This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

DOCUMENT NUMBER: SD-WM-DP-139

SECTION 4 OF 5

TITLE: FINAL REPORT FOR TANK 241-B-101 PUSH MODE CORES 90 + 91

DATE: 11/06/95

ORIGINATOR: SCHREIBER RD

CO: WHC

RECIPIENT:

CO:

REFERENCES: ECN-625769

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RADIOCHEMICAL ANALYSES

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LABCORE Data Entry Template for Worklist# 1834

Analyst: AKL **Instrument:** AB00 16 **Book #** 132552
WB27806

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using Ludlum. Use .100 mL A-SPK. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG	0c42			@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	4	SAMPLE	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000093	B-101	4	SAMPLE	S95T001245	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000093	B-101	5	DUP	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	5	DUP	S95T001245	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000093	B-101	6	SPK	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 1834

A Lewis 7/17/95
Analyst Signature Date

Sharon L Hold 7-19-95
Analyst Signature Date

Data Entry Comments:
High spike recovery, so sample was rerun (see worklist 1861).
This data set was not used. RDitchil 11/2/95

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	4043	3946
1834	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.6	0.6
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)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE.		134.167	130.933
Sample #	Sample Concentration in µCi/L		2.87E-02	BOOK#
WORKLIST#1834	Replicate Concentration in µCi/L		2.80E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		2.8378E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/17/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/mL	(Average) =	2.84E-05	1.61E-07 µCi/mL
RELATIVE COUNTING ERROR		=	3.1%	

Data Entry by: [signature] Date: 07/18/95
Approved by: [signature] Date: 7/18/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

				BLANK	REPLICATE
Type	DETECTOR NUMBER			16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)		2	2
Work List	TOTAL COUNTS	(TC)		11	4
1834	COUNT TIME in MINUTES	(CT)		30	30
AT or TB ?	BACKGROUND in cpm	(BKG)		0.6	0.6
AT	SAMPLE SIZE in mL	(SS)		1.000	1.000
Test Code	DILUTION FACTOR	(DF)		34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)		2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)		0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			0.330	0.330
Sample #	Sample Concentration in µCi/g		<	1.09E-02	BOOK#
S95T1245	Replicate Concentration in µCi/g		<	1.09E-02	
Instrument Code					
WB27806	Maximum Concentration in µCi/g		<	1.0871E-02	
Analyst					
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG				
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)				
07/17/95					
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100				
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				

v RESULTS v

					DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Maximum)	=	< 1.09E-02	
LESS Than Value was Determined from Lc.					2.47E-02 µCi/g
RELATIVE COUNTING ERROR			=	150.8%	

Data Entry by: Sharon Hallett Date: 07/19/95

Approved by: [illegible] Date: 7/19/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	6	8
1634	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.6	0.6
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.330	0.330
Sample #	Sample Concentration in µCi/g	<	1.09E-02	BOOK#
S95T1245	Replicate Concentration in µCi/g	<	1.09E-02	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	1.0871E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/17/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 1.09E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				2.47E-02 µCi/g
RELATIVE COUNTING ERROR		=	99.9%	

Data Entry by:	Shawn [illegible]	Date:	07/19/95
Approved by:	[illegible]	Date:	7/19/95

Form 508101_C Rev. 1.3

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	6	5
1834	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.6	0.6
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1956	2.1956
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.330	0.330
Sample #	Sample Concentration in µCi/g	<	1.10E-02	BOOK#
S95T1245	Replicate Concentration in µCi/g	<	1.10E-02	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	1.1047E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/17/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 1.10E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				2.51E-02 µCi/g
RELATIVE COUNTING ERROR		=	80.0%	

Data Entry by: Steven L. Miller Date: 07/19/95

Approved by: [illegible] Date: 7/19/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	87212	83687
1834	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.6	0.6
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.787	44.787
S95T1245	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	9.57E+01	9.19E+01
WB27806	AVERAGE or MAXIMUM µCi/g from FORM C		<1.0871E-2	
Analyst	BOOK#		112B43	
AKL				
Date				
07/17/95				
Time				
02:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 136.1%**

Data Entry by:	Stephanie Hall	Date:	19-Jul-95
Approved by:	[illegible]	Date:	7-19-95

Form 508101_X Rev. 1.3

LABCORE Data Entry Template for Worklist# 1861

Analyst: S.C.L **Instrument:** AB00 16 WB 27806 **Book #** 132B5 2

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Use 1 mL of sample. Use 0.100 mL of A-Spk. sac

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG	0.64			@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	4	SAMPLE	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000093	B-101	4	SAMPLE	S95T001245	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000093	B-101	5	DUP	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	5	DUP	S95T001245	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000093	B-101	6	SPK	S95T001245	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 1861

Sue C Lai 7-24-95
Analyst Signature Date

Sharon L Valdez 7-25-95
Analyst Signature Date

Data Entry Comments:

Low SPK recovery is due to high solids content in the sample matrix. No further reruns requested.

Spike: 112843

7/26/95

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	4382	4093
1861	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)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		145.367	135.733
Sample #	Sample Concentration in µCi/L		3.11E-02	BOOK#
WORKLIST#1861	Replicate Concentration in µCi/L		2.91E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		3.0091E-02	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/24/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/mL	(Average) =	3.01E-05	1.72E-07 µCi/mL
RELATIVE COUNTING ERROR		=	3.1%	

Data Entry by:	Shayne Lugt	Date:	07/25/95
Approved by:	[illegible]	Date:	7/25/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-159, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

				BLANK	REPLICATE
Type	DETECTOR NUMBER			16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)		2	2
Work List	TOTAL COUNTS	(TC)		24	3
1861	COUNT TIME in MINUTES	(CT)		30	30
AT or TB ?	BACKGROUND in cpm	(BKG)		0.7	0.7
AT	SAMPLE SIZE in mL	(SS)		1.000	1.000
Test Code	DILUTION FACTOR	(DF)		1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)		2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)		0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			0.469	0.356
Sample #	Sample Concentration in µCi/g		<	4.50E-04	BOOK#
S95T1245	Replicate Concentration in µCi/g		<	3.42E-04	
Instrument Code					
WB27806	Maximum Concentration in µCi/g		<	4.4998E-04	
Analyst					
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG				
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)				
07/24/95					
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100				
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 4.50E-04	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				7.71E-04 µCi/g
RELATIVE COUNTING ERROR		=	500.0%	

Data Entry by:	[signature]	Date:	07/25/95
Approved by:	[signature]	Date:	7/25/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	31	33
1861	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.730	0.400
Sample #	Sample Concentration in µCi/g	<	7.00E-04	BOOK#
S95T1245	Replicate Concentration in µCi/g		3.84E-04	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	7.0041E-04	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/24/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 7.00E-04	DETECTION LEVEL
LESS THAN Value was Determined from Rs.				7.71E-04 µCi/g
RELATIVE COUNTING ERROR		=	141.3%	

Data Entry by:	Sharon L Yoder	Date:	07/25/95
Approved by:	[illegible]	Date:	7/25/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139 REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	28	29
1861	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1956	2.1956
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.618	0.656
Sample #	Sample Concentration in µCi/g	<	6.03E-04	BOOK#
S95T1245	Replicate Concentration in µCi/g	<	6.39E-04	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	6.3925E-04	
Analyst				
SCL				
Date				
07/24/95				
Time				
03:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 6.39E-04	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				7.84E-04 µCi/g
RELATIVE COUNTING ERROR		=	196.0%	

Data Entry by: Shayan Haleh Date: 07/25/95

Approved by: [signature] Date: 7/25/95

Form 508101_C Rev. 1.3 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	39662	37639
1861	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)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.786	44.786
S95T1245	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	1.27E+00	1.20E+00
WB27806	AVERAGE or MAXIMUM µCi/g from FORM C		<7.0041E-4	
Analyst	BOOK#		112B43	
SCL				
Date				
07/24/95				
Time				
03:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 61.6%**

Data Entry by: Shyam Hakelin		Date:	25-Jul-95
Approved by:		Date:	7/25/95

Form 508101_X Rev. 1.3

LABCORE Data Entry Template for Worklist# 1885

Analyst: S.C.L. **Instrument:** AB00 16 WB27806 **Book #** 132B52

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using Ludlum. Use .100 mL A-SPK. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG	0.24			@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	4	SAMPLE	S95T001215	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000091	B-101	4	SAMPLE	S95T001215	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000091	B-101	5	DUP	S95T001215	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	5	DUP	S95T001215	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000091	B-101	6	SPK	S95T001215	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	7	SAMPLE	S95T001218	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000091	B-101	7	SAMPLE	S95T001218	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000091	B-101	8	DUP	S95T001218	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	8	DUP	S95T001218	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000091	B-101	9	SPK	S95T001218	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 1885

Sue C Lai 7-25-95 Sharon L Holdh 7-26-95

Data Entry Comments:

spike = 112B43

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# 1885

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

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	3798	4040
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
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)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		125.700	133.767
Sample #	Sample Concentration in µCi/L		2.69E-02	BOOK#
WORKLIST#1885	Replicate Concentration in µCi/L		2.86E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		2.7775E-02	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/25/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	2.78E-05	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	3.2%	1.92E-07 µCi/mL

Data Entry by: [signature] Date: 07/26/95

Approved by: [signature] Date: 7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	5	8
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2016	2.2016
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.404	0.404
Sample #	Sample Concentration in µCi/g	<	3.97E-01	BOOK#
S95T1215	Replicate Concentration in µCi/g	<	3.97E-01	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	3.9696E-01	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.97E-01	DETECTION LEVEL
LESS Than Value was Determined from Lc.				8.83E-01 µCi/g
RELATIVE COUNTING ERROR		=	61.0%	

Data Entry by:	Sharon L Hale	Date:	07/26/95
Approved by:	[signature]	Date:	7/26/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	159	161
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2016	2.2016
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		4.400	4.467
Sample #	Sample Concentration in µCi/g		4.32E+00	BOOK#
S95T1215	Replicate Concentration in µCi/g		4.39E+00	
Instrument Code				
WB27806	Average Concentration in µCi/g		4.3543E+00	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	4.35E+00	8.83E-01 µCi/g
RELATIVE COUNTING ERROR		=	20.3%	

Data Entry by:	[signature]	Date:	07/26/95
Approved by:	[signature]	Date:	7/26/95

Form 508101_C Rev. 1.3

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	173	168
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1608	2.1608
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		4.867	4.700
Sample #	Sample Concentration in µCi/g		4.87E+00	BOOK#
S95T1215	Replicate Concentration in µCi/g		4.70E+00	
Instrument Code				
WB27806	Average Concentration in µCi/g		4.7867E+00	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	4.79E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	19.4%	9.00E-01 µCi/g

Data Entry by:	Sharon Lyffolder	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
DETECTOR NUMBER			16	16
DISH SIZE 1 , 2 , or 5		(MS)	2	2
TOTAL COUNTS		(TC)	70623	69542
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.9	0.9
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.100	0.100
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	101	101
DIGEST GRAMS of SOLIDS/L		(Dg/L)	2.2016	2.2016
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	44.785	44.785
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.2104	0.2104
SAMPLE + SPIKE µCi/g		(S+S)	2.31E+03	2.28E+03
AVERAGE or MAXIMUM µCi/g from FORM C			4.3543E+00	
BOOK#			112B43	

Type	Work List	AT or TB ?	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SPIKE	1885	AT	@ALPHA01	SOLID	S95T1215	WB27806	SCL	07/25/95	02:00 PM

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT | AVG. PERCENT SPIKE RECOVERY = 111.4%

Data Entry by: Sharon L Yates		Date:	26-Jul-95
Approved by: [illegible]		Date:	7/26/95

Form 508101_X Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	91	78
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1284	2.1284
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		2.133	1.700
Sample #	Sample Concentration in µCi/g		2.17E+00	BOOK#
S95T1218	Replicate Concentration in µCi/g		1.73E+00	
Instrument Code				
WB27806	Average Concentration in µCi/g		1.9472E+00	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
02:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.95E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	39.4%	9.13E-01 µCi/g

Data Entry by:	Sharon [illegible]	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	85	76
1865	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1432	2.1432
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.933	1.700
Sample #	Sample Concentration in µCi/g		1.95E+00	BOOK#
S95T1218	Replicate Concentration in µCi/g		1.72E+00	
Instrument Code				
WB27806	Average Concentration in µCi/g		1.8329E+00	
Analyst				
SCL				
Date				
07/25/95				
Time				
02:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	1.83E+00	9.07E-01 µCi/g
RELATIVE COUNTING ERROR		=	39.4%	

Data Entry by:	Sharon L Hylden	Date:	07/26/95
Approved by:	[signature]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	69947	68005
1885	COUNT TIME in MINUTES	(CT)	30	30
AT or JB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1284	2.1284
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.785	44.785
S95T1218	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	2.37E+03	2.30E+03
WB27806	AVERAGE or MAXIMUM µCi/g from FORM C		1.9472E+00	
Analyst	BOOK#		112B43	
SCL				
Date				
07/25/95				
Time				
02:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 109.8%**

Data Entry by:	Sharon [illegible]	Date:	26-Jul-95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_X Rev. 1.3

RUSH

WHC-SD-WM-DP-139, REV. 1

LABCORE Data Entry Template for Worklist# 1903

Analyst: AKL **Instrument:** AB00 16 **Book #** 132B52

Method: LA-508-101 Rev/Mod D-2 ~~WB2687~~ WB27806

Worklist Comment: Determine sample size using Ludlum. Use .100 mL A-SPK. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG	0.07			@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	4	SAMPLE	S95T001221	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000091	B-101	4	SAMPLE	S95T001221	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000091	B-101	5	DUP	S95T001221	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	5	DUP	S95T001221	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000091	B-101	6	SPK	S95T001221	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 1903

Analyst Signature: [signature] Date: 7-25-95

Analyst Signature: [signature] Date: 7-26-95

Data Entry Comments:

High RPD value is due to low alpha activity in the sample. No rerun requested. [signature] 7/26/95

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	4189	4077
1903	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
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)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		138.733	135.000
Sample #	Sample Concentration in µCi/L		2.97E-02	BOOK#
WORKLIST#1903	Replicate Concentration in µCi/L		2.89E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		2.9302E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/25/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL in µCi/mL (Average) =	2.93E-05	DETECTION LEVEL	
RELATIVE COUNTING ERROR =	3.1%	1.92E-07 µCi/mL	

Data Entry by:	Shyrony Walden	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	2	0
1903	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.404	0.404
Sample #	Sample Concentration in µCi/g	<	3.92E-02	BOOK#
S95T1221	Replicate Concentration in µCi/g	<	3.92E-02	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	3.9169E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.92E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				8.71E-02 µCi/g
RELATIVE COUNTING ERROR		=	42.2%	

Data Entry by:	Sharon [illegible]	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	77	102
1903	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.667	2.500
Sample #	Sample Concentration in µCi/g		1.62E-01	BOOK#
S95T1221	Replicate Concentration in µCi/g		2.42E-01	
Instrument Code				
WB27806	Average Concentration in µCi/g		2.0190E-01	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	2.02E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	40.0%	8.71E-02 µCi/g

Data Entry by:	Shanna L Yaglom	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	56	74
1903	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2116	2.2116
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.967	1.567
Sample #	Sample Concentration in µCi/g		9.45E-02	BOOK#
S95T1221	Replicate Concentration in µCi/g		1.53E-01	
Instrument Code				
WB27806	Average Concentration in µCi/g		1.2384E-01	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/25/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.24E-01	DETECTION LEVEL
				8.79E-02 µCi/g
RELATIVE COUNTING ERROR		=	61.6%	

Data Entry by:	Sharon L Ogle	Date:	07/26/95
Approved by:	[illegible]	Date:	7/26/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	65561	59789
1903	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.9	0.9
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.2312	2.2312
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.785	44.785
S95T1221	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	2.12E+02	1.93E+02
WB27806	AVERAGE or MAXIMUM µCi/g from FORM C		2.0190E-01	
Analyst	BOOK#		112B43	
AKL				
Date				
07/25/95				
Time				
03:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 99.7%**

Data Entry by: Sharon L Hafley		Date:	26-Jul-95
Approved by: [signature]		Date:	7/26/95

Form 508101_X Rev. 1.3

LABCORE Data Entry Template for Worklist# 1925

Analyst: S.C.L **Instrument:** AB00 16 **Book #** 13285 2

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using Ludlum. Use .100 mL A-SPK. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID	2.79 E-5	2.86 E-5	N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID	1	3.2	N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID	1	<6.26 E-2	N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID		84.3	N/A	% Ct. Error
		3	BLNK/BKG				@ALPHA01 ALPHA01	SOLID		.93 ~~65~~ SLF 8-1-95	N/A	uCi/g
95000091	B-101	4	SAMPLE	S95T001230	0	F	@ALPHA01 ALPHA01	SOLID	N/A	2.49 E-1	8.39 E-2	uCi/g
95000091	B-101	4	SAMPLE	S95T001230	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	29.3		% Ct. Error
95000091	B-101	5	DUP	S95T001230	0	F	@ALPHA01 ALPHA01	SOLID	2.49 E-1	2.28 E-1	N/A	uCi/g
95000091	B-101	5	DUP	S95T001230	0	F	@ALPHA01 ALPHA01E	SOLID		32.2	N/A	% Ct. Error
95000091	B-101	6	SPK	S95T001230	0	F	@ALPHA01 ALPHA01	SOLID		104.3	N/A	uCi/g
95000093	B-101	7	SAMPLE	S95T001236	0	F	@ALPHA01 ALPHA01	SOLID	N/A	1.38 E+1	8.83 E-1	uCi/g
95000093	B-101	7	SAMPLE	S95T001236	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	10.7		% Ct. Error
95000093	B-101	8	DUP	S95T001236	0	F	@ALPHA01 ALPHA01	SOLID	1.38 E+1	1.42 E+1	N/A	uCi/g
95000093	B-101	8	DUP	S95T001236	0	F	@ALPHA01 ALPHA01E	SOLID		11.1	N/A	% Ct. Error
95000093	B-101	9	SPK	S95T001236	0	F	@ALPHA01 ALPHA01	SOLID		103.8	N/A	uCi/g

Final page for worklist # 1925

Sue Li 7-28-95 [signature]

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# 1925

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

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	3818	4231
1925	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
	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		126.567	140.333
Sample #	Sample Concentration in µCi/L		2.71E-02	BOOK#
	Replicate Concentration in µCi/L		3.00E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		2.8571E-02	
Analyst				
SUE LAI	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/28/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	2.86E-05	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	3.2%	1.72E-07 µCi/mL

Data Entry by:	Stu Peter	Date:	07/31/95
Approved by:	[illegible]	Date:	8/1/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	0	39
1925	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.072	2.072
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.356	0.600
Sample #	Sample Concentration in µCi/g	<	3.72E-02	BOOK#
	Replicate Concentration in µCi/g		6.26E-02	132B52
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	6.2616E-02	
Analyst				
SUE LAI	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/28/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 6.26E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rs.				8.39E-02 µCi/g
RELATIVE COUNTING ERROR		=	84.3%	

Data Entry by: [signature] Date: 07/31/95

Approved by: [signature] Date: 8/1/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	93	92
1925	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.072	2.072
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		2.400	2.367
Sample #	Sample Concentration in µCi/g		2.50E-01	BOOK#
S95T1230	Replicate Concentration in µCi/g		2.47E-01	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		2.4872E-01	
Analyst				
SUE LAI	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/28/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	2.49E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	29.3%	8.39E-02 µCi/g

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/1/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	93	83
1925	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.114	2.114
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		2.400	2.067
Sample #	Sample Concentration in µCi/g		2.45E-01	BOOK#
S95T1230	Replicate Concentration in µCi/g		2.11E-01	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		2.2844E-01	
Analyst				
SUE LAI				
Date				
07/28/95				
Time				

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	2.28E-01	8.22E-02 µCi/g
RELATIVE COUNTING ERROR		=	32.2%	

Data Entry by: [signature] Date: 07/31/95

Approved by: [signature] Date: 8/1/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) LIQUID/SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1, 2, or 5	(MS)	2	2
WorkList	TOTAL COUNTS	(TC)	65493	65628
1925	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)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.072	2.072
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLIDS	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.784	44.784
S95T001230SPK	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	2.28E+02	2.28E+02
AB0016	AVERAGE or MAXIMUM µCi/g from FORM C		2.4872E-01	
Analyst	BOOK#		112B43	
S LAI				
Date				
07/28/95				
Time				
03:45 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 104.3%**

Data Entry by:		Date:	31-Jul-95
Approved by:		Date:	8/1/95

Form 508101_X Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	401	392
1925	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.9668	1.9668
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		12.667	12.367
Sample #	Sample Concentration in µCi/g		1.39E+01	BOOK#
S95T1236	Replicate Concentration in µCi/g		1.36E+01	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		1.3761E+01	
Analyst				
SUE LAI	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/28/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.38E+01	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	10.7%	8.83E-01 µCi/g

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/1/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	371	430
1925	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.922	1.922
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		11.667	13.633
Sample #	Sample Concentration in µCi/g		1.31E+01	BOOK#
S95T1236	Replicate Concentration in µCi/g		1.53E+01	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		1.4232E+01	
Analyst				
SUE LAI	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/28/95				
Time	Relative Counting Error = [ ](The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100			
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.42E+01	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	11.1%	9.04E-01 µCi/g

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/1/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139 REV. 1

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

LA-548-101 (A-3) LIQUID/SOLIDS

				SPIKE	REPLICATE
Type	DETECTOR NUMBER			16	16
SPIKE	DISH SIZE 1 , 2 , or 5		(MS)	2	2
Work List	TOTAL COUNTS		(TC)	66284	64727
1925	COUNT TIME in MINUTES		(CT)	30	30
AT or LB?	BACKGROUND in cpm		(BKG)	0.7	0.7
AT	SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L		(Dg/L)	1.9668	1.9668
Matrix	SPIKE VOLUME in mL		(SVol)	0.100	0.100
SOLIDS	SPIKE DILUTION FACTOR		(SDF)	1	1
Sample#	SPIKE VALUE in µCi/L		(SVal)	44.784	44.784
S95T001236SPK	INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g		(S+S)	2.43E+03	2.37E+03
AB0016	AVERAGE or MAXIMUM µCi/g from FORM C			1.3761E+01	
Analyst	BOOK#			112B43	
S LAI					
Date					
07/28/95					
Time					
03:45 PM					

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 103.8%**

Data Entry by: Date: 31-Jul-95

Approved by: Date: 8/1/95

Form 508101_X Rev. 1.3

LABCORE Data Entry Template for Worklist# 1933

Analyst: RAG Instrument: AB00 16 Book # 132B52

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Recmnd.samp. size .100ml-10ml mount .100ml; use .1ml A-SPK.

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID	2.79 E-5	3.04 E-5	N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID	1	3.0	N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID	1	<3.23e-01 E-1 ~~<5.83~~	N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID	1	84.3	N/A	% Ct. Error
		3	BLNK/BKG				@ALPHA01 ALPHA01	SOLID	1	.208 E+0	N/A	uCi/g
95000093	B-101	4	SAMPLE	S95T001336	0	F	@ALPHA01 ALPHA01	SOLID	N/A	3.66	7.55 E-1	uCi/g
95000093	B-101	4	SAMPLE	S95T001336	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	23.9		% Ct. Error
95000093	B-101	5	DUP	S95T001336	0	F	@ALPHA01 ALPHA01	SOLID	3.66 E+0	4.64 E+0	N/A	uCi/g
95000093	B-101	5	DUP	S95T001336	0	F	@ALPHA01 ALPHA01E	SOLID		21.0	N/A	% Ct. Error
95000093	B-101	6	SPK	S95T001336	0	F	@ALPHA01 ALPHA01	SOLID	100	106.9	N/A	uCi/g
95000093	B-101	7	SAMPLE	S95T001337	0	F	@ALPHA01 ALPHA01	SOLID	~~N/A~~	<5.86 E-1 ~~<5.27~~	5.86 E-1	uCi/g
95000093	B-101	7	SAMPLE	S95T001337	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	500 E-1		% Ct. Error
95000093	B-101	8	DUP	S95T001337	0	F	@ALPHA01 ALPHA01	SOLID	<5.27e-01	~~<5.86~~ <6.63 3.65e-01	N/A	uCi/g
95000093	B-101	8	DUP	S95T001337	0	F	@ALPHA01 ALPHA01E	SOLID		105.4	N/A	% Ct. Error
95000093	B-101	9	SPK	S95T001337	0	F	@ALPHA01 ALPHA01	SOLID	100	108.1	N/A	uCi/g

SLF 8/2/95

RLS 8-1-95

Final page for worklist # 1933

R. Green 7/30/95 8/1/95

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# 1933

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

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	4337	4207
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	10.000	10.000
Test Code	DILUTION FACTOR	(DF)	1	1
Alpha 01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		144.167	139.833
Sample #	Sample Concentration in µCi/L		3.09E-02	BOOK#
	Replicate Concentration in µCi/L		2.99E-02	132B52
Instrument Code				
WB27806	Average Concentration in µCi/L		3.0401E-02	
Analyst				
R.GREEN	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
07/30/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:45 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	3.04E-05	DETECTION LEVEL
				1.35E-07 µCi/mL
RELATIVE COUNTING ERROR		=	3.0%	

Data Entry by: [signature] Date: 07/31/95

Approved by: [signature] Date: 8/2/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	3	2
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.804	1.804
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.269	0.269
Sample #	Sample Concentration in µCi/g	<	3.23E-01	BOOK#
1	Replicate Concentration in µCi/g	<	3.23E-01	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	3.2296E-01	
Analyst				
RAG	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/30/95				
Time	Relative Counting Error = [ ](The Square Root of TC + BKG * CT) / (TC - BKG * CT)[ ] * 1.96 * 100			
03:35 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.23E-01	DETECTION LEVEL
LESS Than Value was Determined from Lc.				7.55E-01 µCi/g
RELATIVE COUNTING ERROR		=	84.3%	

Data Entry by:	Steve Pelan	Date:	08/02/95
Approved by:		Date:	8/2/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	109	98
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
6 ALPHA CY	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.804	1.804
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		3.233	2.867
Sample #	Sample Concentration in µCi/g		3.88E+00	BOOK#
S95T1336	Replicate Concentration in µCi/g		3.44E+00	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		3.6558E+00	
Analyst				
R.GREEN	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/30/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:45 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	3.66E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	23.9%	7.55E-01 µCi/g

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/2/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	119	139
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
GAPHA	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.816	1.816
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		3.567	4.233
Sample #	Sample Concentration in µCi/g		4.25E+00	BOOK#
S95T1336	Replicate Concentration in µCi/g		5.04E+00	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		4.6438E+00	
Analyst				
R.GREEN				
Date				
07/30/95				
Time				
03:45 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	4.64E+00	7.50E-01 µCi/g
RELATIVE COUNTING ERROR		=	21.0%	

Data Entry by: [signature] Date: 07/31/95

Approved by: [signature] Date: 8/2/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUID/SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	68051	66353
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB 2	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.804	1.804
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLIDS	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.784	44.784
S95T001336SPK	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	2.72E+03	2.65E+03
AB0016	AVERAGE or MAXIMUM µCi/g from FORM C		3.6558E+00	
Analyst	BOOK#		112B43	
R GREEN				
Date				
07/30/95				
Time				
03:45 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 106.9%**

Data Entry by:		Date:	31-Jul-95
Approved by:		Date:	8/2/95

Form 508101_X Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139, REV. 1

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

LA-548-101 (A-3) SOLIDS

				SAMPLE	REPLICATE
Type	DETECTOR NUMBER			16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)		2	2
Work List	TOTAL COUNTS	(TC)		16	29
1933	COUNT TIME in MINUTES	(CT)		30	30
AT or TE ?	BACKGROUND in cpm	(BKG)		0.4	0.4
AT	SAMPLE SIZE in mL	(SS)		0.100	0.100
Test Code	DILUTION FACTOR	(DF)		101	101
GALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)		2.3232	2.3232
Matrix	EFFICIENCY FACTOR	(EFF)		0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			0.424	0.567
Sample #	Sample Concentration in µCi/g		<	3.95E-01	BOOK#
S9571337	Replicate Concentration in µCi/g			5.27E-01	132B52
Instrument Code					
WB27806	Maximum Concentration in µCi/g		<	5.2743E-01	
Analyst					
R.GREEN	Rs (Sample Count Rate) = (TC / CT) - BKG				
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)				
07/30/95					
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100				
03:45 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				

v RESULTS v

					DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Maximum) =		< 5.27E-01	
LESS THAN Value was Determined from Rs.					5.86E-01 µCi/g
RELATIVE COUNTING ERROR		=		500.0%	

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/2/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	23	23
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
6 ALPHA 01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.184	2.184
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.367	0.367
Sample #	Sample Concentration in µCi/g		3.63E-01	BOOK#
S9571337	Replicate Concentration in µCi/g		3.63E-01	132B52
Instrument Code				
WB27806	Average Concentration in µCi/g		3.6303E-01	
Analyst				
R.GREEN	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
07/30/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:45 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	3.63E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	105.4%	6.23E-01 µCi/g

Data Entry by:	[signature]	Date:	07/31/95
Approved by:	[signature]	Date:	8/2/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUID/SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
WorkList	TOTAL COUNTS	(TC)	69348	66324
1933	COUNT TIME in MINUTES	(CT)	30	30
AT or TBP	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.3232	2.3232
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLIDS	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	44.784	44.784
S95T001337SPK	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	2.15E+03	2.06E+03
AB0016	AVERAGE or MAXIMUM µCi/g from FORM C		<5.27E-1	
Analyst	BOOK#		112B43	
R GREEN	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)			
07/30/95	PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100			
Time				
03:45 PM				

RESULT **AVG. PERCENT SPIKE RECOVERY = 108.1%**

Data Entry by:		Date:	31-Jul-95
Approved by:		Date:	8/2/95

Form 508101_X Rev. 1.3

LABCORE Data Entry Template for Worklist# 2130

Analyst: S. C. L. Instrument: AB00 16 WB27806 Book # 140 BS 2

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using Ludlum. Use .100 mL A-SPK. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG	0.14			@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	4	SAMPLE	S95T001552	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000091	B-101	4	SAMPLE	S95T001552	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000091	B-101	5	DUP	S95T001552	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000091	B-101	5	DUP	S95T001552	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000091	B-101	6	SPK	S95T001552	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	7	SAMPLE	S95T001556	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000093	B-101	7	SAMPLE	S95T001556	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000093	B-101	8	DUP	S95T001556	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000093	B-101	8	DUP	S95T001556	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000093	B-101	9	SPK	S95T001556	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 2130

Sue C Lai 8-29-95

Em Barclay 8-30-95
Sharon L Holder 8-30-95

Data Entry Comments:

High RPD value for 1552 is acceptable due to low sample alpha activity. 9-5-95

A spike: 112B43

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# 2130

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

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	4356	4501
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
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)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		144.830	149.663
Sample #	Sample Concentration in µCi/L		3.10E-02	BOOK#
WORKLIST#2130	Replicate Concentration in µCi/L		3.20E-02	140B52
Instrument Code				
WB27806	Average Concentration in µCi/L		3.1524E-02	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
08/29/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/mL	(Average) =	3.15E-05	1.30E-07 µCi/mL
RELATIVE COUNTING ERROR		=	3.0%	

Data Entry by:	Sharon L Uplch	Date:	08/30/95
Approved by:	[illegible]	Date:	8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV.1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	1	2
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1272	2.1272
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.259	0.259
Sample #	Sample Concentration in µCi/g	<	5.22E-03	BOOK#
S95T1552	Replicate Concentration in µCi/g	<	5.22E-03	
Instrument Code				
WB27806	Maximum Concentration in µCi/g	<	5.2163E-03	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
08/29/95				
Time	Relative Counting Error = [ ](The Square Root of TC + BKG * CT) / (TC - BKG * CT)[ ] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 5.22E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.				1.23E-02 µCi/g
RELATIVE COUNTING ERROR		=	78.0%	

Data Entry by: Sharon L. Yoder Date: 08/30/95
Approved by: [signature] Date: 8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	51	34
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1272	2.1272
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.330	0.763
Sample #	Sample Concentration in µCi/g		2.68E-02	BOOK#
S95T1552	Replicate Concentration in µCi/g		1.54E-02	
Instrument Code				
WB27806	Average Concentration in µCi/g		2.1068E-02	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
08/29/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	2.11E-02	
RELATIVE COUNTING ERROR		=	57.5%	1.23E-02 µCi/g

Data Entry by:	[signature]	Date:	08/30/95
Approved by:	[signature]	Date:	8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP- 139 REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	50	61
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	2.1192	2.1192
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.297	1.663
Sample #	Sample Concentration in µCi/g		2.62E-02	BOOK#
S95T1552	Replicate Concentration in µCi/g		3.36E-02	
Instrument Code				
WB27806	Average Concentration in µCi/g		2.9903E-02	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
08/29/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Average)	=	2.99E-02	
RELATIVE COUNTING ERROR	=	39.4%	1.23E-02 µCi/g

Data Entry by: Sharon Lyffolk		Date:	08/30/95
Approved by: [signature]		Date:	8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

AT : LA-508-101 (D-2)
LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
DETECTOR NUMBER			16	16
DISH SIZE 1, 2, or 5		(MS)	2	2
TOTAL COUNTS		(TC)	59240	58367
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.37	0.37
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.050	0.050
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	1	1
DIGEST GRAMS of SOLIDS/L		(Dg/L)	2.1272	2.1272
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	44.778	44.778
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.2104	0.2104
SAMPLE + SPIKE µCi/g		(S+S)	3.97E+01	3.92E+01
AVERAGE or MAXIMUM µCi/g from FORM C			2.1068E-02	
BOOK#			112B43	

Type	
SPIKE	
Work List	
2130	
AT or TB ?	
AT	
Test Code	
@ALPHA01	
Matrix	
SOLID	
Sample #	
S95T1552	
Instrument Code	
WB27806	
Analyst	
SCL	
Date	
08/29/95	
Time	
03:00 PM	

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 93.6%**

Data Entry by:	Shuyuan Lyla	Date:	30-Aug-95
Approved by:	[illegible]	Date:	8/30/95

Form 508101_X Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	274	257
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.906	1.906
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		8.763	8.197
Sample #	Sample Concentration in µCi/g		1.97E-01	BOOK#
S95T1556	Replicate Concentration in µCi/g		1.84E-01	
Instrument Code				
WB27806	Average Concentration in µCi/g		1.9050E-01	
Analyst				
SCL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
08/29/95				
Time	Relative Counting Error = [ ](The Square Root of TC + BKG * CT) / (TC - BKG * CT)[ ] * 1.96 * 100			
03:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	1.91E-01	
RELATIVE COUNTING ERROR		=	13.1%	1.37E-02 µCi/g

Data Entry by:	Sharon Yeldh	Date:	08/30/95
Approved by:	[signature]	Date:	8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139, REV. 1

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

LA-548-101 (A-3) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	229	264
2130	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.37	0.37
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	1.9096	1.9096
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		7.263	8.430
Sample #	Sample Concentration in µCi/g		1.63E-01	BOOK#
S95T1556	Replicate Concentration in µCi/g		1.89E-01	
Instrument Code				
WB27806	Average Concentration in µCi/g		1.7594E-01	
Analyst				
SCL				
Date				
08/29/95				
Time				
03:00 PM				

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.76E-01	DETECTION LEVEL
				1.37E-02 µCi/g
RELATIVE COUNTING ERROR		=	13.9%	

Data Entry by:	Sharon L Holder	Date:	08/30/95
Approved by:	[signature]	Date:	8/30/95

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-139 , REV. 1

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
DETECTOR NUMBER			16	16
DISH SIZE 1 , 2 , or 5		(MS)	2	2
TOTAL COUNTS		(TC)	58650	59248
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.37	0.37
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.050	0.050
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	1	1
DIGEST GRAMS of SOLIDS/L		(Dg/L)	1.906	1.906
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	44.778	44.778
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.2104	0.2104
SAMPLE + SPIKE µCi/g		(S+S)	4.39E+01	4.44E+01
AVERAGE or MAXIMUM µCi/g from FORM C			1.9050E-01	
BOOK#			112B43	

Type	Work List	AT or TB ?	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SPIKE	2130	AT	@ALPHA01	SOLID	S95T1556	WB27806	SCL	08/29/95	03:00 PM

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100

RESULT **AVG. PERCENT SPIKE RECOVERY = 93.5%**

Data Entry by: Sharon J. Yoder Date: 30-Aug-95

Approved by: [signature] Date: 8/30/95

Form 508101_X Rev. 1.3

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-139, REV. 1

PART II

WHC-SD-WM-DP-139, REV. OA

ANALYTICAL SERVICES

90-DAY SAFETY SCREENING RESULTS FOR TANK 241-B-101, PUSH-MODE CORES 90 AND 91

DATE PRINTED: SEPTEMBER 25, 1995

365

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WHC-SD-WM-DP-139, REV. 0-A

NARRATIVE

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90-DAY SAFETY SCREEN REPORT FOR TANK 241-B-101, PUSH MODE, CORES 90 AND 91

Summary

This is the 90-day safety screen report for tank 241-B-101, cores 90 and 91. Samples from these cores were analyzed for safety screening purposes in accordance with the Tank 241-B-101 Tank Characterization Plan (TCP) (Reference 1). This report contains the safety screening results for two subsegments not previously analyzed due to concerns regarding homogeneity of the samples (core 90, segment 2, lower half segment; and core 91, segment 2, facie), as well as data from secondary bromide and gravimetric percent water analyses. Ion chromatography (IC) analysis for bromide was required on five subsegments whose lithium results exceeded their notification limit or were suspected to be contaminated with the hydrostatic head fluid (HHF) used during push mode core sampling. Bromide analysis was also performed on the two subsegments not previously analyzed for safety screening purposes. Gravimetric percent water analysis was performed on three samples whose 90 percent confidence calculation (Reference 2) indicated results less than or close to 17 weight percent water in the samples.

Bromide was observed in six of the seven samples, with three of the samples showing concentrations of bromide in excess of the 1200 μg/g notification limit. These data indicate that the samples were most likely contaminated with HHF. Although not required by the TCP, results for chloride, fluoride, nitrate, nitrite, oxalate, phosphate, and sulfate are also reported for these seven samples as additional analytical data received from the IC analysis. These data are included in the summary tables but are not discussed in the narrative to this report.

For the two subsegments analyzed for safety screening purposes (core 90, segment 2, lower half segment; and core 91, segment 2, facie), no notification limits were violated. However, the lower bound of the 95% confidence interval (recently revised from a confidence interval requirement of 90%) for the thermogravimetric analysis (TGA) results for both subsegments were less than the TGA notification limit of 17 weight percent water (per Reference 1). The differential scanning calorimetry (DSC) analysis on both subsegments showed no exothermic energy, so this low percent moisture does not constitute unsafe conditions. To better quantify the moisture level of these subsegments, though, analyses for percent water by gravimetry shall be performed, and these data shall be discussed in the final report for this analysis project.

Sample Receipt and Extrusion

A description of the sample receipt and extrusion is contained in Reference 2.

Analytical Results

THERMOGRAVIMETRIC ANALYSIS (Percent Moisture)

Analyses for percent water by TGA were performed on samples S95T001551 and S95T001555 using procedure LA-514-114, Rev. C-0. Both samples were run under

a nitrogen atmosphere. Although results for neither sample were below the notification limit of 17 weight percent water, the statistical analysis for these two samples could not show with 95% confidence that the results were above the notification limit (see discussion below).

The maximum acceptable precision per the TCP (Reference 1) is a relative percent difference (RPD) of 10%. The TGA precision between the sample and duplicate for sample S95T001551 exceeded the acceptance criterion with an RPD value of 11.2%. However, the DSC result for this sample showed no exothermic energy, so no rerun was requested. The RPD value for sample S95T001555 was 5.11% and is within the acceptable precision.

Statistical analyses were performed on the TGA data per the requirements of the revised Data Quality Objective for Safety Screening (Reference 3). This document requires comparison of sample data to the applicable limit (e.g. greater than 17% water by TGA per Reference 1) with a confidence level of 95%. The 95% confidence calculations for samples S95T001551 and S95T001555 are presented in Table 1. The lower 95% confidence limit for these samples fall below the minimum criterion of 17% water stated in Reference 1. However, since no exotherms were observed for these samples (refer to DSC results below), the low moisture content of these samples does not constitute unsafe conditions.

Table 1. 95% Confidence Interval Lower Limits for Percent Water (Units are in %).

Sample Number and Description	$\hat{\mu}$	$\hat{\sigma}^2_{\hat{\mu}}$	LL
S95T001551 C90 S2 LH	19.86	1.23	12.85
S95T001555 C91 S2 facie	18.02	0.21	15.12

C = Core Number
S = Segment Number
LH = Lower Half

Because the 95% confidence interval lower limits for these two samples are below the 17 weight percent limit stated in Reference 1, analysis for percent water by gravimetry shall be performed to better estimate the moisture content in the samples. These data shall be included in the final report for this sampling event.

In addition to the 95% confidence limits for samples S95T001551 and S95T001555, lower limits for the 95% confidence intervals were calculated for the data reported in Reference 2 (previously reported with 90% confidence limits) and are given in Table 2.

Table 2. 95% Confidence Interval Lower Limits for Percent Water Results Presented in Reference 2 (Units are in %).

Sample Number and Description	$\hat{\mu}$	$\hat{\sigma}^2_{\hat{\mu}}$	LL
S95T001214 C90 S1 UH	33.08	0.0001	33.02
S95T001217 C90 S1 LH	42.00	0.24	38.91
S95T001220 C90 S1 facie	18.74	0.00003	18.71
S95T001229 C90 S2 UH	15.55	0.75	10.09
S95T001223 C90 S2 Dr.Liq.	49.52	0.01	48.83
S95T001238 C91 S1 UH	34.10	0.38	30.19
S95T001235 C91 S1 LH	42.91	1.5	35.17
S95T001244 C91 S2 UH	45.17 (1)	10.91	24.32
S95T001241 C91 S2 LH	22.70	20.86	0.00 (2)
S95T001247 C91 S2 Dr.Liq.	50.47	0.16	47.97

(1) Average includes triplicate result (Reference 2)
(2) Result was negative, so reported as zero.
C = Core Number
S = Segment Number
UH = Upper Half
LH = Lower Half
Dr.Liq. = Drainable Liquid

DIFFERENTIAL SCANNING CALORIMETRY

Differential thermal analyses were performed under a nitrogen purge on samples S95T001551 and S95T001555 using procedure LA-514-114, Rev. C-0. No exotherms were detected in either sample. Since no exotherms were detected for the samples and duplicates, no dry weight basis results were calculated or reported (exotherms are shown as valleys on the Perkin-Elmer scans). Furthermore, no statistical analysis for these two samples were performed.

Similarly to the TGA data presented above, 95% confidence interval upper limits were calculated for the DSC results presented in Reference 2. These data were previously reported with 90% confidence interval upper limits; Reference 3 modified the requirement necessitating a 95% limit rather than a 90% limit. The modified 95% confidence interval upper limits for the DSC data on tank 241-B-101 are presented in Table 3.

Table 3. 95% Confidence Interval Upper Limits for DSC Dry Results Presented in Reference 2 (Units are in joules/gram).

Sample Number and Description	$\hat{\mu}$	$\hat{\sigma}^2_{\hat{\mu}}$	UL
S95T001214 C90 S1 UH	275.00	196.00	363.4
S95T001217 C90 S1 LH	317.50	370.92	439.1
S95T001220 C90 S1 facie	0.00	0.00	0.00
S95T001229 C90 S2 UH	0.00	0.00	0.00
S95T001223 C90 S2 Dr.Liq.	52.00	0.00	52.00
S95T001238 C91 S1 UH	249.50	2.25	258.97
S95T001235 C91 S1 LH	42.5	0.25	45.66
S95T001244 C91 S2 UH	5.00	0.00	5.00
S95T001241 C91 S2 LH	0.00	0.00	0.00
S95T001247 C91 S2 Dr.Liq.	6.00	0.00	6.00

C = Core Number
S = Segment Number
UH = Upper Half
LH = Lower Half
Dr.Liq. = Drainable Liquid

ALPHA TOTAL

The alpha total analyses for samples S95T001552 and S95T001556 were performed using procedure LA-508-101, Rev. D-2. Fusion dilutions were prepared using procedure LA-549-141, Rev. D-0. Both alpha total results were well below the

notification limit of 41 μCi/g. The spike results for both samples were within the TCP criterion of 90-110%, with values of 93.60% and 93.50%, respectively.

Sample S95T001552 exceeded the acceptable precision criterion of less than 10% RPD. However, the average result for this sample was 0.0255 μCi/g, which is more than 3 orders of magnitude less than the notification limit of 41 μCi/g. The statistical analysis for these two samples (presented in Table 4) indicates that neither of the alpha total results exceeded the safety screening criterion of 41 μCi/g at an upper confidence level of 95%. Therefore, no additional analyses were necessary. The 95% confidence interval upper limits for the alpha total data presented in Reference 2 are provided in Table 5.

Table 4. 95% Confidence Interval Upper Limits for Total Alpha (Units are in μCi/g).

Sample No., Description	$\hat{\mu}$	$\hat{\sigma}^2_{\mu}$	UL
S95T001552 C90 S2 LH	0.03	0.00002	0.05
S95T001556 C91 S2 facie	0.18	0.00006	0.23

C = Core Number
S = Segment Number
LH = Lower Half

Table 5. 95% Confidence Interval Upper Limits for Total Alpha Results Presented in Reference 2 (Units are in μCi/g).

Sample No., Description	$\hat{\mu}$	$\hat{\sigma}^2_{\hat{\mu}}$	UL
S95T001215 C90 S1 UH	4.57	0.05	5.96
S95T001218 C90 S1 LH	1.89	0.004	2.27
S95T001221 C90 S1 facie	0.16	0.002	0.41
S95T001230 C90 S2 UH	0.24	0.0001	0.30
S95T001336 C91 S1 UH	4.15	0.24	7.24
S95T001236 C91 S1 LH	14.00	0.04	15.26
S95T001245 C91 S2 UH	0.00	0.00	0.00
S95T001337 C91 S2 LH	0.45	0.01	0.96

C = Core Number S = Segment Number
UH = Upper Half LH = Lower Half

ICP (Lithium)

Lithium was determined by ICP analysis per procedure LA-505-151, Rev. A-1. The solid subsegments were prepared by fusion per procedure LA-549-141, Rev. D-0. Results for both samples S95T001552 and S95T001556 were below the detection limit and below the notification limit of 100 μg/g. However, since lithium has a tendency to precipitate out of solution, these results do not exclude the possibility that an incursion of HHF during the sampling process may have contaminated these samples (refer below to the discussion on bromide results).

The lithium analysis spike results for both samples were within the TCP criterion of 90-110%, with values of 94.64% and 95.92%, respectively. Because both results were below the detection limit, no RPD values were calculated.

Gravimetric Percent Water

Calculation of the lower 90% confidence level (reference 2) and the 95% confidence level (above) for the TGA results from tank 241-B-101 indicated that results for two of the subsegments (S95T001229 and S95T001241) were below the notification limit of 17 weight percent water, while one sample (S95T001220) was just above the limit (reference 2). For all three of these samples, gravimetric analysis for percent water was performed to better

determine the moisture content. Procedure LA-564-101, Rev. F-1 was used for this analysis. For all three samples, results were above the limit of 17 weight percent water. These gravimetry results, coupled with the fact that no energetics were observed for these subsegments, indicate that tank 241-B-101 may be classified as "safe". Average results for samples S95T001541, S95T001543, and S95T001547 (sister samples to S95T001220, S95T001229, and S95T001241) were 23.35%, 41.02%, and 28.23%, respectively. RPD values for these three samples were all within the maximum acceptable precision criterion of 10% as specified in the TCP.

It should be noted that the gravimetry result obtained for sample S95T001543 is nearly three times the percent water result obtained by the TGA method for the same subsegment. This anomaly could indicate an inhomogeneity in the tank 241-B-101 sample material. Further analysis shall be performed on this subsegment to evaluate why the TGA and gravimetric analysis results varied so widely, and this information shall be documented in the final report.

IC (Bromide)

Samples S95T001224, S95T001230, S95T001236, S95T001245, and S95T001248 were contaminated with lithium, indicating a possible incursion of water from the HHF used during sampling. These sample numbers correspond to the drainable liquid from segment 2 of core 90, the upper half solids from segment 2 of core 90, the lower half solids from segment 1 of core 91, the upper half solids from segment 2 of core 91, and the drainable liquid from segment 2 of core 91. Because high lithium concentrations were found in these subsegments, secondary analysis for bromide was performed on sister samples S95T001542, S95T001544, S95T001546, S95T001549, and S95T001550 using procedure LA-533-105, Rev. D-1. Since the results from a number of samples from tank 241-B-101 showed a possible incursion of the HHF, bromide analysis was requested for samples S95T001553 and S95T001557 at the same time that the safety screening analyses were requested.

For six of the seven samples, concentrations of bromide were detected, indicating an incursion of HHF. For five of the samples (S95T001542, S95T001546, S95T001549, S95T001553, and S95T001557), the results reported in the attached summary tables are less than the detection limits. It should be noted, however, that the detection limits obtained are very high. The high detection limits for this analysis are due to very high concentrations of nitrate and nitrite in the tank 241-B-101 samples. These high concentrations forced the analysis to be run at high dilution factors, and as such, the bromide results were below the lower bound of the calibration curve for the instrument. Although these results must be reported as less than detection limit values, it is possible to quantify the bromide results. Table 6 gives estimates for the bromide concentrations. Since these values are being extrapolated and are below the lower bound of the calibration curve, the accuracy of these data cannot be guaranteed. However, these results do give an indication that the samples were contaminated with HHF. It should also be noted that the lithium results corresponding to the subsegments for samples S95T001553 and S95T001557 indicate no HHF contamination occurred during sampling operations; however, it is suggested that the lithium is precipitating out of solution due to the high nitrate and nitrite salt concentrations in the samples, giving a biased low result.

Table 6: Estimated Bromide Concentrations.

Sample Number	Concentration (μg/g Br)	
	Sample	Duplicate
S95T001542	1460	1480
S95T001546	1100	1120
S95T001549	1220	1100
S95T001553	nd	nd
S95T001557	904	815

nd = not detectable

Project Coordinator: Ruth Schreiber

References:

[1] R. D. Schreiber, "Tank 241-B-101 Tank Characterization Plan," WHC-SD-WM-TP-350, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

[2] R. D. Schreiber, "45-Day Safety Screen Results for Tank 241-B-101, Push Mode, Cores 90 and 91", WHC-SD-WM-DP-139, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

[3] H. Babad, J. W. Hunt, and K. S. Redus, "Tank Safety Screening Data Quality Objective," WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 0-A

SAMPLE DATA SUMMARY

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK B-101

CORE NUMBER: 90
SEGMENT #: 1

SEGMENT PORTION: Facie

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001220			% Water by TGA using Mettler	%	17.00	100.0	96.35	n/a	18.75	18.74	18.74	0.05	n/a	n/a	n/a
S95T001220			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001220			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	102.6	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001221		F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	105.0	<3.92e-02	2.02e-01	1.24e-01	1.63e-01	47.9	99.70	8.71e-02	40.0
S95T001221		F	Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	103.1	1.50e-03	< 44.8190	<45.2160	n/a	n/a	93.63	44.80	n/a
S95T001541			% Water by Gravimetric	%	17.00	100.0	100.9	n/a	23.45	23.25	23.35	0.86	n/a	1.00e-02	n/a

U Upper Half of Segment: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001214			% Water by TGA using Mettler	%	17.00	100.0	101.6	n/a	33.07	33.09	33.08	0.06	n/a	n/a	n/a
S95T001214			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	289.0	261.0	275.0	10.2	n/a	n/a	n/a
S95T001214			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	107.9	n/a	193.1	174.5	183.8	10.1	n/a	n/a	n/a
S95T001215		F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	99.64	<3.97e-01	4.350	4.790	4.570	9.63	111.4	8.83e-01	20.3
S95T001215		F	Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	100.9	1.61e-02	< 45.4200	<46.2800	n/a	n/a	90.53	45.40	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001217			% Water by TGA using Mettler	%	17.00	100.0	101.6	n/a	41.51	42.49	42.00	2.33	n/a	n/a	n/a
S95T001217	1		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	322.0	314.0	318.0	2.52	n/a	n/a	n/a
S95T001217			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	364.0	270.0	317.0	29.7	n/a	n/a	n/a
S95T001217	1		DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	109.0	n/a	186.7	182.3	184.5	2.38	n/a	n/a	n/a
S95T001217			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	107.9	n/a	211.0	156.6	183.8	29.6	n/a	n/a	n/a
S95T001218		F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	99.64	<3.97e-01	1.950	1.830	1.890	6.35	109.8	9.13e-01	39.4
S95T001218		F	Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	100.9	1.61e-02	< 46.9800	<46.6600	n/a	n/a	90.73	47.00	n/a

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-139, REV. 0A

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

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK B-101

CORE NUMBER: 90
SEGMENT #: 2

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001229			% Water by TGA using Mettler	%	17.00	100.0	103.6	n/a	16.42	14.69	15.55	11.1	n/a	n/a	n/a
S95T001229			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001229			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	103.3	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001230	F		Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	102.5	<6.26e-02	2.49e-01	2.28e-01	2.38e-01	8.81	104.3	8.39e-02	29.3
S95T001230	F		Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	96.47	2.28e-02	79.25	70.87	75.06	11.2	96.29	48.30	n/a
S95T001543			% Water by Gravimetric	%	17.00	100.0	100.9	n/a	40.78	41.26	41.02	1.17	n/a	1.00e-02	n/a
S95T001544	W		Bromide by Ion Chromatograph	ug/g	-1.0e+03	1.2e+03	104.0	<6.32e-01	1.50e+03	1.51e+03	1.50e+03	0.66	93.90	1.28e+03	n/a
S95T001544	W		Chloride by IC - Dionex 4000i	ug/g	None	None	101.9	<8.30e-02	323.0	376.0	349.5	15.2	107.1	168.0	n/a
S95T001544	W		Fluoride by IC - Dionex 4000i	ug/g	None	None	109.0	<6.20e-02	141.0	144.0	142.5	2.11	96.40	125.0	n/a
S95T001544	W		Nitrite by IC - Dionex 4000i	ug/g	None	None	106.0	<5.47e-01	5.88e+04	6.92e+04	6.40e+04	16.2	130.4	5.31e+03	n/a
S95T001544	W		Nitrate by IC - Dionex 4000i	ug/g	None	None	102.8	<6.99e-01	1.92e+05	1.95e+05	1.94e+05	1.55	102.1	6.79e+03	n/a
S95T001544	W		Oxalate by IC - Dionex 4000i	ug/g	None	None	97.42	<4.96e-01	< 1.00e3	<1.00e3	n/a	n/a	103.2	1.00e+03	n/a
S95T001544	W		Phosphate by IC - Dionex 4000i	ug/g	None	None	104.9	<5.96e-01	3.59e+03	3.93e+03	3.76e+03	9.04	107.3	1.20e+03	n/a
S95T001544	W		Sulfate by IC - Dionex 4000i	ug/g	None	None	104.3	<6.78e-01	1.69e+04	1.50e+04	1.60e+04	11.9	90.30	1.37e+03	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001551			% Water by TGA on Perkin Elmer	%	17.00	100.0	101.4	n/a	18.75	20.97	19.86	11.2	n/a	n/a	n/a
S95T001551			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	481.0	96.45	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001551			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001552	F		Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	106.4	<5.22e-03	2.11e-02	2.99e-02	2.55e-02	34.5	93.60	1.23e-02	57.5
S95T001552	F		Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	104.2	-6.00e-04	< 47.0102	<47.1876	n/a	n/a	94.64	47.00	n/a
S95T001553	W		Bromide by Ion Chromatograph	ug/g	-1.0e+03	1.2e+03	101.4	<6.32e-01	< 3.54e3	<3.54e3	n/a	n/a	99.10	3.54e+03	n/a
S95T001553	W		Chloride by IC - Dionex 4000i	ug/g	None	None	97.89	<8.30e-02	2.07e+03	<4.65e2	n/a	n/a	79.50	465.0	n/a
S95T001553	W		Fluoride by IC - Dionex 4000i	ug/g	None	None	107.3	<6.20e-02	< 3.48e2	<3.48e2	n/a	n/a	105.7	348.0	n/a
S95T001553	W		Nitrite by IC - Dionex 4000i	ug/g	None	None	101.5	<5.47e-01	1.63e+04	2.32e+04	1.98e+04	34.9	137.7	3.07e+03	n/a
S95T001553	W		Nitrate by IC - Dionex 4000i	ug/g	None	None	101.8	<6.99e-01	1.68e+05	2.57e+05	2.12e+05	41.9	347.7	3.92e+03	n/a
S95T001553	W		Oxalate by IC - Dionex 4000i	ug/g	None	None	103.9	<4.96e-01	< 2.78e3	<2.78e3	n/a	n/a	104.3	2.78e+03	n/a
S95T001553	W		Phosphate by IC - Dionex 4000i	ug/g	None	None	106.2	<5.96e-01	< 3.34e3	<3.34e3	n/a	n/a	111.1	3.34e+03	n/a
S95T001553	W		Sulfate by IC - Dionex 4000i	ug/g	None	None	102.9	<6.78e-01	1.90e+05	2.92e+05	2.41e+05	42.3	355.9	3.80e+03	n/a

=> Limit violated
=> Selected Limit

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WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV 0

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK
B-101

CORE NUMBER: 90
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001223			% Water by TGA using Mettler	%	17.00	100.0	101.0	n/a	49.63	49.41	49.52	0.44	n/a	n/a	n/a
S95T001223			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	52.00	52.00	52.00	0.00	n/a	n/a	n/a
S95T001223			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	96.31	n/a	26.30	26.30	26.30	0.00	n/a	n/a	n/a
S95T001224	D		Lithium-ICP-Acid Dil.	ug/mL	-1.0e+03	100.0	97.67	1.30e-03	147.0	144.7	145.8	1.65	93.00	1.00e-02	n/a
S95T001542			Sulfate by IC - Dionex 4000i	ug/mL	None	None	101.9	<6.78e-01	2.23e+04	2.32e+04	2.28e+04	3.96	114.1	1.44e+03	n/a
S95T001542			Phosphate by IC - Dionex 4000i	ug/mL	None	None	101.6	<5.96e-01	7.23e+03	7.53e+03	7.38e+03	4.07	106.8	1.26e+03	n/a
S95T001542			Oxalate by IC - Dionex 4000i	ug/mL	None	None	97.64	<4.96e-01	1.05e3	<1.05e3	n/a	n/a	101.1	1.05e+03	n/a
S95T001542			Nitrate by IC - Dionex 4000i	ug/mL	None	None	102.7	<6.99e-01	3.72e+05	3.80e+05	3.76e+05	2.13	102.5	7.13e+03	n/a
S95T001542			Nitrite by IC - Dionex 4000i	ug/mL	None	None	108.0	<5.47e-01	1.30e+05	1.33e+05	1.32e+05	2.28	112.0	5.58e+03	n/a
S95T001542			Fluoride by IC - Dionex 4000i	ug/mL	None	None	108.8	<6.20e-02	238.0	238.0	238.0	0.00	91.10	132.0	n/a
S95T001542			Chloride by IC - Dionex 4000i	ug/mL	None	None	100.9	<8.30e-02	668.0	704.0	686.0	5.25	105.2	176.0	n/a
S95T001542			Bromide by Ion Chromatograph	ug/mL	-1.0e+03	1.2e+03	102.3	<6.32e-01	<1.34e3	<1.34e3	n/a	n/a	86.20	1.34e+03	n/a

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 0A

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK
B-101

CORE NUMBER: 91
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001238			% Water by TGA using Mettler	%	17.00	100.0	103.8	n/a	33.48	34.72	34.10	3.64	n/a	n/a	n/a
S95T001238			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	248.0	251.0	249.5	1.20	n/a	n/a	n/a
S95T001238			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	102.3	n/a	163.6	165.4	164.5	1.09	n/a	n/a	n/a
S95T001336		F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	109.0	<3.23e-01	3.660	4.640	4.150	23.6	106.9	7.55e-01	23.9
S95T001336		F	Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	99.68	4.60e-03	< 55.4324	<55.0661	n/a	n/a	92.14	55.40	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001235			% Water by TGA using Mettler	%	17.00	100.0	103.6	n/a	41.68	44.13	42.91	5.71	n/a	n/a	n/a
S95T001235			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	42.00	43.00	42.50	2.35	n/a	n/a	n/a
S95T001235			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	103.3	n/a	24.00	24.80	24.40	3.28	n/a	n/a	n/a
S95T001236		F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	102.5	<6.26e-02	13.80	14.20	14.00	2.86	103.8	8.83e-01	10.7
S95T001236		F	Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	96.47	2.28e-02	84.70	74.83	79.77	12.4	94.90	50.80	n/a
S95T001546		W	Bromide by Ion Chromatograph	ug/g	-1.0e+03	1.2e+03	104.0	<6.32e-01	< 2.28e3	<2.28e3	n/a	n/a	100.8	2.28e+03	n/a
S95T001546		W	Chloride by IC - Dionex 4000i	ug/g	None	None	101.9	<8.30e-02	< 2.99e2	<2.99e2	n/a	n/a	103.3	299.0	n/a
S95T001546		W	Fluoride by IC - Dionex 4000i	ug/g	None	None	109.0	<6.20e-02	364.0	366.0	365.0	0.55	102.7	223.0	n/a
S95T001546		W	Nitrite by IC - Dionex 4000i	ug/g	None	None	106.0	<5.47e-01	3.72e+04	5.25e+04	4.48e+04	34.1	120.2	1.97e+03	n/a
S95T001546		W	Nitrate by IC - Dionex 4000i	ug/g	None	None	102.8	<6.99e-01	1.38e+05	1.40e+05	1.39e+05	1.44	99.60	2.52e+03	n/a
S95T001546		W	Oxalate by IC - Dionex 4000i	ug/g	None	None	97.42	<4.96e-01	< 1.79e3	<1.79e3	n/a	n/a	99.00	1.79e+03	n/a
S95T001546		W	Phosphate by IC - Dionex 4000i	ug/g	None	None	104.9	<5.96e-01	6.72e+03	6.98e+03	6.85e+03	3.80	103.7	2.15e+03	n/a
S95T001546		W	Sulfate by IC - Dionex 4000i	ug/g	None	None	104.3	<6.78e-01	1.07e+04	1.05e+04	1.06e+04	1.89	103.0	2.44e+03	n/a

=> Limit violated
=> Selected Limit

INTERIM

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WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 0A

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK
B-101

WHC-SD-WM-DP-139, REV.0A

CORE NUMBER: 91
SEGMENT #: 2

SEGMENT PORTION: Facie

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001555			% Water by TGA on Perkin Elmer	%	17.00	100.0	101.0	n/a	18.48	17.56	18.02	5.11	n/a	n/a	n/a
S95T001555			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	481.0	95.25	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001555			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001556	F		Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	106.4	<5.22e-03	1.91e-01	1.76e-01	1.83e-01	8.17	93.50	1.37e-02	13.1
S95T001556	F		Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	104.2	-6.00e-04	< 52.4659	<52.3670	n/a	n/a	95.92	52.50	n/a
S95T001557	W		Bromide by Ion Chromatograph	ug/g	-1.0e+03	1.2e+03	100.9	<6.32e-01	< 2.08e3	<2.08e3	n/a	n/a	104.3	2.08e+03	n/a
S95T001557	W		Chloride by IC - Dionex 4000i	ug/g	None	None	99.71	<8.30e-02	< 2.73e2	<2.73e2	n/a	n/a	114.6	273.0	n/a
S95T001557	W		Fluoride by IC - Dionex 4000i	ug/g	None	None	109.1	<6.20e-02	< 2.04e2	<2.04e2	n/a	n/a	116.5	204.0	n/a
S95T001557	W		Nitrite by IC - Dionex 4000i	ug/g	None	None	102.1	<5.47e-01	2.31e+04	1.85e+04	2.08e+04	22.1	108.8	2.86e+03	n/a
S95T001557	W		Nitrate by IC - Dionex 4000i	ug/g	None	None	100.4	<6.99e-01	2.82e+05	3.13e+05	2.98e+05	10.4	96.10	7.25e+03	n/a
S95T001557	W		Oxalate by IC - Dionex 4000i	ug/g	None	None	95.22	<4.96e-01	< 1.63e3	<1.63e3	n/a	n/a	97.70	1.63e+03	n/a
S95T001557	W		Phosphate by IC - Dionex 4000i	ug/g	None	None	103.0	<5.96e-01	< 3.12e3	<3.12e3	n/a	n/a	103.4	3.12e+03	n/a
S95T001557	W		Sulfate by IC - Dionex 4000i	ug/g	None	None	100.9	<6.78e-01	1.95e+05	1.95e+05	1.95e+05	0.30	104.3	7.03e+03	n/a

U Upper Half of Segment: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001244			% Water by TGA using Mettler	%	17.00	100.0	101.0	n/a	38.58	48.11	43.34	22.0	n/a	n/a	n/a
S95T001244			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	5.000	5.000	5.000	0.00	n/a	n/a	n/a
S95T001244			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	112.1	n/a	2.900	2.700	2.800	7.14	n/a	n/a	n/a
S95T001245	F		Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	107.9	<4.50e-04	< 7.00e-4	<6.39e-4	n/a	n/a	61.60	7.71e-04	141.3
S95T001245	F		Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	103.1	1.50e-03	104.5	110.4	107.4	5.48	84.55	44.80	n/a
S95T001549	W		Bromide by Ion Chromatograph	ug/g	-1.0e+03	1.2e+03	101.4	<6.32e-01	< 2.19e3	<2.19e3	n/a	n/a	102.0	2.19e+03	n/a
S95T001549	W		Chloride by IC - Dionex 4000i	ug/g	None	None	100.5	<8.30e-02	305.0	299.0	302.0	1.99	102.7	287.0	n/a
S95T001549	W		Fluoride by IC - Dionex 4000i	ug/g	None	None	107.6	<6.20e-02	< 2.15e2	<2.15e2	n/a	n/a	116.2	215.0	n/a
S95T001549	W		Nitrite by IC - Dionex 4000i	ug/g	None	None	101.5	<5.47e-01	7.75e+04	6.73e+04	7.24e+04	14.1	45.30	1.89e+03	n/a
S95T001549	W		Nitrate by IC - Dionex 4000i	ug/g	None	None	101.8	<6.99e-01	1.74e+05	1.54e+05	1.64e+05	12.2	-1.33e+01	2.42e+03	n/a
S95T001549	W		Oxalate by IC - Dionex 4000i	ug/g	None	None	95.20	<4.96e-01	< 1.72e3	<1.72e3	n/a	n/a	98.50	1.72e+03	n/a
S95T001549	W		Phosphate by IC - Dionex 4000i	ug/g	None	None	106.2	<5.96e-01	1.50e+04	9.74e+03	1.24e+04	42.5	97.40	2.06e+03	n/a
S95T001549	W		Sulfate by IC - Dionex 4000i	ug/g	None	None	101.9	<6.78e-01	1.20e+04	1.17e+04	1.18e+04	2.53	96.20	2.35e+03	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001241			% Water by TGA using Mettler	%	17.00	100.0	96.18	n/a	29.27	9.200	19.23	104	n/a	n/a	n/a
S95T001241	1		% Water by TGA using Mettler	%	17.00	100.0	95.31	n/a	26.79	25.55	26.17	4.74	n/a	n/a	n/a
S95T001241			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001241			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	103.3	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001337	F		Alpha of Digested Solid	uCi/g	-1.0e+03	41.00	109.0	<3.23e-01	< 5.27e-1	3.63e-01	n/a	n/a	108.1	5.86e-01	500
S95T001337	F		Lithium -ICP-Fusion	ug/g	-1.0e+03	100.0	99.68	4.60e-03	< 43.0441	<45.7875	n/a	n/a	93.00	43.00	n/a
S95T001547			% Water by Gravimetric	%	17.00	100.0	100.9	n/a	28.44	28.03	28.23	1.45	n/a	1.00e-02	n/a

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-139, REV. 1

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK
B-101

CORE NUMBER: 91
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001247			% Water by TGA on Perkin Elmer	%	17.00	100.0	97.02	n/a	50.07	50.86	50.47	1.57	n/a	n/a	n/a
S95T001247			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	6.000	6.000	6.000	0.00	n/a	n/a	n/a
S95T001247			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	101.2	n/a	3.100	3.200	3.150	3.17	n/a	n/a	n/a
S95T001248		D	Lithium-ICP-Acid Dil.	ug/mL	-1.0e+03	100.0	97.67	1.30e-03	135.0	135.4	135.2	0.22	93.00	1.00e-02	n/a
S95T001550			Sulfate by IC - Dionex 4000i	ug/mL	None	None	101.9	<6.78e-01	2.12e+04	2.12e+04	2.12e+04	0.00	117.6	1.44e+03	n/a
S95T001550			Phosphate by IC - Dionex 4000i	ug/mL	None	None	101.6	<5.96e-01	4.73e+03	4.88e+03	4.80e+03	3.12	106.0	1.26e+03	n/a
S95T001550			Oxalate by IC - Dionex 4000i	ug/mL	None	None	97.64	<4.96e-01	1.05e3	<1.05e3	n/a	n/a	100.0	1.05e+03	n/a
S95T001550			Nitrate by IC - Dionex 4000i	ug/mL	None	None	102.7	<6.99e-01	3.37e+05	3.36e+05	3.36e+05	0.30	99.20	7.13e+03	n/a
S95T001550			Nitrite by IC - Dionex 4000i	ug/mL	None	None	108.0	<5.47e-01	1.31e+05	1.32e+05	1.32e+05	0.76	103.2	5.58e+03	n/a
S95T001550			Fluoride by IC - Dionex 4000i	ug/mL	None	None	108.8	<6.20e-02	261.0	245.0	253.0	6.32	66.50	132.0	n/a
S95T001550			Chloride by IC - Dionex 4000i	ug/mL	None	None	100.9	<8.30e-02	580.0	602.0	591.0	3.72	106.4	176.0	n/a
S95T001550			Bromide by Ion Chromatograph	ug/mL	-1.0e+03	1.7e+03	102.3	<6.32e-01	1.74e+03	1.77e+03	1.76e+03	1.71	79.60	1.34e+03	n/a

=> Limit violated
=> Selected Limit

INTERIM

382

WHC-SD-WM-DP-129, REV. 1

WHC-SD-WM-DP-129, REV. CA

INTERIM

90-DAY SAFETY SCREEN REPORT FOR TANK
B-101

CORE NUMBER: 91
SEGMENT #: Field Blank

SEGMENT PORTION: n/a

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T001232			% Water by TGA using Mettler	%	17.00	100.0	101.0	n/a	99.76	99.89	99.83	0.13	n/a	n/a	n/a
S95T001232			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	481.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S95T001232			DSC Exotherm using Mettler	Joules/g	-1.0e+03	481.0	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S95T001233		D	Lithium-ICP-Acid Dil.	ug/mL	-1.0e+03	100.0	97.67	1.30e-03	2.48e-01	2.46e-01	2.47e-01	0.73	107.7	1.00e-02	n/a

=> Limit violated
=> Selected Limit

INTERIM

383

WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-129, REV. 0A

WHC-SD-WM-DP-139, REV. 0-A

INORGANIC ANALYSES

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LABCORE Data Entry Template for Worklist# 2117

Analyst: PJM ~~PJM PGM~~ 9-12-95 BDV Instrument: DSC0 3 Book # 12N14A

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

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

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	SOLID	28.45	27.44	N/A	Joules/g
95000091	B-101	2	SAMPLE	S95T001551	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000091	B-101	3	DUP	S95T001551	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g
		4	STD				DSC-03	SOLID	28.45	27.10	N/A	Joules/g
95000093	B-101	5	SAMPLE	S95T001555	0		DSC-03	SOLID	N/A	Ø		Joules/g
95000093	B-101	6	DUP	S95T001555	0		DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2117

See attached for signatures
Analyst Signature Date 9-12-95

Analyst Signature Date 9-13-95

Verified 9/13/95. J. M. Fye

S95T001551 produced two endothermic regions one at 140.0°C with a delta H of 462.1 J/g and second at 286.6°C with a delta H of 56.1 J/g.

Data Entry Comments: S95T001555 produced three endothermic regions one at 140.5°C with a delta H of 266.9 J/g, second at 319.5°C with a delta H of 93.64 J/g, and third at 461.8°C with a delta H of 590.0 J/g. The duplicate did not exhibit the third endotherm.

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# 2117

Analyst: RJ McCown **Instrument:** DSC0 _____ **Book #** 12W14A

Method: LA-514-~~113~~ 114 Rev/Mod C-0
RJM 9/6/95

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

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID			N/A	Joules/g
95000091	B-101	2	SAMPLE	S95T001551	0		DSC-01	SOLID	N/A			Joules/g
95000091	B-101	3	DUP	S95T001551	0		DSC-01	SOLID			N/A	Joules/g
95000093	B-101	4	SAMPLE	S95T001555	0		DSC-01	SOLID	N/A			Joules/g
95000093	B-101	5	DUP	S95T001555	0		DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 2117

RJ McCown 9/6/95
Analyst Signature **Date**

Analyst Signature **Date**

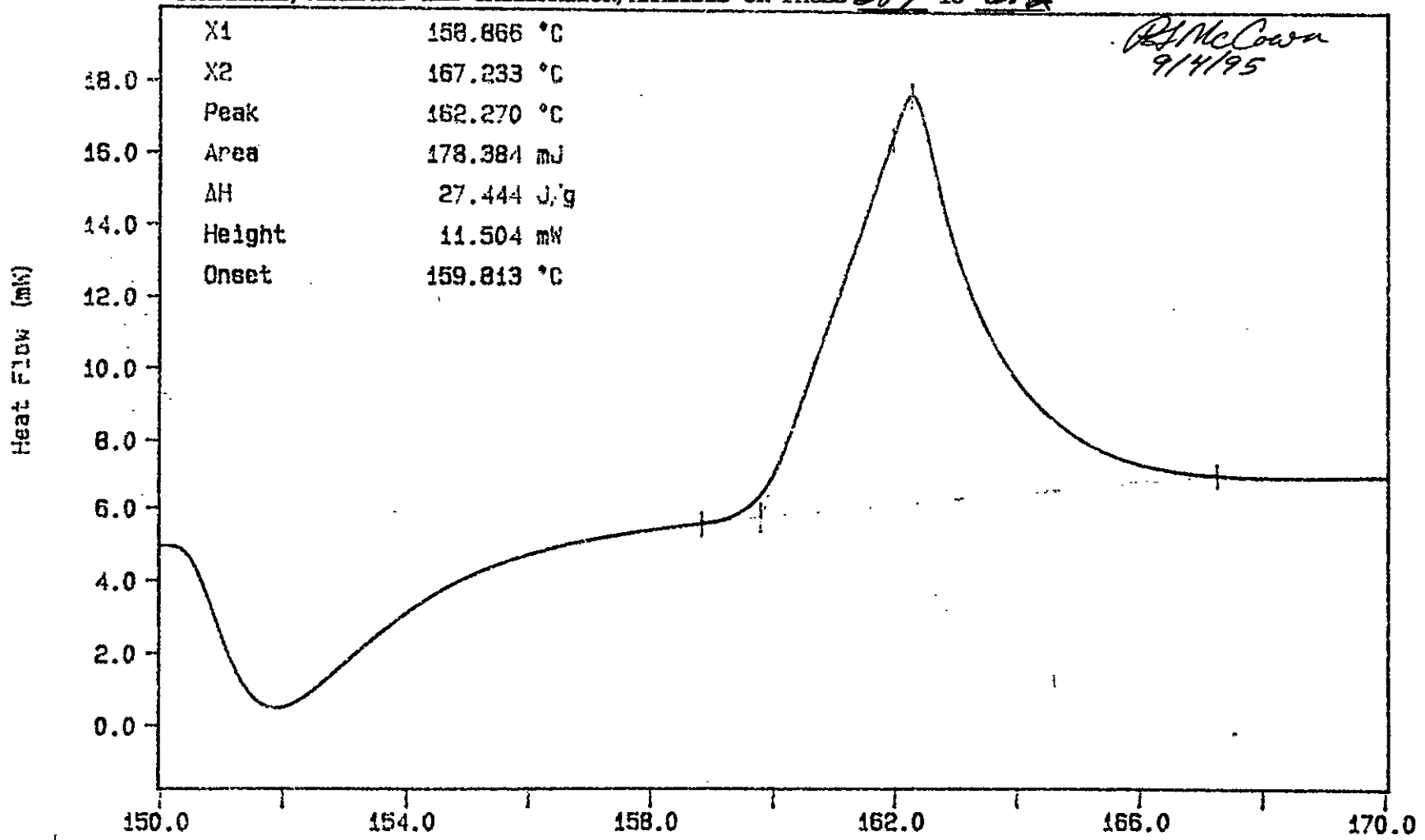
Data Entry Comments:

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.

Curve 1: DSC
File info: IN0090401 Mon Sep 4 17:03:13 1995
Sample Weight: 6.500 mg
12N14A Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 387 TO 392

PJ McCown
9/4/95

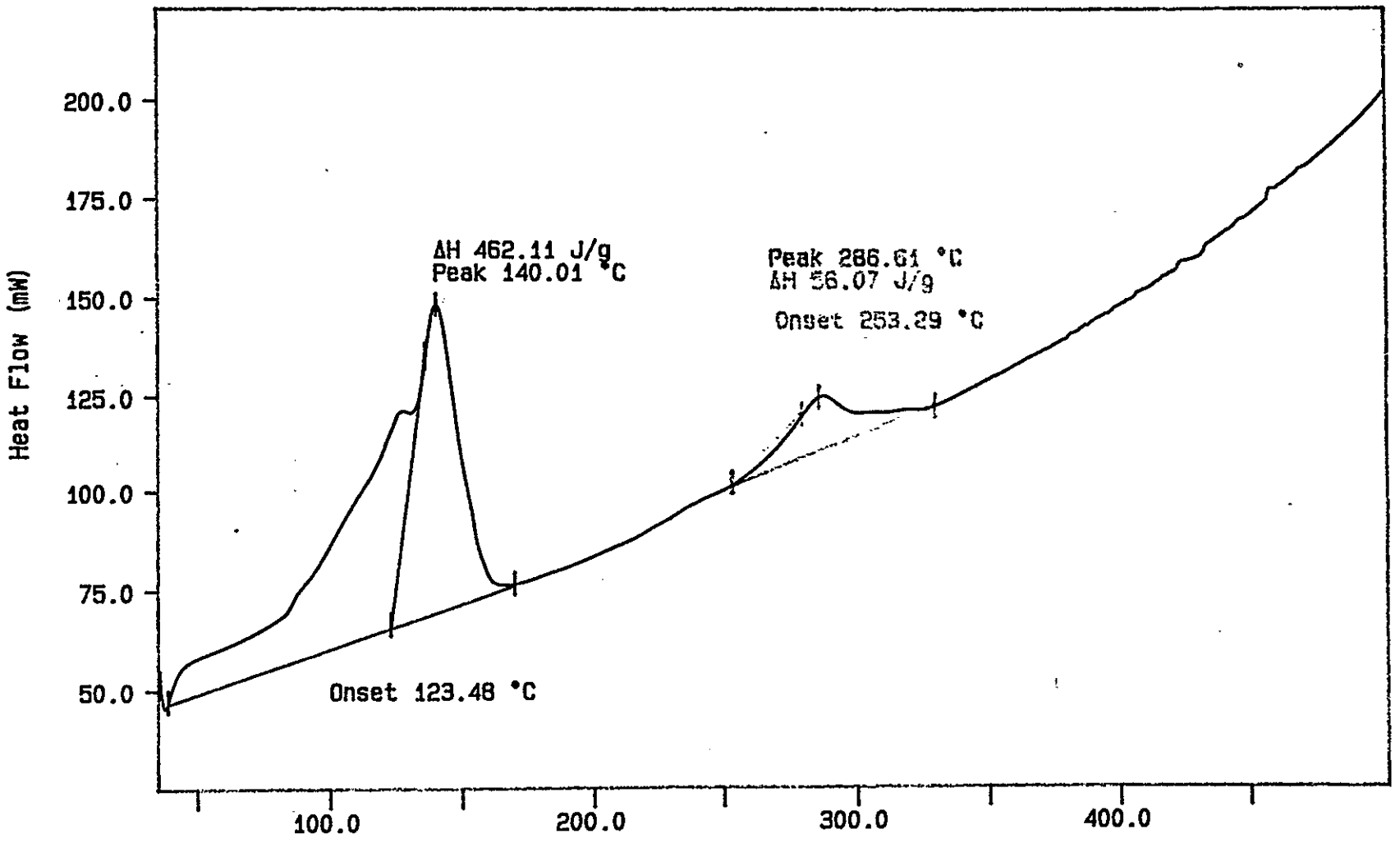


N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Mon Sep 4 17:05:42 1995

WHC-SD-WM-DP-139, REV. 1

Curve 1: DSC
File info: SAM090401 Mon Sep 4 21:08:25 1995
Sample Weight: 43.720 mg
S95T001551

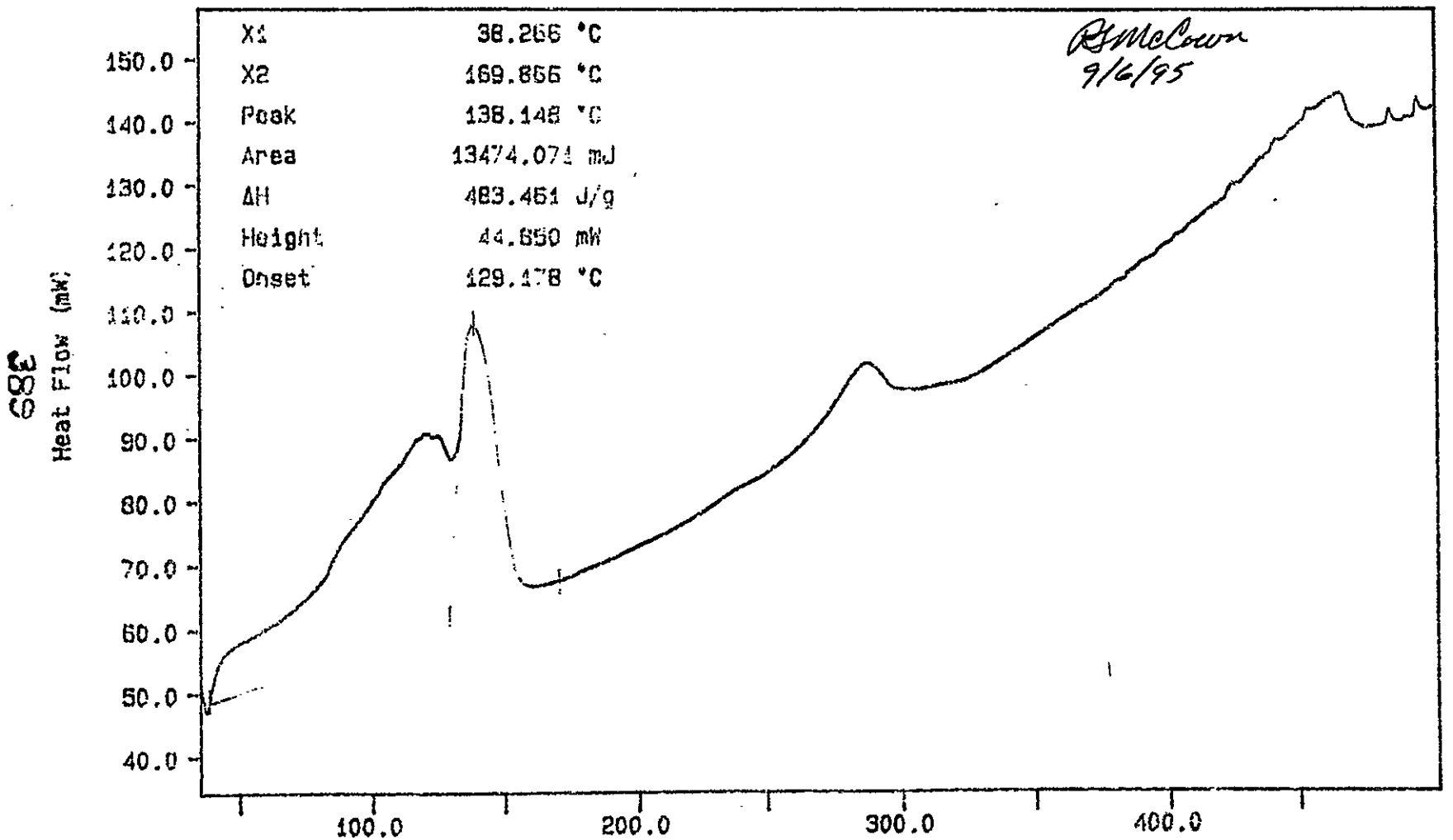


exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Tue Sep 12 13:34:49 1995

WHC-SD-WM-DP-134, REV. 1

Curve 1: DSC
File info: qsav2 Mon Sep 4 22:12:28 1995
Sample Weight: 27.870 mg
S95T001551 DUP

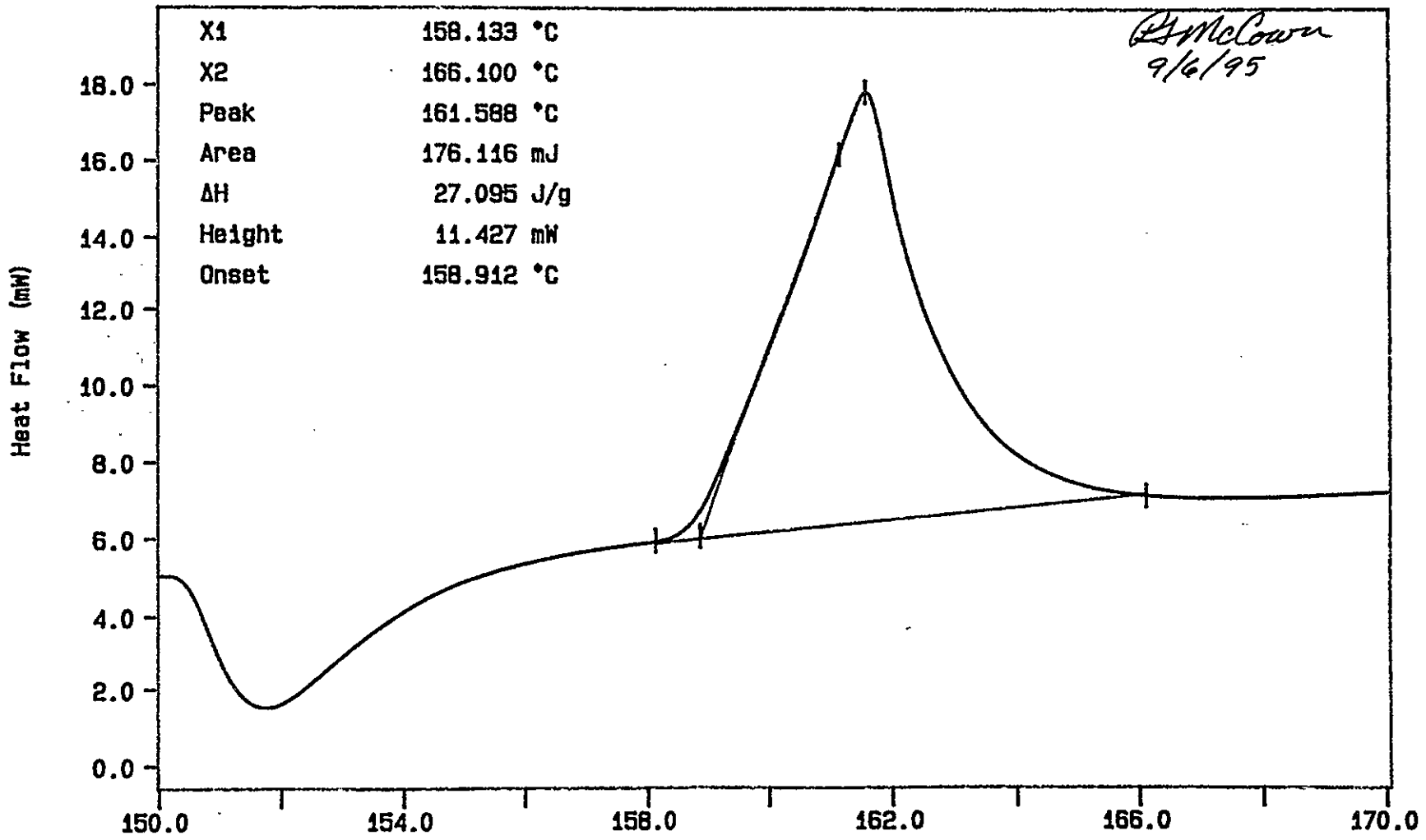


exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Mon Sep 4 23:01:19 1995

WHC-SD-WM-DP-139, REV. 1

Curve 1: DSC
File info: IND090602 Wed Sep 6 16:40:14 1995
Sample Weight: 6.500 mg
12N14A Indium at 10C/min



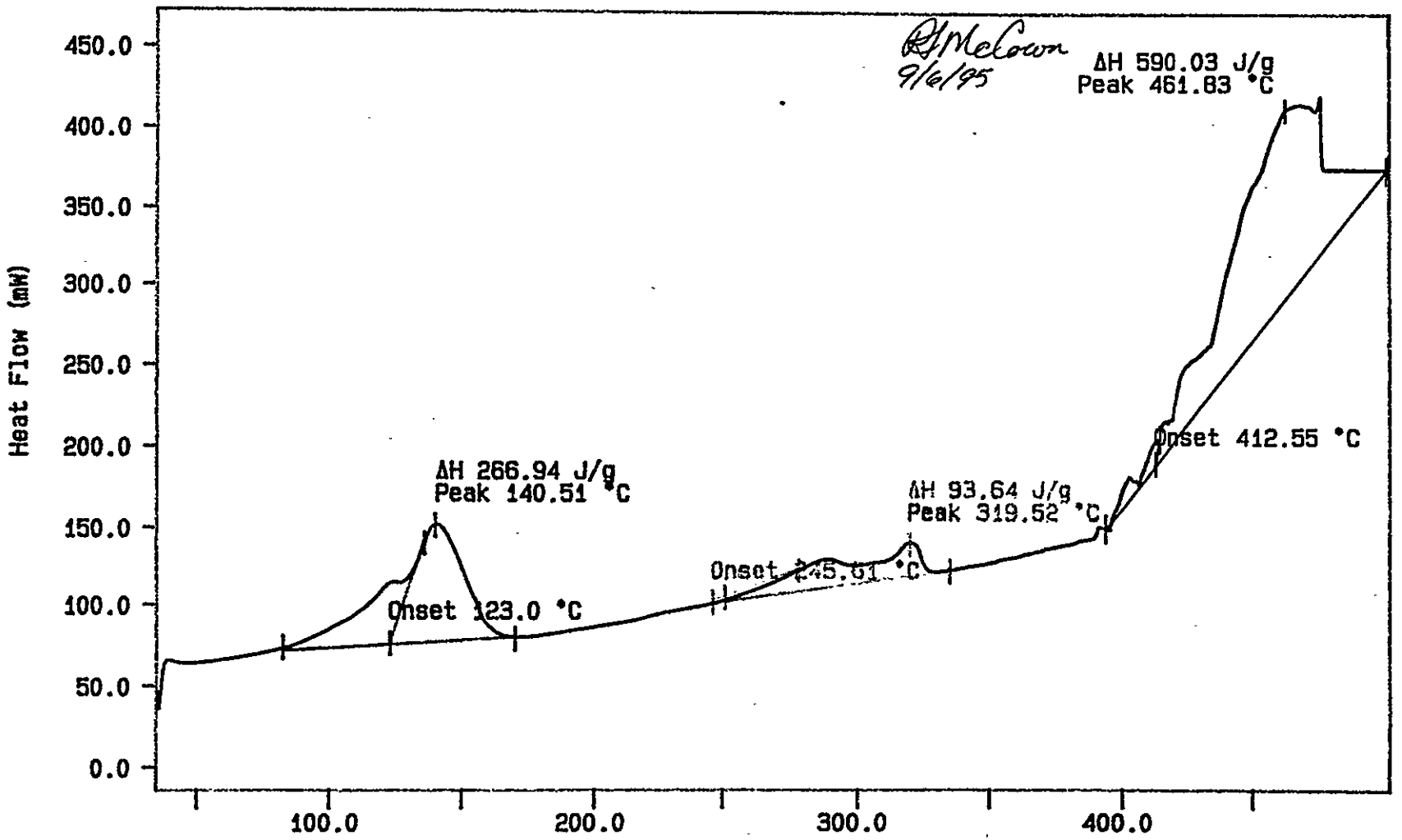
N2, EXOTHERM DOWN
TEMP1: 150.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 170.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Wed Sep 6 16:43:15 1995

390

WHC-SD-WM-DP-139, REV. 1

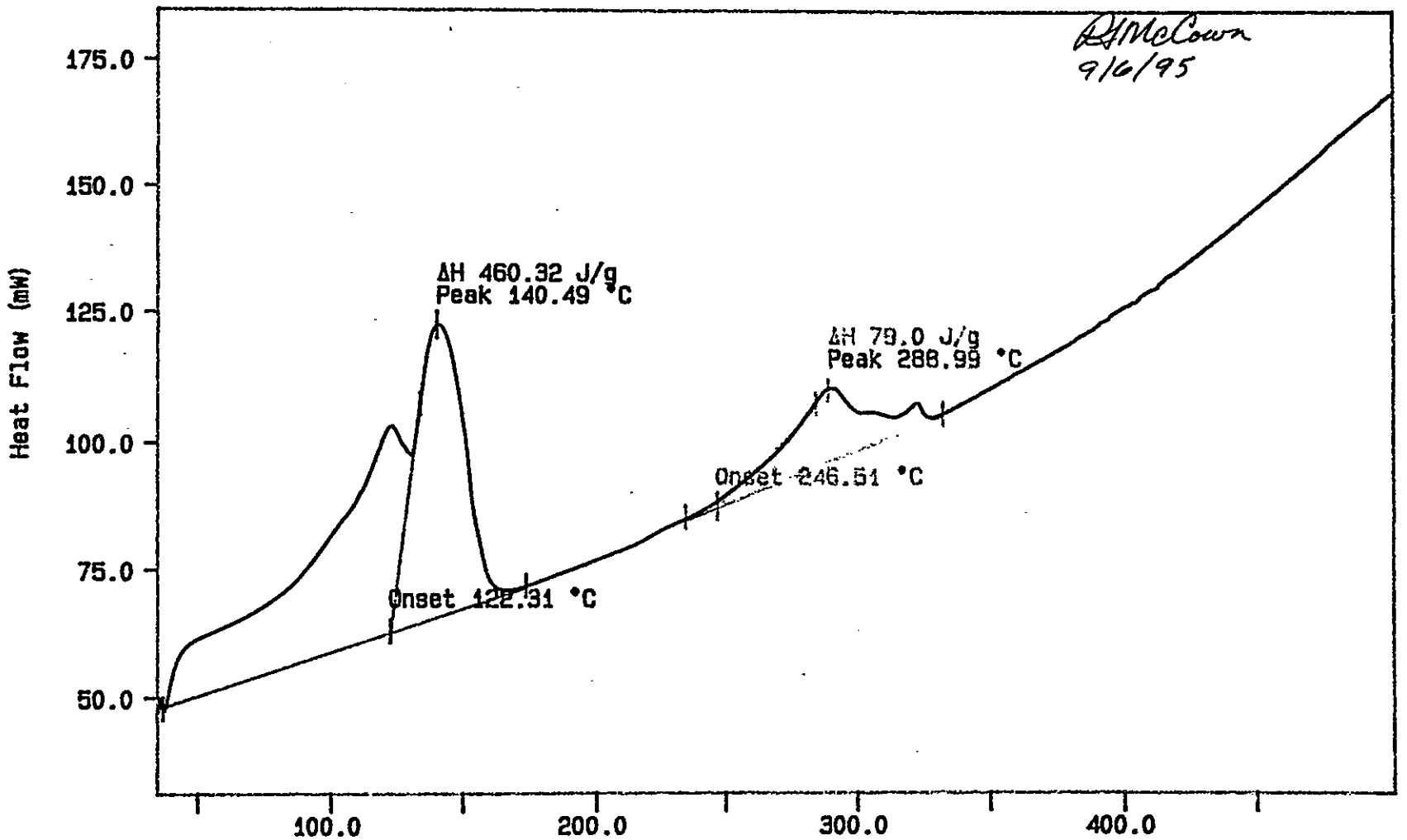
Curve 1: DSC
File info: SAM090601 Wed Sep 6 18:29:25 1995
Sample Weight: 51.930 mg
S95T001555



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Wed Sep 6 18:34:13 1995

Curve 1: DSC
File info: SAM090603 Wed Sep 6 19:45:53 1995
Sample Weight: 38.040 mg
S95T001555 DUP



exotherm down, N2 purge gas
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

PJ MCCOWN
PERKIN ELMER
222-S Lab
Wed Sep 6 21:29:01 1995

3S2

WHC-SD-WM-DP-139, REV. 1

LABCORE Data Entry Template for Worklist# 2162

Analyst: ~~smf~~ 9-12-95 BDV PJM Instrument: TGA01 9-12-95 BDV 3 Book # 65N8A

Method: LA-514-114 Rev/Mod C-0 WHC-SD-WM-DP-139, REV 0A

Worklist Comment: Please run ~~BY-108~~ B-101 TGAs under N2. bdv JHA 9/5/95

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	SOLID	59.74	60.56	N/A	%
95000091	B-101	2	SAMPLE	S95T001551		0	TGA-03	SOLID	N/A	18.75		%
95000091	B-101	3	DUP	S95T001551		0	TGA-03	SOLID	18.75	20.97	N/A	%
		4	STD				TGA-03	SOLID	59.74	60.36	N/A	%
95000093	B-101	5	SAMPLE	S95T001555		0	TGA-03	SOLID	N/A	18.48		%
95000093	B-101	6	DUP	S95T001555		0	TGA-03	SOLID	18.48	17.56	N/A	%

Final page for worklist # 2162

See attached for signatures
Analyst Signature Date 9-12-95 BDV

Dan Hammett 9-13-95
Analyst Signature Date

Verified 9/13/95. J.M. Faye

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# 2162

Analyst: RJ McCown Instrument: TGA0 _____ Book # 65N8A

Method: LA-~~560-112~~ 514-114 Rev/Mod C-0 B-101 WHC-SD-WM-DP-139, REV 1A

RJM 9/6/95

Worklist Comment: Please run ~~BY-108~~ B-101 TGAs under N2. bdv

KMS 9/25/95

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID			N/A	%
95000091	B-101	2	SAMPLE	S95T001551	0		TGA-01	SOLID	N/A			%
95000091	B-101	3	DUP	S95T001551	0		TGA-01	SOLID			N/A	%
95000093	B-101	4	SAMPLE	S95T001555	0		TGA-01	SOLID	N/A			%
95000093	B-101	5	DUP	S95T001555	0		TGA-01	SOLID			N/A	%

Final page for worklist # 2162

RJ McCown 9/6/95
Analyst Signature Date

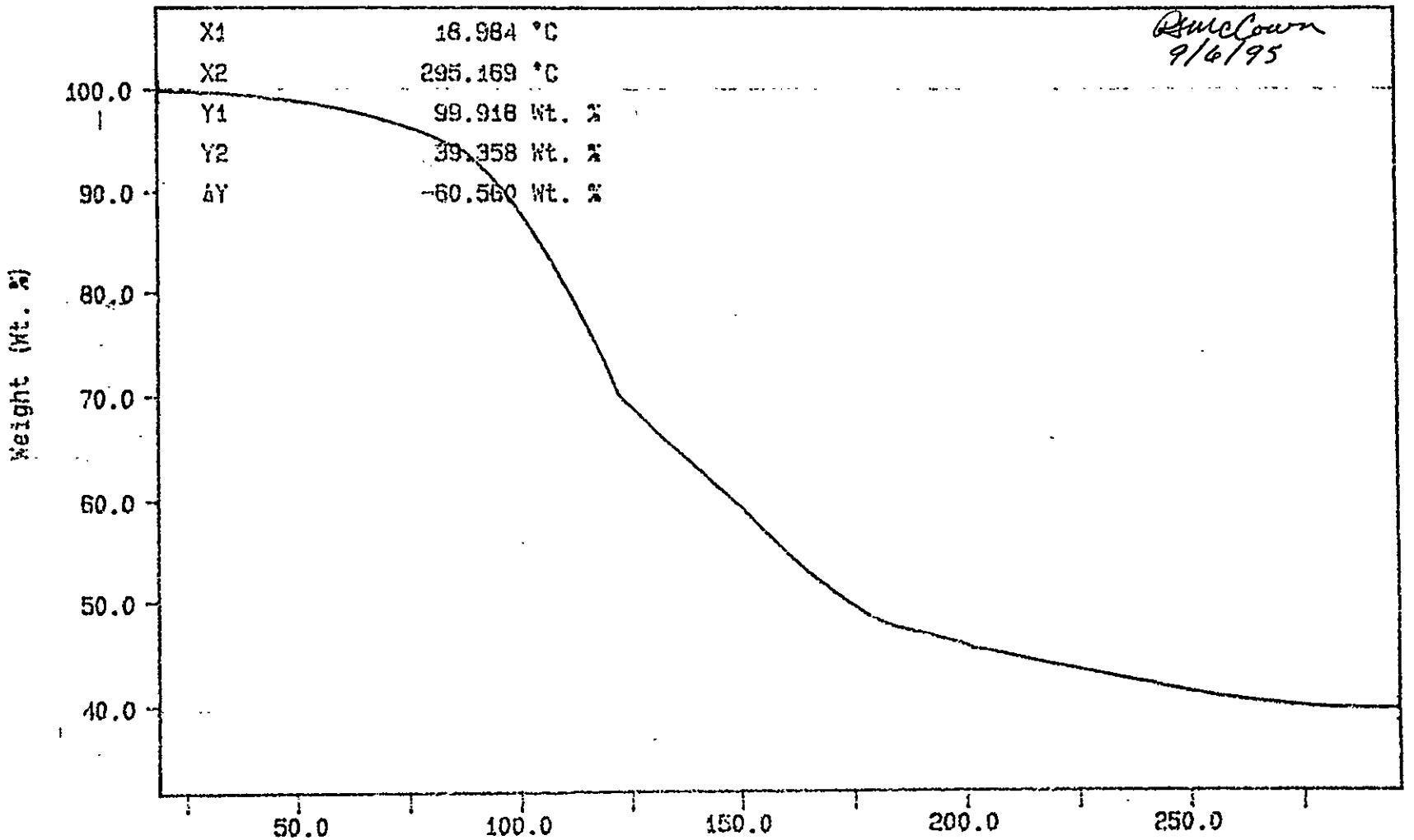
Analyst Signature Date

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.

Curve 1: TGA
File info: TER090401 Mon Sep 4 19:46:14 1995
Sample Weight: 16.797 mg
65N8-A|Terliq

BEST AVAILABLE COPY



RWMcCown 9/6/95

N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

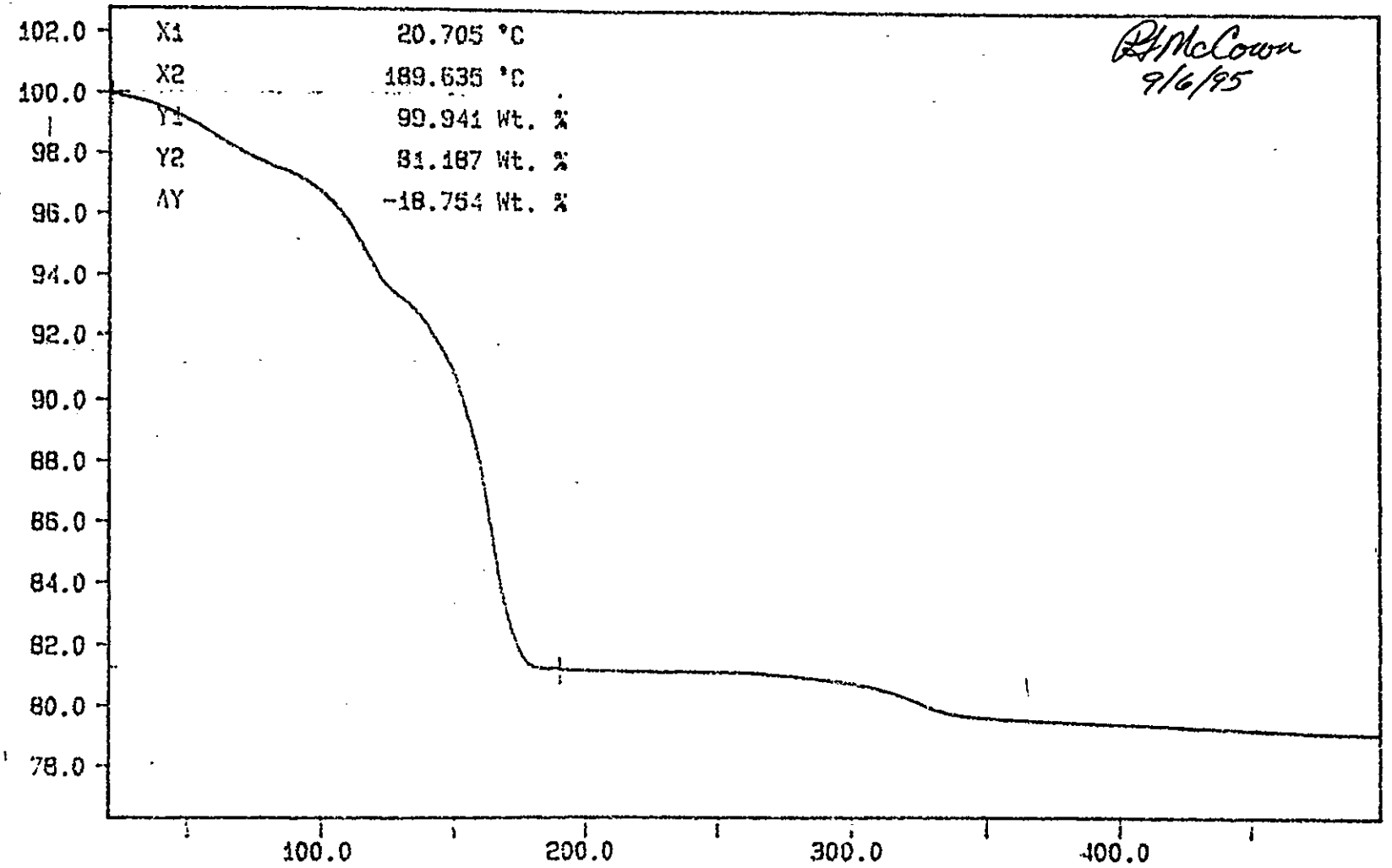
PJ MCCONN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 4 19:50:03 1995

WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 0A

Curve 1: TGA
File info: SAM090401 Mon Sep 4 21:06:16 1995
Sample Weight: 28.014 mg
S95T001551

BEST AVAILABLE COPY



PJ McCown
9/6/95

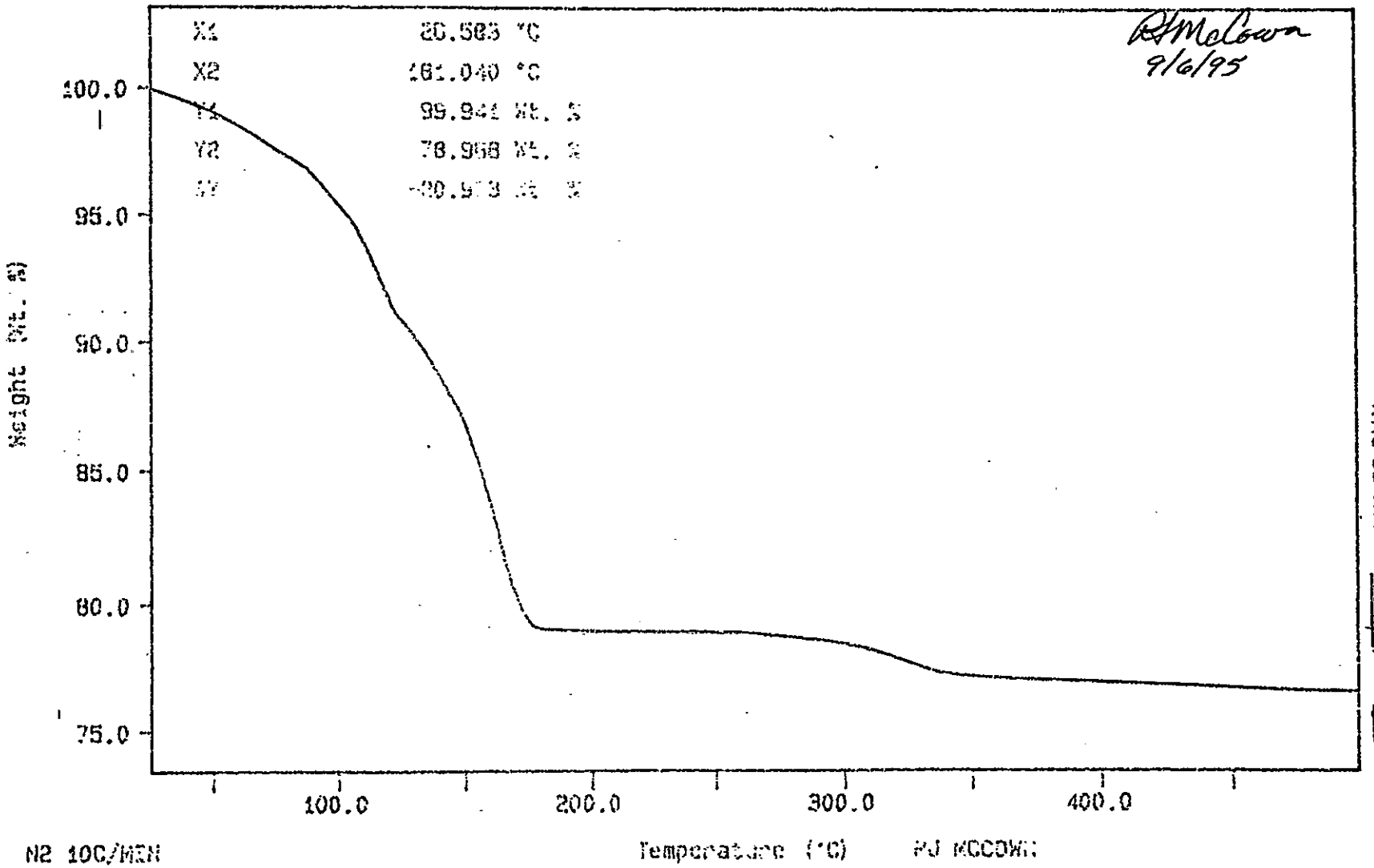
N2 10C/MIN
TEMP1: 30.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 800.0 C

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Sep 4 21:07:49 1995

WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 01

BEST AVAILABLE COPY



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WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 2A

Curve 1: TGA
File info: TER090602 Wed Sep 6 17:02:43 1995
Sample Weight: 14.276 mg
65N8-A|Terliq

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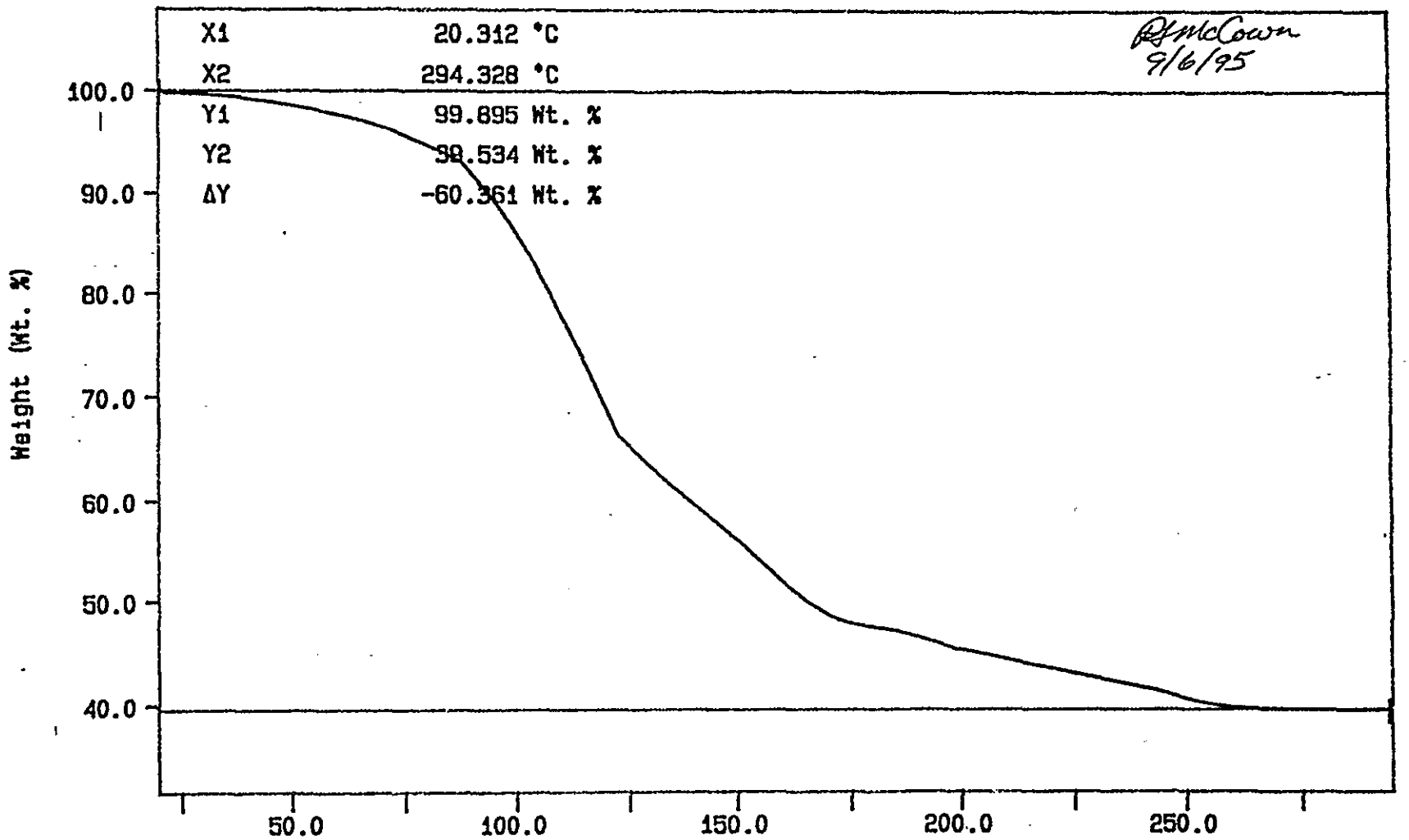

N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 300.0 C

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Wed Sep 6 17:04:23 1995

WHC-SD-WM-DP-132, REV. 1

WHC-SD-WM-DP-139, REV. 00

Curve 1: TGA
File info: SAM090601 Wed Sep 6 18:29:02 1995
Sample Weight: 30.699 mg
S95T001555

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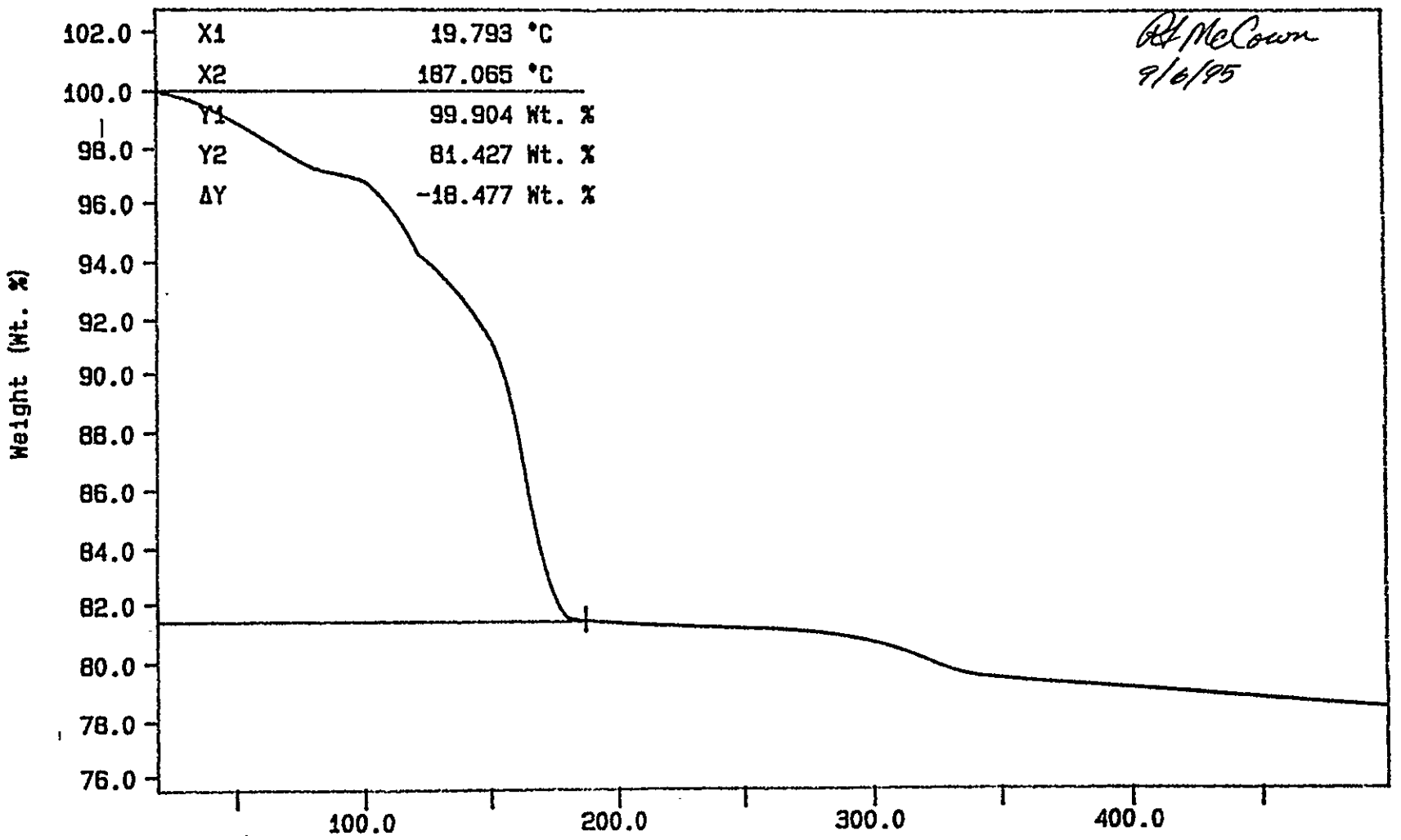
WHC-SD-WM-DP-139, REV. 1

WHC-SD-WM-DP-139, REV. 0A



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N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

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Wed Sep 6 18:40:14 1995

399

Curve 1: TGA
File info: SAM090602 Wed Sep 6 19:44:56 1995
Sample Weight: 32.295 mg
S95T001555 DUP

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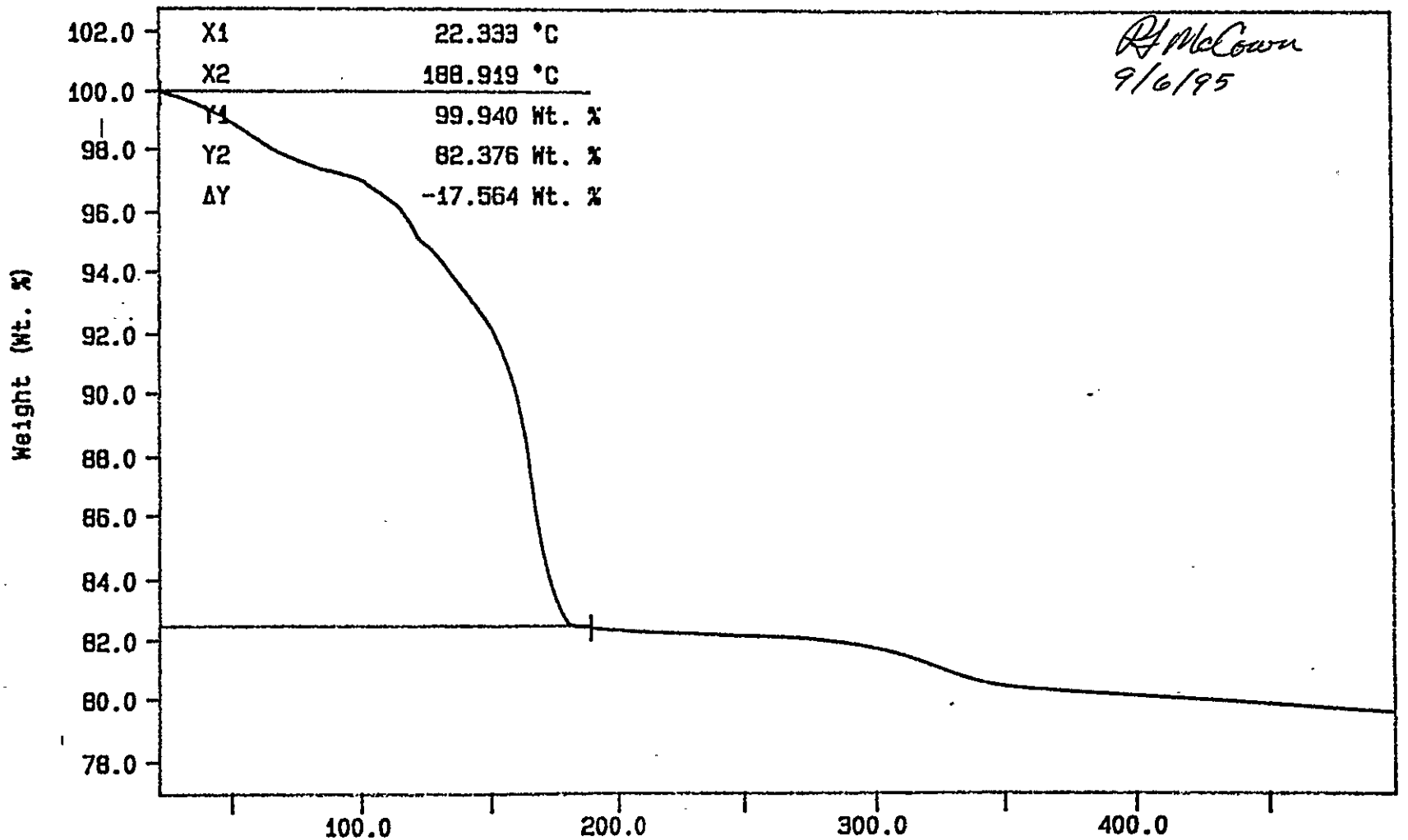
WHC-SD-WM-DP-132, REV. 1

WHC-SD-WM-DP-139, REV. 00



400

N2 10C/MIN
TEMP1: 35.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 500.0 C

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PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 6 21:37:08 1995