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Tank 241-AN-105, Cores 152 and 153, Analytical Results for the 45 Day Report

Franciska M. Steen

Westinghouse Hanford Company, Richland, WA 99352

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ANALYTICAL SERVICES

**TANK 241-AN-105, CORES 152 AND 153,
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
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Richland, Washington**

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222-S ANALYTICAL SERVICES

TANK 241-AN-105, CORES 152 AND 153,
ANALYTICAL RESULTS FOR THE 45 DAY REPORT

This document is the 45-day laboratory report for tank 241-AN-105 push mode core segments collected between June 10, 1996 and June 28, 1996. The segments were subsampled and analyzed in accordance with the *Tank 241-AN-105 Push Mode Core Sampling and Analysis Plan* (TSAP) (Eggers, 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 152

Twenty-two push mode core segments were removed from tank 241-AN-105 riser 12A between June 10, 1996 and June 18, 1996. Segments were received by the 222-S Laboratory between June 11, 1996 and June 24, 1996. Table 2 summarizes the extrusion information.

Selected segments (15, 17, 19 and 21) were sampled using the Retained Gas Sampler (RGS) 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. Segment 14 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.

Core 153

Twenty-two push mode core segments were removed from tank 241-AN-105 riser 7B between June 25, 1996 and June 28, 1996. Segments were received by the 222-S Laboratory between June 28, 1996 and August 9, 1996. Table 3 summarizes the extrusion information.

Selected segments (4, 16, 18 and 20) 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 153. It underwent the same analysis as the drainable liquid as instructed by the TSAP (Eggers, 1996).

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Table 2. Sample Receipt and Extrusion Information for 241-AN-105, Core 152.

Sample ID	Core	Receipt Date	Receipt Time	Receipt Location	Receipt Depth (m)	Extrusion Date	Extrusion Depth (m)	Extrusion Description
96-253	1	6/10/96	6/12/96	6/17/96	2.5	256.5-Denaville	37.6-Upper half	The solids were light gray in color and resembled a mild slurry. The liquid was green in color and opaque. Collected 190 mL of liquid. No organic layer was observed.
96-254	2	6/10/96	6/12/96	6/17/96	0.0	426.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 305 mL of liquid. No organic layer was observed.
96-255	3	6/11/96	6/11/96	6/18/96	0.0	486.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 280 mL of liquid. No organic layer was observed.
96-256	4	6/11/96	6/12/96	6/18/96	0.0	429.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-257	5	6/11/96	6/12/96	6/18/96	0.0	475.5-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 310 mL of liquid. No organic layer was observed.
96-258	6	6/11/96	6/12/96	6/18/96	0.0	429.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-259	7	6/11/96	6/12/96	6/27/96	0.0	473.4-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-260	8	6/12/96	6/12/96	6/27/96	0.0	429.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 306 mL of liquid.
96-261	9	6/12/96	6/12/96	6/27/96	0.0	378.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 239 mL of liquid. No organic layer was observed.
96-262	10	6/12/96	6/12/96	6/27/96	0.0	382.3-Denaville	0.0	Extruded an immeasurable amount of light gray solids and reassembled a wet soil. The liquid was green in color and opaque. Collected 238 mL of liquid. No organic layer was observed.

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Table 2. Sample Receipt and Extrusion Information for 241-AN-105, Core 152.

96-263	11	6/12/96	6/12/96	6/23/96	#4	431.4-Dreanable	0.0	Estimated an immeasurable amount of light gray solids and reconstituted a wet slurry. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-264	12	6/12/96	6/24/96	6/27/96	#6	360.0-Dreanable	0.0	Estimated an immeasurable amount of light gray solids and reconstituted a wet slurry. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.
96-265	13	6/12/96	6/24/96	6/27/96	#6	362.8-Dreanable	0.0	Estimated an immeasurable amount of light gray solids and reconstituted a wet slurry. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.
96-266	14	6/13/96	6/13/96	5/8/96	n/a	152.0-Dreanable	181.5-Upper half 66.7-Lower half	Estimated an immeasurable amount of light gray solids and reconstituted a salt slurry. The liquid was green in color and opaque. Collected 90 mL of liquid. No organic layer was observed.
96-267	15	6/13/96	6/13/96	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.
96-268	16	6/13/96	6/13/96	7/28/96	18.0	0.0	166.5-Upper half 240.7-Lower half	The solids were gray in color and reconstituted a salt slurry.
96-269	17	6/14/96	6/13/96	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.
96-270	18	6/14/96	6/13/96	7/28/96	19.4	0.0	188.0-Upper half 255.3-Lower half	The solids were gray in color and reconstituted a wet slurry.
96-271	19	6/14/96	6/13/96	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.
96-272	20	6/14/96	6/13/96	7/28/96	17.2	0.0	192.9-Upper half 198.0-Lower half	The solids were light to dark gray in color and reconstituted a wet slurry and a salt slurry.
96-273	21	6/14/96	6/13/96	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.

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Table 2. Sample Receipt and Extrusion Information for 241-AN-185, Core 152.

66-734	22	6/16/96	6/20/96	7/11/96	13.0	0.4	195 T-Upper half 211 L-Lower half	The solids were light to dark gray in color and exhibited a full slurry
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*Approximate Inches Extruded

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Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

96-174	1	6/25/96	6/25/96	6/24/96	0.0	246.4-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 163 mL of liquid. No organic layer was observed.
96-176	2	6/25/96	7/26/96	6/25/96	0.0	432.8-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 320 mL of liquid. No organic layer was observed.
96-177	3	6/26/96	8/26/96	6/24/96	0.0	367.0-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 240 mL of liquid. No organic layer was observed.
96-178	4	6/26/96	6/26/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and analyzed by the Petrochem Chemistry and Separation Analysis Group. The sample information is not included in this report.
96-179	5	6/26/96	8/27/96	8/12/96	0.0	406.1-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 310 mL of liquid. No organic layer was observed.
96-180	6	6/26/96	8/27/96	8/12/96	0.0	410.7-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-181	7	6/26/96	8/28/96	8/12/96	0.0	402.6-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 295 mL of liquid. No organic layer was observed.
96-182	8	6/26/96	7/23/96	7/26/96	0.0	426.7-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-183	9	6/26/96	7/22/96	7/26/96	0.0	428.9-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-184	10	6/27/96	7/23/96	8/25/96	0.0	386.1-Dramatic	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet slurry. The liquid was green in color and opaque. Collected 280 mL of liquid. No organic layer was observed.

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Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

95-181	11	6/27/96	7/12/96	7/18/96	9.0	420.0-Dramatic	0.0	Extruded an asymmetrical amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 200 mL of liquid. No organic layer was observed.
95-186	12	6/27/96	7/12/96	7/18/96	0.0	407.2-Dramatic	0.0	Extruded an asymmetrical amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 200 mL of liquid. No organic layer was observed.
95-187	13	6/27/96	7/13/96	7/18/96	0.0	428.4-Dramatic	0.0	Extruded an asymmetrical amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 200 mL of liquid.
95-188	14	6/27/96	6/23/96	6/27/96	13.0	130.1-Dramatic	248.8-Lower half	The solids were medium to dark gray in color and resembled a salt slurry. The liquid was green in color and opaque. Collected 100 mL of liquid. No organic layer was observed.
95-189	15	6/27/96	7/30/96	8/05/96	17.0	0.0	160.5-L, upper half 199.7-L, lower half	The solids were gray in color and resembled a salt slurry.
95-190	16	6/27/96	8/21/96	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.
95-191	17	6/28/96	8/09/96	8/14/96	19.0	0.0	204.2-L, upper half 216.9-L, lower half	The solids were black-gray in color and resembled a wet salt.
95-192	18	6/28/96	8/21/96	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.
95-193	19	6/28/96	8/07/96	8/14/96	8.5	0.0	244.1-Lower half	The solids were dark gray in color and resembled a wet salt.
95-194	20	6/28/96	7/02/96	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.
95-195	21	6/28/96	7/03/96	7/09/96	10.0	173.0-Dramatic	282.1-Lower half	The solids were gray in color and resembled a wet slurry. The liquid was brown-gray in color and opaque. Collected 120 mL of liquid. No organic layer was observed.

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Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

Sample ID	Depth (m)	Depth (ft)	Depth (in)	Depth (cm)	Depth (mm)	Depth (m)	Depth (ft)	Depth (in)	Depth (cm)	Depth (mm)	Depth (m)	Depth (ft)	Depth (in)	Depth (cm)	Depth (mm)	Notes
96-256	22	625.96	7.0275	700.96	14.0	0.0					152.5-Upper half	74.8-Lower half				The upper ten inches of solids were gray color and resembled a silty slurry. The lower four inches of solids were black in color and resembled a shale slurry.
Field Blank	FD	6.2856	77.56	700.96	0.0	277.7-Diameter	0.0									The liquid was colorless and clear. Collected 250 mL of liquid.

*Approximate inches Extruded

Analytical Results Summary

Table I 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 nineteen of the fifty-one subsamples. The high RPDs can be attributed to the small exotherms and the heterogeneous 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-U-106 were determined by summing the weight loss steps which occurred below 330°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 99.77% moisture. Relative percent differences (RPD) greater than 20% were reported for one of the fifty-one subsamples, sample S96T003748. The rerun resulted in a RPD of 0.3%. Several thermograms showed small sharp peaks. These were the result of instrument vibration and were not used in the calculation for the result. The standard recoveries and RPDs for this analysis were within the required limits.

Density

Bulk density was performed on the solid subsamples as required by the TSAP (Eggers, 1996). The results of the bulk density test ranged from 1.52 g/mL to 1.67 g/mL. The highest bulk density of 1.67 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 36.8 $\mu\text{Ci/g}$ (based on a bulk density of 1.67 g/mL). The field blank result was less than 1.75e-5 $\mu\text{Ci/mL}$. A high RPD was reported for two of the forty 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. The standard recoveries for this analysis were within the required limits.

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

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-504-101, 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

Eggers, R. F., 1996, *Tank 241-A1N-103 Push Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-027, Rev. 1, 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

WMC-SD-WM-DP-199, REV. 0

ATTACHMENT 1
SAMPLE BREAKDOWNS

WMC-SD-WM-OP-199, REV. 0

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AN-105
Core:152
Seg: 1
S96T003481

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Upper
Hall

S96T003714

S96T003731

1.3

S96T003893

S96T003906

S96T003915

Drainable
Liquid

S96T003715

S96T003796

S96T003732

SSC
TOL
ALPHA
TIC DC

SS-ANALYS
CP
SP

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AN-105
Core:152
Seg: 2
S96T003482

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AN-105
Core:152
Seg: 3
S96T003483

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WHC-SD-WM-DP-199, REV. 0

AN-105
Core:152
Seg: 4
S96T003491

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AN-105
Core:152
Seg: 5
S96T003492

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AN-105
Core:152
Seg: 6
S96T003493

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AN-105
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Seg: 7
S98T003494

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AN-105
Core:152
Seg: 8
S96T003495

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WPC-SD-WMA-DP-198, REV. 0

AN-105
Core:152
Seg: 9
S96T003502

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AN-105
Core:152
Seg: 10
S96T003503

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AN-105
Core:152
Seg: 11
S96T003504

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AN-105
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Seg: 12
S96T003588

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WHC-SO-NN-DP-199, REV. 0

AN-105
Core:152
Seg: 13
S96T003589

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WHC-SD-WMA-DP-199, REV. 0

AN-105
Core:152
Seg: 16
S96T003513

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AN-105
Core: 152
Seg: 18
S96T003505

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Core:152
Seg: 20
S98T003514

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AN-105
Core:152
Seg: 22
S96T003590

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AN-105
Core:153
Seg: 1
S98T004364

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WHC-SD-MM-DP-199, REV. 0

AN-105
Core:153
Seg: 2
S96T004154

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AN-105
Core: 153
Seg: 3
S96T004385

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Core:153
Seg: 5
S98T004326

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AN-105
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Seg: 6
S96T004327

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AN-105
Core:153
Seg: 7
S96T004323

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AN-105
Core:153
Seg: 8
S96T003664

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WHC-SD-WMA-DP-139, REV. 0

AN-105
Core:153
Seg: 9
S96T003637

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Seg: 10
S96T004155

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WFO-SD-MIL-OP-199, REV. 0

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S96T003638

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Core:153
Seg: 12
S96T003639

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S96T003665

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Seg: 14
S96T004324

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Seg: 15
S96T004156

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AN-105
Core:153
Seg: 17
S96T004386

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Core:153
Seg: 19
S96T004328

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AN-105
Core:153
Seg: 21
S96T003666

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AN-105
Core:153
Seg: 22
S96T003630

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AN-105
Core:153
Seg: FB
S96T003663

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AN-105
Core:153
Seg: HHF
S96T003631

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WMC-SD-WH-OP-199, REV. D

SAMPLE DATA SUMMARY

WMC-SD-WM-OP-199, REV. 0

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INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 152
SEGMENT #: 1

SEGMENT PORTION: N Upper Half of Segment

Sample	t	ANALYZE	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
				Lower	Upper									
2041003716		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.528	n/a	n/a	n/a	n/a	5.00e-01	n/a
2041003727		OSC Eutherm using Mettler	Joules/g	-1.0e+01	1.0e+01	105.0	n/a	5.000	7.500	6.150	37.4	n/a	n/a	n/a
2041003731		OSC Eutherm Dry Calculated	Joules/g Dry	-1.0e+01	1.0e+01	n/a	n/a	8.800	15.00	10.90	37.6	n/a	n/a	n/a
2041003731		% Water by TGA using Mettler	%	None	None	100.0	n/a	98.80	98.81	98.75	15.4	n/a	n/a	n/a
2041003805		Alpha of Digested Solid	uCi/g	-1.0e+01	1.0e+01	85.38	<1.46e-02	<1.42e-02	<2.88e-2	n/a	n/a	74.68	5.70e-02	5.00e+02

Drainable Liquid: Drainable Liquid

Sample	t	ANALYZE	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
				Lower	Upper									
2041003732		OSC Eutherm using Mettler	Joules/g	-1.0e+01	1.0e+01	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
2041003732		OSC Eutherm Dry Calculated	Joules/g Dry	-1.0e+01	1.0e+01	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
2041003732		% Water by TGA using Mettler	%	None	None	98.74	n/a	98.57	98.57	98.57	1.28	n/a	n/a	n/a
2041003732		Alpha in Liquid Sample	uCi/mL	-1.0e+01	1.0e+01	192.5	<1.75e-02	<2.20e-02	2.25e-02	n/a	n/a	103.1	2.70e-02	1.50e+02

2041003732 -> Limit Violated
2041003732 -> Selected Blank

53

WMCSD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152

SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R	AN	Analyze	Unit	Action Limits		Standard %	Blank	Result	Over/Under	Average	RSD %	Std. Rec %	Det Limit	Count Err%
					Lower	Upper									
5507003739			BSC Exotherm using Mettler	Boules/g	-1.0e+05	<None	58.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5507003739			BSC Exotherm Dry Calculated	Boules/g Dry	-1.0e+05	<None	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5507003739			% Water by FDA using Mettler	%	None	None	99.75	n/a	0.00	80.89	40.39	0.75	n/a	n/a	n/a
5507003739			Alpha in Liquid Samples	MCs/mL	-1.0e+05	<None	112.8	<1.74e-02	<2.67e-03	<2.70e-2	n/a	n/a	n/a	2.70e-02	2.77e-02

== Limit Violated

== Selected Limit

(5507003739)

54

WHC-SD-WM-QP-159, Rev. 0

INTERIM

Table 1. Data Summary Results
AM-109

CORE NUMBER: 152
SEQUENT #: 3

SEQUENT PORTION: Drainable Liquid

Sample	#	AF	Analyte	Unit	Action Limits		Standard %	Blend	Result	Duplicate	Average	STD %	Std Dev %	Det Limit	Count Err %
					Lower	Upper									
5501603710			SSC Epoxihene using Mettler	double/g	-1.0e+01	2.0e+01	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5501603720			SSC Epoxihene Dry Calculated	double/gg Dry	-1.0e+01	2.0e+01	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5501603730			SSC Water by TGA on Densit Glass	%	None	None	99.99	n/a	50.43	40.80	50.00	3.48	n/a	n/a	n/a
5501603740			Alum in Liquid Samples	wt%/g	-1.0e+01	2.0e+01	118.5	<1.75e-02	<1.00e-02	4.88e-02	n/a	n/a	n/a	2.70e-02	2.77e+02

5501603710 <> Limit violated
5501603720 <> Selected Limit

55

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 152
SEGMENT #: 4

SEGMENT PORTION: Grainable Liquid

Sampled	Date	Analyte	Unit	Action Limit		Standard	Blank	Result	Duplicate	Average	RSD %	Spk. No. 1	Det. Limit	Count Error
				Lower	Upper									
B941003751		DSG Exotherm using Hestler	scoules/g	-1.0e+05	99.27	98.72	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B941003751		DSG Exotherm Dry Calculated	scoules/g Dry	-1.0e+05	n/a	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B941003751		A Meter by 16A on PwrIn Floor	K	None	None	99.27	n/a	50.12	50.85	50.57	3.41	n/a	n/a	n/a
B941003751		Alpha in Liquid Samples	uCi/g	-1.0e+05	112.5	112.5	<1.75e-02	<2.28e-02	<2.47e-02	n/a	n/a	n/a	2.70e-02	5.00E+02

=> Limit violated

=> Selected Limit

56

WHC-SD-WM-4-DP-198, REV. 0

INTERIM

Table 1. Data Summary Results
AM-103

CORE NUMBER: 152
SEGMENT #: 5

SEGMENT PORTION: Drainside Liquid

Sample#	AB	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Conv Err%
				Lower	Upper									
506T003762		DSC Exotherm using Mettler	Acules/g	-1.0e+03	1.0e+03	97.01	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
506T003762		DSC Exotherm Dry, Calculated	Acules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
506T003762		% Water by TGA using Mettler	%	None	None	99.76	n/a	50.50	50.35	50.67	0.67	n/a	n/a	n/a
506T003762		alpha in Liquid Sample	uCi/gal	-1.0e+03	1.0e+03	112.5	-1.73e-02	-1.65e-02	-2.28e-2	n/a	n/a	n/a	2.70e-02	5.00e-02

==> Limit violated
==> Selected Limit

57

INTERIM

Table 1. Data Summary Results
AR-105

CORE NUMBER: 152
SEGMENT #: 6

SEGMENT POSITION: Draggable Liquid

Sample#	Std Analyte	Unit	Action Limits		Standard %	Blank	Regul	Dupes	Average	RSD %	Spk Rec %	Det Limit	Count Rec %
			Lower	Upper									
925003763	DDC Exotherm using Mettler	Joules/g	-1.0e+03	99.01	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
925003763	DDC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	n/a	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
925003763	% Water by IGA using Mettler	%	None	99.96	n/a	n/a	50.07	50.40	50.23	0.65	n/a	n/a	n/a
925003763	Alpha in Liquid Samples	uCi/ml	-1.0e+03	100.0	+3.0e-02	<2.34e-03	<4.23e-2	n/a	n/a	86.25	3.30e-02	3.00e-02	n/a

> Limit violated
 > Selected Limit

59

WHO-SD-WM-OP-159, REV.0

INTERIM

Table 1. Data Summary Results
AM-805

CORE NUMBER: 152
SEGMENT #: 7

SEGMENT PORTION: Gravelly Liquid

Sample	R	AP	Analyte	Unit	Action Limits		Standard S	Blank	Results	Duplicate	Average	MDL %	Sub Rec %	Det Limit	Count Err%
					Lower	Upper									
39600374			BSC Endorse using Bettle	Acid/g/s	-1.0e-03	1.0e-02	97.74	n/a	0.00e+00	0.00e+00	0.00e+00	0.80	n/a	n/a	n/a
39600374			BSC Endorse Dry Calculated	Acid/g/s Dry	-1.0e-03	1.0e-02	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.80	n/a	n/a	n/a
39600374			% Water by TGA using Bettle	%			50.70	n/a	50.93	50.37	50.64	1.07	n/a	n/a	n/a
39600374			Alpha in Liquid Samples	uCi/g	-1.0e-03	1.0e-02	100.0	<3.0e-02	1.16e-02	<2.15E-2	n/a	n/a	n/a	3.70e-02	1.20e-02

=> Limit violated
=> Selected limit

WHC-SD-WM-DP-199, REV. 0

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INTERIM

Table 1. Data Summary Results
44-105

CORE NUMBER: 152
SEGMENT #: 8

SEGMENT POSITION: Drainable Liquid

Sample	R	Ad	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Avg %	Det Limit	Count Err
					Lower	Upper									
B941005761			DSC Isotherm using Mettler	solids/g	-1.00E-03	<2.00E-03	97.72	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
B941005761			DSC Isotherm Dry Calculated	solids/g Dry	-1.00E-03	<2.00E-03	n/a	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
B941005761			% Water by IGA using Mettler	%	None	None	99.78	n/a	59.32	52.15	51.20	3.39	n/a	n/a	n/a
B941005761			Albedo in Liquid Samples	nE1/BL	-1.00E+02	<2.00E+02	100.0	<3.00E-02	<2.00E-02	<2.00E-02	n/a	n/a	n/a	1.50E-02	1.00E+02

> Limit violated
> Selected Limit

60

WHCSD-WA-DF-159, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 152
SEGMENT #: 9

SEGMENT PORTION: Draining Liquid

Sample #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
			Lower	Upper									
PAC100376	DSC Exotherm using Mettler	Joules/g	-1.0e+02	2.0e+02	99.88	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
PAC100376	DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+02	2.0e+02	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
PAC100376	Wt Loss by TGA on Parker Elmer	%	None	None	99.31	n/a	50.88	50.88	50.41	1.33	n/a	n/a	n/a
PAC100376	Alpha in Liquid Samples	wt-%	-1.0e+02	2.0e+02	100.0	<3.0e-02	<2.7e-02	<2.7e-02	n/a	n/a	n/a	3.70e-02	5.00e+02

→ Limit violated
→ Selected Limit

INTERIM

Table 1. Data Summary Results
Ad-105

CORE NUMBER: 152

SEGMENT #: 10

SEGMENT NAME: Draggable Liquid

Sample	Ref	Analyte	Unit	Action Limit		Standard %	Blank	Result	Duplicate	Average	RSD %	Sub Rec %	Det Limit	Count Err
				Lower	Upper									
B961003707		PSC Soother using Moistur	moles/g	-1.6e+03	3.3e+03	94.20	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B961003707		PSC Soother Dry Calculated	moles/g Dry	-1.6e+03	3.3e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B961003707		X Water by 100 on Perten Elmer	%	None	None	99.33	n/a	50.32	49.68	49.99	0.07	n/a	n/a	n/a
B961003707		Alpha in Sample Sample	n/a/mL	-1.6e+03	3.3e+03	100.0	<3.0e-02	<3.3e-02	13.23e-2	n/a	n/a	n/a	3.70e-02	5.00e+02

=> Limit Violated

=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

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INTERIM

Table 1. Data Summary Results
As-105

CORE NUMBER: 152
SEDIMENT #: 11

SAMPLE POSITION: Drainable Liquid

Sample	#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
				Lower	Upper									
501100748		PSC Exotherm using Mettler	Acoules/g	-1.0e+03	1.0e+03	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
501100748		PSC Exotherm dry calculated	Acoules/g dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
501100748		% Water by TGA using Mettler	%	None	None	95.90	n/a	49.75	50.12	50.02	10.2	n/a	n/a	n/a
501100748.1		% Water by TGA using Mettler	%	None	None	95.90	n/a	50.51	50.42	50.50	0.30	n/a	n/a	n/a
501100748		Alphas in Epsilon Samples	uCi/mg	-1.0e+03	1.0e+03	93.75	<5.50e-02	<5.50e-02	<8.27e-2	n/a	n/a	102.8	0.30e-02	5.00e+02

501100748
=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Report
AU-105

CORE NUMBER: 152
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample #	AD	Analyte	Unit	Action & Limit		Standard %	Blank	Result	Duplicate	Average	RSD %	Std. Dev. %	Det. Limit	Count	Err%
				Lower	Upper										
0041005740	1	DSC Exotherm Dry Calculated	Boules/g Dry	-1.00E-03	-5.00E-02	n/a	n/a	35.70	33.0	108.3	44.8	n/a	n/a	n/a	n/a
0041005740		DSC Exotherm on Packer Elmer	Boules/g	-1.00E-03	-5.00E-02	n/a	n/a	47.40	46.80	53.75	44.5	n/a	n/a	n/a	n/a
0041005740		% Water by TGA using Mettler	%	None	None	95.00	n/a	50.00	50.46	50.27	0.78	n/a	n/a	n/a	n/a
0041005740		Alpha in Liquid Samples	g/g	-1.00E-03	-5.00E-02	85.75	<5.50E-02	<5.50E-02	<5.50E-02	n/a	n/a	n/a	0.20E-02	5.00E-02	

--> Limit violated

--> Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 152
BEDRIFT #: 15

SEGMENT POSITION: Drainable Liquid

Sample	R	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spd Rec %	Det Limit	Count Err %
				Lower	Upper									
551100150		DSC Exotherm using Mettler	Acules/g	-1.0e+03	1.0e+03	102.4	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
551100150		DSC Exotherm Dry Calculated	Acules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
551100150		% Water by IGA on Barkin Elmer	%	None	None	99.31	n/a	68.75	58.22	29.49	8.25	n/a	n/a	n/a
551100150		Algae in Liquid Samples	uLs/mL	-1.0e+03	1.0e+03	91.75	<5.56e-02	<5.85e-01	42.622.2	n/a	n/a	n/a	9.70e-02	5.00E+02

== Limit violated
== Selected Limit

WHC-SD-WM-DP-109, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CODE NUMBER: 152
SEGMENT #: 14

SEGMENT PORTION: M Upper Half of Segment

Sample	R	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
					Lower	Upper									
5047003704			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.530	n/a	n/a	n/a	n/a	5.00e-01	n/a
5047003816			DSC Exotherm using Mettler	Joules/g	-1.0e+01	2.00e+02	98.77	n/a	28.30	24.20	26.10	16.0	n/a	n/a	n/a
5047003816			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	2.00e+02	n/a	n/a	33.50	45.60	49.55	15.9	n/a	n/a	n/a
5047003816			% Water by TGA using Mettler	%	None	None	99.51	n/a	47.85	46.02	46.92	3.84	n/a	n/a	n/a

Lower Half of Segment: & Lower Half of Segment

Sample	R	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
					Lower	Upper									
5047003817			DSC Exotherm using Mettler	Joules/g	-1.0e+01	2.00e+02	98.51	n/a	16.16	7.500	11.85	71.7	n/a	n/a	n/a
5047003817			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	2.00e+02	n/a	n/a	28.30	33.70	31.30	71.2	n/a	n/a	n/a
5047003817			% Water by TGA using Mettler	%	None	None	99.48	n/a	44.85	43.89	44.36	2.10	n/a	n/a	n/a
5047003817			% Alpha of Digested Solid	wt/g	-1.0e+01	2.00e+02	98.58	n/a	47.85	46.02	46.92	n/a	n/a	5.70e-02	5.00e-02

Drainable Liquids: Drainable Liquid

Sample	R	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err %
					Lower	Upper									
5047003751			DSC Exotherm using Mettler	Joules/g	-1.0e+01	2.00e+02	98.2	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5047003751			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+01	2.00e+02	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5047003751			% Water by TGA on Perkin Elmer	%	None	None	99.51	n/a	51.51	50.95	51.13	0.70	n/a	n/a	n/a
5047003751			Alpha in Liquid Samples	wt/L	-1.0e+01	2.00e+02	98.78	n/a	45.55e-02	47.97e-02	46.59e-02	n/a	n/a	0.70e-02	5.00e-02

↗ Limit Violated
↖ Selected Limit

WHC-SD-WM-DF-199, REV. 0

INTERIM

Table 1. Data Summary Results
NR-103

CORE NUMBER: 152
SEGMENT #: 16

SEGMENT PORTION: U Upper Half of Segment

Sample	ANALYST	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
			Lower	Upper									
996100370	Bulk Density of Sample	n/a	None	None	n/a	n/a	1.590	n/a	n/a	n/a	n/a	5.00E-01	n/a
996100375	QAC Endotherm using Mettler	Joules/g	-1.0E+03	2.0E+03	104.0	n/a	27.20	37.20	31.00	4.3	n/a	n/a	n/a
996100380	QAC Endotherm Dry - Calculated	Joules/g Dry	-1.0E+03	2.0E+03	n/a	n/a	43.49	67.30	55.35	4.3	n/a	n/a	n/a
996100382	Alpha by TGA using Mettler	%	None	None	101.0	n/a	44.83	47.43	42.07	3.33	n/a	n/a	n/a

L Lower Half of Segment 1 & Lower Half of Segment

Sample	ANALYST	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
			Lower	Upper									
996100370	Bulk Density of Sample	n/a	None	None	n/a	n/a	1.589	n/a	n/a	n/a	n/a	5.00E-01	n/a
996100375	QAC Endotherm using Mettler	Joules/g	-1.0E+03	2.0E+03	104.0	n/a	27.50	28.00	27.60	2.90	n/a	n/a	n/a
996100379	QAC Endotherm Dry - Calculated	Joules/g Dry	-1.0E+03	2.0E+03	n/a	n/a	45.00	49.40	46.90	2.87	n/a	n/a	n/a
996100381	Alpha by TGA using Mettler	%	None	None	101.0	n/a	44.00	44.10	44.05	5.86	n/a	n/a	n/a
996100389	Alpha by Digested Solids	%	-1.0E+03	2.0E+03	97.00	43.70	43.70	42.40	42.40	n/a	n/a	5.00E-02	5.00E-02

== Limit Violated
== Selected Limit

WPH:SD-WM-OP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

COAG NUMBER: 152
SEGMENT #: 16

SEGMENT POSITION: 16 Upper Half of Segment

Sampled	KAP	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
2001003782		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
2001003783		DSC Exotherm Using Moisture	Joules/g	-1.0e+03	1.0e+03	100.0	n/a	25.40	25.20	25.30	0.46	n/a	n/a	n/a
2001003784		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	25.20	25.00	25.10	0.46	n/a	n/a	n/a
2001003785		% Water by TGA Using Moisture	%	None	None	100.0	n/a	52.44	44.43	48.44	6.69	n/a	n/a	n/a

Lower Half of Segment: 16 Lower Half of Segment

Sampled	KAP	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
2001003786		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
2001003787		DSC Exotherm Using Moisture	Joules/g	-1.0e+03	1.0e+03	100.0	n/a	25.40	25.20	25.30	0.46	n/a	n/a	n/a
2001003788		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	25.20	25.00	25.10	0.46	n/a	n/a	n/a
2001003789		% Water by TGA Using Moisture	%	None	None	100.0	n/a	52.44	44.43	48.44	6.69	n/a	n/a	n/a
2001003890	IF	Alpha of Digested Solid	wt/g	1.0e+03	1.0e+03	99.66	2.72e-02	<1.91e-02	<1.92e-02	n/a	n/a	n/a	4.80e-02	5.00e-02

3-2% >= Limit violated
 3-2% <= Believed Limit

WHC-SC-NWA-DF-199, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 152
SEGMENT Nr 20

SEGMENT PORTION: U Upper Half of Segment

Sample	P	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
B94T00376			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.88	n/a	n/a	n/a	n/a	5.00e-01	n/a
B94T00376			DSC Exotherm using Mettler	Joules/g	-1.0e+03	1.0e+03	101.6	n/a	39.70	39.70	39.70	3.07	n/a	n/a	n/a
B94T00376			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	71.00	71.00	71.00	3.06	n/a	n/a	n/a
B94T00376			% Water by TGA using Mettler	%	None	None	100.3	n/a	55.14	46.04	65.59	1.95	n/a	n/a	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample	P	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
B94T00377			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.88	n/a	n/a	n/a	n/a	5.00e-01	n/a
B94T00377			DSC Exotherm using Mettler	Joules/g	-1.0e+03	1.0e+03	101.6	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B94T00377			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
B94T00377			% Water by TGA using Mettler	%	None	None	100.3	n/a	55.14	39.33	37.73	8.45	n/a	n/a	n/a
B94T00377			Alpha of Digested Solid	uCi/g	-1.0e+03	1.0e+03	110.3	11.80e-03	7.22e-03	7.75e-03	7.49e-03	7.08	26.12	4.40e-02	5.52e-01

→ Liquid Violated
→ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 22

SEGMENT POSITION: U Lower Half of Segment

Sampled	AP Analyte	Unit	Action Limits		Standard X	Blank	Result	Duplicate	Average	STD X	Std Dev %	Det Limit	Count Error
			Lower	Upper									
B461005712	Bulk Density of Sample	g/cm	None	None	n/a	n/a	1.440	n/a	n/a	n/a	n/a	5.00e-01	n/a
B461005798	BSC Emulsion using Water	goules/m	-1.00e-01	1.00e-01	99.77	n/a	99.00	71.00	85.00	21.2	n/a	n/a	n/a
B461005798	BSC Emulsion Dry, Calculated	goules/m Dry	-1.00e-01	1.00e-01	n/a	n/a	99.18	121.0	109.5	20.9	n/a	n/a	n/a
B461005798	% Water by TGA using Mettler	%	None	None	99.51	n/a	99.00	99.00	99.67	4.97	n/a	n/a	n/a
B461005992	Alpha of Digested Solid	gC/g	-1.00e-01	1.00e-01	110.2	<1.00e-05	1.40e-02	1.14e-02	1.23e-02	59.1	n/a	5.00e-03	3.00e-01

→ Limit violated
→ Selected Limit

INTERIM

Table 1. Data Summary Results
JK-105

CORE NUMBER: 153
SEGMENT #: 1

SEGMENT POSITION: Drainable Liquid

Sample	ID	Analyze	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Corr
				Lower	Upper									
1996090423		DSC Isotherm Dry Calculated	Joules/g Dry	-1.0e-03	1.0e-03	n/a	n/a	25.29	51.30	28.35	22.2	n/a	n/a	n/a
1996090423		DSC Isotherm on Parlin Filter	Joules/g	-1.0e-03	1.0e-03	98.69	n/a	12.76	15.90	14.30	22.4	n/a	n/a	n/a
1996090423		Water by TGA on Parlin Filter	%	None	None	99.11	n/a	49.73	49.30	49.50	0.83	n/a	n/a	n/a
1996090423		Alkane in Liquid Sample	wt%/ml	-1.0e-03	1.0e-03	99.41	<2.20e-02	<2.53e-02	<2.40e-02	n/a	n/a	n/a	3.80e-02	3.00e-02

== Limit violated
== Selected Limit

71

INTERIM

Table 1. Data Summary Results
AM-105

DATE NUMBER: 153
SEGMENT #: 2

SEGMENT PORTION: Drizable Liquid

Sample #	AS	Analyze	Unit	Action Limit		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err
				Lower	Upper									
9961002308		BSC Exotherm using Mettler	Joules/g	-1.0e+00	1.0e+00	95.35	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
9961002308		BSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	1.0e+00	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
9961002308		% Water by TGA using Mettler	%	None	None	95.72	n/a	50.38	50.23	50.30	0.30	n/a	n/a	n/a
9961002308		Align to Liquid Samples	LCI/mm	-1.0e+05	1.0e+05	95.31	1.10e-02	<1.50e-02	<2.10E-3	n/a	n/a	87.74	1.80e-02	5.00e+02

☐ Light Violated
☒ Selected Limit

72

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 3

SEGMENT PORTION: Grainable Liquid

Sample	R	Analyze	Unit	Action Limits		Standard %	Blank	Result	Reanalyze	Average	bfp %	Spk Rec %	Det Limit	Coeff Err%
				Lower	Upper									
596100434		DSC Exotherm using Mettler	Joules/g	-1.0e-03	1.0e-03	100.5	n/a	16.50	10.90	18.50	16.9	n/a	n/a	n/a
596100434		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e-03	1.0e-03	n/a	n/a	32.50	10.50	37.65	15.7	n/a	n/a	n/a
596100434		% Water by TGA using Mettler	%	None	None	98.20	n/a	51.00	51.41	51.24	0.66	n/a	n/a	n/a
596100434		Alpha in Liquid Samples	UCs/mL	-1.0e-03	1.0e-03	91.41	2.20e-02	<1.5e-02	<1.87E-2	n/a	n/a	n/a	3.80e-02	5.00000

=> Limit Violated

=> Selected Limit

73

WHC-SD-WML-OP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 5

SEGMENT POSITION: Drainable Liquid

Sample	ID	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	APD %	Std. Dev. %	Out Limit	Count	Err %
				Lower	Upper										
596T004419		DSC Endotherm using Mettler	Joules/g	-1.00E+03	None	99.47	n/a	18.00	205.2	111.6	158	n/a	n/a	n/a	n/a
596T004419		DSC Endotherm Dry Calculated	Joules/g Dry	-1.00E+03	None	n/a	n/a	36.40	215.0	225.2	168	n/a	n/a	n/a	n/a
596T004419 1		DSC Endotherm Dry Calculated	Joules/g Dry	-1.00E+03	None	n/a	n/a	0.00E+00	28.38	14.65	200	n/a	n/a	n/a	n/a
596T004419 1		DSC Endotherm on Perkin Elmer	Joules/g	-1.00E+03	None	95.34	n/a	0.00E+00	31.53	7.385	200	n/a	n/a	n/a	n/a
596T004419		% Water by TGA using Mettler	%	None	None	100.0	n/a	50.43	50.54	50.47	0.26	n/a	n/a	n/a	n/a
596T004419		Alphg in Liquid Samples	GC/%	-1.00E+03	None	21.61	<2.20E-02	<1.54E-02	<1.87E-02	n/a	n/a	n/a	5.80E-02	5.00E+02	n/a

WZC:WZC
 == Limit violated
 == Selected Limit

74

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 6

SEGMENT POSITION: Drainable Liquid

Sample	RAD	Analyte	Unit	Action Limits		Standard 3	Blank	Result	Duplicate	Average	APO &	Std. Dev. %	Det. Limit	Const. Error
				Lower	Upper									
596T004420		DRG Exotherm using Millier	joules/g	-1.00E+03	5.00E+03	59.47	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
596T004420		DRG Exotherm Dry Calculated	joules/g Dry	-1.00E+03	5.00E+03	n/a	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
596T004420		% Water by TGA using Millier	%	None	None	100.0	n/a	58.46	59.00	58.73	1.78	n/a	n/a	n/a
596T004420		Alpha in Liquid Samples	wt.-%	-1.00E+03	5.00E+03	91.41	02.30E-02	-1.54E-02	-1.54E-02	n/a	n/a	n/a	3.30E-02	5.00E+02

75.7
=> Limit violated
=> Selected Limit

75

WMC-SD-WM-DR-199, REV. 0

INTERIM

Table 1. Data Summary Results
AM-100

CORE NUMBER: 153
REAGENT #: 7

Sample Portion: Drainable Liquid

Sample	R	RF	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
996T004421			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	69.00	34.50	200	n/a	n/a	n/a	n/a
996T004421			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	1.0e+03	99.49	n/a	0.00e+00	34.34	17.27	200	n/a	n/a	n/a	n/a
996T004421			% Water by TSA on Perkin Elmer	%	None	None	99.11	n/a	49.93	49.97	49.95	0.98	n/a	n/a	n/a	n/a
996T004421			Alpha in Legend Samples	UG/mL	-1.0e+03	1.0e+03	99.47	<1.42e-02	<1.42e-02	<1.42E-2	n/a	n/a	77.44	3.60e-02	5.00e+02	n/a

→ Limit violated
→ Selected Limit

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 153
SEGMENT #: 8

SEGMENT POSITION: Drainable Liquid

Sample	R	AS	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
PPST003975			DSC Exotherm using Mettler	Joules/g	-1.0e+05	1.0e+05	90.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
PPST003975			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+05	1.0e+05	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
PPST003975			% Water by TGA using Mettler	%	None	None	99.48	n/a	49.99	50.16	50.08	0.34	n/a	n/a	n/a
PPST003975			Algae in Liquid Samples	µCt/mL	-1.0e+05	1.0e+05	95.79	<2.9e-02	<2.9e-02	<1.45E-1	n/a	n/a	90.25	3.50e-01	2.15e+02

--> Limit violated
 --> Selected Limit

WHO-SD-WMA-OP-189, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 153
SEGMENT #1 9

SEGMENT PORTION: Draggable Liquid

Sample	Q AM	Analyte	Unit	Action Limits		Standard %	@Stand	Result	Duplicate	Average	STD %	Std. Dev. %	Pass Limit	Counts Error
				Lower	Upper									
5961001976	05C	Exotherm Using Mettler	Joules/g	-1.0e+05	1.0e+05	106.9	n/a	2.200	0.00e+00	1.100	205	n/a	n/a	n/a
5961001976	05C	Exotherm Dry Calculated	Joules/g Dry	-1.0e+05	1.0e+05	n/a	n/a	2.440	0.00e+00	3.220	200	n/a	n/a	n/a
5961001976	M	Water by TGA using Mettler	%	None	None	99.55	n/a	50.51	50.33	50.42	0.36	n/a	n/a	n/a
5961001976	Alpha	in Liquid Samples	LC/MS	-1.0e+05	1.0e+05	99.77	<2.0e-02	4.48e-02	<2.0e-02	n/a	n/a	n/a	3.58e-02	8.20e+01

63457.0
 * Limit violated
 * Selected Limit

78

WHC-SD-WM-OP-159, REV. 0

INTERIM

Table 1. Data Summary Results
JM-105

CORE NUMBER: 153
SEDIMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample	RAD	Analyte	Unit	Action Limit		Standard %	Blank	Result	Duplicate	Average	SD %	Spk Rec %	DRC Limit	Count Err%
				Lower	Upper									
656001309		DSC Explosive Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	26.50	38.20	32.35	36.2	n/a	n/a	n/a
656001309		DSC Explosive on Perkin Elmer	Joules/g	-1.0e+03	1.0e+03	26.39	n/a	15.95	19.54	16.95	36.2	n/a	n/a	n/a
656001309		% Nitro by TGA on Perkin Elmer	%	None	None	39.09	n/a	48.12	69.52	48.62	2.87	n/a	n/a	n/a
656001309		Alpha in Liquid Samples	ug/l/m	-1.0e+03	1.0e+03	25.31	1.10e-02	<7.10e-03	<7.10e-03	n/a	n/a	n/a	1.80e-03	5.10e-02

>> Limit violated

=> Selected Limit

79

INTERIM

Table 1. Data Summary Results
AR-105

CORE NUMBER: 153
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample	Analysis	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Std. Dev. %	Det. Limit	Count Error
			Lower	Upper									
9567003979	DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	2.5e+02	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
9567003979	DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	2.5e+02	100.0	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
9567003979	% Water by TGA on Perkin Elmer	%	None	None	99.99	n/a	50.05	50.05	50.05	0.00	n/a	n/a	n/a
9567003979	Alcals in Liquid Samples	uCi/gm	-1.0e+03	2.5e+02	99.99	<2.00e-02	<2.50e-02	<3.00e-02	n/a	n/a	n/a	3.90e-02	5.00e-02

= Limit violated
= Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153

SEGMENT #: 12

SEGMENT PORTION: Drainside Liquid

Sampled	RAP	Analyte	Unit	Action Limits		Standard S	Blank	Result	Qualifica	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T005977		DSC Exotherm using Wet/Lar	Joules/g	-1.0e+03	1e+03	106.9	n/a	0.00e+00	57.40	58.40	200	n/a	n/a	n/a
S96T005977		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1e+03	n/a	n/a	0.00e+00	105.0	58.40	200	n/a	n/a	n/a
S96T005977		% Water by TGA using Wet/Lar	%	None	None	99.53	n/a	99.68	50.25	49.97	1.34	n/a	n/a	n/a
S96T005977		Alpha in Liquid Sample	uCi/gm	-1.0e+03	1e+03	53.75	<2.0e-02	<2.0e-02	<1.2e-02	n/a	n/a	n/a	3.80e-02	3.59e-02

= Limit violated

= Selected Limit

INTERIM

Table 1. Data Summary Results
AR-105

CORE NUMBER: 153
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample #	R	ANALYSIS	Unit	Action Limits		Standard X	Blank	Result	Duplicate	Average	STD. S	Std. Dev. S	Dev. Limit	Count Error
				Lower	Upper									
5967003978		OSC Exotherm Dev. Calculated	Btu/lb/g Dev	-1.0E+03	-2.0E+03	n/a	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
5967003978		OSC Exotherm on Perkin Flow	Btu/lb/g	-1.0E+03	-2.0E+03	10.4	n/a	0.00E+00	0.00E+00	0.00E+00	0.00	n/a	n/a	n/a
5967003978		% Water by TGA on Perkin Flow	%	None	None	99.34	n/a	49.34	50.44	49.92	2.06	n/a	n/a	n/a
5967003978		Alpha in Liquid Sample	1/g/g	-1.0E+03	-2.0E+03	91.72	<2.0E+00	<2.0E+00	<2.0E+00	n/a	n/a	n/a	3.90E+02	5.00E+02

* Limit violated
 * Selected Limit

82

WHC-SD-WM-DR-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 14

SEGMENT POSITION: 1 Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
996T004334		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.560	n/a	n/a	n/a	n/a	5.00e-01	n/a
996T004335		DSC Exotherm using Netter	Joules/g	-1.0e+03	1.0e+03	93.55	n/a	21.00	29.00	35.00	22.0	n/a	n/a	n/a
996T004336		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	27.50	25.00	35.25	22.8	n/a	n/a	n/a
996T004337		% Water by TGA using Netter	%	None	None	99.46	n/a	98.87	97.88	96.58	2.13	n/a	n/a	n/a
996T004337	7	Alpha of Digested Solid	g/g	-1.0e+03	1.0e+03	107.0	<3.0e-03	<3.0e-03	4.00e-03	n/a	n/a	86.12	5.00e-03	2.02E+02

Drainable Liquid: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
996T004338		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	85.18	114.0	92.05	49.9	n/a	n/a	n/a
996T004339		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	1.0e+03	95.22	n/a	94.50	57.70	46.26	49.3	n/a	n/a	n/a
996T004339		% Water by TGA on Perkin Elmer	%	None	None	99.69	n/a	99.63	99.63	99.63	0.00	n/a	n/a	n/a
996T004339		Alpha in Liquid Samples	g/g	-1.0e+03	1.0e+03	95.31	5.10e-03	<7.00e-03	1.40e-02	n/a	n/a	n/a	1.80e-02	5.00E+02

→ Limit Violated
→ Selected Limit

03

INTERIM

Table 1. Data Summary Results
AM-105CORE NUMBER: 153
SEGMENT #: 15

SIGNIFY PORTION: U Upper Half of Segment

Sample#	P	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Std Dev %	Det Limit	Count Err%
					Lower	Upper									
B96T004301			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.520	n/a	n/a	n/a	n/a	5.00e-01	n/a
B96T004310			DSC Exotherm using Mettler	Joules/g	-1.0e+05	2.0e+05	105.1	n/a	60.40	23.00	38.15	51.3	n/a	n/a	n/a
B96T004310			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+05	2.0e+05	n/a	n/a	77.40	25.80	65.60	51.3	n/a	n/a	n/a
B96T004310			% Water by TGA using Mettler	%	None	None	98.31	n/a	67.85	48.04	27.80	1.03	n/a	n/a	n/a

L Lower Half of Segment; L Lower Half of Segment

Sample#	P	AN	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Std Dev %	Det Limit	Count Err%
					Lower	Upper									
B96T004301			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.520	n/a	n/a	n/a	n/a	5.00e-01	n/a
B96T004311			DSC Exotherm using Mettler	Joules/g	-1.0e+05	2.0e+05	105.1	n/a	34.70	47.10	45.60	68.8	n/a	n/a	n/a
B96T004311			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+05	2.0e+05	n/a	n/a	71.50	118.0	65.75	69.1	n/a	n/a	n/a
B96T004311			% Water by TGA using Mettler	%	None	None	98.31	n/a	65.82	42.12	51.67	5.23	n/a	n/a	n/a
B96T004317	F		Alpha of Degassed Solid	uCi/g	-1.0e+05	2.0e+05	107.0	<3.24e-02	<3.77e-03	5.34e-03	n/a	n/a	85.44	5.00e-05	1.67E-02

== Limit Violated

== Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 17

SEGMENT PORTION: U Upper Half of Segment

Sample#	RAD	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
B96T001426		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.220	n/a	n/a	n/a	n/a	5.00e-01	n/a
B96T001426		PSC Exotherm using Mettler	Joules/g	-1.0e+03	None	93.84	n/a	48.70	84.10	79.50	63.5	n/a	n/a	n/a
B96T001426		PSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	None	n/a	n/a	83.20	161.0	122.1	68.7	n/a	n/a	n/a
B96T001426		% Water by TGA using Mettler	%	None	None	98.28	n/a	44.90	28.20	41.05	15.7	n/a	n/a	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	RAD	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
B96T001427		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.538	n/a	n/a	n/a	n/a	5.00e-01	n/a
B96T001427		PSC Exotherm using Mettler	Joules/g	-1.0e+03	None	163.7	n/a	15.86	36.60	17.20	21.5	n/a	n/a	n/a
B96T001427		PSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	None	n/a	n/a	28.00	35.70	31.35	21.4	n/a	n/a	n/a
B96T001427		% Water by TGA using Mettler	%	None	None	98.30	n/a	44.54	23.57	33.55	4.58	n/a	n/a	n/a
B96T001427		% Alpha of Digested Solids	wt/g	-1.0e+03	None	163.1	47.72e-05	2.15e-05	6.92e-03	7.04e-03	3.52	36.22	5.00e-03	5.15e+01

--- Least Violated
--- Detected Limit

WHIC-SD-WM-CP-189, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 153
SEGMENT #: 19

SEGMENT PORTION: 1 Lower Half of Segment

Sample #	Analyze	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err %
			Lower	Upper										
B04700420	Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.560	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
B04700427	DSC Isotherm using Mettler	Joules/g	<1.0e+05	<1.0e+05	105.7	n/a	25.90	41.40	33.25	63.21	n/a	n/a	n/a	n/a
B04700427	DSC Isotherm Dry Calculated	Joules/g Dry	<1.0e+05	<1.0e+05	n/a	n/a	23.98	81.30	61.60	64.0	n/a	n/a	n/a	n/a
B04700427	% Water by TGA using Mettler	%	None	None	98.10	n/a	25.70	41.50	45.38	1.46	n/a	n/a	n/a	n/a
B04700428	Alpha of Digested Solid	uCi/g	<1.0e+03	<1.0e+03	105.1	<1.72e+03	1.78e+02	1.13e+02	1.45e+02	63.0	n/a	3.00e-03	4.46e+01	n/a

== Limit violated
== Selected Limit

INTERIM

Table 1. Data Summary Results
AM-105

DOSE NUMBER: 155
SEGMENT #: 21

SEGMENT PORTION: 4 Lower Half of Segment

Sampled	#	Analyte	Units	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
5961005071		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
5961005081		BSE Exotherm Using Mettler	Joules/g	-1.0e+03	1.0e+03	102.6	n/a	21.00	18.20	19.60	16.3	n/a	n/a	n/a
5961005081		BSE Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	38.40	33.30	35.85	14.7	n/a	n/a	n/a
5961005091		% Water by TGA using Mettler	%	None	None	99.53	n/a	11.88	25.20	45.30	1.31	n/a	n/a	n/a
5961005091		Alpha of Digested Solid	uCi/g	-1.0e+03	1.0e+03	102.3	<3.15e-03	8.48e-03	7.42e-03	7.95e-03	13.3	75.77	4.00e-01	5.00E+01

Drainable Liquid Drainable Liquid

Sampled	#	Analyte	Units	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
5961005090		BSE Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5961005090		BSE Exotherm on Berkin Floor	Joules/g	-1.0e+03	1.0e+03	104.4	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
5961005090		% Water by TGA on Berkin Floor	%	None	None	99.34	n/a	33.00	51.41	52.05	0.57	n/a	n/a	n/a
5961005090		Alpha in Liquid Sample	uCi/mL	-1.0e+03	1.0e+03	95.75	<2.00e-02	<1.00e-02	<2.20e-2	n/a	n/a	n/a	5.90e-02	5.00E+02

xx Limit Violated
xx Selected Limit

37

WM-CO-WM-OP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-103

Page: 22

CORE NUMBER: 153
SEGMENT #: 22

SEGMENT POSITION: U Upper Half of Segment

Sample#	RAW	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
2047003975		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
2047003981		DSC Exotherm using Mettler	Joules/g	-1.0e-05	1.0e-05	102.6	n/a	99.10	48.60	48.85	21.7	n/a	n/a	n/a
2047003985		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e-05	1.0e-05	n/a	n/a	49.40	86.50	77.88	21.7	n/a	n/a	n/a
2047003983		% Water by TGA using Mettler	%	None	None	69.93	n/a	66.97	63.15	65.66	2.34	n/a	n/a	n/a

Lower Half of Segment: L Lower Half of Segment

Sample#	RAW	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RSD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
2047003972		Bulk Density of Sample	g/ml	None	None	n/a	n/a	6.608	n/a	n/a	n/a	n/a	5.00e-01	n/a
2047003982		DSC Exotherm using Mettler	Joules/g	-1.0e-05	1.0e-05	102.6	n/a	97.50	90.80	95.15	49.0	n/a	n/a	n/a
2047003982		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e-05	1.0e-05	n/a	n/a	1.06e-02	97.0	108.0	48.6	n/a	n/a	n/a
2047003982		% Water by TGA using Mettler	%	None	None	69.93	n/a	66.87	63.21	65.54	1.45	n/a	n/a	n/a
2047003985		Alpha of Digested Solid	uCi/g	-1.0e-05	1.0e-05	90.58	92.65e-01	1.89e-01	1.16e-01	1.26e-01	13.7	88.52	4.00e-01	1.00e-01

50-200
→ Limit Violated
→ Selected Limit

88
88

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AM-105

CORE NUMBER: 153
SEGMENT #: 10

SEGMENT PORTION: Field Blank

Sample	R Id	Analyte	Unit	Action & Error		Standard %	Blank	Result	Duplicate	Average	RPD %	Sol. Rec. %	Det. Limit	Coast Err%
				Lower	Upper									
19AET003976		DRG Exotherm using Mettler	Joules/g	-1.6e+01	1.6e+01	99.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
19AET003976		DRG Exotherm Dry Calculated	Joules/g Dry	-1.6e+01	1.6e+01	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
19AET003976		K Water by TGA using Mettler	%	None	None	99.48	n/a	99.77	99.76	99.77	0.01	n/a	n/a	n/a
19AET003976		Alpha in Liquid Samples	wt%/wt	None	None	99.22	<1.32e-01	<1.74e-01	<1.14e-1	n/a	n/a	100.3	1.86e-05	5.00e-02

19AET003976
19AET003976

== Limit Violated
== Selected Limit

WHC-SD-YM-CP-189, REV. 0

MHC-SO-MN-DP-199, REV. 0

CHAIN OF CUSTODY

WMC-SD-WM-DP-199, REV. 0

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-08-TF (2) Sample Number 96-254 (3) Supervisor James J. [Signature]
 (4) Tank AN 105 (5) Riser 12A (6) Segments 2 (7) Core 152 (8) Core Seal Number 56

(9) FIELD Over Top Drive Rate <u>21</u> Side Drive Rate <u>33</u> Bottom Drive Rate <u>20</u> Sensible Contamination <u>LD</u> (Alpha) <u>11K</u> (Signature) RCT: <u>[Signature]</u> (MPT)		(10) LABORATORY <u>1 mi/hr</u> <u>50 mi/hr</u> <u>17 mi/hr</u> <u>200 pps</u> (Alpha) <u>closed for 10 days</u> (Signature) RCT: <u>[Signature]</u> (MPT)		(11) Shipment Description A. Work Package Number <u>ES-96-00270</u> B. Core Seal Number <u>11298</u> C. Sampler Seal Number <u>95-1155</u> D. Date and Time Sampler Unpacked <u>6-10-96 2155</u> E. Expected Liquid Content <u>10%</u> F. Expected Solid Content <u>90%</u> G. Drive Rate Through Drill String <u>2.3 R / HR</u> H. Expected Sample Length <u>19"</u>	
--	--	--	--	---	--

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

(13) Field Comments	(14) Laboratory Comments
---------------------	--------------------------

(15) Point of Origin <u>AN 105</u>	(16) Destination <u>2225</u>	(17) Carrier Name (Sign and PRINT) <u>Bluebird Rental Co. D.L. [Signature]</u>	(18) Date/Time <u>6-11-96 1015</u>	(19) Sealer Comments
(20) Released By (Sign and PRINT) <u>[Signature]</u>	(21) Received By (Sign and PRINT) <u>[Signature]</u>	(22) Date/Time <u>6-11-96 1120</u>	(23) Receiver Comments	
(24) Released By (Sign and PRINT) <u>[Signature]</u>	(25) Received By (Sign and PRINT) <u>[Signature]</u>	(26) Date/Time <u>6-15-96 1115</u>	(27) Receiver Comments	
(28) Released By (Sign and PRINT)	(29) Received By (Sign and PRINT)	(30) Date/Time	(31) Receiver Comments	

(32) Seal Intact Upon Release? ☒ Yes ☐ No	(33) Seal Intact Upon Receipt? ☒ Yes ☐ No	(34) Seal Data Consistent with this Record? ☒ Yes ☐ No	Cash Seal No. ☒ Yes ☐ No	Seal No. ☒ Yes ☐ No
--	--	---	---	--

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipments Number 200W-08 TF (2) Sample Number 96-255 (3) Supervisor M. C. Jones
 (4) Tank AW-105 (5) Rider 12A (6) Segment 3 (7) Core 152 (8) Core Seal Number C-1040

(9) FIELD		(10) LABORATORY		(11) SHIPMENT DESCRIPTION	
Open Top Core Rate	<u>21</u>		<u>4 m/hr</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Core Rate	<u>23.50</u>		<u>4 m/hr</u>	B. Core Seal Number	<u>10139</u>
Bottom Core Rate	<u>20</u>		<u>15 m/hr</u>	C. Sampler Seal Number	<u>95-0985</u>
Seepage Concentration	<u>LD</u> (Alpha)		<u>420 dpm/g SS</u> (Alpha)	D. Date and Time Sampler Unseal	<u>6-11-96/0227</u>
	<u>11K</u> (Beta Gamma)		<u>400 dpm/g SS</u> (Beta Gamma)	E. Expected Liquid Content	<u>30%</u>
RCY* (HPT)	<u>11/10/96</u> (Signature)	RCY* (HPT)	<u>[Signature]</u> (Signature)	F. Expected Solid Content	<u>70%</u>
				G. Core Rate Through Drill String	<u>2.5 R/HR</u>
				H. Expected Sample Length	<u>19"</u>

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

(13) Field Comments

Li Br WAS ADDED TO DRILL STRIPS FOR H₂O ANAL.

(14) Laboratory Comments

(15) Point of Origin	(16) Destination	(17) Transfer Name (Sign and PRINT)	(18) Date/Time	(19) Transfer Comments
<u>AW-105</u>	<u>22A-S</u>	<u>[Signature] R. J. [Signature] M. C. Jones</u>	<u>6/11/96</u>	
(20) Received By (Sign and PRINT)	(21) Received By (Sign and PRINT)	(22) Date/Time	(23) Receiver Comments	
<u>[Signature] R. J. [Signature]</u>	<u>[Signature] M. C. Jones</u>	<u>6-11-96</u>		
(24) Received By (Sign and PRINT)	(25) Received By (Sign and PRINT)	(26) Date/Time	(27) Receiver Comments	
<u>[Signature] M. C. Jones</u>	<u>[Signature] R. J. [Signature]</u>	<u>6-11-96</u>		
(28) Received By (Sign and PRINT)	(29) Received By (Sign and PRINT)	(30) Date/Time	(31) Receiver Comments	

(32) Seal Intact Upon Release?	(33) Seal Intact Upon Receipt?	(34) Seal Date Consistent with the Record?
Yes ☒ No ☐	Yes ☐ No ☐	Yes ☒ No ☐

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Segment Number 2004N-08-TP (2) Sample Number 96-256 (3) Supervisor M.C. Jones
(4) Tank 105 A21 (5) Floor 12A (6) Segment 4 (7) Core 152 (8) Core Serial Number 54-58

Reduction Survey Data

181 FIELD

(33) LABORATORY

[10] **Calculus. Discrete**

Over Tap Case Rate

Slide Deck Rate

Current Design Work

§ measurable Contamination

ACT •
ANSWERS

15-00000

POST
POST

10. **Wavelength** and **frequency**

A Work Package Number

B. Cook Feed Monitor

C Sample Serial Number

0 Case and Time Sampler Unweighted

§ Expanded Liquid Consent

F Expected Solid Content

G. Data Base Through Drill String

H Expected Sample Length

(1) INFORMATION: Describe manner of laboratory tests to be performed.

1.2 Field Components

B-4) Laboratory Comments:

(13) Page of One

14. Construction

ANS) Operator Manual (Cage's and PTHAT)

110 Data/Term

(17) **Sanjay Chavhan**1109 Agrostoides Gr. Egan and PUNT

2009/10/04 Received By: HADJICHRISTOPHOS

(2) Dumb/Terms

12.25 Receiver Commence

[23] P. H. Rabinowitz, *Partial Differential Equations with Carathéodory Data*, Lecture Notes in Math., vol. 1510, Springer-Verlag, Berlin, 1992.

54. Approved by (Sign and date)

Get On The

12th Author Comments

[20] International Air Transport Association

Page 14/14

(24) Encoder	(30) Receiver C
--------------	-----------------

Shagunika, M.

OK ☐ ☐

Card. Seed No.

□ □

Sample 10

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipments Number 2014-08-TP (2) Sample Number 96-257 (3) Supervisor M.C. Jones
 No Tank 105 AN (4) Floor 13A (5) Segment 5 (6) Date 152 (7) Core Seal Number C 2010

(1) FIELD		(2) LABORATORY		(3) Shipments Description	
Over Top Flow Rate	<u>4.5 mR/hr</u>	Sampler	<u>4.3 mR/hr</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Bore Rate	<u>45 mR/hr</u>		<u>43 mR/hr</u>	B. Core Seal Number	<u>10442</u>
Bottom Bore Rate	<u>20 mR/hr</u>		<u>15 mR/hr</u>	C. Sampler Seal Number	<u>95-0775</u>
Seawater Circulation Rate	<u>50 dpm/100cm²</u>		<u>20 dpm/100cm² seawater</u>	D. Date and Time Sampler Unseal	<u>6-11-96/0930</u>
	<u>1 K/gm/100cm²</u>		<u>Chondrichthys Swell</u>	E. Expected Liquid Content	<u>30%</u>
RCT (RPT)	<u>[Signature]</u>	RCT (RPT)	<u>[Signature]</u>	F. Expected Solid Content	<u>70%</u>
	(Signature)		(Signature)	G. Core Rate Through Drill String	<u>1.5 R/HR</u>
				H. Expected Sample Length	<u>19"</u>

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

(1) Field Comments		(2) Laboratory Comments	
LIBI Angel To Drill String for Hand Drive			

(13) Point of Core <u>AN-005</u>	(14) Distribution <u>222-S</u>	(15) Sample Name (Sign and PRINT) <u>ES-96-00270, M.C. Jones</u>	(16) Date/Time <u>6-12-96/0900</u>	(17) Sender Comments
(18) Received By (Sign and PRINT) <u>[Signature]</u>	(19) Received By (Sign and PRINT) <u>[Signature]</u>	(20) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>6-12-96/0900</u>	(22) Receiver Comments
(23) Received By (Sign and PRINT) <u>[Signature]</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Received By (Sign and PRINT) <u>[Signature]</u>	(26) Date/Time <u>6-12-96/0900</u>	(27) Receiver Comments
(28) Received By (Sign and PRINT)	(29) Received By (Sign and PRINT)	(30) Received By (Sign and PRINT)	(31) Date/Time	(32) Receiver Comments

(33) Seal Intact Upon Release?	(34) Seal Intact Upon Receipt?	(35) Seal Data Consistent with the Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No Core Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

VHSC SD-MIL-CP-199, REV. 0

COPY

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-259 (3) Supervisor M. C. Jones
 (4) Tank AN-105 (5) Flow 13A (6) Segment 7 (7) Core 152 (8) Core Seal Number SV-10A

Recovery Survey Data:		(10) FIELD	(12) LABORATORY	(10) Shipment Description
Over Top Core Rate	<u>4.5 m/hr</u>	<u>1.5 m/hr</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Core Rate	<u>4.2 m/hr</u>	<u>4.5 m/hr</u>	B. Core Seal Number	<u>10473</u>
Bottom Core Rate	<u>1.5 m/hr</u>	<u>1.6 m/hr</u>	C. Sampler Serial Number	<u>94-090S</u>
Streamable Concentration	<u>220 gpm/1000 L</u>	<u>220 gpm/1000 L</u>	D. Date and Time Sampled	<u>6-11-96/1338</u>
	<u>15 gpm/1000 L</u>	<u>15 gpm/1000 L</u>	E. Expected Liquid Content	<u>30%</u>
	<u>15 gpm/1000 L</u>	<u>15 gpm/1000 L</u>	F. Expected Solid Content	<u>70%</u>
	<u>15 gpm/1000 L</u>	<u>15 gpm/1000 L</u>	G. Core Rate Through Drill String	<u>2 R/HR</u>
	<u>15 gpm/1000 L</u>	<u>15 gpm/1000 L</u>	H. Expected Sample Length	<u>19'</u>
RCY* (gpm)	<u>15</u>	RCY* (gpm)	<u>15</u>	
(Signature)	<u>[Signature]</u>	(Signature)	<u>[Signature]</u>	

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

86

(12) Field Comments		(13) Laboratory Comments	
<u>Libr added to core string for head flow</u>			
(13) Point of Origin	(14) Containment	(15) Transfer (Sign and PRINT)	(16) Date/Time
<u>AN-105</u>	<u>222-S</u>	<u>[Signature] E. J. Proulx</u>	<u>6-12-96/0900</u>
(17) Requisitioned By (Sign and PRINT)	(18) Requisitioned By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
<u>[Signature] E. J. Proulx</u>	<u>[Signature] James R. Proulx</u>	<u>6-12-96/0900</u>	
(21) Requisitioned By (Sign and PRINT)	(22) Requisitioned By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
<u>[Signature] James R. Proulx</u>	<u>[Signature] E. J. Proulx</u>	<u>6-12-96/0900</u>	
(25) Requisitioned By (Sign and PRINT)	(26) Requisitioned By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments
<u>[Signature] James R. Proulx</u>	<u>[Signature] E. J. Proulx</u>	<u>6-12-96/0900</u>	

(19) Seal Intact Upon Receipt	(20) Seal Intact Upon Receipt	(21) Seal Data Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipments Number 200W-DKTP (2) Sample Number 96-260 (3) Supervisor M. C. Jones (4) Tank AN-105 (5) Floor 12A (6) Segment 8 (7) Core 152 (8) Cask Seal Number 256 SN 241

Reduction Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>1 mR/hr</u>		<u>2.5 mR/hr</u>	A. Work Package Number <u>ES-96-0027B</u>
Side Dose Rate	<u>42 mR/hr</u>		<u>57 mR/hr</u>	B. Cask Seal Number <u>10443</u>
Gravel Dose Rate	<u>20 mR/hr</u>		<u>15 mR/hr</u>	C. Sampler Seal Number <u>95-1015</u>
Removable Contamination	<u>170 dpm/100cm²</u>		<u>470 dpm/100cm²</u>	D. Date and Time Sampler Unopened <u>6-12-96 1021Z</u>
	<u>1 K dpm/100cm²</u>		<u>4 mR/hr</u>	E. Expected Liquid Content <u>30%</u>
	<u>R. Quinn</u>		<u>10 dpm/hr</u>	F. Expected Solid Content <u>70%</u>
RCT (SPT)	(Signature)	RCT (SPT)	(Signature)	G. Dose Rate Through Cask Siding <u>2.5 R/hr</u>
				H. Expected Sample Length <u>19"</u>

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

(12) Field Comments		(13) Laboratory Comments	
LIBR ADDED TO DRILL STRING FOR HEAD DIED AFTER SAMPLE WAS PUT IN CASK A PIECE OF PLASTIC WAS FOUND STUCK IN THE LATCHING MECHANISM AND THE SAMPLER IT WAS NOT THERE			
(13) Point of Origin	(14) Destination	(15) Sample Name (Sign and PRINT)	(16) Date/Time
<u>AN-105</u>	<u>22A-5</u>	<u>James E. Blum</u> Ar M Jones	<u>6-12-96/1045</u>
(17) Received by (Sign and PRINT)	(18) Received by (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
<u>James E. Blum</u>	<u>James E. Blum</u>	<u>6-12-96/1045</u>	
(21) Received by (Sign and PRINT)	(22) Received by (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
<u>James E. Blum</u>	<u>James E. Blum</u>	<u>6-12-96/1130</u>	
(25) Received by (Sign and PRINT)	(26) Received by (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments
<u>James E. Blum</u>	<u>James E. Blum</u>	<u>6-12-96/1130</u>	

(29) Seal Intact Upon Release?	(30) Seal Intact Upon Receipt?	(31) Seal Date Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Shipment No.	Cask Seal No.	Sample No.
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

WHIC-SD-WH-OP-199, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 20001-05-TF (2) Sample Number 96-212 (3) Supervisor R. Frank Frost
 (4) Task Ad-105 (5) River 12H (6) Segment 10 (7) Core 152 (8) Core Serial Number SN-68

Reduction Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipment Description	
Over Top Dose Rate	<u>40.5 NR/HR</u>		<u>< 0.5 NR/HA</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Dose Rate	<u>35 NR/HR</u>		<u>50 NR/HA</u>	B. Core Seal Number	<u>10880</u>
Bottom Dose Rate	<u>10 NR/HR</u>		<u>10 NR/HA</u>	C. Sampler Serial Number	<u>95-1096</u>
Measurable Contamination	<u>420 dpm/100cm²</u> (Alpha)		<u>420 dpm/100cm²</u> (Alpha)	D. Date and Time Sampler Unsealed	<u>6-12-96 / 1130</u>
	<u>11000 dpm/100cm²</u> (Beta-Gamma)		<u>< 1K dpm/100cm²</u> (Beta-Gamma)	E. Expected Liquid Content	<u>30%</u>
ACT- (OPT)	<u>10000 dpm/100cm²</u> (Signature)	ACT- (OPT)	<u>10000 dpm/100cm²</u> (Signature)	F. Expected Solid Content	<u>70%</u>
				G. Core Rate Through Drill String	<u>1.6 R</u>
				H. Expected Sample Length	<u>19"</u>

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

101

COPY

MHCSD-WMA-OP-199, REV. 0

(13) Field Comments <u>1500 ml lithium bromide added</u> <u>- 8 sampler</u> <u>not x-rayed</u> <u>sample clean</u>		(14) Laboratory Comments	
(15) Point of Origin <u>TRA</u>	(16) Destination <u>222-S</u>	(17) Sender Name (Sign and PRINT) <u>R. Frank Frost</u>	(18) Date/Time <u>6-13-96</u>
(19) Requisitioned By (Sign and PRINT) <u>R. Frank Frost</u>	(20) Received By (Sign and PRINT) <u>Michael Lindberg</u>	(21) Date/Time <u>6-12-96</u>	(22) Receiver Comments
(23) Requisitioned By (Sign and PRINT) <u>R. Frank Frost</u>	(24) Received By (Sign and PRINT) <u>Michael Lindberg</u>	(25) Date/Time <u>6-12-96</u>	(26) Receiver Comments
(27) Requisitioned By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(31) Seal Intact Upon Release? ☒ Yes ☐ No	(32) Seal Intact Upon Receipt? ☒ Yes ☐ No	(33) Seal Data Consistent with this Record? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Core Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W06-TE (2) Sample Number 96-263 (3) Supervisor James J. Paine
 (4) Tank AN105 (5) Filter 12A (6) Segment 11 (7) Core 152 (8) Cash Seal Number 1013C

(9) FIELD		(12) LABORATORY	(10) Shipment Description
Over Top Core Rate	<u>40.5 ml/hr</u>	<u>40.5 ml/hr</u>	A. Work Package Number <u>ES-96-00270</u>
Side Core Rate	<u>37 ml/hr</u>	<u>80 ml/hr</u>	B. Cash Seal Number <u>11285</u>
Bottom Core Rate	<u>10 ml/hr</u>	<u>10 ml/hr</u>	C. Sample Bag Number <u>95-1205</u>
Seepage Contamination	<u>420 ppm/100 cc²</u> (Alpha)	<u>420 ppm/100 cc²</u> (Alpha)	D. Date and Time Sampler Unsealed <u>6-12-96 1805</u>
	<u>4400 ppm/100 cc²</u> (Beta-Gamma)	<u>51K ppm/100 cc²</u> (Beta-Gamma)	E. Expected Liquid Content <u>10%</u>
RCT* (SPT)	<u>100 ft</u> (Signature)	RCT* (SPT)	F. Expected Solid Content <u>90%</u>
			G. Core Rate Through Drill String <u>2.3 R/hr</u>
			H. Expected Sample Length <u>17"</u>

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

(12) Field Comments	(13) Laboratory Comments

(14) Point of Origin	(14) Destination	(15) Sender Status (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>AN105</u>	<u>2025</u>	<u>James J. Paine for D. Paine</u>	<u>6-13-96/1700</u>	
(18) Received by (Sign and PRINT)	(19) Received by (Sign and PRINT)	(20) Date/Time	(21) Receiver Comments	
<u>James J. Paine</u>	<u>James J. Paine</u>	<u>6-13-96</u>		
(22) Received by (Sign and PRINT)	(23) Received by (Sign and PRINT)	(24) Date/Time	(25) Receiver Comments	
<u>James J. Paine</u>	<u>Michael Lindberg</u>	<u>6-13-96</u>		
(26) Received by (Sign and PRINT)	(27) Received by (Sign and PRINT)	(28) Date/Time	(29) Receiver Comments	

(30) Seal Intact Upon Release?	(31) Seal Intact Upon Receipt?	(32) Seal Date Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

COPY

102

003

509 373 1432

09:04

06/14/96

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-08-TF (2) Sample Number 96-264 (3) Supervisor Daniel J. P...
 (4) Tank AN 105 (5) Bore 12A (6) Segment 12 (7) Core 152 (8) Core Serial Number C-2008

Radiation Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipments Description
Over Top Dose Rate	<u>50.5 mrem</u>		<u>50.5 mrem</u>	A. Work Package Number <u>ES-96-00270</u>
Side Dose Rate	<u>48 mrem</u>		<u>47 mrem</u>	B. Core Seal Number <u>11286</u>
Bottom Dose Rate	<u>15 mrem</u>		<u>11 mrem</u>	C. Sampler Serial Number <u>95-0975</u>
Countable Concentration	<u>220 dpm</u> (Alpha)		<u>220 dpm</u> (Alpha)	D. Date and Time Sampler Unseated <u>6-12-96 2128</u>
	<u><1000 dpm</u> (Beta-Gamma)		<u><1000 dpm</u> (Beta-Gamma)	E. Expected Liquid Content <u>10%</u>
				F. Expected Solid Content <u>90%</u>
RCT* GPTI	<u>[Signature]</u> (Signature)	RCT* GPTI	<u>[Signature]</u> (Signature)	G. Dose Rate Through Drift String <u>2.3R/HR</u>
				H. Expected Sample Length <u>19"</u>

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

103

(12) Field Comments		(13) Laboratory Comments	

(14) Point of Origin <u>AN 105</u>	(15) Container <u>2225</u>	(16) Order Name (Sign and PRINT) <u>James S. Lippert</u>	(17) Date/Time <u>6-27-96</u>	(18) Sender Comments
(19) Received By (Sign and PRINT) <u>James S. Lippert</u>	(20) Received By (Sign and PRINT) <u>James S. Lippert</u>	(21) Date/Time <u>6-27-96</u>	(22) Receiver Comments	
(23) Received By (Sign and PRINT) <u>James S. Lippert</u>	(24) Received By (Sign and PRINT) <u>James S. Lippert</u>	(25) Date/Time <u>6-27-96</u>	(26) Receiver Comments	
(27) Received By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(31) Seal Intact Upon Receipt?	(32) Seal Intact Upon Receipt?	(33) Seal Data Correlation with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No Core Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number SDOW-08-TF (2) Sample Number 96-265 (3) Supervisor M. C. Jones
 (4) Task AN-105 (5) Row 13A (6) Segment 13 (7) Core 152 (8) Core Seal Number C-1036

Radiation Survey Data:		(33) LABORATORY	(10) Shipment Description
Over Top Deck Rate	<u>40.5 mrem</u>	<u>40.5 mrem</u>	A. Work Package Number <u>ES-96-00270</u>
Side Core Rate	<u>47 mrem</u>	<u>43 mrem</u>	B. Cash Seal Number <u>10444</u>
Bottom Deck Rate	<u>16 mrem</u>	<u>15 mrem</u>	C. Sampler Seal Number <u>95-1075</u>
Screenable Contamination	<u>420 dpm</u> (Alpha)	<u>420 dpm</u> (Alpha)	D. Date and Time Sampler Unsealed <u>6-19-96 1015H</u>
	<u>41000 dpm</u> (Beta/Gamma)	<u>41000 dpm</u> (Beta/Gamma)	E. Expected Liquid Content <u>30%</u>
RCT* (dpm)	<u>41000 dpm</u> (Signature)	RCT* (dpm)	F. Expected Solid Content <u>70%</u>
			G. Core Rate Through Drill Sides <u>20 dpm/hr</u>
			H. Expected Sample Length <u>19"</u>

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

104

(12) Field Comments <u>LIBR ADDED TO DRILL STRING FOR HOLE PICKUP</u>	(14) Laboratory Comments
--	--------------------------

(13) Point of Origin <u>AN-105</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Nicholas Jones Sicksels</u>	(16) Date/Time <u>6-29-96</u>	(17) Sender Comments
(18) Receiver Name (Sign and PRINT) <u>James Nicholas Jones Sicksels</u>	(19) Received By (Sign and PRINT) <u>Nicholas Salinas Eusebio Salinas</u>	(20) Date/Time <u>6-28-96</u>	(21) Receiver Comments	
(22) Receiver Name (Sign and PRINT) <u>Nicholas Salinas Eusebio Salinas</u>	(23) Received By (Sign and PRINT) <u>Schubert EEDABOS</u>	(24) Date/Time <u>6-28-96</u>	(25) Receiver Comments	
(26) Receiver Name (Sign and PRINT)	(27) Received By (Sign and PRINT)	(28) Date/Time	(29) Receiver Comments	

(30) Seal Intact Upon Release? ☒ Yes ☐ No	(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Data Consistent with the Record? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Cash Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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COPY

• INFORMATION: Include summary of laboratory tests to be performed.

941 Laboratory Chemistry

(18) Seal Intact Upon Receipt?	(19) Seal Intact Upon Receipt?	(20) Seal Data Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	Shipper No. ☒ Yes ☐ No
		Dash Seal No. ☒ Yes ☐ No
		Sample No. ☒ Yes ☐ No

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TP (3) Sample Number 96-267 (5) Supervisor R. L. Frost
 (4) Tank AN-105 (6) Floor 12A (8) Segment 15 (7) Core 152 (9) Core Seal Number C 1041

Radiation Survey Data:		(3) FIELD	(3) LABORATORY	(10) Shipment Description	
Over Top Dose Rate	<u>40.5 mR/hr</u>		<u>50.5</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Dose Rate	<u>39 mR/hr</u>		<u>45 mR/hr</u>	B. Core Seal Number	<u>10302</u>
Bottom Dose Rate	<u>10 mR/hr</u>		<u>10 mR/hr</u>	C. Sampler Seal Number	<u>RGS-008</u>
Removable Contamination	<u>< 20 dpm/100cm²</u> (Alpha)		<u>< 10</u>	D. Date and Time Sampler Uncollected	<u>6-13-96/10:42 AM</u>
	<u>< 1000 dpm/100cm²</u> (Beta/Gamma)		<u>< 1K</u>	E. Expected Liquid Content	<u>30%</u>
ACT* <u>[Signature]</u> (SPT)		ACT* <u>[Signature]</u> (SPT)		F. Expected Solid Content	<u>70%</u>
				G. Dose Rate Through Drill String	<u>1.5 R</u>
				H. Exposed Sample Length	<u>19"</u>

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

COPY

(12) Field Comments <u>RGS Sample 1500 ml Lithium Bromide sample is clean Recovery 100% / X-ray</u>		(13) Laboratory Comments	
(13) Point of Origin <u>22A</u>	(14) Destination <u>222's Labs</u>	(15) Sampler Name (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(16) Date/Time <u>6/13/96/1700</u>
(17) Issued By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(18) Received By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(19) Date/Time <u>6-13-96</u>	(20) Receiver Comments
(21) Issued By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(22) Received By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(23) Date/Time <u>6-13-96</u>	(24) Receiver Comments
(25) Issued By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(26) Received By (Sign and PRINT) <u>[Signature] R. L. Frost</u>	(27) Date/Time <u>6-13-96</u>	(28) Receiver Comments

(1) Seal Intact Upon Release?	(2) Seal Intact Upon Receipt?	(3) Seal Data Correlated with Site Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Receipt of Sample Pink - Core Sampling, SB-85 Goldwood - Tank Farm Operations, 64-43

SC-5008-303 (01/94)

WHC-SD-WM-TP-199, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

Tran# Number: <u>200W-08-7F</u>	(2) Sample Number: <u>96-268</u>	(3) Supervisor: <u>Dan R. Riem</u>
AN <u>105</u>	(4) Rise: <u>124</u>	(5) Segment: <u>16</u>
	(6) Core: <u>152</u>	(8) Core Serial Number: <u>74</u>

(1) FIELD Top Core Rate: <u>< 0.5 m/min/hr</u> Core Rate: <u>30 m/min/hr</u> Core Rate: <u>18 m/min/hr</u> Variable Contamination: <u>< 20 dpm</u> (Alpha) <u>< 1K dpm</u> (Beta/Gamma) ACT: <u>[Signature]</u> (NPT)	(2) LABORATORY Top Core Rate: <u>< 0.5 m/min/hr</u> Core Rate: <u>40 m/min/hr</u> Core Rate: <u>20 m/min/hr</u> Variable Contamination: <u>< 20 dpm</u> (Alpha) <u>< 1K dpm</u> (Beta/Gamma) RCT: <u>[Signature]</u> (NPT)	(10) Shipment Description A. Work Package Number: <u>ES-96-00270</u> B. Core Seal Number: <u>11297</u> C. Sampler Serial Number: <u>94-4652</u> D. Date and Time Sample Unsealed: <u>6-13-96 2101</u> E. Expected Liquid Content: <u>10%</u> F. Expected Solid Content: <u>90%</u> G. Core Rate Through Drill String: <u>2.02 / HR</u> H. Expected Sample Length: <u>19"</u>
---	--	--

INFORMATION include statement of laboratory tests to be performed.

107

WHS-SC-111A DR. 199, REV. 0

Field Comments		Laboratory Comments	
(1) Point of Origin: <u>N105</u> (14) Destination: <u>2225</u> (2) Relinquished By (Sign and PRINT): <u>[Signature] James Sickels</u> (20) Received By (Sign and PRINT): <u>[Signature] M. L. Lapiers</u> (3) Relinquished By (Sign and PRINT): <u>[Signature] M. L. Lapiers</u> (20) Received By (Sign and PRINT): <u>[Signature] N. Lapiers</u> (7) Relinquished By (Sign and PRINT): <u>[Signature]</u> (20) Received By (Sign and PRINT): <u>[Signature]</u>	(14) Date/Time: <u>6-18-96</u> (17) Sender Comments: (21) Date/Time: <u>6-18-96</u> (22) Receiver Comments: (23) Date/Time: <u>6-18-96</u> (24) Receiver Comments: (25) Date/Time: <u>6-18-96</u> (26) Receiver Comments:		
(11) Seal Intact Upon Release? ☒ Yes ☐ No (12) Seal Intact Upon Receipt? ☒ Yes ☐ No Shipment No. ☒ Yes ☐ No Core Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No	(13) Seal Date Consistent with this Record? ☒ Yes ☐ No		

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipments Number 2000-0-7E (2) Sample Number 96-209 (3) Supervisor M.C. Jones
 (4) Tank AN-105 (5) Floor 12A (6) Segment 17 (7) Core 152 (8) Core Seal Number SN-67

Radiation Survey Data:

ON FIELD (3) LABORATORY

Over Top Dose Rate 12 mR/hr 6.5 mR/hr
 Side Dose Rate 38 mR/hr 7.6 mR/hr
 Bottom Dose Rate 20 mR/hr 18 mR/hr
 Sample Contamination 420 dpm 420 dpm
41K 41K
 RCT* H. Boyd RCT* H. Boyd
 (SPT) (SPT)

(10) Shipment Description

A. Work Package Number ES-96-00270
 B. Core Seal Number 10448
 C. Sampler Seal Number RGS-006
 D. Date and Time Sampler Unpacked 6-18-96 6:44 AM
 E. Expected Liquid Content WTO
 F. Expected Solid Content 70%
 G. Dose Rate Through Core Seals 1.8 R/hr
 H. Expected Sample Length 9"

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

108

(12) Field Comments

WOT ADDED TO DRILL STRING HALL FLOOR
 THE SAMPLER IS A RGS SAMPLER

(14) Laboratory Comments

(12) Point of Origin

AN-105

(14) Destination

222-S

(15) Sender Name (Sign and PRINT)

James Michael Jones, Sr.

(16) Date/Time

6-18-96

(17) Sender Comments

(18) Received By (Sign and PRINT)

James Michael Jones, Sr.

(20) Received By (Sign and PRINT)

Charles E. Boyd

(21) Date/Time

6-18-96

(22) Receiver Comments

(23) Received By (Sign and PRINT)

James Michael Jones, Sr.

(24) Received By (Sign and PRINT)

Charles E. Boyd

(25) Date/Time

6-18-96

(26) Receiver Comments

(27) Received By (Sign and PRINT)

James Michael Jones, Sr.

(28) Received By (Sign and PRINT)

Charles E. Boyd

(29) Date/Time

6-18-96

(30) Receiver Comments

(31) Seal Intact Upon Release?

☒ Yes ☐ No

(32) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipper's No.

☒ Yes ☐ No

Core Seal No.

☐ Yes ☐ No

Sample No.

☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipyard Material 2004-08-18 (2) Sample Number 96-270 (3) Supervisor M. C. Jones
 (4) Task AN-105 (5) Hour 12A (6) Segment 18 (7) Core 152 (8) Core Serial Number C-1045

Station Survey Data:

(9) FIELD

(10) LABORATORY

Over Top Dose Rate

40.5 mrem/hr40.5 mrem/hr

Side Dose Rate

40 mrem/hr32 mrem/hr

Bottom Dose Rate

15 mrem/hr20 mrem/hr

Shieldable Contamination

< 20 dpm< 20 dpm

(Alpha)

(Alpha)

< 1 K dpm< 1 K dpm

(Beta-Gamma)

RST*

DPT*

(Signature)

(Signature)

RST*

DPT*

(Signature)

(Signature)

(10) Shipyard Description

A. Work Package Number

ES-96-00270

B. Core Seal Number

10446

C. Sampler Serial Number

94-462

D. Date and Time Sampler Unleashed

6-14-96/1240

E. Expected Liquid Content

30%

F. Expected Solid Content

20%

G. Dose Rate Through Dose String

1.9 R/hr

H. Expected Sample Length

19"

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

(12) Field Comments

LID ADP2 To Drill For Head And

(13) Laboratory Comments

(14) Piece of Origin

AN-105

(15) Description

222-S

(16) Sender Name (Sign and PRINT)

James Sichel James Sichel

(17) Date/Time

6-14-96

(18) Smitter Comments

(19) Released by (Sign and PRINT)

James Sichel James Sichel

(20) Received by (Sign and PRINT)

James Sichel James Sichel

(21) Date/Time

6-14-96

(22) Receiver Comments

(23) Released by (Sign and PRINT)

James Sichel James Sichel

(24) Received by (Sign and PRINT)

James Sichel James Sichel

(25) Date/Time

6-14-96

(26) Receiver Comments

(27) Released by (Sign and PRINT)

James Sichel James Sichel

(28) Received by (Sign and PRINT)

James Sichel James Sichel

(29) Date/Time

6-14-96

(30) Receiver Comments

(31) Seal Intact Upon Release?

☒ Yes ☐ No

(32) Seal Intact Upon Receipt?

☒ Yes ☐ No

Shipyard No.

☒ Yes ☐ No

Core Seal No.

☒ Yes ☐ No

Sample No.

☒ Yes ☐ No

(RGS)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipments Number 200W-08-1F (2) Sample Number 96-271 (3) Supervisor M. C. Jones
 (4) Task 105-A-N (5) Near 12A (6) Segment 19 (7) Core 152 (8) Core Seal Number SN-64

Recovery Survey Data:		(9) FIELD	(10) LABORATORY	(11) Shipments Description	
Over Top Dive Rate		<u>< 0.5 m/min/hr</u>	<u>1.5 m/min/hr</u>	A. Work Package Number	<u>ES-96-00270</u>
Side Dive Rate		<u>38 m/min/hr</u>	<u>34 m/min/hr</u>	B. Core Seal Number	<u>10447</u>
Bottom Dive Rate		<u>2.5 m/min/hr</u>	<u>12 m/min/hr</u>	C. Sampler Seal Number	<u>RGS-023</u>
Seamable Contamination		<u>< 20 dpm</u>	<u>< 20 dpm</u>	D. Date and Time Sampler Unsealed	<u>6-14-96/10422</u>
		(Alpha)	(Alpha)	E. Expected Liquid Content	<u>30%</u>
		<u>< 1 K dpm</u>	<u>< 1 K dpm</u>	F. Expected Solid Content	<u>20%</u>
		(Base Gamma)	(Base Gamma)	G. Dive Rate Through Drill String	<u>1.7 R/HR</u>
ACT (NPT)	<u>M. C. Jones</u>	Signature	Signature	H. Expected Sample Length	<u>19"</u>

(11) INFORMATION (Include signatures of laboratory seals as performed.)

110

(12) Field Comments

(14) Laboratory Comments

Libr added to DRN string for head fixie
 This a RGS sampler.

(13) Point of Origin

(14) Destination

(15) Sender Name (Sign and PRINT)

(16) Date/Time

(17) Receiver Comments

(18) Inspected By (Sign and PRINT)

(19) Received By (Sign and PRINT)

(20) Date/Time

(21) Receiver Comments

(22) Inspected By (Sign and PRINT)

(23) Received By (Sign and PRINT)

(24) Date/Time

(25) Receiver Comments

(26) Inspected By (Sign and PRINT)

(27) Received By (Sign and PRINT)

(28) Date/Time

(29) Receiver Comments

(30) Seal Intact Upon Release?

(31) Seal Intact Upon Receipt?

(32) Seal Data Correlated with One Received?

Shipment No. Core Seal No. Sample No.
☒ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No

(12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32)

NO. 1000-100-100-100

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

Signature Number 200W-08 TP (2) Sample Number 96-272 (3) Supervisor ROGER
 Job # AA-105 (5) Pipe 12A (6) Segment 20 (7) Date 152 (8) Core Serial Number 57

(9) FIELD (10) Top Drive Rate <u>0.5 m/min/hr</u> (11) Core Rate <u>35 m/min/hr</u> (12) Core Rate <u>17 m/min/hr</u> (13) Contamination <u>< 200 ppm</u> (14) (Alpha) <u>< 1 K dpm</u> (15) (Beta-Gamma) <u>G. Boyd</u> (16) (Signature) <u>G. Boyd</u>		(17) LABORATORY (18) Top Drive Rate <u>0.5 m/min/hr</u> (19) Core Rate <u>30 m/min/hr</u> (20) Core Rate <u>15 m/min/hr</u> (21) Contamination <u>< 200 ppm</u> (22) (Alpha) <u>< 1 K dpm</u> (23) (Beta-Gamma) <u>G. Boyd</u> (24) (Signature) <u>G. Boyd</u>		(25) Shipment Description A. Work Package Number <u>ES-76-00270/0</u> B. Core Seal Number <u>1317</u> C. Sampler Serial Number <u>75-0925</u> D. Date and Time Sampler Unseal <u>6-14-96 1017</u> E. Expected Liquid Content <u>100%</u> F. Expected Solid Content <u>0%</u> G. Core Rate Through Drill String <u>15 A/L</u> H. Expected Sample Length <u>11"</u>	
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3 INFORMATION (Include statements of laboratory tests to be performed.)

111

WHIC-SOW-M-OP 100, REV 0

(26) Field Comments		(27) Laboratory Comments	

(28) Point of Origin <u>AA-105</u>	(29) Description <u>222 S</u>	(30) Sender Name (Sign and PRINT) <u>James Sickels</u>	(31) Date/Time <u>6-18-96</u>	(32) Sender Comments
(33) Subsampled By (Sign and PRINT) <u>James Sickels</u>	(34) Received By (Sign and PRINT) <u>J. McWhinnigan</u>	(35) Date/Time <u>6-18-96</u>	(36) Receiver Comments	
(37) Subsampled By (Sign and PRINT) <u>J. McWhinnigan</u>	(38) Received By (Sign and PRINT) <u>James N. LAYERS</u>	(39) Date/Time <u>6-18-96</u>	(40) Receiver Comments	
(41) Subsampled By (Sign and PRINT)	(42) Received By (Sign and PRINT)	(43) Date/Time	(44) Receiver Comments	

(45) Seal Intact Upon Receipt? ☒ Yes ☐ No	(46) Seal Intact Upon Receipt? ☒ Yes ☐ No	(47) Seal Data Consistent with this Record? ☒ Yes ☐ No
---	---	--

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-OR-TE (2) Sample Number 96-273 (3) Supervisor ROSEN
 (4) Tank AN-105 (5) Floor 12A (6) Segment 21 (7) Date 152 (8) Core Serial Number C2014

Radiation Survey Data:		(10) FIELD	(11) LABORATORY	(10) Shipment Description
Over Tap Dose Rate	<u><0.5 mrem/hr</u>		<u><0.5 mrem/hr</u>	A. Work Package Number <u>ES-96-270/2</u>
Side Dose Rate	<u>80 mrem/hr</u>		<u>33 mrem/hr</u>	B. Core Seal Number <u>1345</u>
Bottom Dose Rate	<u>15 mrem/hr</u>		<u>17 mrem/hr</u>	C. Sampler Serial Number <u>R65-018</u>
Severable Contamination	<u><200 dpm</u>		<u><200 dpm</u>	D. Date and Time Sampler Unsealed <u>6/12/96</u> <u>1830</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content <u>70%</u>
	<u><1 Kdpm</u>		<u><1 Kdpm</u>	F. Expected Solid Content <u>30%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through DBL Shield <u>1.6 R/hr</u>
RCR* <u>1.1</u>	(Signature)	RCR* <u>1.1</u>	(Signature)	H. Expected Sample Length <u>15"</u>
SNPT		SNPT		

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

112

(12) Field Comments <u>(RGS) Sample</u>	(13) Laboratory Comments
--	--------------------------

(14) Point of Origin <u>AN-105</u>	(15) Orientation <u>222-S</u>	(16) Sender Name (Sign and PRINT) For <u>Rosen</u> <u>James Sakali</u>	(17) Date/Time <u>6-18-96</u>	(18) Sender Comments
(19) Received by (Sign and PRINT) <u>James Sakali</u>	(20) Received by (Sign and PRINT) <u>MDunneigh</u>	(21) Date/Time <u>6-18-96</u>	(22) Receiver Comments	
(23) Received by (Sign and PRINT) <u>MDunneigh</u>	(24) Received by (Sign and PRINT) <u>EE Dukes</u>	(25) Date/Time <u>6-18-96</u>	(26) Receiver Comments	
(27) Received by (Sign and PRINT)	(28) Received by (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	
(31) Seal Intact Upon Release?	(32) Seal Intact Upon Receipt?	(33) Seal Data Consistent with this Record?		
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No		

WHC-SO-WMD-199, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 2002-08-TF (2) Sample Number 96-274 (3) Supervisor BOGEN
 (4) Tank AN-105 (5) Date 12-1 (6) Segment 2-2 (7) Core 152 (8) Core Serial Number 316

(9) FIELD		(10) LABORATORY	(11) Shipment Description
Over Top Core Rate	<u>< 0.5 m/min</u>	<u>0.5 m/min</u>	A. Work Package Number <u>ES-96-270/0</u>
Side Core Rate	<u>3.5 m/min</u>	<u>3.5 m/min</u>	B. Core Seal Number <u>1326</u>
Bottom Core Rate	<u>1.3 m/min</u>	<u>1.0 m/min</u>	C. Sampler Seal Number <u>15-835</u>
Sealable Compression	<u>< 200 psi</u> (Alpha)	<u>< 200 psi</u> (Alpha)	D. Date and Time Sample Unpacked <u>1/18/96 18:29</u>
	<u>< 1000 psi</u> (Beta)	<u>< 1000 psi</u> (Beta)	E. Expected Liquid Content <u>20%</u>
	<u>20-30 psi</u> (Gamma)	<u>20-30 psi</u> (Gamma)	F. Expected Solid Content <u>20%</u>
ECT* (HPT)	<u>20-30 psi</u> (Representative)	ECT* (HPT)	G. Core Rate Through Unit Being <u>1.4 ft/min</u>
			H. Expected Sample Length <u>13"</u>

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

113

(12) Field Comments

HSD ACTIVATED w/ 6" REMAINING IN STROKE.

(13) Laboratory Comments

(13a) Point of Origin <u>AN-105</u>	(13b) Description <u>222-S</u>	(13c) Sender Name (Sign and PRINT) <u>James S. Sicks</u>	(13d) Date/Time <u>6-24-96</u>	(13e) Sender Comments
(13f) Received By (Sign and PRINT) <u>James S. Sicks</u>	(13g) Received By (Sign and PRINT) <u>James S. Sicks</u>	(13h) Received By (Sign and PRINT) <u>James S. Sicks</u>	(13i) Date/Time <u>6-24-96</u>	(13j) Receiver Comments
(13k) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13l) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13m) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13n) Date/Time <u>6-24-96</u>	(13o) Reserver Comments
(13p) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13q) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13r) Released By (Sign and PRINT) <u>James S. Sicks</u>	(13s) Date/Time <u>6-24-96</u>	(13t) Reserver Comments

(14) Seal Intact Upon Receipt?

☒ Yes☐ No

(15) Seal Intact Upon Receipt?

☒ Yes☐ No

Shipment No.

☒ Yes☐ No

(16) Seal Date Construct with this Record?

Seal Date

☒ Yes☐ No

Sample No.

☒ Yes☐ No

CHAIN-DE-CUSTODY RECORD FOR CORE SAMPLING

171 Signature Number 200-2775 172 Sample Number 96-275 173 Signature Danah J. Plante
 174 Job AN/05 175 Room 7B 176 Supervisor 1 177 Case 153 178 Case Sheet Number C-1023

Fisherman Survey Data		(19) FIELD		(20) LABORATORY		(21) Sturgeon Measurements	
Over Two Days Box	0.5 mesh/line	15		A. Work Package Number	85-95-00487		
Safe Bait Box	34 mesh/box	41		B. Coded Tag Number	11282		
Shrimp Catch Pkg	30 mesh/box	28		C. Snapper Serial Number	74-4685		
Smallest Catchment	5.20	20		D. Date and Time Sample Completed	6-25-8 1313		
	(Lb/ft)	(Lb/ft)		E. Escapement (grd) Current	30%		
	1.00	11K		F. Grounded Raffle Count	70%		
	(Mesh Count)	(Mesh Count)		G. Open Hole Through Mid Sherg	2.08/HR		
RCF	[Signature]	RCF	[Signature]	H. Estimated Sample Length	19		
DATE		DATE					

81.31 **Redfishes** Three species common; of which winter adults are not collected

GO PVE

(1) **Full Copyright**

U.S. GOVERNMENT PRINTING OFFICE

[illegible]

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment or Core ID: 2000-08-1F (2) Sample Number: 96-276 (3) Shipper: M.C. Jones
 (4) Type: BA-195 (5) Order: 7A (6) Signature: 2 (7) Date: 153 (8) Check Serial Number: 153

(1) Shipper's Name (2) Shipper's Address (3) Shipper's City (4) Shipper's State (5) Shipper's Zip (6) Shipper's Phone		(7) Laboratory (8) Laboratory Address (9) Laboratory City (10) Laboratory State (11) Laboratory Zip (12) Laboratory Phone		(13) Shipping Description A. Weight Package Number B. Core Seal Number C. Sample Serial Number D. Date and Time Sample Unsealed E. Original Unseal Corrosion F. Expected Seal Corrosion G. Date Plug Through Seal Sample H. Expected Sample Length	
(1) Shipper's Name (2) Shipper's Address (3) Shipper's City (4) Shipper's State (5) Shipper's Zip (6) Shipper's Phone		(7) Laboratory (8) Laboratory Address (9) Laboratory City (10) Laboratory State (11) Laboratory Zip (12) Laboratory Phone		(13) Shipping Description A. Weight Package Number B. Core Seal Number C. Sample Serial Number D. Date and Time Sample Unsealed E. Original Unseal Corrosion F. Expected Seal Corrosion G. Date Plug Through Seal Sample H. Expected Sample Length	

(1) If the sample is not sealed, the sample must be sealed in the laboratory.

115

(1) Field Comments LIBR ADDED TO DRILL STRING FOR HOLE 7110.		(2) Laboratory Comments	
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(1) Date of Sample <u>2000-08-1F</u>		(2) Sample Number <u>2005</u>		(3) Sample Name <u>2005-08-1F</u>		(4) Sample Date <u>2005-08-1F</u>		(5) Sample Location <u>2005-08-1F</u>	
(6) Sample Description <u>2005-08-1F</u>		(7) Sample Description <u>2005-08-1F</u>		(8) Sample Description <u>2005-08-1F</u>		(9) Sample Description <u>2005-08-1F</u>		(10) Sample Description <u>2005-08-1F</u>	
(11) Sample Description <u>2005-08-1F</u>		(12) Sample Description <u>2005-08-1F</u>		(13) Sample Description <u>2005-08-1F</u>		(14) Sample Description <u>2005-08-1F</u>		(15) Sample Description <u>2005-08-1F</u>	
(16) Sample Description <u>2005-08-1F</u>		(17) Sample Description <u>2005-08-1F</u>		(18) Sample Description <u>2005-08-1F</u>		(19) Sample Description <u>2005-08-1F</u>		(20) Sample Description <u>2005-08-1F</u>	

DATE/TIME: White - Office of Sample Management Yellow - Reception of Sample Pink - Core Sampling, 55-05 Colored - Tank Farm Operations, 54-13 BC 1000-329 102R 41

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W08TF (2) Sample Number 46-237 (3) Separator 3060A
 (4) Field AN-HS (5) Flow FE (6) Segment 3 (7) Core 153 (8) Core Serial Number CG

(9) FIELD Over Top Core Rate <u>60.5 m/min</u> Side Core Rate <u>41 m/min</u> Sample Core Rate <u>30 m/min</u> Sample Core Rate <u>20</u> Sample Core Rate <u>1000</u> (10) LABORATORY Over Top Core Rate <u>60.5 m/min</u> Side Core Rate <u>41 m/min</u> Sample Core Rate <u>30 m/min</u> Sample Core Rate <u>20</u> Sample Core Rate <u>1000</u> (11) SHIPPING DESCRIPTION A. Weight Package Number <u>ES-95-20427/a</u> B. Core Serial Number <u>11131</u> C. Sample Serial Number <u>95-1245</u> D. Date and Time Sampled <u>4/2/96 0154</u> E. Expected Liquid Content <u>10%</u> F. Expected Solid Content <u>20%</u> G. Date and Time Sampled <u>2.2 R/m</u> H. Expected Sample Length <u>1"</u>	
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(12) INFORMATION (includes minimum of laboratory tests to be performed)

116

WATER w/ LIBR USED AS HEAD FLUID

COPY

(13) Field Comments	(14) Laboratory Comments	(15) Sample Number	(16) Sample Number	(17) Sample Number	(18) Sample Number
AN-HS	237	46-237	46-237	46-237	46-237
(19) Sample Number	(20) Sample Number	(21) Sample Number	(22) Sample Number	(23) Sample Number	(24) Sample Number
46-237	46-237	46-237	46-237	46-237	46-237
(25) Sample Number	(26) Sample Number	(27) Sample Number	(28) Sample Number	(29) Sample Number	(30) Sample Number
46-237	46-237	46-237	46-237	46-237	46-237
(31) Sample Number	(32) Sample Number	(33) Sample Number	(34) Sample Number	(35) Sample Number	(36) Sample Number
46-237	46-237	46-237	46-237	46-237	46-237

301 TRM/Type: WMS - Office of Sample Management Yellow - Receipt of Sample Red - Core Sampling, 30-35 Colored - Field Area Operations, 30-35 90-000-000 001-01

WMS-SD-WM-DP-199, REV. 0

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-IF 2) Sample Number 96-278 3) Supervisor 6/26/96 ~~James Sickle~~ James Sickle
 4) Tank AN-105 5) First ZB 6) Segment 4 7) Core 155 8) Core Serial Number C1025

Collection Survey Data		(9) FIELD	(10) LABORATORY	(11) Shipment Description
Over Top Dose Rate	<u>60.5 m³/hr</u>	<u>60.5 m³/hr</u>	<u>60.5 m³/hr</u>	A. Work Package Number <u>EE-95-0087/a</u>
Side Dose Rate	<u>62.45 m³/hr</u>	<u>60 m³/hr</u>	<u>60 m³/hr</u>	B. Core Seal Number <u>BB-6/26/96-11278</u>
Bottom Dose Rate	<u>13 m³/hr</u>	<u>10 m³/hr</u>	<u>10 m³/hr</u>	C. Sampler Serial Number <u>RGS-016</u>
Stratigraphic Correlation	<u>1200 yds / 100 m²</u> (Alpha)	<u>1200 yds / 100 m²</u> (Alpha)	<u>1200 yds / 100 m²</u> (Alpha)	D. Date and Time Sampler Unseal'd <u>6/26/96 0300</u>
	<u>1000 yds / 100 m²</u> (Beta-Gamma)	<u>1000 yds / 100 m²</u> (Beta-Gamma)	<u>1000 yds / 100 m²</u> (Beta-Gamma)	E. Expected Liquid Content <u>80%</u>
RCT* <u>[Signature]</u> (HPT)	<u>[Signature]</u> (Signature)	RCT* <u>[Signature]</u> (HPT)	<u>[Signature]</u> (Signature)	F. Expected Solid Content <u>20%</u>
				G. Dose Rate Through Drill String <u>2.0 R/hr</u>
				H. Expected Sample Length <u>19'</u>

1) INFORMATION Includes statement of laboratory tests to be performed.

2) Field Comments

RGS SAMPLER.
WATER WITH LIBR USED AS HEAD FLUID

(34) Laboratory Comments

3) Point of Origin <u>AN-105</u>	(14) Destination <u>2225</u>	(16) Order Name (Sign and PRINT) <u>James Sickle</u>	(18) Date/Time <u>6-26-96</u>	(17) Sender Comments
5) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(20) Received By (Sign and PRINT) <u>James Sickle</u>	(22) Date/Time <u>6-26-96</u>	(24) Date/Time <u>6-26-96</u>	(22) Receiver Comments
3) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(24) Received By (Sign and PRINT) <u>James Sickle</u>	(26) Date/Time <u>6-26-96</u>	(28) Date/Time <u>6-26-96</u>	(26) Receiver Comments
7) Relinquished By (Sign and PRINT) <u>James Sickle</u>	(28) Received By (Sign and PRINT) <u>James Sickle</u>	(30) Date/Time <u>6-26-96</u>	(32) Date/Time <u>6-26-96</u>	(30) Receiver Comments

(18) Seal Intact Upon Release? ☒ Yes ☐ No	(20) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Date Consistent with this Record? ☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No	Core Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No
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STRUTHERS: White - Office of Sample Management Yellow - Receipts of Sample Pink - Core Sampling, 55-45 Goldwood - Test Farm Operations, 54-43 BC-9000-305 (01/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number <u>DDOW 08-TF</u>		(2) Sample Number <u>94-282</u>		(3) Supervisor <u>M. G. Jones</u>	
(4) Tank <u>AW-105</u>		(5) Riser <u>7B</u>		(6) Segment <u>8</u>	
(7) Core <u>153</u>		(8) Cash Seal Number <u>SN-72</u>			
(9) FIELD		(10) LABORATORY		(11) Shipment Description	
Over Top Dose Rate <u>20.5 ml/cm</u>		Over Top Dose Rate <u>20.5 ml/cm</u>		A. Work Package Number <u>ES-95-00497</u>	
Side Dose Rate <u>3.7 ml/cm</u>		Side Dose Rate <u>3.7 ml/cm</u>		B. Cash Seal Number <u>10451</u>	
Bottom Dose Rate <u>1.1 ml/cm</u>		Bottom Dose Rate <u>1.1 ml/cm</u>		C. Sample Serial Number <u>94-0835</u>	
Sensurable Contamination <u>220</u>		Sensurable Contamination <u>220</u>		D. Date and Time Sampler Unseal'd <u>6-26-96/1720</u>	
(Alpha) <u>21K</u>		(Alpha) <u>21K</u>		E. Expected Liquid Content <u>30%</u>	
(Beta-Gamma) <u>21K</u>		(Beta-Gamma) <u>21K</u>		F. Expected Solid Content <u>70%</u>	
RCT* <u>21K</u>		RCT* <u>21K</u>		G. Dose Rate Through Drill Spine <u>2 R/hr</u>	
(Signature)		(Signature)		H. Expected Sample Length <u>19'</u>	

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

2) Field Comments		3) Laboratory Comments	
Li Br added to drill string for head fixed.			
4) Point of Origin <u>AW-105</u>	14) Destination <u>22A-5</u>	15) Sender Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	16) Date/Time <u>7-3-96</u>
17) Receiver Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	18) Received By (Sign and PRINT) <u>James A. Smith, James Smith</u>	19) Date/Time <u>7-3-96</u>	20) Receiver Comments
21) Point of Origin <u>AW-105</u>	22) Destination <u>22A-5</u>	23) Sender Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	24) Date/Time <u>7-3-96</u>
25) Receiver Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	26) Received By (Sign and PRINT) <u>James A. Smith, James Smith</u>	27) Date/Time <u>7-3-96</u>	28) Receiver Comments
29) Point of Origin <u>AW-105</u>	30) Destination <u>22A-5</u>	31) Sender Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	32) Date/Time <u>7-3-96</u>
33) Receiver Name (Sign and PRINT) <u>James A. Smith, James Smith</u>	34) Received By (Sign and PRINT) <u>James A. Smith, James Smith</u>	35) Date/Time <u>7-3-96</u>	36) Receiver Comments
(17) Seal Intact Upon Release?	(18) Seal Intact Upon Receipt?	(19) Seal Date Consistent with Date Received?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	
Shipped By	Sample No.	Cash Seal No.	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>100WEX-TP</u>		12) Sample Number <u>96-283</u>		13) Supervisor <u>M. C. Jones</u>	
1) Tank <u>AL-105</u>		15) Row <u>7B</u>		14) Segment <u>9</u>	
16) Core <u>153</u>		18) Cask Serial Number <u>C-2015</u>			
Mission Survey Date			(9) FIELD		(13) LABORATORY
Over Top Core Rate <u>0.8 mrem</u>			<u>1.8 mrem/hr</u>		
Side Core Rate <u>38 mrem</u>			<u>38 mrem/hr</u>		
Bottom Core Rate <u>16 mrem</u>			<u>16 mrem/hr</u>		
Streamable Contamination <u><20</u>			<u><20</u>		
(Alpha)			(Alpha)		
<u>2/K</u>			<u>2/K</u>		
RCY* (HPT)			RCY* (HPT)		
RCY* (HPT)			RCY* (HPT)		
11) Shipment Description					
A. Work Package Number <u>ES-95-00487</u>					
B. Cask Seal Number <u>10458</u>					
C. Sampler Serial Number <u>94-4665</u>					
D. Date and Time Sampler Unleashed <u>6-26-96/2147</u>					
E. Expected Liquid Content <u>30%</u>					
F. Expected Solid Content <u>70%</u>					
G. Dose Rate Through Drill String <u>2.5 R/hr</u>					
H. Expected Sample Length <u>19"</u>					

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

2) Field Comments		3) Laboratory Comments	
LIBR ADDED TO DRILL STRING FOR HOLE FLUID			
1) Point of Origin <u>AL-105</u>	14) Destination <u>222-S</u>	15) Sender Name (Sign and PRINT) <u>Philip R. Parnick for M. Jones</u>	16) Date/Time <u>7-26/96</u>
17) Receiver Comments	18) Receiver Name (Sign and PRINT) <u>Philip R. Parnick</u>	19) Date/Time <u>7-26/96</u>	20) Receiver Comments
21) Receiver Name (Sign and PRINT) <u>Philip R. Parnick</u>	22) Date/Time <u>7-26/96</u>	23) Receiver Comments	24) Receiver Name (Sign and PRINT) <u>Philip R. Parnick</u>
25) Date/Time <u>7-26/96</u>	26) Receiver Comments	27) Receiver Name (Sign and PRINT) <u>Philip R. Parnick</u>	28) Date/Time <u>7-26/96</u>
29) Receiver Comments	30) Receiver Name (Sign and PRINT) <u>Philip R. Parnick</u>	31) Date/Time <u>7-26/96</u>	32) Receiver Comments
33) Seal Intact Upon Release?	34) Seal Intact Upon Receipt?	35) Seal Date Consistent with the Record?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	
Shipment Log	Cask Seal No.	Sample No.	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	

DISTRIBUTION: White - Office of Sample Management Yellow - Receipt of Sample Pink - Core Sampling, 54-55 Goldmark - Tank Farm Operations, 54-43

BC-6000-309 (2/94)

11/10/96 DP-198, REV D

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>200W-08-TF</u>		2) Sample Number <u>96-285</u>		3) Supervisor <u>BOGEN</u>	
4) Tank <u>AN-105</u>		5) Rise <u>7.8</u>		6) Segment <u>11</u>	
7) Core <u>155</u>		8) Cask Serial Number <u>C2004</u>			

10) FIELD		11) LABORATORY		12) SHIPMENT DESCRIPTION	
Over Top Dose Rate	<u>0.5 mrem</u>		<u>17 mrem/kg</u>	A. Work Package Number	<u>E3-95-00487</u>
Side Dose Rate	<u>25 mrem</u>		<u>36 mrem/kg</u>	B. Cask Seal Number	<u>11136</u>
Bottom Dose Rate	<u>15 mrem</u>		<u>16 mrem/kg</u>	C. Sampler Serial Number	<u>95-0993</u>
Scatterable Contamination	<u><20</u>		<u><20</u>	D. Date and Time Sampler Unsealed	<u>6/22/96 0419</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content	<u>80%</u>
	<u><1K</u>		<u><1K</u>	F. Expected Solid Content	<u>20%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drift String	<u>2.0 R/hr</u>
RCY* (HPT)	<u>[Signature]</u>	RCY* (HPT)	<u>[Signature]</u>	H. Expected Sample Length	<u>19"</u>
	(Signature)		(Signature)		

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

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WIC-SD-WMDP-199, REV. 8

2) Field Comments <u>WATER WITH LUBR. USED AS HEAD FLUID</u>		3) Laboratory Comments	
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4) Point of Origin <u>AN-105</u>	11) Date/Time <u>2225</u>	12) Sender Name (Sign and PRINT) <u>[Signature] R. J. Parnick</u>	13) Date/Time <u>7/26/96</u>	14) Sender Comments
5) Received By (Sign and PRINT) <u>[Signature] R. J. Parnick</u>	15) Received By (Sign and PRINT) <u>Connie Redbeck</u>	16) Received By (Sign and PRINT) <u>[Signature] E. D. [unclear]</u>	17) Date/Time <u>7-26 1:50</u>	18) Receiver Comments
6) Retransmitted By (Sign and PRINT) <u>[Signature] R. J. Parnick</u>	19) Retransmitted By (Sign and PRINT) <u>[Signature] E. D. [unclear]</u>	20) Retransmitted By (Sign and PRINT)	21) Date/Time <u>7-26 1440</u>	22) Receiver Comments
7) Retransmitted By (Sign and PRINT)	23) Retransmitted By (Sign and PRINT)	24) Retransmitted By (Sign and PRINT)	25) Date/Time	26) Receiver Comments

27) Seal Intact Upon Release? ☒ Yes ☐ No	28) Seal Intact Upon Receipt? ☒ Yes ☐ No	29) Shipment No. ☒ Yes ☐ No	30) Cask Seal No. ☒ Yes ☐ No	31) Sample No. ☒ Yes ☐ No
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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2000L-08-TF (2) Sample Number 96-216 (3) Supervisor BOGEM
 (4) Tank AN-105 (5) Riser 78 (6) Segment 12 (7) Core 153 (8) Core Serial Number C2011

(9) FIELD		(10) LABORATORY		(11) SHIPMENT DESCRIPTION	
Over Top Core Rate	<u>0.8 MPM</u>	Over Top Core Rate	<u>0.8 MPM</u>	A. Work Package Number	<u>95-60487</u>
Side Core Rate	<u>4.0 MPM</u>	Side Core Rate	<u>4.3 MPM</u>	B. Core Seal Number	<u>11130</u>
Bottom Core Rate	<u>1.5 MPM</u>	Bottom Core Rate	<u>1.6 MPM</u>	C. Sampler Serial Number	<u>95-186.5</u>
Sealable Consumption	<u>220</u>	Sealable Consumption	<u>220</u>	D. Date and Time Sampler Unsealed	<u>6/22/96 0543</u>
(Alpha)	<u>21K</u>	(Alpha)	<u>21K</u>	E. Expected Liquid Content	<u>60%</u>
(Beta-Gamma)	<u>21K</u>	(Beta-Gamma)	<u>21K</u>	F. Expected Solid Content	<u>20%</u>
ECT* (HPT)	<u>21K</u>	ECT* (HPT)	<u>21K</u>	G. Core Rate Through Drill String	<u>2.0 f/hr</u>
(Signature)	<u>[Signature]</u>	(Signature)	<u>[Signature]</u>	H. Expected Sample Length	<u>19"</u>

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

(13) Field Comments	(14) Laboratory Comments
<u>WATER WITH LITR USED AS MWD FLUID</u>	

(15) Point of Origin	(16) Destination	(17) Sender Name (Sign and PRINT)	(18) Date/Time	(19) Sender Comments
<u>AN-105</u>	<u>222 S</u>	<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>	
(20) Receiver Name (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments	(23) Receiver Name (Sign and PRINT)	(24) Date/Time
<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>		<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>
(25) Receiver Name (Sign and PRINT)	(26) Date/Time	(27) Receiver Comments	(28) Receiver Name (Sign and PRINT)	(29) Date/Time
<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>		<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>
(30) Receiver Name (Sign and PRINT)	(31) Date/Time	(32) Receiver Comments	(33) Receiver Name (Sign and PRINT)	(34) Date/Time
<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>		<u>[Signature]</u> <u>Permit</u>	<u>7-25/96</u>

(35) Seal Intact Upon Receipt?	(36) Seal Intact Upon Receipt?	(37) Seal Date Consistent with this Record?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

W 3-7-96

Shipment Number 2008-08-TF (12) Sample Number 94-287 (13) Supervisor R. L. Smith

Task AN 105 (14) Floor 7B (15) Segment 13 (17) Core 153 (18) Cask Serial Number C-1015

Disturbance Survey Data:

(11) FIELD	(13) LABORATORY
Over Top Dens Rate <u>0.5 mrem</u>	<u>0.6 mrem/hr</u>
Side Dens Rate <u>60 mrem</u>	<u>60 mrem/hr</u>
Bottom Dens Rate <u>15 mrem</u>	<u>14 mrem/hr</u>
Measurable Contamination <u><20</u>	<u><20</u>
(Alpha)	(Alpha)
<u><1K</u>	<u><1K</u>
(Beta-Gamma)	(Beta-Gamma)
ACT* <u>[Signature]</u>	ACT* <u>[Signature]</u>
(HPT) (Signature)	(HPT) (Signature)

(10) Shipment Description

A. Work Package Number	<u>ES-95</u>
B. Cask Seal Number	<u>10335</u>
C. Sampler Serial Number	<u>95-0685</u>
D. Date and Time Sampler Unsealed	<u>6-27-95 / 1440</u>
E. Expected Liquid Content	<u>30%</u>
F. Expected Solid Content	<u>70%</u>
G. Dens Rate Through Drill String	<u>2.38</u>
H. Expected Sample Length	<u>19"</u>

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

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2) Field Comments: universal sampler 150cm lithium bromide added sample clean - no liquid

3) Point of Origin 275 (14) Destination 2275 limbs (15) Sample Name (Sign and PRINT) James S. Siskels

4) Date/Time 7-3-96 (16) Date/Time 7-3-96 (17) Sender Comments

5) Received By (Sign and PRINT) James S. Siskels (18) Received By (Sign and PRINT) James S. Siskels (19) Date/Time 7-3-96 (20) Receiver Comments

6) Date/Time 7-3-96 (21) Date/Time 7-3-96 (22) Receiver Comments

7) Received By (Sign and PRINT) James S. Siskels (23) Received By (Sign and PRINT) James S. Siskels (24) Date/Time 7-3-96 (25) Receiver Comments

8) Received By (Sign and PRINT) James S. Siskels (26) Received By (Sign and PRINT) James S. Siskels (27) Date/Time 7-3-96 (28) Receiver Comments

(29) Seal Intact Upon Release? ☒ Yes ☐ No (30) Seal Intact Upon Receipt? ☒ Yes ☐ No (31) Seal Data Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No Cask Serial No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>200W-08-TF</u>		2) Sample Number <u>916-286</u>		3) Supervisor <u>M.C. Jones</u>	
4) Tank <u>AW-105</u>		5) Fleet <u>78</u>		6) Segment <u>14</u>	
		7) Core <u>153</u>		8) Cask Serial Number <u>15-G</u>	

9) Section Survey Data		10) LABORATORY		11) Shipment Description	
Over Top Dose Rate	<u>40.5 mR/hr</u>		<u>0.5 uCi/cm</u>	A. Work Package Number	<u>ES-95-00487</u>
Side Dose Rate	<u>45 mR/hr</u>		<u>4.5 uCi/cm</u>	B. Cask Seal Number	<u>10479</u>
Bottom Dose Rate	<u>22 mR/hr</u>		<u>1.6 uCi/cm</u>	C. Sampled Serial Number	<u>RGS-017</u>
Spentable Contamination	<u>270 dpm/100 cm²</u>		<u>27.0 d/c</u>	D. Date and Time Sampler Unsealed	<u>6-23-96/1758</u>
	(Alpha)		(Alpha)	E. Expected Liquid Content	<u>30%</u>
	<u>1000 dpm/100 cm²</u>		<u>1.1 K dpm</u>	F. Expected Solid Content	<u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	G. Dose Rate Through Drill String	<u>2.5 R/HIS</u>
RCI* (NPT)	<u>[Signature]</u>	RCI* (NPT)	<u>[Signature]</u>	H. Expected Sample Length	<u>19"</u>
	(Signature)		(Signature)		

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

2) Field Comments		3) Laboratory Comments	
LIBR ADDD TO ONLY STRIP AT HEAD FIXED.			

1) Point of Origin		14) Description		15) Sender Name (Sign and PRINT)		16) Date/Time		17) Sender Comments	
<u>AW-105</u>		<u>222-S</u>		<u>James Sickett</u>		<u>6-28-96</u>			
2) Requested By (Sign and PRINT)		12) Received By (Sign and PRINT)		13) Date/Time		18) Receiver Comments			
<u>James Sickett</u>		<u>[Signature]</u>		<u>6-28-96</u>					
3) Requested By (Sign and PRINT)		14) Received By (Sign and PRINT)		15) Date/Time		19) Receiver Comments			
<u>[Signature]</u>		<u>[Signature]</u>		<u>6-28-96</u>					
4) Requested By (Sign and PRINT)		16) Received By (Sign and PRINT)		17) Date/Time		20) Receiver Comments			
<u>[Signature]</u>		<u>[Signature]</u>		<u>6-28-96</u>					

18) Seal Intact Upon Release?		19) Seal Intact Upon Receipt?		20) Seal Date Consistent with this Receipt?	
☒ Yes ☐ No	☒ Yes ☐ No	Shipment No. ☒ Yes ☐ No Cask Seal No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No			

COPY

14) Stages of Marriage: 2000-1875 15) Stages of Marriage: 96-209 16) Euseby No: Mc Jones WPT
17) Date: APR 195 18) Date: 7A 19) Date: 15 20) Date: 153 21) Date: 20-6

Northern Service Data		12th JOURNAL RETURN		12th Shipment Data Input	
Diver Tool Class Rate	0.5		3	C. Work Package Number	63-96-00487
Slide Chute Rate	40		35	d. Lot - Seal Number	10452
Bottom Chute Rate	18		14	E. Sample Serial Number	95-0895
Sealable Containment	320		25	F. Date and Time Sample Unpacked	6-28-96 / 1009
	Initial		Initial	G. Exposed Seal Count	3090
	Final		Final	H. Exposed Seal Count/M	7090
ACT: [Signature]		ACT: [Signature]		I. Seal Area Through Duct Strip	2 RI/HR
4-95		11-95		J. Exposure Sample Length	19"

1714 18th Street, NW, Washington, DC 20036

22
23
24

11.21. Partial Correlation

Lib Dr Apple To own string for good friend.

13-41 4.5 Service Component

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1963-1964: 1964-1965: 1965-1966: 1966-1967: 1967-1968: 1968-1969: 1969-1970: 1970-1971: 1971-1972: 1972-1973: 1973-1974: 1974-1975: 1975-1976: 1976-1977: 1977-1978: 1978-1979: 1979-1980: 1980-1981: 1981-1982: 1982-1983: 1983-1984: 1984-1985: 1985-1986: 1986-1987: 1987-1988: 1988-1989: 1989-1990: 1990-1991: 1991-1992: 1992-1993: 1993-1994: 1994-1995: 1995-1996: 1996-1997: 1997-1998: 1998-1999: 1999-2000: 2000-2001: 2001-2002: 2002-2003: 2003-2004: 2004-2005: 2005-2006: 2006-2007: 2007-2008: 2008-2009: 2009-2010: 2010-2011: 2011-2012: 2012-2013: 2013-2014: 2014-2015: 2015-2016: 2016-2017: 2017-2018: 2018-2019: 2019-2020: 2020-2021: 2021-2022: 2022-2023: 2023-2024: 2024-2025: 2025-2026: 2026-2027: 2027-2028: 2028-2029: 2029-2030: 2030-2031: 2031-2032: 2032-2033: 2033-2034: 2034-2035: 2035-2036: 2036-2037: 2037-2038: 2038-2039: 2039-2040: 2040-2041: 2041-2042: 2042-2043: 2043-2044: 2044-2045: 2045-2046: 2046-2047: 2047-2048: 2048-2049: 2049-2050: 2050-2051: 2051-2052: 2052-2053: 2053-2054: 2054-2055: 2055-2056: 2056-2057: 2057-2058: 2058-2059: 2059-2060: 2060-2061: 2061-2062: 2062-2063: 2063-2064: 2064-2065: 2065-2066: 2066-2067: 2067-2068: 2068-2069: 2069-2070: 2070-2071: 2071-2072: 2072-2073: 2073-2074: 2074-2075: 2075-2076: 2076-2077: 2077-2078: 2078-2079: 2079-2080: 2080-2081: 2081-2082: 2082-2083: 2083-2084: 2084-2085: 2085-2086: 2086-2087: 2087-2088: 2088-2089: 2089-2090: 2090-2091: 2091-2092: 2092-2093: 2093-2094: 2094-2095: 2095-2096: 2096-2097: 2097-2098: 2098-2099: 2099-2100: 2100-2101: 2101-2102: 2102-2103: 2103-2104: 2104-2105: 2105-2106: 2106-2107: 2107-2108: 2108-2109: 2109-2110: 2110-2111: 2111-2112: 2112-2113: 2113-2114: 2114-2115: 2115-2116: 2116-2117: 2117-2118: 2118-2119: 2119-2120: 2120-2121: 2121-2122: 2122-2123: 2123-2124: 2124-2125: 2125-2126: 2126-2127: 2127-2128: 2128-2129: 2129-2130: 2130-2131: 2131-2132: 2132-2133: 2133-2134: 2134-2135: 2135-2136: 2136-2137: 2137-2138: 2138-2139: 2139-2140: 2140-2141: 2141-2142: 2142-2143: 2143-2144: 2144-2145: 2145-2146: 2146-2147: 2147-2148: 2148-2149: 2149-2150: 2150-2151: 2151-2152: 2152-2153: 2153-2154: 2154-2155: 2155-2156: 2156-2157: 2157-2158: 2158-2159: 2159-2160: 2160-2161: 2161-2162: 2162-2163: 2163-2164: 2164-2165: 2165-2166: 2166-2167: 2167-2168: 2168-2169: 2169-2170: 2170-2171: 2171-2172: 2172-2173: 2173-2174: 2174-2175: 2175-2176: 2176-2177: 2177-2178: 2178-2179: 2179-2180: 2180-2181: 2181-2182: 2182-2183: 2183-2184: 2184-2185: 2185-2186: 2186-2187: 2187-2188: 2188-2189: 2189-2190: 2190-2191: 2191-2192: 2192-2193: 2193-2194: 2194-2195: 2195-2196: 2196-2197: 2197-2198: 2198-2199: 2199-2200: 2200-2201: 2201-2202: 2202-2203: 2203-2204: 2204-2205: 2205-2206: 2206-2207: 2207-2208: 2208-2209: 2209-2210: 2210-2211: 2211-2212: 2212-2213: 2213-2214: 2214-2215: 2215-2216: 2216-2217: 2217-2218: 2218-2219: 2219-2220: 2220-2221: 2221-2222: 2222-2223: 2223-2224: 2224-2225: 2225-2226: 2226-2227: 2227-2228: 2228-2229: 2229-2230: 2230-2231: 2231-2232: 2232-2233: 2233-2234: 2234-2235: 2235-2236: 2236-2237: 2237-2238: 2238-2239: 2239-2240: 2240-2241: 2241-2242: 2242-2243: 2243-2244: 2244-2245: 2245-2246: 2246-2247: 2247-2248: 2248-2249: 2249-2250: 2250-2251: 2251-2252: 2252-2253: 2253-2254: 2254-2255: 2255-2256: 2256-2257: 2257-2258: 2258-2259: 2259-2260: 2260-2261: 2261-2262: 2262-2263: 2263-2264: 2264-2265: 2265-2266: 2266-2267: 2267-2268: 2268-2269: 2269-2270: 2270-2271: 2271-2272: 2272-2273: 2273-2274: 2274-2275: 2275-2276: 2276-2277: 2277-2278: 2278-2279: 2279-2280: 2280-2281: 2281-2282: 2282-2283: 2283-2284: 2284-2285: 2285-2286: 2286-2287: 2287-2288: 2288-2289: 2289-2290: 2290-2291: 2291-2292: 2292-2293: 2293-2294: 2294-2295: 2295-2296: 2296-2297: 2297-2298: 2298-2299: 2299-2300: 2300-2301: 2301-2302: 2302-2303: 2303-2304: 2304-2305: 2305-2306: 2306-2307: 2307-2308: 2308-2309: 2309-2310: 2310-2311: 2311-2312: 2312-2313: 2313-2314: 2314-2315: 2315-2316: 2316-2317: 2317-2318: 2318-2319: 2319-2320: 2320-2321: 2321-2322: 2322-2323: 2323-2324: 2324-2325: 2325-2326: 2326-2327: 2327-2328: 2328-2329: 2329-2330: 2330-2331: 2331-2332: 2332-2333: 2333-2334: 2334-2335: 23

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RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipments Number <u>2000-08-TF</u>		2) Sample Number <u>96-290</u>		3) Supervisor <u>R. Funch</u>	
4) Tank <u>AN-105</u>		5) Rate <u>2B</u>		6) Segment <u>16</u>	
7) Date <u>159</u>		8) Core Seal Number <u>C-2008</u>			
9) Date Survey Date:		10) FIELD		11) LABORATORY	
Over Top Dose Rate <u>1 in R/h</u>		<u>1 in R/h</u>			
Side Dose Rate <u>3.6 in R/h</u>		<u>3.5 in R/h</u>			
Bottom Dose Rate <u>1.5 in R/h</u>		<u>1.5 in R/h</u>			
Sensable Contamination <u>220 gpm/100m²</u>		<u>220 gpm/100m²</u>			
RCT* (HPT) <u>R. Funch</u> (Signature)		RCT* (HPT) <u>R. Funch</u> (Signature)		11) Shipments Description A. Work Package Number <u>ES-95-00487</u> B. Core Seal Number <u>10304</u> C. Sampler Serial Number <u>RGS-15</u> D. Date and Time Sampler Unreared <u>6-28-96 12:00</u> E. Expected Liquid Content <u>30%</u> F. Expected Solid Content <u>70%</u> G. Dose Rate Through Drill String <u>2.0 R</u> H. Expected Sample Length <u>19</u>	

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

2) Field Comments <u>RGS samples</u> <u>1500 ml Lithium Iodide, added</u> <u>sample clean</u>		3) Laboratory Comments	
4) Point of Origin <u>2B</u>	11) Destination <u>2229 Lab</u>	12) Sender Name (Sign and PRINT) <u>James Luchio James Siskels</u>	13) Date/Time <u>6-28-96</u>
5) Requisitioned By (Sign and PRINT) <u>James Luchio James Siskels</u>	14) Received By (Sign and PRINT) <u>Charles R. Boyd C.R. Boyd</u>	15) Date/Time <u>6-28-96</u>	16) Receiver Comments
6) Requisitioned By (Sign and PRINT) <u>Charles R. Boyd C.R. Boyd</u>	17) Received By (Sign and PRINT) <u>James A. Cook</u>	18) Date/Time <u>6-28-96</u>	19) Receiver Comments
7) Requisitioned By (Sign and PRINT)	20) Received By (Sign and PRINT)	21) Date/Time	22) Receiver Comments
18) Seal Intact Upon Release? ☒ Yes ☐ No		21) Seal Intact Upon Receipt? ☒ Yes ☐ No	
23) Seal Data Consistent with this Record? ☒ Yes ☐ No		24) Seal Data Consistent with this Record? ☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number <u>200W-08-TP</u>		2) Sample Number <u>94-292</u>		3) Supervisor <u>R. Frank Lant</u>	
4) Tank <u>RU 105</u>		5) Floor <u>7B</u>		6) Segment <u>18</u>	
7) Core <u>153</u>		8) Core Serial Number <u>77</u>			
Station Survey Data:		(31) FIELD		(32) LABORATORY	
Over Top Core Rate <u>1 m/s/hr</u>		<u>1 m/s/hr</u>		A. Work Package Number <u>ES-95-00497</u>	
Side Core Rate <u>3.5 m/s/hr</u>		<u>3.5 4.0 m/s/hr</u>		B. Core Seal Number <u>10305</u>	
Bottom Core Rate <u>1.0 m/s/hr</u>		<u>1.0 m/s/hr</u>		C. Sampler Serial Number <u>RG-019</u>	
Seizable Contamination <u>270 dms/100cm²</u>		<u>220 dms/100cm²</u>		D. Date and Time Sampler Unsealed <u>6-28-96/0441</u>	
<u>1 kg dms/100cm²</u>		<u>1000 dms/100cm²</u>		E. Expected Liquid Content <u>30%</u>	
ACT* <u>[Signature]</u>		ACT* <u>[Signature]</u>		F. Expected Solid Content <u>70%</u>	
(SPT)		(SPT)		G. Core Rate Through Drill String <u>1.8</u>	
(Signature)		(Signature)		H. Expected Sample Length <u>19"</u>	

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

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1. MC-SUM-ADP-199, REV. 0

2) Field Comments <u>1500 mb Lithium brownish added</u> <u>RG-01 sampler</u> <u>sample clean</u>		3) Laboratory Comments			
3) Point of Origin <u>7B</u>		4) Designation <u>2225 Lab</u>		5) Sender Name (Sign and PRINT) <u>James Suckale James Suckale</u>	
6) Date/Time <u>6-28-96</u>		7) Receiver Name (Sign and PRINT) <u>James Suckale James Suckale</u>		8) Date/Time <u>6-28-96</u>	
9) Date/Time <u>6-28-96</u>		10) Date/Time <u>6-28-96</u>		11) Date/Time <u>6-28-96</u>	
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243) Date/Time <u>6-28-96</u>		244) Date/Time <u>6-28-96</u>		245) Date/Time <u>6-28-96</u>	
246) Date/Time <u>6-28-96</u>		247) Date/Time <u>6-28-96</u>		248) Date/Time <u>6-28-96</u>	
249) Date/Time <u>6-28-96</u>		250) Date/Time <u>6-28-96</u>		251) Date/Time <u>6-28-96</u>	
252) Date/Time <u>6-28-96</u>		253) Date/Time <u>6-28-96</u>		254) Date/Time <u>6-28-96</u>	
255) Date/Time <u>6-28-96</u>		256) Date/Time <u>6-28-96</u>		257) Date/Time <u>6-28-96</u>	
258) Date/Time <u>6-28-96</u>		259) Date/Time <u>6-28-96</u>		260) Date/Time <u>6-28-96</u>	
261) Date/Time <u>6-28-96</u>		262) Date/Time <u>6-28-96</u>		263) Date/Time <u>6-28-96</u>	
264) Date/Time <u>6-28-96</u>		265) Date/Time <u>6-28-96</u>		266) Date/Time <u>6-28-96</u>	
267) Date/Time <u>6-28-96</u>		268) Date/Time <u>6-28-96</u>		269) Date/Time <u>6-28-96</u>	
270) Date/Time <u>6-28-96</u>		271) Date/Time <u>6-28-96</u>		272) Date/Time <u>6-28-96</u>	
273) Date/Time <u>6-28-96</u>		274) Date/Time <u>6-28-96</u>		275) Date/Time <u>6-28-96</u>	
276) Date/Time <u>6-28-96</u>		277) Date/Time <u>6-28-96</u>		278) Date/Time <u>6-28-96</u>	
279) Date/Time <u>6-28-96</u>		280) Date/Time <u>6-28-96</u>		281) Date/Time <u>6-28-96</u>	
282) Date/Time <u>6-28-96</u>		283) Date/Time <u>6-28-96</u>		284) Date/Time <u>6-28-96</u>	
285) Date/Time <u>6-28-96</u>		286) Date/Time <u>6-28-96</u>		287) Date/Time <u>6-28-96</u>	
288) Date/Time <u>6-28-96</u>		289) Date/Time <u>6-28-96</u>		290) Date/Time <u>6-28-96</u>	
291) Date/Time <u>6-28-96</u>		292) Date/Time <u>6-28-96</u>		293) Date/Time <u>6-28-96</u>	
294) Date/Time <u>6-28-96</u>		295) Date/Time <u>6-28-96</u>		296) Date/Time <u>6-28-96</u>	
297) Date/Time <u>6-28-96</u>		298) Date/Time <u>6-28-96</u>		299) Date/Time <u>6-28-96</u>	
300) Date/Time <u>6-28-96</u>		301) Date/Time <u>6-28-96</u>		302) Date/Time <u>6-28-96</u>	
303) Date/Time <u>6-28-96</u>		304) Date/Time <u>6-28-96</u>		305) Date/Time <u>6-28-96</u>	
306) Date/Time <u>6-28-96</u>		307) Date/Time <u>6-28-96</u>		308) Date/Time <u>6-28-96</u>	
309) Date/Time <u>6-28-96</u>		310) Date/Time <u>6-28-96</u>		311) Date/Time <u>6-28-96</u>	
312) Date/Time <u>6-28-96</u>		313) Date/Time <u>6-28-96</u>		314) Date/Time <u>6-28-96</u>	
315) Date/Time <u>6-28-96</u>		316) Date/Time <u>6-28-96</u>		317) Date/Time <u>6-28-96</u>	
318) Date/Time <u>6-28-96</u>		319) Date/Time <u>6-28-96</u>		320) Date/Time <u>6-28-96</u>	
321) Date/Time <u>6-28-96</u>		322) Date/Time <u>6-28-96</u>		323) Date/Time <u>6-28-96</u>	
324) Date/Time <u>6-28-96</u>		325) Date/Time <u>6-28-96</u>		326) Date/Time <u>6-28-96</u>	
327) Date/Time <u>6-28-96</u>		328) Date/Time <u>6-28-96</u>		329) Date/Time <u>6-28-96</u>	
330) Date/Time <u>6-28-96</u>		331) Date/Time <u>6-28-96</u>		332) Date/Time <u>6-28-96</u>	
333) Date/Time <u>6-28-96</u>		334) Date/Time <u>6-28-96</u>		335) Date/Time <u>6-28-96</u>	
336) Date/Time <u>6-28-96</u>		337) Date/Time <u>6-28-96</u>		338) Date/Time <u>6-28-96</u>	
339) Date/Time <u>6-28-96</u>		340) Date/Time <u>6-28-96</u>		341) Date/Time <u>6-28-96</u>	
342) Date/Time <u>6-28-96</u>		343) Date/Time <u>6-28-96</u>		344) Date/Time <u>6-28-96</u>	
345) Date/Time <u>6-28-96</u>		346) Date/Time <u>6-28-96</u>		347) Date/Time <u>6-28-96</u>	
348) Date/Time <u>6-28-96</u>		349) Date/Time <u>6-28-96</u>		350) Date/Time <u>6-28-96</u>	
351) Date/Time <u>6-28-96</u>		352) Date/Time <u>6-28-96</u>		353) Date/Time <u>6-28-96</u>	
354) Date/Time <u>6-28-96</u>		355) Date/Time <u>6-28-96</u>		356) Date/Time <u>6-28-96</u>	
357) Date/Time <u>6-28-96</u>		358) Date/Time <u>6-28-96</u>		359) Date/Time <u>6-28-96</u>	
360) Date/Time <u>6-28-96</u>		361) Date/Time <u>6-28-96</u>		362) Date/Time <u>6-28-96</u>	
363) Date/Time <u>6-28-96</u>		364) Date/Time <u>6-28-96</u>		365) Date/Time <u>6-28-96</u>	
366) Date/Time <u>6-28-96</u>		367) Date/Time <u>6-28-96</u>		368) Date/Time <u>6-28-96</u>	
369) Date/Time <u>6-28-96</u>		370) Date/Time <u>6-28-96</u>		371) Date/Time <u>6-28-96</u>	
372) Date/Time <u>6-28-96</u>		373) Date/Time <u>6-28-96</u>		374) Date/Time <u>6-28-96</u>	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Request Number 200-08-4F (2) Sample Number 18-273 (3) Instrument POSS-1
 (4) Task 100-45 (5) Date 78 (6) Equipment 19 (7) Core 153 (8) Core Serial Number 96

Recovery Survey Data		(3) INFORMATION		(10) Additional Information	
Core Top Core Rev	<u>2045</u>	Core Top Core Rev	<u>2045</u>	A. Core Package Number	<u>65-55-00489</u>
Side Break Rate	<u>310</u>	Side Break Rate	<u>32</u>	B. Core Seal Number	<u>11137</u>
Bottom Drive Rate	<u>21</u>	Bottom Drive Rate	<u>117</u>	C. Sample Seal Number	<u>95-0905</u>
Removable Container/Seal	<u>220</u>	Removable Container/Seal	<u>220</u>	D. Date and Time Sampled (MM/DD/YYYY)	<u>6/25/96 1541</u>
(11) (12)	<u>1K</u>	(11) (12)	<u>1K</u>	E. Expected Log Length (meters)	<u>30.8</u>
RC1 (13)	<u>1K</u>	RC1 (13)	<u>1K</u>	F. Expected Log Length (meters)	<u>10-40 20.8</u>
RC2 (14)	<u>1K</u>	RC2 (14)	<u>1K</u>	G. Core Seal Through Core String	<u>1-6 6/16</u>
				H. Expected Sample Length	<u>15</u>

(15) INFORMATION (include assessment of laboratory (core to be performed))

(16) Field Comments		(17) Laboratory Comments	
<u>WATER WITH 1/2" DRIP TO NEAR FLUID</u>			
(18) Field at Origin	(19) Description	(20) Sampled by (Name and PRINT)	(21) Sampled by (Name and PRINT)
<u>100-45</u>	<u>222.5</u>	<u>James S. Suckel</u>	<u>James S. Suckel</u>
(22) Retrieved by (Name and PRINT)	(23) Retrieved by (Name and PRINT)	(24) Retrieved by (Name and PRINT)	(25) Retrieved by (Name and PRINT)
<u>James S. Suckel</u>	<u>James S. Suckel</u>	<u>James S. Suckel</u>	<u>James S. Suckel</u>
(26) Retrieved by (Name and PRINT)	(27) Retrieved by (Name and PRINT)	(28) Retrieved by (Name and PRINT)	(29) Retrieved by (Name and PRINT)
<u>James S. Suckel</u>	<u>James S. Suckel</u>	<u>James S. Suckel</u>	<u>James S. Suckel</u>
(30) Seal Status Upon Recovery	(31) Seal Status Upon Recovery	(32) Seal Status Upon Recovery	(33) Seal Status Upon Recovery
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Receipt of Sample Blue - Core Sampling 58-95 (planning) - Task Force Operations, 58-42

BC-0000-3028 (03/94)

RGS

7) INFORMATION includes assessment of laboratory work to be performed.

MIC-SD-MW-DP-188, REV. C

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-TF (2) Sample Number 96-295 (3) Supervisor R. Frank Lunt
 Tank BN 105 (5) Rose 7B (6) Segment 21 (7) Core 153 (8) Cask Serial Number C-1036

(1) FIELD Over Top Dose Rate <u>0.5 mrem</u> Side Dose Rate <u>28 mrem</u> Bottom Dose Rate <u>15 mrem</u> Gamma Contamination <u>420</u> (Alpha) <u>41K</u> (Beta-Gamma) <u>41K</u> RCT* <u>[Signature]</u> (MPT) <u>[Signature]</u>		(3) LABORATORY Over Top Dose Rate <u>0.5 mrem/h</u> Side Dose Rate <u>32 mrem/h</u> Bottom Dose Rate <u>14 mrem/h</u> Gamma Contamination <u>220</u> (Alpha) <u>41K</u> (Beta-Gamma) <u>41K</u> RCT* <u>[Signature]</u> (MPT) <u>[Signature]</u>		(10) Shipment Description A. Work Package Number <u>ES-95-00487</u> B. Cask Seal Number <u>10306</u> C. Sampler Serial Number <u>95-0945</u> D. Date and Time Sampler Unseated <u>4-28-96 / 1821</u> E. Expected Liquid Content <u>30%</u> F. Expected Solid Content <u>70%</u> G. Dose Rate Through Dri-Stop <u>1.7 R</u> H. Expected Sample Length <u>19"</u>
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(1) INFORMATION (Include statement of laboratory tests to be performed.)

(2) Field Comments <u>1500ml lithium bromide added</u> <u>universal sampler - 8</u> <u>sampler clean - drops of liquid on bottom</u>		(34) Laboratory Comments	
(3) Point of Origin <u>7B</u> <u>207 106</u>	(14) Destination <u>222S Lab</u>	(15) Sender Name (Sign and PRINT) <u>Thomas L. Lunt James S. Sicks</u>	(18) Date/Time <u>7-3-96</u>
(4) Received By (Sign and PRINT) <u>Thomas L. Lunt James S. Sicks</u>		(20) Receiver Name (Sign and PRINT) <u>James S. Sicks</u>	(21) Date/Time <u>7-3-96</u>
(5) Released By (Sign and PRINT) <u>James S. Sicks</u>		(24) Received By (Sign and PRINT) <u>James S. Sicks</u>	(25) Date/Time <u>7-3-96</u>
(6) Released By (Sign and PRINT) <u>James S. Sicks</u>		(28) Received By (Sign and PRINT) <u>James S. Sicks</u>	(29) Date/Time <u>7-3-96</u>
(13) Seal Intact Upon Release? ☒ Yes ☐ No		(32) Seal Data Consistent with this Record? ☒ Yes ☐ No	
(31) Seal Intact Upon Receipt? ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	

Shipwreck Number <u>200W-08-TF</u>		12) Sample Number <u>20-105 16-297-296</u>		13) Supervisor <u>Donald Page</u>	
1) Tank <u>AN-105</u>		14) Riser <u>TB</u>		15) Core <u>153</u>	
16) Bagment <u># 22</u>		17) Core <u>153</u>		18) Cask Serial Number <u>10125</u>	
19) FIELD			20) LABORATORY		
Over Top Core Rate <u>0.5 m/min</u>			Over Top Core Rate <u>15 m/min/hr</u>		
Side Core Rate <u>28 m/min</u>			Side Core Rate <u>28 m/min/hr</u>		
Bottom Core Rate <u>10 m/min</u>			Bottom Core Rate <u>10 m/min/hr</u>		
Seawater Contamination <u><20</u>			Seawater Contamination <u><20</u>		
(Alpha)			(Alpha)		
<u>21K</u>			<u>21K</u>		
(Beta-Gamma)			(Beta-Gamma)		
<u>100</u>			<u>100</u>		
NCT* (HPT)			NCT* (HPT)		
<u>100</u>			<u>100</u>		
Signature			Signature		
<u>[Signature]</u>			<u>[Signature]</u>		
21) Shipwreck Description			22) Shipwreck Description		
A. Work Package Number <u>ES</u>			A. Work Package Number <u>ES</u>		
B. Cask Seal Number <u>1608</u>			B. Cask Seal Number <u>1608</u>		
C. Sampler Serial Number <u>94-0855</u>			C. Sampler Serial Number <u>94-0855</u>		
D. Date and Time Sampler Unloaded <u>4/29/96 - 1825</u>			D. Date and Time Sampler Unloaded <u>4/29/96 - 1825</u>		
E. Expected Liquid Content <u>100%</u>			E. Expected Liquid Content <u>100%</u>		
F. Expected Solid Content <u>0</u>			F. Expected Solid Content <u>0</u>		
G. Core Rise Through Drill String <u>2.5 R</u>			G. Core Rise Through Drill String <u>2.5 R</u>		
H. Expected Sample Length <u>14" stroke</u>			H. Expected Sample Length <u>14" stroke</u>		

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

32 Field Comments

There is waste about 6" up Sample
from Bottom

☐ Laboratory Comments

23) Points of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
14-055 R-70	222-5 Lube	Paul R. Paznik	7-29-1950	
24) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
Paul R. Paznik		Connie B. Paznik	7-29-1950	
25) Relinquished By (Sign and PRINT)		(23) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
Connie B. Paznik		E. F. Dubois	7-29-1950	
27) Relinquished By (Sign and PRINT)		(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments

(16) Seal intact upon delivery?

☒ Yan ☐ He

2013 Budget Illustrative Example: Planning

☒ Yes ☐ No

Chipmunk No.

 $\text{Y} \oplus \text{Z}$ $\text{M} \ominus \text{N}$

(12) Self Data Consistent with this Record?

County Birth No.

☒ Yes ☐ No

Sample Size

 Li_2O

STAFF/TEAM: White - Office of General Management

Yellow - Redesign of Carapace

Plot - Case Enrolling, 37-44

Goldswold - Tank Farm Operations, 44-45

EC-0000-258 02/18/41

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipmen Number 200W-08-TF (2) Sample Number AN-105 Field Block (3) Supervisor Daniel Ayala
 (4) Tank AN-105 (5) Riser 78 (6) Segment Field Block (7) Core 153 (8) Core Serial Number 176

(9) FIELD		(10) LABORATORY		(11) Shipmen Description	
Over Top Core Rate	<u><0.5 m/min</u>	Over Top Core Rate	<u><0.5 m/min</u>	A. Work Package Number	<u>ES-95-00477/0</u>
Side Core Rate	<u><0.5 m/min</u>	Side Core Rate	<u><0.5 m/min</u>	B. Core Serial Number	<u>1222</u>
Bottom Core Rate	<u><0.5 m/min</u>	Bottom Core Rate	<u><0.5 m/min</u>	C. Sample Serial Number	<u>74-0865</u>
Seizable Contamination	<u><20</u> (Alpha)	Seizable Contamination	<u><20</u> (Alpha)	D. Date and Time Sampler Unseated	<u>6/18/76, 1810</u>
RCT* (HPT)	<u>4/18/76</u> (Signature)	RCT* (HPT)	<u>4/18/76</u> (Signature)	E. Expected Liquid Content	<u>100%</u>
				F. Expected Solid Content	<u>0</u>
				G. Core Rate Through Drill String	<u>0</u>
				H. Expected Sample Length	<u>17"</u>

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

136

(13) Field Comments <u>De-ionized H₂O</u>	(14) Laboratory Comments
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(15) Point of Origin <u>AN-105</u>	(16) Destination <u>222-S Lab</u>	(17) Shipmen Name (Sign and PRINT) <u>James S. Sicks</u>	(18) Date/Time <u>7-3-96</u>	(19) Sender Comments
(20) Released By (Sign and PRINT) <u>James S. Sicks</u>	(21) Received By (Sign and PRINT) <u>James S. Sicks</u>	(22) Date/Time <u>7-3-96</u>	(23) Receiver Comments	
(24) Released By (Sign and PRINT) <u>James S. Sicks</u>	(25) Received By (Sign and PRINT) <u>James S. Sicks</u>	(26) Date/Time <u>7-3-96</u>	(27) Receiver Comments	
(28) Released By (Sign and PRINT)	(29) Received By (Sign and PRINT)	(30) Date/Time	(31) Receiver Comments	

(32) Seal Intact Upon Release? ☒ Yes ☐ No	(33) Seal Intact Upon Receipt? ☒ Yes ☐ No	(34) Seal Data Consistent with this Record? ☒ Yes ☐ No
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9C-SD-PHM-OP-109, REV. 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number MB-2236 (2) Sample Number LIBC BLANK (3) Supervisor M. C. JONES
 (4) Tube AN-105 (5) Filter 7B (6) Segment BLANK (7) Core 153 (8) Cask Serial Number N/A

Radiation Survey Data		(9) FIELD	(10) LABORATORY	1104 Shipment Description	
Over Top Dose Rate				A. Work Package Number	<u>ES-95-00467</u>
Side Dose Rate				B. Cask Seal Number	<u>10453</u>
Bottom Dose Rate				C. Sampler Serial Number	<u>N/A</u>
Smearable Contamination				D. Date and Time Sampler Unsealed	<u>7-1-96 0530</u>
	(Alpha)	(Alpha)		E. Expected Liquid Contents	<u>100%</u>
	(Beta Gamma)	(Beta Gamma)		F. Expected Solid Contents	<u>0%</u>
ACT- (HPT)	(Signature)	ACT- (HPT)	(Signature)	G. Dose Rate Through Drill String	<u>2.5 mR/hr</u>
				H. Expected Sample Length	<u>100 mL</u>

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

1121 Field Comments	1122 Laboratory Comments
<u>LIBC FIELD BLANK</u>	

(13) Point of Origin <u>ALLIUS</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>Ken R. Penzlik for M.C. Jones</u>	(16) Date/Time <u>7-27-94</u>	(17) Sampler Comments
(18) Released By (Sign and PRINT) <u>Ken R. Penzlik</u>	(19) Received By (Sign and PRINT) <u>Connie Botwin</u>	(20) Date/Time <u>7-27-94 1830</u>	(21) Date/Time <u>7-27-94 1830</u>	(22) Receiver Comments
(23) Released By (Sign and PRINT) <u>Connie Botwin</u>	(24) Received By (Sign and PRINT) <u>EE Dubois</u>	(25) Date/Time <u>7-27-94 1830</u>	(26) Date/Time <u>7-27-94 1830</u>	(27) Receiver Comments
(28) Released By (Sign and PRINT)	(29) Received By (Sign and PRINT)	(30) Date/Time	(31) Date/Time	(32) Receiver Comments

(110) Seal Intact Upon Release? ☒ Yes ☐ No	(111) Seal Intact Upon Receipt? ☒ Yes ☐ No	Shipment No. ☐ Yes ☒ No <u>N/A</u>	Cask Seal No. ☐ Yes ☒ No <u>N/A</u>	Sample No. ☒ Yes ☐ No
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DISTRIBUTION White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 55-85 Goldenrod - Tank Farm Operations, 54-43

BC 0000 303 (02/94)

110-SD-11A-DR-199, REV. 0

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WHC-SO-WH-DP-199, REV. 0

INORGANIC ANALYSES

MHC-SO-WM-DF-199, REV. 0

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~~WAC-SD-WF-OF-199~~, REV. 0

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LABCORE Data Entry Template for Worklist#

11288

Analyst: CD Instrument: DSC0 1 Book # PLAN#8

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

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

GROUP	PROJECT	S TYPE	SAMPLE	# A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	28.1	N/A	Joules/g
96000832	AN-105	2 SAMPLE	9961003732	0	DSC-01	LIQUID	N/A	0		Joules/g
96000832	AN-105	3 DUP	9961003732	0	DSC-01	LIQUID	0	0	N/A	Joules/g
96000832	AN-105	4 SAMPLE	9961003739	0	DSC-01	LIQUID	N/A	0		Joules/g
96000832	AN-105	5 DUP	9961003739	0	DSC-01	LIQUID	0	0	N/A	Joules/g

Final page for worklist # 11288

CD 7/31/96
Analyst Signature Date

Paula Mueh 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-7-96

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 142 TO 146

DSC STD 12N14-B

19.780 mg

Rate: 10.0 °C/min

File: 00009.001

DSC METTLER 31-Jul-96

Ident: 0.0

222-S Laboratory

exo

Integration
Delta H 386 mJ
28.1 J/g
Peak 161.2°C
-19.4 mW

142

10.01

Blandina Valenzuela for PD Meyers 8-7-96

120.

140.

160.

180.

°C

WMC-SD-WM-D-2-99, REV. C

596T003732 N2

18.000 mg

Rate: 10.0 °C/min

File: 00009.001 DSC METTLER 31-JUL-95

Ident: 0.0

922-8 Laboratory

VOX

20 mW

Integration

Delta H24223 mJ

1345.7 J/g

Peak 126.9°C

-55.4 mW

100.

200.

300.

400.

°C

896T003732 DUP N2

24.900 mg

Rate: 10.0 °C/min

File: 00011.001

DSC METTLER

31-Jul-98

Ident: 0.0

222-B Laboratory

exo

50. mW

Integration

Delta H35242 mJ

1450.3 J/g

Peak 131.8°C

-75.8 mW

100.

200.

300.

400.

°C

S96T003739 M2

17.789 mg

Rate: 10.0 °C/min

File: 09005.001

DSC METTLER 31-Jul-95

Ident: 0.0

222-S Laboratory

S96T003739DUP N2

15.130 mg

Rate: 10.0 °C/min

File: 00007.001

DSC METTLER

31-Jul-98

Ident: 0.0

222-E Laboratory

LABCORE Data Entry Template for Worklist#

11289

Analyst: KRM Instrument: DSC0 1 Book # 12/146

Method: LA-514-119 Rev/Mod C-1

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

GROUP	PROJECT	S TYPE	SAMPLE#	S A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	L10010	28.45	28.1 *	N/A	joules/g
96000532	AN-105	2 SAMPLE	9600053760	0	DSC-01	L10010	N/A	0		joules/g
96000532	AN-105	3 DUP	9600053760	0	DSC-01	L10010	0	0	N/A	joules/g
96000532	AN-105	4 SAMPLE	9600053741	0	DSC-01	L10010	N/A	0		joules/g
96000532	AN-105	5 DUP	9600053741	0	DSC-01	L10010	0	0	N/A	joules/g

Final page for worklist #

11289

Analyst Signature Date 7-31-96

Analyst Signature Date 8-6-90

Verified by ⁸⁻⁷⁻⁹⁶
Validated by
Blandina
Valenzuela
8-7-96

Data Entry Comments:

Units shown for QC (SPE & 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 148 TO 152.

DSC STD 12N14-B

19.780 mg

Rate: 10.0 °C/min

File: 00003.001

Ident: 0.0

DSC METTLER 31-JUL-96

222-S Laboratory

> EXO

Integration
Delta H 387 mJ
28.1 J/g
Peak 161.2°C
-19.4 mW

10
mW

120.

140.

160.

180.

°C

248

Paul M. T... 7-31-96

WHO-SD-WA-000000-000000

998T003740 SAM N2

14.139 mg

Rate: 10.0 °C/min

File: 00013.001 DSC METTLER 31-Jul-96

Ident: 0.0

222-S Laboratory

S96T009740 DUP N2

17.852 mg

Rate: 10.0 °C/min

File: 00018.001

Ident: 0.0

DSC METTLER

31-Jul-96

222-S Laboratory

S96T003741 DUP N2

14.783 mg

Rate: 10.0 °C/min

File: 00018.001

DSC METTLER 31-Jul-96

Ident: 0.0

222-E Laboratory

EXD

Integration

Delta H 20275 mJ

1371.5 J/g

Peak 125.1°C

-51.4 mW

Integration

Delta H 547 mJ

37.0 J/g

Peak 240.9°C

-5.4 mW

20. mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11290

Analyst: SME Instrument: DSC0 1 Book # 12N14B

Method: LA-514-113 Rev/Mod C-1 9/18/96

Worklist Comment: AN-105 DSC, RUN UNDER N2, RCJ

GROUP	SUBJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	27.6	N/A	Joules/g
9600032	AN-105	2 SAMPLE	96T003742	0	DSC-01	LIQUID	N/A	Ø		Joules/g
9600062	AN-105	3 DUP	96T003742	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
9600032	AN-105	4 SAMPLE	96T003743	0	DSC-01	LIQUID	N/A	Ø		Joules/g
9600032	AN-105	5 DUP	96T003743	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist #

11290

Analyst Signature

Date

Analyst Signature

Date

Verified/Validated by

Blandina

Valenzuela

8-7-96

Data Entry Comments

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 154 TO 158

DSC STD 12N14B

4.778 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

DSC NETTLER 01-Aug-98

222-B Laboratory

exo

5 mW

Integration
Delta H 132 mJ
27.6 J/g
Peak 158.3°C
-11.7 mW

120.

140.

160.

180.

154

WHCSD-WM-DP-199, REV. 0

Signature 81-96

S95T003742 N2

13.485 mg

Rate: 10.0 °C/min

File: 00099.001

DSC METTLER

01-Aug-98

Ident: 0.0

222-B Laboratory

exo>

Integration

Delta H12998 mJ

963.9 J/g

Peak 121.3°C

-35.0 mW

155

20. mW

100.

200.

300.

400.

°C

S96T003742 DUP N2

15.985 mg

Rate: 10.0 °C/min

File: 00630.001

DSC METTLER

01-Aug-96

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration
Delta H16802 mJ
1051.1 J/g
Peak 130.9°C
-44.3 mW

100.

200.

300.

400.

°C

156

S96T003743 N2

13.780 mg

Rate: 10.0 °C/min

File: 00042.001

Ident: 0.0

DSC METTLER 02-Aug-95

B22-B Laboratory

exo

20 mW

Integration
Delta H13728 mJ
997.7 J/g
Peak 127.3°C
-35.8 mW

100.

200.

300.

400.

°C

S96T003743 DUP N2

15.339 mg

Rate: 10.0 °C/min

File: 00044.001

DSC NETTLER 02-Aug-98

Ident: 0.0

222-S Laboratory

158

WHC-SD-WM-DP-199, REV. 0

LABCORE Data Entry Template for Worklist#

11291

Analyst: SME/100 Instrument: DSC0 1 Book # 120148

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

Worklist Comment: AN-105 DSC, RUN UNDER N2, RCI

GROUP	PROJECT	S TIME	SAMPLE	R A	TEST	MATCH	ACTUAL	FOLIO	DL	UNIT
		1 STD			DSC-01	LIMITED	<u>28.45</u>	<u>27.8*</u>	<u>N/A</u>	Joules/g
9600832	AN-105	2 SAMPLE	9951003744	0	DSC-01	LIMITED	<u>N/A</u>	<u>0</u>		Joules/g
9600832	AN-105	3 DUP	9951003744	0	DSC-01	LIMITED	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
9600832	AN-105	4 SAMPLE	9951003745	0	DSC-01	LIMITED	<u>N/A</u>	<u>0</u>		Joules/g
9600832	AN-105	5 DUP	9951003745	0	DSC-01	LIMITED	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11291

Analyst Signature

Date

Analyst Signature

Date

Anthony Puro 8-2-96

Verified/Validated by
Blondina
Valenzuela 8-7-96

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 142 TO 144.

DSC STD 12N148

4.778 mg

Rate: 10.0 °C/min

File: 00028.001

Ident: 0.0

DSC METTLER

01-Aug-98

222-B Laboratory

WHC-SD-WM-DE-199, REV. 0

S98T003744 N2

14.180 mg

Rate: 10.0 °C/min

File: 00045.001

DSC METTLER

02-Aug-98

Ident: 0.0

222-E Laboratory

AXO
60

50. mW

Integration

Delta H14093 mJ

993.9 J/g

Peak 121.4°C

-38.7 mW

100.

200.

300.

400.

°C

895T003744 DUP N2

14.995 mg

Rate: 10.0 °C/min

File: 00049.001

DSC METTLER

02-Aug-95

Ident: 0.0

222-S Laboratory

6X00

162

20. mW

Integration
Delta H 14042 mJ
936.4 J/g
Peak 135.0 °C
-42.5 mW

Integration
Delta H 432 mJ
29.8 J/g
Peak 241.0 °C
-4.6 mW

100.

200.

300.

400.

°C

S95T003745 SAM N2

22.500 mg

Rate: 10.0 °C/min

File: 00052.001

DSC METTLER 02-Aug-96

Ident: 0.0

223-G Laboratory

exo >

50. mW

Integration
Delta H23419 mJ
1026.9 J/g
Peak 134.0°C
-51.3 mW

100.

200.

300.

400.

°C

3745 ^{WLA} 9/7/96

S96T0Q3475 DUP N2

31.245 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

DSC METTLER 02-Aug-96

222-S Laboratory

exo

Integration

Delta H 54 mJ

1.7 J/g

Peak 305.1°C

-1.0 mW

Integration

Delta H 29766 mJ

952.7 J/g

Peak 131.3°C

-76.6 mW

Integration

Delta H 1566 mJ

50.1 J/g

Peak 238.6°C

-12.6 mW

WHCSD-WH-OP-188, REV. 0

164
mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11292

Analyst: ADP Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2, RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	A A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	L10010	<u>28.45</u>	<u>26.84</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	9961009744	0	DSC-01	L10010	<u>N/A</u>	<u>0</u>		Joules/g
96000832	AN-105	3 DUP	9961009744	0	DSC-01	L10010	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	9961009747	0	DSC-01	L10010	<u>N/A</u>	<u>0</u>		Joules/g
96000832	AN-105	5 DUP	9961009747	0	DSC-01	L10010	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11292

[Signature] 8-2-96
Analyst Signature Date

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 166 TO 170

IND 12N14-B N2

4.778 mg

Rate: 10.0 °C/min

File: 00080.001

DSC METTLER 02-Aug-95

Ident: 0.0

222-S Laboratory

996T003746 SAM M2

23.310 mg

Rate: 10.0 °C/min

File: 00058.001

DSC METTLER

02-Aug-95

Ident: 0.0

222-S Laboratory

S95T003746 DUP N2

19.049 mg

Rate: 10.0 °C/min

File: 00058.001

Ident: 0.0

DSC METTLER 02-Aug-96

222-S Laboratory

595T003747 SAM N2

19.690 mg

Rate: 10.0 °C/min

File: 00080.001

DSC METTLER

02-Aug-98

Ident: 0.0

222-B Laboratory

169

S96T003747 DUF N2

18.360 mg

Rate: 10.0 °C/min

File: 00084.001

DSC METTLER

03-Aug-98

Ident: 0.0

222-B Laboratory

ΔX
8X

20. mW

170

Integration
Delta H 18897 mJ
1029.3 J/g
Peak 132.5°C
-48.6 mW

Integration
Delta H 41 mJ
2.2 J/g
Peak 303.1°C
-0.6 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11293

Analyst: HP Instrument: DSC 1 Book # 12N14-B

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

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

GROUP	PROJECT	# TYPE	SAMPLE#	# A	TEST	INSTR	ACTUAL	FORM	DL	UNIT
		1 STD			DSC-01	L1000	28.45	28.7*	N/A	Joules/g
96000832	AN-105	2 SAMPLE	9961003748	#	DSC-01	L1000	N/A	Ø		Joules/g
96000832	AN-105	3 DUP	9961003748	#	DSC-01	L1000	Ø	Ø	N/A	Joules/g
96000832	AN-105	4 SAMPLE	9961003749	#	DSC-01	L1000	N/A	Ø		Joules/g
96000832	AN-105	5 DUP	9961003749	#	DSC-01	L1000	Ø	Ø	N/A	Joules/g

Final page for worklist # 11293

Anthony Peruto 8-3-96
Analyst Signature Date

Joseph Carl Mack 8-6-96
Analyst Signature Date

Rae Ann Green 8-3-96

Verified/Validated by
Blandina
Valenzuela 8-7-96

Data Entry Comments:

The thermogram for sample # 9961003749
was unobtainable. Sample was reanalyzed
on worklist # 13019. 7/19/96

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 112 TO 115.

IND 12N14-B N2

4.777 mg

Rate: 10.0 °C/min

File: 00062.001

DSC METTLER

03-Aug-96

Ident: 0.0

222-S Laboratory

S96T00374B 5AM N2

17.000 mg

Rate: 10.0 °C/min

File: 00070.001

DSC METTLER

09-Aug-98

Ident: 0.0

222-S Laboratory

S96T003748 DUP N2

15.884 mg

Rate: 10.0 °C/min

File: 00071.001

DSC METTLER

03-Aug-96

Ident: 0.0

222-S Laboratory

S96T003749 DUP N2

19.801 mg

Rate: 10.0 °C/min

File: 00073.001

DSC METTLER 03-Aug-86

Ident: 0.0

222-5 Laboratory

175

20. mW

Integration

Delta H23514 mJ

1231.0 J/g

Peak 125.6°C

-59.0 mW

100.

200.

300.

400.

°C

8-3-96

Rae Ann Green

LABCORE Data Entry Template for Worklist#

11294

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

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

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	WTRIN	ACTUAL	FIND	DL	UNIT
		1 STD			DSC-01	LIQID	<u>28.45</u>	<u>29.23</u>	<u>N/A</u>	Joules/g
95000832	AN-105	2 SAMPLE	5961003750 / 0		DSC-01	LIQID	<u>N/A</u>	<u>0</u>		Joules/g
95000832	AN-105	3 DUP	5961003750 0		DSC-01	LIQID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
95000832	AN-105	4 SAMPLE	5961003751 0		DSC-01	LIQID	<u>N/A</u>	<u>0</u>		Joules/g
95000832	AN-105	5 DUP	5961003751 0		DSC-01	LIQID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11294

Roz Ann Davis 8-4-96
 Analyst Signature Date

SPH 8-6-96
 Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 177 TO 181.

IND 12N14-B N2

4.777 mg

Rate: 10.0 °C/min

File: 00062.001

Ident: 0.0

DSC NETTLER

03-Aug-96

222-S Laboratory

exo

10. mW

Integration

Delta H 139 mJ

29.2 J/g

Peak 158.2°C

-12.0 mW

120.

140.

160.

180.

°C

8-3-96
Flac Chan Green 8-4-96

S96T003750 SAM N2

19.495 mg

Rate: 10.0 °C/min

File: 00074.001

DSC METTLER

04-Aug-96

Ident: 0.0

222-B Laboratory

exo>

20. mW

178

Integration

Delta H 18254 mJ

937.8 J/g

Peak 132.4°C

-51.0 mW

Integration

Delta H 415 mJ

21.3 J/g

Peak 240.8°C

-5.3 mW

100.

200.

300.

400.

°C

8-4-96
RaeAnn Green

S95T003750 DUP N2

18.683 mg

Rate: 10.0 °C/min

File: 00075.001

Ident: 0.0

DSC METTLER

04-Aug-95

222-S Laboratory

S96T003751 SAM N2

21.527 mg

Rate: 10.0 °C/min

File: 00076.001

Ident: 0.0

DSC METTLER

04-Aug-96

222-S Laboratory

150

50. mW

8.4.96

Rae Ann Green

100.

200.

300.

400.

°C

S98T003751 DUP N2

17.357 mg

Rate: 10.0 °C/min

File: 00077.001

DSC NETTLER

04-Aug-96

Ident: 0.0

222-S Laboratory

8-4-96

Rae Ann Green

LABCORE Data Entry Template for Worklist#

11308

Analyst: KRM Instrument: DSC0 1 Book # 1A N-1B

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

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

ANALYST	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.6*</u>	<u>N/A</u>	Joules/g
9600832	AN-105	2 SAMPLE	9967003731 0		DSC-01	SOLID	<u>N/A</u>	<u>5.0</u>		Joules/g
9600832	AN-105	3 REP	9967003731 0		DSC-01	SOLID	<u>5.0</u>	<u>7.3</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11308

Analyst Signature

Date

Analyst Signature

Date

Rae Ann Green 8-5-96

Verified/Validated by

Blandina

Valenzuela

8-7-96

Data Entry Comments:

Units shown for QC (SPE & 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 183 TO 185

DSC STD 12N14B

4.778 mg

Rate: 10.0 °C/min

File: 00079.001

DSC METTLER

05-Aug-96

Ident: 0.0

222-S Laboratory

896T003731 SAM N2

16.688 mg

Rate: 10.0 °C/min

File: 00089.001

Ident: 0.0

DSC METTLER

05-Aug-98

222-S Laboratory

S96T009171 DUP N2

26.630 mg

Rate: 10.0 °C/min

File: 00090.001

DSC METTLER

05-AUG-96

Ident: 0.0

232-S Laboratory

LABCORE Data Entry Template for Worklist#

11499

Analyst: KLM Instrument: DSC0 1 Book # 121143

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

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

GROUP	PROJECT	S TYPE	SAMPLE	R A	-----TEST-----	MATRIX	ACTUAL	FORMED	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.6</u>	N/A	Joules/g
96000832	AN-105	2 SAMPLE	96T003792	0	DSC-01	SOLID	N/A	<u>24.3</u>		Joules/g
96000832	AN-105	3 DUP	96T003792	0	DSC-01	SOLID	<u>24.3</u>	<u>37.7</u>	N/A	Joules/g
96000832	AN-105	4 SAMPLE	96T003793	0	DSC-01	SOLID	N/A	<u>27.2</u>		Joules/g
96000832	AN-105	5 DUP	96T003793	0	DSC-01	SOLID	<u>27.2</u>	<u>28.0</u>	N/A	Joules/g

Final page for worklist # 11499

Analyst Signature

Date

Analyst Signature

Date

Verified/Validated by
Blandina Valenzuela
8-6-96 B-7-96

S96T003792 duplicate result is the sum of two exotherms.
The sample thermogram did not display two exotherms.

Data Entry Comments:

S96T003793 results are the sum of two exotherms.

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

DSC STD 12N148

4.778 mg

Rate: 10.0 °C/min

File: 00078.001

Ident: 0.0

DSC METTLER

05-Aug-96

222-B Laboratory

ΔXOX

187
mW

Integration
Delta H 141 mJ
29.6 J/g
Peak 158.2°C
-12.0 mW

120.

140.

160.

180.

°C

S96T003792 SAM N2

14.780 mg

Rate: 10.0 °C/min

File: 00080.001

DSC METTLER

08-Aug-96

Ident: 0.0

222-S Laboratory

S96T003792 DUP N2

10.967 mg

Rate: 10.0 °C/min

File: 00062.001

Ident: 0.0

DSC METTLER

05-Aug-98

222-8 Laboratory

100.

200.

300.

400.

°C

S96T003793 SAM N2

18.743 mg

Rate: 10.0 °C/min

File: 00084.001

Ident: 0.0

DSC METTLER

05-Aug-98

222-S Laboratory

S96T003793 DUP N2

10.993 mg

Rate: 10.0 °C/min

File: 00088.001

Ident: 0.0

DSC METTLER

05-Aug-98

222-S Laboratory

LABCORE Data Entry Template for Worklist#

11500

Analyst: PS Instrument: DSCD 1 Book # 12N14-B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RC1

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	PATRIK	ACRUM	PERM	OL	UNIT
		1 STD			DSC-01	SOL 10	<u>28.45</u>	<u>29.7</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	996T003794	0	DSC-01	SOL 10	<u>N/A</u>	<u>26.5</u>		Joules/g
96000832	AN-105	3 DUP	996T003794	0	DSC-01	SOL 10	<u>26.5</u>	<u>24.3</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	996T003795	0	DSC-01	SOL 10	<u>N/A</u>	<u>30.7</u>		Joules/g
96000832	AN-105	5 DUP	996T003795	0	DSC-01	SOL 10	<u>30.7</u>	<u>32.7</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11500

Barbara Green 8-6-96
Analyst Signature Date

John J. H. 8/6/96
Analyst Signature Date

Verified/Validated by
Blanca
Valenzuela 8/22/96

Data Entry Comments: 996T003794 results are the sum of two exotherms

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

NATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 143 TO 147

DSC STD 12N14B

4.778 mg

Rate: 10.0 °C/min

File: 00078.001

Ident: 0.0

DSC METTLER

05-Aug-95

222-S Laboratory

EXO >

5. mW

Integration

Delta H 142 mJ

29.7 J/g

Peak 158.2°C

-12.0 mW

Plandura valenzuela for

Final Green

222-96

120.

140.

160.

180.

°C

S96T003724 SAM N2

52.517 mg

Rate: 10.0 °C/min

File: 00082.001

DSC METTLER

08-Aug-96

Ident: 0.0

222-B Laboratory

exo

50. mW

Integration

Delta H 698 mJ

13.3 J/g

Peak 262.8°C

4.9 mW

Integration

Delta H 691 mJ

13.2 J/g

Peak 322.8°C

4.4 mW

Integration

Delta H 32461 mJ

619.1 J/g

Peak 125.3°C

-59.3 mW

100.

200.

300.

400.

°C

S96T003794 DUP N2

59.180 mg

Rate: 10.0 °C/min

File: 00094.001

DSC METTLER

05-Aug-99

222-B Laboratory

195

S96T003794.DSC199, REV.0

S96T003795 SAM N2

10.858 mg

Rate: 10.0 °C/min

File: 00096.001

DSC METTLER

06-Aug-96

Ident: 0.0

222-S Laboratory

S96T003795 DUP N2

10.346 mg

Rate: 10.0 °C/min

File: 00000.001

Ident: 0.0

DSC METTLER

06-Aug-98

222-S Laboratory

LABCORE Data Entry Template for Worklist#

11501

Analyst: SHF Instrument: DSC0 1 Book # 172114B

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

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

REC'D	PROJECT	S TYPE	SAMPLE	S A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			090-01	SOLID	<u>22.45</u>	<u>22.9*</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	961003796	0	090-01	SOLID	<u>N/A</u>	<u>38.5</u>		Joules/g
96000832	AN-105	3 DUP	961003796	0	090-01	SOLID	<u>38.5</u>	<u>39.7</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	961003797	0	090-01	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
96000832	AN-105	5 DUP	961003797	0	090-01	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11501

Lucie M. Sullivan 87-96
Analyst Signature Date

Terri Mark 9-3-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
87-6-96
BN

961003796 results are the sum of two exotherms
961003797 was over-integrated, disregard lined out
results idea 9/1/96

Data Entry Comments

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 199 TO 203

DSC STD 12N14B

9.429 mg

Rate: 10.0 °C/min

File: 00017.001

DSC METTLER

07-Aug-98

Ident: 0.0

822-S Laboratory

exo

10. mW

Integration
Delta H 273 mJ
28.9 J/g
Peak 158.6°C
-19.0 mW

120.

140.

160.

180.

°C

David M. Zetter 8-7-98

S95T003796 N2

17.054 mg

Rate: 10.0 °C/min

File: 00023.001

Ident: 0.0

DSC METTLER

07-Aug-98

222-8 Laboratory

EXO>

20. mW

Integration

Delta H 278 mJ

15.7 J/g

Peak 235.0°C

1.5 mW

Integration

Delta H 402 mJ

22.8 J/g

Peak 309.1°C

2.5 mW

Integration

Delta H 13358 mJ

756.1 J/g

Peak 131.1°C

-35.5 mW

100.

200.

300.

400.

°C

S96T003796 DUP N2

15.842 mg

Rate: 10.0 °C/min

File: 00025.001

DSC METTLER

07-Aug-96

222-S Laboratory

exo>

201

20. mW

Integration
Delta H 298 mJ
19.0 J/g
Peak 234.9°C
1.6 mW

Integration
Delta H 324 mJ
20.7 J/g
Peak 309.0°C
2.2 mW

Integration
Delta H13307 mJ
850.7 J/g
Peak 120.9°C
-37.2 mW

100.

200.

300.

400.

°C

S95T003797 SAM N2

9.580 mg

Rate: 10.0 °C/min

File: 00027.001

DSC NETTLER

07-Aug-86

Ident: 0.0

222-B Laboratory

exo

10. mW

Integration

Delta H 7167 mJ

750.3 J/g

Peak

105.7°C

-23.3 mW

Integration

Delta H 163 mJ

19.1 J/g

Peak

186.7°C

-1.4 mW

Integration

Delta H 92 mJ

9.6 J/g

Peak

264.9°C

-0.5 mW

100.

200.

300.

400.

°C

S96T003797 DUP N2

File: 00029.001

DSC METTLER

08-Aug-96

33.586 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist#

11502

Analyst: SMF Instrument: DSC0 1 Batch # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2 RCI

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.1</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	9667003796	0	DSC-01	SOLID	<u>N/A</u>	<u>59</u>		Joules/g
96000832	AN-105	3 DUP	9667003796	0	DSC-01	SOLID	<u>59</u>	<u>73</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	9667003816	0	DSC-01	SOLID	<u>N/A</u>	<u>28.9</u>		Joules/g
96000832	AN-105	5 DUP	9667003816	0	DSC-01	SOLID	<u>28.4</u>	<u>29.2</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11502

Susan M. Dalton 8-8-96
Analyst Signature Date

Shirley 8-12-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8/14/96

Does Entry Comments 9667003796 requests are the sum of two exotherms.

9667003816 requests 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 205 TO 209.

DSC STD 12N14B

8.429 mg

Rate: 10.0 °C/min

File: 00084.001

DSC METTLER 08-Aug-88

Ident: 0.0

222-S Laboratory

EXOA

Integration

Delta H 265 mJ

28.1 J/g

Peak 159.0 °C

-17.0 mW

10. mW

120.

140.

160.

180.

°C

205

INHO-SD-YMA-OP-199, REV. 0

S96T003795 N2

19.709 mg

Rate: 10.0 °C/min

File: 00032.001

Ident: 0.0

DSC METTLER

06-Aug-96

222-8 Laboratory

exo

202

20. mW

Integration
Delta H 505 mJ
25.6 J/g
Peak 296.9°C
2.5 mW

Integration
Delta H 659 mJ
33.4 J/g
Peak 305.0°C
2.9 mW

Integration
Delta H 15239 mJ
824.0 J/g
Peak 130.7°C
-41.6 mW

100.

200.

300.

400.

°C

S95T003798 DUP N2

17.053 mg

Rate: 10.0 °C/min

File: 00035.001

DSC METTLER

08-Aug-95

Ident: 0.0

222-B Laboratory

S98T003816 N2

29.035 mg

Rate: 10.0 °C/min

File: 00038.001

Ident: 0.0

DSC METTLER

222-B Laboratory

08-Aug-96

208

S96T003816 DUP N2

File: 00040.001 DSC METTLER 08-Aug-98

11.102 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist#

11503

Analyst: ML Instrument: DSC0 1 Book # 12N14B

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

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

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	RAW17X	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	000.10	<u>28.4</u>	<u>27.4</u>	<u>N/A</u>	Ammonia
96000832	AN-105	2 SAMPLE	9607003017	0	DSC-01	000.10	<u>N/A</u>	<u>16.1</u>		Ammonia
96000832	AN-105	3 DUP	9607003017	0	DSC-01	000.10	<u>16.1</u>	<u>7.6</u>	<u>N/A</u>	Ammonia

Final page for worklist # 11503

A. Lambel 08-08-96
Analyst Signature Date

St. J. P. 8-12-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8/4/96

Data Entry Comments:

by E. H. 7/2/96 The results are the sum of two weight loss
experiments

Units shown for QC (RPE & 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 34 TO 313

J. Lumbel 12-08-96

DSC STD 12N14B

9.429 mg

Rate: 10.0 °C/min

File: 00094.001

Ident: 0.0

DSC NETTLER

08-Aug-96

222-S Laboratory

exo

Integration

Delta H 259 mJ

27.4 J/g

Peak 159.0 °C

-16.9 mW

10. mW

120.

140.

160.

180.

°C

S96T003817 SAM N2

R4.811 mg

Rate: 10.0 °C/min

File: 00042.001

Ident: D.0

DSC METTLER

08-Aug-96

222-S Laboratory

S95T003817 DUP N2

23.207 mg

Rate: 10.0 °C/min

File: 00044.001

Ident: 0.0

DSC METTLER

08-Aug-95

222-8 Laboratory

LABCORE Data Entry Template for Worklist#

11658

Analyst: JP Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

DECP	PROJECT	S TYPE	SAMPLE	S A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	27.4*	N/A	Joules/g
9600095	AN-105	2 SAMPLE	996T003974	0	DSC-01	LIQUID	N/A	Ø		Joules/g
9600095	AN-105	3 DUP	996T003974	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
9600095	AN-105	4 SAMPLE	996T003975	0	DSC-01	LIQUID	N/A	Ø		Joules/g
9600095	AN-105	5 DUP	996T003975	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 11658

A. Lambert
Analyst Signature

08-08-96
Date

JP
Analyst Signature

8-12-96
Date

Data Entry Comments:

32

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 215 TO 219

DSC STD 12N14B

9.429 mg

Rate: 10.0 °C/min

File: 00034.001

Ident: 0.0

DSC METTLER

08-Aug-96

222-S Laboratory

exo

Integration

Delta H 259 mJ

27.4 J/g

Peak 159.0°C

-16.9 mW

215

10. mW

Blunden Valenzuela for EA Lambert 7/14/96

120.

140.

160.

180.

°C

WMC-SD-WMA-DP-199, REV. 0

S9BT003974 SAM N2

16.820 mg

Rate: 10.0 °C/min

File: 00046.001

Ident: 0.0

DSC NETTLER

08-Aug-95

222-S Laboratory

Integration
Delta H21449 mJ
1139.7 J/g
Peak 99.3°C
-62.6 mW

216

S96T003974 DUP N2

22.934 mg

Rate: 10.0 °C/min

File: 00048.001

Ident: 0.0

DSC METTLER

05-Aug-96

222-8 Laboratory

S96T003975 SAM N2

17.787 mg

Rate: 10.0 °C/min

File: 00080.001

Ident: 0.0

DSC NETTLER 09-Aug-95

222-S Laboratory

Integration

Delta H 24674 mJ

1368.7 J/g

Peak 130.4°C

-52.0 mW

696T003975 DUP N2

17.094 mg

Rate: 10.0 °C/min

File: 00062.001

DSC METTLER

09-Aug-98

Ident: 0.0

222-S Laboratory

exo

20. mW

Integration

Delta H20026 mJ

1171.5 J/g

Peak 124.5°C

-46.9 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11659

Analyst: AM Instrument: DSC0 | Book # 12014B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLER	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>38.45</u>	<u>30.4</u>	<u>N/A</u>	<u> Joules/g</u>
9600945	AN-105	2 SAMPLE	2967003976	0	DSC-01	LIQUID	<u>N/A</u>	<u>2.2</u>		<u> Joules/g</u>
9600945	AN-105	3 DUP	2967003976	0	DSC-01	LIQUID	<u>2.2</u>	<u>0</u>	<u>N/A</u>	<u> Joules/g</u>
9600945	AN-105	4 SAMPLE	2967003977	0	DSC-01	LIQUID	<u>N/A</u>	<u>0</u>		<u> Joules/g</u>
9600945	AN-105	5 DUP	2967003977	0	DSC-01	LIQUID	<u>0</u>	<u>52.4</u>	<u>N/A</u>	<u> Joules/g</u>

Final page for worklist # 11659

AM 8/14/96
Analyst Signature Date

ACW 8/14/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8 14 96

Data Entry Comments:

Units shown for QC (SPE & 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 221 TO 225

DSC STD 12N148

4.510 mg

Rate: 10.0 °C/min

File: 00057.001

Ident: 0.0

DSC METTLER 09-AUG-98

222-S Laboratory

R. McCown 8/9/98

exo
↑

Integration

Delta H 137 mJ

30.4 J/g

Peak 158.0 °C

-10.4 mW

5. mW
↑

120.

140.

160.

180. °C

221

UFGC-SD-MWD-199, REV. 0

S96T003976 N2

36.547 mg

Rate: 10.0 °C/min

File: 00055.001

Ident: 0.0

DSC NETTLER

09-Aug-96

222-S Laboratory

EXO

50. mW

Integration
Delta H 82 mJ
2.2 J/g
Peak 254.8°C
1.2 mW

Integration
Delta H 54 mJ
1.5 J/g
Peak 304.6°C
-1.3 mW

Integration
Delta H 90460 mJ
839.4 J/g
Peak 125.3°C
-64.0 mW

100.

200.

300.

400.

°C

S96T003876 DUP N2

34.291 mg

Rate: 10.0 °C/min

File: 00080.001

DSC METTLER

08-Aug-96

Ident: 0.0

222-B Laboratory

exo

50. mW

Integration

Delta H 28 mJ

0.8 J/g

Peak 304.7°C

-0.8 mW

Integration

Delta H 28446 mJ

829.5 J/g

Peak 125.9°C

-65.2 mW

100.

200.

300.

400.

°C

S96T003977 N2

30.587 mg

Rate: 10.0 °C/min

File: 00062.001

Ident: 0.0

DSC METTLER

08-Aug-96

222-S Laboratory

S96T003977 DUP N2

40.355 mg

Rate: 10.0 °C/min

File: 00084.001

Ident: 0.0

DSC METTLER 08-Aug-96

222-S Laboratory

exo

Integration

Delta H 24844 mJ

515.6 J/g

Peak 121.3°C

-54.3 mW

Integration

Delta H 2117 mJ

52.4 J/g

Peak 213.5°C

32.3 mW

225

LABCORE Data Entry Template for Worklist#

11660

Analyst: EAL Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-05	LIQUID	<u>28.45</u>	<u>29.69</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	5961003976	0	DSC-05	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	3 DUP	6961003976	0	DSC-05	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	5961003975	0	DSC-05	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	5 DUP	5961003975	0	DSC-05	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	6 SAMPLE	6961003980	0	DSC-05	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	7 DUP	5961003980	0	DSC-05	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist #

11660

See attached for signatures
Analyst Signature EAL Date 8-13-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina
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.

LABCORE Data Entry Template for Worklist#

11660

Analyst: PLM Instrument: DSC0 _____ Book # MD 12A14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE	N A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
96000945	AN-105	2 SAMPLE	9961003978	0	DSC-01	LIQUID	N/A			Joules/g
96000945	AN-105	3 DUP	9961003978	0	DSC-01	LIQUID			N/A	Joules/g
96000945	AN-105	4 SAMPLE	9961003979	0	DSC-01	LIQUID	N/A			Joules/g
96000945	AN-105	5 DUP	9961003979	0	DSC-01	LIQUID			N/A	Joules/g
96000945	AN-105	6 SAMPLE	9961003980	0	DSC-01	LIQUID	N/A			Joules/g
96000943	AN-105	7 DUP	9961003980	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist #

11660

PLM
Analyst Signature
Date
8/12/96
8/13/96

PLM
Analyst Signature
Date
8/14/96

DSC-03 instrument
was used
8.13.96

Blancina
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: OSC

File Info: INDO81201 Mon Aug 12 09:04:39 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 322 TO 324.

A. Lamber

10.0 EXOTHERM DOWN

TEMP: 158.88

TEMPER

0.0 min HEAT: 29.88

10.0 J/g

Temperature (°C)

EA LAMBER

PERCIN-ELMER

7 Series Thermal Analysis System

Mon Aug 12 09:28:07 1996

WHC-SD-WMA-OP-199, REV. 0

Curve 1: DSC

File Info: 84N081204 Mon Aug 12 14:20:05 1986

Sample Weight: 15.910 mg

8867003878

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 12:00:23 1986

WHC-SD-1M-OP-199, REV. 0

Curve 1: DSC

File info: SAM061205 Mon Aug 12 15:54:43 1996

Sample Weight: 19.400 mg

SSBT003978 DLP

N2 100/min

DATE: 8-12-96

TIME: 15:54

TECH: 0.5 min RATE

10.0 °C/min

Temperature (°C)

EA LABEL

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Aug 12 21:48:40 1996

WRC-SD-WMA-OP-199, REV. 0

Curve 1: DSC

File info: SAM081206 Mon Aug 12 22:32:20 1996

Sample Weight: 12.759 mg

996T003879

RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 23:51:54 1996

WMO-SD-WM-DP-199, REV 0

Curve 1: DSC

File Infor: 8AH081901 Tue Aug 13 00:42:05 1996

Sample Weight: 16.830 mg

996T0099790UP

RD MEYER
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 13 01:22:34 1996

WHC-SD-WM-DP-199, REV. 0

Curve 1: DSC

File info: SAMP01202 Mon Aug 12 10:30:11 1996

Sample Weight: 17.520 mg

996T003980

N2 10C/min

HEAT FLOW 2

TEMPERATURE

0.0 min RATE: 10.0

0.0 C/min

Temperature (°C)

EA LAMBDA

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Aug 12 11:49:13 1996

WHC-SD-WM-DP-199, REV. 0

Curve 1: DSC

File info: 9AM081203 Mon Aug 12 12:54:03 1996

Sample Weight: 15.110 mg

996T903980 DLP

WHC-SD-WM-OP-189, REV. 0

LABCORE Data Entry Template for Worklist#

11663

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FORMD	DL	UNIT
		1 STD			DSC-01	STD 10	<u>22.46</u>	<u>27.8</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	996T003981	0	DSC-01	STD 10	<u>N/A</u>	<u>21.</u>		Joules/g
96000945	AN-105	3 DUP	996T003981	0	DSC-01	STD 10	<u>21.</u>	<u>18.2</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	996T003982	0	DSC-01	STD 10	<u>N/A</u>	<u>57.5</u>		Joules/g
96000945	AN-105	5 DUP	996T003982	0	DSC-01	STD 10	<u>57.5</u>	<u>94.8</u>	<u>N/A</u>	Joules/g
96000945	AN-105	6 SAMPLE	996T003983	0	DSC-01	STD 10	<u>N/A</u>	<u>39.1</u>		Joules/g
96000945	AN-105	7 DUP	996T003983	0	DSC-01	STD 10	<u>39.1</u>	<u>42.6</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11663

Analyst Signature A. Lumbel Date 08-12-96Analyst Signature A. Lumbel Date 8/14/96Verified/Validated by
Blandina Valenzuela
8-14-96

S96T003981 result is the sum of two exotherms.

Data Entry Comments: S96T003983 result is the sum of two exotherms

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 231 TO 242

D. Lantel 08-12-96

DSC STD 12N14-B

4.610 mg

Rate: 10.0 °C/min

File: 00000.001

Ident: 0.0

DSC METTLER 12-Aug-95

222-B Laboratory

exo

Integration
Delta H 132 mJ
29.2 J/g
Peak 158.4°C
-9.8 mW

5. mW

120.

140.

160.

180.

°C

950

S95T003B91 SAM N2

19.430 mg

Rate: 10.0 °C/min

File: 00082.001

Ident: 0.0

DSC METTLER

12-Aug-98

222-B Laboratory

S96T003881 DUP N2

File: 00084.001 DSC METTLER 12-Aug-95

10.988 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

A
D
S
C

232

20. mW

Integration

Delta H 91 mJ

8.3 J/g

Peak 240.6°C

0.8 mW

Integration

Delta H 109 mJ

9.9 J/g

Peak 306.8°C

0.9 mW

Integration

Delta H 9671 mJ

880.9 J/g

Peak 123.2°C

-28.0 mW

100.

200.

300.

400.

°C

SS6T003882 SAM N2

14.828 mg

Rate: 10.0 °C/min

File: 00086.001

Ident: 0.0

DSC METTLER

12-Aug-98

222-B Laboratory

S96T003982 OUP N2

9.842 mg

Rate: 10.0 °C/min

File: 00001.001

Ident: 0.0

DSC METTLER 12-Aug-95

222-B Laboratory

Integration
Delta H 819 mJ
94.6 J/g
Peak 309.0°C
1.7 mW

Integration
Delta H 12121 mJ
1402.6 J/g
Peak 103.4°C
-33.6 mW

240

S98T003983 SAM N2

17.831 mg

Rate: 10.0 °C/min

File: 00088.001

Ident: 0.0

DSC METTLER

12-Aug-06

225-B Laboratory

S96T003983 DUP N2

File: 00007.001 DSC METTLER 13-Aug-95

22.840 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

COW

20. mW

Integration
Delta H 280 mJ
12.4 J/g
Peak 240.6°C
1.5 mW

Integration
Delta H 819 mJ
36.2 J/g
Peak 305.8°C
3.5 mW

Integration
Delta H23798 mJ
1051.1 J/g
Peak 132.5°C
-51.4 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 12274

Analyst: RM Instrument: DSC0 1 Book # 12NAB

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

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIGUID	<u>28.45</u>	<u>26.9</u>	<u>N/A</u>	Joules/g
9600032	AN-105	2 SAMPLE	9601004039	0	DSC-01	LIGUID	<u>N/A</u>	<u>0</u>		Joules/g
9600032	AN-105	3 DUP	9601004050	0	DSC-01	LIGUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
9600045	AN-105	4 SAMPLE	9601004300	0	DSC-01	LIGUID	<u>N/A</u>	<u>0</u>		Joules/g
9600045	AN-105	5 DUP	9601004308	0	DSC-01	LIGUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12274

Analyst Signature: RM Date: 8/26/96

Analyst Signature: John M. Mac Date: 8/29/96

Verified/validated by:
Blandina
Valenzuela 4-3-96

Data Entry Comments:

Units shown for QC (BPK & 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

OSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00051.001

DSC METTLER

26-Aug-96

Ident: 0.0

222-S Laboratory

exo

5. mW

Integration

Delta H 121 mJ

26.9 J/g

Peak 158.6°C

-8.5 mW

Blandina Valenzuela for RD Meyer 9396

120.

140.

160.

180.

°C

S96T004039 N2

17.140 mg

Rate: 10.0 °C/min

File: 00059.001 DSC METTLER 27-Aug-96

Ident: 0.0

222-8 Laboratory

245

S96T004039 DUP N2

14.360 mg

Rate: 10.0 °C/min

File: 00061.001

Ident: 0.0

DSC METTLER

27-Aug-98

222-S Laboratory

exo

246
mW
0.2

Integration
Delta H20540 mJ
1430.3 J/g
Peak 124.8°C
-43.3 mW

100.

200.

300.

400.

°C

S96T004308 N2

14.350 mg

Rate: 10.0 °C/min

File: 00053.001

DSC METTLER

26-Aug-96

Ident: 0.0

222-S Laboratory

VOX

20.02 mW

Integration

Delta H21009 mJ

1464.1 J/g

Peak 126.7°C

-44.7 mW

100.

200.

300.

400.

°C

S96T004308DUP N2

18.780 mg

Rate: 10.0 °C/min

File: 00057.001 DSC METTLER 27-Aug-98

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 12327

Analyst: B.M. Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PREP/LOT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	29.9	N/A	Joules/g
96000945	AN-105	2 SAMPLE	996T004310	0	DSC-01	SOLID	N/A	40.4		Joules/g
96000945	AN-105	3 DUP	996T004310	0	DSC-01	SOLID	40.4	23.9	N/A	Joules/g
96000945	AN-105	4 SAMPLE	996T004311	0	DSC-01	SOLID	N/A	34.7		Joules/g
96000945	AN-105	5 DUP	996T004311	0	DSC-01	SOLID	34.7	57.1	N/A	Joules/g

Final page for worklist # 12327

Rae Ann Green 9-1-96
Analyst Signature Date

Revised 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
9-8-96

996T004310 results are the sum of two exotherms

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.

1. THE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 252 TO 254

DSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00005.001

DSC METTLER

31-Aug-85

Ident: 0.0

222-B Laboratory

exo

250

10. MW

Integration

Delta H 135 MJ

29.9 J/g

Peak 158.4°C

-8.7 MW

8-31-96

A. Green

50.

100.

150.

°C

S96T004310 SAM N2

23.790 mg

Rate: 10.0 °C/min

File: 00008.001

Ident: 0.0

DSC METTLER

01-Sep-95

222-8 Laboratory

6X0>

50. mW

Integration
Delta H 421 mJ
17.7 J/g
Peak 240.6°C
2.8 mW

Integration
Delta H 540 mJ
22.7 J/g
Peak 310.7°C
3.7 mW

Integration
Delta H 22211 mJ
933.6 J/g
Peak 129.7°C
-55.2 mW

100.

200.

300.

400.

°C

251

WHC-SD-WMA-DP-189, REV. 0

S98T004310 DUP N2

24.090 mg

Rate: 10.0 °C/min

File: 00010.001

DSC METTLER

01-Sep-98

Ident: 0.0

222-S Laboratory

S95T004311 SAM N2

20.915 mg

Rate: 10.0 °C/min

File: 00014.001

DSC METTLER

01-Sep-96

Ident: 0.0

222-S Laboratory

S96T004311 DUP N2

28.906 mg

Rate: 10.0 °C/min

File: 00012.001

DSC METTLER

01-Sep-96

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 12328

Analyst: SME Instrument: DSC0 1 Book # 12N143

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

Worklist Comment: Please run AN-105 DSCs under NZ. bdr

GROUP	PROJECT	S TYPE	SAMPLE#	A A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>26.7</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	5967084335	0	DSC-01	SOLID	<u>N/A</u>	<u>39.31</u>	<u>N/A</u>	Joules/g
96000945	AN-105	3 DUP	5967084335	0	DSC-01	SOLID	<u>39.31</u>	<u>39</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	5967084433	0	DSC-01	SOLID	<u>N/A</u>	<u>48.7</u>	<u>N/A</u>	Joules/g
96000945	AN-105	5 DUP	5967084433	0	DSC-01	SOLID	<u>48.7</u>	<u>94.1</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12328

Susan M. Sullivan 9-4-96
Analyst Signature Date

newright 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
9.6.96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 256 TO 261.

DSC STD 12N14B

25.810 mg

Rate: 10.0 °C/min

File: 00048.001

Ident: 0.0

DSC METTLER 04-Sep-96

222-S Laboratory

S98T004335 N2

19.107 mg

Rate: 10.0 °C/min

File: 00050.001

Ident: 0.0

DSC NETTLER 04-Sep-95

222-S Laboratory

exo>

20. mW

Integration

Delta H 269 mJ

14.1 J/g

Peak 243.3°C

2.1 mW

Integration

Delta H 314 mJ

18.4 J/g

Peak 309.3°C

2.4 mW

Integration

Delta H 16913 mJ

885.2 J/g

Peak 125.8°C

-44.0 mW

100.

200.

300.

400.

°C

S96T004335 DUP N2

28.408 mg

Rate: 10.0 °C/min

File: 00052.001

Ident: 0.0

DSC METTLER

04-Sep-98

222-S Laboratory

S96T004435 SAM N2

59.812 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

DSC METTLER 04-Sep-95

222-S Laboratory

259

S96T004435 DUP N2

41.448 mg

Rate: 10.0 °C/min

File: 00085.001

Ident: 0.0

DSC METTLER 05-Sep-95

222-S Laboratory

exo

50. mW

0.60

Integration
Delta H 27485 mJ
663.1 J/g
Peak 129.3°C
-65.2 mW

Integration
Delta H 3902 mJ
94.1 J/g
Peak 267.1°C
7.9 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 12329

Analyst: HR Instrument: DSCD 1 Book # 12.114-BMethod: LA-514-113 Rev/Mod C-1

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.5*</u>	N/A	Joules/g
96000945	AN-105	2 SAMPLE	5967006436	0	DSC-01	SOLID	<u>N/A</u>	<u>15.8</u>		Joules/g
96000945	AN-105	3 DUP	5967006436	0	DSC-01	SOLID	<u>15.8</u>	<u>19.6</u>	N/A	Joules/g
96000945	AN-105	4 SAMPLE	5967006437	0	DSC-01	SOLID	<u>N/A</u>	<u>22.9</u>		Joules/g
96000945	AN-105	5 DUP	5967006437	0	DSC-01	SOLID	<u>22.9</u>	<u>44.4</u>	N/A	Joules/g

Final page for worklist # 12329

Analyst Signature: *Blandina* Date: 9-1-96Analyst Signature: *Reichert* Date: 9/5/96Verified/Validated by
Blandina
Valentini 9-6-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 262 TO 266

DSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00018.001

DSC METTLER

01-Sep-96

Ident: 0.0

222-S Laboratory

exo
↑

10. mW

262

Integration

Delta H 133 mJ

29.5 J/g

Peak 156.4°C

-8.4 mW

Vol-King 9/1/96

50.

100.

150.

200.

250.

°C

996T004436 SAM N2

9.850 mg

Rate: 10.0 °C/min

File: 00030.001

Ident: 0.0

DSC METTLER 01-Sep-95

222-S Laboratory

S96T004436 DUP N2

12.750 mg

Rate: 10.0 °C/min

File: 00092.001

Ident: 0.0

DSC METTLER 02-Sep-86

222-S Laboratory

S9ET004437 SAM N2

File: 00034.001

DSC METTLER

02-Sep-96

30.580 mg

Rate: 10.0 °C/min

Ident: 0.0

222-B Laboratory

Wob King 9-2-96

S96T004437 DUP N2

24.910 mg

Rate: 10.0 °C/min

File: 00095.001

DSC METTLER

02-Sep-96

Ident: 0.0

222-8 Laboratory

Noting 9-2-96

LABCORE Data Entry Template for Worklist# 12330

Analyst: EAL Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FIND	DL	UNIT
		1 STD			DSC-03	L14U10	<u>28.45</u>	<u>27.48</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	9961004309 0		DSC-03	L14U10	<u>N/A</u>	<u>13.55</u>		Joules/g
96000945	AN-105	3 DUP	9961004309 0		DSC-03	L14U10	<u>13.55</u>	<u>19.54</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	9961004333 0		DSC-03	L14U10	<u>N/A</u>	<u>34.8</u>		Joules/g
96000945	AN-105	5 DUP	9961004333 0		DSC-03	L14U10	<u>34.8</u>	<u>57.7</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12330

See attached for signatures
Analyst Signature _____ Date 9-5-96

Kevin Light 9/5/96
Analyst Signature _____ Date

Verified/Validated by
Blandina
Valenzuela 9-6-96

S961004309 results are of the same magnitude but thermograms are way different. The sample exotherm contained the sharp exothermic decomp. that is being seen very often lately.

Data Entry Comment:

LABCORE Data Entry Template for Worklist# 12330

Analyst: EAL Instrument: DSCD Book # 12N14-B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATCH	ACTUAL	FOUND	BL	UNIT
		1 STD			DSC-01	LIMID			N/A	Scouten/g
96000945	AN-105	2 SAMPLE	9967004309	0	DSC-01	LIMID	N/A			Scouten/g
96000945	AN-105	3 DUP	9967004309	0	DSC-01	LIMID			N/A	Scouten/g
96000945	AN-105	4 SAMPLE	9967004333	0	DSC-01	LIMID	N/A			Scouten/g
96000945	AN-105	5 DUP	9967004333	0	DSC-01	LIMID			N/A	Scouten/g

Final page for worklist # 12330

A. Lambert
Analyst Signature

09-01-96
Date

Analyst Signature

Date

DSC-03 instrument
was used.
4-5-96

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: OMC

File info: INDOOR101 Run: Sep 1 06:27:57 1995

Sample Weight: 5.850 mg

12N14-8 DDDDM AT 50C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 269 TO 273

Curve 1: DSC

File Info: 3AM090162 Run Sep 1 09:54:17 1996

Sample Weight: 18.760 mg

395T004309

M2 100/min

File: 3AM090162

File: 3AM090162

File: 3AM090162

File: 3AM090162

Temperature (°C)

SA LAMER

PERKIN-ELMER

7 Series Thermal Analysis System

Thu Sep 5 1996

100-SD-WM-DP-169, REV. 0

Curve 1: DSC

File Info: SAN090103 Sun Sep 1 10:33:23 1995

Sample Weight: 18.830 mg

8887004300 DLP

271

HE 10C/min

TIME: 0.0 min RATE: 20.0 C/min

Temperature (°C)

EA LANCE

PERKIN-ELMER

7 Series Thermal Analysis System

WHC-SD-WMA-DP-199, REV. 0

Curve 1: DSC

File Info: BAM090104 Sun Sep 1 13:11:55 1995

Sample Weight: 18.530 mg

998T004333

NR 100/min

TEMP: 25.5 °C

TEMP:

9.0 MIN RATE

10.0 O/min

Temperature (°C)

EA LABEL

PERKIN-ELMER

7 Series Thermal Analysis System

WPC-SD-MIA-DP-199, REV. 0

Curve 1: DSC

File Info: SAH090105 Sun Sep 1 14:23:47 1996

Sample Weight: 18.540 mg

S96T004333 DUP

273

N2 10C/min

Temperature (°C)

TIME 55.3 S

TIME 55.3 S

0.0 min RATE: 10.0 C/min

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 6 09:41:46 1996

WIC-SD-WM-QP-199, REV. 0

LABCORE Data Entry Template for Worklist# 12331

Analyst: ABD Instrument: DSC0 1 Book # 12331-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	28.3	N/A	Joules/g
96000945	AN-105	2 SAMPLE	5961004419	0	DSC-01	LIQUID	N/A	18.0		Joules/g
96000945	AN-105	3 DUP	8967004419	0	DSC-01	LIQUID	18.0	205.2	N/A	Joules/g
96000945	AN-105	4 SAMPLE	5967004420	0	DSC-01	LIQUID	N/A	0		Joules/g
96000945	AN-105	5 DUP	8967004420	0	DSC-01	LIQUID	0	0	N/A	Joules/g

Final page for worklist # 12331

Analyst Signature

Date

Analyst Signature

Date

Verified/Validated by
Blandina
Valenzuela
9.6.96

Data Entry Comments:

5967004419 thermograms do not look similar. The water endotherm is shifted over to 200°C which is very odd for a liquid sample. This sample should be rerun.

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 275 TO 277

DSC STD 12N14B

4.510 mg

Rate: 10.0 °C/min

File: 00079.001

Ident: 0.0

DSC METTLER

29-Aug-98

222-8 Laboratory

exo>

20. mW

Integration

Delta H 128 mJ

28.3 J/g

Peak 158.6°C

-9.0 mW

Blandina Valenzuela for KB Querin 9-6-96

120.

140.

160.

180.

°C

S96T004419 SAMPLE

21.034 mg

Rate: 10.0 °C/min

File: 00075.001

DSC METTLER

29-Aug-96

Ident: 0.0

222-8 Laboratory

Integration

Delta H 13262 mJ

630.5 J/g

Peak 135.8°C

-44.8 mW

Integration

Delta H 597 mJ

28.4 J/g

Peak 242.2°C

-7.2 mW

Integration

Delta H 380 mJ

18.0 J/g

Peak 202.9°C

16.0 mW

exo>

50. mW

100.

200.

300.

400.

°C

S96T004419 DUPLICATE

19.062 mg

Rate: 10.0 °C/min

File: 00077.001 DSC NETTLER 29-Aug-96

Ident: 0.0

222-B Laboratory

AXIS

20. mW

Integration

Delta H 3711 mJ

205.2 J/g

Peak 366.5°C

4.6 mW

Integration

Delta H12565 mJ

694.9 J/g

Peak 208.3°C

-32.9 mW

100.

200.

300.

400.

°C

277

0.077-00077.0001-001

S96T004420 SAMPLE

13.823 mg

Rate: 10.0 °C/min

File: 00079.001

DSC METTLER

30-Aug-98

Ident: 0.0

222-3 Laboratory

ENDO

20. mW

Integration
Delta H 406 mJ
29.3 J/g
Peak 162.1°C
-4.1 mW

Integration
Delta H 252 mJ
18.3 J/g
Peak 240.3°C
-3.3 mW

Integration
Delta H 12172 mJ
880.6 J/g
Peak 122.7°C
-35.9 mW

100.

200.

300.

400.

°C

S96T004420 DUP

21.756 mg

Rate: 10.0 °C/min

File: 00081.001

DSC METTLER

30-Aug-96

Ident: 0.0

222-6 Laboratory

Δ H
exo

20. mW

Integration

Delta H 575 mJ

26.4 J/g

Peak 240.2°C

-5.6 mW

Integration

Delta H 16789 mJ

863.6 J/g

Peak 135.7°C

-53.7 mW

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 12332

Analyst: RWK Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIGAND	<u>28.45</u>	<u>28.02</u>	<u>*114</u>	Joules/g
96000945	AN-105	2 SAMPLE	3967004421	0	DSC-03	LIGAND	<u>N/A</u>	<u>0</u>		Joules/g
96000945	AN-105	3 DUP	3967004421	0	DSC-03	LIGAND	<u>0</u>	<u>34.54</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	3967004433	0	DSC-03	LIGAND	<u>N/A</u>	<u>12.7</u>		Joules/g
96000945	AN-105	5 DUP	3967004433	0	DSC-03	LIGAND	<u>12.7</u>	<u>15.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12332

See attached for signatures
Analyst Signature _____ Date 9-3-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina
Valenzuela
BDV

9-6-96

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 12332

Analyst: AK Instrument: DSC0 _____ Book # 12014-B

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

Worklist Comment: Please run AN-105 DSCs under N2, bdy

GROUP	PROJECT	S TYPE	SAMPLE	Q A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
96000945	AN-105	2 SAMPLE	996T004421	0	DSC-01	LIQUID	N/A			Joules/g
96000945	AN-105	3 DUP	996T004421	0	DSC-01	LIQUID			N/A	Joules/g
96000945	AN-105	4 SAMPLE	996T004433	0	DSC-01	LIQUID	N/A			Joules/g
96000945	AN-105	5 DUP	996T004433	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 12332

M. K. Myers 9-1-96
Analyst Signature Date

Newlight 9/5/96
Analyst Signature Date

DSC-03 instrument
was used.

Blandina
Valenzuela
9-3-96

Data Entry Comments:

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

Curve 1: DSC
 File Infor: D0090101 Sun Sep 1 08:27:57 1995
 Sample Weight: 5.330 mg
 129414-S INDTAN AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 282 TO 286

N2, EXOTHERM DOWN

100.0 °C/min 10.0 min RATE: 10.0 °C/min

Temperature (°C)

J-E SPELHMAN *9-1-96*
 PERKIN-ELMER
 7 Series Thermal Analysis System

Curve 1: DSC

File info: 84MD-40108 Run Gap: 1 12:25:35 1998

Sample Weight: 17.100 mg

998T004421

282

N2 10C/min
7/25/98 12:25:35

TIME: 0.5 min RATE: 10.0 C/min

AN KIRBY
PERCIN-ELMER
7 Series Thermal Analysis System
S.

Curve 1: DSC

File Info: 844040107 Sun Sep 1 21:08:15 1998

Sample Weight: 16.810 mg

998700-4421 DUP

254

HE 10C/min

SEAL 55.3 g

TIME

0.0 SEC RATED

35.0 D/SEC

Temperature (°C)

BY KIM

PERKIN-ELMER

7 Series Thermal Analysis System

12.1

...IC-SD-WM-DP-199, REV.0

Curve 1: DSC

File info: SAMP40106 Run Sep 1 20:07:19 1995

Sample Weight: 15.200 mg

955T004433

N2 10C/min

15.200 mg

THICK

D.C.

HEAT FLOW

20.0 J/gm

Temperature (°C)

RM KIMS

PERKIN-ELMER

7 Series Thermal Analysis System

Curve 1: DSC

File info: 84ND40201 Run Sep 1 22:27:37 1998

Sample Weight: 17.050 mg

886T004433 DUP

WHC-SD-WM-OP-199, REV. 0

LABCORE Data Entry Template for Worklist# 12333

Analyst: RA Instrument: DSCD 1 Book # 12N14-B

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

Worklist Comments: Please run AN-105 DSCs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-WI	LIQUID	<u>28.45</u>	<u>30.3</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	96G1004434	0	DSC-WI	LIQUID	<u>N/A</u>	<u>16.8</u>		Joules/g
96000945	AN-105	3 DUP	96G1004434	0	DSC-DI	LIQUID	<u>16.8</u>	<u>19.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12333

Rae Ann Green 8-31-96
Analyst Signature Date

NE Wright 9/5/96
Analyst Signature Date

Verified/Validated by

Blandina
Valenzuela 9-6-96

Data Entry Comments:

See duplicate 7-5-96 The decomposition occurring
at approximately 200°C is seen on both the sample and
duplicate. However, it is more visible in the sample run.
It is most likely the decomposition of a pure material.
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 28 TO 30.

DSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00005.001

Ident: 0.0

DSC METTLER

31-Aug-96

222-S Laboratory

exo

10. mW

Integration

Delta H 137 mJ

30.3 J/g

Peak 156.4°C

-8.7 mW

Rashon Green
8-31-96

50.

100.

150.

°C

288

WFO-SD-WM-DP-199, REV. 0

S96T004434 ^{SAM} N2

26.511 mg

Rate: 10.0 °C/min

File: 00003.001 DSC METTLER 31-Aug-96

Ident: 0.0

222-5 Laboratory

Integration

Delta H 19029 mJ

717.8 J/g

Peak 127.3°C

-53.1 mW

Integration

Delta H 513 mJ

19.3 J/g

Peak 239.9°C

-6.6 mW

Integration

Delta H 746 mJ

28.1 J/g

Peak 250.5°C

3.9 mW

Integration

Delta H 446 mJ

15.8 J/g

Peak 204.8°C

19.1 mW

S96T004434 TRIP N2
22.778 mg

Rate: 10.0 °C/min

File: 00007.001 DSC METTLER 31-Aug-96
Ident: 0.0 222-8 Laboratory

LABCORE Data Entry Template for Worklist# 12356

Analyst: BDY Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105, bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	NORMAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	596T003731	0	DSC-02	SOLID	N/A	8.89		Joules/g Dry
96000832	AN-105	2 DUP	596T003731	0	DSC-02	SOLID	8.89	13.0	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	596T004254	0	DSC-02	SOLID	N/A	80.5		Joules/g Dry
96000832	AN-105	4 DUP	596T004254	0	DSC-02	SOLID	80.5	58.4	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	596T003792	0	DSC-02	SOLID	N/A	43.4		Joules/g Dry
96000832	AN-105	6 DUP	596T003792	0	DSC-02	SOLID	43.4	67.3	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	596T003793	0	DSC-02	SOLID	N/A	48.0		Joules/g Dry
96000832	AN-105	8 DUP	596T003793	0	DSC-02	SOLID	48.0	49.4	N/A	Joules/g Dry
96000832	AN-105	9 SAMPLE	596T003794	0	DSC-02	SOLID	N/A	46.9		Joules/g Dry
96000832	AN-105	10 DUP	596T003794	0	DSC-02	SOLID	46.9	43.0	N/A	Joules/g Dry
96000832	AN-105	11 SAMPLE	596T003795	0	DSC-02	SOLID	N/A	55.4		Joules/g Dry
96000832	AN-105	12 DUP	596T003795	0	DSC-02	SOLID	55.4	58.0	N/A	Joules/g Dry
96000832	AN-105	13 SAMPLE	596T003796	0	DSC-02	SOLID	N/A	70.6		Joules/g Dry
96000832	AN-105	14 DUP	596T003796	0	DSC-02	SOLID	70.6	73.0	N/A	Joules/g Dry
96000832	AN-105	15 SAMPLE	596T003797	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
96000832	AN-105	16 DUP	596T003797	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Data Entry Comments:

Data 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# 12356

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

Final page for worklist # 12356

Priscilla Valenzuela
Analyst Signature

4-10-96
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

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96TDD 3731	5.0	-	6.9
3731D	7.3		13.0
4254	113.7	115.14	6
4254D	-	60.14	56.7
4358	N		-
4358D	L		-
3792	21.3	43.14	43.7
3792D	-	43.7	61.7
3793	24.3	47.21	48.0
3793D	-	-	41.4
3794	52.5	43.44	44.9
3794D	24.3	43.44	43.0
3795	78.1	44.5	-
3795D	-	-	59.0
3796	-	41.1	40.6
3796D	-	-	73.0
3797	7	47.1	4
3797D	1		4

LABCORE Data Entry Template for Worklist# 12357

Analyst: BDV Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE	S A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	5961003798	0	DSC-02	SOLID	N/A	98.1		Joules/g Dry
96000832	AN-105	2 DUP	5961003798	0	DSC-02	SOLID	98.1	121	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	5961003816	0	DSC-02	SOLID	N/A	53.5		Joules/g Dry
96000832	AN-105	4 DUP	5961003816	0	DSC-02	SOLID	53.5	45.6	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	5961003817	0	DSC-02	SOLID	N/A	22.4		Joules/g Dry
96000832	AN-105	6 DUP	5961003817	0	DSC-02	SOLID	22.9	13.7	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	5961004259	0	DSC-02	SOLID	N/A	106		Joules/g Dry
96000832	AN-105	8 DUP	5961004259	0	DSC-02	SOLID	106	94.5	N/A	Joules/g Dry
96000945	AN-105	9 SAMPLE	5961003981	0	DSC-02	SOLID	N/A	36.4		Joules/g Dry
96000945	AN-105	10 DUP	5961003981	0	DSC-02	SOLID	36.4	33.3	N/A	Joules/g Dry
96000945	AN-105	11 SAMPLE	5961003982	0	DSC-02	SOLID	N/A	106		Joules/g Dry
96000945	AN-105	12 DUP	5961003982	0	DSC-02	SOLID	106	174	N/A	Joules/g Dry
96000945	AN-105	13 SAMPLE	5961003983	0	DSC-02	SOLID	N/A	69.4		Joules/g Dry
96000945	AN-105	14 DUP	5961003983	0	DSC-02	SOLID	69.4	66.3	N/A	Joules/g Dry
96000945	AN-105	15 SAMPLE	5961004310	0	DSC-02	SOLID	N/A	77.4		Joules/g Dry
96000945	AN-105	16 DUP	5961004310	0	DSC-02	SOLID	77.4	45.8	N/A	Joules/g Dry
96000945	AN-105	17 SAMPLE	5961004311	0	DSC-02	SOLID	N/A	71.5		Joules/g Dry
96000945	AN-105	18 DUP	5961004311	0	DSC-02	SOLID	71.5	118	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# 12357

GROUP	PROJECT	S TYPE	SAMPLE#	R #	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
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Final page for worklist # 12357

Blandina Valenzuela 9-18-96
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 = Worksheet Slot Number,
R = Replicate Number, A = Aliquot Code

AN 105 dry OSC

CALCULATED DRY OSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
896T003778	570	31.84	101
3798D	10	30.54	121
3816	514	41.1	55
3816D	-	1.92	-5.6
3817	161	44.26	2.1
3817D	76	40.20	137
4254	604	21.1	10
4254D	541	11.1	94.5
3981	210	-	2-4
3981D	12.1	45.40	3.2
3982	515	45.54	106
3982D	74.8	45.54	174
3983	1.1	41.22	69.4
3983D	46.0	1.1	6.1
4310	-	47.1	77.4
4310D	-	1.1	45.6
4311	1.1	51.47	41.5
4311D	571	51.47	115

LABCORE Data Entry Template for Worklist# 12358

Analyst: BW Instrument: DSC01 Book # Method: I.A-514-113 Rev/Mod

Worklist Comment: Dry DSC for An-105. bdv

GROUP	PROJECT	B TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	WH1
96000945	AN-105	1 SAMPLE	5961004335	0	DSC-02	SOLID	N/A	57.8		Joules/g Dry
96000945	AN-105	2 DUP	5961004335	0	DSC-02	SOLID	57.8	72.7	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	5961004335	0	DSC-02	SOLID	N/A	83.2		Joules/g Dry
96000945	AN-105	4 DUP	5961004335	0	DSC-02	SOLID	83.2	161	N/A	Joules/g Dry
96000945	AN-105	5 SAMPLE	5961004436	0	DSC-02	SOLID	N/A	22.0		Joules/g Dry
96000945	AN-105	6 DUP	5961004436	0	DSC-02	SOLID	22.0	34.7	N/A	Joules/g Dry
96000945	AN-105	7 SAMPLE	5961004437	0	DSC-02	SOLID	N/A	41.9		Joules/g Dry
96000945	AN-105	8 DUP	5961004437	0	DSC-02	SOLID	41.9	81.3	N/A	Joules/g Dry
96000945	AN-105	9 SAMPLE	5961004438	0	DSC-02	L10U10	N/A	25.2		Joules/g Dry
96000945	AN-105	10 DUP	5961004438	0	DSC-02	L10U10	25.2	31.5	N/A	Joules/g Dry
96000945	AN-105	11 SAMPLE	5961004434	0	DSC-02	L10U10	N/A	34.5		Joules/g Dry
96000945	AN-105	12 DUP	5961004434	0	DSC-02	L10U10	34.5	40.8	N/A	Joules/g Dry

Final page for worklist # 12358

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 = Worksheet Slot Number,
R = Replicate Number, A = Aliquot Code

LABCORE Data Entry Template for Worklist# 12359

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

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R #	TEST	MATRIX	ACTUAL	FOLIO	DL	UNIT
96000832	AN-105	1 SAMPLE	596T003732	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	2 DUP	596T003732	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	596T004039	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	4 DUP	596T004039	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	596T003739	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	6 DUP	596T003739	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	596T003740	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	8 DUP	596T003740	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	9 SAMPLE	596T003741	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	10 DUP	596T003741	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	11 SAMPLE	596T003742	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	12 DUP	596T003742	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	13 SAMPLE	596T003743	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	14 DUP	596T003743	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	15 SAMPLE	596T003744	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	16 DUP	596T003744	0	DSC-02	L10010	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	17 SAMPLE	596T003745	0	DSC-02	L10010	N/A	Ø		Joules/g Dry
96000832	AN-105	18 DUP	596T003745	0	DSC-02	L10010	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 = Worksheet Row Number.
R = Replicate Number, A = Aliquot Code

LABCORE Data Entry Template for Worklist# 12359

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

Final page for worklist # 12359

Blanchina Valenzuela
Analyst Signature

9/10/96
Date

Analyst Signature

Date

Data Entry Comments

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

AN-105 chg DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T003732	0	--	0
3732D	0	-	0
4039	0	-	0
4039D	0	-	0
3739	0	--	0
3739D	0	---	0
3740	0	---	0
3740D	0	---	0
3741	0	-	0
3741D	0	---	0
3742	0	-	0
3742D	0	-	0
3743	0	-	0
3743D	0	-	0
3744	0	-	0
3744D	0	---	0
3745	0	-	0
3745D	0	-	0

LABCORE Data Entry Template for Worklist# 12360

Analyst: BOY Instrument: DSC01 Book # ---Method: LA-514-113 Rev/ModWorklist Comment: Dry DSC for AN-105. bdy

ORLP	PROJECT	B TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	996T003746	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	2 DUP	996T003746	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	996T003747	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	4 DUP	996T003747	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	996T003748	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	6 DUP	996T003748	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	996T003749	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	8 DUP	996T003749	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	9 SAMPLE	996T003750	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	10 DUP	996T003750	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	11 SAMPLE	996T003751	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	12 DUP	996T003751	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	13 SAMPLE	996T003974	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	14 DUP	996T003974	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	15 SAMPLE	996T003975	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	16 DUP	996T003975	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	17 SAMPLE	996T003976	0	DSC-02	LIQUID	N/A	4 94		Joules/g Dry
96000945	AN-105	18 DUP	996T003976	0	DSC-02	LIQUID	4 44	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# 12360

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	Unit
96000965	AN-105	19 SAMPLE	5961003977	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000965	AN-105	20 DUP	5961003977	0	DSC-02	LIQUID	Ø	105	N/A	Joules/g Dry

Final page for worklist # 12360

Blandina Valenzuela 9-10-96

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

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96TD03746	0	-	0
3746D	0	-	0
3747	0	-	0
3747D	0	-	0
3748	0	-	0
3748D	0	-	0
3749	0	-	0
3749D	0	-	0
3750	0	-	0
3750D	0	-	0
3751	0	-	0
3751D	0	-	0
3774	0	-	0
3774D	0	-	0
3775	0	-	0
3775D	0	-	0
3776	0	2.142	4.44
3776D	0	2.142	0
3777	0	2.142	0
3777D	0	2.142	0

LABCORE Data Entry Template for Worklist# 12361

Analyst: ROY Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	HAIRIN	ACTUAL	FOUND	DL	UNIT
96000945	AN-105	1 SAMPLE	596T003979	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	2 DUP	596T003979	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	596T003979	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	4 DUP	596T003979	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	5 SAMPLE	596T003980	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	6 DUP	596T003980	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	7 SAMPLE	596T004308	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	8 DUP	596T004308	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	9 SAMPLE	596T004309	0	DSC-02	LIQUID	N/A	26.5		Joules/g Dry
96000945	AN-105	10 DUP	596T004309	0	DSC-02	LIQUID	26.5	32.2	N/A	Joules/g Dry
96000945	AN-105	11 SAMPLE	596T004333	0	DSC-02	LIQUID	N/A	69.1		Joules/g Dry
96000945	AN-105	12 DUP	596T004333	0	DSC-02	LIQUID	69.1	115	N/A	Joules/g Dry
96000945	AN-105	13 SAMPLE	596T004419	0	DSC-02	LIQUID	N/A	36.4		Joules/g Dry
96000945	AN-105	14 DUP	596T004419	0	DSC-02	LIQUID	36.4	414	N/A	Joules/g Dry
96000945	AN-105	15 SAMPLE	596T004420	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	16 DUP	596T004420	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	17 SAMPLE	596T004421	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	18 DUP	596T004421	0	DSC-02	LIQUID	Ø	69.0	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# 12361

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

Final page for worklist # 12361

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.

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
396T00 3978	Ø	—	Ø
39780	Ø	—	Ø
3979	Ø	—	Ø
39790	Ø	—	Ø
3980	Ø	—	Ø
39800	Ø	—	Ø
4308 398	Ø	—	Ø
43080	Ø	—	Ø
4309	11.1	48.6	26.5
43090	11.1	—	26.5
4333	11.1	49.6	21.1
43330	11.1	49.6	114.6
4419	11.5	11.46	2.1
44190	11.5	11.46	4.4
4420	Ø	—	Ø
44200	Ø	—	Ø
4421	Ø	—	Ø
44210	2.54	—	1.1

LABCORE Data Entry Template for Worklist# 13019

Analyst: RDM Instrument: DSC 3 Book # 12N148

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

Worklist Comment: AN105 DSC Run RUN UNDER NZ.

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	METHOD	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-05	L10010	28.45	27.41	N/A	Joules/g
96080905	AN-105	2 SAMPLE	9607004419	1	DSC-05	L10010	N/A	0		Joules/g
96080905	AN-105	3 DUP	9607004419	1	DSC-05	L10010	0	27.453	N/A	Joules/g
96080932	AN-105	4 SAMPLE	9607083749	0	DSC-05	L10010	N/A	42.6		Joules/g
96080932	AN-105	5 DUP	9607083749	0	DSC-05	L10010	42.6	64.9	N/A	Joules/g

Final page for worklist # 13019

Analyst Signature

Date

9-18-96

Analyst Signature

Date

See attached for signatures
Verified/Validated by
Blarina
Valenzuela
9-18-96

9607004419 results are a replicate for this sample. The exotherm found in the sample is from the decomposition of a pure substance. It is occurring during the evaporation of water.

9607003749 thermograms indicate an exotherm occurring during the evaporation of water. It appears to be from a relatively pure substance. The results are the sum of two exotherms.

Units shown for GC (SPR & STD) may not reflect theoretical units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 13067

Analyst: BDV Instrument: DSC0 1 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R &	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
96000852	AN-105	1 SAMPLE	9961003749	1	DSC-02	LIC810	N/A	85.7		Joules/g Dry
96000852	AN-105	2 DUP	9961003749	1	DSC-02	LIC810	85.7	130.1	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	9961804419	1	DSC-02	LIC810	N/A	0		Joules/g Dry
96000945	AN-105	4 DUP	9961804419	1	DSC-02	LIC810	0	29.34	N/A	Joules/g Dry

Final page for worklist # 13067

Blandina Valenzuela
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 13019

Analyst: RDM Instrument: DSCD Book # 12NHB

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

Worklist Comment: AN105 DSC Rerun RUN UNDER N2. **RUSH**

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	METHOD	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	L10410			N/A	Joules/g
96000945	AN-105	2 SAMPLE	9601004419	1	DSC-01	L10410	N/A			Joules/g
96000945	AN-105	3 DUP	9601004419	1	DSC-01	L10410			N/A	Joules/g
96000832	AN-105	4 SAMPLE	9601003749	0	DSC-01	L10410	N/A			Joules/g
96000832	AN-105	5 DUP	9601003749	0	DSC-01	L10410			N/A	Joules/g

Final page for worklist # 13019

Analyst Signature: RDM Date: 9/18/96

Analyst Signature: _____ Date: _____

9-18-96
F.G.A.O.
DSC-03 instrument was
used.
9-18-96 Blandina
Valenzuela

Data Entry Comments:

Curve 1: DSC

File info: ind091701 Tue Sep 17 17:11:15 1996

Sample Weight: 0.580 mg

12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION ANALYSIS ON PAGES 31 TO 35

rd buyers
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Sep 17 17:17:11 1996

Curve 1: DSC
 File Info: SAM091801 Wed Sep 18 00:32:49 1996
 Sample Weight: 12.060 mg
 S96T004419

M2 10C/min
 THERM 35.8 E
 0.0 min RATE 10.0 C/min

rd mayer
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 18 00:32:49 1996

Curve 1: DSC
File info: SAM091802 Wed Sep 18 01:46:57 1996
Sample Weight: 22.680 mg
596T004419DUP

Curve 1: DSC

File info: ssm091701 Tue Sep 17 18:30:52 1996

Sample Weight: 16.000 mg

B96T00387E 447

N2 100/min

Mod 1 80.0 g

TIMER:

0.0 min RATE:

10.0 g/min

Temperature (°C)

rd mayer

PERKIN-ELMER

7 Series Thermal Analysis System

Mod Sep 18 08:34:10 1996

Curve 1: DSC
 File info: BAM091702 Tue Sep 17 22:19:55 1996
 Sample Weight: 17.510 mg
 S96T0037490UP

NE 10C/min
 速率: 10.0 °C/min
 TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

rd meyers
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Sep 18 09:42:17 1996

LABCORE Data Entry Template for Worklist#

11281

Analyst: RPM Instrument: TGAD 1 Book # 62108

Method: LA-560-112 Rev/Mod B-1 9/18/96 FS

Worklist Comment: AN-105 TGA, RUN UNDER N2, RCI

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.04	N/A	X
96000832	AN-105	2 SAMPLE	8961083752 0		TGA-01	LIQUID	N/A	49.57		X
96000832	AN-105	3 DUP	8961083752 0		TGA-01	LIQUID	49.57	50.2	51.74	X
96000832	AN-105	4 SAMPLE	8961083759 0		TGA-01	LIQUID	N/A	50.2		X
96000832	AN-105	5 DUP	8961083759 0		TGA-01	LIQUID	50.8	50.57	N/A	X

Final page for worklist # 11281

Analyst Signature: RPM Date: 7/31/96

Analyst Signature: Trish Muck Date: 8-6-96

Verified/Validated by
Blamaina
Valenzuela 8.7.96

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 317 TO 321

TGA STD B2NB-A

10.990 mg

Rate: 10.0 °C/min

File: 00004.001

TG METTLER 31-JUL-95

Ident: 0.0

222-B Laboratory

Step Analysis

Height -9.79 mg

-59.04 %

Res1C. 8.79 mg

40.96 %

Onset 81.7 °C

Blandina Valenzuela for RD Meyers 8/7/96

S96T003732 N2

17.029 mg

Rate: 10.0 °C/min

File: 00010.001

Ident: 0.0

TG METTLER 31-Jul-98

222-S Laboratory

Step Analysis
Height -7.37 mg
-43.26 %
Resid. 9.66 mg
56.74 %
Dpeak 83.0 °C

Step Analysis
Height -1.07 mg
-6.31 %
Resid. 8.48 mg
49.62 %

0.8

S96T003732 DUP N2

11.146 mg

Rate: 10.0 °C/min

File: 00012.001

Ident: 0.0

TG

METTLER

31-Jul-95

222-B Laboratory

Step Analysis
Height -5.77 mg
-51.74 %
Resid. 5.38 mg
48.26 %
Onset 73.0 °C

31.9

2.00

100.

200.

300.

400.

°C

U-C-SD-WM-OP-199, REV. 0

898T003739 N2

16.447 mg

Rate: 10.0 °C/min

File: 00006.001

Ident: 0.0

TG METTLER 31-Jul-99

322-B Laboratory

Step Analysis
Height -7.16 mg
-43.63 %
ResidC. 9.27 mg
56.37 %
Dpeak 81.0°C

Step Analysis
Height -1.08 mg
-6.57 %
ResidC. 8.15 mg
49.58 %

320

585T0037390UP N2

13.111 mg

Rate: 10.0 °C/min

File: 00008.001 T6 METTLER 31-Jul-98

Ident: 0.0

222-B Laboratory

Step Analysis

Height -5.81 mg

-44.29 %

ResidC. 7.30 mg

55.71 %

Dpeak 77.0°C

Step Analysis

Height -0.82 mg

-6.28 %

ResidC. 6.46 mg

49.26 %

LABCORE Data Entry Template for Worklist#

11282

Analyst: RDM Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE	S A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-05	LIQUID	59.2	59.77	N/A	%
96000832	AN-105	2 SAMPLE	8961003740	D	TGA-05	LIQUID	N/A	50.43		%
96000832	AN-105	3 DUP	8961003740	B	TGA-05	LIQUID	50.43	49.69	N/A	%
96000832	AN-105	4 SAMPLE	8961003741	D	TGA-05	LIQUID	N/A	50.12		%
96000832	AN-105	5 DUP	8961003741	B	TGA-05	LIQUID	50.12	50.83	N/A	%

Final page for worklist # 11282

See attached for signatures
Analyst Signature [Signature] Date 8-6-96

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-7-96

Data Entry Comments:

Units shown for QC (SPE & 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#

11282

Analyst: _____ Instrument: TGA0 _____ Book # _____

Method: LA-560-112 Rev/Mod _____

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	C TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96000832	AN-105	2 SAMPLE	9961003768	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	3 DUP	9961003768	0	TGA-01	LIQUID			N/A	%
96000832	AN-105	4 SAMPLE	9961003761	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	5 DUP	9961003761	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 11282

Analyst Signature _____
Date 7/31/96

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: TGA
File Infor T89073101 Mod Jul 31 02:07:44 1998
Sample Weight: 10.850 mg
TGA STD 6208-A

See also the Researcher's Manual for details of TGA
COMPUTER GENERATED TGA CURVE ANALYSIS ON PAGES 324-328

W2 100/MIN
TIME 257.8 s
TGA 0.0 min RATE 10.0 C/min
RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Mod Jul 31 07:58:33 1998

Curve 1: TGA

File info: 8AM073103 Wed Jul 31 12:58:16 1996

Sample Weight: 14.065 mg

898T003745

100.0 MIN 100.0

100.0 MIN 100.0

TIME

0.0 MIN RATE

10.0 C/MIN

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Jul 31 13:22:01 1996

WPC-SD-MM-OP-199, REV. 0

Curve 1: TGA

File Info: SAMP73104 Wed Jul 31 16:06:32 1996

Sample Weight: 15.343 mg

88670037400LP

10C/MIN N2

TIME 00:02

TEMPERATURE

0.0 MIN RATE: 10.0 C/MIN

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Jul 31 16:01:33 1996

WHC-SD-WM-QP-199, REV. 0

Curve 1: TGA

File Info: SAMP79101 Wed Jul 31 08:02:52 1996

Sample Weight: 25.115 mg

9961003741

10C/MIN #2

7/31/96 8:05:05

25.115 mg 25.115 mg 25.115 mg

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Jul 31 08:03:05 1996

WHC-SD-WM-OP-199, REV. D

Curve 1: TGA

File Infr: SAM073102 Wed Jul 31 10:01:24 1996

Sample Weight: 14.975 mg

8961003741DUP

328

Weight (%)

100/MIN H2

TIME: 20.0 E

TIME: 20.0 E

2.0 min RATE: 10.0 °C/min

10.0 °C/min

Temperature (°C)

80 MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Wed Jul 31 11:57:19 1996

WRCSD-WM-CP-199, REV. 0

LABCORE Data Entry Template for Worklist#

11283

Analyst: SMF Instrument: TGA0 1 Book # 8218A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RC1

BROW	PROJECT	S TYPE	SAMPLE	R R	TEST	MATCH	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIMIT	<u>59.2</u>	<u>59.06</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	596T003742	D	TGA-01	LIMIT	<u>N/A</u>	<u>50.5</u>		%
96000832	AN-105	3 DUP	596T003742	D	TGA-01	LIMIT	<u>50.5</u>	<u>50.85</u>	<u>N/A</u>	%
96000832	AN-105	4 SAMPLE	596T003743	D	TGA-01	LIMIT	<u>N/A</u>	<u>50.07</u>		%
96000832	AN-105	5 DUP	596T003743	D	TGA-01	LIMIT	<u>50.07</u>	<u>50.4</u>	<u>N/A</u>	%

Final page for worklist #

11283

Smulson 8-1-96
Analyst Signature Date

Paul Mull 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-7-96

S96T003742 results are the sum of two weight loss steps.

Data Entry Comments: S96T003743 results are the sum of two weight loss steps.

Units shown for QC (SPE & 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 332 TO 334.

TGA STD 62N8A

19.690 mg

Rate: 10.0 °C/min

File: 00027.001

TG

METTLER

30-Jul-98

Ident: 0.0

222-6 Laboratory

Step Analysis

Height-11.63 mg

-59.06 %

ResidC. 8.06 mg

40.94 %

Dpeak 90.0 °C

330

5. mg

WUC-SD-WA-SP-159-REV-0

50.

100.

150.

200

Signature P-1-16

S95T003742 N2

17.014 mg

Rate: 10.0 °C/min

File: 00029.001

Ident: 0.0

TG METTLER

30-JUL-95

222-B Laboratory

331

S96T003742 DUP N2

14.065 mg

Rate: 10.0 °C/min

File: 00041.001

TG METTLER 30-JUL-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.53 mg

-43.62 %

ResidC. 8.44 mg

56.38 %

Dpeak 79.0°C

Step Analysis

Height -1.08 mg

-7.23 %

ResidC. 7.36 mg

49.09 %

Dpeak 191.0°C

332

S95T003743 N2

15.718 mg

Rate: 10.0 °C/min

File: 00048.001

T6

METTLER

31-Jul-96

Ident: 0.0

222-8 Laboratory

Step Analysis
Height -6.83 mg
-43.48 %
ResidC. 6.88 mg
56.52 %
Dpeak 79.0 °C

Step Analysis
Height -1.04 mg
-6.59 %
ResidC. 7.79 mg
49.56 %
Dpeak 179.0 °C

333

S95T003743 DUP N3

14.026 mg

Rate: 10.0 °C/min

File: 00046.001

TG

METTLER

31-Jul-99

Ident: 0.0

222-B Laboratory

Step Analysis

Height -6.28 mg

-44.58 %

Resid. 7.81 mg

55.42 %

Opeak 77.0°C

Step Analysis

Height -0.82 mg

-5.82 %

Resid. 6.98 mg

49.49 %

LABCORE Data Entry Template for Worklist#

11284

Analyst: SME/ADD Instrument: TGA0 1 Book # 82A08A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2, RC1

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.07	*	N/A
96000832	AN-105	2 SAMPLE	9967003764	0	TGA-01	LIQUID	N/A	50.91		X
96000832	AN-105	3 DUP	9967003764	0	TGA-01	LIQUID	50.91	50.37		X
96000832	AN-105	4 SAMPLE	9967003765	0	TGA-01	LIQUID	N/A	50.42		X
96000832	AN-105	5 DUP	9967003765	0	TGA-01	LIQUID	50.42	52.16		X

Final page for worklist #

11284

Analyst Signature

Date

Anthony Purnita 8-2-96

Verified/Validated by

Blandina

Valenzuela 8-7-96

Data Entry Comments:

Units shown for QC (SPE & 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 33a TO 34c

TGA STD 62NBA

19.690 mg

Rate: 10.0 °C/min

File: 00087.001

Ident: 0.0

TG METTLER 30-Jul-96

323-B Laboratory

Step Analysis

Height-11.63 mg

-59.07 %

Resid. 8.06 mg

40.83 %

Dpeak 90.0°C

S96T003744 N2

11.483 mg

Rate: 10.0 °C/min

File: 00047.001

Ident: 0.0

TG METTLER 31-Jul-95

222-S Laboratory

Step Analysis
Height -5.21 mg
-45.48 %
Resid. 6.24 mg
54.52 %
Dpeak 71.0°C

Step Analysis
Height -0.62 mg
-5.43 %
Resid. 5.61 mg
48.99 %

137

S96T003744 DUP N2

File: 00048.001 TG METTLER 31-Jul-98

14.098 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.21 mg

-44.04 %

ResidC. 7.89 mg

55.96 %

Dpeak 77.0°C

Step Analysis

Height -0.89 mg

-6.33 %

ResidC. 7.00 mg

49.63 %

S96T003745 SAM N2

22.735 mg

Rate: 10.0 °C/min

File: 00053.001

TG

METTLER

81-Jul-88

Ident: 0.0

222-B Laboratory

Step Analysis

Height -9.89 mg

-43.50 %

ResidC. 12.85 mg

56.50 %

Dpeak 93.0°C

Step Analysis

Height -1.57 mg

-6.92 %

ResidC. 11.27 mg

49.56 %

Dpeak 179.0°C

339

0.5

WHS-SD-NNM-DP-199, REV. 0

S96T003475 DUP N2

30.248 mg

Rate: 10.0 °C/min

File: 00055.001

TG NETTLER

31-Jul-95

Ident: 0.0

222-S Laboratory

340

WHC-SID-WM-DP-158, REV. 0

LABCORE Data Entry Template for Worklist#

11285

Analyst: ADD Instrument: TGA0 3 Book # 82NBA

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

Worklist Comment: AN-105 TGA, RUN UNDER N2, RCJ

GROUP	PROJECT	E TYPE	SAMPLE	S A	TEST	MATRIX	ACTUAL	FORMED	DL	UNIT
		1 STD			TGA-05	LIGHT	<u>59.2</u>	<u>58.79</u>	N/A	%
9600032	AN-105	2 SAMPLE	960003746	0	TGA-05	LIGHT	N/A	<u>50.80</u>		%
9600032	AN-105	3 DUP	960003746	0	TGA-05	LIGHT	<u>50.80</u>	<u>50.03</u>	N/A	%
9600032	AN-105	4 SAMPLE	960003747	0	TGA-05	LIGHT	N/A	<u>50.12</u>		%
9600032	AN-105	5 DUP	960003747	0	TGA-05	LIGHT	<u>50.12</u>	<u>49.66</u>	N/A	%

Final page for worklist # **11285**

See attached for signatures
Analyst Signature 8.5.96

8.6.96
Analyst Signature Date

Verified/Validated
by Blandina
Valenzuela
8-7-96

Blandina
Valenzuela

Data Entry Comments: S96T003746 results are the sum of several weight loss steps.

S96T003747 results are the sum of several weight loss steps.

(This is shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worksheet Row Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist#

11285

Analyst: ADD Instrument: TGA0 _____ Book # 82 N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIGNED			N/A	%
96000832	AN-105	2 SAMPLE	9967003766	0	TGA-01	LIGNED	N/A			%
96000832	AN-105	3 DUP	9967003766	0	TGA-01	LIGNED			N/A	%
96000832	AN-105	4 SAMPLE	9967003767	0	TGA-01	LIGNED	N/A			%
96000832	AN-105	5 DUP	9967003767	0	TGA-01	LIGNED			N/A	%

Final page for worklist #

11285

Alfonso Parra 8-2-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

8.5.96

Blandina
Valenzuela

Data Entry Comments

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

Curve 1: TGA

File info: TER000102 Fri Aug 2 02:34:42 1996

Sample Weight: 30.646 mg

TGA STD 0240-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 343 TO 347.

N2 100/Min

Temp: 25.0 °C

Time: 0.0 min Rate: 10.0 °C/min

Temperature (°C)

AD PARLINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 02:42:32 1996

WHC-SD-WM-OP-199, REV. 0

Curve 1: TGA

File info: SAM080201 Fri Aug 2 08:42:54 1996

Sample Weight: 30.529 mg

895T003745 BAH

344

10C/MIN N2

7/1/96 8:42:54 2

THERM

5.0 MIN RATE

50.0 O2/min

Temperature (°C)

40 PURITON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 08:42:02 1996

WHC-SD-WM-DP-199, REV. 0

Curve 1: TGA

File info: S40000001 Fri Aug 2 10:31:40 1996

Sample Weight: 21.770 mg

996T003748 DUP

10C/MIN N2

TIME: 39.2 S

TIME: 39.2 S

0.0 min RATE: 10.0 C/MIN

10.0 C/MIN

Temperature (°C)

AD PURINGTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 11:35:45 1996

WMC-SD-WM-DP-189, REV. 0

Curve 1: TGA

File Info: 84080203 Fri Aug 2 12:34:29 1996

Sample Weight: 16.960 mg

886T003747 SAM

10C/MIN N2

TIME: 0.0 min

0.0 min

10.0 g/min

AD PURITON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 12:35:24 1996

WPC-SD-MM-OP-189, REV. 0

Curve 1: TGA

File Info: SAM080804 Fri Aug 2 13:52:33 1986

Sample Weight: 19.535 mg

55GT003747 CUP

347

10C/MIN N2

750°C

TDMS

0.5 GEA RATE

50.0 C/min

Temperature (°C)

AD PURINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 14:16:10 1986

WHC-SD-WM-DP-199, REV. 0

LABCORE Data Entry Template for Worklist#

11286

Analyst: ADD Instrument: TGA0 1 Book # 82N8A

Method: LA-560-112 Rev/Mod 8-13-1

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R & TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	LIMULD	59.2	58.35x	N/A	%
9600832	AN-105	2 SAMPLE	896T003748	0	TGA-01	LIMULD	N/A	49.75	%
9600832	AN-105	3 DUP	896T003748	0	TGA-01	LIMULD	49.75	30.12	N/A %
9600832	AN-105	4 SAMPLE	896T003749	0	TGA-01	LIMULD	N/A	50.07	%
9600832	AN-105	5 DUP	896T003749	0	TGA-01	LIMULD	50.07	50.46	N/A %

Final page for worklist # 11286

[Signature] 8-2-96
Analyst Signature Date

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8-7-96

S96T003748 results are the sum of ^{85.96} several weight loss steps. The high RPD are unusual for a liquid sample and should be rerun.

Data Entry Comments: S96T003749 results are the sum of several weight loss steps.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 34 TO 35

TER 82N8-A N2

19.945 mg

Rate: 10.0 °C/min

File: 00051.001

TG

METTLER

31-Jul-95

Ident: 0.0

222-B Laboratory

Step Analysis
Height-11.68 mg
-58.55 %
Res1C. 8.27 mg
41.45 %
Dpeak 87.0 °C

S96T003748 SAM N2

22.382 mg

Rate: 10.0 °C/min

File: 00057.001

Ident: 0.0

TG

METTLER

31-Jul-98

222-6 Laboratory

OxG

5. mg

Step Analysis

Height -9.58 mg

-42.85 %

ResidC. 12.78 mg

57.15 %

Dpeak 93.0°C

Step Analysis

Height -0.61 mg

-2.71 %

ResidC. 12.17 mg

54.44 %

Step Analysis

Height -0.94 mg

-4.19 %

ResidC. 11.24 mg

50.26 %

Dpeak 179.0°C

100.

200.

300.

400.

°C

S95Y003748 DUP N2

File: 00089.001 T6 METTLER 81-Jul-95

10.987 mg

Rate: 10.0 °C/min

Ident: 0.0

222-B Laboratory

Step Analysis

Height -1.90 mg

-17.33 %

ResidC. 9.06 mg

82.67 %

Step Analysis

Height -0.59 mg

-5.38 %

ResidC. 8.47 mg

77.29 %

Step Analysis

Height -0.81 mg

-7.41 %

ResidC. 7.66 mg

69.87 %

Onset 181.0 °C

S96T003749 SAM N2

File: 00081.001 TG NETTLER 31-Jul-96

13.660 mg

Rate: 10.0 °C/min

Ident: 0.0

282-S Laboratory

Step Analysis
Height -5.70 mg
-41.70 %
ResidC. 7.96 mg
58.30 %

Step Analysis
Height -0.27 mg
-1.96 %
ResidC. 7.70 mg
56.34 %

Step Analysis
Height -0.88 mg
-6.41 %
ResidC. 6.79 mg
49.72 %

S96T003749 DUP N2

13.890 mg

Rate: 10.0 °C/min

File: 00065.001

TG

METTLER

01-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -5.88 mg

-42.92 %

ResidC. 7.81 mg

57.08 %

Step Analysis

Height -0.36 mg

-2.60 %

ResidC. 7.45 mg

54.48 %

Step Analysis

Height -0.68 mg

-4.94 %

ResidC. 6.78 mg

49.55 %

353

LABCORE Data Entry Template for Worklist#

11287

Analyst: ADD Instrument: TGA0 3 Book # 82N8A

Method: LA-514-114 Rev/Mod C1

Worklist Comment: AN-105 TGA, RUN UNDER N2. RC1

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-05	L10M10	<u>57.2</u>	<u>58.99%</u>	<u>N/A</u>	<u>S</u>
96000832	AN-105	2 SAMPLE	9667003750	0	TGA-05	L10M10	<u>N/A</u>	<u>48.76</u>		<u>S</u>
96000832	AN-105	3 DUP	9667003750	0	TGA-05	L10M10	<u>48.96</u>	<u>50.22</u>	<u>N/A</u>	<u>S</u>
96000832	AN-105	4 SAMPLE	9667003751	0	TGA-05	L10M10	<u>N/A</u>	<u>51.31</u>		<u>S</u>
96000832	AN-105	5 DUP	9667003751	0	TGA-05	L10M10	<u>51.31</u>	<u>50.95</u>	<u>N/A</u>	<u>S</u>

Final page for worklist # 11287

See attached for signatures
Analyst Signature 8-5-96

8-6-96
Analyst Signature Date

Verified/Validated
by Blandina Valenzuela
8-9-96

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist#

11287

Analyst: ADD Instrument: TGA0 _____ Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLER	R A	TEST	MATRIX	ACTUAL	#FOUND	DL	UNIT
		1 STD			TGA-01	LIMUO			N/A	%
9600832	AN-105	2 SAMPLE	8967003759	8	TGA-01	LIMUO	N/A			%
9600832	AN-105	3 DUP	8967003759	0	TGA-01	LIMUO			N/A	%
9600832	AN-105	4 SAMPLE	8967003751	0	TGA-01	LIMUO	N/A			%
9600832	AN-105	5 DUP	8967003751	8	TGA-01	LIMUO			N/A	%

Final page for worklist # 11287

Blandina Valenzuela 8-2-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

8-5-96

Blandina Valenzuela

Data Entry Comments:

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

Curve 1: TBA

File Info: THERMO102 Fri Aug 2 05:34:42 1996

Sample Weight: 30.646 mg

TBA STD 8298-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 216 TO 241

HE 100/MIN

TEMP 20.0 °C

TIME

0.0 min RATE

10.0 °/min

Temperature (°C)

AD PURDITON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 05:01:09 1996

WFO-SD-WMA-OP-199, REV. 0

Curve 1: TGA

File info: SAMC80205 Fri Aug 2 15:15:30 1996

Sample Weight: 28.124 mg

SAF003700 SAM

82.4% 596T

10C/MIN M2

TIME: 00:02:00

TIME: 00:02:00

6.0 min RATE: 20.0

20.0 g/min

Temperature (°C)

AD PURITON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 15:15:01 1996

WHC-SD-VIA-DP-199, REV. 0

Curve 1: TGA

File Info: SAN000206 Fri Aug 2 16:22:00 1996

Sample Weight: 17.585 mg

9987003750 DUP

100/KIN M2

100.0 20.0 5

TIME

P.O

SEA RATE

NO. P C/MIN

Temperature (°C)

AD FURINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Aug 2 17:17:31 1996

Curve 1: TBA

File info: SAM080581 Sat Aug 3 09:12:42 1996

Sample Weight: 18.123 mg

BB67003751 64M

10C/MIN NR

TIME: 00:03.8

TIME: 00:03.8

0.0 min RATE: 10.0 C/min

10.0 C/min

Temperature (°C)

AD PARLINTON

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Aug 3 09:32:26 1996

WFO-SD-MM-OP-199, REV. 0

Curve 1: TGA

File info: SAND80302 Sat Aug 3 10:40:41 1996

Sample Weight: 17.122 mg

9857003751 DUP

10C/MIN N2

100.0 10.0

Temp

0.0 min N2

10.0 g/min

Temperature (°C)

AD PURITON

PERKIN-ELMER

7 Series Thermal Analysis System

Sat Aug 3 11:54:12 1996

WMC-SD-WM-OP-199, REV. 0

LABCORE Data Entry Template for Worklist#

11305

Analyst: KRM Instrument: TGAO 1 Book # 8210A

Method: LA-560-112 Rev/Mod B1

Worklist Comment: AN-105 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>59.75</u>	<u>*N/A</u>	3
96000832	AN-105	2 SAMPLE	960008321	0	TGA-01	SOLID	<u>N/A</u>	<u>46.68</u>		3
96000832	AN-105	3 DUP	960008321	0	TGA-01	SOLID	<u>46.68</u>	<u>40.81</u>	<u>N/A</u>	2

Final page for worklist # 11305

Analyst Signature [Signature] Date 8-5-96

Analyst Signature [Signature] Date 8-6-96

Rec Ann Green 8-5-96

~~Val~~ ⁸⁻⁷⁻⁹⁶ Verified/Validated by ⁸⁻⁷⁻⁹⁶ [Signature]

Verified/Validated by
Blandina
Valenzuela
8-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 343 TO 344.

TGA STD 82N8A

20.179 mg

Rate: 10.0 °C/min

File: 00079.001

TG

METTLER

03-Aug-98

Ident: 0.0

222-6 Laboratory

Blandina Valenzuela for KR Monteith

S98T003731 SAM N2

18.253 mg

Rate: 10.0 °C/min

File: 00088.001 T6 METTLER 03-AUG-90

Ident: 0.0

222-S Laboratory

S96T003731 DUP N2

File: 00081.001 TG METTLER 03-AUG-86

14.258 mg

Rate: 10.0 °C/min

Ident: 0.0

222-B Laboratory

Step Analysis

Height -5.82 mg

-40.81 %

Resid. 8.44 mg

59.19 %

Dpeak 71.0 °C

LABCORE Data Entry Template for Worklist#

11493

Analyst: KRM Instrument: TGA0 1 Book # 8208A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2, RCI

GROUP	PROJECT	S TYPE	SAMPLED	S A	TEXT	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.80</u>	<u>N/A</u>	X
96000832	AN-105	2 SAMPLE	5961003792	0	TGA-01	SOLID	<u>N/A</u>	<u>44.31</u>		X
96000832	AN-105	3 DUP	5961003792	0	TGA-01	SOLID	<u>44.31</u>	<u>43.63</u>	<u>N/A</u>	X
96000832	AN-105	4 SAMPLE	5961003793	0	TGA-01	SOLID	<u>N/A</u>	<u>42.04</u>		X
96000832	AN-105	5 DUP	5961003793	0	TGA-01	SOLID	<u>42.04</u>	<u>44.58</u>	<u>N/A</u>	X

Final page for worklist #

11493

Analyst Signature

Date

8-5-96

Analyst Signature

Date

8-6-96

Verified/Validated by

Blandina

Valenzuela

8-7-96

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 310 TO 310.

TGA STD 62N8A

20.179 mg

Rate: 10.0 °C/min

File: 00079.001

TG

METTLER

03-Aug-96

Ident: 0.0

222-B Laboratory

710-SD-WM-DP-199, REV. 0

[Signature] 9-17-96
Hie

S96T003792 SAM N2

File: 00081.001 TG METTLER 03-Aug-96

15.988 mg

Rate: 10.0 °C/min

Ident: 0.0

222-B Laboratory

Step Analysis

Height -7.08 mg

-44.31 %

Resid. 8.90 mg

55.69 %

Dpeak 81.0 °C

S96T003792 DUP N2

6.239 mg

Rate: 10.0 °C/min

File: 00083.001 T0 METTLER 03-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis
Height -3.60 mg
-43.63 %
ResidC. 4.63 mg
56.23 %
Dpeak 89.0 °C

S96T003793 SAM N2

15.122 mg

Rate: 10.0 °C/min

File: 00085.001 TG NETTLER 03-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height -6.36 mg

-42.04 %

Res1C. 8.76 mg

57.96 %

Dpeak 69.0 °C

S95T003793 DUP N2

9.660 mg

Rate: 10.0 °C/min

File: 00087.001 TG METTLER 03-Aug-98

Ident: 0.0

222-S Laboratory

Step Analysis

Height -4.31 mg

-44.56 %

Res1C. 5.35 mg

55.42 %

Dpeak 61.0 °C

LABCORE Data Entry Template for Worklist#

11494

Analyst: RJA Instrument: TGA0 1 Book # 82N3.A

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

Worklist Comment: AN-105 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>59.73</u>	*N/A	%
96000832	AN-105	2 SAMPLE	9961003796	0	TGA-01	SOLID	<u>N/A</u>	<u>42.46</u>		%
96000832	AN-105	3 DUP	9961003794	0	TGA-01	SOLID	<u>42.46</u>	<u>44.41</u>	N/A	%
96000832	AN-105	4 SAMPLE	9961003795	0	TGA-01	SOLID	<u>N/A</u>	<u>43.23</u>		%
96000832	AN-105	5 DUP	9961003795	0	TGA-01	SOLID	<u>43.23</u>	<u>45.83</u>	N/A	%

Final page for worklist # 11494

Rae Ann Dwyer 8-6-96
Analyst Signature Date

St. Peter 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8-7-96

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 322 TO 376

TGA STD 82N8A

20.179 mg

Rate: 10.0 °C/min

File: 00078.001 T6 METTLER 03-Aug-98

Ident: 0.0

222-G Laboratory

Step Analysis

Height: 12.05 mg

-59.73 %

Resid: 8.13 mg

40.27 %

Dpeak: 95.0 °C

S96T003794 SAM N2

49.798 mg

Rate: 10.0 °C/min

File: 00099.001

Ident: 0.0

TG METTLER 09-Aug-96

222-S Laboratory

Step Analysis

Height-18.60 mg

-42.46 %

ResidC. 26.20 mg

57.54 %

Dpeak 141.0 °C

WHC-SD-WM-OP-199, REV.0

S96T003794 DUP N2

16.743 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

TG METTLER

222-B Laboratory

06 AM
88-AUG-98

Step Analysis

Height -7.44 mg

-44.41 %

ResidC. 9.31 mg

55.59 %

Dpeak 75.0 °C

S96T003795 SAM N2

29.272 mg

Rate: 10.0 °C/min

File: 00097.001

TB NETTLER

04 Aug-96

Ident: 0.0

222-S Laboratory

S96T003795 DUP N2

21.045 mg

Rate: 10.0 °C/min

File: 00099.001

TG METTLER

06
24-Aug-96

Ident: 0.0

222-B Laboratory

Step Analysis
Height -9.64 mg
-45.83 %
ResidC. 11.40 mg
54.17 %
Dpeak 85.0 °C

5.0 mg
376

100.

200.

300.

400.

°C

8-6-96

Rae Ann Green

LABCORE Data Entry Template for Worklist#

11495

Analyst: SHF Instrument: TGA0 1 Bosh # 821087

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLES	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	^{59.2} 58.45	59.34	N/A	%
96000852	AN-105	2 SAMPLE	5961003796	0	TGA-01	SOLID	N/A	45.15		%
96000852	AN-105	3 DUP	5961003796	0	TGA-01	SOLID	45.15	46.04	N/A	%
96000852	AN-105	4 SAMPLE	5961003797	0	TGA-01	SOLID	N/A	36.14		%
96000852	AN-105	5 DUP	5961003797	0	TGA-01	SOLID	36.14	39.33	N/A	%

Final page for worklist # 11495

Luis M. Dultox 8-7-96
Analyst Signature Date

Shirley 8-12-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8/14/96

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 322 TO 362.

TGA STD B2N8A

15.563 mg

Rate: 10.0 °C/min

File: 00018.001

TG

METTLER

05-Aug-95

Ident: 0.0

222-B Laboratory

Step Analysis

Height -8.25 mg

-59.34 %

ResidC. 6.34 mg

40.66 %

Dpeak 81.7°C

378

5.8g

50.

100.

150.

200.

°C

Shirley M. Filler 8-7-95

SB5T003796 N2

15.944 mg

Rate: 10.0 °C/min

File: 00024.001

TG

NETTLER

05-Aug-95

Ident: 0.0

222-S Laboratory

379

5. mg

Step Analysis
Height -6.20 mg
-38.88 %
ResidC. 9.74 mg
81.12 %
Onset 79.0 °C

Step Analysis
Height -1.00 mg
-6.27 %
ResidC. 8.74 mg
54.85 %

100.

200.

300.

400.

°C

S96T003796 QUP N2

25.608 mg

Rate: 10.0 °C/min

File: 00031.001

TG METTLER 08-Aug-95

Ident: 0.0

222-8 Laboratory

Step Analysis

Height-12.95 mg

-36.37 %

Resid. 22.66 mg

63.63 %

Step Analysis

Height -3.44 mg

-9.67 %

Resid. 19.21 mg

59.98 %

0.8C

10. mg

100.

200.

300.

400.

°C

W83C-SQ-1624-QP-1-99, REV. 0

598T003797 SAM N2

41.790 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

T6 METTLER 07-Aug-95

222-S Laboratory

Step Analysis

Height -8.25 mg

-19.75 %

ResidC. 33.54 mg

80.25 %

Step Analysis

Height -6.85 mg

-16.39 %

ResidC. 26.69 mg

63.86 %

5 mg

351

100.

200.

300.

400.

°C

S96T003797 OUP N2

38.110 mg

Rate: 10.0 °C/min

File: 00030.001

Ident: 0.0

TG

METTLER

08-449-25

222-8 Laboratory

LABCORE Data Entry Template for Worklist#

11496

Analyst: SMF Instrument: TGA0 1 Book # 8208A

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

Worklist Comment: AN-105 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>58.91</u>	<u>N/A</u>	<u>%</u>
96000832	AN-105	2 SAMPLE	5967005798	0	TGA-01	SOLID	<u>N/A</u>	<u>38.88</u>		<u>%</u>
96000832	AN-105	3 DUP	5967005798	0	TGA-01	SOLID	<u>38.88</u>	<u>40.86</u>	<u>N/A</u>	<u>%</u>
96000832	AN-105	4 SAMPLE	5967003816	0	TGA-01	SOLID	<u>N/A</u>	<u>47.82</u>		<u>%</u>
96000832	AN-105	5 DUP	5967003816	0	TGA-01	SOLID	<u>47.82</u>	<u>46.02</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 11496

Luis M. Jaltor 8-8-96
Analyst Signature Date

SLP 8-12-96
Analyst Signature Date

A. Lambel 8-8-96

Verified/Validated by
Blarina
Valenzuela
8-14-96

Data Entry Comments

Some dup #41 was lost! Who knows? Dup was
re-run under sample #54. AL 08/08/96

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 384 TO 388

TGA STD 82N8A

18.449 mg

Rate: 10.0 °C/min

File: 00035.001

Ident: 0.0

TS NETTLER

08-Aug-88

222-B Laboratory

Step Analysis

Height-10.87 mg

-58.91 %

Resid. 7.58 mg

41.09 %

Dpeak 88.3°C

384

5. mg

10/10/199, REV. 0

S96T003798 N2

38.705 mg

Rate: 10.0 °C/min

File: 00039.001

Ident: 0.0

TG

METTLER

05-Aug-96

222-8 Laboratory

Step Analysis

Height-14.27 mg

-38.88 %

ResidC. 22.42 mg

61.07 %

Dpeak 91.0 °C

385

15. mg

100.

200.

300.

400.

°C

S96T003816 N2

File: 00039.001

TG

METTLER

08-Aug-95

14.854 mg

Rate: 10.0 °C/min

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -6.09 mg

-41.65 %

ResidC. 8.46 mg

58.15 %

Dpeak 79.0 °C

Step Analysis

Height -0.87 mg

-5.97 %

ResidC. 7.59 mg

52.17 %

187

S96T003816 DUP N2

26.527 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

T6 METTLER

08-Aug-95

222-S Laboratory

Step Analysis
Height-12.21 mg
-46.02 %
ResidC. 14.32 mg
53.98 %
Dpeak 85.0 °C

388

5. mg

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11497

Analyst: AKL Instrument: TGA0 1 Book # 12444-B Jan 1996
 Method: LA-560-112 Rev/Mod B-1
105 7/17/96 FS
 Worklist Comment: AN-107 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>58.89</u>	<u>N/A</u>	%
95000632	AN-105	2	SAMPLE	5967005817	0		TGA-01	SOLID	<u>N/A</u>	<u>44.82</u>		%
95000632	AN-105	3	SAMPLE	5967005817	0		TGA-01	SOLID	<u>44.82</u>	<u>43.89</u>	<u>N/A</u>	%

Final page for worklist # 11497

A. Rambal 08-08-96
 Analyst Signature Date
 Verified by Al Anastro 9-17-96
 Analyst Signature Date

Data Entry Comments:

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

TEMPERATURE BELOW REPRESENTS CHEMICAL THERMOGRAVIMETRIC ANALYSIS (TGA)
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 290 TO 310

As Sample 10-08-96

TGA STD 82NBA

18.449 mg

Rate: 10.0 °C/min

File: 00035.001

T6

METTLER

08-Aug-96

Ident: D.0

222-S Laboratory

06C

5. mg

Step Analysis
Height-10.86 mg
-58.89 %
Resid. 7.58 mg
41.11 %
Dpeak 88.3°C

WHC-SD-WMA-OP-159, REV.0

50.

100.

150.

200.

°C

S96T003B17 SAM N2

29.888 mg

Rate: 10.0 °C/min

File: 00043.001

Ident: 0.0

TG METTLER 05-Aug-88

222-8 Laboratory

Step Analysis
Height-13.30 mg
~44.82 %
Resid. 16.37 mg
55.18 %

Step Analysis
Height -0.27 mg
-0.90 %
Resid. 16.02 mg
54.00 %

WHC-SD-MH-MP-199, REV. 0

S96T003B17 DUP N2

15.566 mg

Rate: 10.0 °C/min

File: 00045.001

TG METTLER

08-Aug-96

Ident: D.0

222-S Laboratory

Step Analysis

Height -6.83 mg

-43.89 %

Resid. 8.73 mg

56.11 %

Dpeak 69.0 °C

Step Analysis

Height -0.23 mg

-1.46 %

Resid. 8.49 mg

54.55 %

WHC-SO-MADP-199, REV. 0

392

MO-924 200W

08/17/96 TUE 10:34 FAX 509 276 0335

0004

LABCORE Data Entry Template for Worklist#

11651

Analyst: SM Instrument: TGA0 1 Book # B2WB-A

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLER	R &	TEST.....	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	58.89	N/A	%
96000943	AN-105	2 SAMPLE	9961003976	0	TGA-01	LIQUID	N/A	99.77		%
96000945	AN-105	3 DUP	9961003974	0	TGA-01	LIQUID	99.77	99.76	N/A	%
96000945	AN-105	4 SAMPLE	9961003975	0	TGA-01	LIQUID	N/A	49.99		%
96000943	AN-105	5 DUP	9961003975	0	TGA-01	LIQUID	49.99	50.16	N/A	%

Final page for worklist #

11651

A. Lambel 08-08-96
Analyst Signature Date

SLH 8-12-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8/14/96

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 314 TO 318

TGA STD 82N8A

18.449 mg

Rate: 10.0 °C/min

File: 00035.001

TG METTLER

08-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.86 mg

-58.89 %

Resid. 7.58 mg

41.11 %

Onset 88.3°C

Blandina Vafaruzgala for EA Lantel

8/14/96

50.

100.

150.

200.

°C

394

5.00

S96T003974 SAM N2

21.575 mg

Rate: 10.0 °C/min

File: 00047.001

TG METTLER 08-Aug-98

Ident: 0.0

222-S Laboratory

Step Analysis
Height-21.52 mg
-99.77 %
ResidC. 0.05 mg
0.23 %

095

ICSD-WM-OP-159, REV. 0

S96T003974 DUP N2

24.871 mg

Rate: 10.0 °C/min

File: 00048.001 TG METTLER 08-Aug-98

Ident: 0.0

222-S Laboratory

Step Analysis
Height-24.81 mg
-99.76 %
ResidC. 0.06 mg
0.24 %

10. mg

100.

200.

300.

400.

°C

S96T003975 SAM N2

20.841 mg

Rate: 10.0 °C/min

File: 00051.001

T5

METTLER

09-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.32 mg

-49.99 %

Res1C. 10.32 mg

50.01 %

Dpeak 87.0 °C

596T003975 DUP N2

File: 00053.001 TG METTLER 08-Aug-96

24.121 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height-12.10 mg

-50.16 %

Resid. 12.02 mg

49.84 %

Dpeak 93.0 °C

868

5. mg

LABCORE Data Entry Template for Worklist#

11652

Analyst: Bim Instrument: TGA0 1 Book # 8218A

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.92</u>	<u>N/A</u>	<u>2</u>
9600945	AN-105	2 SAMPLE	9961003976	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.51</u>		<u>3</u>
9600945	AN-105	3 DUP	9961003976	0	TGA-01	LIQUID	<u>50.51</u>	<u>50.33</u>	<u>N/A</u>	<u>3</u>
9600945	AN-105	4 SAMPLE	9961003977	0	TGA-01	LIQUID	<u>N/A</u>	<u>49.68</u>		<u>3</u>
9600945	AN-105	5 DUP	9961003977	0	TGA-01	LIQUID	<u>49.68</u>	<u>50.25</u>	<u>N/A</u>	<u>3</u>

Final page for worklist # 11652

Bim 8/9/96
Analyst Signature Date

[Signature] 8/14/96
Analyst Signature Date

Verified/Validated by
Blancina
Valenzuela
8/14/96

Data Entry Comments: S96T003976 results are the sum of two weight loss steps

S96T003977 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 = Worksheet Slot Number.
R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 400 TO 404.

TGA STD 82N8A

32.096 mg

Rate: 10.0 °C/min

File: 00085.001

Ident: 0.0

TG NETTLER 09-AUG-95

222-S Laboratory

R. McCann 5/9/96

Step Analysis

Height-18.91 mg

-58.92 %

Resid. 13.18 mg

41.08 %

Dpeak 102.5 °C

173850.D\\MDE-199.BEV.0

S96T003976 N2

41.403 mg

Rate: 10.0 °C/min

File: 00000.001

TG

METTLER

09-Aug-98

Ident: 0.0

222-E Laboratory

Step Analysis
Height -17.51 mg
-42.29 %
Resid. 23.89 mg
57.71 %

Step Analysis
Height -3.40 mg
-9.22 %
Resid. 20.49 mg
49.49 %

S98T003976 DUP M2

File: 00051.001 TG METTLER 09-Aug-96

35.818 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis
Height-15.77 mg
-42.73 %
ResidC. 21.14 mg
57.27 %

Step Analysis
Height ~2.81 mg
~7.50 %
ResidC. 18.34 mg
49.67 %
Dpeak 189.0 °C

402

696T003977 N2

32.460 mg

Rate: 10.0 °C/min

File: 00083.001

Ident: 0.0

TG METTLER 09-Aug-98

222-S Laboratory

Step Analysis
Height-13.73 mg
-42.29 %
Resid. 18.73 mg
57.71 %

Step Analysis
Height -2.40 mg
-7.39 %
Resid. 16.34 mg
50.32 %
Dpeak 195.0°C

896T003977 DMP N2

39.837 mg

Rate: 10.0 °C/min

File: 00065.001

TG

METTLER

09-Aug-96

Ident: 0.0

222-B Laboratory

Step Analysis
Height-18.79 mg
-42.16 %
Resid. 23.04 mg
57.84 %

Step Analysis
Height -3.22 mg
-8.09 %
Resid. 19.82 mg
49.76 %

404
10.01

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist#

11653

Analyst: EAL Instrument: TGA0 3 Book # 8248AMethod: LA-514-114 Rev/Mod C-1Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MPH/IN	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIMITED	59.2	58.81	N/A	X
96009945	AN-105	2 SAMPLE	996T003970	0	TGA-03	LIMITED	49.4	58.90	49.41	X
96009946	AN-105	3 DUP	996T003970	0	TGA-03	LIMITED	53.90	50.44	N/A	X
96009946	AN-105	4 SAMPLE	996T003979	0	TGA-03	LIMITED	N/A	50.03		X
96009945	AN-105	5 DUP	996T003979	0	TGA-03	LIMITED	50.03	50.06	N/A	X
96009948	AN-105	6 SAMPLE	996T003980	0	TGA-03	LIMITED	N/A	53.90		X
96009945	AN-105	7 DUP	996T003980	0	TGA-03	LIMITED	53.90	54.21	N/A	X

Final page for worklist # 11653

See attached for signatures
Analyst Signature Date 8-13-96

 Analyst Signature Date 9-14-96

 Verified/Validated by
 Blandina Valenzuela 8-14-96

996T003976 is the result of two weight loss steps.
 996T003979 results are the sum of two weight loss steps
 996T003980 results are the sum of two weight loss steps

Data Entry Comments:

LABCORE Data Entry Template for Worklist#

11653

Analyst: [Signature] Instrument: TGA0 _____ Book # 821089

Method: LA-560-112 Rev/Mod _____

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLES	R R	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96000945	AN-105	2 SAMPLE	596T003978	0	TGA-01	LIQUID	N/A			%
96000945	AN-105	3 DUP	596T003978	0	TGA-01	LIQUID			N/A	%
96000945	AN-105	4 SAMPLE	596T003979	0	TGA-01	LIQUID	N/A			%
96000945	AN-105	5 DUP	596T003979	0	TGA-01	LIQUID			N/A	%
96000945	AN-105	6 SAMPLE	596T003980	0	TGA-01	LIQUID	N/A			%
96000945	AN-105	7 DUP	596T003980	0	TGA-01	LIQUID			N/A	%

Final page for worklist #

11653

[Signature] 08.12.96
Analyst Signature Date
[Signature] 8/13/96

Analyst Signature _____ Date _____

TGA-03 instrument
was used.
8.13.96
RBY

Data Entry Comments:

Data 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: T80081291 Mon Aug 12 09:19:07 1996

Sample Weight: 14.182 mg

TGA STD 6248-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 407 TO 413

A. Lumbel

407

N2 30C/MIN

TIME 35.00

TEMPERATURE

0.0 min RATE 0.0

0.0 g/min

Temperature (°C)

EA LABS

PERKIN-ELMER

7 Series Thermal Analysis System

Mon Aug 12 09:43:16 1996

WHCSD-WMA-DP-199, REV. 0

Curve 1: TGA

File info: SAMP01204 Mon Aug 12 14:02:40 1996

Sample Weight: 22.972 mg

598T009978

10C/MIN N2
THERM 50.0 S

TIME: 0.0 min RATED 10.0 g/min

Temperature (°C)

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 12:55 1996

WHCSD-WMA-OP-199 REV.0

Curve 1: TGA

File Info: S4M081205 Mon Aug 12 16:06:13 1996

Sample Weight: 18.258 mg

985T003978 DUP

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 20:48:37 1996

WHD-SD-WM-DP-199, REV. 0

Curve 1: TGA

File Info: BANC61206 Mon Aug 12 22:42:54 1996

Sample Weight: 7.680 mg

996T003679

RD MEYER
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 23:52:00 1996

WHIC-SD-WM-DR-199, REV. 0

Curve 1: TGA

File info: SAMP0130UP Tue Aug 13 00:42:28 1996

Sample Weight: 17.803 mg

99670039730UP

10C/NIN ME

TEMP 65.2 2

TONEN

0.5 mL WATER

10.0 g/min

Temperature (°C)

RD MEYERS

PERKIN-ELMER

7 Series Thermal Analysis System

Tue Aug 13 14:57:47 1996

WPC-SD-WAL-OP-199, REV.0

Curve 1: TGA

File Info: SAM081202 Mon Aug 12 10:42:40 1996

Sample Weight: 16.230 mg

996T003880

WHC-SD-VIA-10-199, REV. 0

Curve 1: TGA

File info: SAM081203 Mon Aug 12 13:02:03 1996

Sample Weight: 14.982 mg

SBST093000 DUP

10C/MIN ME
THERM 10.0 MIN RATE 10.0 C/MIN

EA LAMBERT
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 13:07:20 1996

LABCORE Data Entry Template for Worklist#

11656

Analyst: EAL Instrument: TGA0 1 Book # 82N8AMethod: LA-560-112 Rev/Mod B-1

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

ORSLP	PROJECT	S TYPE	SAMPLE#	R & -----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD		TGA-01	SOLID	<u>69.2</u>	<u>58.92</u>	<u>N/A</u>	X
96800945	AN-105	2 SAMPLE	8961803981	D TGA-01	SOLID	<u>N/A</u>	<u>44.99</u>		X
96800945	AN-105	3 DUP	8961803981	D TGA-01	SOLID	<u>44.99</u>	<u>45.6</u>	<u>N/A</u>	X
96800945	AN-105	4 SAMPLE	8961803982	D TGA-01	SOLID	<u>N/A</u>	<u>45.87</u>		X
96800945	AN-105	5 DUP	8961803982	D TGA-01	SOLID	<u>45.87</u>	<u>45.91</u>	<u>N/A</u>	X
96800945	AN-105	6 SAMPLE	8961803983	D TGA-01	SOLID	<u>N/A</u>	<u>44.17</u>		X
96800945	AN-105	7 DUP	8961803983	D TGA-01	SOLID	<u>44.17</u>	<u>43.15</u>	<u>N/A</u>	X

Final page for worklist # 11656

See attached for signatures
Analyst Signature Date 8-14-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina
Valenzuela
8-14-96Data Entry Comments: S96T003981 results are the sum of two weight loss steps.S96T003983 duplicate thermogram produced a peak due to the instrument being touched.

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

LABCORE Data Entry Template for Worklist# 11656

Analyst: ML Instrument: TGA0 _____ Book# 12087

Method: LA-560-112 Rev/Mod _____

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			TGA-01	SOLID		
2 SAMPLE	S96T003981 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
3 DOP	S96T003981 0		TGA-01	SOLID		
4 SAMPLE	S96T003982 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
5 DOP	S96T003982 0		TGA-01	SOLID		
6 SAMPLE	S96T003983 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
7 DOP	S96T003983 0		TGA-01	SOLID		

Final page for worklist # 11656

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments

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

A. Rumbel 08.12.96

TGA STD B2N8-A

20.238 mg

Rate: 10.0 °C/min

File: 00081.001

T8

METTLER

12-Aug-96

Ident: 0.0

222-B Laboratory

Step Analysis

Height-12.34 mg

-58.92 %

Resid. 8.60 mg

41.08 %

Dpeak 90.8 °C

41.6

S96T003981 SAM N2

File: 00083.001

TG

METTLER

12-Aug-96

15.322 mg

Rate: 10.0 °C/min

Ident: 0.0

222-6 Laboratory

Step Analysis

Height -8.11 mg

-39.86 %

ResidC. 9.21 mg

60.14 %

Dpeak 73.0 °C

Step Analysis

Height -0.79 mg

-5.13 %

ResidC. 8.39 mg

54.74 %

S96T003981 DUP N2

20.882 mg

Rate: 10.0 °C/min

File: 00085.001

TG

METTLER

12-Aug-95

Ident: 0.0

222-B Laboratory

Step Analysis

Height -8.39 mg

-40.21 %

ResidC. 12.45 mg

59.70 %

Dpeak 79.0°C

Step Analysis

Height -1.12 mg

-5.39 %

ResidC. 11.30 mg

54.20 %

Dpeak 175.0°C

418

W:\CSD\MM-DF-199, REV.0

S96T003982 SAM N2

File: 00087.001 T6 METTLER 12-Aug-96

18.251 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.37 mg

-45.87 %

ResidC. 9.88 mg

54.13 %

Dpeak 131.0°C

419

S96T003982 DUP N2

25.341 mg

Rate: 10.0 °C/min

File: 00002.001

TG

METTLER

12-Aug-96

Ident: 0.0

822-B Laboratory

Step Analysis

Height-11.81 mg

-45.21 %

Resid. 14.43 mg

54.79 %

Onset 131.0 °C

S96T003983 SAM N2

16.614 mg

Rate: 10.0 °C/min

File: 00089.001

TG

METTLER

12-Aug-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.43 mg

-44.17 %

Resid. 9.34 mg

55.55 %

Onset 75.0 °C

421

S96T003983 DUP N2

File: 00008.001 T6 NETTLER 13-Aug-98

15.302 mg

Rate: 10.0 °C/min

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -7.03 mg

-43.15 %

Resid. 9.27 mg

56.85 %

Dpeak 99.0 °C

LABCORE Data Entry Template for Worklist# 12278

Analyst: RCB Instrument: TGAO | Book # 92NBA

Method: LA-560-112 Rev/Mod B-1 9/18/96 fs

Worklist Comment: Please run AN-105 TGAs under N2, bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACQVAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2 58.44	58.44	N/A	%
9600832	AN-105	2 SAMPLE	996T004039 D		TGA-01	LIQUID	N/A 58.57	58.57	N/A	9.17-96
9600832	AN-105	3 DUP	996T004039 D		TGA-01	LIQUID	58.57 58.57	58.57	N/A	9.17-96
9600843	AN-105	4 SAMPLE	954T004308 D		TGA-01	LIQUID	N/A 58.57	58.57	N/A	9.17-96
9600845	AN-105	5 DUP	996T004308 D		TGA-01	LIQUID	58.57 58.57	58.57	N/A	9.17-96

Final page for worklist # 12278

RCB 9/18/96
Analyst Signature Date

Linda Mark 8/29/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9/3/96

Data Entry Comments:

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

LABCORE Completed Worklist Report for Worklist# 12278

Analyst: rdm Instrument: TGA01 Book# 2285A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD		TGA-01	LIQUID	5.92w%1	58.44	28.716 % Recovery	
2 SAMPLE	894T004059	TGA-01	LIQUID	N/A	59.17	%	
3 STD	894T004059	TGA-01	LIQUID	63.57	46.67	33.767 %	
4 SAMPLE	894T004108	TGA-01	LIQUID	N/A	50.38	%	
5 STD	894T004140	TGA-01	LIQUID	50.38	50.33	8.998 STD	

Final page for worklist# 12278

Blanchina Valeriyevna for BDI Myers
Analyst Signature Date 4/1/96 Analyst Signature Date

Blanchina Valeriyevna 9/6/96
Reviewer Signature Date

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 425 TO 429

TGA STD 82N8-A

File: 00052.001 TG METTLER 26-Aug-96

14.926 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.72 mg

-58.44 %

Resid. 6.20 mg

41.56 %

Dpeak 84.2°C

425

5. mg

Blandina Valenzuela for RD Meyers 9-3-96

50.

100.

150.

200.

°C

S95T004039 N2

15.507 mg

Rate: 10.0 °C/min

File: 00060.001

TG

METTLER

27-Aug-98

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.31 mg

-47.12 %

ResidC. 8.20 mg

52.88 %

Dpeak 81.0 °C

Step Analysis

Height -1.00 mg

-6.45 %

ResidC. 7.15 mg

46.13 %

Dpeak 177.0 °C

S96T004039 DUP N2

File: 00062.001 TG METTLER 27-Aug-96

20.533 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -8.31 mg

-40.48 %

ResidC. 12.22 mg

59.52 %

Dpeak 85.0°C

Step Analysis

Height -1.27 mg

-6.19 %

ResidC. 10.91 mg

53.15 %

S96T004308 N2

17.623 mg

Rate: 10.0 °C/min

File: 00054.001

Ident: 0.0

TG METTLER 26-Aug-96

222-S Laboratory

Step Analysis

Height -8.88 mg

-50.38 %

Resid. 8.74 mg

49.62 %

Dpeak 85.0 °C

S96T004308DUP N2

File: 00056.001 TG METTLER 27-Aug-96

19.519 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

WHC SD-WM-DR-100 REV 0
LABCORE Data Entry Template for Worklist# 12336

Analyst: RJD Instrument: TGA0 1 Book # 82NBA

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLES	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.2	58.2	N/A	%
96000945	AN-105	2 SAMPLE	996T004310	0	TGA-01	SOLID	N/A	47.55		%
96000945	AN-105	3 DUP	996T004310	0	TGA-01	SOLID	47.55	48.04	N/A	%
96000945	AN-105	4 SAMPLE	996T004311	0	TGA-01	SOLID	N/A	52.82		%
96000945	AN-105	5 DUP	996T004311	0	TGA-01	SOLID	52.82	50.12	N/A	%

Final page for worklist # 12336

Analyst Signature RJD Date 9-1-96
RJD 9-1-96

Analyst Signature RJD Date 9/5/96
RJD 9/5/96

Verified/Validated by
Blandina
Valenzuela
9-6-96

Data Entry Comments: 996T004310 thermogram does indicate there is some
hydrated compounds
996T004311 thermograms do indicate there are some hydrated compounds

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 431 TO 435

TGA STD 82N8-A

20.373 mg

Rate: 10.0 °C/min

File: 00006.001

Ident: 0.0

TG METTLER 31-Aug-96

222-S Laboratory

Step Analysis

Height-11.86 mg

-58.20 %

ResidC. 8.52 mg

41.80 %

Dpeak 87.5°C

431

596T004310 SAM N2

37.545 mg

Rate: 10.0 °C/min

File: 00009.001

Ident: 0.0

TG METTLER 01-Sep-96

222-S Laboratory

Step Analysis

Height-17.85 mg

-47.85 %

Res1C. 19.69 mg

52.45 %

Dpeak 101.0 °C

S96T004310 DUP N2

32.882 mg

Rate: 10.0 °C/min

File: 00011.001 TG WETTLER 01-Sep-98

Ident: 0.0

222-S Laboratory

Step Analysis

Height-15.89 mg

-48.04 %

Resid. 16.97 mg

51.96 %

Dpeak 95.0 °C

S95T004311 SAM N2

22.203 mg

Rate: 10.0 °C/min

File: 00019.001

Ident: 0.0

TG

NETTLER

01-Sep-96

222-S Laboratory

Step Analysis

Height-11.73 mg

-52.82 %

ResidC. 10.47 mg

47.18 %

Dpeak 91.0 °C

0.0015

100.

200.

300.

400.

°C

A. Lambert
9-1-96

S96T004311 DUP N2

File: 00015.001 TG METTLER 01-Sep-98

17.720 mg

Rate: 10.0 °C/min

Ident: 0.0

222-9 Laboratory

Step Analysis

Height -8.88 mg

-50.12 %

Resid. 8.83 mg

49.83 %

Dpeak 83.0 °C

435

5. mg

20050410.DT189.DTG.0

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 12337

Analyst: EAL Instrument: TGA0 1 Book # 8N2B-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MAIRLN	ACTUAL	FORM	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.18</u>	<u>N/A</u>	%
9600945	AN-105	2 SAMPLE	996T004335	0	TGA-01	SOLID	<u>N/A</u>	<u>46.87</u>		%
9600945	AN-105	3 DUP	996T004335	0	TGA-01	SOLID	<u>46.87</u>	<u>45.88</u>	<u>N/A</u>	%
9600945	AN-105	4 SAMPLE	996T004435	0	TGA-01	SOLID	<u>N/A</u>	<u>44.7</u>		%
9600945	AN-105	5 DUP	996T004435	0	TGA-01	SOLID	<u>44.7</u>	<u>38.2</u>	<u>N/A</u>	%

Final page for worklist # 12337

A Lambel 09-01-96
Analyst Signature Date

New Light 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-6-96

Data Entry Comments:

996T004335 results are the sum of two weight loss steps. The peak seen on the thermogram is from a ^{movement to} ~~temperature~~ the instrument
996T004435 results are the sum of two weight loss steps. The peak seen on the thermogram is from a sharp movement of the instrument
Values shown for GC (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 437 TO 441.

A. Lambert 09-01-96

TGA STD 82N8-A

31.228 mg

Rate: 10.0 °C/min

File: 00017.001

Ident: 0.0

TG METTLER 01-Sep-95

222-S Laboratory

Step Analysis

Height-18.17 mg

-58.18 %

Res1C. 13.06 mg

41.82 %

Dpeak 105.0 °C

S96T004335 SAM N2

20.381 mg

Rate: 10.0 °C/min

File: 00019.001 TG METTLER 01-Sep-95

Ident: 0.0

222-B Laboratory

Step Analysis

Height ~8.60 mg

-42.20 %

ResidC. 11.78 mg

57.80 %

Dpeak 85.0 °C

Step Analysis

Height ~0.95 mg

-4.67 %

ResidC. 10.76 mg

52.78 %

435

S96T004335 DUP N2

29.634 mg

Rate: 10.0 °C/min

File: 00021.001

TG

METTLER

01-Sep-95

Ident: 0.0

222-8 Laboratory

Step Analysis

Height-12.12 mg

-40.90 %

ResidC. 17.51 mg

59.10 %

Step Analysis

Height -1.47 mg

-4.98 %

ResidC. 16.01 mg

54.01 %

Dpeak 191.0°C

439
DW 5

100.

200.

300.

400.

°C

S96T004435 SAM N2

File: 00029.001 T9 METTLER 01-Sep-96

23.253 mg

Rate: 10.0 °C/min

Ident: 0.0

222-6 Laboratory

Step Analysis

Height -9.52 mg

-40.92 %

ResidC. 13.74 mg

59.06 %

Onset 85.0 °C

Step Analysis

Height -0.86 mg

-3.76 %

ResidC. 12.79 mg

55.01 %

440

S96T004435 DUP N2

27.942 mg

Rate: 10.0 °C/min

File: 00025.001

Ident: 0.0

TG METTLER 01-Sep-98

222-B Laboratory

LABCORE Data Entry Template for Worklist# 12338

Analyst: RK Instrument: TGA0 1 Book # 325T-A

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

Worklist Comment: Please run AN-105 TGAs under N2, bdy

WLIST	PROJECT	S TYPE	SAMPLE#	R A	TEST	WTRTH	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.2	58.13	N/A	%
9600945	AN-105	2 SAMPLE	S96T004436	0	TGA-01	SOLID	N/A	44.54		%
9600945	AN-105	3 DUP	S96T004436	0	TGA-01	SOLID	44.54	42.57	N/A	%
9600945	AN-105	4 SAMPLE	S96T004437	0	TGA-01	SOLID	N/A	46.16		%
9600945	AN-105	5 DUP	S96T004437	0	TGA-01	SOLID	46.16	44.59	N/A	%

Final page for worklist # 12338

Mod-King 9-1-96
Analyst Signature Date

RK 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9696

Data Entry Comments: S96T004436 results are the sum of three weight loss steps.

S96T004437 results are the sum of two weight loss steps

Units shown for QC (SPE & 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 443 TO 447

TGA STD B2NB-A

31.228 mg

Rate: 10.0 °C/min

File: 00017.004

7B

METTLER

01-Sep-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-18.15 mg

-58.13 %

ResidC. 13.07 mg

41.87 %

Onset 105.0 °C

Not King 2/1/96

S96T004435 SAM N2

15.216 mg

Rate: 10.0 °C/min

File: 00027.001

Ident: 0.0

TG METTLER 01-Sep-98

222-B Laboratory

Step Analysis
Height -3.26 mg
-21.42 %
ResidC. 11.94 mg
78.47 %

Step Analysis
Height -2.56 mg
-16.83 %
ResidC. 9.38 mg
61.64 %

Step Analysis
Height -0.96 mg
-6.29 %
ResidC. 8.42 mg
55.35 %
Onset 179.0 °C

444

S96T004436 DUP N2

File: 00029.001 T6 METTLER 01-Sep-95

25.061 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -9.40 mg

-36.03 %

Resid. 16.66 mg

63.97 %

Step Analysis

Height -1.71 mg

-6.54 %

Resid. 14.96 mg

57.42 %

Step Analysis

Height -0.40 mg

-1.53 %

Resid. 14.56 mg

55.90 %

Not Here

S96T004437 SAM N2

File: 00031.001 TG METTLER 01-Sep-96

20.062 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.86 mg

-39.12 %

ResidC. 12.23 mg

60.88 %

Step Analysis

Height -1.42 mg

-7.04 %

ResidC. 10.82 mg

53.83 %

446

5.5

Note King 9-1-96

S96T004437 DUP N2

24.147 mg

Rate: 10.0 °C/min

File: 00039.001 TG METTLER 02-Sep-85

Ident: 0.0 222-B Laboratory

Step Analysis
Height -9.05 mg
-37.47 %
ResidC. 15.10 mg
62.53 %

Step Analysis
Height -1.72 mg
-7.12 %
ResidC. 13.38 mg
55.41 %

447

60.5

Not King 9-1-96

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 12339

Analyst: EAL Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: Please run AN-105 TGAs under N2 bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>59.66</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T004309	0	TGA-03	LIQUID	<u>N/A</u>	<u>48.12</u>		%
96000943	AN-105	3 DUP	S96T004309	0	TGA-03	LIQUID	<u>48.12</u>	<u>49.52</u>	<u>N/A</u>	%
96000945	AN-105	4 SAMPLE	S96T004333	0	TGA-03	LIQUID	<u>N/A</u>	<u>49.62</u>		%
96000943	AN-105	5 DUP	S96T004333	0	TGA-03	LIQUID	<u>49.62</u>	<u>49.65</u>	<u>N/A</u>	%

Final page for worklist # 12339

See attached for signatures

Analyst Signature

Date

9-3-96
2001

Analyst Signature

Date

Verified/Validated by

Blandina

Valenzuela

9-6-96

S96T004309 results are the sum of three weight loss steps.

Data Entry Comments

S96T004333 results are the sum of three weight loss steps.

LABCORE Data Entry Template for Worklist# 12339

Analyst: EAL Instrument: TGA0 _____ Book # 82A/B-A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	2 SAMPLE	5967004309	0	TGA-01	LIQUID	N/A	_____	_____	X
96000945	AN-105	3 DUP	5967004309	0	TGA-01	LIQUID	_____	_____	N/A	X
96000945	AN-105	4 SAMPLE	5967004333	0	TGA-01	LIQUID	N/A	_____	_____	X
96000945	AN-105	5 DUP	5967004333	0	TGA-01	LIQUID	_____	_____	N/A	X

Final page for worklist # 12339

A. L. L. L. L.
Analyst Signature

09-01-96
Date

Revised 9/5/96
Analyst Signature Date

TGA-03 instrument
was used.

9-3-96

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: THERMOGRAM Run Sep 1 12:52:55 1998

Sample Weight: 21.384 mg

TGA STD 6240-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 452 TO 454.

NE 100/MIN
THERMOGRAM

TEMP

0.0 MIN RATE

10.0 C/MIN

Temperature (°C)

EA LAMBEL
PERCIN-ELMER
7 Series Thermal Analysis System
Tue Sep 1 1998

110-SD-M11-DF-159, REV. 3

Curve 1: TGA

File info: SAM90102 Sun-Sep 1 09:47:39 1995

Sample Weight: 17.580 mg

996T00-4302

ANCO-SD-MIL-OP-159, REV.0

Curve 1: TGA

File Info: SAM000163 Run Sep 1 11:00:35 1988

Sample Weight: 15.900 mg

995T004369 DRP

100/MIN 162

TEMPERATURE 100.0

TEMPERATURE

0.0 min POWER

20.0 W/min

Temperature (°C)

EA LABEL

PERKIN-ELMER

7 Series Thermal Analysis System

SL-4 567

100-SD-WM-CP-199, REV. 0

Curve 1: TGA

File info: SAND80104 Sun Sep 1 13:02:50 1985

Sample Weight: 17.088 mg

988T00-4333

WIC-SD-WAL-OP-199, REV. 0

Curve 1: TGA

File Infr: SAM000105 Sun Sep 1 14:12:10 1995

Sample Weight: 17.391 mg

996T004333 DUP

WHICSD-MHDP-199, REV. 0

LABCORE Data Entry Template for Worklist# 12340

Analyst: JPB Instrument: TGAO 1 Book # 8201-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FORMED	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>59.21</u>	<u>N/A</u>	%
9600945	AN-105	2 SAMPLE	9961004419	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.41</u>		%
9600945	AN-105	3 DUP	9961004419	0	TGA-01	LIQUID	<u>50.41</u>	<u>50.54</u>	<u>N/A</u>	%
9600945	AN-105	4 SAMPLE	9961004420	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.1</u>		%
9600945	AN-105	5 DUP	9961004420	0	TGA-01	LIQUID	<u>50.1</u>	<u>50.02</u>	<u>N/A</u>	%

Final page for worklist # 12340

Analyst Signature: [Signature] Date: 8/29/96

Analyst Signature: [Signature] Date: 9/5/96

Verified/Validated by
Blarina
Valenzuela
9-6-96

Data Entry Comments: 9961004419 results are the sum of two weight loss

steps

9961004420 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 = Worksheet Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 456 TO 460

TGA STD 82N8-A

20.984 mg

Rate: 10.0 °C/min

File: 00074.001

TG

NETTLER

29-Aug-98

Ident: 0.0

228-S Laboratory

Step Analysis

Height-12.42 mg

-59.21 %

Res10. 8.56 mg

40.79 %

Onset 95.0 °C

5. mg

..IC-SD-WM-OP-199, REV. 0

Blandina Valenzuela For KR. Querin 9-6-96

50.

100.

150.

200.

°C

S96T004419 SAMPLE

File: 00076.001 TG METTLER 28-Aug-96

17.338 mg

Rate: 10.0 °C/min

Ident: 0.0

222-8 Laboratory

Step Analysis

Height -7.55 mg

-43.53 %

ResidC. 9.79 mg

56.47 %

Dpeak 85.0 °C

Step Analysis

Height -1.19 mg

-8.88 %

ResidC. 8.59 mg

49.53 %

Dpeak 179.0 °C

457

17.338 mg 10.0 °C/min 0.0 222-8 Laboratory 28-Aug-96

S96T004418 DUP

17.230 mg

Rate: 10.0 °C/min

File: 00078.001

Ident: 0.0

TG METTLER 29-Aug-96

222-S Laboratory

Step Analysis
Height -7.49 mg
-43.47 %
ResidC. 9.74 mg
56.53 %
Dpeak 83.0°C

Step Analysis
Height -1.22 mg
-7.07 %
ResidC. 8.52 mg
49.45 %
Dpeak 179.0°C

S96T004420 SAMPLE

File: 00080.001

T6

METTLER

30-Aug-96

17.727 mg

Rate: 10.0 °C/min

Ident: 0.0

222-B Laboratory

Step Analysis

Height -7.91 mg

-44.64 %

Resid. 9.81 mg

55.36 %

Dpeak 81.0°C

Step Analysis

Height -0.97 mg

-5.46 %

Resid. 8.75 mg

49.37 %

Dpeak 181.0°C

459

mg

100.

200.

300.

400.

°C

100-01-02-150.F12.0

S96T004420 DUP

15.999 mg

Rate: 10.0 °C/min

File: 00082.001 TG NETTLER 30-Aug-96

Ident: 0.0

222-B Laboratory

Step Analysis
Height -6.56 mg
-41.01 %
ResidC. 9.44 mg
58.99 %

Step Analysis
Height -1.60 mg
-10.01 %
ResidC. 7.84 mg
48.98 %

460

LABCORE Data Entry Template for Worklist# 12341

Analyst: RWK Instrument: TGAO 3 Book # 82NRA

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	Q TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FORM	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.67</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T004421	0	TGA-03	LIQUID	<u>N/A</u>	<u>49.93</u>		%
96000945	AN-105	3 DUP	S96T004421	0	TGA-03	LIQUID	<u>49.93</u>	<u>49.97</u>	<u>N/A</u>	%
96000945	AN-105	4 SAMPLE	S96T004433	0	TGA-03	LIQUID	<u>N/A</u>	<u>49.71</u>		%
96000945	AN-105	5 DUP	S96T004433	0	TGA-03	LIQUID	<u>49.71</u>	<u>49.80</u>	<u>N/A</u>	%

Final page for worklist # 12341

See attached for signatures
Analyst Signature RWK Date 9-3-96

Analyst Signature _____ Date _____

Verified/Validated by
Blundina
Valenzuela
9-6-96

Data Entry Comments: S96T004421 results are the sum of two weight loss steps

S96T004433 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.

LABCORE Data Entry Template for Worklist# 12341

Analyst: KK Instrument: TGA0 _____ Book # 1228-8

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

Worklist Comment: Please run AN-105 TGAs under N2. bdr

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	X
96000945	AN-105	2 SAMPLE	996T004421	0	TGA-01	LIQUID	N/A			X
96000945	AN-105	3 DUP	996T004421	0	TGA-01	LIQUID			N/A	X
96000945	AN-105	4 SAMPLE	996T004433	0	TGA-01	LIQUID	N/A			X
96000945	AN-105	5 DUP	996T004433	0	TGA-01	LIQUID			N/A	X

Final page for worklist # 12341

Rafael 4-1-96
Analyst Signature Date

Reedlight 9/5/96
Analyst Signature Date

TGA-03 instrument
was used.

9-3-96

Blandina
Valenzuela

Data Entry Comments:

Units shown for QC (SPE & 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: TEP090106 Sun Sep 1 12:52:05 1996

Sample Weight: 21.304 mg

TGA STD 82MS-A

THE CURVE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
HAS DIRECTLY VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 463 TO 467

HE 10C/KIN
THERM 10.0 2

TIME: 0.0 SEC RATE: 10.0 C/min

EA-LABEL 406 King 4/1/96
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA

File Info: 940840106 Sun Sep 1 19:34:47 1996

Sample Weight: 18.181 mg

998T004421

100/MIN 102

TIME: 00:00 8

TIME: 00:00 8

0.0 min POWER

10.0 g/min

Temperature (°C)

PERKIN-ELMER

7 Series Thermal Analysis System

7 Series Thermal Analysis System

SD-WA-EP-199, REV. 0

Curve 1 TGA

File Info: qeev1 Sun Sep 1 21:00:27 1998

Sample Weight: 25.577 mg

985T004421 DUP

100/MIN NR

TEMPERATURE 25.0 MIN RATE 10.0 C/MIN

Temperature (°C)

RM KING

PERKIN-ELMER

7 Series Thermal Analysis System

100-SD-WM+CP-159, REV. 0

Curve 1: TGA

File Info: SAMP40108 Sun Sep 1 22:11:44 1995

Sample Weight: 25.253 mg

9857004438

466

10C/MIN NR

25.253

12/28/95

0.5 min RATE

10.0 g/min

Temperature (°C)

PM K100

PERKIN-ELMER

7 Series Thermal Analysis System

1110-SD-WM-DP-159, REV. 0

Curve 1: TGA

File Info: SAND-00001 Sun Sep 1 23:23:10 1990

Sample Weight: 29.364 mg

BBST004489 DUP

100/10000

DATE: 9/1/90

TIME: 23:23

0.0 min RATE: 10.0 °C/min

10.0 °C/min

Temperature (°C)

AN K100

PERKIN-ELMER

7 Series Thermal Analysis System

...C-SD-WA-CP-159, REV. 0

LABCORE Data Entry Template for Worklist# 12342

Analyst: R.B. Instrument: TGA0 1 Book # 32N8-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

WORKLIST	Product	Q TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	58.19	N/A	%
94000945	AN-105	2 SAMPLE	596T004434	0	TGA-01	LIQUID	N/A	51.07		%
94000945	AN-105	3 REP	596T004434	0	TGA-01	LIQUID	51.07	51.41	N/A	%

Final page for worklist # 12342

Rebecca Smith 8-31-96
Analyst Signature Date

Rebecca Smith 9/5/96
Analyst Signature Date

Verified/Validated by
Blanca
Valenzuela
9-6-96

Data Entry Comments: S96T004434 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 464 TO 471

TGA STD 82NB-A

20.373 mg

Rate: 10.0 °C/min

File: 00006.001

Ident: 0.0

TG

METTLER

31-Aug-86

222-S Laboratory

Step Analysis

Height-11.86 mg

-58.19 %

ResidC. 8.52 mg

41.81 %

Dpeak 87.8 °C

469

596T004434 SAM N2

38.639 mg

Rate: 10.0 °C/min

File: 00002.001

TB

METTLER

31-Aug-96

Ident: 0.0

222-S Laboratory

Step Analysis

Height-16.57 mg

-42.99 %

ResidC. 21.97 mg

57.01 %

Step Analysis

Height -3.12 mg

-8.08 %

ResidC. 18.83 mg

48.85 %

Dpeak 181.0 °C

P. Klein 8-31-96

470

S96T004434 DUP N2

38.614 mg

Rate: 10.0 °C/min

File: 00004.001

TG

METTLER

31-Aug-96

Ident: 0.0

222-G Laboratory

Step Analysis

Height-18.86 mg

-43.44 %

ResidC. 21.95 mg

56.56 %

Step Analysis

Height -3.09 mg

-7.97 %

ResidC. 18.86 mg

48.59 %

Dpeak 181.0 °C

471

LABCORE Data Entry Template for Worklist# 12607

Analyst: SMF Instrument: TGA0 1 Book # 8208A

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

Worklist Comment: Retun, Please run AN-105 TGAs under N2. Doesn't need DSC.bdv

GROUP	PROJECT	S TYPE	SAMPLE	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.07</u>	<u>N/A</u>	1
9600032	AN-105	2 SAMPLE	9961003748	1	TGA-01	LIQUID	<u>N/A</u>	<u>50.51</u>		2
9600032	AN-105	3 DUP	9961003748	1	TGA-01	LIQUID	<u>50.51</u>	<u>50.66</u>	<u>N/A</u>	2

Final page for worklist # 12607

Luis M. Jullon 9-4-96
Analyst Signature Date

Ken Jullon 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela

Data Entry Comments: Sample results are the sum of two weight loss steps.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 473 TO 475.

TGA STD 62N8A

22.192 mg

Rate: 10.0 °C/min

File: 00049.001

Ident: 0.0

T6 METTLER 04-Sep-85

222-8 Laboratory

Step Analysis

Height-12.89 mg

-58.07 %

Resid. 9.31 mg

41.93 %

Dpeak 92.5 °C

473

5. mg

50.

100.

150.

200.

Steve M. Fulton 9/8/86

S96T003748 N2

16.378 mg

Rate: 10.0 °C/min

File: 00051.001

TG

METTLER

04-Sep-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height -7.11 mg

-43.41 %

Res1C. 9.27 mg

56.59 %

Dpeak 83.0 °C

Step Analysis

Height -1.18 mg

-7.10 %

Res1C. 8.10 mg

49.48 %

S96T003748 DUF N2

8.568 mg

Rate: 10.0 °C/min

File: 00083.001

Ident: 0.0

TG METTLER 04-Sep-96

222-8 Laboratory

Step Analysis

Height -3.82 mg

-44.61 %

Resid. 4.75 mg

55.39 %

Dpeak 75.0°C

Step Analysis

Height -0.52 mg

-8.05 %

Resid. 4.23 mg

49.34 %

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control	Page 1 of 1
		Date: 09/18/96
Project Title/Work Order WMC-SD-MM-OP-189, Rev. 0, "Tank 241-AM-105, Cores 152 and 153, Analytical Results for the 45 Day Report"		EDY NO.: EDY-617495
		ECN NO.:

Name	MSIN	Text With all Attach	EDY/ECN ONLY	
<u>Pacific Northwest Laboratory</u>				
J. R. Gormsen	K7-28		X	
S. J. Harris	K7-22	X		
K. L. Silvers	P7-27		X	
<u>U.S. Department of Energy, RL</u>				
C. A. Babel	S7-54	X		
<u>Westinghouse Manford Company</u>				
J. N. Appel	G3-21		X	
M. W. Barnes	T6-03	X		
D. C. Hetzer	S6-31		X	
T. J. Kelley	S7-21		X	
M. W. Kirch	R2-11	X		
M. J. Kupfer	H5-49		X	
J. E. Neacham	S7-15	X		
K. L. Powell	T6-04		X	
J. B. Schaffer (SD COV SHT., DST. SHT, ROR)	R2-12		X*	
F. H. Steen	R2-12	X		
M. J. Sutey	Y4-07		X	X*
T. T. Tran (LATA)	B1-44	X		
J. A. Voogd	H5-03		X	
L. R. Webb (SD COV SHT., DST. SHT, ROR)	T6-06		X *	
A. E. Young	R2-12	X		
Central Files	A3-68	2		
EDMC	H6-08	X		
LTIC	T6-03		X	

U. S. Department of Energy

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Defense Nuclear Federal Safety Board

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Washington D.C. 20004

* Needs only releasing paperwork, not a copy of the released document.