

START

9513337.1998

0040994

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Program Support	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: Tank 241-TY-104/Waste Management/PS/AS	6. Cog. Engr.: George L. Miller	7. Purchase Order No.: N/A
8. Originator Remarks: This document is being released into the Supporting Document System for retrievability purposes.		9. Equip./Component No.: N/A
11. Receiver Remarks: For Release.		10. System/Bldg./Facility: N/A
		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 04/06/95

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-DP-101	N/A	0	45-Day Safety Screen Results for Tank 241-TY-104, Auger Samples, 95-AUG-008 and 95-AUG-009	Q	2	1	

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec. 12.7)		1. Approval	4. Review	1. Approved	4. Reviewed no/comment
		2. Release	5. Post-Review	2. Approved w/comment	5. Reviewed w/comment
		3. Information	6. Dist. (Receipt Acknow. Required)	3. Disapproved w/comment	6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G)	(H)	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
2	1	Cog. Eng. G.L. Miller	<i>[Signature]</i>	4/6/95	TL-06						
2	1	Cog. Mgr. A.D. Rice	<i>[Signature]</i>	4-6-95	TL-06						
2	1	QA W.A. Hendricksen	<i>[Signature]</i>	4/6/95	TL-03						
		Safety									
		Env.									
3		Central Files			LB-04						
3		O.S.T.I. (2)			LB-07						

18. A.E. Young <i>[Signature]</i> Signature of EDT Originator 4-6-95 Date	19. _____ Authorized Representative Date for Receiving Organization	20. A.D. Rice <i>[Signature]</i> Cognizant Manager 4-6-95 Date	21. DOE APPROVAL (if required, Ctrl. No.) <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
---------------------------------------------------------------------------------------	------------------------------------------------------------------------	----------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-DP-101, REV 0

Document Title: 45-Day Safety Screen Results for Tank 241-TY-104,
Auger Samples, 95-AUG-008 and 95-AUG-009

Release Date: 4/6/95

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

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:


Kara M. Broz

April 6, 1995

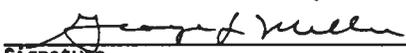
TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors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

This report has been reproduced from the best available copy. Available in paper copy and microfiche. Printed in the United States of America. Available to the U.S. Department of Energy and its contractors from:

U.S. Department of Energy
Office of Scientific and Technical Information (OSTI)
P.O. Box 62
Oak Ridge, TN 37831
Telephone: (615) 576-8401

Available to the public from:

U.S. Department of Commerce
National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Telephone: (703) 487-4650

SUPPORTING DOCUMENT		1. Total Pages 32
2. Title 45-Day Safety Screen Results for Tank 241-TY-104, Auger Samples, 95-AUG-008 and 95-AUG-009	3. Number WHC-SD-WM-DP-101	4. Rev No. 0
5. Key Words 45-Day, Safety Screen Results, Safety Screen, Tank 241-TY-104, Tank TY-104, TY-104, Auger Samples, 95-AUG-008, 95-AUG-009	6. Author Name: George L. Miller  Signature Organization/Charge Code 8E480/MDR21	
7. Abstract N/A		
8. RELEASE STAMP <div data-bbox="1062 1619 1459 1836" style="border: 1px solid black; padding: 5px; text-align: center;">OFFICIAL RELEASE BY WHC DATE APR 06 1995 55 565</div>		

9513337.2001



Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-101, REV. 0

222-S ANALYTICAL SERVICES

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-TY-104,
AUGER SAMPLES, 95-AUG-008 & 95-AUG-009

Date Printed:

APRIL 5, 1995

WHC-SD-WM-DP-101, REV. 0

TABLE OF CONTENTS

Narrative	1
Sample Analyses Results	8
Differential Scanning Calorimetry (DSC)	
Worklist # 654	9
Worklist # 724	15
Worklist # 919	19
Thermogravimetric Analysis (TGA)	
Worklist # 667	20
Worklist # 732	26

This Document consists of pages 1 through 29.

9513337.2003

WHC-SD-WM-DP-101, REV. 0

NARRATIVE

WHC-SD-WM-DP-101, REV. 0

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-TY-104
AUGER SAMPLES 95-AUG-008 AND 95-AUG-009ANALYTICAL SUMMARY

Analytical results for those primary analytes (i.e. differential scanning calorimetry, thermogravimetric analysis, total alpha radioactivity and total organic carbon) listed in Table A-1 of the Tank Characterization Plan (TCP) referenced below indicate that no safety screening notification limits were exceeded. Included in this report are copies of all differential scanning calorimetry (DSC), and thermogravimetric analyses (TGA) raw data scans as requested in the TCP. Photographs were taken of the augers during extrusion in the hot cell.

REFERENCE

Tank 241-TY-104 Tank Characterization Plan (WHC-SD-WM-TP-301), Revision OA, released on February 27, 1995, Westinghouse Hanford Company, Richland, WA 99352.

SCOPE

This is the 45-Day report of primary analytical results for the Safety Screening and Organic Programs on two auger samples, 95-AUG-008 and 95-AUG-009, collected from single shell tank 241-TY-104 on February 28, 1995. Each auger sample was received, extruded, and analyzed by the 222-S Laboratory in accordance with the tank characterization plan referenced above. Because no primary notification limits were exceeded, no secondary analyses were included in this report.

SAMPLE RECEIPT, EXTRUSION AND SUBSAMPLINGAuger 95-AUG-008, Segment 1

Only one segment was collected as auger sample 95-AUG-008 from tank TY-104, riser 18. It was received into the 222-S Laboratory on February 28, 1995 at 1255 hours and extruded on March 2, 1995. There was no drainable liquid or crust, but 90.58 grams of thin, moist, dark-brown material was obtained: 27.02 grams of material which had fallen into the tray was placed into vial number 6420, and 63.56 grams of material removed from auger flutes #8 through #19 (approximately 12 inches of a 20 inch auger) was placed into jar number 6478. Per instructions from the Ferrocyanide Safety Program, work on these subsamples was held for over a week to determine whether sufficient sample had been collected for the needs of that program or whether another sample collection was necessary. Upon notification to proceed with work, material from both containers was combined and designated as tank waste representing

WHC-SD-WM-DP-101, REV. 0

quarter segment D. All analyses and sample archives for this auger sample were performed on this quarter segment.

Auger 95-AUG-009, Segment 1

Only one segment was collected as auger sample 95-AUG-009 from tank TY-104, riser 15. It was received into the 222-S Laboratory on February 28, 1995 at 1300 hours and extruded on March 3, 1995. There was no drainable liquid or crust, but 277 grams of thick, moist, dark-brown material was obtained from auger flutes #8 through #19 (approximately 12 inches of a 20 inch auger). Material (153.34 grams) from auger flutes #14 through #19 was placed into jar number 6479, representing quarter segment D. Into jar number 6560 was placed 124.43 grams of material from flutes #8 through #13, representing quarter segment C.

DSC and TGA analyses were performed on each quarter segment, and total alpha and TOC were performed on the half segment (a composite of these two quarter segments).

SAMPLE IDENTIFICATION INFORMATION

TABLE 1. SAMPLE IDENTIFICATION

LABCORE Sample ID	Customer Sample ID	Hot Cell Vial #	Analytes
S95T000201	95-AUG-009, Riser 15, auger sample	n/a	Extrusion
S95T000235	95-AUG-009, Riser 15, Segment D	6632	DSC, TGA
S95T000240	95-AUG-009, Riser 15, Segment C	6634	DSC, TGA
S95T000236	95-AUG-009, Riser 15, Lower $\frac{1}{2}$ Seg.	6635	TIC/TOC
S95T000243	95-AUG-009, Riser 15, Lower $\frac{1}{2}$ Seg.	n/a	Total alpha
S95T000200	95-AUG-008, Riser 18, auger sample	n/a	Extrusion
S95T000316	95-AUG-008, Riser 18, Segment D	6636	DSC, TGA, TIC/TOC
S95T000318	95-AUG-008, Riser 18, Segment D	n/a	Total alpha

ANALYTICAL RESULTS

Analytical results are presented in Tables 2 and 3. Applicable action limits (upper and/or lower) for each analyte were shaded.

WHC-SD-WM-DP-101, REV. 0

DSC (Energetics Content)

Analyses were performed under a nitrogen atmosphere using procedure LA-514-113, Rev. B-1. No exotherms were observed in any of the three samples or their duplicates by either the wet or dry weight basis. Because all exothermic values were zero, the precision between each sample and its duplicate was also 0 relative percent difference (RPD). The LMCS control standard exhibited a recovery of 97.7 percent, which was within the program's specified accuracy control limits of 90 to 110 percent recovery.

TGA (Moisture Content)

Weight percent water was performed under a nitrogen atmosphere using procedure LA-560-112, Rev. A-2. Including all three samples and their duplicates, the results ranged in value from 49.75 to 55.23 percent water by weight, with an mean of 51.88. Consequently, none of the samples were beyond (less than) the control limit of <17 wt. % water. Relative percent differences between samples and their duplicates were 10.4, 0.5 and 6.4 for samples S95T000235, S95T000240 and S95T000316, respectively. A precision control limit of $\pm 10\%$, having two significant figures, was specified in Table A-1, page A-15, of the Tank Characterization Plan (TCP), referenced above. By expressing the RPD for sample S95T000235 to two significant figures, all sample data are within the TCP specified precision control limit. The LMCS control standard exhibited a recovery of 98.6 percent, which was within the program's specified accuracy control limits of 90 to 110 percent recovery.

Total Alpha Radioactivity

Samples were prepared by fusion using procedure LA-549-141, Rev. C-2. Total alpha analyses were performed using procedure LA-508-101, Rev. D-2. Because it was determined for auger sample, 95-AUG-008, that all of the recovered sample material represented only a quarter segment, the total alpha was performed on that quarter segment. This was a deviation from the TCP requirement for total alpha analyses on half segments. A sample duplicate and spike were performed on both samples, S95T000243 and S95T000318. Neither sample met the TCP specified precision criterion of $\pm 10\%$ RPD. Sample precision values were 20.0 and 29.3 RPD for samples S95T000243 and S95T000318, respectively. Likewise, both samples exceeded the accuracy control limits of 90 to 110 percent recovery, with values of 79.6% and 78.3%, respectively. Sample alpha activities ranged from 0.117 to 0.184 $\mu\text{Ci/g}$, which were more than 200 fold less than the notification limit of $>41 \mu\text{Ci/g}$.

Total Organic Carbon

Total organic carbon (TOC) and total inorganic carbon (TIC) analyses were performed using procedure LA-342-100, Rev. A-0, a hot persulfate oxidation method. Although only TOC analyses were requested in the TCP, TIC data were included in this report as a by-product of the TOC procedure. TOC sample

WHC-SD-WM-DP-101, REV. 0

values were more than 30 fold less than the notification limit of >30,000 μg C/g. Precision acceptance limit criteria specified for TOC in the TCP were ± 10 RPD. TOC precision between samples and their duplicates for samples S95T000236 and S95T000316 exceeded the acceptance criteria with values of 16.1 and 14.5 RPD, respectively. TOC accuracy was acceptable with a percent recovery of 91.2 percent recovery for spiked sample S95T000236. The TCP specified accuracy acceptance limits for TOC spikes were 90 to 110 percent recovery.

45-Day Safety Screening Analysis Report
TY-104

CORE NUMBER: 95-AUG-008,
SEGMENT #: 1

TABLE 2

SEGMENT PORTION: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S95T000316			% Water by TGA using Mettler	%	17.000	n/a	98.67	n/a	53.23	49.95	51.59	6.36	n/a	0.000		n/a
S95T000316			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	481.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000		n/a
S95T000316			DSC Exotherm using Mettler	Joules/g	n/a	481.000	97.72	n/a	0	0	0.000	n/a	n/a	0.000		n/a
S95T000316			TOC by Persulfate/Coulometry	ug/g	n/a	30000.00	94.00	18.800	7.74e2	8.95e2	8.34e+02	14.5	n/a	80.000		n/a
S95T000316			TIC by Acid/Coulometry	ug/g	n/a	n/a	100.3	9.400	5.48e3	6.46e3	5.97e+03	16.4	n/a	5.000		n/a
S95T000318			Alpha of Digested Solid	uCi/g	n/a	41.000	89.61	<2.90e-02	1.37e-1	1.84e-1	1.61e-01	29.3	78.30	0.070		46.6

=> Limit violated

=> Selected Limit

951337.2008

45-Day Safety Screening Analysis Report
TY-104

TABLE 3

CORE NUMBER: 95-AUG-009
SEGMENT #: 1

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S95T000240			% Water by TGA using Mettler	%	17.000	n/a	98.58	n/a	51.42	51.67	51.55	0.49	n/a	0.000	n/a
S95T000240			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	481.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S95T000240			DSC Exotherm using Mettler	Joules/g	n/a	481.000	97.72	n/a	0	0	0.000	n/a	n/a	0.000	n/a

SEGMENT PORTION: D Bottom Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S95T000235			% Water by TGA using Mettler	%	17.000	n/a	98.58	n/a	55.23	49.75	52.49	10.4	n/a	0.000	n/a
S95T000235			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	481.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S95T000235			DSC Exotherm using Mettler	Joules/g	n/a	481.000	97.72	n/a	0	0	0.000	n/a	n/a	0.000	n/a

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S95T000236			TOC by Persulfate/Coulometry	ug/g	n/a	30000.00	94.00	18.800	8.26e2	9.71e2	8.98e+02	16.1	91.20	80.000	n/a
S95T000236			TIC by Acid/Coulometry	ug/g	n/a	n/a	100.3	9.400	5.87e3	6.33e3	6.10e+03	7.54	95.90	5.000	n/a
S95T000243			Alpha of Digested Solid	uCi/g	n/a	41.000	89.61	<2.90e-02	1.43e-1	1.17e-1	1.30e-01	20.0	79.60	0.065	35.8

=> Limit violated
=> Selected Limit

951337.2009

9513337.2010

WHC-SD-WM-DP-101, REV. 0

SAMPLE ANALYSES RESULTS

LABCORE Data Entry Template for Worklist# 654

Analyst: MS Instrument: DSC01 Book # 12W14-17

Method: LA-514-113 Rev/Mod 13-1

WHC-SD-WM-DP-101, REV 0

Worklist Comment: Please run TY-104 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>27.8</u>	<u>N/A</u>	Joules/g
95000017	TY-104	2 SAMPLE	S95T000235	0	DSC-01	SOLID	<u>N/A</u>	<u>∅</u>		Joules/g
95000017	TY-104	3 DUP	S95T000235	0	DSC-01	SOLID	<u>∅</u>	<u>∅</u>	<u>N/A</u>	Joules/g
95000017	TY-104	4 SAMPLE	S95T000240	0	DSC-01	SOLID	<u>N/A</u>	<u>∅</u>		Joules/g
95000017	TY-104	5 DUP	S95T000240	0	DSC-01	SOLID	<u>∅</u>	<u>∅</u>	<u>N/A</u>	Joules/g

Final page for worklist # 654

[Signature] 3-26-95
Analyst Signature Date

[Signature] 3-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 3-30-95

Data Entry Comments: S95T000235 produced two endotherms one at 107.3°C with a delta H of 997.9 J/g and the second at 271.2°C with a delta H of 194 J/g. S95T000240 produced one endotherm at 113.3°C with a delta H of 834.7 J/g.

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 10 TO 14.

DSC STD 12N14-A

6.656 mg

Rate: 10.0 °C/min

File: 00051.001

DSC METTLER 24-Mar-95

Ident: 0.0

222-S Laboratory

exo >

5. mW

Integration
Delta H 185 mJ
27.8 J/g
Peak 158.6 °C
-12.7 mW

WHC-SD-WM-DP-101, REV. 0

David W. Smith

3-26-95

120.

140.

160.

180. °C

10

951537.2012

S95T000235 N2

29.296 mg

Rate: 10.0 °C/min

File: 00053.001

DSC METTLER

24-Mar-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration

Delta H 568 mJ

19.4 J/g

Peak 271.2 °C

-2.1 mW

Integration

Delta H29233 mJ

997.9 J/g

Peak 107.3 °C

-77.7 mW

WHG-SD-MM-DP-101, REV.0

100.

200.

300.

400.

°C

S95T000235 (DUP) N2

36.425 mg

Rate: 10.0 °C/min

File: 00055.001

DSC METTLER

24-Mar-95

Ident: 0.0

222-S Laboratory

<OX>

50. mW

Integration

Delta H 474 mJ

13.0 J/g

Peak 265.1 °C

-2.0 mW

Integration

Delta H 28998 mJ

796.1 J/g

Peak 107.3 °C

-76.4 mW

WHC-SD-WM-DP-101, REV.0

100.

200.

300.

400.

°C

1:1

951337.2014

S95T000240 N2

31.578 mg

Rate: 10.0 °C/min

File: 00057.001

DSC METTLER 24-Mar-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration
Delta H26359 mJ
834.7 J/g
Peak 113.3 °C
-80.7 mW

WHC-SD-WM-DP-101, REV. 0

100.

200.

300.

400.

°C

13

951337.2015

S95T000240 (DUP) N2

32.157 mg

Rate: 10.0 °C/min

File: 00059.001

DSC METTLER

24-Mar-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration

Delta H31431 mJ

977.4 J/g

Peak 111.3 °C

-79.2 mW

WHC-SD-WM-DP-101, REV. 0

100.

200.

300.

400.

°C

LBCORE Data Entry Template for Worklist# 724

Analyst: 1205 Instrument: DSC01 Book # 12214-77

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

Worklist Comment: Please run TY-104 DSC under N2. bdv WHC-SD-WM-DP-101. REV. C

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	27.8	N/A	Joules/g
95000016	TY-104	2 SAMPLE	S95T000316	0	DSC-01	SOLID	N/A	∅		Joules/g
95000016	TY-104	3 DUP	S95T000316	0	DSC-01	SOLID	∅	∅	N/A	Joules/g

Final page for worklist # 724

[Signature] 3-26-95
Analyst Signature Date

[Signature] 3-29-95
Analyst Signature Date

verified by Blandina Valenzuela

Data Entry Comments: S95T000316 produced two endotherms one at ⁸¹⁹819.0 J/g
107.3°C with a delta H of 819.0 J/g and a second at 273.0°C ^{7g}7g
with a delta H of 40.7 J/g. ^{3/27/95}
BDV

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 16 TO 18.

DSC STD 12N14-A

6.656 mg

Rate: 10.0 °C/min

File: 00061.001

DSC METTLER 25-Mar-95

Ident: 0.0

222-S Laboratory

exo >

10. mW

Integration
Delta H 185 mJ
27.8 J/g
Peak 158.6 °C
-13.0 mW

WHC-SD-WM-DP-101, REV. 0

David W. Smith

120.

3/27/95
BDN

140.

160.

180. °C

16

9513337.2018

S95T000316 N2

29.858 mg

Rate: 10.0 °C/min

File: 00063.001

DSC METTLER

25-Mar-95

Ident: 0.0

222-S Laboratory

> exo

50. mW

Integration
Delta H 1216 mJ
40.7 J/g
Peak 273.0 °C
-5.0 mW

Integration
Delta H 24454 mJ
819.0 J/g
Peak 107.3 °C
-76.7 mW

WHC-SD-WM-DP-101, REV.0

100.

200.

300.

400.

°C

17

9513337.2019

S95T000316 (DUP) N2

30.635 mg

Rate: 10.0 °C/min

File: 00065.001

DSC METTLER

25-Mar-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

Integration

Delta H 1243 mJ

40.6 J/g

Peak 273.1 °C

-4.8 mW

Integration

Delta H 26675 mJ

870.8 J/g

Peak 109.3 °C

-80.0 mW

WHC-SD-WM-DP-101, REV 0

100.

200.

300.

400.

°C

18

9515337.2020

LABCORE Data Entry Template for Worklist# 919

Analyst: BDV **Instrument:** DSC01 _____ **Book #** _____

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

Worklist Comment: Calculated TY-104 dry DSC. bdv

WHC-SD-WM-DP-101, REV. 0

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
95000016	TY-104	1 SAMPLE	S95T000316	0	DSC-02	SOLID	N/A	∅		Joules/g Dry
95000016	TY-104	2 DUP	S95T000316	0	DSC-02	SOLID	∅	∅	N/A	Joules/g Dry
95000017	TY-104	3 SAMPLE	S95T000235	0	DSC-02	SOLID	N/A	∅		Joules/g Dry
95000017	TY-104	4 DUP	S95T000235	0	DSC-02	SOLID	∅	∅	N/A	Joules/g Dry
95000017	TY-104	5 SAMPLE	S95T000240	0	DSC-02	SOLID	N/A	∅		Joules/g Dry
95000017	TY-104	6 DUP	S95T000240	0	DSC-02	SOLID	∅	∅	N/A	Joules/g Dry

Data entered & verified by
Blanca Valenzuela 4-3-95
Analyst Signature **Date**

Final page for worklist # 919

Analyst Signature **Date**

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 667

Analyst: DWS Instrument: TGA01 A Book # 42W8-1A

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

*DWS
3-26-95*

Worklist Comment: Please run TY-104 TGA under N2. bdv **WHC-SD-WM-DP-101, REV. 0**

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.35</u>	<u>N/A</u>	%
95000017	TY-104	2 SAMPLE	S95T000235	0	TGA-01	SOLID	<u>N/A</u>	<u>55.23</u>		%
95000017	TY-104	3 DUP	S95T000235	0	TGA-01	SOLID	<u>55.23</u>	<u>49.75</u>	<u>N/A</u>	%
95000017	TY-104	4 SAMPLE	S95T000240	0	TGA-01	SOLID	<u>N/A</u>	<u>51.42</u>		%
95000017	TY-104	5 DUP	S95T000240	0	TGA-01	SOLID	<u>51.42</u>	<u>51.67</u>	<u>N/A</u>	%

Final page for worklist # 667

DWS 3-26-95
Analyst Signature Date

DWS 3-25-95
Analyst Signature Date

Verified by Blandina Valenzuela

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 21 TO 25.

TGA STD 42N8-A

17.286 mg

Rate: 10.0 °C/min

File: 00052.001

TG METTLER 25-Mar-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height-10.09 mg

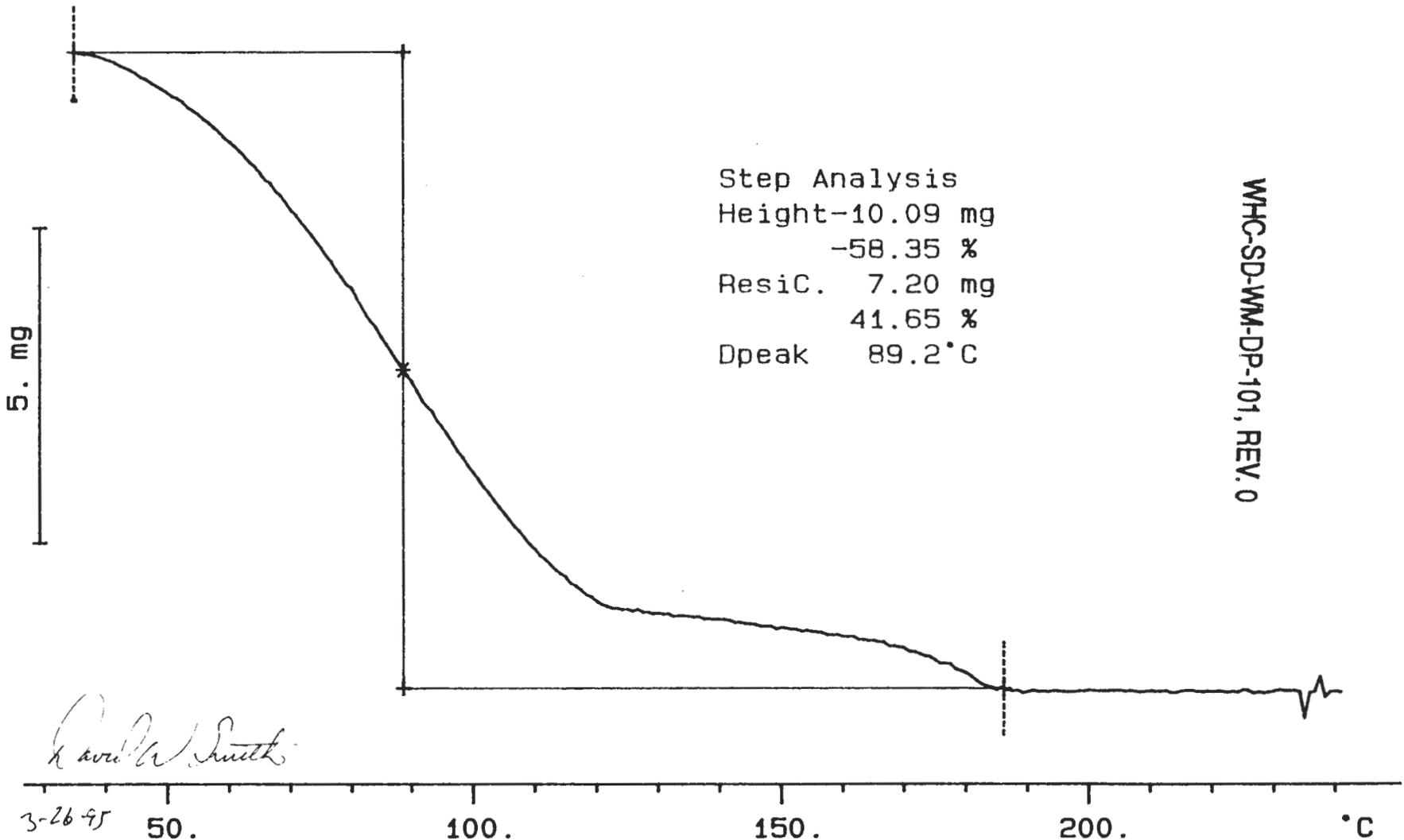
-58.35 %

ResiC. 7.20 mg

41.65 %

Dpeak 89.2 °C

WHC-SD-WM-DP-101, REV. 0



21

9513337.2023

S95T000235 (DUP) N2

34.552 mg

Rate: 10.0 °C/min

File: 00056.001

TG

METTLER

25-Mar-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-101, REV. 0

Step Analysis

Height-17.19 mg

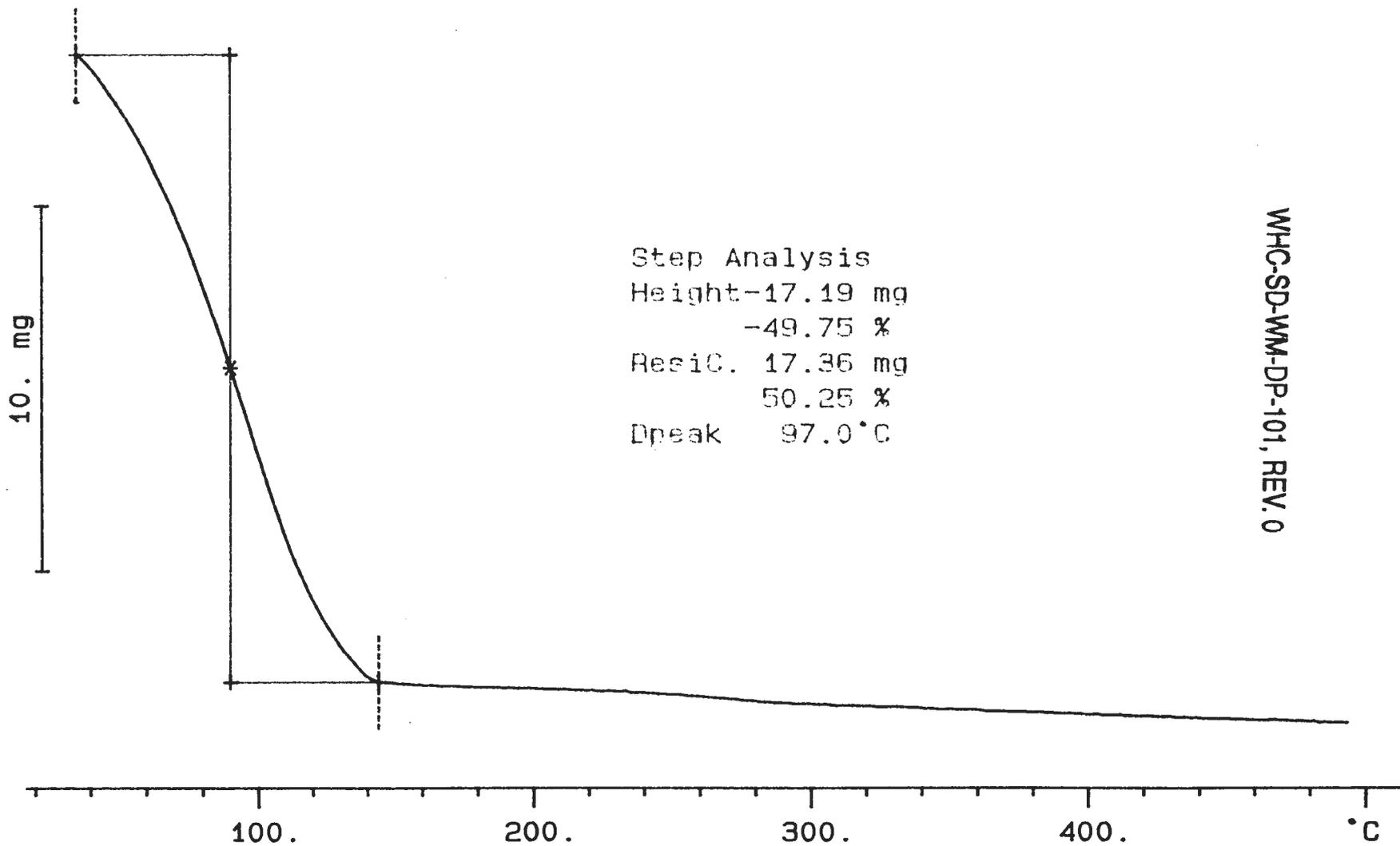
-49.75 %

Resid. 17.36 mg

50.25 %

Dpeak 97.0 °C

23



9513337.2025

S95T000240 N2

33.337 mg

Rate: 10.0 °C/min

File: 00058.001

TG

METTLER

25-Mar-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height-17.14 mg

-51.42 %

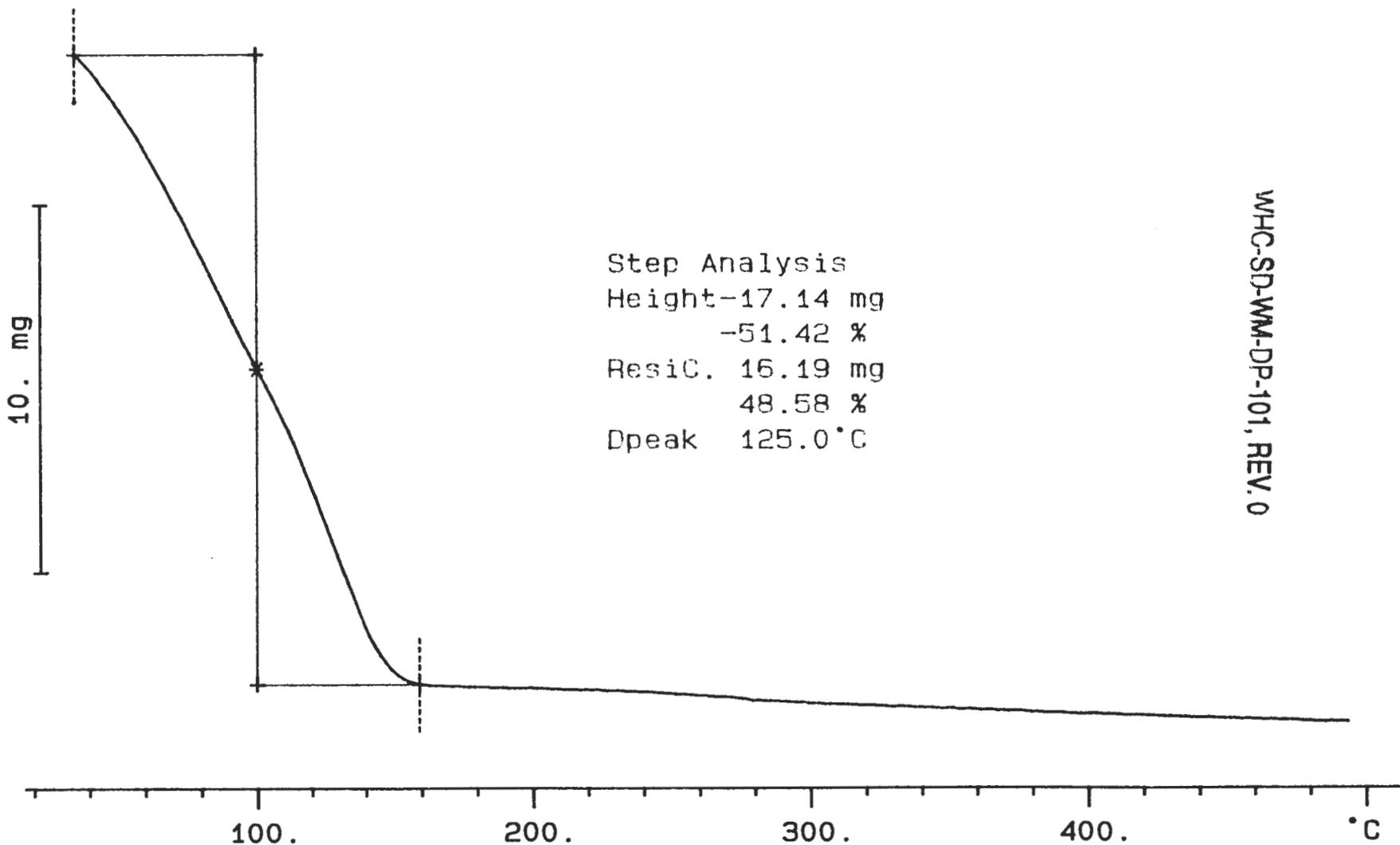
ResiC. 16.19 mg

48.58 %

Dpeak 125.0 °C

WHC-SD-WM-DP-101, REV. 0

24



9513557.2026

S95T000240 (DUP) N2

38.211 mg

Rate: 10.0 °C/min

File: 00060.001

TG

METTLER

25-Mar-95

Ident: 0.0

222-S Laboratory

22

10. mg

Step Analysis

Height-19.74 mg

-51.67 %

ResidC. 18.47 mg

48.33 %

Dpeak 93.0 °C

WHC-SD-WM-DP-101, REV.0

951337.2027

100.

200.

300.

400.

°C

LABCORE Data Entry Template for Worklist# 732

Analyst: JWS Instrument: TGA01 _____ Book # 42WB-A

Method: LA-560-112 Rev/Mod A2

Worklist Comment: Please run TY-104 TGA under N2. bdv WHC-SD-WM-DP-101, REV. 0

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.40</u>	<u>N/A</u>	%
95000016	TY-104	2 SAMPLE	S95T000316	0	TGA-01	SOLID	<u>N/A</u>	<u>53.23</u>		%
95000016	TY-104	3 DUP	S95T000316	0	TGA-01	SOLID	<u>53.23</u>	<u>49.95</u>	<u>N/A</u>	%

Final page for worklist # 732

[Signature] 3-26-95
Analyst Signature Date

[Signature] 3-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 3-30-95

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 27 TO 29.

TGA STD 42NB-A

16.020 mg

Rate: 10.0 °C/min

File: 00062.001

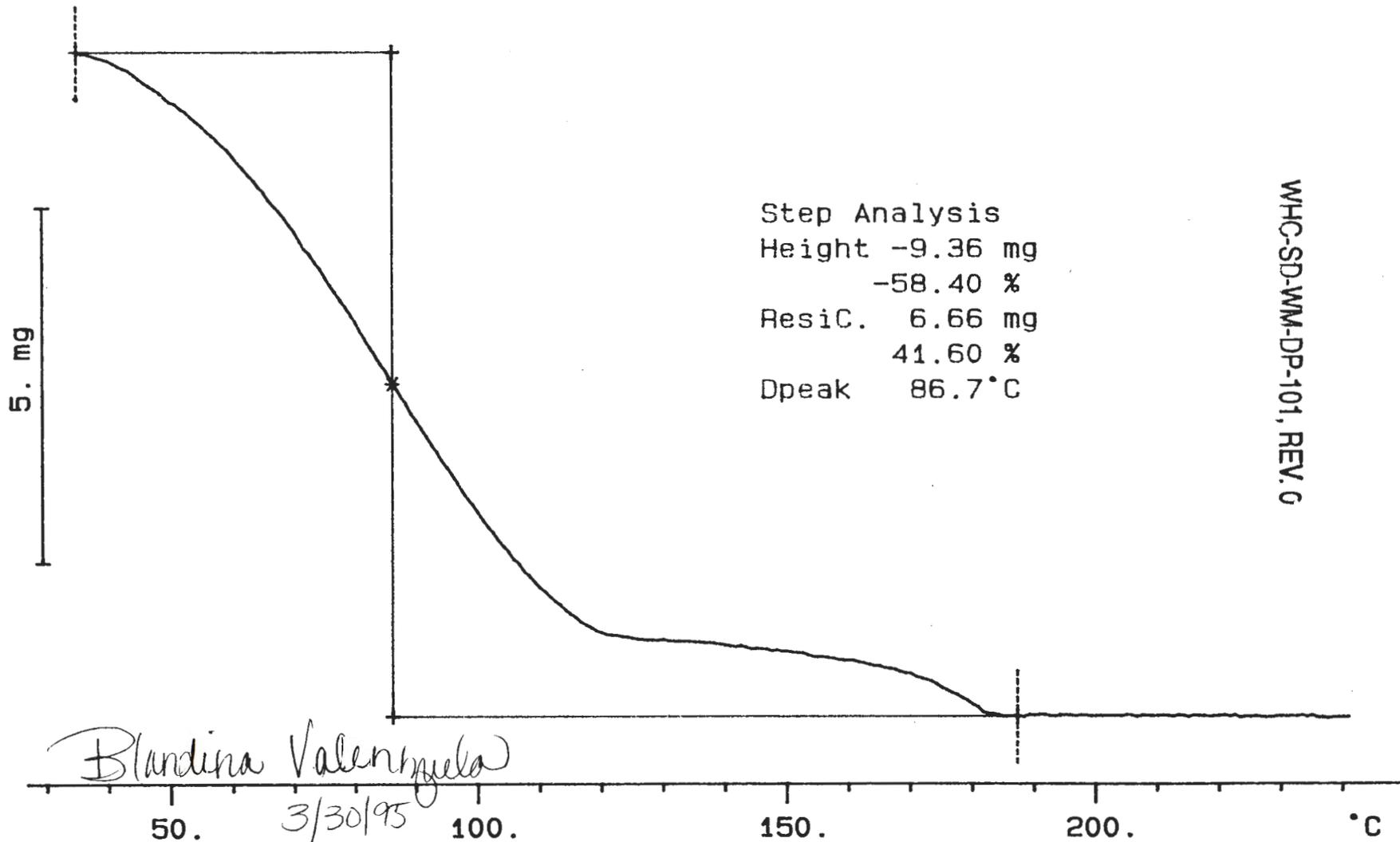
TG

METTLER

26-Mar-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DP-101, REV. 0

9513337.2029

S95T000316 N2

36.165 mg

Rate: 10.0 °C/min

File: 00064.001

TG

METTLER

26-Mar-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-101, REV.0

Step Analysis

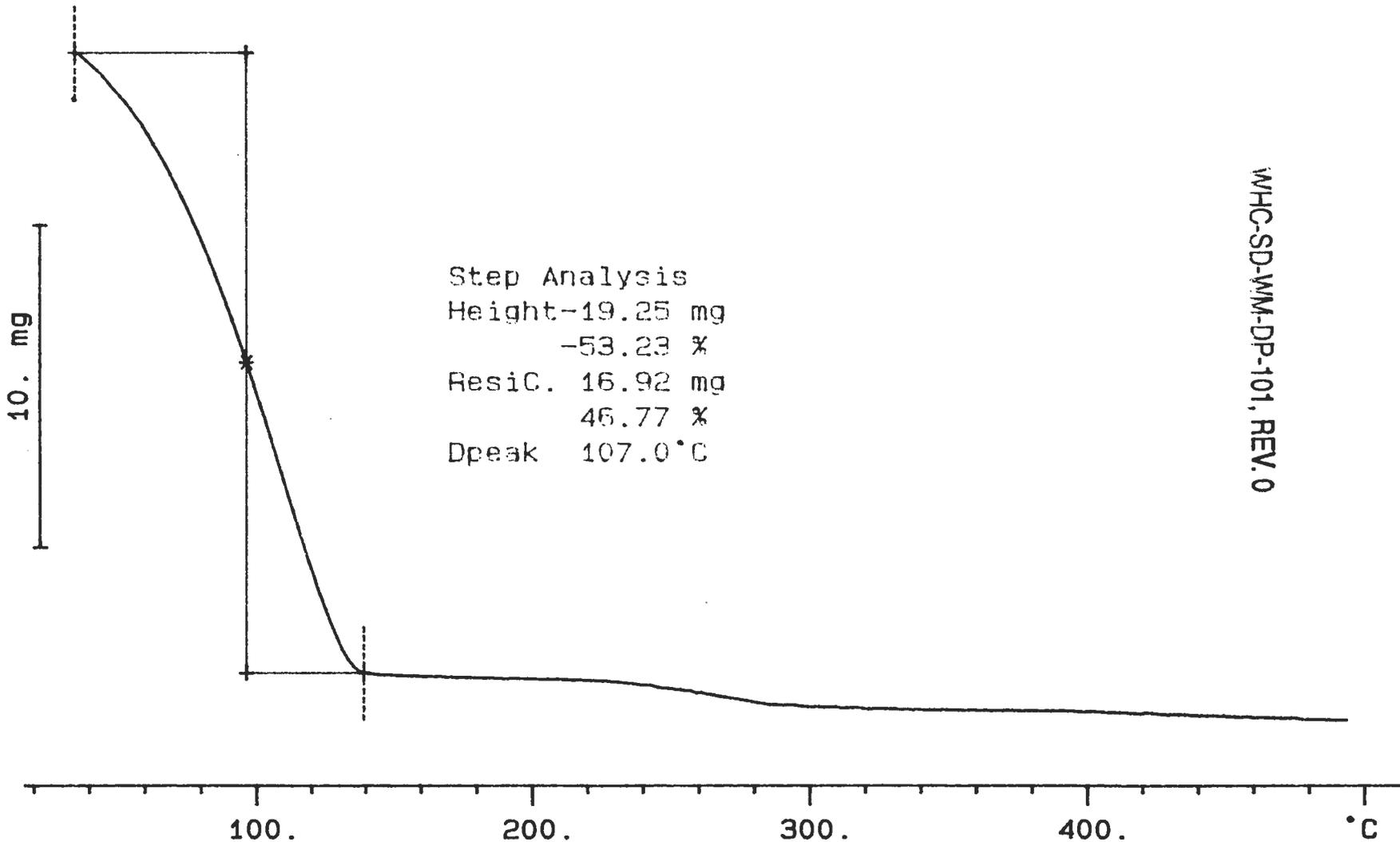
Height-19.25 mg

-53.23 %

Resid. 16.92 mg

46.77 %

Dpeak 107.0 °C



25

951337.2030

S95T000316 (DUP) N2

34.743 mg

Rate: 10.0 °C/min

File: 00066.001

TG

METTLER

26-Mar-95

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-101, REV. 0

Step Analysis

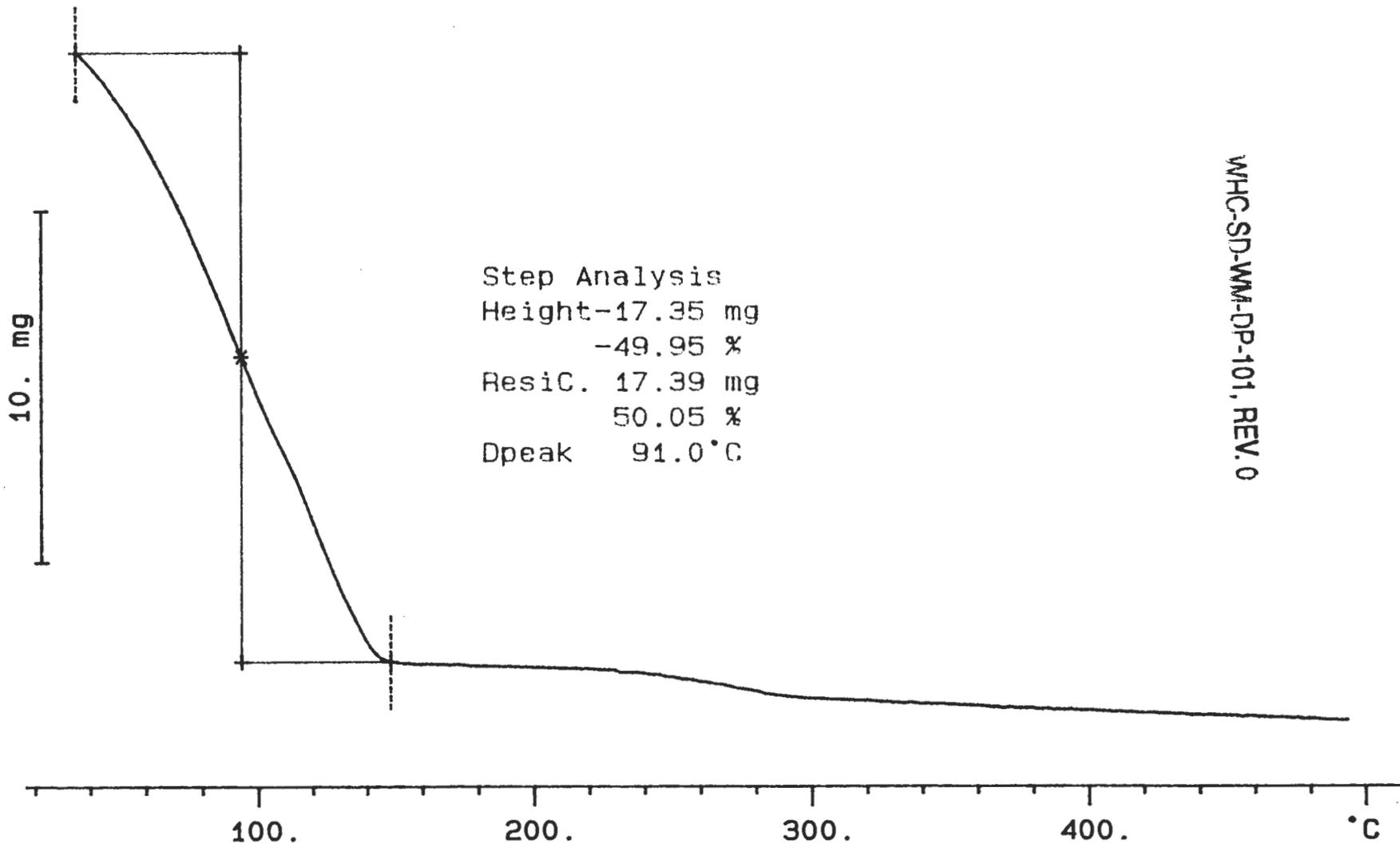
Height-17.35 mg

-49.95 %

ResiC. 17.39 mg

50.05 %

Dpeak 91.0 °C



62

9515537.2031

DISTRIBUTION SHEET

To DISTRIBUTION	From ANALYTICAL SERVICES	Page 1 of 2		
		Date:	04/06/95	
Project Title/Work Order WHC-SD-WM-DP-101, Rev. 0, "45-Day Safety Screen Results for Tank 241-TY-104, Auger Samples, 95-AUG-008 and 95-AUG-009"		EDT NO.:	EDT-610413	
		ECN NO.:	N/A	
Name	MSIN	Text With all Attach	EDT/ECN ONLY	
<u>Pacific Northwest Laboratory</u>				
J. R. Gormsen	K7-28		X	
S. J. Harris	K7-22	X		
K. L. Silvers	P7-27		X	
<u>U.S. Department of Energy, RL</u>				
C. A. Babel	S7-54	X		
<u>Westinghouse Hanford Company</u>				
J. N. Appel	G3-21		X	
R. J. Cash	S7-15	X		
J. L. Deichman	H4-19		X	
G. D. Forehand	S7-31	X		
C. E. Golberg	H5-49		X	
V. W. Hall	H4-21		X	
D. C. Hetzer	S6-31		X	
L. Jensen	T6-07	X		
G. D. Johnson	G1-19	X		
T. J. Kelly	S7-30	X		
N. W. Kirch	R2-11	X		
J. G. Kristofzski	T6-06		X	
M. J. Kupfer	H5-49	X		
E. J. Lipke	S7-14	X		
N. G. McDuffie	S7-15	X		
J. E. Meacham	S7-15	X		
G. L. Miller	T6-06		X	
P. M. Morant	H4-25	X		
P. Sathyanarayana	R2-12	2		
B. C. Simpson	R2-12	X		
D. A. Turner	S7-15	X		
J. A. Voogd	R4-01		X	
O. S. Wang	S7-15		X	
Central Files	L8-04	2		
EDMC	H6-08	X		
LTIC	T6-03		X	
OSTI	L8-07	2		
TFIC (Tank Farm Information Center)	R1-20		X	

DISTRIBUTION SHEET

To DISTRIBUTION	From ANALYTICAL SERVICES	Page 2 of 2		
		Date: 04/06/95		
Project Title/Work Order WHC-SD-WM-DP-101, Rev. 0, "45-Day Safety Screen Results for Tank 241-TY-104, Auger Samples, 95-AUG-008 and 95-AUG-009"		EDT NO.: EDT-610413		
		ECN NO.: N/A		
Name	MSIN	Text With all Attach	EDT/ECN ONLY	

Washington State Department of Ecology

Single-Shell Tank Unit Manager

S. E. McKinney

P.O. Box 47600

Olympia, Washington 98504-7600

X

Environmental Protection Agency

Single-Shell Tank Unit Manager

D. R. Einan

712 Swift Boulevard, Suite 5

Richland, Washington 99352

X

U. S. Department of Energy

Jim Poppiti

12800 Middlebrook Rd.

Trevion II, EM-36

Germantown, MD 20874

X

Los Alamos Technical Associates

A. T. DiCenso

750 Swift Boulevard

Suite # 4

Richland, WA 99352

X