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6. Cog. Engr.:
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20. J.O. Kristofski
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BD-7400-172-2 (04/94) GEF097
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Document Number: WHC-SD-WM-DP-111, REV 0

Document Title: 45-Day Safety Screen Results for Tank 241-C-101, Auger Sample 95-AUG-019

Release Date: 5/11/95

This document was reviewed following the procedures described in WHC-CM-3-4 and is:

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May 11, 1995

Kara M. Broz

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A-6400-073 (08/94) WEF124
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ANALYTICAL SERVICES

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-C-101, AUGER SAMPLE 95-AUG-019

Date Printed: MAY 9, 1995

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This Document consists of pages 1 through 39.
SUMMARY

One auger sample from tank 241-C-101 was received by the 222-S Laboratory and underwent safety screening analyses - differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), and total alpha analysis - in accordance with the tank characterization plan (Reference 1).

Analytical results for the TGA on the crust sample (the uppermost portion of the auger sample) (sample number S95T000823) were less than the safety screening notification limit of 17 weight percent water. Verbal and written notifications were made on May 3, 1995.

No exotherms were observed in the DSC analyses and the total alpha results were well below the safety screening notification limit.

SCOPE

This document serves as the 45-day report deliverable for the tank 241-C-101 auger sample collected on March 29, 1995. The sample was received, extruded, and analyzed by the 222-S Laboratory in accordance with the TCP (Reference 1). Any exceptions to the plan are discussed in the following sections.

This report includes the primary safety screening results (DSC, TGA, and total alpha) obtained from the analyses and copies of all DSC and TGA raw data scans as requested per the TCP. Although not included in this report, a photograph of the extruded sample was taken and is available. This report also includes bulk density measurements required by Characterization Plant Engineering (Reference 2). Additional analyses (pH, total organic carbon, and total inorganic carbon) are being performed on the drainable liquid at the request of Characterization Process Control; these analyses will be reported at a later date in a final report for this auger sample.

SAMPLE RECEIPT, EXTRUSION, AND SUBSAMPLING

Auger sample 95-AUG-19 was collected from riser 8 of tank 241-C-101 using a 20 inch auger bit. Two auger samples were to be obtained from the tank in accordance with the TCP. However, a tank walkdown revealed that only one riser was available for sampling and a sample at a second riser could not be taken.

The waste depth under riser 8 was estimated to be about 30 inches. A 10 inch auger sample and a 20 inch auger sample were to be taken to sample the full 30 inches of waste. Errors during sampling resulted in the auger penetrating the full depth of the waste. Therefore, any stratification of waste in the auger sample cannot be assumed to be representative of the waste stratification in the tank.
The auger sample was received at the 222-S Laboratory on March 30, 1995 and extruded on April 14, 1995. The outside of the liner which contained the sample and the inside of the shipping cask were found to be contaminated with waste and modifications to the hot cell procedure were required to load the sample safely into the hot cell.

The auger sample was completely full with sample material. The solids were thick and mud-like in appearance and dark brown in color. The lower half of the auger contained waste that was damp looking and was more tightly packed with solids than the upper half. The upper flutes of the auger were drier than the lower flutes and had some white or off-white material mixed in with the brown solids. Flutes #1 through #4 appeared to have some crust-like material. 592 grams of solids were recovered from the sampler; this was divided into 15.47 grams of crust, 189.78 grams of upper half solids, and 386.79 grams of lower half solids. 32.19 grams of drainable liquid were recovered from the liner.

ANALYTICAL RESULTS

Analytical results appear in the Sample Data Summary. Sample and duplicate results are presented in the tables of the Sample Data Summary while any rerun results are provided in footnotes to the tables.

TGA (Moisture)

The weight percent water by TGA was performed under a nitrogen purge using either procedure LA-560-112, Rev. A-2 on a Mettler TG 50 instrument or procedure LA-514-114, Rev. B-0 on a Perkin-Elmer TGA 7 instrument. The drainable liquid sample contained 73.80 weight percent water and the solid samples averaged from 15.43 weight percent for the crust to 33.92 weight percent water for the lower half solids. The relative percent differences (RPDs) between samples and duplicates were below 10% for all but one sample; a rerun of this sample resulted in an acceptable RPD. The Laboratory Measurement Control System (LMCS) control standard for all samples was well within the program's specified accuracy control limits of 90 to 110 percent.

The TGA result for the crust sample (S95T000823) was less than the notification limit of 17 weight percent water (notification is made if the sample analyzed is less than 17 weight percent water). The result for this sample was 10.46 weight percent and the duplicate was 20.4 weight percent, resulting in an average of 15.43 weight percent. The rerun had a result of 19.79 weight percent, indicating that the sample may have sufficient moisture.

DSC

DSC analyses were performed under a nitrogen purge using either procedure LA-514-113, Rev. B-1 on a Mettler DSC 20 instrument or procedure LA-514-114, Rev.
B-O on a Perkin Elmer DSC 7 instrument. The DSC scans from these two instruments show exotherms differently; exotherms on the Perkin Elmer are shown as downward peaks while the Mettler shows them as upward peaks. No exotherms were observed for any of the samples. The LMCS control standards for the samples ranged from 95.25 to 109.7 percent and were within the program's specified accuracy control limits of 90 to 110 percent.

**Total Alpha**

The total alpha analyses were performed using procedure LA-508-101, Rev. D-2. All total alpha results were below the notification limit; average results ranged from 0.96 to 1.18 μCi/g. All three samples exceeded the precision criteria with RPDs ranging from 15.8 to 32.6 percent. Spike recoveries ranged from 80.8 to 88.9 percent, which is typical for the total alpha analyses but are outside the program's 90 to 110 percent. No reruns were requested as the total alpha results were less than 5 percent of the action limit of 41 μCi/g.

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<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count</th>
<th>Err %</th>
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<tr>
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<td>Bulk Density of Sample</td>
<td>g/mL</td>
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<tr>
<td>S95T000827</td>
<td></td>
<td>% Water by TGA on Perkin Elmer</td>
<td>%</td>
<td>17.600 - 200.000</td>
<td>97.64</td>
<td>n/a</td>
<td>23.35</td>
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<td>22.55</td>
<td>7.08</td>
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<tr>
<td>S95T000827</td>
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<td>DSC Exotherm on Perkin Elmer</td>
<td>Joules/g</td>
<td>-1.000 - 481.000</td>
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<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
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<td>n/a</td>
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<td>Alpha of Digested Solid</td>
<td>uCi/g</td>
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<td>&lt;3.42e-01</td>
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**L Lower Half of Segment: L Lower Half of Segment**

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<th>RPD %</th>
<th>Spk Rec %</th>
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<tr>
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<td></td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>17.600 - 200.000</td>
<td>99.49</td>
<td>n/a</td>
<td>33.65</td>
<td>34.2</td>
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<td>S95T000831</td>
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<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000 - 481.000</td>
<td>n/a</td>
<td>0.000e+00</td>
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<td>0.000</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
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<tr>
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<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000 - 481.000</td>
<td>95.25</td>
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<td>0</td>
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<td>Alpha of Digested Solid</td>
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- **Note:** TGA for sample# S95T000823 was rerun. Rerun result was 19.79%
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<th>RA#</th>
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<th>Unit</th>
<th>Action Limits</th>
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<th>Count Err %</th>
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<tr>
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<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>200.000</td>
<td>99.51</td>
<td>n/a</td>
<td>73.80</td>
<td>73.8</td>
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<td>n/a</td>
<td>n/a</td>
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<tr>
<td>S951000820</td>
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<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
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<td>481.000</td>
<td>n/a</td>
<td>0.00e+00</td>
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<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000</td>
<td>481.000</td>
<td>109.7</td>
<td>0.00e+00</td>
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=> Limit violated
=> Selected Limit
LABCORE Data Entry Template for Worklist# 1218

Analyst: SMF  Instrument: DSC01  Book #: 12N14-A

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

Worklist Comment: Please run C-101 DSC under N2. bdv

<table>
<thead>
<tr>
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<td>C-101</td>
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<td>S95T000823 0</td>
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<tr>
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<td>DSC-03</td>
<td>SOLID N/A 0 N/A Joules/g</td>
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<td>C-101</td>
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<td>DSC-03</td>
<td>SOLID N/A 0 N/A Joules/g</td>
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</table>

Final page for worklist # 1218

Verified by: Blandina Valenzuela  Date: 5/01/95

Analyst Signature: Date: 5/1/95

Data Entry Comments:

S95T000823 produced two endotherms one at 114.9°C with a delta H of 471.7 J/g and second at 285.7°C with a delta H of 471.9 J/g

S95T000827 produced two endotherms one at 111.9°C with a delta H of 671.7 J/g and the second at 280.3°C with a delta H of 475.6 J/g

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 # 1218**

**Analyst:** SMF  
**Instrument:** DSC01  
**Book #:** 1214-A

**Method:** LA-514-113 Rev/Mod.  
**Worklist Comment:** Please run C-101 DSC under N2. bdv

<table>
<thead>
<tr>
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<th>SAMPLE#</th>
<th>R A</th>
<th>---</th>
<th>MATRIX ACTUAL FOUND</th>
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<td>C-101</td>
<td>STD</td>
<td>95T000823 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>28.45 28.57 N/A</td>
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<td>Joules/g</td>
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<td>DSC-01</td>
<td>SOLID</td>
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<td>5/195 BDV</td>
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<tr>
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<td>DUP</td>
<td>95T000827 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>5/195 BDV</td>
<td>Joules/g</td>
</tr>
</tbody>
</table>

**Final page for worklist # 1218**

Analyst Signature: [Signature]  
Date: 4-29-95

**Data Entry Comments:**  
95T000823 - Dark Brown clay-like material  
95T000827 - Dark Brown clay-like 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.
Curve i: DSC

File info: INDD42902 Sat Apr 29 16:57:30 1995
Sample Weight: 6.340 mg

I2MM-A Indium at 10c/min

Signature below represents chemical technologist/chemist that completed/verified the calibration/analysis on pages 11 to 15.

| X1 | 154.533 °C |
| X2 | 159.233 °C |
| Peak | 157.386 °C |
| Area | 181.382 mJ |
| AH | 28.609 J/g |
| Height | 15.957 mW |
| Onset | 154.715 °C |

Perkin-Elmer

N2 exotherm down

Temperature (°C) 150.0 152.0 154.0 156.0 158.0 160.0 162.0 164.0 166.0 168.0 170.0

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Sat Apr 29 17:03:13 1995
Curve 1: DSC

Sample Weight: 21.380 mg
S95T000823, 10C/min

Best Available Copy

Perkin-Elmer

AH 471.74 J/g
Peak 114.9 °C

AH 471.91 J/g
Peak 285.92 °C

Onset 36.06 °C

Onset 261.26 °C

110.0 -
100.0 -
90.0 -
80.0 -
70.0 -
60.0 -
50.0 -

100.0 200.0 300.0 400.0

Temperature (°C)

Heat Flow (mW)

SM Fulton
Westinghouse Hanford Co.
222-6 Lab
Sat Apr 29 18:23:37 1995
Sample Weight: 29.640 mg

- Endothermic peak at 115.13 °C
- Exothermic peak at 290.51 °C
- Onset at 36.27 °C
- Onset at 264.43 °C

Peak 1: ΔH = 473.9 J/g
Peak 2: ΔH = 498.32 J/g

Temperature: 30.0 °C
Temperature Rate: 10.0 °C/min

SM Fulton
Westinghouse Hanford Co. 222-S Lab
Curve 1: DSC
File info: SAM042903 Sat Apr 29 20:16:50 1995
Sample Weight: 24.290 mg
S95T000827, 10C/min

BEST AVAILABLE COPY

Perkin-Elmer

ΔH 671.74 J/g
Peak 111.86 °C

ΔH 475.61 J/g
Peak 280.25 °C

Onset 100.87 °C
Onset 260.38 °C

exotherm down, nitrogen purge gas

Temperature (°C)

Heat Flow (mW)

40.0 50.0 60.0 70.0 80.0 90.0 100.0 110.0 120.0 130.0 140.0 150.0 160.0
0.0 100.0 200.0 300.0 400.0

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Sat Apr 29 21:17:55 1995

BEST AVAILABLE COPY

Perkin-Elmer
Curve 1: DSC
Sample Weight: 17.840 mg
S95T000827 (DUP), 10C/min

ΔH 641.49 J/g
Peak 115.67 °C

ΔH 496.31 J/g
Peak 281.35 °C

Onset 35.09 °C

Onset 258.43 °C

Best Available Copy

Perkin-Elmer

Exotherm down, nitrogen purge gas

Temperature (°C): SM Fulton

Westinghouse Hanford Co.
222-S Lab
Sat Apr 29 22:14:55 1995
LABCORE Data Entry Template for Worklist# 1219

Analyst:        Instrument:  DSC01  Book # 12194A

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

Worklist Comment: Please run C-101 DSC under N2. bdv

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<th>SAMPLE#</th>
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<th>FOUND</th>
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<td>∅</td>
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<td>Joules/g</td>
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<tr>
<td>95000048</td>
<td>C-101</td>
<td>3 DUP</td>
<td>S95T000831 0</td>
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<td>∅</td>
<td>∅</td>
<td>N/A</td>
<td>Joules/g</td>
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</tbody>
</table>

Final page for worklist # 1219

Analyst Signature Date

Verified by Blandina Valenzuela 5/1/95

Data Entry Comments: S95T000831 produced two endotherms, one at 115.3°C with a delta H of 786.6 J/g and the second at 288.8°C with a delta H of 356.3 J/g.

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.
DSC STD 12N14-A
6.525 mg
Rate: 10.0 °C/min

Integration
Delta H 177 mJ
27.1 J/g
Peak 160.9°C
-8.6 mW

Blandina Valenzuela 5/1/95 for RD Meyers
S95T000831 N2
29.315 mg
Rate: 10.0 °C/min
Ident: 0.0
222-9 Laboratory

Integration
Delta H23059 mJ
786.6 J/g
Peak 115.3°C
-86.1 mW

Integration
Delta H10444 mJ
356.3 J/g
Peak 288.8°C
-38.4 mW

°C
100. 200. 300. 400.
Integration
Delta H 23299 mJ
801.1 J/g
Peak 111.3°C
-87.2 mW

Integration
Delta H 9289 mJ
319.4 J/g
Peak 288.9°C
-34.4 mW
LABCORE Data Entry Template for Worklist# 1233

Analyst: Mr. Analyst Instrument: DSC01 Book #: 12N14-A

Method: LA-514-113 Rev/Mod

Worklist Comment: Please run C-101 DSC under N2. bdv

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<td>Joules/g</td>
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<td>C-101</td>
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<td>DSC-01</td>
<td>LIQUID</td>
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<td>N/A</td>
<td>Joules/g</td>
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</table>

Final page for worklist # 1233

Analyst Signature: [Signature] Date: 4-29-95

Verified by: [Signature] Date: 5-1-95

Data Entry Comments: Bright yellow liquid. It produced three endothermic
One at 107.3°C with a delta H of 1504.1 J/g, second at 157.1°C with a delta H of
18.0 J/g and third at 219.0°C with a delta H of 16.0 J/g

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.
DSC STD 12N14-A
6.340 mg
Rate: 10.0 °C/min
Ident: 0.0

Integration
Delta H 198 mJ
31.2 J/g
Peak 158.5°C
-14.0 mW
S95T000820 N2

File: 00104.001 DSC METTLER 29-Apr-95
Ident: 0.0 222-8 Laboratory

Rate: 10.0 °C/min

Peak: 219.0 °C
-5.8 mW

Delta H: 199 mJ

Integration

Peak: 151.1 °C
-1.6 mW

Delta H: 223 mJ
16.0 J/g
18.0 J/g

Integration

Peak: 1504.1 °C
-86.8 mW

Delta H: 18635 mJ
1504.1 J/g

Integration

Peak: 107.3 °C

123.389 mg

22
**Integration**

**Integration**

**Delta H 155 mJ**

**12.2 J/g**

**Peak 161.2°C**

**-1.2 mW**

**Integration**

**Delta H 196 mJ**

**15.5 J/g**

**Peak 219.0°C**

**-5.0 mW**

**Integration**

**Delta H 17105 mJ**

**1350.7 J/g**

**Peak 107.3°C**

**-87.5 mW**
LABCORE Data Entry Template for Worklist# 1239

Analyst: SMF  Instrument: TGA01  Book # 42NB-A

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

Worklist Comment: Please run C-101 TGA under N2. bdv

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<td>TGA-03</td>
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<td>%</td>
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<td>TGA-03</td>
<td>SOLID</td>
<td>10.46</td>
<td>20.42</td>
<td>N/A</td>
<td>%</td>
<td></td>
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<tr>
<td>95000048 C-101</td>
<td>3 DUP</td>
<td>S95T000823 0</td>
<td>TGA-03</td>
<td>SOLID</td>
<td>10.46</td>
<td>20.42</td>
<td>N/A</td>
<td>%</td>
<td></td>
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<td>S95T000823 0</td>
<td>TGA-03</td>
<td>SOLID</td>
<td>10.46</td>
<td>20.42</td>
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<td>%</td>
<td></td>
</tr>
<tr>
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<td>S95T000827 0</td>
<td>TGA-03</td>
<td>SOLID</td>
<td>23.35</td>
<td>21.84</td>
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<td>%</td>
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<td>95000048 C-101</td>
<td>6 DUP</td>
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<td>TGA-03</td>
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<td>23.35</td>
<td>21.84</td>
<td>N/A</td>
<td>%</td>
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Final page for worklist # 1239

Data Entry Comments: S95T000823 produced a second weight loss step of 18.81% at approximately 300°C. S95T000827 produced a second weight loss step of 16.57% at approximately 300°C

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

Analyst Signature Date

Verified by Blandina Valenzuela 5-1-95
LABCORE Data Entry Template for Worklist# 1239

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Final page for worklist # 1239

Data Entry Comments:

595T000823 - Dark Brown clay-like 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.
Curve 1: TGA

File info: TER042901 Sat Apr 29 17:06:47 1995
Sample Weight: 17.913 mg
42N8A Terliq

Signature below represents chemical technologist/chemist that completed/verified the calibration/analysis on pages 26 to 31.

X1  16.206 °C
X2  246.655 °C
Y1  99.922 Wt. %
Y2  42.084 Wt. %
ΔY -57.839 Wt. %

Temperature (°C)  Weight (Wt. %)

N2

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 29 17:16:15 1995
Curve 1: TGA
Sample Weight: 21.273 mg
S95T000823 (DUP), 10C/min

BEST AVAILABLE COPY

ΔY -20.42 Wt. %

ΔY -17.56 Wt. %

Temperature (°C)

N2
TEMP: 35.0  C TIMES: 0.0 min RATE: 10.0 C/min

Perkin-Elmer

SM Fulton
7 Series Thermal Analysis System
Sat Apr 29 19:32:30 1995
Curve i: TGA
Sample Weight: 14.479 mg
S95T000823(TRIPL), 10C/min

Temperature (°C)

Weight (Wt. %)

ΔY -19.79 Wt. %

ΔY -17.4 Wt. %

N2

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

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 29 23:25:45 1995
Curve 1: TGA
Sample Weight: 22.189 mg
S95T000827(DUP), 10C/min

ΔY = -21.84 Wt. %
ΔY = -17.3 Wt. %

N2 Temp: 85.0 C
Temperature: 10.0 C/min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Apr 29 22:21:40 1995
LABCORE Data Entry Template for Worklist# 1240

Analyst:  BWF  Instrument:  TGA01  Book #  42N8-A

Method: LA-560-112 Rev/Mod  A-2

Worklist Comment: Please run C-101 TGA under N2. bdv

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<td>SOLID</td>
<td>N/A</td>
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<td>%</td>
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<td>33.63</td>
<td>34.19</td>
<td>N/A</td>
<td>%</td>
</tr>
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Final page for worklist # 1240

Analyst Signature  Date  4/29/95  5-1-95

Verified by Blandina Valenzuela  5/1/95

Data Entry Comments: S95T000831 produced a second weight loss step of 11.34% at 309.0°C

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, R = Worklist Slot Number, K = Replicate Number, A = Aliquot Code.
TGA STD 42NB-A

14.740 mg

Rate: 10.0 °C/min

File: 00103.001
Ident: 0.0

TG METTLER
29-Apr-95

222-8 Laboratory

Step Analysis
Height -8.68 mg
-58.89 %

ResiC. 6.06 mg
41.11 %

Dpeak 80.8°C
Step Analysis
Height -9.97 mg
-33.63 %
ResiC. 19.67 mg
66.37 %
Dpeak 73.0°C

Step Analysis
Height -3.36 mg
-11.34 %
ResiC. 15.94 mg
53.78 %
Dpeak 309.0°C
Step Analysis
Height -6.53 mg
-34.19 %
ResiC. 12.58 mg
65.81 %

Step Analysis
Height -2.11 mg
-11.06 %
ResiC. 10.13 mg
53.04 %
Dpeak 307.0°C
LABCORE Data Entry Template for Worklist# 1252

Analyst: SIF  Instrument: TGA01  Book #: 42N8-A
Method: LA-560-112 Rev/Mod  A-2
Worklist Comment: Please run C-101 TGA under N2. bdv

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<td>73.82</td>
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Final page for worklist # 1252

Signatures:

[Signatures: Analyst Signature: SIF, Date: 4-29-95]
[Signatures: Analyst Signature: C, Date: 5-1-95]
[Signature: Verified by Blandina Valenzuela, Date: 5-1-95]

Data Entry Comments:
S951000820 Bright yellow liquid

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.
TGA STD 42N8-A
14.740 mg
Rate: 10.0 °C/min

Step Analysis
Height -8.68 mg
-58.90 %
ResiC. 6.06 mg
41.10 %
Dpeak 80.8°C

File: 00103.001 TG METTLER 29-Apr-96
Ident: 0.0 222-8 Laboratory

Signature below represents Chemical Technologist/Chemist that completed/verified the calibration/analysis on pages 37 to 39.
Step Analysis
Height -8.43 mg
-73.79 %
ResiC. 2.99 mg
26.21 %
Dpeak 83.0°C
Step Analysis
Height -9.35 mg
-73.82 %
Residue 3.32 mg
26.18 %
Dpeak 83.0°C