~~XXXX~~ RMIS View/Print Document Cover Sheet ~~XXXX~~

This document was retrieved from the Boeing ISEARCH System.

Accession #: D196071710

Document #: SD-WM-DP-105

Title/Desc:

FINAL REPORT FOR TANK 241B112 AUGER SAMPLES
95-AUG-014 & 95-AUG-015

COMPLETE

ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **No 625764**Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Driginator's Name, Organization, MSIN, and Telephone No. John M. Conner, Characterization Plans, Coordination and Reports, R2- 12. 373-2711		3a. USQ Required? ☐ Yes ☒ No	4. Date 10/19/95
11a. Modification Work ☐ Yes (fill out Blk. 11b) ☒ No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A Cog. Engineer Signature & Date	11d. Restored to Original Condition (Temp. or Standby ECN only) N/A Cog. Engineer Signature & Date	
	5. Project Title/No./Work Order No. Tank 241-B-112	6. Bldg./Sys./Fac. No. N/A	7. Approval Designator Q	
12. Description of Change This ECN is being generated in order to update/add additional information to the existing document.	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-DP-105, Rev. 0	9. Related ECN No(s). N/A	10. Related PO No. N/A	
	13a. Justification (mark one) Criteria Change ☐ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☒			
13b. Justification Details This ECN will assist in the completion of the documentation process for this document.				
14. Distribution (include name, MSIN, and no. of copies) See attached distribution sheet.			RELEASE STAMP OFFICIAL RELEASE BY WHC DATE OCT 26 1995 <i>Sta 4</i>	

RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-DP-105, REV 1

Document Title: Final Report for Tank 241-B-112, Auger Samples 95-AUG-014 and 95-AUG-015

Release Date: 10/26/95

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

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara Broz

10/26/95

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy. Available in paper copy. Printed in the United States of America. To obtain copies of this report, contact:

Westinghouse Hanford Company - Document Control Services
P.O. Box 1970, Mailstop H6-08, Richland, WA 99352
Telephone: (509) 372-2420; Fax: (509) 376-4989

THIS PAGE INTENTIONALLY
LEFT BLANK

SUPPORTING DOCUMENT1. Total Pages **83**

2. Title

Final Report for Tank 241-B-112, Auger Samples 95-AUG-014 and 95-AUG-015

3. Number

WHC-SD-WM-DP-105

4. Rev No.

1

5. Key Words

Final Report, Tank 241-B-112, Tank B-112, B-112, B Farm, Auger Samples, 95-AUG-014, 95-AUG-015

6. Author

Name: John M. Conner

Signature

Organization/Charge Code 75310/N4G4C

7. Abstract

N/A

8. RELEASE STAMP

OFFICIAL RELEASE
BY WHCDATE **OCT 26 1995****Sta 4**

THIS PAGE INTENTIONALLY
LEFT BLANK

[illegible]

THIS PAGE INTENTIONALLY
LEFT BLANK

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-105, REV. 1

ANALYTICAL SERVICES

FINAL REPORT FOR TANK 241-B-112,
AUGER SAMPLES 95-AUG-014 AND 95-AUG-015

Date Printed:

OCTOBER 18, 1995

THIS PAGE INTENTIONALLY
LEFT BLANK

WMC-SD-WM-DP-105, REV. 1
TABLE OF CONTENTS

PART I	Final Report for Tank 241-B-112, Auger Samples 95-AUG-014 and 95-AUG-015	1
Narrative		2
Chain of Custody Forms		4
Hot Cell Logbook		7
Photographs		19
Sample Handling		22
Extrusion Worklist # 862		23
Extrusion Worklist # 777		24
Sample Preparations		25
Fusion Digestion Worklist # 997		26
Fusion Digestion Worklist # 1192		27
Inorganic Analyses		28
Differential Scanning Calorimetry (DSC)		
DSC Worklist # 1207		29
Radiochemical Analyses		31
Alpha Total Analysis (AT)		
AT Worklist # 1199		32
Part II	45-Day Safety Screen Results for Tank 241-B-112, Auger Samples, 95-AUG-014 and 95-AUG-015	44
Narrative		46
Sample Data Summary		50
Undigested Sample Analyses - Direct		53
Differential Scanning Calorimetry (DSC)		
DSC Worklist # 922		54
DSC Worklist # 921		58

THIS PAGE INTENTIONALLY
LEFT BLANK

PART I

WHC-SD-WM-DP-112, REV. 1

**REVISED FINAL REPORT FOR TANK 241-C-203,
AUGER SAMPLES 95-AUG-020 AND 95-AUG-021**

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

NARRATIVE

THIS PAGE INTENTIONALLY
LEFT BLANK

FINAL REPORT FOR TANK 241-B-112,
AUGER SAMPLES 95-AUG-014 AND 95-AUG-015

ANALYTICAL SUMMARY

Two auger samples from tank 241-B-112 (B-112) were received in the 222-S Laboratories and underwent safety screening analyses, consisting of differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), and total alpha activity. All results for all analyses (DSC, TGA, and total alpha) were within the safety screening notification limits specified in the Tank Characterization Plan (TCP) [1]. No notifications nor secondary analyses were required.

SCOPE

This document constitutes the final laboratory report for the tank B-112 auger samples collected on March 16, 1995 (samples 95-AUG-014 and 95-AUG-015). As no additional analyses have been performed, the 45-day report, included as part II of this document (beginning on page 44), contains the data summary tables, discussions of the analytical methods and data, and raw data scans for DSC and TGA analyses. The data summary tables from the 45-day report (pp. 50-52) will serve as the final data summary tables as well.

Additional information provided in this revision includes the sample chain-of-custody sheets, photographs of the extruded auger samples, copies of the laboratory hot-cell notebook pages, and the raw data for the total alpha analyses.

REFERENCE

- [1] R. D. Schreiber, *Tank 241-B-112 Tank Characterization Plan*, WHC-SD-WM-TP-302, Rev. 0, February 6, 1995.

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

CHAIN OF CUSTODY FORMS

THIS PAGE INTENTIONALLY
LEFT BLANK

COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

PEAZNIK

(1) Shipment Number		(2) Sample Number		(3) Supervisor	
B112		3		95-AUG-015	
(4) Tank	(5) Riser	(6) Cask Serial Number		(7) FIELD	
B112	3	1037		LABORATORY	
Radiation Survey Date:		(8) Shipment Description			
(9) FIELD		(10) LABORATORY			
Over Top Dose Rate	22 mR	A. Work Package Number			
Side Dose Rate	52 mR	B. Cask Seal Number			
Bottom Dose Rate	220 DPM	C. Date and Time Sample			
Smearable Contamination	220 DPM (Alpha)	Removed from Tank			
	11K DPM (Beta-Gamma)	D. Expected Liquid Content			
	Signature	E. Expected Solid Content			
	Signature	F. Dose Rate Through Drill String			
	Signature	G. Expected Sample Length			

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

WHC-SD-WM-DP-105, REV. 1

51

(10) Field Comments		(32) Laboratory Comments	
(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time
B112 4/9	2225 LABS	PEAZNIK, R.J.	3-17-95/1000
(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
DA KRAUTH	SGENTLE	3-17-95/1145	
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
SGENTLE	SGENTLE	03-17-95	
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release?		(30) Seal Data Consistent with this Record?	
Yes ☒ No ☐	(29) Seal Intact Upon Receipt?	Yes ☒ No ☐	
	Yes ☒ No ☐	Cask Seal No. Yes ☒ No ☐	
		Sample No. Yes ☒ No ☐	

COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number B112 (2) Sample Number 95-AVG-014 (3) Supervisor PRZNIK
 (4) Tank B112 (5) Riser 7 (6) Cask Serial Number 1033

Radiation Survey Date:		(7) FIELD	(31) LABORATORY	(8) Shipment Description
Over Top Dose Rate	<u>2.2 mR</u>		<u>20.5 mR/hr</u>	A. Work Package Number <u>ES-95-00079-0</u>
Side Dose Rate	<u>2.2 mR</u>		<u>3 mR/hr</u>	B. Cask Seal Number <u>1023</u>
Bottom Dose Rate	<u>2.2 mR</u>		<u>20.5 mR/hr</u>	C. Date and Time Sample <u>3-16-95 / 1030 hrs</u>
Smearable Contamination	<u>220 DPM</u>	(Alpha)	<u>220 DPM</u>	Removed from Tank <u>30%</u>
	<u>215 DPM</u>	(Alpha)	<u>215 DPM</u>	D. Expected Liquid Content <u>70%</u>
	<u>215 DPM</u>	(Alpha)	<u>215 DPM</u>	E. Expected Solid Content <u>250 mR/hr</u>
	<u>215 DPM</u>	(Alpha)	<u>215 DPM</u>	F. Dose Rate Through Drill String <u>8"</u>
	<u>215 DPM</u>	(Alpha)	<u>215 DPM</u>	G. Expected Sample Length

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

WHC-SD WM-DP-105, REV. 1

(10) Field Comments		(32) Laboratory Comments	
(11) Point of Origin <u>B112 R/M</u>	(12) Destination <u>222 S LABS</u>	(13) Sender Name (Sign and PRINT) <u>PRZNIK, RS K. Luf</u>	(14) Date/Time <u>3-17-95 / 1000 hrs</u>
(17) Relinquished By (Sign and PRINT) <u>DA KRAM</u>	(18) Received By (Sign and PRINT) <u>S Gentle</u>	(15) Sender Comments	(20) Receiver Comments
(21) Relinquished By (Sign and PRINT) <u>S Gentle</u>	(22) Received By (Sign and PRINT) <u>DA KRAM</u>	(23) Date/Time <u>3-17-95 / 1145</u>	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release? ☒ Yes ☐ No		(30) Seal Data Consistent with this Record? ☒ Yes ☐ No	
(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		Cask Seal No. <u>1023</u> Sample No. <u>1023</u>	

WHC-SD-WM-DP-105, REV. 1

HOT CELL LOG BOOK

THIS PAGE INTENTIONALLY
LEFT BLANK

NOTEBOOK/LOGBOOK UNCLASSIFIED COVERSHEET

SECTION I

RECORD COPY
NOT FOR CIRCULATION
FEB 17 1995
RECEIVED WHC BCSP
INVENT CONT

Notebook No.

WHC-N-1123 1

Date of Issue

2-17-95

Copy

1

Title

241-B-112

Author

R.K. Fuller

If continued from another notebook
give the notebook number

This is a Controlled Notebook. The assigned custodian is responsible for this book. When the book is completed, contact your Records Management Specialist for a Retention Schedule. Complete Section II of this form and return the Notebook to Unclassified Document Control, A4-18.

Responsible Custodian	Payroll No.	MSIN	Date Assigned
R.K. Fuller		TG-31	FEB 17 1995

SECTION II

Complete this section prior to returning notebook to Unclassified Document Control, A4-18

Abstract:

(Give brief description of notebook contents)

Period Covered:

(Inclusive dates - Month/Day/Year)

Certification Statement:

This notebook does ☐ does not ☐ contain any Quality Assurance Record Material (as described in Section 9.0 of WHC-CM-3-5) and has been verified to be a complete and legible record.

Custodian's Signature and Date

Retention Schedule:

Specialist Concurrence Name

Custodian's Manager's Name

Table of Contents

				pages
①	B112	95-AUG-014	Riser #7	6-9
②	B112	95-AUG-015	Riser #3	10-13

WHC-SD-WM-DP-105, REV. 1

Pages 2 through 5 of Hot Cell Log Book number
WHC-N-1123 Copy 1 were intentionally left Blank.

COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number _____ (2) Sample Number 95-AVG-014 (3) Supervisor PRAZNIK
 (4) Tank B112 (5) Riser 7 (6) Cask Serial Number 1033

Radiation Survey Data:		(7) FIELD	(31) LABORATORY	(8) Shipment Description	
Over Top Dose Rate	<u><2 mR</u>		<u>40.5 mR/HR</u>	A. Work Package Number	<u>ES-95-00079-0</u>
Side Dose Rate	<u><2 mR</u>		<u>3 mR/HR</u>	B. Cask Seal Number	<u>1023</u>
Bottom Dose Rate	<u><2 mR</u>		<u>40.5 mR/HR</u>	C. Date and Time Sample	<u>3-16-95/ 1030hrs</u>
Smearable Contamination	<u><20 DPM</u>		<u>420 DPM</u>	Removed from Tank	
	(Alpha)		(Alpha)	D. Expected Liquid Content	<u>30%</u>
	<u><1K DPM</u>		<u>4100 DPM</u>	E. Expected Solid Content	<u>70%</u>
	(Beta-Gamma)		(Beta-Gamma)	F. Dose Rate Through Drill String	<u>250 mR/hr</u>
RCT*	<u>[Signature]</u>	RCT*	<u>[Signature]</u>	G. Expected Sample Length	<u>8"</u>
	(Signature)		(Signature)		

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

11

Field Submittal
3/16/95

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin <u>B112 R/M</u>	(12) Destination <u>222 S LABS</u>	(13) Sender Name (Sign and PRINT) <u>PRAZNIK, RS [Signature]</u>	(14) Date/Time <u>3-17-95/ 1000hr</u>	(15) Sender Comments
(17) Relinquished By (Sign and PRINT) <u>[Signature] DA KRAHN</u>	(18) Received By (Sign and PRINT) <u>S Gentle S Gentle</u>	(19) Date/Time <u>3-17-95/ 1145</u>	(20) Receiver Comments	
(21) Relinquished By (Sign and PRINT) <u>S Gentle S GENTLE</u>	(22) Received By (Sign and PRINT) <u>[Signature] S GENTLE</u>	(23) Date/Time <u>1300 3-17-95</u>	(24) Receiver Comments	
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	
(16) Seal Intact Upon Release? ☒ Yes ☐ No		(29) Seal Intact Upon Receipt? ☒ Yes ☐ No		(30) Seal Data Consistent with this Record? ☒ Yes ☐ No
Shipment No. <u>none</u> ☒ Yes ☐ No		Cask Seal No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No

WHC-SD-WM-DP-115, REV 1

95-AUG-014

RISER # 7

3/27/95

Sample # 95-AUG-014

Cask # 1033

Dose rate through drill string = 350 mR/hr

Work list # 777 Labcore number = S95T 000356

Tape # 6 B Farm

20 gm wt = 19.99 grams 500 gm wt = 499.97 grams

Temp = 80.6 °F Humidity = 20 %

Solids:

Total amount of solid material recovered was about 7 grams. A small amount of dark brown solid sample was located on flutes #2 through #8. Sample was damp. Drainable liquid (less than 5 ml) dripped off the auger onto the auger tray when the auger sleeve was removed. Did not recover the drainable liquid. Some gray solids were collected from flutes #2 and #3 (possible crust). Subsampled the remaining flutes (#4 through #8).

Subsample Information:

- (1) Subsampled solids on flutes #2 and #3. Possible crust sample. Gray Solids

- Vial # 6499 (20 ml - vial size)
- 2.02 grams recovered

- (2) Subsampled solids on flutes #4 through #8. Remaining solids. Brown solids.

- Vial # 6633 (20 ml - vial size)
- 5.70 grams recovered

Keith Fuller
3/27/95

3/27/95

- Did not divide sample into $\frac{1}{2}$ segments due to the lack of material.

~~3/27/95~~
3/27/95

B112 95-AUG-014 Rise, #7
Photograph

3/27/95

B112 95-AUG-014

COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

PRANZNIK

(1) Shipment Number B112 (2) Sample Number 95-AUG-015 (3) Supervisor PRANZNIK

(4) Tank B112 (5) Riser 3 (6) Cask Serial Number 1037

Radiation Survey Data:		(31) LABORATORY	(8) Shipment Description
Over Top Dose Rate	<u>2.2 mR</u>	<u>20.5 mR/hr</u>	A. Work Package Number <u>ES-95-00079-0</u>
Side Dose Rate	<u>2.2 mR</u>	<u>1.5 mR/hr</u>	B. Cask Seal Number <u>1024</u>
Bottom Dose Rate	<u>2.20 DPM</u>	<u>20.5 mR/hr</u>	C. Date and Time Sample <u>3-16-95 / 1200hrs</u>
Smearable Contamination	<u>2.1K DPM</u>	<u>20 DPM</u>	Removed from Tank <u>30%</u>
	<u>2.1K DPM</u>	<u><1000 DPM</u>	D. Expected Liquid Content <u>70%</u>
	<u>2.1K DPM</u>	<u><1000 DPM</u>	E. Expected Solid Content <u>45 mR/hr</u>
	<u>2.1K DPM</u>	<u><1000 DPM</u>	F. Dose Rate Through Drill String <u>8"</u>
	<u>2.1K DPM</u>	<u><1000 DPM</u>	G. Expected Sample Length

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

F
G1

(10) Field Comments		(32) Laboratory Comments	
(11) Point of Origin <u>B112 4/3</u>	(12) Destination <u>2225 LABS</u>	(13) Sender Name (Sign and PRINT) <u>PRANZNIK, R.J. Lemp</u>	(14) Date/Time <u>3-17-95 / 1000</u>
(16) Relinquished By (Sign and PRINT) <u>DA KRATH</u>	(17) Received By (Sign and PRINT) <u>SGentle</u>	(18) Received By (Sign and PRINT) <u>SGentle</u>	(19) Date/Time <u>3-17-95 / 1145</u>
(21) Relinquished By (Sign and PRINT) <u>SGentle</u>	(22) Received By (Sign and PRINT) <u>SGentle</u>	(23) Date/Time <u>03-17-95</u>	(24) Receiver Comments
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments
(16) Seal Intact Upon Release?		(30) Seal Data Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	Cask Seal No. ☒ Yes ☐ No	Sample No. ☒ Yes ☐ No

B112 95-AUG-015 Riser #3

3/28/95

Cask # 1037 Lab-con #: S95T000357

Dose rate through drill string = 45 mR/hr

Worklist # 778 = Lab Worklist

Tape #6 B-Farm

10 gm = 19.99 grams 500 gm = 499.97

Temp = 81.0°F 20% Humidity

No Liner Liquid

Solids Description:

Flute #2 was clean. Flutes #3-8 ^{3/28/95} had very little material. A little bit of drainable liquid dripped on the tray. Some dark material on flutes #4 and #8. No visible crust. Will not divide into half segments due to ²⁵⁷La²⁵⁷Pa²⁵⁷ lack of material. Collected sample in on 20 ml vial

Subsample Information:

B112 95-AUG-015 Solids (all solids from cask)

g/vial # 6653 (20 ml vial size)

Gross wt: 30.20 grams

Initial wt: 27.50 grams

net wt: 2.70 grams (ENTIRE SAMPLE)

John M. Comer = Project Coordinator

Sample will be loaded out for laboratory analyses.

Heith ³Jullu
3/28/95

3/28/55

ENC

75 AUG 61

1000000

LWM-115, REV. 1

115 Rev 3

115

420193

B112 95-AUG-015

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

PHOTOGRAPHS

THIS PAGE INTENTIONALLY
LEFT BLANK

3/27/95

B112 95-AUG-014

1000

5/22/75

B112 95 AUG-015

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

SAMPLE HANDLING

THIS PAGE INTENTIONALLY
LEFT BLANK

LABCORE Data Entry Template for Worklist# 862

Analyst: EC Instrument: BA000 NA Book # NA

Method: LO-160-103 Rev/Mod A-7

Worklist Comment: B-112 95-AUG-015 Riser 3 Extrusion

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>19.99</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>499.97</u>	<u>N/A</u>	
95000036	B-112	3	SAMPLE	S95T000453	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>0</u>		ml
95000036	B-112	4	SAMPLE	S95T000453	0		DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
95000036	B-112	5	SAMPLE	S95T000453	0		EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
95000036	B-112	6	SAMPLE	S95T000453	0		EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
95000036	B-112	7	SAMPLE	S95T000453	0		LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
95000036	B-112	8	SAMPLE	S95T000453	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>WHC-N-1123</u>		
95000036	B-112	9	SAMPLE	S95T000453	0		SLDVOL01	SOLID	<u>N/A</u>	<u>2</u>		ml
95000036	B-112	10	SAMPLE	S95T000453	0		SLDWT-01	SOLID	<u>N/A</u>	<u>2</u>		g
95000036	B-112	11	SAMPLE	S95T000453	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 862

EC 3-29-95
Analyst Signature Date

EC 3-29-95
Analyst Signature Date

Was originally worklist #748.

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# 777

Analyst: RK7 Instrument: BA000 Book # _____

Method: LO-160-103 Rev/Mod A-7

Worklist Comment: B-112 95-AUG-014 Riser #7

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	<u>20</u>	<u>19.99</u>	<u>N/A</u>	
		2	INSTCHK02				EXTRUD01	SOLID	<u>500</u>	<u>499.97</u>	<u>N/A</u>	
95000032	B-112	3	SAMPLE	S95T000356	0		DLIQVOL1	SOLID	<u>N/A</u>	<u>45</u>		mL
95000032	B-112	4	SAMPLE	S95T000356	0		DLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
95000032	B-112	5	SAMPLE	S95T000356	0		EST.G/ML	SOLID	<u>N/A</u>	<u>0</u>		g/mL
95000032	B-112	6	SAMPLE	S95T000356	0		EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
95000032	B-112	7	SAMPLE	S95T000356	0		LLIQWT01	SOLID	<u>N/A</u>	<u>0</u>		g
95000032	B-112	8	SAMPLE	S95T000356	0		NOTEBOOK	SOLID	<u>N/A</u>	<u>WHC-N-1123</u>		
95000032	B-112	9	SAMPLE	S95T000356	0		SLDVOL01	SOLID	<u>N/A</u>	<u>7</u>		mL
95000032	B-112	10	SAMPLE	S95T000356	0		SLDWT-01	SOLID	<u>N/A</u>	<u>7</u>		g
95000032	B-112	11	SAMPLE	S95T000356	0		ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		mL

Final page for worklist # 777

Keith Fuller 3/28/95
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.

WHC-SD-WM-DP-105, REV. 1

SAMPLE PREPARATIONS

THIS PAGE INTENTIONALLY
LEFT BLANK

LABCORE Data Entry Template for Worklist# 997

Analyst: KRM Instrument: FUS01 AL11066 Book # _____

Method: LA-549-141 Rev/Mod C-2 452 BDI 4-21-95

Worklist Comment: B-112 FUSION DIGEST ~~-356~~ > 481

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP	595T000481 <u>481</u>		FUSION01	SOLID	<u>250 mL</u>		N/A	g/L
95000032	B-112	2 SAMPLE	595T000481 <u>481</u>	0 F	FUSION01	SOLID	N/A	<u>.4272</u>		g/L
95000032	B-112	3 DUP	595T000481 <u>481</u>	0 F	FUSION01	SOLID	<u>.4272</u>	<u>.4296</u>	N/A	g/L

Final page for worklist # 997

Analyst Signature [Signature] Date 4-17-95

Analyst Signature [Signature] Date 4-17-95

$$\frac{481 \text{ BDI } 4-21-95}{.1068 \text{ G}} = .4272 \text{ g/L}$$

$$\frac{481 \text{ BDI } 4-21-95}{.250 \text{ L}} = .4296 \text{ g/L}$$

356 BDI 4-21-95

481

356 mL

* Sample # ~~595T000481~~ could not be located. Used sample # 595T000452 instead. Both sample #'s are from TK- B-112 / V 6633 / Segment #1 / lower half.

* * Sample 452 was used correctly to create 481. 356 was the parent sample in demographics for both 452 and 481, instead of 452 being 481's parent sample. Bertrand Griffin II 4-21-95

Data Entry Comments:

30 mL HCL 35 mL/h 3.5 mL/h Bob Clements

DOSE RATE

Bertrand Griffin II 4-21-95

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# 1192

Analyst: C. H. Instrument: FUS01 AL11066 Book #

Method: LA-549-141 Rev/Mod C-2

Worklist Comment: SUPER RUSH B-112 FUSION - 357->864, 454->865

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>250ml</u>	<u>250ml</u>	<u>N/A</u>	g/L
95000032	B-112	2 SAMPLE	S95T000864	0 F	FUSION01	SOLID	<u>N/A</u>	<u>2.0616</u>		g/L
		.5154g →	250ml							
95000032	B-112	3 DUP	S95T000864	0 F	FUSION01	SOLID	<u>2.0616</u>	<u>2.0783</u>	<u>N/A</u>	g/L
		.5197g →	250ml							
95000036	B-112	4 SAMPLE	S95T000865	0 F	FUSION01	SOLID	<u>N/A</u>	<u>1.9968</u>		g/L
		.4992g →	250ml							
95000036	B-112	5 DUP	S95T000865	0 F	FUSION01	SOLID	<u>1.9968</u>	<u>1.9920</u>	<u>N/A</u>	g/L
		.4987g →	250ml							

Final page for worklist # 1192

Analyst Signature [Signature] Date 4-24-95

Analyst Signature [Signature] Date 4-26-95

Data Entry Comments:

OTA: 3 mrad/hr & Jim Evans

Calibration: 1) WT: 200.0000 G

for AL11066 2) WT: 100.0000 G

3) WT: 100.0000 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.

27 [Signature] 4-26-95

WMC-SD-WM-DP-105, REV. 1

INORGANIC ANALYSES

THIS PAGE INTENTIONALLY
LEFT BLANK

LABCORE Data Entry Template for Worklist# 1207

Analyst: BV Instrument: DSC01 Book # —

Method: LA-514-113 Rev/Mod —

WHC-SD-WM-DP-105, REV. 1

Worklist Comment: Calculated dry DSC for B-112. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
95000032	B-112	1 SAMPLE	S95T000357	0	DSC-02	SOLID	N/A	31.9		Joules/g Dry
95000032	B-112	2 DUP	S95T000357	0	DSC-02	SOLID	31.9	8.3	N/A	Joules/g Dry
95000032	B-112	3 DUP2	S95T000357	0	DSC-02	SOLID	31.9	27.2	N/A	Joules/g Dry
95000032	B-112	4 SAMPLE	S95T000452	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000032	B-112	5 DUP	S95T000452	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry
95000036	B-112	6 SAMPLE	S95T000454	0	DSC-02	SOLID	N/A	Ø		Joules/g Dry
95000036	B-112	7 DUP	S95T000454	0	DSC-02	SOLID	Ø	Ø	N/A	Joules/g Dry

Final page for worklist # 1207

Blandina Valenzuela
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

[illegible]

WHC-SD-WM-DP-105, REV. 1

RADIOCHEMICAL ANALYSES

THIS PAGE INTENTIONALLY
LEFT BLANK

SUPER RUSH

worklistrpt Version 2.0 02/21/95
04/24/95 15:49

Page: 1

LABCORE Data Entry Template for Worklist# 1199

Analyst: BGH Instrument: AB00 #15 Book # 1071352
WB 26872
 Method: LA-508-101 Rev/Mod D-2
 Worklist Comment: Determine sample size using Ludlum. SLF WHC-SD-WM-DP-105, REV.1

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1 STD			0ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2 BLNK-PREP			0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2 BLNK-PREP			0ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3 BLNK/BKG	<u>0.45</u>		0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000032	B-112	4 SAMPLE	S95T000481	0 F	0ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000032	B-112	4 SAMPLE	S95T000481	0 F	0ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000032	B-112	5 DUP	S95T000481	0 F	0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000032	B-112	5 DUP	S95T000481	0 F	0ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000032	B-112	6 SPK	S95T000481	0 F	0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		7 STD			0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		7 STD			0ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		8 BLNK-PREP			0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		8 BLNK-PREP			0ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		9 BLNK/BKG	<u>2.4</u>		0ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000032	B-112	10 SAMPLE	S95T000864	0 F	0ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000032	B-112	10 SAMPLE	S95T000864	0 F	0ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000032	B-112	11 DUP	S95T000864	0 F	0ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Data Entry Comments:

Low SPK recovery is the result of disk corrosion by HCl.

No re-run requested. ~~ASPH~~ 5/1/95

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# 1199

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
95000032	B-112	11 DUP	S95T000864	0 F	ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000036	B-112	12 SAMPLE	S95T000865	0 F	ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000036	B-112	12 SAMPLE	S95T000865	0 F	ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000036	B-112	13 DUP	S95T000865	0 F	ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000036	B-112	13 DUP	S95T000865	0 F	ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error

Final page for worklist # 1199

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.

AT : LA-508-101 (D-2)

LA-548-101 (A-3) LIQUIDS

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STANDARD	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	4639	4668
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	10.000	10.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	153.933	154.900
Sample #	Sample Concentration in $\mu\text{Ci/L}$	2.91E-02	BOOK#
WRKLST 1199	Replicate Concentration in $\mu\text{Ci/L}$	2.93E-02	107852
Instrument Code			
WB26872	Average Concentration in $\mu\text{Ci/L}$	2.9226E-02	
Analyst			
KGH	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Date	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
04/24/95	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Time	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

v RESULTS v

ALPHA TOTAL	in $\mu\text{Ci/mL}$	(Average) =	2.92E-05	DETECTION LEVEL
				1.52E-07
RELATIVE COUNTING ERROR		=	2.9%	$\mu\text{Ci/mL}$

Data Entry by: *Sharon L. Hefner*
 Approved by: *[Signature]*
 Form 508101_C Rev. 1.3

Date: 04/25/95

Date: 4/25/95

Page 1 of 1

AT : LA-508-101 (D-2)

LA-548-101 (A-3)

SOLIDS

		BLANK	REPLICATE
Type	DETECTOR NUMBER	15	15
BLANK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	6	13
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	0.4272	0.4272
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.356	0.356
Sample #	Sample Concentration in $\mu\text{Ci/g}$	< 3.16E-03	BOOK#
S95T481	Replicate Concentration in $\mu\text{Ci/g}$	< 3.16E-03	
Instrument Code			
WB26872	Maximum Concentration in $\mu\text{Ci/g}$	< 3.1583E-03	
Analyst			
KGH	Rs (Sample Count Rate) = (TC / CT) - BKG		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
04/24/95			
Time	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

v RESULTS v

ALPHA TOTAL	in $\mu\text{Ci/g}$	(Maximum) =	< 3.16E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.				7.12E-03
RELATIVE COUNTING ERROR		=	142.9%	$\mu\text{Ci/g}$

Data Entry by: <i>[Signature]</i>	Date: 04/25/95
Approved by: <i>[Signature]</i>	Date: 4/25/95

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	50	66
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	0.4272	0.4272
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.967	1.500
Sample #	Sample Concentration in $\mu\text{Ci/g}$	8.57E-03	BOOK#
S95T481	Replicate Concentration in $\mu\text{Ci/g}$	1.33E-02	
Instrument Code			
WB26872	Average Concentration in $\mu\text{Ci/g}$	1.0928E-02	
Analyst			
KGH	Rs (Sample Count Rate) = (TC / CT) - BKG		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
04/24/95			
Time	Relative Counting Error = $\left[\frac{\sqrt{(\text{The Square Root of TC} + \text{BKG} * \text{CT})}}{(\text{TC} - \text{BKG} * \text{CT})} \right] * 1.96 * 100$		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

v RESULTS v

ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	1.09E-02	DETECTION LEVEL
			7.12E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR	=	56.9%	

Data Entry by: <i>Sharon J. Gaulton</i>	Date: 04/25/95
Approved by: <i>[Signature]</i>	Date: 4/25/95

AT : LA-508-101 (D-2)

LA-548-101 (A-3)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
DUPLICATE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	58	55
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	0.4296	0.4296
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	1.233	1.133
Sample #	Sample Concentration in $\mu\text{Ci/g}$	1.09E-02	BOOK#
S95T481	Replicate Concentration in $\mu\text{Ci/g}$	9.99E-03	
Instrument Code			
WB26872	Average Concentration in $\mu\text{Ci/g}$	1.0427E-02	
Analyst			
KGH	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Date	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
04/24/95			
Time	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

v RESULTS v

ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	1.04E-02	DETECTION LEVEL
			7.08E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR	=	50.3%	

Data Entry by: <i>Sharon J. Halden</i>	Date: 04/25/95
Approved by: <i>[Signature]</i>	Date: 4/25/95
Form 508101_C Rev. 1.3	Page 1 of 1

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	15	15
SPIKE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	39451	43171
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	0.4272	0.4272
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Sample #	SPIKE VALUE in $\mu\text{Ci/L}$ (SVal)	36.372	36.372
S95T481	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.238	0.238
Instrument Code	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	1.16E+01	1.27E+01
WB26872	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ from FORM C	1.0928E-02	
Analyst	BOOK#	94B43	
KGH	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Date	SAMPLE + SPIKE $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
04/24/95	PERCENT SPIKE RECOVERY = $((S+S \mu\text{Ci/g} - \text{SAMPLE } \mu\text{Ci/g}) * ((SDF/SVol)/(DF/SS/Dg/L))) / SVal * 100$		
Time			
04:00 PM			

RESULT AVG. PERCENT SPIKE RECOVERY = 71.6%

Data Entry by: *[Signature]* Date: 25-Apr-95
 Approved by: *[Signature]* Date: 4/25/95
 Form 508101_X Rev. 1.3 Page 1 of 1

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		BLANK	REPLICATE
Type	DETECTOR NUMBER	15	15
BLANK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	4	6
1199	COUNT TIME in MINUTES (CT)	30	30
AT or 157	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	2.0616	2.0616
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.356	0.356
Sample #	Sample Concentration in $\mu\text{Ci/g}$	< 6.54E-04	BOOK#
S95T864	Replicate Concentration in $\mu\text{Ci/g}$	< 6.54E-04	
Instrument Code			
WB26872	Maximum Concentration in $\mu\text{Ci/g}$	< 6.5446E-04	
Analyst			
KGH	Rs (Sample Count Rate) = (TC / CT) - BKG		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
04/24/95			
Time	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

▼ RESULTS ▼

ALPHA TOTAL	in $\mu\text{Ci/g}$ (Maximum) =	< 6.54E-04	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.48E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR	=	67.9%	

Data Entry by: <i>Sharon H. Miller</i>	Date: 04/25/95
Approved by: <i>[Signature]</i>	Date: 4/25/95

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	27	19
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	2.0616	2.0616
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.581	0.356
Sample #	Sample Concentration in $\mu\text{Ci/g}$	< 1.07E-03	BOOK#
S95T864	Replicate Concentration in $\mu\text{Ci/g}$	< 6.54E-04	
Instrument Code			
WB26872	Maximum Concentration in $\mu\text{Ci/g}$	< 1.0669E-03	
Analyst			
KGH	Rs (Sample Count Rate) = (TC / CT) - BKG		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
04/24/95			
Time	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

▼ RESULTS ▼

ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 1.07E-03	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.		1.48E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR =	226.3%	

Data Entry by: *Sharon L. Hylton* Date: 04/25/95
 Approved by: *[Signature]* Date: 4/25/95
 Form 508101_C Rev. 1.3 Page 1 of 1

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
DUPLICATE	DISH SIZE 1, 2, or 5 (MS)	2	2
WORK LIST	TOTAL COUNTS (TC)	17	16
1199	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	2.6788	2.6788
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.356	0.356
Sample #	Sample Concentration in $\mu\text{Ci/g}$	< 5.04E-04	BOOK#
S95T864	Replicate Concentration in $\mu\text{Ci/g}$	< 5.04E-04	
Instrument Code			
WB26872	Maximum Concentration in $\mu\text{Ci/g}$	< 5.0367E-04	
Analyst			
KGH	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
04/24/95			
Time	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

v RESULTS v

ALPHA TOTAL	in $\mu\text{Ci/g}$ (Maximum) =	< 5.04E-04	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.14E-03
RELATIVE COUNTING ERROR	=	500.0%	$\mu\text{Ci/g}$

Data Entry by: *Sharon L. Haggard* Date: 04/25/95
 Approved by: *[Signature]* Date: 4/25/95
 Form 508101_C Rev. 1.3 Page 1 of 1

AT : LA-508-101 (D-2)

LA-548-101 (A-3) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	55	64
1199	COUNT TIME in MINUTES (CT)	30	30
AT or IS ?	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	1.9968	1.9968
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	1.133	1.433
Sample #	Sample Concentration in $\mu\text{Ci/g}$	2.15E-03	BOOK#
S95T865	Replicate Concentration in $\mu\text{Ci/g}$	2.72E-03	
Instrument Code			
WB26872	Average Concentration in $\mu\text{Ci/g}$	2.4328E-03	
Analyst			
KGH	Rs (Sample Count Rate) = (TC / CT) - BKG		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/ μCi)		
04/24/95			
Time	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

▼ RESULTS ▼

ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	2.43E-03	DETECTION LEVEL
			1.52E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR	=	50.3%	

Data Entry by: <i>[Signature]</i>	Date: 04/25/95
Approved by: <i>[Signature]</i>	Date: 4/25/95

AT : LA-508-101 (D-2)

LA-548-101 (A-3)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
DUPLICATE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work Bkg	TOTAL COUNTS (TC)	67	55
1199	COUNT TIME in MINUTES (CT)	30	30
AT 508101	BACKGROUND in cpm (BKG)	0.7	0.7
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L (Dg/L)	1.992	1.992
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	1.533	1.133
Sample #	Sample Concentration in $\mu\text{Ci/g}$	2.91E-03	BOOK#
S95T865	Replicate Concentration in $\mu\text{Ci/g}$	2.15E-03	
Instrument Code			
WB26872	Average Concentration in $\mu\text{Ci/g}$	2.5337E-03	
Analyst			
KGH	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Date	ALPHA TOTAL $\mu\text{Ci/g}$ = $R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
04/24/95			
Time	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
04:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		

▼ RESULTS ▼

ALPHA TOTAL	in $\mu\text{Ci/g}$ (Average)	=	2.53E-03	DETECTION LEVEL
				1.53E-03 $\mu\text{Ci/g}$
RELATIVE COUNTING ERROR		=	50.3%	

Data Entry by: <i>Sharon G. Galt</i>	Date: 04/25/95
Approved by: <i>KGH</i>	Date: 4/25/95
Form 508101_C Rev. 1.3	Page 1 of 1

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

PART II

WHC-SD-WM-DP-105, REV. 1

WHC-SD-WM-DP-105, REV. 0

ANALYTICAL SERVICES

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-B-112,
AUGER SAMPLES, 95-AUG-014 AND 95-AUG-015

Date Printed:

APRIL 26, 1995

THIS PAGE INTENTIONALLY
LEFT BLANK

TABLE OF CONTENTS

Narrative	1
Sample Data Summary	5
Undigested Sample Analyses - Direct	8
Differential Scanning Calorimetry(DSC)	
DSC Worklist # 922	9
DSC Worklist # 921	13
Thermogravimetric Analyses (TGA)	
TGA Worklist # 929	21
TGA Worklist # 930	31

This Document consists of pages 1 through 34.

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

WHC-SD-WM-DP-105, REV. 0

NARRATIVE

THIS PAGE INTENTIONALLY
LEFT BLANK

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-B-112,
AUGER SAMPLES 95-AUG-014 AND 95-AUG-015ANALYTICAL SUMMARY

Two auger samples from tank 241-B-112 (B-112) were received in the 222-S Laboratories and underwent safety screening analyses, consisting of differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), and total alpha activity. All results for all analyses (DSC, TGA, and total alpha) were within the safety screening notification limits specified in the Tank Characterization Plan (TCP). No notifications nor secondary analyses were required.

SCOPE

This document serves as the 45-day report deliverable for the tank B-112 auger samples collected on March 16, 1995 (95-AUG-014 and 95-AUG-015). The 222-S Laboratories received, extruded, and analyzed each sample in accordance with the TCP referenced below. Included in this report are the primary safety screening results obtained from the analyses and copies of all DSC and TGA raw data scans as requested per the TCP. Photographs of the auger samples were taken during extrusion and, although not included in this report, are available.

SAMPLE RECEIPT, EXTRUSION, AND SUBSAMPLINGAuger 95-AUG-014

Auger sample 95-AUG-014 was collected from riser 7 of tank B-112 using a 10 inch auger bit. It was received into the 222-S Laboratories on March 17, 1995 at 1145 and extruded on March 27, 1995. A small amount of drainable liquid dripped off the auger (less than 5 mL), but no liquid was recovered for analysis. A gray substance was noticed on flutes 2 and 3 at the top of the auger. These moist solids were subsampled as a possible crust sample (2.02 g recovered in vial# 6499). Wet brown solids were subsampled from flutes 4 through 8 (5.70 g subsampled into vial #6633). A total of 7.72 g of material was recovered from this sample. All analyses required per the TCP were conducted. No archive sample was retained since so little material was collected.

Auger 95-AUG-015

Auger sample 95-AUG-015 was collected from riser 3 of tank B-112 using a 10 inch auger bit. It was received into the 222-S Laboratories on March 17, 1995 at 1145 and extruded on March 28, 1995. There was no drainable liquid, and only 2.70 g of material was recovered. This material (brown solids) was scraped from flutes 3 through 8 of the auger and subsampled into vial #6653. All analyses required per the TCP were conducted. No archive sample was retained since so little material was collected.

WHC-SD-WM-DP-105, Rev. 0

SAMPLE IDENTIFICATION INFORMATION

Table 1: Sample Identification

LABCORE Sample ID	Customer Sample ID	Analyses
S96T000356	95-AUG-014, Riser 7, auger sample	Extrusion
S95T000357	95-AUG-014, Riser 7, upper half (crust) subsample	DSC/TGA
S95T000864	95-AUG-014, Riser 7, upper half (crust) subsample fusion/digest	Total alpha
S95T000452	95-AUG-014, Riser 7, remaining solids subsample	DSC/TGA
S95T000481	95-AUG-014, Riser 7, remaining solids fusion/digest	Total alpha
S95T000453	95-AUG-015, Riser 3, auger sample	Extrusion
S95T000454	95-AUG-015, Riser 3, subsample	DSC/TGA
S95T000865	95-AUG-015, Riser 3, fusion/digest	Total alpha

ANALYTICAL RESULTS

Analytical results are presented in Tables 2 and 3, with the applicable notification limits shaded.

DSC (Energetics Content)

DSC analyses were performed under a nitrogen atmosphere using procedure LA-514-113, Rev. B-1. For samples exhibiting exotherms, dry weight basis results were calculated from the wet weight basis results by using the average percent water by TGA for each sample. Both the wet and dry results are given in Tables 2 and 3.

Sample S95T000357 exhibited a small exotherm (in both sample and duplicate). The average value for the exotherm was 13.80 J/g with a relative percent difference (RPD) of 117%, which failed the precision criterion stated in the TCP. The large RPD is due to the presence of an exotherm near the detection limit and lack of homogenization (as explained below for TGA). The average exotherm is less than 3% of the limit of 481 J/g. A third sample was analyzed for S95T000357, resulting in an exotherm of 18.7 J/g. This result does not appear in Table 2, but is provided in the raw data. No other sample exhibited an exotherm.

TGA (Moisture Content)

Weight percent water was performed under a nitrogen atmosphere using procedure LA-560-112, Rev. A-2. Results for samples S95T000357, S95T000452, and S95T000454 and their duplicates ranged in value from 21% to 47% percent water by weight. These results are all above the safety screening action limit of 17% by weight.

The RPD for sample S95T000357 was 62.4% (results were 40.19 and 21.08). This disparity is most likely due to the fact that the sample was not homogenized. Due to the very small amount of sample available, the material was subsampled directly from the auger into a 20 mL vial without homogenization, which would have resulted in unacceptable sample loss.

A third sample was analyzed for sample S95T000357, yielding a result of 32.75% water by weight. A third sample was also analyzed for S95T000452, yielding a result of 46.96% water by weight. These results do not appear in Table 2, but are provided in the raw data.

Total Alpha Activity

Analyses for total alpha activity were performed on samples S95T000481, S95T000864, and S95T000865. Samples were prepared by fusion using procedure LA-549-141, Rev. C-2, and analyses were performed using procedure LA-508-101, Rev. D-2. A sample duplicate was performed on each sample and a spike was performed on sample S95T000481.

The spike recovery was 71.6%, but no rerun was deemed necessary since the samples were near detection limits and far below the safety screening action limit of 41 uCi/g.

REFERENCE

Schreiber, R. D. 1995, WHC-SD-WM-TP-302, Rev. 0, "Tank 241-B-112 Tank Characterization Plan," dated February 6, 1995.

THIS PAGE INTENTIONALLY
LEFT BLANK

WHC-SD-WM-DP-105, REV. 1

WHC-SD-WM-DP-105, REV. 0

SAMPLE DATA SUMMARY

THIS PAGE INTENTIONALLY
LEFT BLANK

45 Day Safety Screen Results for B-112
B-112

TABLE 2

SEGMENT #: 95-AUG-014

RISE: 7

SEGMENT PORTION: II Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000357		% Water by TGA using Mettler	%	99.61	n/a	40.19	21.08	30.63	62.4	n/a	n/a	n/a
S951000357		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	31.9	8.3	20.10	117	n/a	n/a	n/a
S951000357		DSC Exotherm using Mettler	Joules/g	110.4	n/a	21.9	5.7	13.80	117	n/a	n/a	n/a
S951000864	F	Alpha of Digested Solid	wt/g	98.65	<6.54e-06	<1.07e-3	<5.06e-6	n/a	n/a	n/a	1.00e-03	226.3

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000452		% Water by TGA using Mettler	%	99.61	n/a	40.04	43.26	41.65	7.73	n/a	n/a	n/a
S951000452		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S951000452		DSC Exotherm using Mettler	Joules/g	110.4	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S951000481	F	Alpha of Digested Solid	wt/g	98.65	<1.16e-03	1.09e-2	1.04e-2	1.06e-02	4.69	71.60	7.00e-03	56.9

SEGMENT PORTION: I Lower Half of Segment

WHC-SD-WM-DP-105, REV. 1
WHC-SD-WM-DP-105, REV. 0

26-apr-1995 13:01:02
A-0002-1

45 Day Safety Screen Results for B-112
B-112

TABLE 3

RISER: 3

SEGMENT #: 95-AUG-015

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000454			% Water by TGA using Mettler	%	99.61	n/a	45.57	47.14	46.36	3.39	n/a	n/a	n/a
S95T000454			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000454			DSC Exotherm using Mettler	Joules/g	99.12	n/a	0	0	0.000	n/a	n/a	n/a	n/a
S95T000865	F		Alpha of Digested Solid	uCi/g	98.65	<6.54e-04	2.43e-3	2.53e-3	2.48e-03	4.03	n/a	2.00e-03	50.3

WHC-SD-WM-DP-105, REV. 1

WHC-SD-WM-DP-105, REV. 0

WHC-SD-WM-DP-105, REV. 1

WHC-SD-WM-DP-105, REV. 0

UNDIGESTED SAMPLE ANALYSES - DIRECT

THIS PAGE INTENTIONALLY
LEFT BLANK

LABCORE Data Entry Template for Worklist# 922

Analyst: SJF Instrument: DSC01 Book # 12N14-AMethod: LA-514-113 Rev/Mod B-1

Worklist Comment: Please run B-112 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.2</u>	<u>N/A</u>	Joules/g
95000036	B-112	2 SAMPLE	S95T000454	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000036	B-112	3 DUP	S95T000454	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 922

Susan M. Dalton
Analyst Signature Date

Reynold 4/21/95
Analyst Signature Date

Verified by Blandina Valenzuela 4/24/95

Data Entry Comments: Sample S95T000454 produced two endotherms one at 121.3°C
with a delta H of 1117.6 J/g and the second at 211.0°C with a delta H of 4.5 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 55 TO 57.

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00206.001

DSC METTLER

19-Apr-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-105, REV. 0

WHC-SD-WM-DP-105, REV. 1

S95T000454 N2

20.059 mg

Rate: 10.0 °C/min

File: 00210.001

DSC METTLER

20-Apr-95

Ident: 0.0

222-S Laboratory

LABCORE Data Entry Template for Worklist# 921

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

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

Worklist Comment: Please run B-112 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>31.0</u>	<u>N/A</u>	Joules/g
95000032	B-112	2 SAMPLE	S95T000357	0	DSC-01	SOLID	<u>N/A</u>	<u>21.9</u>		Joules/g
95000032	B-112	3 DUP	S95T000357	0	DSC-01	SOLID	<u>21.9</u>	<u>5.7</u>	<u>N/A</u>	Joules/g
		4 STD			DSC-01	SOLID	<u>28.45</u>	<u>31.4</u>	<u>N/A</u>	Joules/g
95000032	B-112	5 DUP2	S95T000357	0	DSC-01	SOLID	<u>21.9</u>	<u>18.7</u>	<u>N/A</u>	Joules/g
95000032	B-112	6 SAMPLE	S95T000452	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000032	B-112	7 DUP	S95T000452	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 921

See attached for signatures
Analyst Signature Date

Data entered and verified by
Blandina Valenciano 4/25/95
Analyst Signature Date

Data Entry Comments: S95T000357 produced two endotherms one at 115.3°C
with a delta H of 883.0 J/g, and the second at 258.1°C with a
delta H of 96.9 J/g. The STD and DUP2 for S95T000357 was performed
later, once the chemist was able to look at the results.

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. S95T000452 produced an endo-therm
of 947.4 J/g at 115.3°C
BDV
4/25/95
BDV

LABCORE Data Entry Template for Worklist# 921

Analyst: PLS Instrument: DSC01 Book # 12474-A

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

Worklist Comment: Please run B-112 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>31.0</u>	<u>N/A</u>	Joules/g
95000032	B-112	2 SAMPLE	S95T000357	0	DSC-01	SOLID	<u>N/A</u>	<u>21.9</u>		Joules/g
95000032	B-112	3 DUP	S95T000357	0	DSC-01	SOLID	<u>21.9</u>		<u>N/A</u>	Joules/g
95000032	B-112	4 SAMPLE	S95T000452	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000032	B-112	5 DUP	S95T000452	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 921

Paul W. Smith 4-18-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 62 TO 65.

S95T000357 (DUP) N2

27.607 mg

Rate: 10.0 °C/min

File: 00200.001

Ident: 0.0

DSC METTLER

19-Apr-95

222-S Laboratory

S95T000452 (DUP) N2

33.380 mg

Rate: 10.0 °C/min

File: 00204.001

DSC METTLER

19-Apr-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-105, REV. 0

WHC-SD-WM-DP-105, REV. 1

LABCORE Data Entry Template for Worklist# 929

Analyst: DWS Instrument: TGA01 Book # 42N84Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run B-112 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>57.62</u>	N/A	%
95000032	B-112	2 SAMPLE	S95T000357	0	TGA-01	SOLID	N/A	<u>40.19</u>		%
95000032	B-112	3 DUP	S95T000357	0	TGA-01	SOLID	<u>40.19</u>	<u>21.08</u>	N/A	%
95000032	B-112	4 SAMPLE	S95T000452	0	TGA-01	SOLID	N/A	<u>40.04</u>		%
95000032	B-112	5 DUP	S95T000452	0	TGA-01	SOLID	<u>40.04</u>	<u>43.26</u>	N/A	%
		6 STD			TGA-01	SOLID	<u>59.19</u> <u>57.62</u>	<u>58.96</u>	N/A	%
95000032	B-112	7 DUP2	S95T000357	0	TGA-01	SOLID	<u>40.19</u>	<u>32.75</u>	N/A	%
95000032	B-112	8 DUP2	S95T000452	0	TGA-01	SOLID	<u>40.04</u>	<u>46.96</u>	N/A	%

Final page for worklist # 929

See attached for signatures
Analyst Signature _____ Date __________
Analyst Signature _____ Date 4-25-95Verified by Blandina Valenzuela 4/25/95Data Entry Comments: The DUP2 for samples S95T000357 and S95T000452 were
run ^{4/24/95} on the day after the ^{other 4/24/95 STD} samples. Once the chemist was able to
look at the results.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# 929

Analyst: aws Instrument: TGA01 Book # 422812

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

Worklist Comment: Please run B-112 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>57.62</u>	N/A	%
								<u>40.19</u>	<u>9 mi = 4/15/95</u>	
95000032	B-112	2 SAMPLE	S95T000357	0	TGA-01	SOLID	N/A	<u>39.70</u>		%
						<u>9 mi = 4/15/95</u>	<u>40.19</u>			
95000032	B-112	3 DUP	S95T000357	0	TGA-01	SOLID	<u>39.70</u>	<u>21.08</u>	N/A	%
95000032	B-112	4 SAMPLE	S95T000452	0	TGA-01	SOLID	N/A	<u>40.04</u>		%
95000032	B-112	5 DUP	S95T000452	0	TGA-01	SOLID	<u>40.04</u>	<u>43.26</u>	N/A	%

Final page for worklist # 929

Paula Smith 4-18-95
Analyst Signature Date

Lusie M. Fulton 4-18-95
Analyst Signature Date

Data Entry Comments:

S95T000357 has a second weight loss step of 3.41% at 268°C, duplicate
has 4.49% at 270°C. The sample must be non-homogeneous

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 68 TO 75.

TGA STD 42N8-A

18.076 mg

Rate: 10.0 °C/min

File: 00197.001

TG

METTLER

18-Apr-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-105, REV. 1
WHC-SD-WM-DP-105, REV. 0

(DUP2) 4/16/95 BIV

S95T000357 N2

13.018 mg

Rate: 10.0 °C/min

File: 00214.001

TG

METTLER

19-Apr-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-105, REV. 0
WHC-SD-WM-DP-105, REV. 1

S95T000452 (DUP2) N2

17.737 mg

Rate: 10.0 °C/min

File: 00209.001

TG

METTLER

19-Apr-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-105, REV. 1

LABCORE Data Entry Template for Worklist# 930

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

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

Worklist Comment: Please run B-112 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.96</u>	<u>N/A</u>	%
95000036	B-112	2 SAMPLE	S95T000454	0	TGA-01	SOLID	<u>N/A</u>	<u>45.57</u>		%
95000036	B-112	3 DUP	S95T000454	0	TGA-01	SOLID	<u>45.57</u>	<u>47.14</u>	<u>N/A</u>	%

Final page for worklist # 930

Lusie M. Dutton 4-19-95
Analyst Signature Date

NEWing 4/21/95
Analyst Signature Date

Verified by Blandina Valenzuela

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 77 TO 79.

WHC-SD-WM-DP-105, REV. 0