 15 (6) Segment: 2 (7) Core: 154 (8) Cask Serial Number: 72

Radiation Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>6.5</u>	<u>2.5</u>	<u>30 after uncorrected</u>	A. Work Package Number: <u>ES-96-00441</u>
Slide Dose Rate	<u>54</u>	<u>30 after uncorrected</u>	<u>30 after uncorrected</u>	B. Cask Seal Number: <u>11139</u>
Bottom Dose Rate	<u>60</u> (<u>620</u>)	<u>220 dpm</u>	<u>220 dpm</u>	C. Sampler Serial Number: <u>75-0563</u>
Significant Contamination	<u>220</u>	<u>220 dpm</u>	<u>220 dpm</u>	D. Date and Time Sampler Unsealed: <u>7/11/96 1822</u>
	(Alpha)	(Alpha)	(Alpha)	E. Expected Liquid Content: <u>30%</u>
	<u>ELK</u>	<u>ELK</u>	<u>ELK</u>	F. Expected Solid Content: <u>70%</u>
	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	G. Dose Rate Through Drill String: <u>1.5 R/hr</u>
RCT* (HPT)	<u>Marty</u>	RCT* (HPT)	<u>12/28</u>	H. Expected Sample Length: <u>17"</u>
	(Signature)		(Signature)	

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

84

(12) Field Comments
WATER w/ LIBA USED AS HEAD FLUID

(13) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Designation <u>222 S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickle</u>	(16) Date/Time <u>8-20-96</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(20) Received By (Sign and PRINT) <u>James Sickle</u>	(21) Date/Time <u>8-20-96</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(24) Received By (Sign and PRINT) <u>James Sickle</u>	(25) Date/Time <u>8-20-96</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(28) Received By (Sign and PRINT) <u>James Sickle</u>	(29) Date/Time <u>8-20-96</u>	(30) Receiver Comments	

(32) Seal Data Consistent with this Record?

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

Shipment No.

Cask Seal No.

Sample No.

☒ Yes ☐ No☒ Yes ☐ No☒ Yes ☐ No

BC-6000-308 10

DISTRIBUTION: White - Office of Sample Management

Yellow - Recipient of Sample

Pink - Core Sampling, 56-05

Goldsboro - Tank Farm Operations, 54-43

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 2004-08-7F (2) Sample Number 96-299 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 3 (7) Core 154 (8) Cask Serial Number 176

Radiation Survey Data:		(31) FIELD	(32) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>1.5</u>	<u>20.5</u>	<u>25 m/hr uncorrected</u>	A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate	<u>70</u>	<u>20 m/hr uncorrected</u>	<u>20 m/hr uncorrected</u>	B. Cask Seal Number <u>11140</u>
Bottom Dose Rate	<u>40</u>	<u>20 m/hr uncorrected</u>	<u>20 m/hr uncorrected</u>	C. Sampler Serial Number <u>95-0805</u>
Smearable Contamination	<u>220</u>	<u>220 dpm</u>	<u>220 dpm</u>	D. Date and Time Sampler Unseated <u>7/14/96</u> <u>2106</u>
	<u>LIK</u>	<u>LIK dpm</u>	<u>LIK dpm</u>	E. Expected Liquid Content <u>30%</u>
	(Alpha)	(Alpha)	(Alpha)	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	G. Dose Rate Through Drill String <u>1.5 R/hr</u>
RCT* (HPT)	<u>Mudg</u>	RCT* (HPT)	<u>5.2</u>	H. Expected Sample Length <u>19"</u>
	(Signature)		(Signature)	

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

(12) Field Comments	(13) Laboratory Comments
<u>WATER w/ LBR USED AS HEAD FLUID</u>	

(12) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>A-101</u>	<u>222 S</u>	<u>James Sickett</u>	<u>8-20-96</u>	
(19) Relinquished By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments	
<u>James Sickett</u>	<u>James Sickett</u>	<u>8-20-96</u>		
(23) Relinquished By (Sign and PRINT)	(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments	
<u>James Sickett</u>	<u>James Sickett</u>	<u>8-20-96</u>		
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

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

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 55-85 Goldenrod - Tank Farm Operations, 54-43

BC-6000-309 (02/94)

WHC-SD-WM-OP-200, REV. 0

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(11) Shipment Number 0000-08-17		(12) Sample Number 76-300	(13) Supervisor B. J. J.	(14) Core 154	(15) Cask Serial Number C1030
(9) Tank A-101		(5) Room 15	(6) Segment 4	(10) Shipment Description ES-95-00441	
Radiation Survey Data: Over Top Dose Rate 4.5 Side Dose Rate 0.6 Bottom Dose Rate 2.20 Removable Contamination 1.18 (Alpha) RCT* (Signature) M. J. J. RCT* (Date) 7/11/96		(13) LABORATORY (Signature) E. J. J. (Date) 7/11/96 (Time) 15:00 (Location) WHC-SD-WM-DP-200			
(11) INFORMATION (include statement of laboratory tests to be performed) 98 (12) Field Comments MASTER N/LR USED AS HEAD FLUID.		(13) Laboratory Comments (14) Laboratory Comments			
(11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)		(11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)			

(16) Seal Intact Upon Release?	Yes ☒ No ☐
(17) Seal Intact Upon Receipt?	Yes ☒ No ☐
Shipment No.	Yes ☒ No ☐
Cask Seal No.	Yes ☒ No ☐
Sample No.	Yes ☒ No ☐
(18) Seal Data Consistent with this Record?	

(11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)
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DISTRIBUTION: White - Office of Sample Management Yellow - Receptors of Sample Pink - Core Sampling, 58-85 Goldened - Tank Farm Operations, 54-43
 BC-6000-308 10

R.G.S.

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

1) Shipment Number 20615-68-17 2) Sample Number 96-301 3) Supervisor R. Frank 4) Tank A 101 5) Rise -15 6) Segment 5 7) Core 154 8) Cask Serial Number 64

radiation Survey Data: (9) FIELD <0.5 Over Top Dose Rate 28.0 Sid e Dose Rate 15.0 Bottom Dose Rate <20 Smearable Contamination <1K

RCT* (HPT) [Signature] (Beta-Gamma) <1K (Alpha) <20 L45

RCT* (HPT) [Signature] (Beta-Gamma) <1K L45 (Alpha) <20 L45

A. Work Package Number ES-96-00441 B. Cask Seal Number 1A339 C. Sampler Serial Number RG-5-021 D. Date and Time Sampler Unsealed 7-12-96 / 0317 E. Expected Liquid Content 30% 30% 19" F. Expected Solid Content 70% G. Dose Rate Through Drill String 1.38 H. Expected Sample Length 19"

(10) Shipment Description (33) LABORATORY

2) Field Comments R.G.S. sampler left on bottom of sample well on bottom of sample sample X-rayed

(14) Destination A 101 (15) Sender Name (Sign and PRINT) James Keith James Sickels

(16) Date/Time 7-11-96 (17) Sender Comments

(18) Date/Time 7-11-96 (19) Receiver Comments

(20) Date/Time 7-11-96 (21) Receiver Comments

(22) Date/Time 7-11-96 (23) Receiver Comments

(24) Date/Time 7-11-96 (25) Receiver Comments

(26) Date/Time 7-11-96 (27) Receiver Comments

(28) Date/Time 7-11-96 (29) Receiver Comments

(30) Date/Time 7-11-96 (31) Receiver Comments

(32) Seal Data Consistent with this Record? Yes (33) Seal No. Yes (34) Seal No. No

(35) Shipment No. Yes (36) Shipment No. No

(37) Cask Seal No. Yes (38) Cask Seal No. No

(39) Sample No. Yes (40) Sample No. No

1) Point of Origin R-15 2) Point of Origin R-15

(1) Relinquished By (Sign and PRINT) James Keith James Sickels (2) Relinquished By (Sign and PRINT) James Keith James Sickels

(3) Relinquished By (Sign and PRINT) James Keith James Sickels (4) Relinquished By (Sign and PRINT) James Keith James Sickels

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(99) Relinquished By (Sign and PRINT) James Keith James Sickels (100) Relinquished By (Sign and PRINT) James Keith James Sickels

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2004-08-7F (2) Sample Number 96-303 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 7 (7) Core 154 (8) Cask Serial Number C2008

Radiation Survey Data:		(9) FIELD	(13) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u><0.5</u>		<u><0.5</u>	A. Work Package Number <u>15-96-00441</u>
Side Dose Rate	<u>25</u>		<u>25 MR/hr</u>	B. Cask Seal Number <u>11141</u>
Bottom Dose Rate	<u>15</u>		<u>20 MR/hr</u>	C. Sampler Serial Number <u>96-95-0799</u>
Smearable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unseated <u>7/12/96 1801</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>30%</u>
	<u><1K</u>		<u><1K</u>	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drift String <u>1.2 R/hr</u>
RCT* (HPT)	<u>[Signature]</u>	RCT* (HPT)	<u>[Signature]</u>	H. Expected Sample Length <u>19"</u>
	(Signature)		(Signature)	

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

68

(12) Field Comments
WATER WITH LIBX USED AS HEAD FLUID.

(13) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>[Signature] R. PRAZNIK for BOGEN</u>	(16) Date/Time <u>7-22-96 1300</u>	(17) Sender Comments <u>2226</u>
(19) Relinquished By (Sign and PRINT) <u>[Signature] R. PRAZNIK</u>	(20) Received By (Sign and PRINT) <u>[Signature] J. [Name]</u>	(21) Date/Time <u>7-22-96 1300</u>	(22) Receiver Comments <u>2226</u>	
(23) Relinquished By (Sign and PRINT) <u>[Signature] J. [Name]</u>	(24) Received By (Sign and PRINT) <u>[Signature] E. [Name]</u>	(25) Date/Time <u>7-22-96 1300</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

(32) Seal Data Consistent with this Record?

☒ Yes☐ No☒ Yes☐ No

Shipment No.

☒ Yes☐ No

Cask Seal No.

☒ Yes☐ No

Sample No.

☒ Yes☐ No

WHC-SD-WM-DF-200, REV. 0

RGS

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-087F (2) Sample Number 96-304 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 8 (7) Core 154 (8) Cask Serial Number C2009

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>10.5</u>		<u>20.5</u>	A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate	<u>20.0</u>		<u>16 mR/hr</u>	B. Cask Seal Number <u>11124</u>
Bottom Dose Rate	<u>12.0</u>		<u>10 mR/hr</u>	C. Sampler Serial Number <u>RGS 025</u>
Removable Contamination	<u><20</u>		<u>120 LHS</u>	D. Date and Time Sampler Unseated <u>7/12/96 1855</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>30%</u>
	(Beta-Gamma)		(Beta-Gamma)	F. Expected Solid Content <u>70%</u>
RCT* (HPT)	<u>[Signature]</u>	RCT* (HPT)	<u>[Signature]</u>	G. Dose Rate Through Drill String <u>900 mR/hr</u>
	(Signature)		(Signature)	H. Expected Sample Length <u>19"</u>

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

12) Field Comments

WATER WITH LHT USED AS HEAD FLUID
 KRI SHOWED 12" RECOVERY

13) Laboratory Comments

13) Point of Origin <u>A-101</u>	14) Destination <u>2223</u>	15) Sender Name (Sign and PRINT) <u>James Sickels</u>	16) Date/Time <u>7-16-96</u>	17) Sender Comments
19) Relinquished By (Sign and PRINT) <u>James Sickels</u>	20) Received By (Sign and PRINT) <u>[Signature]</u>	21) Date/Time <u>7-16-96</u>	22) Receiver Comments	
23) Relinquished By (Sign and PRINT) <u>[Signature]</u>	24) Received By (Sign and PRINT) <u>[Signature]</u>	25) Date/Time <u>7-16-96</u>	26) Receiver Comments	
27) Relinquished By (Sign and PRINT) <u>[Signature]</u>	28) Received By (Sign and PRINT) <u>[Signature]</u>	29) Date/Time <u>7-16-96</u>	30) Receiver Comments	

(18) Seal Intact Upon Release?

☐ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

(32) Seal Date Consistent with this Record?

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

--- SAMPLING

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLE

(1) Shipment Number: 2000-08-7F

(4) Tank: A-101

(13) Radiation Survey Data:

Over Top Dose Rate: <0.45

Side Dose Rate: 0.6

Bottom Dose Rate: 0.8

Enneable Contamination: 5.20

(3) Supervisor: 157

(7) Core: 9

(10) Segment: LABORATORY

(11) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(8) Cask Serial Number: 65-5C-00441

(12) Sample Number: 96-305

(14) Field: 15

(16) Field: 15

(17) Core: 9

(18) Field: 15

(19) Field: 15

(20) Field: 15

(21) Field: 15

(22) Field: 15

(23) Field: 15

(24) Field: 15

(25) Field: 15

(26) Field: 15

(27) Field: 15

(28) Field: 15

(29) Field: 15

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(95) Field: 15

(96) Field: 15

(97) Field: 15

(98) Field: 15

(99) Field: 15

(100) Field: 15

(1) Shipment Number: 2000-08-7F

(4) Tank: A-101

(13) Radiation Survey Data:

Over Top Dose Rate: <0.45

Side Dose Rate: 0.6

Bottom Dose Rate: 0.8

Enneable Contamination: 5.20

(3) Supervisor: 157

(7) Core: 9

(10) Segment: LABORATORY

(11) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(8) Cask Serial Number: 65-5C-00441

(12) Sample Number: 96-305

(14) Field: 15

(16) Field: 15

(17) Core: 9

(18) Field: 15

(19) Field: 15

(20) Field: 15

(21) Field: 15

(22) Field: 15

(23) Field: 15

(24) Field: 15

(25) Field: 15

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(15) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(16) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(17) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

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(29) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(30) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(31) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

(32) Field Comments: WATER WITH LIBA USED AS HEAD FLUID.

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-48-7E (2) Sample Number 96-306 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 10 (7) Core 154 (8) Cask Serial Number C2011

Radiation Survey Data: (9) FIELD Over Top Dose Rate <u>105</u> Side Dose Rate <u>30</u> Bottom Dose Rate <u>16</u> Smearable Contamination <u>220</u> (Alpha) <u>1K</u> (Beta-Gamma) <u>[Signature]</u> RCT* (HPT) <u>[Signature]</u>		(33) LABORATORY Over Top Dose Rate <u>105 mR/hr</u> Side Dose Rate <u>25 mR/hr</u> Bottom Dose Rate <u>20 mR/hr</u> Smearable Contamination <u>220</u> (Alpha) <u>1K</u> (Beta-Gamma) <u>[Signature]</u> RCT* (HPT) <u>[Signature]</u>		(10) Shipment Description A. Work Package Number <u>ES-96-00441</u> B. Cask Seal Number <u>1143</u> C. Sampler Serial Number <u>95-1055</u> D. Date and Time Sampler Unseated <u>7/12/96 2125</u> E. Expected Liquid Content <u>30%</u> F. Expected Solid Content <u>70%</u> G. Dose Rate Through Drill String <u>1.4 R/hr</u> H. Expected Sample Length <u>19"</u>	
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(11) INFORMATION (Include statement of laboratory tests to be performed.)

92

(12) Field Comments <u>WATER w/ LIPID USED AS HEAD FLUID</u>		(34) Laboratory Comments	
(13) Point of Origin <u>A-101</u>	(14) Destination <u>222 S</u>	(15) Sender Name (Sign and PRINT) <u>[Signature] R. J. PRAZNIK</u>	(16) Date/Time <u>7-22-96 1501</u>
(17) Relinquished By (Sign and PRINT) <u>[Signature] R. J. PRAZNIK</u>		(18) Receiver Name (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>	(19) Date/Time <u>7-22-96 1501</u>
(20) Relinquished By (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>		(21) Receiver Name (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>	(22) Date/Time <u>7-22-96 1501</u>
(23) Relinquished By (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>		(24) Receiver Name (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>	(25) Date/Time <u>7-22-96 1501</u>
(26) Relinquished By (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>		(27) Receiver Name (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>	(28) Date/Time <u>7-22-96 1501</u>
(29) Relinquished By (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>		(30) Receiver Name (Sign and PRINT) <u>[Signature] J. E. DICKERSON</u>	(31) Date/Time <u>7-22-96 1501</u>
(32) Seal Intact Upon Release? ☒ Yes ☐ No		(33) Seal Intact Upon Receipt? ☒ Yes ☐ No	
(34) Shipment No. ☒ Yes ☐ No		(35) Cask Seal No. ☒ Yes ☐ No	
(36) Sample No. ☒ Yes ☐ No		(37) Sample No. ☒ Yes ☐ No	

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07/22/96

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08TF (2) Sample Number 96-307 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 11 (7) Core 154 (8) Cask Serial Number C2015

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description	
Over Top Dose Rate	<u><0.5</u>		<u><0.5 mR/hr</u>	A. Work Package Number	<u>ES-9600441</u>
Side Dose Rate	<u>7.0</u>		<u>7.0 mR/hr</u>	B. Cask Seal Number	<u>11144</u>
Bottom Dose Rate	<u>10</u>		<u>10 mR/hr</u>	C. Sampler Serial Number	<u>95-0495</u>
Smearable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unseated	<u>7/12/96 0453</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content	<u>30%</u>
	<u><1K</u>		<u><1K</u>	F. Expected Solid Content	<u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drill String	<u>200 mR/hr</u>
RCT* (HPT)	<u>[Signature]</u>	RCT* (HPT)	<u>[Signature]</u>	H. Expected Sample Length	<u>19"</u>
	(Signature)		(Signature)		

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

93

(12) Field Comments <u>WATER w/ L.B.F. USED AS HEAVY FLUID</u>	(13) Laboratory Comments
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(13) Point of Origin <u>A-101</u>	(14) Destination <u>222 S</u>	(15) Sender Name (Sign and PRINT) <u>DAVID J KEANE</u>	(16) Date/Time <u>7-27-96 0730</u>	(17) Sender Comments <u>7-27-96</u>
(19) Relinquished By (Sign and PRINT) <u>DAVID J KEANE</u>	(20) Received By (Sign and PRINT) <u>DAVID J KEANE</u>	(21) Date/Time <u>7-27-96 0730</u>	(22) Receiver Comments <u>7-27-96</u>	
(23) Relinquished By (Sign and PRINT) <u>DAVID J KEANE</u>	(24) Received By (Sign and PRINT) <u>FEDELES</u>	(25) Date/Time <u>7-27-96 1115</u>	(26) Receiver Comments	
(27) 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? ☒ Yes ☐ No		

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 2000-08-TF (2) Sample Number 96-308 (3) Supervisor R. Lusk East
 (4) Tank A 101 (5) R ser 15 (6) Section 12 (7) Core 154 (8) Cask Serial Number 316

(9) FIELD		(10) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>0.8 mrem</u>	Over Top Dose Rate	<u>0.8 mrem</u>	A. Work Package Number	<u>ES-96-00441</u>
Side Dose Rate	<u>46 mrem</u>	Side Dose Rate	<u>46 mrem</u>	B. Cask Seal Number	<u>7-12-96 10309</u>
Bottom Dose Rate	<u>15 mrem</u>	Bottom Dose Rate	<u>15 mrem</u>	C. Sampler Serial Number	<u>RGS-026</u>
Smearable Contamination	<u><20</u>	Smearable Contamination	<u><20</u>	D. Date and Time Sampler Unseated	<u>7-12-96 0555</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content	<u>30%</u>
	(Beta-Gamma)		(Beta-Gamma)	F. Expected Solid Content	<u>70%</u>
RCT (H-T)	<u>1/8</u>	RCT (H-T)	<u>1/8</u>	G. Dose Rate Through Drill String	<u>2.0R</u>
	(Signature)		(Signature)	H. Expected Sample Length	<u>19"</u>

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

(12) File Id Comments		(13) Laboratory Comments	
<u>RGS sample</u> <u>sample X-rayed</u> <u>Lithium Bromide 1500mb added.</u>			
(14) Point of Origin <u>R-15</u>	(15) Destination <u>2225 Lab</u>	(16) Sender Name (Sign and PRINT)	(17) Date/Time <u>7-12-96</u>
(18) Receiver Name (Sign and PRINT)	(19) Receiver Name (Sign and PRINT)	(20) Receiver Name (Sign and PRINT)	(21) Date/Time <u>7-12-96</u>
(22) Receiver Name (Sign and PRINT)	(23) Receiver Name (Sign and PRINT)	(24) Receiver Name (Sign and PRINT)	(25) Date/Time <u>7-12-96</u>
(26) Receiver Name (Sign and PRINT)	(27) Receiver Name (Sign and PRINT)	(28) Receiver Name (Sign and PRINT)	(29) Date/Time
(30) Receiver Name (Sign and PRINT)	(31) Receiver Name (Sign and PRINT)	(32) Receiver Name (Sign and PRINT)	(33) Receiver Name (Sign and PRINT)
(34) Seal Intact Upon Release?	(35) Seal Intact Upon Receipt?	(36) Seal Date Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43

SC-8000-309 02/94

COP

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2000-08-TF (2) Sample Number 96-309 (3) Supervisor R. Frank Frost
 (4) Tank A 101 (5) Riser 15 (6) Segment 13 (7) Core 154 (8) Cask Serial Number C-2003

Radiation Survey Data:

Over Top Dose Rate
 Side Dose Rate
 Bottom Dose Rate
 Smearable Contamination

(9) FIELD

<0.5

43

13

<20

(Alpha)

<1K

(Beta-Gamma)

RCT*
(HPT)

(Signature)

(33) LABORATORY

<0.5 mR/hr

38 mR/hr

20 mR/hr

<20

(Alpha)

<1K

(Beta-Gamma)

RCT*
(HPT)

(Signature)

(10) Shipment Description

A. Work Package Number

ES-96-00441

B. Cask Seal Number

10310

C. Sampler Serial Number

95-1025

D. Date and Time Sampler Unseated

7-17-96/1133

E. Expected Liquid Content

30%

F. Expected Solid Content

70%

G. Dose Rate Through Drill String

1.5 R

H. Expected Sample Length

19"

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

95

(12) Field Comments

1500 ml lithium Bromide added
sample clean - no water
no x-ray

(34) Laboratory Comments

(13) Point of Origin R-15

(14) Destination

222S Lab.

(15) Sender Name (Sign and PRINT)

David J Keane for F. Frost

(16) Date/Time

7-29-96/1305

(17) Sender Comments

(18) Relinquished By (Sign and PRINT)

David J Keane

(20) Received By (Sign and PRINT)

David J Keane

(21) Date/Time

7-29-96/0910

(22) Receiver Comments

(23) Relinquished By (Sign and PRINT)

David J Keane

(24) Received By (Sign and PRINT)

E. E. Dukes

(25) Date/Time

7-27-96/1415

(26) Receiver Comments

(27) Relinquished By (Sign and PRINT)

(28) Received By (Sign and PRINT)

(29) Date/Time

(30) Receiver Comments

(18) Seal Intact Upon Release?

☒ Yes

☐ No

(31) Seal Intact Upon Receipt?

☒ Yes

☐ No

Shipment No.

☒ Yes

☐ No

(32) Seal Date Consistent with this Record?

Cask Seal No.

☒ Yes

☐ No

Sample No.

☒ Yes

☐ No

WHC-SD-WM-CP-200, REV. 0

005

509 373 1432

14:25

07-29-96

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-310 (3) Supervisor R. Frank Frost (8) Cask Serial Number 60
 (4) Tank A 101 (5) Riser 15 (6) Segment 14 (7) Core 154

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u><0.5</u>		<u><0.5 mR/hr</u>	A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate	<u>43 mR/hr</u>		<u>45 mR/hr</u>	B. Cask Seal Number <u>10311</u>
Bottom Dose Rate	<u>13 mR/hr</u>		<u>20 mR/hr</u>	C. Sampler Serial Number <u>95-093S</u>
Smearable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unseated <u>7-17-96 / 1248</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>30%</u>
	<u><1K</u>		<u><1K</u>	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drill String <u>2-R</u>
RCT* (HPT)	<u>[Signature]</u>	RCT* (HPT)	<u>[Signature]</u>	H. Expected Sample Length <u>19"</u>
	(Signature)		(Signature)	

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

(12) Field Comments <u>1500 mb Lithium Bromide added no X-ray samples clean</u>		(34) Laboratory Comments	
(13) Point of Origin <u>R-15</u>	(14) Destination <u>2225 LAR</u>	(15) Sender Name (Sign and PRINT) <u>David J Keane</u>	(16) Date/Time <u>7-22-96</u>
(19) Relinquished By (Sign and PRINT) <u>David J Keane</u>	(20) Received By (Sign and PRINT) <u>David J Keane</u>	(21) Date/Time <u>7-22-96</u>	(17) Sender Comments <u>7-22-96</u>
(23) Relinquished By (Sign and PRINT) <u>David J Keane</u>	(24) Received By (Sign and PRINT) <u>David J Keane</u>	(25) Date/Time <u>7-22-96</u>	(22) Receiver Comments <u>7-22-96</u>
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(26) Receiver Comments
(18) Seal Intact Upon Release? ☒ Yes ☐ No		(32) Seal Data Consistent with this Record? ☒ Yes ☐ No	
(31) Seal Intact Upon Receipt? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No	
		Cask Seal No. ☒ Yes ☐ No	
		Sample No. ☐ Yes ☐ No	

WHC-SD-WM-DP-200, REV. 0

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

SHIPMENT Number <u>20NW-08-TF</u>	(2) Sample Number <u>96-311</u>	(3) Supervisor <u>BOGEN</u>
Tank <u>A-101</u>	(5) Riser <u>15</u>	(7) Core <u>154</u>
(6) Segment <u>15</u>	(8) Cask Serial Number <u>12805</u>	
(10) Shipment Description		
A. Work Package Number <u>ES-76-0041</u>		
B. Cask Seal Number <u>11146</u>		
C. Sampler Serial Number <u>95-0915</u>		
D. Date and Time Sampler Unseated <u>7/18/96 0119</u>		
E. Expected Liquid Content <u>30%</u>		
F. Expected Solid Content <u>70%</u>		
G. Dose Rate Through Drill String <u>1.8 R/k</u>		
H. Expected Sample Length <u>19"</u>		
(11) INFORMATION (Include statement of laboratory tests to be performed.)		

(12) Field Comments <u>WATER w/ LiBr TRACER USED AS HEAD FLUID</u>		(13) Laboratory Comments	
(13a) Point of Origin <u>A-101</u>	(14) Destination <u>222 S</u>	(15) Sample Name (Sign and PRINT) <u>James Michael James Seckels</u>	(16) Date/Time <u>7-19-96</u>
(17) Relinquished By (Sign and PRINT) <u>James Michael James Seckels</u>	(18) Received By (Sign and PRINT) <u>James Michael James Seckels</u>	(19) Date/Time <u>7-19-96</u>	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT) <u>James Michael James Seckels</u>	(22) Received By (Sign and PRINT) <u>James Michael James Seckels</u>	(23) Date/Time <u>7-19-96</u>	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT) <u>James Michael James Seckels</u>	(26) Received By (Sign and PRINT) <u>James Michael James Seckels</u>	(27) Date/Time <u>7-19-96</u>	(28) Receiver Comments
(18) Seal Intact Upon Release? ☒ Yes ☐ No		(32) Seal Date Consistent with this Record? ☒ Yes ☐ No	
(31) Seal Intact Upon Receipt? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No	
DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, SG-85		Goldenrod - Tank Farm Operations, S4-43	

WHC-SD-WM-OP-200, REV. 0

07/19/96

15:11

509 373 1432

023

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 20-W-08-TE (2) Sample Number 96-312 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 15 (6) Segment 16 (7) Core 154 (8) Cask Serial Number 12016

Radiation Survey Date: (9) FIELD (33) LABORATORY

Over Top Dose Rate	<u>10.5</u>	<u>10.5</u>
Side Dose Rate	<u>40</u>	<u>38</u>
Bottom Dose Rate	<u>15</u>	<u>20</u>
Smearable Contamination	<u>120</u>	<u>20</u>
	(Alpha)	(Alpha)
	<u>1K</u>	<u>1K</u>
	(Beta-Gamma)	(Beta-Gamma)
RCT* (HPT)	(Signature)	RCT* (HPT) (Signature)

(10) Shipment Description

A. Work Package Number	<u>ES-96-00441</u>
B. Cask Seal Number	<u>1150</u>
C. Sampler Serial Number	<u>95-1055</u>
D. Date and Time Sampler Unseated	<u>7/18/96 0245</u>
E. Expected Liquid Content	<u>302</u>
F. Expected Solid Content	<u>702</u>
G. Dose Rate Through Drill String	<u>1.8 R/hr</u>
H. Expected Sample Length	<u>19"</u>

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

86

(12) Field Comments

WATER w/ LIPY USED AS HEAD FLUID

(34) Laboratory Comments

(13) Point of Origin

(14) Destination

(15) Sender Name (Sign and PRINT)

(16) Date/Time

(17) Sender Comments

(18) Relinquished By (Sign and PRINT)

(19) Relinquished By (Sign and PRINT)

(20) Received By (Sign and PRINT)

(21) Date/Time

(22) Receiver Comments

(23) Relinquished By (Sign and PRINT)

(24) Relinquished By (Sign and PRINT)

(25) Received By (Sign and PRINT)

(26) Date/Time

(27) Receiver Comments

(28) Date/Time

(29) Receiver Comments

(30) Date/Time

(31) Receiver Comments

(32) Seal Data Consistent with this Record?

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

Shipment No.

Cask Seal No.

Sample No.

☒ Yes ☐ No☒ Yes ☐ No☒ Yes ☐ No☒ Yes ☐ No☒ Yes ☐ No

Management

Yellow - Recipient of Sample

Pink - Core Sampling, S6-85

Goldenrod - Tank Farm Operations, S4-43

BC-2000 31

WHC-SD-WM-DF-200, REV. 0

007

509 373 1432

14:26

07/22/96

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 76-313 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Risor 15 (6) Segment 17 (7) Core 154 (8) Cask Serial Number 1007C

Radiation Survey Date:		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>5 mrem/hr at C</u>	<u>1.3 mR/hr</u>		A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate	<u>6 mrem/hr at C</u>	<u>4 mR/hr</u>		B. Cask Seal Number <u>11151</u>
Bottom Dose Rate	<u>3 mrem/hr at C</u>	<u>4.5 mR/hr</u>		C. Sampler Serial Number <u>95-0445</u>
Removable Contamination	<u>200 DPM/100 cm²</u>	<u>200 DPM</u>		D. Date and Time Sampler Unseated <u>7/18/96 0617</u>
	(Alpha)	(Alpha)		E. Expected Liquid Content <u>30%</u>
	<u>41,000 DPM/100 cm²</u>	<u>416 DPM</u>		F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)	(Beta-Gamma)		G. Dose Rate Through Drill String <u>100 mR/hr</u>
RCT* <u>DP Dorison</u>	(Signature)	RCT* <u>SA</u>	(Signature)	H. Expected Sample Length <u>17"</u>
(HPI)		(HPI)		

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

(12) Field Comments

WATER W/ LIBR TRACER USED AS HEAD FLUID

(13) Laboratory Comments

(13) Point of Origin

A-101

(14) Destination

222S

(15) Sample Name (Sign and PRINT)

James Sickle's James Sickle's

(16) Date/Time

8-19-96

(17) Sender Comments

(18) Transmitted By (Sign and PRINT)

James Sickle's James Sickle's

(19) Received By (Sign and PRINT)

James Sickle's James Sickle's

(20) Date/Time

8-19-96

(21) Receiver Comments

(22) Relinquished By (Sign and PRINT)

James Sickle's James Sickle's

(23) Received By (Sign and PRINT)

AL Chambers AL Chambers

(24) Date/Time

8/18/96

(25) Receiver Comments

(26) Relinquished By (Sign and PRINT)

James Sickle's James Sickle's

(27) Received By (Sign and PRINT)

AL Chambers AL Chambers

(28) Date/Time

8/18/96

(29) Receiver Comments

(30) Seal Intact Upon Release?

☒ Yes

☐ No

(31) Seal Intact Upon Receipt?

☒ Yes

☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-85 Goldenrod - Tarr Farm Operations, 54-43 BC-6000-309 802F

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-08-TF (2) Sample Number 96-314 (3) Supervisor R. Frank East
 (4) Tank A 101 (5) Riser 15 (6) Segment 18 (7) Core 154 (8) Cask Serial Number C-1045

Radiation Survey Data:		(9) FIELD	(10) LABORATORY	(10) Shipment Description
Over Top Dose Rate		<u>2.5</u>	<u>20.5</u>	A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate		<u>96</u>	<u>30 m/hr uncorrected</u>	B. Cask Seal Number <u>10355</u>
Bottom Dose Rate		<u>20 (FNU)</u>	<u>10 m/hr uncorrected</u>	C. Sampler Serial Number <u>95-0598</u>
Smearable Contamination		<u>220</u>	<u><20 dpm</u>	D. Date and Time Sampler Unseated <u>7-18-96 / 1024</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>30%</u>
	<u>214</u>		<u><1K dpm</u>	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drill String <u>2R</u>
ACT* <u>Mulligan</u>		ACT* <u>5-1207</u>		H. Expected Sample Length <u>19"</u>
(HPT)	(Signature)	(HPT)	(Signature)	

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

100

(12) Field Comments

Called 15 agmt. lithium bromide & 2 gal. requested by Cop. Engineer.
② Waste on bottom of sampler
③ sample X-rayed 7-19-96 → new seal & as sealed above.

(13) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>James Sicket James Sicket</u>	(16) Date/Time <u>7-21-96</u>	(17) Sender Comments
(19) Requisitioned By (Sign and PRINT) <u>James Sicket James Sicket</u>	(20) Received By (Sign and PRINT) <u>Robert J. Eastman</u>	(21) Date/Time <u>8-20-96</u>	(22) Receiver Comments	
(23) Requisitioned By (Sign and PRINT) <u>Robert J. Eastman</u>	(24) Received By (Sign and PRINT) <u>RL Chamber</u>	(25) Date/Time <u>8/20/96</u>	(26) Receiver Comments	
(27) Requisitioned 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 Date Consistent with this Record? ☒ Yes ☐ No
Shipment No. ☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-85 Goldenrod - Tank Farm Operations, 54-43

8C-6000-308 (02/94)

RG S

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1. Number 20062-28-TF 2. Sample Number 96-315 3. Supervisor R. L. Lusk, Jr. 4. 74

5. Survey Date A101 6. Riser 15 7. Core 154 8. Cask Serial Number

9. Top Core Rate < 0.5 mrem 10. Segment 19 11. Shipment Description ES-96-00441

12. Core Rate 12 mrem 13. F.E.L.D. < 0.5 mrem 14. Work Package Number 10351

15. Core Rate 3.6 mrem 16. (Alpha) 4 8 mrem 17. Cask Seal Number RB5-030

18. Core Rate < 20 19. (Beta-Gamma) < 10 20. Sampler Serial Number 7-18-96/1222

19. Core Rate < 1K 21. (Alpha) < 1K 22. Date and Time Sampler Unsealed 30%

23. Core Rate < 1K 24. (Alpha) < 1K 25. Expected Liquid Content 70%

26. Core Rate < 1K 27. (Alpha) < 1K 28. Expected Solid Content 470 MR

29. Core Rate < 1K 30. (Alpha) < 1K 31. Dose Rate Through Drill String 19

32. Core Rate < 1K 33. (Alpha) < 1K 34. Expected Sample Length

35. Core Rate < 1K 36. (Alpha) < 1K

37. Core Rate < 1K 38. (Alpha) < 1K

39. Core Rate < 1K 40. (Alpha) < 1K

41. Core Rate < 1K 42. (Alpha) < 1K

43. Core Rate < 1K 44. (Alpha) < 1K

45. Core Rate < 1K 46. (Alpha) < 1K

47. Core Rate < 1K 48. (Alpha) < 1K

49. Core Rate < 1K 50. (Alpha) < 1K

51. Core Rate < 1K 52. (Alpha) < 1K

53. Core Rate < 1K 54. (Alpha) < 1K

55. Core Rate < 1K 56. (Alpha) < 1K

57. Core Rate < 1K 58. (Alpha) < 1K

59. Core Rate < 1K 60. (Alpha) < 1K

61. Core Rate < 1K 62. (Alpha) < 1K

63. Core Rate < 1K 64. (Alpha) < 1K

65. Core Rate < 1K 66. (Alpha) < 1K

67. Core Rate < 1K 68. (Alpha) < 1K

69. Core Rate < 1K 70. (Alpha) < 1K

71. Core Rate < 1K 72. (Alpha) < 1K

73. Core Rate < 1K 74. (Alpha) < 1K

75. Core Rate < 1K 76. (Alpha) < 1K

77. Core Rate < 1K 78. (Alpha) < 1K

79. Core Rate < 1K 80. (Alpha) < 1K

81. Core Rate < 1K 82. (Alpha) < 1K

83. Core Rate < 1K 84. (Alpha) < 1K

85. Core Rate < 1K 86. (Alpha) < 1K

87. Core Rate < 1K 88. (Alpha) < 1K

89. Core Rate < 1K 90. (Alpha) < 1K

91. Core Rate < 1K 92. (Alpha) < 1K

93. Core Rate < 1K 94. (Alpha) < 1K

95. Core Rate < 1K 96. (Alpha) < 1K

97. Core Rate < 1K 98. (Alpha) < 1K

99. Core Rate < 1K 100. (Alpha) < 1K

101. Core Rate < 1K 102. (Alpha) < 1K

103. Core Rate < 1K 104. (Alpha) < 1K

105. Core Rate < 1K 106. (Alpha) < 1K

107. Core Rate < 1K 108. (Alpha) < 1K

109. Core Rate < 1K 110. (Alpha) < 1K

111. Core Rate < 1K 112. (Alpha) < 1K

113. Core Rate < 1K 114. (Alpha) < 1K

115. Core Rate < 1K 116. (Alpha) < 1K

117. Core Rate < 1K 118. (Alpha) < 1K

119. Core Rate < 1K 120. (Alpha) < 1K

121. Core Rate < 1K 122. (Alpha) < 1K

123. Core Rate < 1K 124. (Alpha) < 1K

125. Core Rate < 1K 126. (Alpha) < 1K

127. Core Rate < 1K 128. (Alpha) < 1K

129. Core Rate < 1K 130. (Alpha) < 1K

131. Core Rate < 1K 132. (Alpha) < 1K

133. Core Rate < 1K 134. (Alpha) < 1K

135. Core Rate < 1K 136. (Alpha) < 1K

137. Core Rate < 1K 138. (Alpha) < 1K

139. Core Rate < 1K 140. (Alpha) < 1K

141. Core Rate < 1K 142. (Alpha) < 1K

143. Core Rate < 1K 144. (Alpha) < 1K

145. Core Rate < 1K 146. (Alpha) < 1K

147. Core Rate < 1K 148. (Alpha) < 1K

149. Core Rate < 1K 150. (Alpha) < 1K

151. Core Rate < 1K 152. (Alpha) < 1K

153. Core Rate < 1K 154. (Alpha) < 1K

155. Core Rate < 1K 156. (Alpha) < 1K

157. Core Rate < 1K 158. (Alpha) < 1K

159. Core Rate < 1K 160. (Alpha) < 1K

161. Core Rate < 1K 162. (Alpha) < 1K

163. Core Rate < 1K 164. (Alpha) < 1K

165. Core Rate < 1K 166. (Alpha) < 1K

167. Core Rate < 1K 168. (Alpha) < 1K

169. Core Rate < 1K 170. (Alpha) < 1K

171. Core Rate < 1K 172. (Alpha) < 1K

173. Core Rate < 1K 174. (Alpha) < 1K

175. Core Rate < 1K 176. (Alpha) < 1K

177. Core Rate < 1K 178. (Alpha) < 1K

179. Core Rate < 1K 180. (Alpha) < 1K

181. Core Rate < 1K 182. (Alpha) < 1K

183. Core Rate < 1K 184. (Alpha) < 1K

185. Core Rate < 1K 186. (Alpha) < 1K

187. Core Rate < 1K 188. (Alpha) < 1K

189. Core Rate < 1K 190. (Alpha) < 1K

191. Core Rate < 1K 192. (Alpha) < 1K

193. Core Rate < 1K 194. (Alpha) < 1K

195. Core Rate < 1K 196. (Alpha) < 1K

197. Core Rate < 1K 198. (Alpha) < 1K

199. Core Rate < 1K 200. (Alpha) < 1K

201. Core Rate < 1K 202. (Alpha) < 1K

203. Core Rate < 1K 204. (Alpha) < 1K

205. Core Rate < 1K 206. (Alpha) < 1K

207. Core Rate < 1K 208. (Alpha) < 1K

209. Core Rate < 1K 210. (Alpha)

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

2) Field Comments:

RG-5 sampler
sampler 4-sayed.
sampler sixty

(34) Laboratory Comments

(13) Point of Origin <i>R-15</i> (14) Destination <i>2225 LWB</i> <i>A 10V</i>		(15) Sender Name (Sign and PRINT) <i>James Sicks</i>		(16) Date/Time <i>7-17-96</i>		(17) Sender Comments	
(19) Requisitioned By (Sign and PRINT) <i>James Sicks</i>		(20) Received By (Sign and PRINT) <i>James Sicks</i>		(21) Date/Time <i>7-17-96</i>		(22) Receiver Comments	
(23) Requisitioned By (Sign and PRINT) <i>James Sicks</i>		(24) Received By (Sign and PRINT) <i>James Sicks</i>		(25) Date/Time <i>7-17-96</i>		(26) Receiver Comments	
(27) Requisitioned By (Sign and PRINT) <i>James Sicks</i>		(28) Received By (Sign and PRINT) <i>James Sicks</i>		(29) Date/Time <i>7-17-96</i>		(30) Receiver Comments	
(18) Seal Intact Upon Release? ☒ Yes ☐ No				(31) Seal Intact Upon Receipt? ☒ Yes ☐ No			
(32) Seal Data Consistent with this Receipt?				Cash Seal No. ☒ Yes ☐ No			
Office of Sample Management Yellow - Recipient of Sample				Pink - Core Sampling, 56-65 Goldenrod - Tank Farm Operations, 54-43			

☒ Yes ☐ No

DISTRIBUTION: WNI - Office of Sample Management

Yellow - Recipient of Sample

Rich., Core Sampling, 50-51

Goldenrod - Tank Farm Operations, S4-43

Sample No. 71

BC-6000-309 102/94

~~WHC-SD-WM-DP-200, REV. 0~~

101

COOL

DEPARTMENT OF THE ARMY

Continued - York Farm Operations, S4-43

CONSTITUTION: White - Office of Sample Management

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number N/A (2) Sample Number HHE (3) Supervisor R. Frank Frost
 (4) Tank A 101 (5) Riser 15 (6) Segment HHE (7) Core 154 (8) Cask Serial Number BOTTLE

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate				A. Work Package Number <u>ES-96-00441</u>
Side Dose Rate				B. Cask Seal Number <u>10353</u>
Bottom Dose Rate				C. Sampler Serial Number <u>N/A</u>
Smearable Contamination				D. Date and Time Sampler Unsealed <u>7-18-96 / 1145</u>
				E. Expected Liquid Content <u>100%</u>
				F. Expected Solid Content <u>---</u>
				G. Dose Rate Through Drill String <u>---</u>
				H. Expected Sample Length <u>---</u>

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

(2) Field Comments <u>HHE = Blank Lithium Bromide sample.</u>	(34) Laboratory Comments
--	--------------------------

(3) Point of Origin <u>HHE</u>	(14) Destination <u>222S Lab.</u>	(15) Sender Name (Sign and PRINT) <u>James Sicks</u>	(16) Date/Time <u>7-23-96</u>	(17) Sender Comments
(4) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(18) Received By (Sign and PRINT) <u>James Sicks</u>	(20) Received By (Sign and PRINT) <u>James Sicks</u>	(21) Date/Time <u>7-23-96</u>	(22) Receiver Comments
(5) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(19) Received By (Sign and PRINT) <u>James Sicks</u>	(23) Received By (Sign and PRINT) <u>James Sicks</u>	(24) Date/Time <u>7-23-96</u>	(25) Receiver Comments
(6) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Received By (Sign and PRINT)	(28) Date/Time	(29) Receiver Comments

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. <u>N/A</u> ☐ Yes ☐ No	(32) Seal Date Consistent with this Record? Cask Seal No. <u>N/A</u> ☐ Yes ☐ No	Sample No. ☒ Yes ☐ No
---	---	---	---	---

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-336 (3) Supervisor M. C. JONES **COPY**
 (4) Tank A-101 (5) Riser 24 (6) Segment 1 (7) Core 156 (8) Cask Seal Number 249

Radiation Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>.5 mrem/hr at C</u>	<u>1 mrem/hr</u>	A. Work Package Number	<u>ES-96-00443</u>
Side Dose Rate	<u>16 mrem/hr at C</u>	<u>16 mrem/hr</u>	B. Cask Seal Number	<u>10201</u>
Bottom Dose Rate	<u>8 mrem/hr at C</u>	<u>11 mrem/hr</u>	C. Sampler Serial Number	<u>96-028</u>
Smearable Contamination	<u><20 DPM/100cm²</u>	<u>120 DPM</u>	D. Date and Time Sampler Unsealed	<u>7-22-96 / 0215</u>
	(Alpha)	(Alpha)	E. Expected Liquid Content	<u>100%</u>
	<u><1000 DPM/100cm²</u>	<u>41K DPM</u>	F. Expected Solids Content	<u>0%</u>
	(Beta-Gamma)	(Beta-Gamma)	G. Dose Rate Through Drill String	<u>600 MR/HR</u>
RCT* <u>D. J. Decker</u>	RCT* <u>SL</u>		H. Expected Sample Length	<u>9"</u>
(Signature)	(Signature)			

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

(12) Field Comments

X-RAY SHOWED ABOUT 9" IN SAMPLER.
 ALSO PISTON IS ONLY HALF WAY UP THE SAMPLER.

(13) Laboratory Comments

(13) Point of Origin

A-101

(14) Destination

222-S

(15) Sender Name (Sign and PRINT)

James Sickett

(16) Date/Time

8-19-96

(17) Sender Comments

(18) Relinquished By (Sign and PRINT)

James Sickett

(19) Received By (Sign and PRINT)

James Sickett

(20) Date/Time

8-19-96

(21) Receiver Comments

(22) Relinquished By (Sign and PRINT)

James Sickett

(23) Received By (Sign and PRINT)

James Sickett

(24) Date/Time

11-30-96

(25) Receiver Comments

(26) Relinquished By (Sign and PRINT)

James Sickett

(27) Received By (Sign and PRINT)

James Sickett

(28) Date/Time

11-30-96

(29) Receiver Comments

(30) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (2/94)

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipman Number	(2) Sample Number	(3) Supervisor	(4) Tank	(5) Rise	(6) Segment	(7) Core	(8) Cask Serial Number
200-08-7F	A-01	96.337	24		2	156	106
(110) Shipment Description ES-96-C00413 10204 RGS-022 7-22-96 0330							
(120) Laboratory 40.5 30 15 120							
(130) Field <0.5 32 18 20 41K (Aloha)							
(140) Radiological 41K (Aloha)							
(150) Environmental 41K (Aloha)							
(160) Other 41K (Aloha)							
(170) Other 41K (Aloha)							
(180) Other 41K (Aloha)							
(190) Other 41K (Aloha)							
(200) Other 41K (Aloha)							
(210) Other 41K (Aloha)							
(220) Other 41K (Aloha)							
(230) Other 41K (Aloha)							
(240) Other 41K (Aloha)							
(250) Other 41K (Aloha)							
(260) Other 41K (Aloha)							
(270) Other 41K (Aloha)							
(280) Other 41K (Aloha)							
(290) Other 41K (Aloha)							
(300) Other 41K (Aloha)							
(310) Other 41K (Aloha)							
(320) Other 41K (Aloha)							
(330) Other 41K (Aloha)							
(340) Other 41K (Aloha)							
(350) Other 41K (Aloha)							
(360) Other 41K (Aloha)							
(370) Other 41K (Aloha)							
(380) Other 41K (Aloha)							
(390) Other 41K (Aloha)							
(400) Other 41K (Aloha)							
(410) Other 41K (Aloha)							
(420) Other 41K (Aloha)							
(430) Other 41K (Aloha)							
(440) Other 41K (Aloha)							
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(560) Other 41K (Aloha)							
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(690) Other 41K (Aloha)							
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(720) Other 41K (Aloha)							
(730) Other 41K (Aloha)							
(740) Other 41K (Aloha)							
(750) Other 41K (Aloha)							
(760) Other 41K (Aloha)							
(770) Other 41K (Aloha)							
(780) Other 41K (Aloha)							
(790) Other 41K (Aloha)							
(800) Other 41K (Aloha)							
(810) Other 41K (Aloha)							
(820) Other 41K (Aloha)							
(830) Other 41K (Aloha)							
(840) Other 41K (Aloha)							
(850) Other 41K (Aloha)							
(860) Other 41K (Aloha)							
(870) Other 41K (Aloha)							
(880) Other 41K (Aloha)							
(890) Other 41K (Aloha)							
(900) Other 41K (Aloha)							
(910) Other 41K (Aloha)							
(920) Other 41K (Aloha)							
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(940) Other 41K (Aloha)							
(950) Other 41K (Aloha)							
(960) Other 41K (Aloha)							
(970) Other 41K (Aloha)							
(980) Other 41K (Aloha)							
(990) Other 41K (Aloha)							
(1000) Other 41K (Aloha)							

WHC-SD-WM-DP-200, REV. 0

... necessary financial statement of laborers: viz. as to be performed.)

(3.4) Laboratory Comments

(12)	Field Comments

X-RAY should be ~~be~~ sampler was full

[illegible]

(18) Seal Intact Upon Release?	☒ Yes	☐ No
(31) Seal Intact Upon Receipt?	☒ Yes	☐ No
		Shipped to: ☒ Yes ☐ No
		Cask Seal No. ☒ Yes ☐ No
		Sampling Air: ☒ Yes ☐ No

(2) Date Data Consistent with this Report?

BC-6000-309 (07/94)

DISTRIBUTION: White - Office of Sample Management
Yellow - Recipient of Sample
Pink - Core Sampling, 56-85
Goldendred - Tank Farm Operations, etc.

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

1) Shipment Number 200W-08-TF (2) Sample Number 96-338 (3) Supervisor M.C. JONES
 1) Tank A-101 (5) Riser 24 (6) Segment 3 (7) Core 156 (8) Cask Serial Number SN-73

Radiation Survey Data:

(9) FIELD (33) LABORATORY

Over Top Dose Rate	<u>6.5</u>	<u>40.5 mR/hr</u>
Side Dose Rate	<u>32</u>	<u>30 mR/hr</u>
Bottom Dose Rate	<u>20</u>	<u>13 mR/hr</u>
Removable Contamination	<u>220</u>	<u>220</u>
	(Alpha)	(Alpha)
	<u>21K</u>	<u>40K</u>
	(Beta-Gamma)	(Beta-Gamma)
RCT* (HPT)	<u>MALLOM</u>	<u>NAME</u>
	(Signature)	(Signature)

(10) Shipment Description

A. Work Package Number ES-96-00443
 B. Cask Seal Number 10205
 C. Sampler Serial Number 96-034
 D. Date and Time Sampler Unseated 7-22-96/0600
 E. Expected Liquid Content 30%
 F. Expected Solid Content 70%
 G. Dose Rate Through Drift String 1.3 R/HR
 H. Expected Sample Length 19"

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

2) Field Comments

(34) Laboratory Comments

3) Point of Origin <u>A-101</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickett</u>	(16) Date/Time <u>8-14-96</u>	(17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(20) Received By (Sign and PRINT) <u>David J Keane</u>	(21) Date/Time <u>8-14-96</u>	(22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>David J Keane</u>	(24) Received By (Sign and PRINT) <u>EE Debes</u>	(25) Date/Time <u>8-14-96 1100</u>	(26) Receiver Comments	
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	
(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Date Consistent with this Record? ☒ Yes ☐ No		
Shipment No. ☒ Yes ☐ No		Cask Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

MHC-SD-WM-DF-200, REV. 0

106

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-339 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 24 (6) Segment 4 (7) Core 156 (8) Cask Serial Number C 2013

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>2.5</u>	<u>1.5</u>		A. Work Package Number <u>ES-96-00.443</u>
Side Dose Rate	<u>64</u>	<u>40</u>		B. Cask Seal Number <u>11147</u>
Bottom Dose Rate	<u>40</u>	<u>20</u>		C. Sampler Serial Number <u>96-029</u>
Smearable Contamination	<u>2.0</u>	<u>2.0</u>		D. Date and Time Sampler Unseated <u>7/22/96-1310</u>
	(Alpha) <u>CLK</u>	(Alpha) <u>CLK</u>		E. Expected Liquid Content <u>302</u>
	(Beta-Gamma) <u>(U=2)</u>	(Beta-Gamma)		F. Expected Solid Content <u>702</u>
RCT* <u>MALLORY</u>	(Signature)	RCT* <u>[Signature]</u>	(Signature)	G. Dose Rate Through Drill String <u>1.0 R/HR</u>
(HPT)		(HPT)		H. Expected Sample Length <u>19"</u>

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

(12) Field Comments

(34) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>James Sickels</u>	(16) Date/Time <u>8-16-96</u>	(17) Sender Comments
(18) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(20) Received By (Sign and PRINT) <u>Hustillo Salinas / EUSTOLIO SERRANO</u>	(21) Date/Time <u>8-16-96</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>Hustillo Salinas / EUSTOLIO SERRANO</u>	(24) Received By (Sign and PRINT) <u>Michael Lindberg</u>	(25) Date/Time <u>8/14/96 0928</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

(32) Seal Date Consistent with this Record?

☒ Yes ☐ No☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

COPY

Radiation Survey Data:		(9) FIELD		(133) LABORATORY		(110) Shipment Description	
Top Dose Rate			6.5		40.5 mr/hr	A. Work Package Number	ES-96-00443
Side Dose Rate			21		29 mr/hr	B. Cask Seal Number	10356
Bottom Dose Rate			15		15 mr/hr	C. Sampler Serial Number	96-036
Measurable Contamination			520		520	D. Date and Time Sampler Unseated	7-22-96 / 1749
			(Alpha)		(Alpha)	E. Expected Liquid Content	302
			(Beta-Gamma)		(Beta-Gamma)	F. Expected Solid Content	702
RECT* (HPT)			Matt Lom		W. Same	G. Dose Rate Through Drill String	1.2 R/hr
			(Signature)		(Signature)	H. Expected Sample Length	19"

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

WHC-SD-WM-DP-200, REV. 0

Field Comments		(34) Laboratory Comments	
100 mL LITH. BROMIDE ADDED 3 SAMPLER, SAMPLER CLEAN, NO WASTE OR LIQUID			
Point of Origin R24 A-101	(14) Destination 2225 LAB	(15) Sender Name (Sign and PRINT) Gina Nickel James Siskels	(16) Date/Time 8-14-96
Relinquished By (Sign and PRINT) Gina Nickel James Siskels	(20) Received By (Sign and PRINT) David J Keane	(21) Date/Time 8-14-96	(17) Sender Comments
Relinquished By (Sign and PRINT) David J Keane	(24) Received By (Sign and PRINT) David J Keane	(25) Date/Time 8-14-96	(22) Receiver Comments
Relinquished By (Sign and PRINT) David J Keane	(28) Received By (Sign and PRINT) EEDubois	(29) Date/Time 8-14-96	(26) Receiver Comments
(31) Seal Intact Upon Receipt?		(32) Seal Data Consistent with this Record?	
☒ Yes ☐ No		☒ Yes ☐ No	

COPY

8C-6000-303 1025

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-TF (2) Sample Number 96-342 (3) Supervisor M.C. JONES
 (4) Tank A-101 (5) Riser 24 (6) Segment 7 (7) Core 156 (8) Cask Serial Number C-2017

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description	
Over Top Dose Rate	<u>1.5</u>	<u>10.5 mR/hr</u>		A. Work Package Number	<u>ES-96-00443</u>
Side Dose Rate	<u>25</u>	<u>25 mR/hr</u>		B. Cask Seal Number	<u>10206</u>
Bottom Dose Rate	<u>20</u>	<u>10 mR/hr</u>		C. Sampler Serial Number	<u>96-023</u>
Removable Contamination	<u>220</u>	<u>220</u>		D. Date and Time Sampler Unseated	<u>7-23-96/0115</u>
	(Alpha)	(Alpha)		E. Expected Liquid Content:	<u>30%</u>
	(Beta-Gamma)	(Beta-Gamma)		F. Expected Solid Content	<u>10%</u>
RECT* (HPT)	<u>MALLOY</u> (Signature)	RECT* (HPT)	<u>M. Jones</u> (Signature)	G. Dose Rate Through Drill String	<u>12/HR</u>
				H. Expected Sample Length	<u>19"</u>

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

2) Field Comments

LIBR ADDED TO DRILL STRING FOR HEAD FLUID.

(34) Laboratory Comments

3) Point of Origin <u>A-101</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickels</u>	(16) Date/Time <u>8-14-96</u>	(17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(20) Received By (Sign and PRINT) <u>David J Keane</u>	(21) Date/Time <u>8-14-96</u>	(22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>David J Keane</u>	(24) Received By (Sign and PRINT) <u>James Sickels</u>	(25) Date/Time <u>8-14-96</u>	(26) Receiver Comments	
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

(32) Seal Data Consistent with this Record?

Shipment No.
☒ Yes ☐ NoCask Seal No.
☒ Yes ☐ NoSample No.
☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200V-08-9F (2) Sample Number 96-343 (3) Supervisor M. C. JONES
 (4) Tank A-101 (5) Riser 24 (6) Segment 8 (7) Core 156 (8) Cask Serial Number 1037

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>0.5 mR/hr</u>	<u>2.5</u>	<u>2.5</u>	A. Work Package Number <u>ES-96-00443</u>
Side Dose Rate	<u>2.5 mR/hr</u>	<u>23</u>	<u>23</u>	B. Cask Seal Number <u>10207</u>
Bottom Dose Rate	<u>1.0 mR/hr</u>	<u>20</u>	<u>20</u>	C. Sampler Serial Number <u>96-032</u>
Smearable Contamination	<u>220</u>	<u>220</u>	<u>220</u>	D. Date and Time Sampler Unseated <u>7-23-96 / 0220</u>
	(Alpha)	(Alpha)	(Alpha)	E. Expected Liquid Content <u>302</u>
	<u>11000</u>	<u>21K</u>	<u>21K</u>	F. Expected Solid Content <u>702</u>
	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	G. Dose Rate Through Drill String <u>1.4 R/hr</u>
RCT* <u>14</u>	(Signature)	RCT* <u>[Signature]</u>	(Signature)	H. Expected Sample Length <u>19"</u>
(HPT)		(HPT)		

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

111

COPY

(12) Field Comments

LIBR ADDED TO DRILL STRING FOR HEAD FLUID.

(34) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Destination <u>222-5</u>	(15) Sender Name (Sign and PRINT) <u>Stephen B Carter</u>	(16) Date/Time <u>8/9/96</u> <u>1400</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>Stephen B Carter</u>	(20) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>8-9-96</u> <u>1402</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>8-9-96</u> <u>1427</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(28) Received By (Sign and PRINT) <u>[Signature]</u>	(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? ☒ Yes ☐ No
Shipment No. ☒ Yes ☐ No		Cask Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

RG2

CHAIN-OF-CUSTODY RECORD FOR 344-0016

11) Shipment Number <u>2000-08-11</u>		12) Sample Number <u>96-24-11</u>		13) Cone <u>156</u>		14) East Seal Number	
(4) Tank <u>A-101</u>		(5) Row <u>24</u>		(6) Segment <u>9</u>		(7) Cone	
110) Shipment Description		111) Laboratory Comments		112) Field Comments		113) Seal Date Consistent with this Record?	
A. Work Package Number		114) Destination		115) Recipient Name (Sign and PRINT)		116) Sender Comments	
B. Cash Seal Number		117) Date		118) Recipient By (Sign and PRINT)		119) Receiver Comments	
C. Sampler Serial Number		120) Date		121) Recipient By (Sign and PRINT)		122) Receiver Comments	
D. Date and Time Sampled		123) Date		124) Recipient By (Sign and PRINT)		125) Receiver Comments	
E. Expected Liquid Content		126) Date		127) Recipient By (Sign and PRINT)		128) Receiver Comments	
F. Expected Solid Content		129) Date		130) Recipient By (Sign and PRINT)		131) Receiver Comments	
G. Dose Rate Through Drill String		132) Date		133) Recipient By (Sign and PRINT)		134) Receiver Comments	
H. Expected Sample Length		135) Date		136) Recipient By (Sign and PRINT)		137) Receiver Comments	
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F. Expected Solid Content		129) Date		130) Recipient By (Sign and PRINT)		131) Receiver Comments	
G. Dose Rate Through Drill String		132) Date		133) Recipient By (Sign and PRINT)		134) Receiver Comments	
H. Expected Sample Length		135) Date		136) Recipient By (Sign and PRINT)		137) Receiver Comments	

White - Office of Sample Management

112

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 8000-08-11		(2) Sample Number 96-345	(3) Supervisor M.C. Jones	(4) Tank A-101																																																	
(5) Reel 24		(6) Segment 10	(7) Core 156	(8) Core Seal Number 14-g																																																	
<table border="1"> <tr> <td colspan="2">Radiation Survey Date:</td> <td colspan="2">13 min</td> <td colspan="2">13 min</td> </tr> <tr> <td>Over Top Dose Rate</td> <td>15.0 uSv/hr</td> <td>40 uSv/hr</td> <td>40 uSv/hr</td> <td>40 uSv/hr</td> <td>40 uSv/hr</td> </tr> <tr> <td>Side Dose Rate</td> <td>30 uSv/hr</td> <td>30 uSv/hr</td> <td>30 uSv/hr</td> <td>30 uSv/hr</td> <td>30 uSv/hr</td> </tr> <tr> <td>Bottom Dose Rate</td> <td>230 DPM/100cm</td> <td>230 DPM/100cm</td> <td>230 DPM/100cm</td> <td>230 DPM/100cm</td> <td>230 DPM/100cm</td> </tr> <tr> <td>Stemable Concentration</td> <td>(Alpha)</td> <td>(Alpha)</td> <td>(Alpha)</td> <td>(Alpha)</td> <td>(Alpha)</td> </tr> <tr> <td></td> <td>(Beta-Gamma)</td> <td>(Beta-Gamma)</td> <td>(Beta-Gamma)</td> <td>(Beta-Gamma)</td> <td>(Beta-Gamma)</td> </tr> <tr> <td>RC*</td> <td>D. Dodson</td> <td>RC*</td> <td>D. Dodson</td> <td>RC*</td> <td>D. Dodson</td> </tr> <tr> <td>(Signature)</td> <td>(Signature)</td> <td>(Signature)</td> <td>(Signature)</td> <td>(Signature)</td> <td>(Signature)</td> </tr> </table>					Radiation Survey Date:		13 min		13 min		Over Top Dose Rate	15.0 uSv/hr	40 uSv/hr	40 uSv/hr	40 uSv/hr	40 uSv/hr	Side Dose Rate	30 uSv/hr	30 uSv/hr	30 uSv/hr	30 uSv/hr	30 uSv/hr	Bottom Dose Rate	230 DPM/100cm	230 DPM/100cm	230 DPM/100cm	230 DPM/100cm	230 DPM/100cm	Stemable Concentration	(Alpha)	(Alpha)	(Alpha)	(Alpha)	(Alpha)		(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	RC*	D. Dodson	RC*	D. Dodson	RC*	D. Dodson	(Signature)	(Signature)	(Signature)	(Signature)	(Signature)	(Signature)	
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	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)	(Beta-Gamma)																																																
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DISTRIBUTION: White - Office of Sample Management Yellow - Receipt of Sample Pink - Core Sampling, S.G. 85 Colored - Tank Farm Operations, S.G. 43

BC-8000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08TF (2) Sample Number 96-346 (3) Supervisor BOGEN
 (4) Tank A-101 (5) Riser 24 (6) Segment 11 (7) Core 156 (8) Cask Serial Number 62

Radiation Survey Data:

Over Top Dose Rate
 Side Dose Rate
 Bottom Dose Rate
 Smearable Contamination

(9) FIELD
1 MREN/Hr
40 MREN/Hr
20 MREN/Hr
<20 (Alpha)
<1000 (Beta-Gamma)

RCT*
 (HPT)

(Signature)

(33) LABORATORY

2.5
9137 45
9-99 12 9
120 (Alpha)
1K (Beta-Gamma)

RCT*
 (HPT)

(Signature)

(10) Shipment Description

A. Work Package Number
 B. Cask Seal Number
 C. Sampler Serial Number
 D. Date and Time Sampler Unseated
 E. Expected Liquid Content
 F. Expected Solid Content
 G. Dose Rate Through Drill String
 H. Expected Sample Length

ES-96-00443
11159
95-1288
7-23-96/1011
30%
70%
1.2 R/Hr
19"

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

COPY

MHC-SD-WM-DF-200, REV. 0

(12) Field Comments

WATER w/ LIBR USED AS HEAD FLUID

(34) Laboratory Comments

(13) Point of Origin

A101

(14) Destination

222-S

(15) Sampler Name (Sign and PRINT)

Signature Steven B. Carter

(16) Date/Time

8-9-96
1500

(17) Sender Comments

(19) Relinquished By (Sign and PRINT)

Signature Steven B. Carter

(20) Received By (Sign and PRINT)

Signature James C. Fisher

(21) Date/Time

8-9-96
1505

(22) Receiver Comments

(23) Relinquished By (Sign and PRINT)

Signature James C. Fisher

(24) Received By (Sign and PRINT)

Signature N. LAPIERS

(25) Date/Time

8-9-96
1930

(26) Receiver Comments

(27) Relinquished By (Sign and PRINT)

(28) Received By (Sign and PRINT)

(32) Seal Data Consistent with this Record?

(18) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management

Yellow - Recipient of Sample

Pink - Core Sampling, S6-B5

Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08 TF (2) Sample Number 96-347 (3) Supervisor M. C. JONES
 (4) Tank A-101 (5) Riser 24 (6) Segment 12 (7) Core 156 (8) Cask Serial Number C-1055

Radiation Survey Data:

Over Top Dose Rate	<u>1 mR/hr</u>	<u>1.5</u>
Side Dose Rate	<u>35 mR/hr</u>	<u>3.7</u>
Bottom Dose Rate	<u>8 mR/hr</u>	<u>12</u>
Smearable Contamination	<u>120</u>	<u>120</u>
(Alpha)	<u>4100</u>	<u>41K</u>
(Beta-Gamma)	<u>115</u>	<u>115</u>
RCT* (HPT)	<u>115</u>	<u>115</u>
(Signature)	<u>115</u>	<u>115</u>

(10) Shipment Description

A. Work Package Number	<u>ES-96-00443</u>
B. Cask Seal Number	<u>10295</u>
C. Sampler Serial Number	<u>96-022</u>
D. Date and Time Sampler Unseated	<u>7-24-96 / 0130</u>
E. Expected Liquid Content	<u>100%</u>
F. Expected Solid Content	<u>0%</u>
G. Dose Rate Through Drill String	<u>450 mR/hr</u>
H. Expected Sample Length	<u>19"</u>

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

115

COPY

(12) Field Comments

SAMPLE WAS X-RAYED AND LOOK LIKE IT WAS FULL OF LIQUID. LIBR WAS ADDED TO DRILL STRING FOR HEAD FLUID.

(34) Laboratory Comments

(13) Point of Origin <u>A-101</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>STEVEN B CONNER</u>	(16) Date/Time <u>8-7-96</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>STEVEN B CONNER</u>	(20) Received By (Sign and PRINT) <u>JOHN L. HICKS</u>	(21) Date/Time <u>8-7-96</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>JOHN L. HICKS</u>	(24) Received By (Sign and PRINT) <u>JOHN L. HICKS</u>	(25) Date/Time <u>8-7-96</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT) <u>JOHN L. HICKS</u>	(28) Received By (Sign and PRINT) <u>JOHN L. HICKS</u>	(29) Date/Time <u>8-7-96</u>	(30) Receiver Comments	

(32) Seal Date Consistent with this Record?

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

1) Shipment Number 200W-08-TF (2) Sample Number 96-348 (3) Supervisor M.C. Jones
 1) Tank A-101 (5) Riser 24 (6) Segment 13 (7) Core HR 156 156 (8) Cask Serial Number 50-23-6
7/24/96

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>0.7</u>		<u>4.5</u>	A. Work Package Number <u>ES-96-00443</u>
Side Dose Rate	<u>40</u>		<u>40</u>	B. Cask Seal Number <u>10297</u>
Bottom Dose Rate	<u>11</u>		<u>10</u>	C. Sampler Serial Number <u>96-025</u>
Smearable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unseated <u>7-27/96 0237</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>30%</u>
	<u><1000</u>		<u><1000</u>	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drill String <u>1.3 R/hr</u>
RCT* <u>[Signature]</u>	(HPT)	RCT* <u>[Signature]</u>	(HPT)	H. Expected Sample Length <u>19"</u>
	(Signature)		(Signature)	

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

116

2) Field Comments <u>LABR ADDED TO DRILL STRING FOR HEAD GAGE.</u>	34) Laboratory Comments
---	-------------------------

3) Point of Origin <u>A-101</u>	14) Destination <u>222-S</u>	15) Sender Name (Sign and PRINT) <u>James Sickle JAMES Sickle</u>	16) Date/Time <u>7-26-96</u>	17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>James Sickle JAMES Sickle</u>	20) Received By (Sign and PRINT) <u>[Signature]</u>	21) Date/Time <u>7-26-96</u>	22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>[Signature]</u>	24) Received By (Sign and PRINT) <u>R. Hunter</u>	25) Date/Time <u>7/26/96 1435</u>	26) Receiver Comments	
2) Relinquished By (Sign and PRINT) <u>[Signature]</u>	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? ☐ Yes ☐ No	Shipment No. ☐ Yes ☐ No	Cask Seal No. ☐ Yes ☐ No	Sample No. ☐ Yes ☐ No
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EOP

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-349 (3) Supervisor Bogen
 (4) Tank A-101 (5) Riser 24 (6) Segment 14 (7) Core 156 (8) Cask Serial Number C1047

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u>2.5</u>		<u>1.5</u>	A. Work Package Number <u>ES-96-00443</u>
Side Dose Rate	<u>80</u>		<u>60</u>	B. Cask Seal Number <u>11158</u>
Bottom Dose Rate	<u>40</u>		<u>30</u>	C. Sampler Serial Number <u>96-024</u>
Smearable Contamination	<u>220</u>		<u>220</u>	D. Date and Time Sampler Unseal'd <u>7-24-96/0943</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>302</u>
	<u>21K</u>		<u>21K</u>	F. Expected Solid Content <u>70%</u>
	(Beta-Gamma) <u>(CF=2)</u>		(Beta-Gamma)	G. Dose Rate Through Drill String <u>2.08/HR</u>
RCT* (HPT)	<u>MILLON</u> (Signature)	RCT* (HPT)	<u>[Signature]</u> (Signature)	H. Expected Sample Length <u>19"</u>

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

(12) Field Comments <u>WATER n/LIBR USED AS HEAD FLUID.</u>	(13) Laboratory Comments
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(13) Point of Origin <u>A-101</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickett</u>	(16) Date/Time <u>8-16-96</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(20) Received By (Sign and PRINT) <u>Mustafa Salim</u>	(21) Date/Time <u>8-16-96</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>Mustafa Salim</u>	(24) Received By (Sign and PRINT) <u>Michael Lindberg</u>	(25) Date/Time <u>8/16/96</u>	(26) Receiver Comments	
(27) 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? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
---	---	--	---	--	---

WHC-SD-WM-DP-200, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-350 (3) Supervisor HARTLEY
 (4) Tank A-101 (5) Riser 24 (6) Segment 15 (7) Core 156 (8) Cask Serial Number #71

Radiation Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>< 5</u>	<u>< 0.5</u>	A. Work Package Number	<u>ES-96-00443</u>
Side Dose Rate	<u>40</u>	<u>40</u>	B. Cask Seal Number	<u>11468</u>
Bottom Dose Rate	<u>10</u>	<u>6</u>	C. Sampler Serial Number	<u>96-037</u>
Sensitizable Contamination	<u>< 20</u>	<u>< 20</u>	D. Date and Time Sampler Unseated	<u>7-24-96/1400</u>
(Alpha)	<u>< 1 K</u>	<u>< 1 K</u>	E. Expected Liquid Content	<u>302</u>
(Beta-Gamma)	<u>100</u>	<u>100</u>	F. Expected Solid Content	<u>702</u>
RCT* (HPT)	(Signature)	RCT* (HPT)	G. Dose Rate Through Drill String	<u>1.4 R/HR</u>
			H. Expected Sample Length	<u>19"</u>

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

(12) Field Comments	(13) Laboratory Comments
---------------------	--------------------------

(14) Point of Origin	(15) Destination	(16) Sender Name (Sign and PRINT)	(17) Date/Time	(18) Sender Comments
<u>A-101</u>	<u>222-5</u>	<u>James Sickels</u>	<u>8-12-96</u>	
(19) Relinquished By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments	
<u>James Sickels</u>	<u>James Sickels</u>	<u>8-12-96</u>		
(23) Relinquished By (Sign and PRINT)	(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments	
<u>Midnight</u>	<u>Midnight</u>	<u>8-12-96</u>		
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	
<u>Midnight</u>	<u>Midnight</u>	<u>8-12-96</u>		

(31) Seal Intact Upon Release? (32) Seal Intact Upon Receipt? (33) Seal Date Consistent with this Record?

Shipment No. Cask Seal No. Sample No.

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-85 Goldenrod - Tank Farm Operations, 34-43 BC 6000-309 (02/84)

WHC-SD-WM-DP-200, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 7000-08-71 (2) Sample Number 96-352 (3) Supervisor R. FRANK FROST
 (4) Tank A-101 (5) Floor 24 (6) Segment 17 (7) Core 150 (8) Cask Serial Number C-2009

Radiation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate	<u><0.5</u>	<u>10.5</u>		A. Work Package Number <u>ES-96-00443</u>
Side Dose Rate	<u>42</u>	<u>42</u>		B. Cask Seal Number <u>10299</u>
Bottom Dose Rate	<u>5</u>	<u>8</u>		C. Sampler Serial Number <u>96-031</u>
Smearable Contamination	<u><26</u>	<u>100</u>		D. Date and Time Sampler Unsealed <u>7-24-96</u>
	(Alpha)	(Alpha)		E. Expected Liquid Content <u>302</u>
	(Beta-Gamma)	(Beta-Gamma)		F. Expected Solid Content <u>702</u>
RCT* (HPT)	<u>11</u>	RCT* (HPT)	<u>11</u>	G. Dose Rate Through Drill String <u>1.9 R/hr</u>
	(Signature)		(Signature)	H. Expected Sample Length <u>19"</u>

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

COPY

(12) Field Comments

1500ml LITHIUM BROMIDE ADDED
 -3 SAMPLER
 SAMPLER CLEAN - NO LIQUID

(34) Laboratory Comments

(13) Point of Origin <u>R-24</u>	(14) Destination <u>2225 LAB</u>	(15) Sampler Name (Sign and PRINT) <u>James Sicks</u>	(16) Date/Time <u>8-12-96</u>	(17) Sealer Comments
(18) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(19) Received By (Sign and PRINT) <u>W. L. DOWLING</u>	(20) Date/Time <u>8-12-96</u>	(21) Receiver Comments	
(22) Relinquished By (Sign and PRINT) <u>W. L. DOWLING</u>	(23) Received By (Sign and PRINT) <u>N. LAPIERS</u>	(24) Date/Time <u>8-12-96</u>	(25) Receiver Comments	
(26) Relinquished By (Sign and PRINT)	(27) Received By (Sign and PRINT)	(28) Date/Time	(29) Receiver Comments	

(32) Seal Data Consistent with this Record?

(18) Seal Intact Upon Release?

☒ Yes ☐ No

(31) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipment No.

☒ Yes ☐ No

Cask Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management

Yellow - Recipient of Sample

Pink - Core Sampling, 56-65

Goldenrod - Tank Farm Operations, 54-43

BC-6000-329 (02/94)

WHC-SD-WM-DP-200, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-08-TK (2) Sample Number 96-353 (3) Supervisor M. C. Gable
 (4) Tank A-101 (5) Riser 24 (6) Segment 18 (7) Core 156 (8) Cask Serial Number C-1021

(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>10.5</u>		<u>6.5</u>	A. Work Package Number	<u>ES-96-00443</u>
Side Dose Rate	<u>32</u>		<u>30</u>	B. Cask Seal Number	<u>10296</u>
Bottom Dose Rate	<u>14</u>		<u>10</u>	C. Sampler Serial Number	<u>96-039</u>
Smearable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unseated	<u>7-25-96/0140</u>
(Alpha)			(Alpha)	E. Expected Liquid Content	<u>90%</u>
(Beta-Gamma)	<u><1000</u>		(Beta-Gamma)	F. Expected Solid Content	<u>10%</u>
RCT* (HPT)	<u>[Signature]</u>	RCT* (HPT)	<u>[Signature]</u>	G. Dose Rate Through Drill String	<u>700 MR/HR</u>
(Signature)		(Signature)		H. Expected Sample Length	<u>19"</u>

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

121

(12) Field Comments		(134) Laboratory Comments	
<p>X-RAY showed sampler had liquid in it</p> <p>LIBR added to DRILL STRING FOR HEAD FLUID</p>			
(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time
<u>A-101</u>	<u>222-S</u>	<u>James Sichel James Sichel</u>	<u>7-26-96</u>
(19) Relinquished By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(17) Sender Comments
<u>James Sichel James Sichel</u>	<u>[Signature]</u>	<u>7-26-96</u>	
(23) Relinquished By (Sign and PRINT)	(24) Received By (Sign and PRINT)	(25) Date/Time	(22) Receiver Comments
<u>[Signature]</u>	<u>[Signature]</u>	<u>7-26-96</u>	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(26) Receiver Comments
<u>[Signature]</u>	<u>[Signature]</u>	<u>7-26-96 14:35</u>	
(31) Seal Intact Upon Receipt?	(32) Seal Data Consistent with this Record?	(30) Receiver Comments	
☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	

WHC-SD-WM-DP-200, REV. 0

6/2/96/56

15:129

529 373 432

224

WHC-SD-WM-DP-200, REV. 0

INORGANIC ANALYSES

WHC-SD-WM-DP-200, REV. 0

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LABCORE Data Entry Template for Worklist#

11902

Analyst: RJA Instrument: DSC01 Book # 12N14B

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

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	26.1 *	N/A	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004110	0	DSC-01	LIQUID	N/A	Ø		Joules/g
96001016	A-101 (P)	3 DUP	S96T004110	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004115	0	DSC-01	LIQUID	N/A	26.1		Joules/g
96001016	A-101 (P)	5 DUP	S96T004115	0	DSC-01	LIQUID	26.1	25.5	N/A	Joules/g

Final page for worklist #

11902

Bae Ann Green 8-15-96
Analyst Signature Date

Susan Bee 8/20/96
Analyst Signature Date

Verified/Validated by Blandina
Valenzuela
8-22-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 126 TO 130.

STD 12N14-B N2

4.510 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER 14-Aug-96

Ident: 0.0

222-8 Laboratory

WHC-SD-WM-DP-200, REV. 0

S96T004110 SAM N2
 12.022 mg
 Rate: 10.0 °C/min
 File: 00030.001 DSC METTLER 14-Aug-96
 Ident: 0.0 222-S Laboratory

8-14-96

RaeAnn Green

°C

S96T004110 DUP N2

12.990 mg

Rate: 10.0 °C/min

File: 00032.001

DSC METTLER 14-Aug-96

Ident: 0.0

222-S Laboratory

exo

50 mW

Integration

Delta H17932 mJ

1380.4 J/g

Peak 101.3°C

-77.2 mW

WHC-SD-WM-DP-200, REV. 0

8-14-96

Rae Ann Green

100.

200.

300.

400.

°C

S96T004115 SAM N2

28.009 mg

Rate: 10.0 °C/min

File: 00034.001

DSC METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-200, REV. 0

S96T004115 DUP N2

28.251 mg

Rate: 10.0 °C/min

File: 00036.001

Ident: 0.0

DSC METTLER

15-Aug-96

222-S Laboratory

130

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist#

11903

Analyst:

QAM

Instrument: DSC0 |

Book # 12N14-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>25.8*</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004116 0		DSC-01	LIQUID	<u>N/A</u>	<u>29.7</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004116 0		DSC-01	LIQUID	<u>29.7</u>	<u>30.8</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004117 0		DSC-01	LIQUID	<u>N/A</u>	<u>34.9</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004117 0		DSC-01	LIQUID	<u>34.9</u>	<u>30.2</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11903

QAMurphy 8-14-96
Analyst Signature Date

Susan Bu 8/20/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela 8-21-96

S96T004116 results are the sum of two exotherms.

S96T004117 results are the sum of two exotherms.

Data Entry Comments:

The standard has a change in baseline due to the instrument equilibrating to the right temperature

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 132 TO 136

STD 12N14-B N2

4.510 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

<OX8

mw .5

Integration

Delta H 116 mJ

25.8 J/g

Peak 157.8°C

-9.0 mW

120.

140.

160.

180.

°C

AD Murkin 8-14-96

WHC-SD-WM-DP-200, REV. 0

S96T004116 SAM N2

22.744 mg

Rate: 10.0 °C/min

File: 00022.001

Ident: 0.0

DSC METTLER 14-Aug-96

222-S Laboratory

S96T004116 DUP N2

21.624 mg

Rate: 10.0 °C/min

File: 00024.001

Ident: 0.0

DSC METTLER 14-Aug-96

222-S Laboratory

S96T004117 SAM N2

20.546 mg

Rate: 10.0 °C/min

File: 00026.001

Ident: 0.0

DSC METTLER 14-Aug-96

222-S Laboratory

S96T004117 DUP N2

26.055 mg

Rate: 10.0 °C/min

File: 00028.001

DSC METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

exo

20.02
mW

Integration

Delta H 523 mJ

20.1 J/g

Peak 255.0°C

4.6 mW

Integration

Delta H 25966 mJ

996.6 J/g

Peak 126.2°C

-54.1 mW

Integration

Delta H 263 mJ

10.1 J/g

Peak 294.7°C

1.2 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11904

Analyst: QDM Instrument: DSC01 Book # 12N14-6

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

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>25.8</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004118	0	DSC-01	LIQUID	<u>N/A</u>	<u>29.5</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004118	0	DSC-01	LIQUID	<u>29.5</u>	<u>29.4</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11904

QDMurphy 8-14-96
Analyst Signature Date

Susan Bur 8/20/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8-21-96

Data Entry Comments: The change in the baseline is due to the instrument
squibulating to the right temperature.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 138 TO 140

STD 12N14-B N2

4.510 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

exo>

5. mW

Integration
Delta H 116 mJ
25.8 J/g
Peak 157.8°C
-9.0 mW

120.

140.

160.

180.

°C

Q. Murphy 8-14-96

WHC-SD-WM-DP-200, REV.0

138

S96T004118 SAM N2

29.385 mg

Rate: 10.0 °C/min

File: 00017.001

DSC METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

S96T004118 DUP N2
 32.425 mg
 Rate: 10.0 °C/min
 File: 00019.001
 Ident: 0.0
 DSC METTLER 14-AUG-86
 222-S Laboratory

LABCORE Data Entry Template for Worklist#

11905

Analyst: gal Instrument: DSC0 1 Book # 12N/14-B

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

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.2</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004067	0	DSC-01	SOLID	<u>N/A</u>	<u>52.6</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004067	0	DSC-01	SOLID	<u>52.6</u>	<u>63.3</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004072	0	DSC-01	SOLID	<u>N/A</u>	<u>115</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004072	0	DSC-01	SOLID	<u>115</u>	<u>137</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11905

A. Lambel
Analyst Signature Date 8-15-96

D. Harker
Analyst Signature Date 8-20-96

Verified/Validated by
Blandina
Valenzuela
8-21-96

S96T004067 results are the sum of two ^{exotherms} weight loss steps. 8-21-96
BVR

Data Entry Comments: S96T004072 results are the sum of two ^{exotherms} ~~wt~~ ⁸⁻²¹⁻⁹⁶ exotherms.

12N14-B STD N2

4.510 mg

Rate: 10.0 °C/min

File: 00038.001

DSC METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

exo>

20. mW

Integration

Delta H 127 mJ

28.2 J/g

Peak 158.7°C

-8.7 mW

Blandina Valenzuela for Ann Lambel 8-21-96

120.

140.

160.

180.

°C

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 142 TO 146.

S96T004067 SAM N2 27.378 mg Rate: 10.0 °C/min File: 00041.001 DSC METTLER 15-AUG-96
Ident: 0.0 222-8 Laboratory

S96T004067 DUP N2

18.935 mg

Rate: 10.0 °C/min

File: 00043.001 DSC METTLER 15-Aug-96

Ident: 0.0

222-S Laboratory

exo >

20. mW

Integration
Delta H 17062 mJ
901.1 J/g
Peak 129.2°C
-34.8 mW

Integration
Delta H 1015 mJ
53.6 J/g
Peak 312.8°C
2.6 mW

Integration
Delta H 184 mJ
9.7 J/g
Peak 248.7°C
1.3 mW

100.

200.

300.

400.

°C

S96T004072 DUP N2

19.267 mg

Rate: 10.0 °C/min

File: 00047.001 DSC METTLER 15-Aug-96

Ident: 0.0 222-S Laboratory

WFO-60-111-2-200, 200-2

Analyst: cal Instrument: DSC0 3 Method: LA-514-114 Book # 12N14B

Worklist Comment: A-101. Run under NITROGEN. new

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD			DSC-03	SOLID	<u>28.45</u>	<u>29.26</u>	<u>N/A</u>	Joules/
2 SAMPLE	S96T004073	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/
3 DUP	S96T004073	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/
4 SAMPLE	S96T004074	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/
5 DUP	S96T004074	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/

Final page for worklist # 11906

See Attached for Signatures
Analyst Signature Date

Altmaier 8-20-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8.21.96

Data Entry Comments:

LABCORE Data Entry Template for Worklist#

11906

Analyst: ALL

Instrument: DSC0 3

Book # 12N14-B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	_____	_____	N/A	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004073	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001016	A-101 (P)	3 DUP	S96T004073	0	DSC-01	SOLID	_____	_____	N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004074	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001016	A-101 (P)	5 DUP	S96T004074	0	DSC-01	SOLID	_____	_____	N/A	Joules/g

Final page for worklist #

11906

A. Lambel
Analyst Signature

08-15-95
Date

Analyst Signature

Date

DSC-03 Instrument
was used.

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: IND081501 Thu Aug 15 06:26:22 1996

Sample Weight: 2.120 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 149 TO 153

E. Lambel

N2, EXOTHERM DOWN
TIME: 128.8 s

TONES: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 06:58:05 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM081502 Thu Aug 15 09:56:30 1996

Sample Weight: 28.890 mg

S96T004073

N2 10C/min
TIME: 33.88

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

EA LAMBDA
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 10:13:27 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File Info: SAM081503 Thu Aug 15 11:07:23 1996

Sample Weight: 25.230 mg

S96T004073 DUP

151

N2 10C/min
THERM 33.8 g

TIME: 0.0 min RATE: 10.0 C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 14:01:17 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
File info: SAN081504 Thu Aug 15 14:54:27 1996
Sample Weight: 18.590 mg
S96T004074

152

N2 10C/min
TIME: 55.8 8
THERM: 55.8 8
THERM: 0.0 min RATE: 10.0 C/min

EA LABBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 15:00:50 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File Info: S4W081505 Thu Aug 15 15:52:07 1996
 Sample Weight: 32.100 mg
 S95T004074 DUP

EA LABEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Aug 15 17:35 1996

N2 100/min
 THERM 25.8 g
 THERM 0.0 min RATE: 10.0 °C/min

LABCORE Data Entry Template for Worklist#

11907

Analyst: RLM **Instrument:** DSC01 **Book #** 120148

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

Worklist Comment: A-101. Run under NITROGEN. new

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
96001016	A-101 (P)	2 SAMPLE	S96T004075	0	DSC-01	SOLID	<u>N/A</u>	<u>16.0</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004075	0	DSC-01	SOLID	<u>16.0</u>	<u>22.1</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004076	0	DSC-01	SOLID	<u>N/A</u>	<u>19.2</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004076	0	DSC-01	SOLID	<u>19.2</u>	<u>21.6</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11907

RLM 8/16/96
Analyst Signature **Date**

DLT 8-20-96
Analyst Signature **Date**

Verified/Validated by
Blandino
Valenzuela
8-21-96

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.

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

DSC STD 12N14B

4.510 mg

Rate: 10.0 °C/min

File: 00049.001

DSC METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

BSMCCorn 8/16/96

exo>

5. mW

Integration
Delta H 129 mJ
28.7 J/g
Peak 158.7°C
-9.0 mW

120.

140.

160.

180.

°C

S96T004075 N2
39.835 mg

Rate: 10.0 °C/min

File: 00051.001 DSC METTLER 15-Aug-96
Ident: 0.0 222-S Laboratory

<ox>

50. mW

100. 200. 300. 400. °C

Integration
Delta H 639 mJ.
16.0 J/g
Peak 260.9°C
5.6 mW

Integration
Delta H30611 mJ
768.4 J/g
Peak 127.3°C
-60.8 mW

156

S96T004075 DUP N2

27.375 mg

Rate: 10.0 °C/min

File: 00053.001

Ident: 0.0

DSC

METTLER

15-Aug-96

222-S Laboratory

exo >

100.

200.

300.

400.

°C

S96T004076 DUP N2
34.675 mg
Rate: 10.0 °C/min
File: 00057.001
Ident: 0.0
DSC METTLER 16-Aug-86
222-S Laboratory

LABCORE Data Entry Template for Worklist# 11908

Analyst: PJM Instrument: DSC0 3 Method: LA-514-114 Book # 12N14B

Worklist Comment: A-101. Run under NITROGEN. new

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD			DSC-03	SOLID	<u>28.45</u>	<u>30.25</u> *	<u>N/A</u>	Joules/
2 SAMPLE	S96T004077	0	DSC-03	SOLID	<u>N/A</u>	<u>30.55</u>		Joules/
3 DUP	S96T004077	0	DSC-03	SOLID	<u>30.55</u>	<u>31.91</u>	<u>N/A</u>	Joules/
4 SAMPLE	S96T004078	0	DSC-03	SOLID	<u>N/A</u>	<u>20.95</u>		Joules/
5 DUP	S96T004078	0	DSC-03	SOLID	<u>20.95</u>	<u>19.34</u>	<u>N/A</u>	Joules/

Final page for worklist # 11908

See Attached In Signature

Analyst Signature

Date

Analyst Signature

Date

Verified/Validated by

Blandina

Valenzuela

8-22-96

Data Entry Comments:

LABCORE Data Entry Template for Worklist#

11908

Analyst: RLM Instrument: DSC0 3 Book # 12014B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101. Run under NITROGEN. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004077	0	DSC-01	SOLID	N/A			Joules/g
96001016	A-101 (P)	3 DUP	S96T004077	0	DSC-01	SOLID			N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004078	0	DSC-01	SOLID	N/A			Joules/g
96001016	A-101 (P)	5 DUP	S96T004078	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 11908

RLM 8/16/96
Analyst Signature Date

ACU 8/21/96
Analyst Signature Date

DSC-03 Instrument
was used.

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: IND081501 Thu Aug 15 06:26:22 1996

Sample Weight: 2.120 mg

12N14-B INDIUM AT 10C/MIN

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

162

Heat Flow (mW)

WHC-SD-WM-DP-200, REV.0

N2, EXOTHERM DOWN

Temperature (°C)

TIME: 140.8 s TIME: 0.0 min RATE: 10.0 °C/min

EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 20 09:59:27 1996

Curve 1: DSC

File Info: SAM081506 Thu Aug 15 19:06:49 1996

Sample Weight: 37.130 mg

S96T004077

N2 10C/min

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

PJ MCCOMM

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Aug 20 07:02:48 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC

File info: SAM081507 Thu Aug 15 21:29:11 1996

Sample Weight: 34.020 mg

S96T004077 DUP

164

N2 10C/min

TEMP: 38.0 °C
TIME: 000.0 s

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Aug 20 07:12:47 1996

MMO-SD-UM-DP-200, REV.0

Curve 1: DSC

File info: SAM081508 Thu Aug 15 23:02:19 1996

Sample Weight: 39.530 mg

S96T004078

N2 10C/min

TEMP: 25.0 °C
TIME: 000.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Aug 20 07:23:29 1996

WHI-SD-1MM-DP-200, REV. 0

Curve 1: DSC
 File Info: SAK081601 Fri Aug 16 02:25:25 1996
 Sample Weight: 44.240 mg
 S96T004078 DUP

PJ MCCOY
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Aug 20 07:35:42 1996

LABCORE Data Entry Template for Worklist# 12277

Analyst: RDM Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: Please run A-101 DSCs 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>28.22</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004289	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004289	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
		4 STD			DSC-03	LIQUID	<u>28.45</u>	<u>29.35</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	5 SAMPLE	S96T004290	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	6 DUP	S96T004290	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12277

Analyst Signature

Date

8-29-96

Analyst Signature

Date

Final Mark 8-29-96
BDV

Verified/Validated by
 Blandina
 Valenzuela
 9-3-96

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# 12277

Analyst: RPM Instrument: DSC0 _____ Book # 121170

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

Worklist Comment: Please run A-101 DSCs 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
96001049	A-101 (P)	2 SAMPLE	S96T004289	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	3 DUP	S96T004289	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004290	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	5 DUP	S96T004290	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 12277

RPM
Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

DSC-03 instrument

was used.

8.29.96

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: IND082801 Mon Aug 26 07:20:07 1996

Sample Weight: 5.920 mg

12N14-8 INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 169 TO 174.

N2, EXOTHERM DOWN

TIME: 120.8 s

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System
Mon Aug 26 08:45:35 1996

WHCSD-WM-DP-200, REV.0

Curve 1: DSC

File Info: SA0082601 Mon Aug 26 12:47:08 1996

Sample Weight: 24.480 mg

S96T004289

Curve 1: DSC

File info: SAM082701 Tue Aug 27 09:53:22 1996

Sample Weight: 17.630 mg

S96T004289DUP

N2 10C/min
TIME: 35.8 s
TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 27 11:34:23 1996

WHICSD-WM-DP-200, REV. 0

Curve 1: DSC

File info: IND082701 Tue Aug 27 05:54:19 1996

Sample Weight: 5.320 mg

12N14-B INDIUM AT 10C/MIN

N2, EXOTHERM DOWN

TIME: 128.8 s TIMES: 0.0 min RATES: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 27 06:51:56 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM082702 Tue Aug 27 12:39:12 1996

Sample Weight: 17.010 mg

996T004290

TIME: 35.0 g

TIME: 008.8 g

TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 27 13:00:47 1996

WNC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File Info: SA4082703 Tue Aug 27 14:25:10 1996
 Sample Weight: 21.770 mg
 896T004290DUP

BO MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Aug 27 15:05:48 1996

N2 100/min
 TIME 00:08
 0.0 min RATE: 10.0 °C/min

LABCORE Data Entry Template for Worklist# 12326

Analyst: QAM Instrument: DSC0 1 Book # 12N1A-B

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

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

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>26.6</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004279	0	DSC-01	SOLID	<u>N/A</u>	<u>70.1</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004279	0	DSC-01	SOLID	<u>70.1</u>	<u>62.7</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004280	0	DSC-01	SOLID	<u>N/A</u>	<u>51.7</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004280	0	DSC-01	SOLID	<u>51.7</u>	<u>43.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12326

QAMurphy 8-30-96
Analyst Signature Date

Reichert 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-6-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 176 TO 180.

DSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00083.001

DSC METTLER 30-Aug-96

Ident: 0.0

222-S Laboratory

exo

176

50 mW

Integration

Delta H 120 mJ

26.6 J/g

Peak 158.0°C

-9.1 mW

120.

140.

160.

180.

°C

Ch Murphy 8-30-96

S96T004279 SAM N2

9.310 mg

Rate: 10.0 °C/min

File: 00085.001

DSC METTLER 30-Aug-96

Ident: 0.0

222-S Laboratory

exo

Integration

Delta H 5654 mJ

607.3 J/g

Peak 125.9°C

-13.1 mW

10. mW

Integration

Delta H 652 mJ

70.1 J/g

Peak 250.5°C

2.8 mW

100.

200.

300.

400.

°C

177

177-004279-0200-0000

S96T004279 DUP N2

15.892 mg

Rate: 10.0 °C/min

File: 00087.001

Ident: 0.0

DSC METTLER 30-Aug-96

222-S Laboratory

>ox
ex
Integration
Delta H14945 mJ
940.4 J/g
Peak 122.8°C
-36.8 mW

Integration
Delta H 997 mJ
62.7 J/g
Peak 248.6°C
4.1 mW

mW
02

100.

200.

300.

400.

°C

178

WHCSD-WM-DP-200, REV.0

S96T004280 SAM N2

16.615 mg

Rate: 10.0 °C/min

File: 00089.001

DSC METTLER

30-Aug-96

Ident: 0.0

222-S Laboratory

worklistrpt Version 2.1 05/15/95
08/27/96 11:06

Page: 1

LABCORE Data Entry Template for Worklist# 12362

Analyst: BDD Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for A-101. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001016	A-101 (P)	1 SAMPLE	S96T004067	0	DSC-02	SOLID	N/A	84.1		Joules/g Dry
96001016	A-101 (P)	2 DUP	S96T004067	0	DSC-02	SOLID	84.1	101	N/A	Joules/g Dry
96001016	A-101 (P)	3 SAMPLE	S96T004072	0	DSC-02	SOLID	N/A	185		Joules/g Dry
96001016	A-101 (P)	4 DUP	S96T004072	0	DSC-02	SOLID	185	221	N/A	Joules/g Dry
96001016	A-101 (P)	5 SAMPLE	S96T004073	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	6 DUP	S96T004073	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	7 SAMPLE	S96T004074	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	8 DUP	S96T004074	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	9 SAMPLE	S96T004075	0	DSC-02	SOLID	N/A	28.2		Joules/g Dry
96001016	A-101 (P)	10 DUP	S96T004075	0	DSC-02	SOLID	28.2	38.9	N/A	Joules/g Dry
96001016	A-101 (P)	11 SAMPLE	S96T004076	0	DSC-02	SOLID	N/A	34.5		Joules/g Dry
96001016	A-101 (P)	12 DUP	S96T004076	0	DSC-02	SOLID	34.5	38.8	N/A	Joules/g Dry
96001016	A-101 (P)	13 SAMPLE	S96T004077	0	DSC-02	SOLID	N/A	53.4		Joules/g Dry
96001016	A-101 (P)	14 DUP	S96T004077	0	DSC-02	SOLID	53.4	55.8	N/A	Joules/g Dry
96001016	A-101 (P)	15 SAMPLE	S96T004078	0	DSC-02	SOLID	N/A	38.9		Joules/g Dry
96001016	A-101 (P)	16 DUP	S96T004078	0	DSC-02	SOLID	38.9	35.9	N/A	Joules/g Dry
96001049	A-101 (P)	17 SAMPLE	S96T004279	0	DSC-02	SOLID	N/A	133		Joules/g Dry
96001049	A-101 (P)	18 DUP	S96T004279	0	DSC-02	SOLID	133	119	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# 12362

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

Final page for worklist # 12362

Blandina Valenzuela 10-7-96
Analyst Signature Date

Ilhanna 10-8-96
Analyst Signature Date

Validated 10-8-96 HEE

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.

A-101 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T004067	52.6	37.46	84.1
4067D	63.3	37.46	101
4072	115	37.98	185
4072D	137	37.98	221
4073	Ø	—	Ø
4073D	Ø	—	Ø
4074	Ø	—	Ø
4074D	Ø	—	Ø
4075	16.0	43.16	28.2
4075D	22.1	43.16	32.9
4076	19.2	44.34	34.5
4076D	21.6	44.34	38.8
4077	30.55	42.82	53.4
4077D	31.91	42.82	55.8
4078	20.95	46.09	35.9
4078D	19.34	46.09	35.9
4279	70.1	47.24	133
4279D	62.7	47.24	119

LABCORE Data Entry Template for Worklist# 12363

Analyst: BDY Instrument: DSC01 Book # —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for A-101. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001049	A-101 (P)	1 SAMPLE	S96T004280	0	DSC-02	SOLID	N/A	93.3		Joules/g Dry
96001049	A-101 (P)	2 DUP	S96T004280	0	DSC-02	SOLID	93.3	79.2	N/A	Joules/g Dry
96001049	A-101 (P)	3 SAMPLE	S96T004533	0	DSC-02	SOLID	N/A	106		Joules/g Dry
96001049	A-101 (P)	4 DUP	S96T004533	0	DSC-02	SOLID	106	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	5 SAMPLE	S96T004534	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	6 DUP	S96T004534	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	7 SAMPLE	S96T004535	0	DSC-02	SOLID	N/A	83.2		Joules/g Dry
96001049	A-101 (P)	8 DUP	S96T004535	0	DSC-02	SOLID	83.2	85.0	N/A	Joules/g Dry
96001049	A-101 (P)	9 SAMPLE	S96T004536	0	DSC-02	SOLID	N/A	89.7		Joules/g Dry
96001049	A-101 (P)	10 DUP	S96T004536	0	DSC-02	SOLID	89.7	89.6	N/A	Joules/g Dry
96001049	A-101 (P)	11 SAMPLE	S96T004537	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	12 DUP	S96T004537	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	13 SAMPLE	S96T004538	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	14 DUP	S96T004538	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	15 SAMPLE	S96T004539	0	DSC-02	SOLID	N/A	67.8		Joules/g Dry
96001049	A-101 (P)	16 DUP	S96T004539	0	DSC-02	SOLID	67.8	65.1	N/A	Joules/g Dry
96001049	A-101 (P)	17 SAMPLE	S96T004540	0	DSC-02	SOLID	N/A	88.8		Joules/g Dry
96001049	A-101 (P)	18 DUP	S96T004540	0	DSC-02	SOLID	88.8	74.7	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# 12363

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 12363

Blandina Valenzuela 10-7-96
Analyst Signature Date

H. Anastro 10-8-96
Analyst Signature Date

Validated 10-8-96 Hga

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.

A-101 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96TCC 4280	51.7	44.60	93.3
4230D	43.9	44.60	79.2
4533	65.7	38.20	106
4533A	Ø	—	Ø
24	Ø	—	Ø
24D	Ø	—	Ø
35	55.3	33.56	83.2
35D	56.5	33.56	85.0
36	62.4	30.43	89.7
36D	62.3	30.43	89.6
37	Ø	—	Ø
34D	Ø	—	Ø
38	Ø	—	Ø
38D	Ø	—	Ø
31	43.5	35.8	67.8
31D	41.8	35.8	65.1
32	61.7	30.51	88.8
32A	51.9	30.51	74.7

LABCORE Data Entry Template for Worklist# 12364

Analyst: BDY Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for A-101. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001049	A-101 (P)	1 SAMPLE	S96T004541	0	DSC-02	SOLID	<u>N/A</u>	<u>127</u>		Joules/g Dry
96001049	A-101 (P)	2 DUP	S96T004541	0	DSC-02	SOLID	<u>127</u>	<u>109</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	3 SAMPLE	S96T004542	0	DSC-02	SOLID	<u>N/A</u>	<u>103</u>		Joules/g Dry
96001049	A-101 (P)	4 DUP	S96T004542	0	DSC-02	SOLID	<u>103</u>	<u>114</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	5 SAMPLE	S96T004543	0	DSC-02	SOLID	<u>N/A</u>	<u>86.2</u>		Joules/g Dry
96001049	A-101 (P)	6 DUP	S96T004543	0	DSC-02	SOLID	<u>86.2</u>	<u>95.5</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	7 SAMPLE	S96T004544	0	DSC-02	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g Dry
96001049	A-101 (P)	8 DUP	S96T004544	0	DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	9 SAMPLE	S96T004545	0	DSC-02	SOLID	<u>N/A</u>	<u>199</u>		Joules/g Dry
96001049	A-101 (P)	10 DUP	S96T004545	0	DSC-02	SOLID	<u>199</u>	<u>213</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	11 SAMPLE	S96T004546	0	DSC-02	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g Dry
96001049	A-101 (P)	12 DUP	S96T004546	0	DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	13 SAMPLE	S96T004547	0	DSC-02	SOLID	<u>N/A</u>	<u>128</u>		Joules/g Dry
96001049	A-101 (P)	14 DUP	S96T004547	0	DSC-02	SOLID	<u>128</u>	<u>196</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	15 SAMPLE	S96T004548	0	DSC-02	SOLID	<u>N/A</u>	<u>42.7</u>		Joules/g Dry
96001049	A-101 (P)	16 DUP	S96T004548	0	DSC-02	SOLID	<u>42.7</u>	<u>112</u>	<u>N/A</u>	Joules/g Dry
96001049	A-101 (P)	17 SAMPLE	S96T004549	0	DSC-02	SOLID	<u>N/A</u>	<u>40.5</u>		Joules/g Dry
96001049	A-101 (P)	18 DUP	S96T004549	0	DSC-02	SOLID	<u>40.5</u>	<u>18.7</u>	<u>N/A</u>	Joules/g Dry

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 12364

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 12364

Blandina Valenzuela 10-7-96
Analyst Signature Date

H. Anastas 10.8.96
Analyst Signature Date

Validated 10.8.96 HUA

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.

A-101 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T004541	84.3	33.71	127
4541D	71.9	32.71	109
4542	67.9	34.12	103
4542D	74.8	34.12	114
4543	57.8	32.95	86.2
4543D	64.0	32.95	95.5
4544	Ø	—	Ø
4544D	Ø	—	Ø
4545	129	35.16	199
4545D	138	35.16	213
4546	Ø	—	Ø
4546D	Ø	—	Ø
4547	73.1	42.78	123
4547D	112	42.78	196
4548	22.9	46.59	42.9
4548D	59.9	46.59	112
4549	22.3	44.98	40.5
4549D	10.3	44.98	13.7

LABCORE Data Entry Template for Worklist# 12365

Analyst: Hea Instrument: DSC01 Book # —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001049	A-101 (P)	1 SAMPLE	S96T004550	0	DSC-02	SOLID	N/A	28.5		Joules/g Dry
96001049	A-101 (P)	2 DUP	S96T004550	0	DSC-02	SOLID	28.5	51.6	N/A	Joules/g Dry
96001049	A-101 (P)	3 SAMPLE	S96T004551	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	4 DUP	S96T004551	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	5 SAMPLE	S96T004552	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	6 DUP	S96T004552	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001049	A-101 (P)	7 SAMPLE	S96T004584	0	DSC-02	LIQUID	N/A	124		Joules/g Dry
96001049	A-101 (P)	8 DUP	S96T004584	0	DSC-02	LIQUID	124	73.7	N/A	Joules/g Dry
96001049	A-101 (P)	9 SAMPLE	S96T004585	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96001049	A-101 (P)	10 DUP	S96T004585	0	DSC-02	LIQUID	Ø	131	N/A	Joules/g Dry
96001049	A-101 (P)	11 SAMPLE	S96T004587	0	DSC-02	LIQUID	N/A	78.6		Joules/g Dry
96001049	A-101 (P)	12 DUP	S96T004587	0	DSC-02	LIQUID	78.6	Ø	N/A	Joules/g Dry

Final page for worklist # 12365

Hea
Analyst Signature Date 10.8.96

Hea
Analyst Signature Date 10.8.96

Validated by Hea 10.8.96

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.

LABCORE Data Entry Template for Worklist# 12366

Analyst: BDV Instrument: DSC01 Book # Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001016	A-101 (P)	1 SAMPLE	S96T004110	0	DSC-02	LIQUID	N/A	<u>Ø</u>		Joules/g Dry
96001016	A-101 (P)	2 DUP	S96T004110	0	DSC-02	LIQUID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96001016	A-101 (P)	3 SAMPLE	S96T004115	0	DSC-02	LIQUID	N/A	<u>50.4</u>		Joules/g Dry
96001016	A-101 (P)	4 DUP	S96T004115	0	DSC-02	LIQUID	<u>50.4</u>	<u>49.2</u>	N/A	Joules/g Dry
96001016	A-101 (P)	5 SAMPLE	S96T004116	0	DSC-02	LIQUID	N/A	<u>63.0</u>		Joules/g Dry
96001016	A-101 (P)	6 DUP	S96T004116	0	DSC-02	LIQUID	<u>63.0</u>	<u>65.4</u>	N/A	Joules/g Dry
96001016	A-101 (P)	7 SAMPLE	S96T004117	0	DSC-02	LIQUID	N/A	<u>64.8</u>		Joules/g Dry
96001016	A-101 (P)	8 DUP	S96T004117	0	DSC-02	LIQUID	<u>64.8</u>	<u>56.1</u>	N/A	Joules/g Dry
96001016	A-101 (P)	9 SAMPLE	S96T004118	0	DSC-02	LIQUID	N/A	<u>56.4</u>		Joules/g Dry
96001016	A-101 (P)	10 DUP	S96T004118	0	DSC-02	LIQUID	<u>56.4</u>	<u>56.2</u>	N/A	Joules/g Dry
96001049	A-101 (P)	11 SAMPLE	S96T004289	0	DSC-02	LIQUID	N/A	<u>Ø</u>		Joules/g Dry
96001049	A-101 (P)	12 DUP	S96T004289	0	DSC-02	LIQUID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96001049	A-101 (P)	13 SAMPLE	S96T004290	0	DSC-02	LIQUID	N/A	<u>Ø</u>		Joules/g Dry
96001049	A-101 (P)	14 DUP	S96T004290	0	DSC-02	LIQUID	<u>Ø</u>	<u>Ø</u>	N/A	Joules/g Dry
96001049	A-101 (P)	15 SAMPLE	S96T004582	0	DSC-02	LIQUID	N/A	<u>53.8</u>		Joules/g Dry
96001049	A-101 (P)	16 DUP	S96T004582	0	DSC-02	LIQUID	<u>53.8</u>	<u>52.4</u>	N/A	Joules/g Dry
96001049	A-101 (P)	17 SAMPLE	S96T004583	0	DSC-02	LIQUID	N/A	<u>49.1</u>		Joules/g Dry
96001049	A-101 (P)	18 DUP	S96T004583	0	DSC-02	LIQUID	<u>49.1</u>	<u>85.0</u>	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.

worklistrpt Version 2.1 05/15/95
08/27/96 11:08

Page: 2

LABCORE Data Entry Template for Worklist# 12366

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 12366

Blundina Valenzuela 10-7-96
Analyst Signature Date

[Signature] 10-8-96
Analyst Signature Date

Validated by SLA 10-8-96

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.

A-101 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T004110	Ø	—	Ø
4110D	Ø	—	Ø
4115	26.1	48.16	50.4
4115D	25.5	48.16	49.2
4116	29.7	52.89	63.0
4116D	30.8	52.89	65.4
4117	34.7	46.12	64.8
4117D	30.2	46.12	56.1
4118	29.5	47.71	56.42
4118D	29.4	47.71	56.22
4289	Ø	—	Ø
4289D	Ø	—	Ø
4290	Ø	—	Ø
4290D	Ø	—	Ø
4582	22.5	46.99	53.8
4582D	27.8	46.99	52.4
4583	26.1	46.71	49.1
4583D	25.2	46.81	35.0

LABCORE Data Entry Template for Worklist# 13224

Analyst: SMF Instrument: DSC0 1 Book # 12N14R

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>28.5</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004582	0	DSC-01	LIQUID	<u>N/A</u>	<u>28.5</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004582	0	DSC-01	LIQUID	<u>28.5</u>	<u>27.8</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004583	0	DSC-01	LIQUID	<u>N/A</u>	<u>26.1</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004583	0	DSC-01	LIQUID	<u>26.1</u>	<u>45.2</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13224

Susie M. Dutton 9-24-96
Analyst Signature Date

RCJ 9/24/96
Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela

9-26-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 196 TO 200.

DSC STD 12N14B

25.810 mg

Rate: 10.0 °C/min

File: 00058.001

DSC METTLER

24-Sep-96

Ident: 0.0

222-S Laboratory

exo

Integration

Delta H 735 mJ

28.5 J/g

Peak 159.9°C

-32.4 mW

196

20. mW

120.

140.

150.

180.

°C

Susan M. Fulton 9-24-96

WHC-SD-WM-DP-200, REV. 0

S96T004583 N2
15.164 mg

Rate: 10.0 °C/min

File: 00064.001 DSC METTLER 26-Sep-96
Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 13225

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 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>28.15</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004584	0	DSC-03	LIQUID	<u>N/A</u>	<u>66.2</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004584	0	DSC-03	LIQUID	<u>66.2</u>	<u>39.2</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004585	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004585	0	DSC-03	LIQUID	<u>0</u>	<u>70.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13225

See attached for signatures
Analyst Signature Date 9-24-96

Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
9-26-96

Data Entry Comments:

sample
S96T004584 results are the sum of two exotherms.
The sharp peak (exotherm) is probably due to the decomposition of a pure
substance. The high RPDs are due to sample inhomogeneity.

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# 13225

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

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101 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
96001049	A-101 (P)	2 SAMPLE	S96T004584	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	3 DUP	S96T004584	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004585	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	5 DUP	S96T004585	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 13225

Susan M. Dutton 9-24-96
Analyst Signature Date

Kevin J. D 9/26/96
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.

Curve 1: DSC

File info: IND092401 Tue Sep 24 16:50:28 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 203 TO 207

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File info: SAM092401 Tue Sep 24 18:12:41 1996
 Sample Weight: 15.140 mg
 996T004584

SM FILTIN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 10:04:13 1996

N2 100/min
 THERM 80:8 THERM 0.0 min RATE: 10.0 C/min

Curve 1: DSC

File info: SAM092402 Tue Sep 24 20: 27: 42 1996

Sample Weight: 13.610 mg

S96T004584 DUP

N2 10C/min

TIME: 22.8 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Sep 25 10: 13: 20 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File info: SA002403 Tue Sep 24 21:26:41 1996
 Sample Weight: 13.630 mg
 996T004595

SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Sep 24 21:26:40 1996

N2 100/min
 THERM 25.8 g
 THERM 0.0 min RATE 10.0 C/min

Curve 1: DSC
 File Info: SAM092404 Tue Sep 24 22:53:28 1996
 Sample Weight: 15.100 mg
 S96T004585 DUP

SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 10:36:02 1996

N2 10C/min
 Purge 20.0 g/min
 Mod 0.0 min RATE: 40.0 C/min

LABCORE Data Entry Template for Worklist# 13226

Analyst: SME Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 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>28.15*</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004587 0		DSC-03	LIQUID	<u>N/A</u>	<u>42.12</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004587 0		DSC-03	LIQUID	<u>42.12</u>	<u>0</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004669 0		DSC-03	LIQUID	<u>N/A</u>	<u>38.4</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004669 0		DSC-03	LIQUID	<u>38.4</u>	<u>44.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13226

See attached for signatures
Analyst Signature Date 9-24-96
Verified/Validated by Blandina Valenzuela 9-26-96

Reed Light 9/26/96
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# 13226

Analyst: SME Instrument: DSC0 _____ Book # 12014B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101 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
96001049	A-101 (P)	2 SAMPLE	S96T004587	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	3 DUP	S96T004587	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004669	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96001016	A-101 (P)	5 DUP	S96T004669	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 13226

Lusie M. Dulton 9-24-96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was used.

9-24-96

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: IND092401 Tue Sep 24 16: 50: 28 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 210 TO 214.

N2, EXOTHERM DOWN

TIME: 128.8 s

TIME: 0.0 min

RATE: 10.0 °C/min

10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Sep 24 17: 31: 42 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File info: SAM092405 Wed Sep 25 00:28:50 1996
 Sample Weight: 8.620 mg
 996T004587

N2 10C/min
 TIME: 03.8 8
 TIME: 0.0 min RATE: 10.0 C/min
 SM FILTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 09:30:13 1996

Curve 1: DSC
 File Info: SAM092406 Wed Sep 25 01:37:49 1996
 Sample Weight: 13.520 mg
 S96T004587DLP

N2 100/min
 TIME: 55.8 g
 0.0 mL/min RATE: 10.0 °C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 02:41:44 1996

Curve 1: DSC
 File info: SAM92407 Wed Sep 25 03:22:24 1996
 Sample Weight: 19.250 mg
 9361004669

N2 100/min
 TIME 00:08
 0.0 min RATE: 10.0 °/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 09:39:54 1996

Curve 1: DSC
 File Infr: SAM092408 Wed Sep 25 04:33:27 1996
 Sample Weight: 19.150 mg
 SS6T0046680UP

N2 10C/min
 THERM 38.8 g
 TONER 0.0 min RATE 10.0 C/min
 SM FILT
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 09:48:54 1996

LABCORE Data Entry Template for Worklist# 13227

Analyst: SMF Instrument: DSC0 1 Book # 12014-B

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	26.6	N/A	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004670	0	DSC-01	LIQUID	N/A	Ø		Joules/g
96001016	A-101 (P)	3 DUP	S96T004670	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004671	0	DSC-01	LIQUID	N/A	Ø		Joules/g
96001016	A-101 (P)	5 DUP	S96T004671	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 13227

Analyst Signature _____ Date _____

Susie M. Dullos 9-24-96

Analyst Signature _____ Date _____

Rebecca L. 9/26/96

Verified/Validated by

Blandina

Valenzuela

9-26-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 216 TO 220.

DSC STD 12N14B

25.810 mg

Rate: 10.0 °C/min

File: 00033.001

Ident: 0.0

DSC METTLER 23-Sep-96

222-S Laboratory

S96T004670 N2

10.860 mg

Rate: 10.0 °C/min

File: 00054.001

DSC METTLER 24-Sep-96

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration
Delta H13222 mJ
1217.5 J/g
Peak 103.3°C
-71.4 mW

100.

200.

300.

400.

°C

217

WHC-SD-WM-DP-200, REV. 0

S96T004671 SAM N2

10.308 mg

Rate: 10.0 °C/min

File: 00045.001

DSC METTLER

23-Sep-96

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 13228

Analyst: QAM Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>25.3*</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004672	0	DSC-01	LIQUID	<u>N/A</u>	<u>17.2</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004672	0	DSC-01	LIQUID	<u>17.2</u>	<u>31.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13228

QAM 9-24-96
Analyst Signature Date

Rea 9/26/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-26-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 222 TO 224.

Murphy 9-27-96

DSC STD 12N14B

25.810 mg

Rate: 10.0 °C/min

File: 00033.001

DSC METTLER

23-Sep-96

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-200, REV. 0

S96T004672 SAM N2

28.801 mg

Rate: 10.0 °C/min

File: 00049.001

DSC METTLER

24-Sep-95

Ident: 0.0

222-S Laboratory

WHI-69-WM-DP-200, REV. 0

S96T004672DUP N2

20.506 mg

Rate: 10.0 °C/min

File: 00051.001

DSC METTLER

24-Sep-96

Ident: 0.0

222-S Laboratory

224

LABCORE Data Entry Template for Worklist# 13236

Analyst: RDM Instrument: DSC0 3 Book # 12N148

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.83*</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004544	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004544	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004545	0	DSC-03	SOLID	<u>N/A</u>	<u>129</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004545	0	DSC-03	SOLID	<u>129</u>	<u>138</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13236

See attached for signatures
Analyst Signature Date 10-1-96 RDM

 10-3-96
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# 13236

Analyst: Rom Instrument: DSC0 Book # 12N14BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004544	0	DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	3 DUP	S96T004544	0	DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004545	0	DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	5 DUP	S96T004545	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 13236

Analyst Signature: Rom
Date: 9/25/96
Susie M. J. J. J.
9-25-96

Analyst Signature: _____ Date: _____

DSC-03 instrument was
used. 10-1-96

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: IND092501 Wed Sep 25 05:24:40 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 227 TO 231.

N2, EXOTHERM DOWN

TIME 122.8 s THERM 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 06:16:54 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC

File info: SAM092503 Wed Sep 25 09:11:15 1996

Sample Weight: 24.390 mg

S96T004544

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 12:04:47 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC

File info: SAH092504 Wed Sep 25 12:58:48 1996

Sample Weight: 43.750 mg

S96T004544DUP

6229

Heat Flow (mW)

N2 10C/min
TIME: 30.8 g

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 13:23:33 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
File info: SAM092505 Wed Sep 25 15:19:46 1996
Sample Weight: 40.770 mg
S96T004545

Curve 1: DSC

File info: SAM092506 Wed Sep 25 17:38:02 1996

Sample Weight: 19.280 mg

S96T004545 DUP

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Oct 9 07:01:03 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13237

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.83*</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004546	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004546	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004547	0	DSC-03	SOLID	<u>N/A</u>	<u>73.1</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004547	0	DSC-03	SOLID	<u>73.1</u>	<u>112</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13237

See attached for signatures
Analyst Signature 10-1-96 SMF
Date

10-3-96
Analyst Signature 10-3-96
Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments: S96T004547 results are the sum of two exotherms.
The high RPD's are due to sample inhomogeneity.

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# 13237

Analyst: SHF Instrument: DSC0 Book # 12.014B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004546	0	DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	3 DUP	S96T004546	0	DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004547	0	DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	5 DUP	S96T004547	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 13237

Susie M. Julten 9-25-96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was used.

10-1-96

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: IND092501 Wed Sep 25 05:24:40 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 234 TO 238

N2, EXOTHERM DOWN

TIME: 128.8 s THERM: 0.0 mV RATE: 10.0 °C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 06:16:54 1996

Curve 1: DSC

File info: SAM092507 Wed Sep 25 18:53:50 1996

Sample Weight: 24.330 mg

S96T004546

N2 10C/min

TEMP: 55.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Sep 25 19:35:27 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File Infor: S44092508 Wed Sep 25 20:27:49 1996
 Sample Weight: 37.550 mg
 S96T004546 DUP

Curve 1: DSC
 File Info: SAM092509 Wed Sep 25 21:38:25 1996
 Sample Weight: 20.700 mg
 S98T004547

Curve 1: DSC

File info: SAM092510 Wed Sep 25 22:42:16 1996

Sample Weight: 34.030 mg

S96T004547 DUP

238

N2 10C/min
TIME: 00:08

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 23:42:37 1996

WHC-SD-WM-DP-200, REV.0

LABCORE Data Entry Template for Worklist# 13238

Analyst: RM

Instrument: DSC0 1

Book # 82NOA

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

Worklist Comment: A-101 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>27.7</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2	SAMPLE	S96T004548	0		DSC-01	SOLID	<u>N/A</u>	<u>22.9</u>		Joules/g
96001049	A-101 (P)	3	DUP	S96T004548	0		DSC-01	SOLID	<u>22.9</u>	<u>59.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13238

RM 9/25/96
Analyst Signature Date

Reynoldt 9/26/96
Analyst Signature Date

Verified/Validated by
Blancina
Valenzuela
9-26-96

Data Entry Comments: S46T004548 duplicate results are the sum of
two exotherms. The sharp exotherm occurring at approximately 230°C
is probably due to the decomposition of a fairly pure substance.

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 240 TO 242.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00068.001

DSC METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

exo

Integration

Delta H 715 mJ

27.7 J/g

Peak 159.5°C

-32.7 mW

240

20. mW

WHC-SD-WM-DP-200, REV. 0

Blandina Valenzuela for RD Meyers 10-14-96

110.

120.

130.

140.

150.

160.

170.

°C

S96T004548 DUP N2

14.040 mg

Rate: 10.0 °C/min

File: 00072.001

DSC METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration

Delta H 15787 mJ

1124.5 J/g

Peak 132.8°C

-36.5 mW

Integration

Delta H 152 mJ

10.8 J/g

Peak 208.7°C

4.3 mW

Integration

Delta H 689 mJ

49.1 J/g

Peak 252.7°C

4.1 mW

100.

200.

300.

400.

°C

242

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13260

Analyst: SMF Instrument: DSC0 1Book # 8208A 9-25-96
12 N14AMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 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>27.5</u>	<u>*</u>	<u>N/A</u> Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004549	0	DSC-01	SOLID	<u>N/A</u>	<u>22.3</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004549	0	DSC-01	SOLID	<u>22.3</u>	<u>10.3</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004550	0	DSC-01	SOLID	<u>N/A</u>	<u>16.3</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004550	0	DSC-01	SOLID	<u>16.3</u>	<u>29.5</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13260

Luisa M. Dalton 9-25-96
Analyst Signature Date

PLH 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 10-7-96

Data Entry Comments:

^{SPK}
¹⁰⁻¹⁻⁹⁶
S96T004549 results high RPDs are due to sample
inhomogeneity.

S96T004550 high RPDs are due to sample inhomogeneity.

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 244 TO 248.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00068.001

DSC METTLER 25-Sep-96

Ident: 0.0

222-S Laboratory

exo

20 mW

Integration

Delta H 709 mJ

27.5 J/g

Peak 159.5°C

-32.6 mW

110.

120.

130.

140.

150.

160.

170.

°C

WHC-SD-WM-DP-200, REV. 0

244

Laurie M. Dalton 7-25-96

S96T004549DUP N2

29.772 mg

Rate: 10.0 °C/min

File: 00084.001

DSC METTLER 26-Sep-96

Ident: 0.0

222-S Laboratory

246

WHC-SD-WM-DP-200, REV. 0

S96T004550 N2

24.554 mg

Rate: 10.0 °C/min

File: 00088.001

DSC METTLER

26-Sep-95

Ident: 0.0

222-S Laboratory

S96T004550 DUP N2
17.945 mg
Rate: 10.0 °C/min
File: 00090.001
Ident: 0.0
DSC METTLER 28-Sep-86
222-S Laboratory

exo >

20. mW

Integration
Delta H 530 mJ
29.5 J/g
Peak 246.7 °C
3.4 mW

Integration
Delta H15068 mJ
839.7 J/g
Peak 126.4 °C
-40.0 mW

°C

400.

300.

200.

100.

LABCORE Data Entry Template for Worklist# 13261

Analyst: Smf Instrument: DSC0 3 Book # 12N48

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.75</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004551	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004551	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004552	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004552	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13261

See Attached for Signature
Analyst Signature Date

Frank Muck
Analyst Signature Date 10-3-96

Verified/Validated by
Blandina
Valenzuela
10-496

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# 13261Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004551	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	3 DUP	S96T004551	0	DSC-01	SOLID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004552	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	5 DUP	S96T004552	0	DSC-01	SOLID	_____	_____	N/A	Joules/g

Final page for worklist # 13261

Lusie M. DeGen 9-25-96
 Analyst Signature Date

 Analyst Signature Date

DSC03 Instrument
 was used

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: IND092501 Wed Sep 25 05:24:40 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 251 TO 255

N2, EXOTHERM DOWN

TIME: 128.0 s THERM: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 00:00:54 1996

Curve 1: DSC

File info: SAM092511 Thu Sep 26 00:21:07 1996

Sample Weight: 25.890 mg

S96T004551

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

TIME: 0.0 min RATE: 10.0 C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 02:28:38 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
File info: SAM092512 Thu Sep 26 03:17:45 1996
Sample Weight: 27.830 mg
S96T004551 DUP

N2 10C/min
TIME: 33.0 s
THERM: 000.0 s
TIME: 0.0 min RATE: 10.0 C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 04:55:15 1996

Curve 1: DSC

File info: SAM092601 Thu Sep 26 21:00:06 1996

Sample Weight: 24.280 mg

S96T004552

N2 10C/min

TIME: 38.8 g THERM: 0.0 min RATE: 10.0 C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 21:24:47 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
 File info: SA092602 Thu Sep 26 22:24:15 1996
 Sample Weight: 21.610 mg
 SS6T004552 DUP

N2 10C/min
 TIME: 05:08
 0.0 min RATE: 10.0 C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Sep 26 23:57:40 1996

LABCORE Data Entry Template for Worklist# 13262

Analyst: SME Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: A-101 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
96001016	A-101 (P)	2 SAMPLE	S96T004689	0	DSC-01	SOLID	<u>N/A</u>	<u>44.5</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004689	0	DSC-01	SOLID	<u>44.5</u>	<u>51.3</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004690	0	DSC-01	SOLID	<u>N/A</u>	<u>59.4</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004690	0	DSC-01	SOLID	<u>59.4</u>	<u>43.7</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13262

Susie M. Fulton 9-26-96
Analyst Signature Date

CD Murphy 9-27-96
Analyst Signature Date

Verified/Validated by

Blandina
Valenzuela
10-7-96

FLH 10-3-96

Data Entry Comments: S96T004689 sample results are the sum of two exotherms

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 257 TO 261.

DSC STD 12N14B

25.810 mg

Rate: 10.0 °C/min

File: 00086.001

Ident: 0.0

DSC METTLER 26-Sep-96

222-S Laboratory

exo>

20. mW

Integration
Delta H 741 mJ
28.7 J/g
Peak 159.8°C
-33.3 mW

110.

120.

130.

140.

150.

160.

170.

°C

Lucas M. Fulton 9-26-96

W-CSD-WV-C-200, REV. 0

257

S96T004689 N2

46.196 mg

Rate: 10.0 °C/min

File: 00092.001

Ident: 0.0

DSC METTLER

27-Sep-96

222-S Laboratory

S96T004689 DUP N2

24.478 mg

Rate: 10.0 °C/min

File: 00094.001

Ident: 0.0

DSC METTLER 27-Sep-96

222-S Laboratory

exo >

20. mW

259

Integration
Delta H 22739 mJ
928.9 J/g
Peak 140.7°C
-42.2 mW

Integration
Delta H 1257 mJ
51.3 J/g
Peak 320.8°C
2.9 mW

100.

200.

300.

400.

°C

S96T004690 N2
 59.923 mg
 Rate: 10.0 °C/min
 File: 00096.001
 Ident: 0.0
 DSC METTLER 27-Sep-96
 222-S Laboratory

S96T004690 DUP N2

28.622 mg

Rate: 10.0 °C/min

File: 00001.001

DSC METTLER 27-Sep-96

Ident: 0.0

222-S Laboratory

261

20. mW

exo>

Integration

Delta H 1250 mJ

43.7 J/g

Peak 314.8°C

4.1 mW

Integration

Delta H 27133 mJ

948.0 J/g

Peak 142.2°C

-51.1 mW

100.

200.

300.

400.

°C

WHIC-6D-WM-DP-200-REV.0

worklistrpt Version 2.1 05/15/95
10/02/96 14:59

Page: 1

LABCORE Data Entry Template for Worklist# 13263

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.30</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004691	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004691	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
		4 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.16</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	5 SAMPLE	S96T004692	0	DSC-03	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001016	A-101 (P)	6 DUP	S96T004692	0	DSC-03	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13263

See attached for signatures
Analyst Signature 10-2-96
Date BOY

T.R. O'Brien 10-02-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-4-96

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# 13263

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004691 0		DSC-01	SOLID	N/A			Joules/g
96001016	A-101 (P)	3 DUP	S96T004691 0		DSC-01	SOLID			N/A	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004692 0		DSC-01	SOLID	N/A			Joules/g
96001016	A-101 (P)	5 DUP	S96T004692 0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 13263

Susie M. Dalton 9-26-96
Analyst Signature Date
Daniel P. Bromley 10/1/96

Analyst Signature Date

DSC03 Instrument
was used

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: IND100101 Tue Oct 1 09:56:44 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2164 TO 2169.

S96T004691 SAM

N2 10C/min
TEMP1: 35.0 C
TEMP2: 500.0 C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 1 12:50:48 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM100102 Tue Oct 1 14:06:57 1996

Sample Weight: 20.770 mg

S96T004691 DUP

262

TEMP: 20.0 °C

TEMP: 600.0 °C

TIME: 0.0 min

RATE: 10.0 C/min

DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 1 15:04:33 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: qsav2 Thu Sep 26 05:17:42 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

267

N2, EXOTHERM DOWN

TIME: 120.0 s THERM: 0.0 min RATE: 10.0 C/min

Temperature (°C)

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 19:51:26 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM092603 Fri Sep 27 00:36:01 1996

Sample Weight: 20.480 mg

S96T004692

268

N2 10C/min

TEMP: 30.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Oct 2 13:00:35 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC

File info: SAM092604 Fri Sep 27 01:53:22 1996

Sample Weight: 23.870 mg

S96T004692 DUP

N2 10C/min

TEMP: 30.0 °C
TEMP: 500.0 °C

TIME: 0.0 min

RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Oct 2 13:06:37 1996

WHC-SD-WM-DP-200, REV.0

LABCORE Data Entry Template for Worklist# 13264

Analyst: SMF Instrument: DSC0 1 Book # 12N141B

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

Worklist Comment: A-101 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>27.5</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004693	0	DSC-01	SOLID	<u>N/A</u>	<u>41.4</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004693	0	DSC-01	SOLID	<u>41.4</u>	<u>35.9</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004694	0	DSC-01	SOLID	<u>N/A</u>	<u>60</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004694	0	DSC-01	SOLID	<u>60</u>	<u>47</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13264

Lucie N. Julson 9-24-96
Analyst Signature Date 9-25-96

RIP 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

S96T004693 results are the sum of two exotherms

S96T004694 results are the sum of two exotherms

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 271 TO 275.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00068.001

DSC METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

exo >

20. mW

Integration

Delta H 710 mJ

27.5 J/g

Peak 159.5°C

-32.6 mW

110.

120.

130.

140.

150.

160.

170.

°C

Assie M. J. 9-25-96

WHCSD-WV-02-200, 2511

271

S96T004694 DUP N2

29.627 mg Rate: 10.0 °C/min

File: 00080.001 DSC METTLER 25-Sep-96
Ident: 0.0 222-8 Laboratory

LABCORE Data Entry Template for Worklist# 13265

Analyst: Ra Instrument: DSC0 | _____ Book # 12N14-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 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>28.9</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004695	0	DSC-01	SOLID	<u>N/A</u>	<u>70.7</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004695	0	DSC-01	SOLID	<u>70.7</u>	<u>71.3</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004696	0	DSC-01	SOLID	<u>N/A</u>	<u>68.9</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004696	0	DSC-01	SOLID	<u>68.9</u>	<u>74.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13265

Ra Lynn Green 9-28-96
Analyst Signature Date

Frederick Mack 10-3-96
Analyst Signature Date

Verified/Validated by:
Blandina
Valenzuela
10-9-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 277 TO 281.

DSC STD 12N14B N2

25.810 mg

Rate: 10.0 °C/min

File: 00003.001

DSC METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration

Delta H 745 mJ

28.9 J/g

Peak 160.0°C

-32.2 mW

50.

100.

150.

200.

7-27-96 C

Rae Ann Green

277

WFO-SD-WV-09-200, REV. 1

S96T004695 DUP N2

28.290 mg

Rate: 10.0 °C/min

File: 00007.001

Ident: 0.0

DSC METTLER 27-Sep-96

222-S Laboratory

exo

100. 200. 300. 400. °C

S96T004696 SAM N2

43.647 mg

Rate: 10.0 °C/min

File: 00009.001

Ident: 0.0

DSC METTLER

27-Sep-96

222-S Laboratory

exo

Integration
Delta H 3009 mJ
68.9 J/g
Peak 328.7°C
7.3 mW

Integration
Delta H36838 mJ
844.0 J/g
Peak 133.3°C
-64.7 mW

°C

400.

300.

200.

100.

LABCORE Data Entry Template for Worklist# 13266

Analyst: RM Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: A-101 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>28.9</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004697	0	DSC-01	SOLID	<u>N/A</u>	<u>74.8</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004697	0	DSC-01	SOLID	<u>74.8</u>	<u>103.3</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004698	0	DSC-01	SOLID	<u>N/A</u>	<u>64.2</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004698	0	DSC-01	SOLID	<u>64.2</u>	<u>58.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13266

RM 10/15/96
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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 CONSULTED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 283 TO 287.

S96T004698 N2

24.749 mg

File: 00052.001

Ident: 0.0

DSC METTLER

222-S Laboratory

15-Oct-96

Rate: 10.0 °C/min

R₁

exo >

Integration
Delta H 390 mJ
15.8 J/g
Peak 248.8°C
2.5 mW

Integration
Delta H 1197 mJ
48.4 J/g
Peak 318.9°C
3.6 mW

Integration
Delta H 17280 mJ
698.2 J/g
Peak 140.7°C
-39.7 mW

20. mW

982

°C

400.

300.

200.

100.

S96T004698 DUP N2

15.079 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

DSC METTLER

222-S Laboratory

15-Oct-96

Blm

LABCORE Data Entry Template for Worklist# 13267

Analyst: QAM Instrument: DSC0 1 Book # 12N14-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 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>27.1</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004699	0	DSC-01	SOLID	<u>N/A</u>	<u>70.6</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004699	0	DSC-01	SOLID	<u>70.6</u>	<u>70.6</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004700	0	DSC-01	SOLID	<u>N/A</u>	<u>98.7</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004700	0	DSC-01	SOLID	<u>98.7</u>	<u>50.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13267

Analyst Signature QAMurphy 9-28-96
DateAnalyst Signature Not-Kemp Date 9/28/96Verified/Validated by
Blandina
Valenzuela
10-4-96Data Entry Comments: S96T004699 results are the sum of two exothermsS96T004700 results are the sum of two exothermsUnits 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 289 TO 293.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

exo>

10. mW

Integration

Delta H 700 mJ

27.1 J/g

Peak 159.2°C

-25.8 mW

Blandina Valenzuela for Rob King 10-4-96

100.

200.

300.

400.

°C

289

WHC-SD-WM-DP-200, REV. 0

S96T004699 N2

16.705 mg

Rate: 10.0 °C/min

File: 00023.001

Ident: 0.0

DSC METTLER

28-Sep-96

222-S Laboratory

Wob. Kamp 9/28/96

S96T004699 DUP N2
21.450 mg
Rate: 10.0 °C/min
File: 00025.001
Ident: 0.0
DSC METTLER 28-Sep-96
222-S Laboratory

S96T004700 N2
17.822 mg

Rate: 10.0 °C/min

File: 00019.001
Ident: 0.0

DSC METTLER 28-Sep-96
222-S Laboratory

S96T004700 DUP N2

9.371 mg

Rate: 10.0 °C/min

File: 00021.001

DSC METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

exo

Integration

Delta H 6543 mJ

698.2 J/g

Peak 125.7°C

-15.2 mW

Integration

Delta H 41 mJ

4.4 J/g

Peak 208.3°C

-0.7 mW

293

10. mW

Integration

Delta H 56 mJ

5.9 J/g

Peak 252.3°C

0.5 mW

Integration

Delta H 421 mJ

45.0 J/g

Peak 316.4°C

1.7 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 13268

Analyst: NK Instrument: DSC0 1 Book # 12114-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 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>26.8*</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	2 SAMPLE	S96T004701	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001016	A-101 (P)	3 DUP	S96T004701	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96001016	A-101 (P)	4 SAMPLE	S96T004702	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
96001016	A-101 (P)	5 DUP	S96T004702	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13268

Analyst Signature: NK Date: 9/29/96Analyst Signature: RLH Date: 10-3-96Verified/Validated by
Blandina
Valenzuela
10-7-96Data Entry Comments: S96T004702 thermogram does indicate several different complex reactions occurring from 35-320°C.

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 295 TO 299.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

exo

10. mW

Integration

Delta H 691 mJ

26.8 J/g

Peak 159.2°C

-25.8 mW

Rob King 9/28/96

100.

200.

300.

400.

°C

WHC-SD-WM-DP-200, REV. 0

S96T004701 N2

19.110 mg

File: 00027.001 DSC METTLER 28-Sep-96

Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

S96T004701 DUP N2

25.250 mg

Rate: 10.0 °C/min

File: 00029.001

Ident: 0.0

DSC METTLER

29-Sep-96

222-S Laboratory

exo

Integration

Delta H31408 mJ

1243.9 J/g

Peak

109.3°C

-69.4 mW

Integration

Delta H 70 mJ

2.8 J/g

Peak

224.2°C

-1.6 mW

50. mW

°C

400.

300.

200.

100.

Not Ming 1/28/96

S96T004702 N2
14.450 mg

Rate: 10.0 °C/min

File: 00031.001 DSC METTLER 29-Sep-96
Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 13348

Analyst: RWK Instrument: DSC0 3 Book # 12N148

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.26</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004533	0	DSC-03	SOLID	<u>N/A</u>	<u>65.7</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004533	0	DSC-03	SOLID	<u>65.7</u>	<u>0</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004534	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004534	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13348

See attached for signatures
Analyst Signature [Signature] Date 10-1-96

[Signature] 10-5-96
Analyst Signature Date

Verified/Validated by

Blandina
Valenzuela
[Signature] 10-7-96
BOR

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# 13348

Analyst: DRK Instrument: DSC0 _____ Book # 12114-B

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004533	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	3 DUP	S96T004533	0	DSC-01	SOLID	_____	_____	N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004534	0	DSC-01	SOLID	N/A	_____	_____	Joules/g
96001049	A-101 (P)	5 DUP	S96T004534	0	DSC-01	SOLID	_____	_____	N/A	Joules/g

Final page for worklist # 13348

DRK 9/28/96
Analyst Signature Date

Analyst Signature Date

DSC-03 instrument
was used.

10-1-96

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: IN0092802 Set Sep 28 17:27:49 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 302 TO 306

N2, EXOTHERM DOWN

Temperature (°C)

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

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 1 07:22:06 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC

File info: SAM092801 Sat Sep 28 18:42:02 1996

Sample Weight: 24.080 mg

S96T004533

N2 10C/min

TIME: 35.0 min RATE: 10.0 °C/min

Temperature (°C)

AW KING

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Oct 1 12:19:47 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
File info: SAM092804 Sat Sep 28 21:03:26 1996
Sample Weight: 21.010 mg
S96T004533 DUP

N2 10C/min

TEMP: 35.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Sep 28 21:33:17 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC
File info: SAM092805 Sat Sep 28 22:12:45 1996
Sample Weight: 28.120 mg
S96T004534

WHC-SD-WM-DP-200, REV. 0

N2 10C/min
TEMP1: 35.0 °C
TEMP2: 500.0 °C

TIME1: 0.0 min RATE1: 10.0 °C/min

RM KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 00:15:07 1996

Curve 1: DSC

File info: SAM092901 Sun Sep 29 00: 45: 35 1996

Sample Weight: 20.560 mg

S96T004534 DUP

WHC-SD-MM-DP-200, REV.0

N2 10C/min
TEMP1: 35.0 °C
TEMP2: 500.0 °C

TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 00: 47: 53 1996

worklistrpt Version 2.1 05/15/95
09/25/96 11:18

Page: 1

LABCORE Data Entry Template for Worklist# 13349

Analyst: QNM Instrument: DSC0 1 Book # 12N14-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 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>25.5</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004535	0	DSC-01	SOLID	<u>N/A</u>	<u>55.3</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004535	0	DSC-01	SOLID	<u>55.3</u>	<u>56.5</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004536	0	DSC-01	SOLID	<u>N/A</u>	<u>62.4</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004536	0	DSC-01	SOLID	<u>62.4</u>	<u>62.3</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13349

Q Murphy 9-29-96
 Analyst Signature Date

Rob King 9/29/96
 Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela

10-7-96

PLB 10-3-96

Data Entry Comments:

S96T004535 results are the sum of two exotherms

S96T004536 results are the sum of two exotherms

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 308 TO 312.

DMurphy 9-29-96

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00037.001

DSC METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration

Delta H 657 mJ

25.5 J/g

Peak 160.1 °C

-28.1 mW

120.

140.

160.

180.

°C

WHC-SD-WM-DP-200, REV. 0

308

S96T004535 N2

36.589 mg

Rate: 10.0 °C/min

File: 00038.001 DSC METTLER 29-Sep-96

Ident: 0.0 222-S Laboratory

S96T004535 DUP N2
17.644 mg
Rate: 10.0 °C/min
File: 00040.001 DSC METTLER 29-Sep-96
Ident: 0.0 222-S Laboratory

S96T004536 N2

22.840 mg

Rate: 10.0 °C/min

File: 00042.001 DSC METTLER 28-Sep-98

Ident: 0.0 222-S Laboratory

exo

High Temp 9/24/98

S96T004536 DUP N2

31.925 mg

Rate: 10.0 °C/min

File: 00044.001

DSC METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

LABCORE Completed Worklist Report for Worklist# 13350

Analyst: rwk

Instrument: DSC03

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		0	DSC-03	SOLID	28.45	27.50	96.661 % Recovery	
2 SAMPLE	S96T004537	0	DSC-03	SOLID	N/A	0		Joules/g
3 DUF	S96T004537	0	DSC-03	SOLID	0	0	0.000 RPD	
4 SAMPLE	S96T004538	0	DSC-03	SOLID	N/A	0		Joules/g
5 DUF	S96T004538	0	DSC-03	SOLID	79.5	0	200.000 RPD	

Final page for worklist# 13350

See attached for signatures 10-7-96
Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Blandina Valenzuela 10-7-96
Reviewer Signature _____ Date _____

LABCORE Data Entry Template for Worklist# 13350

Analyst: BA Instrument: DSC0 3 Book # 12/14-B

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

Worklist Comment: A-101 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004537	0		DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	3 DUP	S96T004537	0		DSC-01	SOLID			N/A	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004538	0		DSC-01	SOLID	N/A			Joules/g
96001049	A-101 (P)	5 DUP	S96T004538	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 13350

M. Kim 9/29/96
Analyst Signature Date

Analyst Signature Date

DSC03 Instrument
was used

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: IND092902 Sun Sep 29 02:23:19 1996

Sample Weight: 6.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 315 TO 319.

N2, EXOTHERM DOWN

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

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 21:01:18 1996

315

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM092902 Sun Sep 29 18:11:20 1996

Sample Weight: 17.170 mg

S96T004537

316

N2 10C/min

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

RW KING

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Oct 1 13:48:12 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: DSC
File info: SAM092903 Sun Sep 29 19:17:45 1996
Sample Weight: 27.980 mg
S96T004537 DUP

WHC-SD-WM-DP-200, REV. 0

317

TEMP1: 35.0 °C
TEMP2: 506.0 °C
TIME1: 0.0 min
RATE1: 10.0 °C/min

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 20:38:44 1996

Curve 1: DSC

File info: SAM092905 Sun Sep 29 21:09:17 1996

Sample Weight: 14.200 mg

S96T004538

N2 10C/min
TEMP: 50.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 21:14:39 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: DSC

File info: SAM092906 Sun Sep 29 22:17:28 1996

Sample Weight: 23.370 mg

S96T004538 DUP

N2 10C/min

TEMP: 25.0 °C
TEMP: 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RW KING

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Sep 30 00:10:24 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13351

Analyst: DPB Instrument: DSC01 Book # 12N14-B

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

Worklist Comment: A-101 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>25.2</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004539	0	DSC-01	SOLID	<u>N/A</u>	<u>43.5</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004539	0	DSC-01	SOLID	<u>43.5</u>	<u>41.8</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004540	0	DSC-01	SOLID	<u>N/A</u>	<u>61.7</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004540	0	DSC-01	SOLID	<u>61.7</u>	<u>51.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13351

Dan P. Beasley 10/1/96 1730
Analyst Signature Date

TR 10-03-96
Analyst Signature Date

Results for S96T004539 + 4540 are the
sum of two exotherms. See 102.96

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 321 TO 325.

DSC STD 12N14-B

6.580 mg

Rate: 10.0 °C/min

File: 00068.001

DSC METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

321

WHC-SD-WM-DP-200, REV. 0

S96T004539 DUP N2

13.334 mg

Rate: 10.0 °C/min

File: 00072.001 DSC METTLER 01-Oct-96

Ident: 0.0

222-S Laboratory

Integration

Delta H12598 mJ

944.8 J/g

Peak 125.4°C

-25.9 mW

exo

20.02 mW

Integration

Delta H 77 mJ

5.8 J/g

Peak 262.6°C

0.7 mW

Integration

Delta H 481 mJ

36.0 J/g

Peak 320.6°C

1.6 mW

100.

200.

300.

400.

°C

323

S96T004540 SAM N2

14.457 mg

Rate: 10.0 °C/min

File: 00074.001

DSC METTLER

01-Oct-95

Ident: 0.0

222-S Laboratory

Integration

Delta H 13166 mJ

910.7 J/g

Peak 127.2°C

-29.9 mW

exo

Integration

Delta H 243 mJ

16.8 J/g

Peak 252.7°C

1.7 mW

Integration

Delta H 650 mJ

44.9 J/g

Peak 306.7°C

2.9 mW

20.02 mW

324

100.

200.

300.

400.

°C

S96T004540 DUP N2

20.502 mg

Rate: 10.0 °C/min

File: 00076.001

DSC METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

Integration

Delta H17010 mJ

829.7 J/g

Peak 142.6°C

-35.5 mW

exo

Integration

Delta H 312 mJ

15.2 J/g

Peak 250.5°C

2.3 mW

Integration

Delta H 753 mJ

36.7 J/g

Peak 318.5°C

2.9 mW

20. mW

100.

200.

300.

400.

°C

325

LABCORE Data Entry Template for Worklist# 13352

Analyst: BAK Instrument: DSC0 1 Book # 12614-B

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

Worklist Comment: A-101 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>25.3</u>	<u>*</u>	<u>N/A</u> Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004541	0	DSC-01	SOLID	<u>N/A</u>	<u>84.3</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004541	0	DSC-01	SOLID	<u>84.3</u>	<u>71.9</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	4 SAMPLE	S96T004542	0	DSC-01	SOLID	<u>N/A</u>	<u>67.9</u>		Joules/g
96001049	A-101 (P)	5 DUP	S96T004542	0	DSC-01	SOLID	<u>67.9</u>	<u>74.8</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13352

Bob King 9-30-96
Analyst Signature Date

R. P. P. 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 10-7-96

Data Entry Comments: S96T004541 results are the sum of two exotherms

S96T004542 results are the sum of two exotherms

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 327 TO 331.

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00037.001

DSC METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

exo>

20. mW

Integration

Delta H 654 mJ

25.3 J/g

Peak 160.1 °C

-28.1 mW

Not thing at all

120.

140.

160.

180.

°C

WHC-SD-WM-DP-200, REV. 0

327

S96T004541 N2

11.450 mg

Rate: 10.0 °C/min

File: 00046.001

DSC METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

exo>

10. mW

Integration

Delta H 8632 mJ

753.9 J/g

Peak 127.4°C

-23.1 mW

Integration

Delta H 143 mJ

12.5 J/g

Peak 250.6°C

1.0 mW

Integration

Delta H 609 mJ

53.2 J/g

Peak 308.6°C

2.3 mW

Integration

Delta H 213 mJ

18.6 J/g

Peak 452.5°C

0.8 mW

Not Wm 4/29/96

100.

200.

300.

400.

°C

328

S96T004541 DUP N2

10.957 mg

Rate: 10.0 °C/min

File: 00048.001 DSC METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

exo>

329

10. mW

Integration
Delta H 8064 mJ
736.0 J/g
Peak 127.3°C
-23.3 mW

Integration
Delta H 43 mJ
4.0 J/g
Peak 204.4°C
-0.9 mW

Integration
Delta H 236 mJ
21.5 J/g
Peak 252.6°C
1.4 mW

Integration
Delta H 552 mJ
50.4 J/g
Peak 302.6°C
2.5 mW

Not King 9/29/96

100.

200.

300.

400.

°C

S96T004542 N2

12.730 mg

Rate: 10.0 °C/min

File: 00050.001

DSC METTLER

30-Sep-96

Ident: 0.0 222-S Laboratory

S96T004542 DUP N2

22.921 mg

Rate: 10.0 °C/min

File: 00052.001

Ident: 0.0

DSC METTLER 30-Sep-96

222-S Laboratory

exo>

Integration

Delta H 16528 mJ
721.1 J/g

Peak 136.4°C
-40.9 mW

Integration

Delta H 337 mJ
14.7 J/g

Peak 252.6°C
2.3 mW

Integration

Delta H 1378 mJ
60.1 J/g

Peak 318.7°C
4.6 mW

Not Working 9-30-96

331

20. mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 13353

Analyst: QAM Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: A-101 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>27.1</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004543	0	DSC-01	SOLID	<u>N/A</u>	<u>57.8</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004543	0	DSC-01	SOLID	<u>57.8</u>	<u>64.0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13353

Q Murphy 9-28-96
Analyst Signature Date

2111 10-3-96
Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela

10-7-96

Data Entry Comments: S96T004543 results are the sum of two exotherms.

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 333 TO 335

P. Murphy 9-28-96

DSC STD 12N14-B

25.810 mg

Rate: 10.0 °C/min

File: 00013.001

DSC METTLER 28-Sep-96

Ident: 0.0

222-S Laboratory

exo >

10. mW

Integration
Delta H 700 mJ
27.1 J/g
Peak 159.2°C
-25.8 mW

333

100.

200.

300.

400.

°C

WHC-SD-WM-DP-200, REV. 0

S96T004543 N2

32.605 mg

Rate: 10.0 °C/min

File: 00015.001

Ident: 0.0

DSC METTLER

28-Sep-96

222-S Laboratory

S96T004543 DUP N2
 40.487 mg
 Rate: 10.0 °C/min
 File: 00017.001 DSC METTLER 28-Sep-96
 Ident: 0.0 222-S Laboratory

LABCORE Data Entry Template for Worklist# 13370

Analyst: DOW Instrument: DSC01 _____ Book # Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001016	A-101 (P)	1 SAMPLE	S96T004669	0	DSC-02	LIQUID	N/A	71.0		Joules/g Dry
96001016	A-101 (P)	2 DUP	S96T004669	0	DSC-02	LIQUID	71.0	83.0	N/A	Joules/g Dry
96001016	A-101 (P)	3 SAMPLE	S96T004670	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	4 DUP	S96T004670	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	5 SAMPLE	S96T004671	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	6 DUP	S96T004671	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	7 SAMPLE	S96T004672	0	DSC-02	LIQUID	N/A	68.0		Joules/g Dry
96001016	A-101 (P)	8 DUP	S96T004672	0	DSC-02	LIQUID	68.0	124	N/A	Joules/g Dry
96001016	A-101 (P)	9 SAMPLE	S96T004699	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	10 DUP	S96T004699	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	11 SAMPLE	S96T004700	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	12 DUP	S96T004700	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	13 SAMPLE	S96T004701	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	14 DUP	S96T004701	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
96001016	A-101 (P)	15 SAMPLE	S96T004702	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96001016	A-101 (P)	16 DUP	S96T004702	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# 13370

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 13370

Blandina Valenzuela 10-7-96
Analyst Signature Date

Anastasia 10-8-96
Analyst Signature Date

Validated by HUA 10-8-96

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.

337

A-101 chg DP

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
840104667	38.4	45.92	71.0
46610	44.9	45.92	83.0
4670	0	—	0
4670	0	—	0
4670	0	—	0
4670	2	—	0
4670	17.2	74.72	68.0
46700	21.4	74.72	124
4678		29.64	
4670		29.64	
4670	0	23.07	0
4670	0	28.07	0
4670	0	27.14	0
47000	0	27.14	0
4701	0	—	0
47010	2	—	0
4700	0	—	0
47000	0	—	0

LABCORE Data Entry Template for Worklist# 13371

Analyst: Hea Instrument: DSC01 Book # —

Method: LA-514-113 Rev/Mod —

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001016	A-101 (P)	1 SAMPLE	S96T004689	0	DSC-02	SOLID	<u>N/A</u>	<u>65.8</u>		Joules/g Dry
96001016	A-101 (P)	2 DUP	S96T004689	0	DSC-02	SOLID	<u>65.8</u>	<u>75.9</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	3 SAMPLE	S96T004690	0	DSC-02	SOLID	<u>N/A</u>	<u>89.6</u>		Joules/g Dry
96001016	A-101 (P)	4 DUP	S96T004690	0	DSC-02	SOLID	<u>89.6</u>	<u>66.9</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	5 SAMPLE	S96T004691	0	DSC-02	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g Dry
96001016	A-101 (P)	6 DUP	S96T004691	0	DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	7 SAMPLE	S96T004692	0	DSC-02	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g Dry
96001016	A-101 (P)	8 DUP	S96T004692	0	DSC-02	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	9 SAMPLE	S96T004693	0	DSC-02	SOLID	<u>N/A</u>	<u>61.4</u>		Joules/g Dry
96001016	A-101 (P)	10 DUP	S96T004693	0	DSC-02	SOLID	<u>61.4</u>	<u>53.2</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	11 SAMPLE	S96T004694	0	DSC-02	SOLID	<u>N/A</u>	<u>91.6</u>		Joules/g Dry
96001016	A-101 (P)	12 DUP	S96T004694	0	DSC-02	SOLID	<u>91.6</u>	<u>71.8</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	13 SAMPLE	S96T004695	0	DSC-02	SOLID	<u>N/A</u>	<u>107</u>		Joules/g Dry
96001016	A-101 (P)	14 DUP	S96T004695	0	DSC-02	SOLID	<u>107</u>	<u>108</u>	<u>N/A</u>	Joules/g Dry
96001016	A-101 (P)	15 SAMPLE	S96T004696	0	DSC-02	SOLID	<u>N/A</u>	<u>98.4</u>		Joules/g Dry
96001016	A-101 (P)	16 DUP	S96T004696	0	DSC-02	SOLID	<u>98.4</u>	<u>106.3</u>	<u>N/A</u>	Joules/g Dry

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 13371

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

Final page for worklist # 13371

Heather Anas 10.8.96
Analyst Signature Date

H Anas 10.8.96
Analyst Signature Date

Validated by Hea 10.8.96

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.

A-101 J11502

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
096T004687	44.5	32.41	65.2
4681D	51.3	32.41	75.9
4689D	59.4	32.62	82.0
4690D	43.7	32.62	66.9
4691	0	29.15	0
4692D	0	29.15	2
4692	0	31.79	2
4693D	0	31.79	2
4693	41.4	32.53	61.4
4693D	35.7	32.53	53.9
4694	60	34.51	91.6
4695	60	34.51	71.8
4695	70.7	34.51	107
4695D	71.3	34.51	108
4696	68.9	30.01	98.4
4696D	74.4	30.01	106.3
4697	WL 13266	31.83	10-3-96
4697D		31.83	

worklistrpt Version 2.1 05/15/95
10/14/96 08:24

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13799

Analyst: RD M Instrument: DSC0 1 Book # 12N148Method: LA-514-113 Rev/Mod C-1

Worklist Comment: A-101 DSC Reruns

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>27.1</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004545	0	DSC-01	SOLID	<u>N/A</u>	<u>113.8</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004545	0	DSC-01	SOLID	<u>113.8</u>	<u>100.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13799

Blandina Valenzuela for RD Meyers
Analyst Signature Date 10-14-96H Anastro
Analyst Signature Date 10-14-96Verified/Validated by
Blandina
Valenzuela 10-14-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 343 TO 345

DSC STD 12N14-B N2

17.838 mg

Rate: 10.0 °C/min

File: 00021.001

Ident: 0.0

DSC METTLER 12-Oct-96

222-S Laboratory

exo

10. mW

343

Integration

Delta H 483 mJ

27.1 J/g

Peak 159.1°C

-25.9 mW

Blandina Valenzuela for RD Meyers 10-15-96

120.

130.

140.

150.

160.

170.

°C

W-C-SD-MW-D-200, REV. 0

S96T004545 N2

7.810 mg

Rate: 10.0 °C/min

File: 00023.001 DSC METTLER 12-Oct-98
Ident: 0.0 222-S Laboratory

Integration

Delta H 6026 mJ

771.6 J/g

Peak

120.0 °C

-14.8 mW

10. mW

exo >

Integration

Delta H 53 mJ

6.8 J/g

Peak

204.6 °C

-0.8 mW

Integration

Delta H 888 mJ

113.8 J/g

Peak

304.7 °C

1.7 mW

100.

200.

300.

400.

°C

444

S96T004545DUP N2

22.400 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

DSC METTLER

12-Oct-96

222-S Laboratory

LABCORE Data Entry Template for Worklist# 13825

Analyst: RDM

Instrument: DSC0 1

Book # 12114B

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

RUSH

Worklist Comment: A-101. RUN UNDER NITROGEN. RUSH! new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>25.5</u>	<u>N/A</u>	Joules/g
96001049	A-101 (P)	2 SAMPLE	S96T004586 0		DSC-01	LIQUID	<u>N/A</u>	<u>25.5</u>		Joules/g
96001049	A-101 (P)	3 DUP	S96T004586 0		DSC-01	LIQUID	<u>25.5</u>	<u>27.3</u>	<u>N/A</u>	Joules/g

Final page for worklist # 13825

RDM
Analyst Signature

10/11/96
Date

J. Aneston
Analyst Signature

10-14-96
Date

Data Entry Comments:

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 347 TO 349.

DSC STD 12N14-B N2

17.838 mg

Rate: 10.0 °C/min

File: 00005.001

DSC METTLER

11-Oct-96

Ident: 0.0

222-S Laboratory

Blandina Valenzuela for RD Meyers 10-15-96

S96T004586 N2

12.920 mg

Rate: 10.0 °C/min

File: 00007.001 DSC METTLER 11-Oct-96
Ident: 0.0 222-S Laboratory

S96T004586 DUP N2
 14.540 mg
 Rate: 10.0 °C/min
 File: 00009.001
 Ident: 0.0
 DSC METTLER 11-Oct-96
 222-S Laboratory

worklistrpt Version 2.1 05/15/95
10/15/96 14:31

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 14041

Analyst: BDV Instrument: DSC01 Book # —

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96001016	A-101 (P)	1 SAMPLE	S96T004697	0	DSC-02	SOLID	N/A	108		Joules/g Dry
96001016	A-101 (P)	2 DUP	S96T004697	0	DSC-02	SOLID	108	149	N/A	Joules/g Dry
96001016	A-101 (P)	3 SAMPLE	S96T004698	0	DSC-02	SOLID	N/A	96.9		Joules/g Dry
96001016	A-101 (P)	4 DUP	S96T004698	0	DSC-02	SOLID	96.9	88.1	N/A	Joules/g Dry
96001049	A-101 (P)	5 SAMPLE	S96T004545	0	DSC-02	SOLID	N/A	171		Joules/g Dry
96001049	A-101 (P)	6 DUP	S96T004545	0	DSC-02	SOLID	171	152	N/A	Joules/g Dry
96001049	A-101 (P)	7 SAMPLE	S96T004586	0	DSC-02	LTIQID	N/A	48.3		Joules/g Dry
96001049	A-101 (P)	8 DUP	S96T004586	0	DSC-02	LTIQID	48.3	51.7	N/A	Joules/g Dry

Final page for worklist # 14041

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# 14045

Analyst: BON Instrument: DSC01 _____ Book # _____

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Dry DSC for A-101. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96001049	A-101 (P)	1 SAMPLE	S96T004545	1	DSC-02	SOLID	N/A	194		Joules/g Dry
96001049	A-101 (P)	2 DUP	S96T004545	1	DSC-02	SOLID	194	0	N/A	Joules/g Dry

Final page for worklist # 14045

Blandina Valenzuela
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#

11922

Analyst: Rz **Instrument:** TGA0 1 **Book #** 82N8-A

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

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.77*</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004110	0	TGA-01	LIQUID	<u>N/A</u>	<u>93.67</u>		%
96001016	A-101 (P)	3 DUP	S96T004110	0	TGA-01	LIQUID	<u>93.67</u>	<u>93.07</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004115	0	TGA-01	LIQUID	<u>N/A</u>	<u>48.17</u>		%
96001016	A-101 (P)	5 DUP	S96T004115	0	TGA-01	LIQUID	<u>48.17</u>	<u>48.14</u>	<u>N/A</u>	%

Final page for worklist #

11922

Rae Ann Green 8-15-96
Analyst Signature **Date**

Susan Bee 8/20/96
Analyst Signature **Date**

Verified/Validated by
Blandina
Valenzuela
8/21/96

Data Entry Comments: S96T004115 results are the sum of two weight loss
steps

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 353 TO 357

STD 82N8-A N2

34.898 mg

Rate: 10.0 °C/min

File: 00014.001

TG

METTLER

14-Aug-96

Ident: 0.0

222-8 Laboratory

353

WHC-SD-WM-DP-200, REV.0

S96T004110 SAM N2

File: 00031.001 TG METTLER 14-Aug-96

12.017 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.26 mg

-93.67 %

ResidC. 0.76 mg

6.33 %

Dpeak 85.0 °C

354

5. mg

8-14-96

Rae Ann Green

WFO-SD-WA-DP-200, REV. 0

S96T004110 DUP N2

File: 00033.001 TG METTLER 14-Aug-96

12.413 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis
Height-11.55 mg
-93.07 %
Res1C. 0.86 mg
6.93 %
Dpeak 85.0°C

S96T004115 SAM N2

32.141 mg

Rate: 10.0 °C/min

File: 00035.001

TG

METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.91 mg

-40.16 %

ResiC. 19.23 mg

59.84 %

Step Analysis

Height -2.58 mg

-8.01 %

ResiC. 16.63 mg

51.74 %

Dpeak 187.0 °C

8-14-96

R. Green

S96T004115 DUP N2

28.110 mg

Rate: 10.0 °C/min

File: 00037.001

TG

METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.29 mg

-40.17 %

ResidC. 16.82 mg

59.83 %

Dpeak 93.0°C

Step Analysis

Height -2.24 mg

-7.97 %

ResidC. 14.56 mg

51.80 %

Dpeak 187.0°C

LABCORE Data Entry Template for Worklist#

11923

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

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

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	58.50*	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004116	0	TGA-01	LIQUID	N/A	52.91		%
96001016	A-101 (P)	3 DUP	S96T004116	0	TGA-01	LIQUID	52.91	52.87	N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004117	0	TGA-01	LIQUID	N/A	45.54		%
96001016	A-101 (P)	5 DUP	S96T004117	0	TGA-01	LIQUID	45.54	46.69	N/A	%

Final page for worklist #

11923

QAM 8-14-96
Analyst Signature Date

Susan Bee 8/20/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8-22-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 359 TO 363.

DMurphy 8-14-96

STD 82N8-A N2

34.898 mg

Rate: 10.0 °C/min

File: 00014.001

TG

METTLER

14-Aug-96

Ident: 0.0

222-S Laboratory

359

10. mg

Step Analysis

Height-20.41 mg

-58.50 %

ResidC. 14.46 mg

41.44 %

Dpeak 115.0°C

115.0°C

S96T004116 SAM N2

23.503 mg

Rate: 10.0 °C/min

File: 00023.001 TG METTLER 14-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.64 mg

-41.01 %

Resid. 13.86 mg

58.99 %

Step Analysis

Height -1.97 mg

-8.36 %

Resid. 11.90 mg

50.62 %

Dpeak 187.0 °C

360

5. mg

100. 200. 300. 400. °C

S96T004116 DUP N2

6.707 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

TG METTLER 14-Aug-96

222-S Laboratory

Step Analysis

Height -2.67 mg

-39.88 %

Resid. 4.03 mg

60.12 %

Step Analysis

Height -0.87 mg

-12.99 %

Resid. 3.14 mg

46.84 %

Dpeak 135.0 °C

S96T004117 SAM N2

22.162 mg

Rate: 10.0 °C/min

File: 00027.001 TG METTLER 14-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.50 mg

-38.34 %

ResidC. 13.67 mg

61.66 %

Dpeak 91.0°C

Step Analysis

Height -1.60 mg

-7.20 %

ResidC. 12.07 mg

54.46 %

Dpeak 187.0°C

S96T004117 DUP N2

10.857 mg

Rate: 10.0 °C/min

File: 00029.001

TG

METTLER

14-Aug-86

Ident: 0.0

222-S Laboratory

Step Analysis

Height -4.08 mg

-37.57 %

ResidC. 6.78 mg

62.43 %

Step Analysis

Height -0.99 mg

-9.12 %

ResidC. 5.79 mg

53.31 %

363

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist#

11924

Analyst: QPM Instrument: TGA0 1 Book # 82UR-A

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

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.78</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004118	0	TGA-01	LIQUID	<u>N/A</u>	<u>47.47</u>		%
96001016	A-101 (P)	3 DUP	S96T004118	0	TGA-01	LIQUID	<u>47.47</u>	<u>47.95</u>	<u>N/A</u>	%

Final page for worklist # 11924

QPMurphy 8-H-96
Analyst Signature Date

Susan Bee 8/20/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-22-96

Data Entry Comments: The results are the sum of two weight loss steps
The second weight loss step could be due to hydrated salts.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 365 TO 367

Chen Kuyun 8-17-96

00014.001-DP-200, REV. 0

S96T004118 SAM N2

34.281 mg

Rate: 10.0 °C/min

File: 00018.001 TG METTLER 14-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-13.01 mg

-37.96 %

Resid. 21.27 mg

62.04 %

Step Analysis

Height -3.26 mg

-9.51 %

Resid. 17.95 mg

52.35 %

Dpeak 189.0°C

366

S96T004118 DUP N2

22.852 mg

Rate: 10.0 °C/min

File: 00020.001

TG

METTLER

14-Aug-96

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -9.32 mg

-40.78 %

Resid. 13.53 mg

59.22 %

Dpeak 93.0°C

Step Analysis

Height -1.64 mg

-7.17 %

Resid. 11.86 mg

51.90 %

Dpeak 191.0°C

367

WHC-SD-MM-DP-200, REV 0

LABCORE Data Entry Template for Worklist#

11925

Analyst: sal Instrument: TGA0 1 Book # P2N8A

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

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.77</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004067	0	TGA-01	SOLID	<u>N/A</u>	<u>33.37</u>		%
96001016	A-101 (P)	3 DUP	S96T004067	0	TGA-01	SOLID	<u>33.37</u>	<u>41.54</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004072	0	TGA-01	SOLID	<u>N/A</u>	<u>37.34</u>		%
96001016	A-101 (P)	5 DUP	S96T004072	0	TGA-01	SOLID	<u>37.34</u>	<u>38.62</u>	<u>N/A</u>	%

Final page for worklist #

11925

P. Lambert 8.15.96
Analyst Signature Date

Jason Ba 8/20/96
Analyst Signature Date

Verify/Validated by
Blandina
Valenzuela
8.22.96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 369 TO 373.

A. Lambert

82N8-A STA N2

20.709 mg

Rate: 10.0 °C/min

File: 00040.001 TG METTLER 15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.17 mg

-58.77 %

ResiC. 8.54 mg

41.23 %

Dpeak 88.3 °C

S96T004067 DUP N2

28.771 mg

Rate: 10.0 °C/min

File: 00044.001 TG METTLER 15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.95 mg

-41.54 %

Resid. 16.82 mg

58.46 %

Dpeak 83.0 °C

S96T004072 SAM N2

14.034 mg

Rate: 10.0 °C/min

File: 00046.001 TG METTLER 15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -5.24 mg

-37.34 %

ResidC. 8.79 mg

62.66 %

Dpeak 61.0°C

372

S96T004072 DUP N2

24.415 mg

Rate: 10.0 °C/min

File: 00048.001 TG METTLER 15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.43 mg

-38.62 %

ResidC. 14.98 mg

61.38 %

Dpeak 77.0°C

LABCORE Data Entry Template for Worklist# 11926

Analyst: aal Instrument: TGA0 3 Method: LA-514-114 Book # 82N8A

Worklist Comment: A-101. Run under Nitrogen. new

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.70</u>	<u>N/A</u>	%
2 SAMPLE	S96T004073	0	TGA-03	SOLID	<u>N/A</u>	<u>38.81</u>		%
3 DUP	S96T004073	0	TGA-03	SOLID	<u>38.81</u>	<u>38.50</u>	<u>N/A</u>	%
4 SAMPLE	S96T004074	0	TGA-03	SOLID	<u>N/A</u>	<u>36.35</u>		%
5 DUP	S96T004074	0	TGA-03	SOLID	<u>36.35</u>	<u>35.70</u>	<u>N/A</u>	%

Final page for worklist # 11926

See Attached for Signatures
Analyst Signature Date

 8-20-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-21-96

Data Entry Comments: S96T004074 results are the sum of two weights steps

LABCORE Data Entry Template for Worklist#

11926

Analyst: ELC

Instrument: TGA0 3

Book # 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004073	0	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	3 DUP	S96T004073	0	TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004074	0	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	5 DUP	S96T004074	0	TGA-01	SOLID	_____	_____	N/A	%

Final page for worklist #

11926

Analyst Signature Ann Lumbel

Date 8/15/96

Analyst Signature _____

Date _____

TGA-03 Instrument
was used.

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: TER081501 Thu Aug 15 06:52:50 1996

Sample Weight: 21.975 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
CALCULATED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 376 TO 380.

A. Lambel

376

WHIC-SD-WM-DP-200, REV. 0

N2 10C/MIN

TIME: 55.8 S TIME: 0.0 min RATES: 10.0 C/min

Temperature (°C)

EA LAMBEL
PERKIN-ELMER

7 Series Thermal Analysis System
Thu Aug 15 09:13:43 1996

Curve 1: TGA
 File Info: SAM081502 Thu Aug 15 10:07:19 1996
 Sample Weight: 18.377 mg
 586T004073

10C/MIN N2
 TIME: 58.8 S
 0.0 min RATE: 10.0 g/min
 Temperature (°C)
 EA LAMCEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Aug 15 10:22:36 1996

Curve 1: TGA

File info: SAM061503 Thu Aug 15 11:16:27 1996

Sample Weight: 21.561 mg

99ST004073 DUP

378

10C/MIN N2

TIME: 55.8 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 13:36:34 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA
 File Info: S4061B04 Thu Aug 15 14:38:42 1996
 Sample Weight: 24.302 mg
 886T004074

100/MIN N2
 THERM 55.8 g
 TONEL 0.0 min RATE: 10.0 g/min
 EA LABEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Aug 15 15:07:08 1996

Curve 1: TGA

File info: SAM081505 Thu Aug 15 16:02:47 1996

Sample Weight: 16.887 mg

S95T004074 DUP

10C/MIN N2

TIME: 55.8 g

TIME: 0.0 min RATE: 10.0 g/min

Temperature (°C)

EA LAMBEL

PERKIN-ELMER

7 Series Thermal Analysis System
Thu Aug 15 17:10:03 1996

WHC-SD-WM-DP-200, REV. 0

worklistrpt Version 2.1 05/15/95
08/13/96 13:24

Page: 1

LABCORE Data Entry Template for Worklist#

11927

Analyst: Rim Instrument: TGA0 1 Book # 8208AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.86</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004075	0	TGA-01	SOLID	<u>N/A</u>	<u>42.71</u>		%
96001016	A-101 (P)	3 DUP	S96T004075	0	TGA-01	SOLID	<u>42.71</u>	<u>43.61</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004076	0	TGA-01	SOLID	<u>N/A</u>	<u>45.7</u>		%
96001016	A-101 (P)	5 DUP	S96T004076	0	TGA-01	SOLID	<u>45.7</u>	<u>42.98</u>	<u>N/A</u>	%

Final page for worklist #

11927

RIMcCoun 8/16/96
Analyst Signature Date

Swann Bee 8/20/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8-22-96

Data Entry Comments: S96T004075 results are the sum of two weight loss steps

S96T004076 results are the sum of two weight loss steps.

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 382 TO 386.

TGA STD 82N8A

28.623 mg

Rate: 10.0 °C/min

File: 00050.001

TG

METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

Q. McCann 8/16/96

Step Analysis

Height-16.85 mg

-58.86 %

Resid. 11.78 mg

41.14 %

Dpeak 98.3 °C

382

15-AUG-1996 10:20:00 AM

S96T004075 N2

39.839 mg

Rate: 10.0 °C/min

File: 00052.001

TG

METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-14.28 mg

-35.83 %

Resid. 25.56 mg

64.17 %

Step Analysis

Height -2.74 mg

-6.88 %

Resid. 22.82 mg

57.28 %

Dpeak 187.0 °C

S96T004075 DUP N2

44.774 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

TG

METTLER

15-Aug-96

222-S Laboratory

Step Analysis
Height-16.58 mg
-37.02 %
ResidC. 28.20 mg
62.98 %

Step Analysis
Height -2.95 mg
-6.59 %
ResidC. 25.25 mg
56.40 %
Dpeak 193.0°C

S96T004076 N2

31.287 mg

Rate: 10.0 °C/min

File: 00056.001

TG

METTLER

15-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.94 mg

-38.18 %

ResiC. 19.34 mg

61.82 %

Step Analysis

Height -2.35 mg

-7.52 %

ResiC. 16.99 mg

54.30 %

Dopeak 187.0°C

5. mg

100.

200.

300.

400.

°C

S96T004076 DUP N2

File: 00058.001

TG

METTLER

16-Aug-96

34.471 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.22 mg

-35.44 %

ResidC. 22.25 mg

64.56 %

Step Analysis

Height -2.60 mg

-7.54 %

ResidC. 19.66 mg

57.02 %

Dpeak 185.0 °C

LABCORE Data Entry Template for Worklist#

11928

Analyst: pjm Instrument: TGA03 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	59.2	58.87	*N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004077	0	TGA-03	SOLID	N/A	44.13		%
96001016	A-101 (P)	3 DUP	S96T004077	0	TGA-03	SOLID	44.13	41.50	N/A	%
		4 STD			TGA-03	SOLID	59.2	58.68	N/A	%
96001016	A-101 (P)	5 SAMPLE	S96T004078	0	TGA-03	SOLID	N/A	46.36		%
96001016	A-101 (P)	6 DUP	S96T004078	0	TGA-03	SOLID	46.36	45.81	N/A	%

Final page for worklist #

11928

See Attached for Signatures
Analyst Signature Date

D. Honaker 8-20-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-21-96

Data Entry Comments:

LABCORE Data Entry Template for Worklist#

11928

Analyst: Rm **Instrument:** TGA0 3 **Book #** 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101. Run under Nitrogen. new

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004077	0	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	3 DUP	S96T004077	0	TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004078	0	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	5 DUP	S96T004078	0	TGA-01	SOLID	_____	_____	N/A	%

Final page for worklist #

11928

Rm
Analyst Signature
8/15/96
Date

Daniel J. Brumby
Analyst Signature
8/17/96
Date

TGA-03 Instrument
was used.

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: TER081501 Thu Aug 15 08:59:50 1996

Sample Weight: 21.975 mg

TGA STD 8248-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 389 TO 394

389

WHC-SD-MM-DP-200, REV.0

N2 10C/MIN
TGA: 288.8 8

THERM: 0.0 min RATE: 10.0 C/min

Temperature (°C)

EA LAMBL 8/15/96
PERKIN-ELMER

7 Series Thermal Analysis System
Thu Aug 15 17:35:32 1996

Curve 1: TGA

File info: SAM081506 Thu Aug 15 18:06:43 1996

Sample Weight: 34.364 mg

S96T004077

10C/MIN N2
TGA: 34.364 mg
TGA: 55.841

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

PJ MCCOMM
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 15 20:18:19 1996

MMIC-SD-MM-DF-200, REV. 0

Curve 1: TGA
 File info: SAM081507 Thu Aug 15 21:29:02 1996
 Sample Weight: 25.282 mg
 S96T004077 DUP

WHIC-SD-WM-DP-200, REV. 0

10C/MIN N2
 0.0 min RATE: 10.0 C/min
 08:08

PJ MCCONN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Aug 15 22:02:15 1996

Curve 1: TGA

File info: TERO81601 Fri Aug 16 17:32:39 1996

Sample Weight: 19.240 mg

TGA STD 62N8-A

DP BROWLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 16 17:35:48 1996

N2 10C/MIN
TIME 38.8 g
THERM 0.0 min RATE 10.0 C/min

Curve 1: TGA

File info: SAM081801 Fri Aug 16 18:48:08 1996

Sample Weight: 14.576 mg

SD6T004078 SAM

10C/MIN N2
TIME: 55.8 s
THERM: 0.0 min RATE: 10.0 C/min

DP BROWLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 16 21:25:22 1996

WALCO-SO-WM-DP-200, REV. 0

Curve 1: TGA

File Info: SAN081802 Fri Aug 16 22:23:08 1996

Sample Weight: 10.244 mg

S96T004078 DUP

LABCORE Data Entry Template for Worklist# 12279

Analyst: RDM Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod B-1

Worklist Comment: Please run A-101 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>59.06</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004289	0	TGA-03	LIQUID	<u>N/A</u>	<u>47.09</u>		%
96001049	A-101 (P)	3 DUP	S96T004289	0	TGA-03	LIQUID	<u>47.09</u>	<u>46.98</u>	<u>N/A</u>	%
		4 STD			TGA-03	LIQUID	<u>59.2</u>	<u>59.06</u>	<u>N/A</u>	%
96001049	A-101 (P)	5 SAMPLE	S96T004290	0	TGA-03	LIQUID	<u>N/A</u>	<u>47.29</u>		%
96001049	A-101 (P)	6 DUP	S96T004290	0	TGA-03	LIQUID	<u>47.29</u>	<u>47.63</u>	<u>N/A</u>	%

Final page for worklist # 12279

See attached for signatures
Analyst Signature Date 8-29-96

Janita Much 8/29/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9-3-96

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# 12279

Analyst: Y. Joon Instrument: TGA0 _____ Book # 921089

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

Worklist Comment: Please run A-101 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	_____	_____	N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004289	0	TGA-01	LIQUID	N/A	_____	_____	%
96001049	A-101 (P)	3 DUP	S96T004289	0	TGA-01	LIQUID	_____	_____	N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004290	0	TGA-01	LIQUID	N/A	_____	_____	%
96001049	A-101 (P)	5 DUP	S96T004290	0	TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 12279

R. D. Joon 8/26/96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

8-29-96

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: TER082601 Mon Aug 26 06:30:32 1996

Sample Weight: 16.281 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 397 TO 402

N2 10C/MIN

TIME: 55.0 8

TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Aug 26 11:56:05 1996

WMO-CD-MN-DP-200, REV. 0

Curve 1: TGA

File info: SAM082601 Mon Aug 26 12:52:50 1996

Sample Weight: 19.843 mg

S96T004289

10C/MIN N2

TIME: 00:08

TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Aug 26 14:39:28 1996

W10-SD-WM-DP-200, REV. 0

Curve 1: TGA
 File Info: SAM082701 Tue Aug 27 08:57:04 1996
 Sample Weight: 16.466 mg
 S96T0042950LP

RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Aug 27 11:45:45 1996

Curve 1: TGA
 File Info: TERA02701 Tue Aug 27 06: 19: 13 1996
 Sample Weight: 16.058 mg
 TGA STD 82N6-A

N2 10C/MIN
 TIME 30.38
 THERM 20.0
 0.0 min RATE: 10.0 C/min
 RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Aug 27 06: 45: 15 1996

Curve 1: TGA

File info: SAM082702 Tue Aug 27 12:43:24 1996

Sample Weight: 17.410 mg

SS6T004290

10C/MIN N2
TIME: 35.8 8

TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Aug 29 12:31:06 1996

WHS-DATA-DP-200, FILE 0

Curve 1: TGA
File info: SAM082703 Tue Aug 27 14:30:33 1996
Sample Weight: 18.338 mg
S96T004290DUP

10C/MIN N2
THERM: 38.8 8 THERM: 0.0 min RATE: 10.0 C/min

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 27 15:00:31 1996

WHC-SD-MIA-DP-200, REV.0

LABCORE Data Entry Template for Worklist# 12335

Analyst: QAM Instrument: TGA0 1 Book # 82W8-A

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

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

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.17</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004279	0	TGA-01	SOLID	<u>N/A</u>	<u>47.48</u>		%
96001049	A-101 (P)	3 DUP	S96T004279	0	TGA-01	SOLID	<u>47.48</u>	<u>47.0</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004280	0	TGA-01	SOLID	<u>N/A</u>	<u>42.11</u>		%
96001049	A-101 (P)	5 DUP	S96T004280	0	TGA-01	SOLID	<u>42.11</u>	<u>47.08</u>	<u>N/A</u>	%

Final page for worklist # 12335

QAM 8-30-96
Analyst Signature Date

TE 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
9-6-96

Data Entry Comments:

S96T004279 results are the sum of two weight loss steps.

S96T004280 results are the sum of two weight loss steps

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 404 TO 408

TGA STD 82N8-A

18.668 mg

Rate: 10.0 °C/min

File: 00084.001

TG

METTLER

30-Aug-96

Ident: 0.0

222-S Laboratory

404

Handwritten signature: Murphy 8-30-96

S96T004279 SAM N2

9.341 mg

Rate: 10.0 °C/min

File: 00086.001 TG METTLER 30-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -3.67 mg

-39.28 %

Resid. 5.67 mg

60.72 %

Dpeak 71.0°C

Step Analysis

Height -0.77 mg

-8.20 %

Resid. 4.91 mg

52.52 %

Dpeak 179.0°C

S96T004279 DUP N2

File: 00088.001 TG METTLER 30-Aug-96

9.013 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis
Height -3.14 mg
-34.88 %
ResiC. 5.87 mg
65.12 %

Step Analysis
Height -1.09 mg
-12.12 %
ResiC. 4.78 mg
53.00 %

406

WMO-CD-WMO-CD-2001-1000

S96T004280 SAM N2

22.832 mg

Rate: 10.0 °C/min

File: 00090.001

TG

METTLER

30-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -7.35 mg
-32.17 %
Resid. 15.49 mg
67.83 %

Step Analysis
Height -2.27 mg
-9.94 %
Resid. 13.22 mg
57.89 %

407

S96T004280 DUP N2

File: 00092.001

TG

METTLER

30-Aug-96

17.080 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.29 mg

-36.83 %

ResidC. 10.79 mg

63.17 %

Step Analysis

Height -1.75 mg

-10.25 %

ResidC. 9.04 mg

52.92 %

LABCORE Data Entry Template for Worklist# 13219

Analyst: SMT Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL 9-24-96 80V	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.94</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004582	0	TGA-01	LIQUID	<u>N/A</u>	<u>47.02</u>		%
96001049	A-101 (P)	3 DUP	S96T004582	0	TGA-01	LIQUID	<u>47.02</u>	<u>46.95</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004583	0	TGA-01	LIQUID	<u>N/A</u>	<u>46.75</u>		%
96001049	A-101 (P)	5 DUP	S96T004583	0	TGA-01	LIQUID	<u>46.75</u>	<u>46.87</u>	<u>N/A</u>	%

Final page for worklist # 13219

Susie M. Dutton 9-24-96
Analyst Signature Date

RCJ 9/26/96
Analyst Signature Date

Susie M. Dutton 9-24-96

Verified/Validated by

Blandina
Valencia
9/26/96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 410 TO 414.

S96T004582 N2

18.128 mg

Rate: 10.0 °C/min

File: 00061.001

TG

METTLER

24-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -7.26 mg
-40.06 %
ResidC. 10.87 mg
59.94 %
Dpeak 81.0°C

Step Analysis
Height -1.26 mg
-6.96 %
ResidC. 9.59 mg
52.91 %
Dpeak 181.0°C

411

5. mg

S96T004582 DUP N2

14.408 mg

Rate: 10.0 °C/min

File: 00063.001

TG

METTLER

24-Sep-98

Ident: 0.0

222-S Laboratory

412

6w.5

Step Analysis
Height -5.81 mg
-40.29 %
ResidC. 8.60 mg
59.71 %
Dpeak 77.0°C

Step Analysis
Height -0.96 mg
-6.66 %
ResidC. 7.64 mg
53.03 %
Dpeak 183.0°C

S96T004583 N2

13.643 mg

Rate: 10.0 °C/min

File: 00065.001 TG METTLER 25-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -5.54 mg

-40.58 %

ResidC. 8.11 mg

59.42 %

Dpeak 73.0 °C

Step Analysis

Height -0.84 mg

-6.17 %

ResidC. 7.26 mg

53.24 %

Dpeak 183.0 °C

S96T004583 DUP N2

14.403 mg

Rate: 10.0 °C/min

File: 00067.001 TG METTLER 25-Sep-96

Ident: 0.0

222-S Laboratory

41.4

5. mg

Step Analysis
Height -5.89 mg
-40.88 %
ResidC. 8.52 mg
59.12 %
Dpeak 77.0°C

Step Analysis
Height -0.86 mg
-5.99 %
ResidC. 7.65 mg
53.13 %
Dpeak 181.0°C

LABCORE Data Entry Template for Worklist# 13220

Analyst: SMF Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 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>58.90</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004584	0	TGA-03	LIQUID	<u>N/A</u>	<u>47.00</u>		%
96001049	A-101 (P)	3 DUP	S96T004584	0	TGA-03	LIQUID	<u>47.00</u>	<u>46.60</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004585	0	TGA-03	LIQUID	<u>N/A</u>	<u>46.02</u>		%
96001049	A-101 (P)	5 DUP	S96T004585	0	TGA-03	LIQUID	<u>46.02</u>	<u>46.25</u>	<u>N/A</u>	%

Final page for worklist # 13220

See attached for signatures

Analyst Signature _____ Date _____

9-24-96

SMF

Analyst Signature _____

Date _____

Verified/Validated by

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.

worklistrpt Version 2.1 05/15/95
09/23/96 11:29

Page: 1

LABCORE Data Entry Template for Worklist# 13220

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

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 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	%
96001049	A-101 (P)	2 SAMPLE	S96T004584	0	TGA-01	LIQUID	N/A	_____	_____	%
96001049	A-101 (P)	3 DUP	S96T004584	0	TGA-01	LIQUID	_____	_____	N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004585	0	TGA-01	LIQUID	N/A	_____	_____	%
96001049	A-101 (P)	5 DUP	S96T004585	0	TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 13220

Susie M. Fulton 9-24-96
Analyst Signature Date

RCJ 9/26/96
Analyst Signature Date

TGA-03 instrument
was used.

9-24-96

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: TER062401 Tue Sep 24 17:12:20 1996

Sample Weight: 19.685 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 417 TO 421.

417

N2 10C/MIN
TIME: 00:08

RATE: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Sep 24 17:20:33 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA
 File info: SAM092401 Tue Sep 24 18:21:31 1996
 Sample Weight: 16.061 mg
 SS6T004584

10C/MIN N2
 TIME: 88.88
 TONEL: 0.0 min RATE: 10.0 C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Sep 24 19:37:46 1996

Curve 1: TGA

File info: SAM092402 Tue Sep 24 20:30:00 1996

Sample Weight: 14.884 mg

SS6T004584 DUP

10C/MIN N2

TIME: 35.0 g TIME: 0.0 min RATE: 10.0 C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Sep 24 20:34:51 1996

Curve 1: TGA

File info: SAM092403 Tue Sep 24 21:38:23 1996

Sample Weight: 16.942 mg

S96T004565

10C/MIN N2

TIME: 00:08

TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Sep 24 21:38:34 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: TGA

File info: SAM092404 Tue Sep 24 22:55:03 1996

Sample Weight: 17.064 mg

996T004585 DUP

10C/MIN N2

TIME: 55.8 8

RATE: 0.0 min

RATE: 10.0 g/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Sep 24 23:25:17 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13221

Analyst: SMF Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 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>58.90*</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004587	0	TGA-03	LIQUID	<u>N/A</u>	<u>46.46</u>		%
96001049	A-101 (P)	3 DUP	S96T004587	0	TGA-03	LIQUID	<u>46.46</u>	<u>46.41</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004669	0	TGA-03	LIQUID	<u>N/A</u>	<u>45.44</u>		%
96001016	A-101 (P)	5 DUP	S96T004669	0	TGA-03	LIQUID	<u>45.44</u>	<u>46.40</u>	<u>N/A</u>	%

Final page for worklist # 13221

See attached for signatures
 Analyst Signature Date 9-24-96
BBR

reviewed 9/26/96
 Analyst Signature Date

Verified/Validated by
Blanchina Valenzuela
9-26-96

S96T004587 results are the sum of two weight loss steps. The noticeable change in slope is probably due to a strongly hydrated salt.

Data Entry Comments:

S96T004587 ⁶⁶⁹ results are the sum of two weight loss steps.
 The ~~X~~ noticeable change in slope is probably due to a strongly hydrated salt.

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# 13221

Analyst: SMF Instrument: TGA0 Book # 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 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	%
96001049	A-101 (P)	2 SAMPLE	S96T004587	0	TGA-01	LIQUID	N/A	_____	_____	%
96001049	A-101 (P)	3 DUP	S96T004587	0	TGA-01	LIQUID	_____	_____	N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004669	0	TGA-01	LIQUID	N/A	_____	_____	%
96001016	A-101 (P)	5 DUP	S96T004669	0	TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 13221

Susie M. Jullon 9-24-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

9-24-96

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: TER082401 Tue Sep 24 17:12:20 1996

Sample Weight: 19.665 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 424 TO 428

N2 10C/MIN
TIME: 300.0 s

TIME: 0.0 min RATE: 10.0 G/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Sep 24 17:25:33 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA
 File Infor: S44092405 Wed Sep 25 00:28:39 1996
 Sample Weight: 10.113 mg
 8987004587

10C/MIN N2
 TIME 25.8 S
 0.0 min RATE: 10.0 C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 00:43:55 1996

Curve 1: TGA
 File info: SAM092405 Wed Sep 25 01:30:38 1996
 Sample Weight: 13.982 mg
 S96T004587 DUP

10C/MIN N2
 THERM 85.8 g THERM 0.0 min RATE: 10.0 C/min
 SM FILTIN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 02:47:16 1996

Curve 1: TGA

File info: SAM092407 Wed Sep 25 03:25:29 1996

Sample Weight: 13.656 mg

896T004689

10C/MIN N2
TIME: 00:08

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 03:30:46 1996

Curve 1: TGA

File info: SAM092408 Wed Sep 25 04:35:07 1996

Sample Weight: 16.529 mg

896T004689DUP

10C/MIN N2

TIME: 35.8 s

TIMER:

0.0 min RATE: 10.0 G/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Sep 25 05:00:18 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13222

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

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>59.33</u>	<u>N/A</u>	<u>X</u>
96001016	A-101 (P)	2 SAMPLE	S96T004670	0	TGA-01	LIQUID	<u>N/A</u>	<u>100.7</u>		<u>X</u>
96001016	A-101 (P)	3 DUP	S96T004670	0	TGA-01	LIQUID	<u>100.7</u>	<u>98.27</u>	<u>N/A</u>	<u>X</u>
96001016	A-101 (P)	4 SAMPLE	S96T004671	0	TGA-01	LIQUID	<u>N/A</u>	<u>93.44</u>		<u>X</u>
96001016	A-101 (P)	5 DUP	S96T004671	0	TGA-01	LIQUID	<u>93.44</u>	<u>93.54</u>	<u>N/A</u>	<u>X</u>

Final page for worklist # 13222

Analyst Signature _____ Date _____

Lucie M. Dutton 9-24-96

KE Wright 9/26/96
Analyst Signature _____ Date _____

Verified/Validated by

Blandina Valenzuela
9-26-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 430 TO 434

TGA STD 82N8A

16.737 mg

Rate: 10.0 °C/min

File: 00034.001

TG METTLER

23-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.93 mg

-59.33 %

ResidC. 6.80 mg

40.64 %

Dpeak 84.2 °C

430

5. mg

WHC-SD-WM-DP-200, REV. 0

S96T004670 N2

10.055 mg

Rate: 10.0 °C/min

File: 00055.001 TG METTLER 24-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.12 mg

-100.65 %

ResidC. -0.07 mg

-0.65 %

431

S96T004671 SAM N2

21.557 mg

Rate: 10.0 °C/min

File: 00046.001

TG METTLER 23-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-19.12 mg
-88.69 %
ResiC. 2.44 mg
11.31 %

Step Analysis
Height -1.02 mg
-4.75 %
ResiC. 1.41 mg
6.56 %

433

S96T004671DUP N2

22.332 mg

Rate: 10.0 °C/min

File: 00053.001

TG

METTLER

24-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -19.84 mg

-88.86 %

ResidC. 2.49 mg

11.14 %

Step Analysis

Height -1.05 mg

-4.68 %

ResidC. 1.38 mg

6.19 %

434

LABCORE Data Entry Template for Worklist# 13223

Analyst: GAM Instrument: TGA0 1 Book # 82V8A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.09 *	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004672	0	TGA-01	LIQUID	N/A	76.59		%
96001016	A-101 (P)	3 DUP	S96T004672	0	TGA-01	LIQUID	76.59	72.84	N/A	%

Final page for worklist # 13223

GAM 9-24-96
Analyst Signature Date

RCJ 9/26/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-26-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 436 TO 438.

QRMurphy 9-27-96

TGA STD 82N8A

16.737 mg

Rate: 10.0 °C/min

File: 00034.001

TG

METTLER

23-Sep-96

Ident: 0.0

222-S Laboratory

436

77HC-SD-WM-DP-200, REV. 0

S96T004672 SAM N2

60.880 mg

Rate: 10.0 °C/min

File: 00050.001 TG METTLER 24-Sep-96

Ident: 0.0

222-S Laboratory

437

20. mg

Step Analysis

Height-46.63 mg

-76.59 %

Resid. 14.25 mg

23.41 %

Dpeak 141.0 °C

100.

200.

300.

400.

°C

S96T004672DUP N2

54.851 mg

Rate: 10.0 °C/min

File: 00052.001

TG

METTLER

24-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-39.96 mg
-72.84 %
ResidC. 14.89 mg
27.16 %
Dpeak 131.0°C

438

mg
20

LABCORE Data Entry Template for Worklist# 13233

Analyst: RDm Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.88</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004544	0	TGA-03	SOLID	<u>N/A</u>	<u>26.34</u>		%
96001049	A-101 (P)	3 DUP	S96T004544	0	TGA-03	SOLID	<u>26.34</u>	<u>32.32</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004545	0	TGA-03	SOLID	<u>N/A</u>	<u>40.81</u>		%
96001049	A-101 (P)	5 DUP	S96T004545	0	TGA-03	SOLID	<u>40.81</u>	<u>29.55</u>	<u>N/A</u>	%

Final page for worklist # 13233

Analyst Signature

Date

Analyst Signature

Date

Verified/Validated by

Blandina

Valenzuela 10-7-96

Data Entry Comments:

S96T004545 will need to be rerun due to high RPD's

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

worklistrpt Version 2.1 05/15/95
09/23/96 13:09

Page: 1

LABCORE Data Entry Template for Worklist# 13233

Analyst: ROM Instrument: TGA0 Book # 92N8AMethod: LA-560-112 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004544	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	3 DUP	S96T004544	0	TGA-01	SOLID			N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004545	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	5 DUP	S96T004545	0	TGA-01	SOLID			N/A	%

Final page for worklist # 13233

Analyst Signature Susie M. Dutton Date 9-25-96

Analyst Signature _____ Date _____

TGA-03 instrument
was used.

10-1-96

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: TERN02501 Wed Sep 25 08:49:40 1996

Sample Weight: 16.111 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 441 TO 443

Weight Mt. %

441

N2 10C/MIN

TIME 33.8 g

TIME 0.0 min RATE 10.0 C/min

Temperature (°C)

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System

Wed Sep 25 06:11:42 1996

Curve 1: TGA

File info: SAM092503 Wed Sep 25 09:16:34 1996

Sample Weight: 12.563 mg

S96T004544

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 12:11:05 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: T8A
 File Info: SAM082504 Wed Sep 25 13:07:30 1996
 Sample Weight: 27.905 mg
 S96T004544DUP

LABCORE Data Entry Template for Worklist# 13234

Analyst: SMF Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.88</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004546	0	TGA-03	SOLID	<u>N/A</u>	<u>21.13</u>		%
96001049	A-101 (P)	3 DUP	S96T004546	0	TGA-03	SOLID	<u>21.13</u>	<u>16.53</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004547	0	TGA-03	SOLID	<u>N/A</u>	<u>43.08</u>		%
96001049	A-101 (P)	5 DUP	S96T004547	0	TGA-03	SOLID	<u>43.08</u>	<u>42.48</u>	<u>N/A</u>	%

Final page for worklist # 13234

See attached for signatures
Analyst Signature Date 10-1-96

elt
Analyst Signature Date 10-3-96

Verified/Validated by
Blandina Valenzuela

Date 10-7-96

Data Entry Comments: S96T004546 should be rerun; the shape of the thermograms are different.

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

worklistrpt Version 2.1 05/15/95
09/23/96 13:10

Page: 1

LABCORE Data Entry Template for Worklist# 13234

Analyst: SHF Instrument: TGA0 _____ Book # 82 N2A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004546	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	3 DUP	S96T004546	0	TGA-01	SOLID			N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004547	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	5 DUP	S96T004547	0	TGA-01	SOLID			N/A	%

Final page for worklist # 13234

Lusie M. J. J. J. 9-25-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.
10-1-96

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: TER092501 Wed Sep 25 05: 49: 40 1996

Sample Weight: 16.111 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 446 TO 448

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA
 File Info: SAN082509 Wed Sep 25 21:52:53 1996
 Sample Weight: 15.104 mg
 556T004547

100/NIN N2
 TGA 55.8 g
 THERM 0.0 min RATE 10.0 °C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 25 21:52:53 1996

Curve 1: TGA

File info: SAM092510 Wed Sep 25 22:45:57 1996

Sample Weight: 23.344 mg

S96T004547 DUP

10C/MIN N2
TEMP: 31.3 °C
TIME: 000.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 25 23:30:08 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13235

Analyst: RDM Instrument: TGA0 1 Book # 12NHB

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.28</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004548 0		TGA-01	SOLID	<u>N/A</u>	<u>46.61</u>		%
96001049	A-101 (P)	3 DUP	S96T004548 0		TGA-01	SOLID	<u>46.61</u>	<u>46.57</u>	<u>N/A</u>	%

Final page for worklist # 13235

RDM 9/25/96
Analyst Signature Date

RCJ 9/26/96
Analyst Signature Date

Verified/Validated by Blandina
Valenzuela
9.26.96

Data Entry Comments: S96T004548 results are the sum of two weight loss
steps.

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 450 TO 452 ^{LAP 10-10-96}

TGA STD 82N8-A

21.710 mg

Rate: 10.0 °C/min

File: 00069.001

TG

METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.65 mg

-58.28 %

ResidC. 9.06 mg

41.72 %

Dpeak 90.8 °C

450

5. mg

Blandina Valenzuela for RD Meyer 10-14-96

WHC-SD-WM-DP-200, REV. 0

S96T004548 N2

14.435 mg

Rate: 10.0 °C/min

File: 00071.001

TG

METTLER

25-Sep-96

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -5.92 mg

-41.01 %

ResidC. 8.52 mg

58.99 %

Dpeak 77.0 °C

Step Analysis

Height -0.81 mg

-5.60 %

ResidC. 7.69 mg

53.26 %

Dpeak 175.0 °C

451

S96T004548 DUP N2

16.433 mg

Rate: 10.0 °C/min

File: 00073.001 TG METTLER 25-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.83 mg

-41.53 %

ResiC. 9.61 mg

58.47 %

Dpeak 81.0 °C

Step Analysis

Height -0.83 mg

-5.04 %

ResiC. 8.73 mg

53.09 %

Dpeak 181.0 °C

452

WHC-SD-WM-DP-200, REV. 0

WHC SD-WM-DP-200 REV 2
LABCORE Data Entry Template for Worklist# 13251

Analyst: SMF Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.14</u>	<u>*</u>	<u>N/A</u> %
96001016	A-101 (P)	2 SAMPLE	S96T004693	0	TGA-01	SOLID	<u>N/A</u>	<u>32.42</u>		%
96001016	A-101 (P)	3 DUP	S96T004693	0	TGA-01	SOLID	<u>32.42</u>	<u>32.64</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004694	0	TGA-01	SOLID	<u>N/A</u>	<u>35.61</u>		%
96001016	A-101 (P)	5 DUP	S96T004694	0	TGA-01	SOLID	<u>35.61</u>	<u>33.40</u>	<u>N/A</u>	%

Final page for worklist # 13251

Susan M. Sutton 9-25-96
Analyst Signature Date

R. R. R. 10-3-96
Analyst Signature Date

Verified/Validated by:
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 454 TO 458.

TGA STD 82N8-A

21.710 mg

Rate: 10.0 °C/min

File: 00069.001

Ident: 0.0

TG

METTLER

25-Sep-96

222-S Laboratory

Step Analysis

Height-12.62 mg

-58.14 %

Resid. 9.09 mg

41.86 %

Dpeak 90.8°C

454

Lusie M. Jackson 200 9-25-96

455

S96T004693 DUP N2

30.175 mg

Rate: 10.0 °C/min

File: 00077.001

TG

METTLER

25-Sep-96

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -9.85 mg

-32.64 %

Resid. 20.33 mg

67.36 %

Dpeak 131.0°C

456

5. mg

WHC SD-WM DP-200, REV. 0

S96T004694 N2

17.071 mg

Rate: 10.0 °C/min

File: 00079.001 TG METTLER 25-Sep-96

Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.08 mg
-35.61 %
Resid. 10.99 mg
64.39 %
Dpeak 107.0°C

S96T004694 DUP N2

20.553 mg

Rate: 10.0 °C/min

File: 00081.001

TG

METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.86 mg

-33.40 %

ResidC. 13.69 mg

66.60 %

Dpeak 115.0 °C

458

LABCORE Data Entry Template for Worklist# 13252

Analyst: SHF Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	<u>59.2</u>	<u>58.14</u>	<u>N/A</u>	%
96001049	A-101 (P)	2	SAMPLE	S96T004549	0		TGA-01	SOLID	<u>N/A</u>	<u>45.89</u>		%
96001049	A-101 (P)	3	DUP	S96T004549	0		TGA-01	SOLID	<u>45.89</u>	<u>44.06</u>	<u>N/A</u>	%
96001049	A-101 (P)	4	SAMPLE	S96T004550	0		TGA-01	SOLID	<u>N/A</u>	<u>41.33</u>		%
96001049	A-101 (P)	5	DUP	S96T004550	0		TGA-01	SOLID	<u>41.33</u>	<u>44.21</u>	<u>N/A</u>	%

Final page for worklist # 13252

Susie M. Dulon 9-25-96
Analyst Signature Date

RH L 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments: S96T004549 results are the sum of two weight loss steps?

S96T004550 results are the sum of two weight loss steps?

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 460 TO 464.

TGA STD 82N8-A

21.710 mg

Rate: 10.0 °C/min

File: 00069.001

TG

METTLER

25-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.62 mg

-58.14 %

ResidC. 9.09 mg

41.86 %

Dpeak 90.8 °C

460

1-033-MW-J-200, REV. C

S96T004549 N2

31.267 mg

Rate: 10.0 °C/min

File: 00089.001

TG

METTLER

26-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height-12.68 mg
-40.55 %
ResidC. 18.59 mg
59.45 %

Step Analysis
Height -1.67 mg
-5.34 %
ResidC. 16.89 mg
54.03 %
Dpeak 183.0°C

S96T004549DUP N2

23.275 mg

Rate: 10.0 °C/min

File: 00085.001

Ident: 0.0

TG METTLER 26-Sep-96

222-S Laboratory

Step Analysis

Height -8.79 mg

-37.78 %

Resid. 14.47 mg

62.19 %

Dpeak 91.0°C

Step Analysis

Height -1.46 mg

-6.28 %

Resid. 12.98 mg

55.77 %

Dpeak 179.0°C

462

S96T004550 N2

25.983 mg

Rate: 10.0 °C/min

File: 00089.001

TG

METTLER

26-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.08 mg

-34.96 %

Resid. 16.90 mg

65.04 %

Step Analysis

Height -1.66 mg

-6.37 %

Resid. 15.24 mg

58.67 %

Dpeak 181.0 °C

463

S96T004550 DUP N2

24.574 mg

Rate: 10.0 °C/min

File: 00091.001

TG

METTLER

26-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.81 mg

-39.90 %

ResiC. 14.77 mg

60.10 %

Dpeak 93.0°C

Step Analysis

Height -1.06 mg

-4.31 %

ResiC. 13.71 mg

55.78 %

Dpeak 181.0°C

464

5. mg

LABCORE Data Entry Template for Worklist# 13253

Analyst: SMF Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.88</u>	<u>* N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004551	0	TGA-03	SOLID	<u>N/A</u>	<u>45.26</u>		%
96001049	A-101 (P)	3 DUP	S96T004551	0	TGA-03	SOLID	<u>45.26</u>	<u>42.98</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004552	0	TGA-03	SOLID	<u>N/A</u>	<u>44.10</u>		%
96001049	A-101 (P)	5 DUP	S96T004552	0	TGA-03	SOLID	<u>44.10</u>	<u>41.92</u>	<u>N/A</u>	%

Final page for worklist # 13253

See attached for signatures
Analyst Signature 10-1-96
Date

RH 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 13253

Analyst: SJF Instrument: TGA0 _____ Book # 82 N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	_____	_____	N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004551	0	TGA-01	SOLID	N/A	_____	_____	%
96001049	A-101 (P)	3 DUP	S96T004551	0	TGA-01	SOLID	_____	_____	N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004552	0	TGA-01	SOLID	N/A	_____	_____	%
96001049	A-101 (P)	5 DUP	S96T004552	0	TGA-01	SOLID	_____	_____	N/A	%

Final page for worklist # 13253

Lusie M. Dutton 9-25-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.
10-1-96

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: TER092501 Wed Sep 25 05:49:40 1996

Sample Weight: 16.111 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 467 TO 471.

N2 10C/MIN

TIME: 25.0 8

TIME: 0.0 min RATE: 10.0 C/min

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Thu Sep 26 00:41:42 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM092511 Thu Sep 26 00:23:17 1996

Sample Weight: 11.572 mg

S96T004551

468

10C/MIN N2

TEMP: 300.0 °C
TIME: 000.0 min

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Thu Sep 26 01:15:19 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: TGA
 File Infor: SAM092512 Thu Sep 26 03:23:25 1996
 Sample Weight: 20.365 mg
 S96T004551 DUP SMF 9-26-96

Curve 1: TGA
 File Info: SAM092601 Thu Sep 26 21:01:35 1996
 Sample Weight: 16.364 mg
 996T004552

100/MIN N2
 TIME: 00:08
 RATE: 10.0 C/min
 SH FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Sep 26 21:12:47 1996

Curve 1: TGA
 File info: SAM092602 Thu Sep 26 22:27:00 1996
 Sample Weight: 26.337 mg
 S96T004552 DUP

10C/MIN N2
 THERM 88.8 g THERM 0.0 min RATE: 10.0 C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Sep 26 23:40:53 1996

worklistrpt Version 2.1 05/15/95
09/23/96 13:42

Page: 1

LABCORE Data Entry Template for Worklist# 13254

Analyst: SME Instrument: TGA0 1 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.49*</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004689	0	TGA-01	SOLID	<u>N/A</u>	<u>31.89</u>		%
96001016	A-101 (P)	3 DUP	S96T004689	0	TGA-01	SOLID	<u>31.89</u>	<u>32.93</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004690	0	TGA-01	SOLID	<u>N/A</u>	<u>33.48</u>		%
96001016	A-101 (P)	5 DUP	S96T004690	0	TGA-01	SOLID	<u>33.48</u>	<u>33.86</u>	<u>N/A</u>	%

Final page for worklist # 13254

Susie M. Dulton 9-26-96
Analyst Signature Date

G. Murphy 9-27-96
Analyst Signature Date

Verified/Validated by
Blandina

Valenzuela 10-7-96

R. H. H. 10-3-96

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 473 TO 477

WHC-SD-WM-D-200, REV. C

474

WHC:SD-WM-DP-200, REV. 0

S96T004689 DUP N2

File: 00095.001 TG METTLER 27-Sep-96

25.263 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.32 mg

-32.93 %

ResidC. 16.94 mg

67.07 %

Dpeak 121.0 °C

475

S96T004690 N2

22.020 mg

Rate: 10.0 °C/min

File: 00097.001

TG

METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.37 mg

-33.48 %

Res1C. 14.65 mg

66.52 %

Dpeak 123.0 °C

476

5.0 mg

S96T004690 DUP N2

21.302 mg

Rate: 10.0 °C/min

File: 00002.001

TG

METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.21 mg

-33.86 %

ResidC. 14.09 mg

66.14 %

Dpeak 113.0°C

477

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13255

Analyst: SMF Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.77</u>	⁶⁰ <u>10-2-96</u>	<u>N/A</u> %
96001016	A-101 (P)	2 SAMPLE	S96T004691	0	TGA-03	SOLID	<u>N/A</u>	<u>29.94</u>		%
96001016	A-101 (P)	3 DUP	S96T004691	0	TGA-03	SOLID	<u>29.94</u>	<u>28.36</u>	<u>N/A</u>	%
		4 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.77</u>	<u>N/A</u>	%
96001016	A-101 (P)	5 SAMPLE	S96T004692	0	TGA-03	SOLID	<u>N/A</u>	<u>32.98</u>		%
96001016	A-101 (P)	6 DUP	S96T004692	0	TGA-03	SOLID	<u>32.98</u>	<u>30.59</u>	<u>N/A</u>	%

Final page for worklist # 13255

See attached for signatures
Analyst Signature [Signature] Date 10-2-96 ⁰⁰¹

T.R. Olsen ⁰³⁻⁹⁶
Analyst Signature [Signature] Date 10-09

Verified/Validated by
Blandina
Valenzuela 10-4-96

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# 13255

Analyst: SMP Instrument: TGA0 Book # 82N8A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004691	0	TGA-01	SOLID	N/A			%
96001016	A-101 (P)	3 DUP	S96T004691	0	TGA-01	SOLID			N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004692	0	TGA-01	SOLID	N/A			%
96001016	A-101 (P)	5 DUP	S96T004692	0	TGA-01	SOLID			N/A	%

Final page for worklist # 13255

Susie M. Julton 9-26-96
Analyst Signature Date
David P. Bromley 10/6/96

Analyst Signature Date

TGA-03 instrument
was used.

10-2-96

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: TER100101 Tue Oct 1 10:52:16 1996

Sample Weight: 22.850 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 480 TO 485.

N2 10C/MIN

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

DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 1 12:31:27 1996

James P. Bromley 10/1/96

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM100101 Tue Oct 1 12:58:44 1996

Sample Weight: 22.272 mg

S96T004691 SAM

10C/MIN N2

TEMP: 35.0 °C
TIME: 000.0 s

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

DP BROMLEY

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Oct 1 13:02:56 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM100102 Tue Oct 1 14:14:36 1996

Sample Weight: 13.472 mg

S96T004691 DUP

482

10C/MIN N2

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

Temperature (°C)

DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 1 14:48:29 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: TER092502 Thu Sep 26 05:47:03 1996

Sample Weight: 22.568 mg

TGA STD 82NB-A

N2 10C/MIN
TIME: 00.8 8

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 26 19:58:10 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM092603 Fri Sep 27 00:40:58 1996

Sample Weight: 21.919 mg

S96T004692

10C/MIN N2

TIME: 00:08

RATE: 0.0

MIN

RATE: 10.0

C/MIN

Temperature (°C)

SM FULTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Sep 27 01:00:35 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM092604 Fri Sep 27 01:55:13 1996

Sample Weight: 23.461 mg

S96T004692 DUP

10C/MIN N2

Temperature (°C)

TEMP: 35.8 °C

TIME: 0.0 min RATE: 10.0 °C/min

SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Sep 27 02:38:41 1996

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13256

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

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.54</u>	<u>N/A</u>	%
96001016	A-101 (P)	2 SAMPLE	S96T004695	0	TGA-01	SOLID	<u>N/A</u>	<u>33.51</u>		%
96001016	A-101 (P)	3 DUP	S96T004695	0	TGA-01	SOLID	<u>33.51</u>	<u>34.52</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004696	0	TGA-01	SOLID	<u>N/A</u>	<u>30.94</u>		%
96001016	A-101 (P)	5 DUP	S96T004696	0	TGA-01	SOLID	<u>30.94</u>	<u>29.07</u>	<u>N/A</u>	%

Final page for worklist # 13256

Rae Lynn Green 9-28-96
Analyst Signature Date

RH Oct 3, 1996
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 487 TO 491.

TGA STD 82N8-A N2

39.752 mg

Rate: 10.0 °C/min

File: 00004.001

TG

METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-23.27 mg

-58.54 %

Resid. 16.48 mg

41.46 %

Dpeak 107.0 °C

9-27-96

Rae Ann Green

WFO-SD-WM-DR-200, REV.0

S96T004695 DUP N2

29.371 mg

Rate: 10.0 °C/min

File: 00008.001

TG

METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

489

5. mg

Step Analysis

Height-10.14 mg

-34.52 %

ResidC. 19.23 mg

65.48 %

Step Analysis

Height -0.46 mg

-1.56 %

ResidC. 18.77 mg

63.92 %

S96T004696 SAM N2

34.255 mg

Rate: 10.0 °C/min

File: 00010.001

TG

METTLER

27-Sep-96

Ident: 0.0

222-S Laboratory

490

5. mg

Step Analysis

Height-10.60 mg

-30.94 %

ResiC. 23.66 mg

69.06 %

Step Analysis

Height -0.97 mg

-2.84 %

ResiC. 22.66 mg

66.16 %

100.

200.

300.

400.

°C

200, REV. 0

S96T004696 DUP N2

39.961 mg

Rate: 10.0 °C/min

File: 00012.001

TG

METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.62 mg

-29.07 %

ResiC. 28.34 mg

70.93 %

Dpeak 147.0 °C

Step Analysis

Height -0.73 mg

-1.82 %

ResiC. 27.61 mg

69.10 %

491

5. mg

Rae Ann Shum

LABCORE Completed Worklist Report for Worklist# 13258

Analyst: tam

Instrument: TGA01

Book# 82N8-A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	TGA-01	SOLID	59.2	58.93*	99.544 % Recovery	
2 SAMPLE	S96T004699 0	TGA-01	SOLID	N/A	31.39	%	
3 DUP	S96T004699 0	TGA-01	SOLID	31.39	24.75	23.655 RPD	
4 SAMPLE	S96T004700 0	TGA-01	SOLID	N/A	26.43	%	
5 DUP	S96T004700 0	TGA-01	SOLID	26.43	27.84	5.196 RPD	

Final page for worklist# 13258

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Blandina Valenzuela 10-7-96
Reviewer Signature Date

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 493 TO 497

QAMurphy 9-28-96

TGA STD B2N8-A

38.626 mg

Rate: 10.0 °C/min

File: 00014.001

TG

METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-22.76 mg

-58.93 %

ResidC. 15.87 mg

41.07 %

Dpeak 111.0 °C

493

10. mg

100.

200.

300.

400.

°C

WHC-SD-WM-DP-200, REV. 0

S96T004699 N2

10.263 mg

Rate: 20.0 °C/min

File: 00024.001 TG METTLER 28-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -1.41 mg
-13.72 %
Resid. 8.85 mg
86.28 %

Step Analysis
Height -1.81 mg
-17.67 %
Resid. 7.04 mg
68.60 %
Dpeak 109.0°C

Step Analysis
Height -0.20 mg
-1.90 %
Resid. 6.85 mg
66.70 %

Nb/Kmp 9/28/96

494

S96T004699 DUP N2

16.461 mg

Rate: 20.0 °C/min

File: 00026.001

Ident: 0.0

TG METTLER 28-Sep-96

222-S Laboratory

Step Analysis

Height -1.53 mg

-9.30 %

ResiC. 14.93 mg

90.70 %

Step Analysis

Height -2.54 mg

-15.45 %

ResiC. 12.39 mg

75.25 %

Dpeak 119.0 °C

Step Analysis

Height -0.25 mg

-1.55 %

ResiC. 12.13 mg

73.70 %

495

W/C-SD-MM-DE-200-REV.0

21.767 mg

Rate: 10.0 °C/min

Ident: 0.0

222-5 Laboratory

Height -5.75 mg

-26.43 %

ResiC. 16.00 mg

73.49 %

Dpeak 107.0°C

496

2. mg

WHC-SD-WM-DP-200, REV. 0

S96T004700 DUP N2

18.170 mg

Rate: 10.0 °C/min

File: 00022.001

Ident: 0.0

TG METTLER 28-Sep-96

222-S Laboratory

Step Analysis

Height -5.06 mg

-27.84 %

Resid. 13.09 mg

72.05 %

Dpeak 45.0 °C

LABCORE Data Entry Template for Worklist# 13259

Analyst: R/R Instrument: TGA0 1 Book # 8218-A

Method: LA-560-112 Rev/Mod 13-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.81</u>	<u>*</u>	<u>N/A</u> %
96001016	A-101 (P)	2 SAMPLE	S96T004701	0	TGA-01	SOLID	<u>N/A</u>	<u>72.15</u>		<u>x</u>
96001016	A-101 (P)	3 DUP	S96T004701	0	TGA-01	SOLID	<u>72.15</u>	<u>68.73</u>	<u>N/A</u>	<u>x</u>
96001016	A-101 (P)	4 SAMPLE	S96T004702	0	TGA-01	SOLID	<u>N/A</u>	<u>15.66</u>		<u>x</u>
96001016	A-101 (P)	5 DUP	S96T004702	0	TGA-01	SOLID	<u>15.66</u>	<u>22.63</u>	<u>N/A</u>	<u>x</u>

Final page for worklist # 13259

Nob King 9/29/96
Analyst Signature Date

R/R 10-3-96
Analyst Signature Date

Verified/Validated by

Blandina

Valenzuela

10-7-96

Data Entry Comments:

S96T004702 results are the sum of three weight loss steps
the high RPDs and thermogram shapes are different that a rren should be
performed

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.

TGA STD 82N8-A

38.626 mg

Rate: 10.0 °C/min

File: 00014.001

TG METTLER 28-Sep-96

Ident: 0.0

222-S Laboratory

499

10. mg

Step Analysis

Height-22.72 mg

-58.81 %

ResidC. 15.91 mg

41.19 %

Dpeak 111.0°C

John Mump 9/28/96

100.

200.

300.

400.

°C

WHC-SD-WM-DP-200, REV.0

S96T004701 DUP N2

27.463 mg

Rate: 20.0 °C/min

File: 00030.001 TG METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-18.88 mg

-68.73 %

ResidC. 8.56 mg

31.18 %

Dpeak 137.0 °C

Not Wimp 9/28/96

WHC-SD-WM-DP-200, REV. 0

501

LABCORE Data Entry Template for Worklist# 13339

Analyst: RWK Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCI

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.65</u>	<u>*N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004533	0	TGA-03	SOLID	<u>N/A</u>	<u>38.69</u>		%
96001049	A-101 (P)	3 DUP	S96T004533	0	TGA-03	SOLID	<u>38.69</u>	<u>37.71</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004534	0	TGA-03	SOLID	<u>N/A</u>	<u>34.10</u>		%
96001049	A-101 (P)	5 DUP	S96T004534	0	TGA-03	SOLID	<u>34.10</u>	<u>35.61</u>	<u>N/A</u>	%

Final page for worklist # 13339

See attached for signatures
Analyst Signature [Signature] Date 10-1-96

[Signature] 10-3-96
Analyst Signature Date

Verified/Validated by

Blandina
Valezzuela

Data Entry Comments: S96T004533 results are the sum of 3 weight loss steps.

LABCORE Data Entry Template for Worklist# 13339

Analyst: BK Instrument: TGA0 10-1-96 80V Book # 8278-A BK 9/20
Method: LA-560-112 Rev/Mod B+C-1
Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004533	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	3 DUP	S96T004533	0	TGA-01	SOLID			N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004534	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	5 DUP	S96T004534	0	TGA-01	SOLID			N/A	%

Final page for worklist # 13339

BK 9/20/96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

10-1-96

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: T8092601 Sat Sep 28 17:41:09 1996
 Sample Weight: 28.351 mg
 TGA STD 82H8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 504 TO 508.

N2 10C/MIN
 TIME: 28.9 S
 288.8 S
 0.0 min RATE: 10.0 C/min

Curve 1: TGA
File Info: SAM092803 Sat Sep 28 18:45:51 1996
Sample Weight: 10.852 mg
S96T004533

Curve 1: TGA

File info: SAM092804 Sat Sep 28 20:55:40 1996

Sample Weight: 12.380 mg

S96T004533 DUP

TEMP: 35.0 °C

TIME: 0.0 min

RATE: 10.0 C/min

Temperature (°C)

RM KING

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Oct 1 07:04:50 1996

WHC-SD-WM-DP-200, REV.0

Curve 1: TGA
File info: SAM092805 Sat Sep 28 22:06:26 1996
Sample Weight: 18.762 mg
S96T004534

10C/MIN N2
TEMP: 35.0 C
TIME: 0.0 min RATE: 10.0 C/min
TEMP: 600.0 C

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 00:09:24 1996

Curve 1: TGA

File info: SAM092901 Sun Sep 29 00:41:26 1996

Sample Weight: 11.142 mg

S96T004534 DUP

508

WHC-SD-WM-DP-200, REV. 0

LABCORE Data Entry Template for Worklist# 13340

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

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.22</u>	<u>N/A</u>	%
								<u>36.06</u>		
96001049	A-101 (P)	2 SAMPLE	S96T004535	0	TGA-01	SOLID	<u>N/A</u>	<u>29.49</u>	<u>10-1-96</u>	%
								<u>36.06</u>		
96001049	A-101 (P)	3 DUP	S96T004535	0	TGA-01	SOLID	<u>29.49</u>	<u>31.05</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004536	0	TGA-01	SOLID	<u>N/A</u>	<u>29.49</u>		%
96001049	A-101 (P)	5 DUP	S96T004536	0	TGA-01	SOLID	<u>29.49</u>	<u>31.37</u>	<u>N/A</u>	%

Final page for worklist # 13340

OAM Murphy 9-29-96
Analyst Signature Date

Not Kim 9-29-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

21066 10-3-96

Data Entry Comments: S96T004536 results are the sum of two weight loss
steps

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 510 TO 514.

AMurphy 9-29-96

TGA STD 82NB-A

32.137 mg

Rate: 20.0 °C/min

File: 00036.001

TG

METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-18.71 mg

-58.22 %

ResidC. 13.43 mg

41.78 %

Dpeak 124.3°C

510

WHC-SD-WM-DP-200, REV. 0

File: 00039.001 TG METTLER 29-Sep-98
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

S96T004535 N2
 36.281 mg

Step Analysis
 Height-12.72 mg
 -36.06 %
 Res1C. 22.54 mg
 63.89 %
 Dpeak 137.0 °C

S96T004535 DUP N2

31.178 mg

Rate: 10.0 °C/min

File: 00041.001

TG

METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.68 mg

-31.05 %

Resid. 21.48 mg

68.89 %

Dpeak 125.0 °C

512

5. mg

WHC-SD-WM-DP-200, REV. 0

S96T004536 N2

27.692 mg

Rate: 10.0 °C/min

File: 00043.001 TG METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -3.51 mg
-12.66 %
ResiC. 24.19 mg
87.34 %

Step Analysis
Height -4.66 mg
-16.83 %
ResiC. 19.53 mg
70.51 %

Step Analysis
Height -0.43 mg
-1.54 %
ResiC. 19.10 mg
68.97 %

Note: Wtmg 9/24/96

513

S96T004536 DUP N2

20.554 mg

Rate: 10.0 °C/min

File: 00045.001 TG METTLER 29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -2.65 mg
-12.88 %
ResiC. 17.91 mg
87.12 %

Step Analysis
Height -3.80 mg
-18.49 %
ResiC. 14.11 mg
68.63 %
Dpeak 117.0°C

Step Analysis
Height -0.28 mg
-1.35 %
ResiC. 13.83 mg
67.27 %

LABCORE Data Entry Template for Worklist# 13341

Analyst: RWK Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.77</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004537	0	TGA-03	SOLID	<u>N/A</u>	<u>29.72</u>		%
96001049	A-101 (P)	3 DUP	S96T004537	0	TGA-03	SOLID	<u>29.72</u>	<u>35.83</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004538	0	TGA-03	SOLID	<u>N/A</u>	<u>25.83</u>		%
96001049	A-101 (P)	5 DUP	S96T004538	0	TGA-03	SOLID	<u>25.83</u>	<u>28.81</u>	<u>N/A</u>	%

Final page for worklist # 13341

See attached for signatures
Analyst Signature Date 10-2-96

Leida Mack 10-3-96
Analyst Signature Date

Verified/Validated by BBY
Blandina
Valenzuela 10-7-96

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 13341

Analyst: NR Instrument: TGA0 Book # 8217-A

Method: LA-560-112 Rev/Mod 13-1

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004537	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	3 DUP	S96T004537	0	TGA-01	SOLID			N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004538	0	TGA-01	SOLID	N/A			%
96001049	A-101 (P)	5 DUP	S96T004538	0	TGA-01	SOLID			N/A	%

Final page for worklist # 13341

Not Nmp
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

10-2-96

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: TER092901 Sun Sep 29 02: 25: 32 1996

Sample Weight: 17.893 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 517 TO 521.

N2 10C/MIN
TEMP: 35.0 °C
TEMP: 300.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 20: 55: 30 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM092902 Sun Sep 29 16:05:18 1996

Sample Weight: 20.017 mg

S96T004537

10C/MIN N2

TEMP: 85.0 C TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 20:44:53 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM092903 Sun Sep 29 19:14:02 1996

Sample Weight: 7.290 mg

S96T4537 DUP

TEMP: 30.0 C

TIME: 0.0 min RATE: 10.0 C/min

RW KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 20:49:57 1996

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File Info: SAM092905 Sun Sep 29 21:05:15 1996

Sample Weight: 15.275 mg

S96T004538

10C/MIN N2

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RM KING

PERKIN-ELMER

7 Series Thermal Analysis System

Sun Sep 29 21:06:55 1996

Curve 1: TGA
File info: SAM092906 Sun Sep 29 22:13:48 1996
Sample Weight: 17.838 mg
S96T004538 DUP

10C/MIN N2
TEMP: 350.0 C
TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

RM KING
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Sep 29 22:28:46 1996

LABCORE Data Entry Template for Worklist# 13342

Analyst: DPB Instrument: TGA01 Book # 82N8-A

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

Worklist Comment: A-101 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	58.71	N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004539	0	TGA-01	SOLID	N/A	37.2		%
96001049	A-101 (P)	3 DUP	S96T004539	0	TGA-01	SOLID	37.2	34.4	N/A	%
96001049	A-101 (P)	4 SAMPLE	S96T004540	0	TGA-01	SOLID	N/A	30.65		%
96001049	A-101 (P)	5 DUP	S96T004540	0	TGA-01	SOLID	30.65	30.36	N/A	%

Final page for worklist # 13342

Donald P. Bandy 10/6/96 1738
Analyst Signature Date

Linda Mack 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 523 TO 527

TGA STD 82N8-A N2

25.155 mg

Rate: 10.0 °C/min

File: 00069.001

TG

METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-14.77 mg

-58.71 %

Resid. 10.39 mg

41.29 %

Dpeak 100.8 °C

523

0000-WV-02-200, REV. 0

S96T004539 SAM N2

23.781 mg

Rate: 10.0 °C/min

File: 00071.001

TG

METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.85 mg

-37.20 %

Resid. 14.93 mg

62.80 %

524

S96T004539 DUP N2

15.702 mg

Rate: 10.0 °C/min

File: 00073.001

TG METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -5.41 mg

-34.43 %

Resid. 10.28 mg

65.49 %

Dpeak 61.0°C

525

S96T004540 SAM N2

24.780 mg

Rate: 10.0 °C/min

File: 00075.001

Ident: 0.0

TG

METTLER

01-Oct-96

222-S Laboratory

Step Analysis

Height -7.60 mg

-30.65 %

Resid. 17.18 mg

69.35 %

Dpeak 111.0 °C

S96T004540 DUP N2

27.043 mg

Rate: 10.0 °C/min

File: 00077.001

TG

METTLER

01-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.21 mg

-30.36 %

ResidC. 18.83 mg

69.64 %

Dpeak 123.0°C

527

LABCORE Data Entry Template for Worklist# 13343

Analyst: MLK Instrument: TGA0 1 Book # 8278-A

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.22</u>	<u>*</u>	<u>N/A</u> %
96001049	A-101 (P)	2 SAMPLE	S96T004541	0	TGA-01	SOLID	<u>N/A</u>	<u>31.18</u>		%
96001049	A-101 (P)	3 DUP	S96T004541	0	TGA-01	SOLID	<u>31.18</u>	<u>36.23</u>	<u>N/A</u>	%
96001049	A-101 (P)	4 SAMPLE	S96T004542	0	TGA-01	SOLID	<u>N/A</u>	<u>33.74</u>		%
96001049	A-101 (P)	5 DUP	S96T004542	0	TGA-01	SOLID	<u>33.74</u>	<u>34.5</u>	<u>N/A</u>	%

Final page for worklist # 13343

Mob Wm 9-30-96
Analyst Signature Date

R/Stok 10-3-96
Analyst Signature Date

Verified/Validated by

Blandina
Valenzuela 10-9-96

Data Entry Comments: S96T004542 results are the sum of two weight loss steps.

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 529 TO 533.

TGA STD 82N8-A

32.137 mg

Rate: 20.0 °C/min

File: 00036.001

TG

METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

629

S96T004541 N2

23.292 mg

Rate: 10.0 °C/min

File: 00047.001

TG

METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -2.55 mg

-10.97 %

ResidC. 20.73 mg

88.99 %

Step Analysis

Height -4.71 mg

-20.21 %

ResidC. 16.02 mg

68.77 %

Step Analysis

Height -0.34 mg

-1.47 %

ResidC. 15.68 mg

67.30 %

Not King 4/24/96

530

5. mg

S96T004541 DUP N2

24.158 mg

Rate: 10.0 °C/min

File: 00049.001

TG

METTLER

29-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.75 mg

-36.23 %

ResidC. 15.41 mg

63.77 %

Step Analysis

Height -0.37 mg

-1.52 %

ResidC. 15.04 mg

62.25 %

S96T004542 N2

20.320 mg

Rate: 10.0 °C/min

File: 00051.001

TG

METTLER

30-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -3.23 mg
-15.89 %
ResidC. 17.07 mg
84.02 %

Step Analysis
Height -3.63 mg
-17.85 %
ResidC. 13.45 mg
66.17 %
Dpeak 111.0 °C

Step Analysis
Height -0.32 mg
-1.58 %
ResidC. 13.13 mg
64.59 %

532

S96T004542 DUP N2

26.023 mg

Rate: 10.0 °C/min

File: 00053.001

TG

METTLER

30-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -2.79 mg

-10.74 %

ResiC. 23.23 mg

89.26 %

Step Analysis

Height -6.18 mg

-23.76 %

ResiC. 17.04 mg

65.50 %

Dpeak 125.0 °C

Step Analysis

Height -0.36 mg

-1.39 %

ResiC. 16.68 mg

64.11 %

Not Wmp 9/30/96

LABCORE Data Entry Template for Worklist# 13344

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

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

Worklist Comment: A-101 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.9</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004543	0	TGA-01	SOLID	<u>N/A</u>	<u>31.5</u>		%
96001049	A-101 (P)	3 DUP	S96T004543	0	TGA-01	SOLID	<u>31.5</u>	<u>34.4</u>	<u>N/A</u>	%

Final page for worklist # 13344

CHAMurphy 9-28-96
Analyst Signature Date

RJBL 10-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
10-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 535 TO 537

Champerly 9-28-96

TGA STD 82N8-A

38.626 mg

Rate: 10.0 °C/min

File: 00014.001

TG

METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

SES

S96T004543 N2

19.576 mg

Rate: 10.0 °C/min

File: 00016.001

Ident: 0.0

TG METTLER 28-Sep-96

222-S Laboratory

536

2. mg

Step Analysis

Height -6.17 mg

-31.54 %

ResidC. 13.40 mg

68.46 %

Dpeak 111.0 °C

S96T004543 DUP N2

87.162 mg

Rate: 10.0 °C/min

File: 00018.001

TG

METTLER

28-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-29.98 mg

-34.40 %

ResidC. 57.18 mg

65.60 %

Dpeak 167.0 °C

537

worklistrpt Version 2.1 05/15/95
10/14/96 08:44

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13766Analyst: DGD Instrument: TGA0 3 Book # 82N8AMethod: LA-514-114 Rev/Mod D-0

Worklist Comment: A-101 TGA Reruns

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.2</u>	<u>58.74</u>	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004702 1		TGA-03	SOLID	N/A	<u>11.66</u>		%
96001016	A-101 (P)	3 DUP	S96T004702 1		TGA-03	SOLID	<u>11.66</u>	<u>17.68</u>	N/A	%

Final page for worklist # 13766

See attached for signatures 10-14-96
 Analyst Signature Boy Date

H. Anestor 10-14-96
 Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
10-14-96

Data Entry Comments:

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

538

worklistrpt Version 2.1 05/15/95
10/09/96 10:13

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13766

Analyst: DeD Instrument: TGA0 Book # 82N8-A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: A-101 TGA Reruns

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	2 SAMPLE	S96T004702	1	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	3 DUP	S96T004702	1	TGA-01	SOLID	_____	_____	N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T005243	0	TGA-01	SOLID	N/A	_____	_____	%
96001016	A-101 (P)	5 DUP	S96T005243	0	TGA-01	SOLID	_____	_____	N/A	%

Final page for worklist # 13766

Analyst Signature David C. Dunbar Date 10-12-96

Analyst Signature _____ Date _____

Data Entry Comments:

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

still in hot cell.
this is an A-101
composite.
G. Kelly
10/17/96

Oct. 14, 1996 11:09AM WHC 222S LAB ROOM 2F BACKSIDE No. 5838 P. 4/18

Curve 1: TGA

File info: TER101201 Set Oct 12 07: 11: 20 1996

Sample Weight: 19.122 mg

TGA STD 82N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 540 TO 542.

540

Weight (Wt. %)

N2 10C/MIN

TEMP: 25.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

WHC-SD-WM-DP-200, REV. 0

Curve 1: TGA

File info: SAM101203 Sat Oct 12 20:29:01 1996

Sample Weight: 18.383 mg

S96T4702

54.1
Weight (Wt. %)

10C/MIN N2

TIME: 55:8 8

TIME: 0.0 min RATE: 10.0 C/min

Temperature (°C)

DC DUNHAM

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Oct 12 20:39:20 1996

542

Curve 1: TGA
File info: SAM101210 Sat Oct 12 21:49:10 1996
Sample Weight: 10.636 mg
S96T004702 DUP

10C/MIN N2
TEMP: 85.0 °C
TIME: 00:00
TIME: 0.0 min RATE: 10.0 C/min

DC DUNHAM
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Oct 12 23:30:02 1996

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13767

Analyst: PJM Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: A-101 TGA Reruns

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.15</u>	<u>N/A</u>	%
96001049	A-101 (P)	2 SAMPLE	S96T004545	0	TGA-01	SOLID	<u>N/A</u>	<u>31.66</u>		%
96001049	A-101 (P)	3 DUP	S96T004545	0	TGA-01	SOLID	<u>31.66</u>	<u>32.22</u>	<u>N/A</u>	%
96001016	A-101 (P)	4 SAMPLE	S96T004697	0	TGA-01	SOLID	<u>N/A</u>	<u>30.15</u>		%
96001016	A-101 (P)	5 DUP	S96T004697	0	TGA-01	SOLID	<u>30.15</u>	<u>30.7</u>	<u>N/A</u>	%
		6 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.07</u>	<u>N/A</u>	%
96001016	A-101 (P)	7 SAMPLE	S96T004698	0	TGA-01	SOLID	<u>N/A</u>	<u>33.13</u>		%
96001016	A-101 (P)	8 DUP	S96T004698	0	TGA-01	SOLID	<u>33.13</u>	<u>34.3</u>	<u>N/A</u>	%

Final page for worklist # 13767

See attached for signatures
Analyst Signature

Date

10-15-96 gpr

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
10/09/96 10:14

WHC-SD-WM-DP-200, REV. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13767

Analyst: Bla Instrument: TGA0 Book # 8205A

Method: LA-514-114 Rev/Mod _____

Worklist Comment: A-101 TGA Reruns

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID			N/A	%
96001049	A-101 (P)	2 SAMPLE	S96T004545	1	TGA-03	SOLID	N/A			%
96001049	A-101 (P)	3 DUP	S96T004545	1	TGA-03	SOLID			N/A	%
96001016	A-101 (P)	4 SAMPLE	S96T004697	1	TGA-03	SOLID	N/A			%
96001016	A-101 (P)	5 DUP	S96T004697	1	TGA-03	SOLID			N/A	%
96001016	A-101 (P)	6 SAMPLE	S96T004698	1	TGA-03	SOLID	N/A			%
96001016	A-101 (P)	7 DUP	S96T004698	1	TGA-03	SOLID			N/A	%

Final page for worklist # 13767

Bla 10/14/96
Analyst Signature Date

Analyst Signature Date

TGA-01 instrument
was used.
10-15-96
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.

545

TGA STD 82N8A

21.563 mg

Rate: 10.0 °C/min

File: 00035.001

TG

METTLER

14-Oct-96

Ident: 0.0

222-S Laboratory

RL McCown

Step Analysis

Height-12.75 mg

-59.15 %

ResidC. 8.81 mg

40.85 %

Dpeak 94.2°C

545

S96T004545 N2

11.880 mg

Rate: 10.0 °C/min

File: 00036.001

Ident: 0.0

TG METTLER 14-Oct-96

222-S Laboratory

B. McCown

Step Analysis

Height -1.80 mg

-15.13 %

Resid. 10.08 mg

84.87 %

Step Analysis

Height -1.96 mg

-16.53 %

Resid. 8.12 mg

68.33 %

S96T004545 DUP N2

29.469 mg

Rate: 10.0 °C/min

File: 00037.001

Ident: 0.0

TG METTLER 14-Oct-96

222-S Laboratory

AmMcGown

Step Analysis
Height -3.45 mg
-11.69 %
Resid. 26.02 mg
88.31 %

Step Analysis
Height -6.05 mg
-20.53 %
Resid. 19.97 mg
67.78 %
Dpeak 125.0 °C

FILE: 00037-0-AM-050-0-1

845

S96T004697 N2

33.759 mg

Rate: 10.0 °C/min

File: 00038.001

Ident: 38.0

TG METTLER 14-Oct-96

222-S Laboratory

At McCown

Step Analysis

Height -3.70 mg

-10.95 %

ResidC. 30.06 mg

89.05 %

Step Analysis

Height -6.48 mg

-19.20 %

ResidC. 23.58 mg

69.85 %

Dpeak 135.0 °C

S96T004697 DUP N2

48.625 mg

Rate: 10.0 °C/min

File: 00039.001

Ident: 0.0

TG METTLER

14-Oct-96

222-S Laboratory

Blum Low

Step Analysis

Height -5.14 mg

-10.58 %

ResidC. 43.48 mg

89.42 %

Step Analysis

Height -9.78 mg

-20.12 %

ResidC. 33.70 mg

69.30 %

Dpeak 139.0 °C

TGA STD 82N8A

16.872 mg

Rate: 10.0 °C/min

File: 00051.001

Ident: 0.0

TG METTLER 15-Oct-96

222-S Laboratory

BS McCown 10/15/96

S96T004698 N2

14.189 mg

Rate: 10.0 °C/min

File: 00053.001

TG

METTLER

15-Oct-96

Ident: 0.0

222-S Laboratory

Blm

Step Analysis

Height -1.76 mg

-12.43 %

ResidC. 12.43 mg

87.57 %

Step Analysis

Height -2.94 mg

-20.70 %

ResidC. 9.49 mg

66.87 %

Dpeak 99.0 °C

255

S96T004698 DUP N2

14.395 mg

Rate: 10.0 °C/min

File: 00055.001

TG

METTLER

15-Oct-96

Ident: 0.0

222-S Laboratory

RJW

Step Analysis

Height -1.96 mg

-13.63 %

ResiC. 12.43 mg

86.37 %

Step Analysis

Height -2.98 mg

-20.67 %

ResiC. 9.46 mg

65.70 %

Dpeak 99.0 °C

LABCORE Data Entry Template for Worklist# 13824

Analyst:

RMA

Instrument: TGA0

1

Book # *92NBA*

Method: LA-560-112 Rev/Mod *L-0*

Worklist Comment: A-101. Run under Nitrogen. RUSH!

RUSH

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<i>59.2</i>	<i>59.15</i>	<i>N/A</i>	%
96001049	A-101 (P)	2 SAMPLE	S96T004586	0	TGA-01	LIQUID	<i>N/A</i>	<i>46.82</i>		%
96001049	A-101 (P)	3 DUP	S96T004586	0	TGA-01	LIQUID	<i>46.82</i>	<i>47.53</i>	<i>N/A</i>	%

Final page for worklist # 13824

RMA
Analyst Signature

10/11/96
Date

11/11/96
Analyst Signature

10-14-96
Date

Verified/Validated by
Blandina
Valenzuela
10-14-96

Data Entry Comments:

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 554 TO 556.

TGA STD 82N8-A N2

19.335 mg

Rate: 10.0 °C/min

File: 00006.001

TG

METTLER

11-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-11.44 mg

-59.15 %

ResidC. 7.90 mg

40.85 %

Dpeak 89.2°C

5.165

Blandina Valenzuela for RD Meyers 10-15-96

50.

100.

150.

200.

°C

S96T004586 N2

19.753 mg

Rate: 10.0 °C/min

File: 00008.001

TG

METTLER

11-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.79 mg

-39.41 %

ResidC. 11.97 mg

60.59 %

Step Analysis

Height -1.46 mg

-7.41 %

ResidC. 10.47 mg

53.01 %

S96T004586 DUP N2

15.329 mg

Rate: 10.0 °C/min

File: 00010.001

TG

METTLER

11-Oct-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -6.33 mg
-41.29 %
ResidC. 9.00 mg
58.71 %

Step Analysis
Height -0.96 mg
-6.24 %
ResidC. 8.00 mg
52.21 %
Dpeak 183.0 °C

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control	Page 1 of 1
		Date: 10/18/96

Project Title/Work Order
WHC-SD-WM-DP-200, Rev. 0, "Tank 241-A-101, Cores 154 and 156
Analytical Results for the 45 Day Report"

EDT NO.: EDT-617561

ECN NO.: N/A

Name	MSIN	Text With all Attach	EDT/ECN ONLY	
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DE&S Hanford, Inc.

J. E. Meacham	S7-14	X		
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J. N. Appel	G3-21		X	
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J. G. Field	R2-12	X		
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T. J. Kelley	S7-21		X	
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Los Alamos Technical Associates

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Pacific Northwest National Laboratory

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Rich Tontodonato		X		
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Washington D.C. 20004

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