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

DOCUMENT NUMBER: SD-WM-DP-082

SECTION ONE **OF** TWO

TITLE: 216-Day Final Report for Tank 241-C-108, Auger Samples 94-Aug-012, 94-Aug-014, 94-Aug-015 and Push Mode, Core 61

DATE: August, 1996

ORIGINATOR: Esch, RA

CO: WHC

RECIPIENT:

CO:

REFERENCES:

COMPLETE

ENGINEERING CHANGE NOTICE

1. ECN № 623827

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	3a. USQ Required?	4. Date
Supplemental [] Direct Revision [X] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	R. A. Esch, Program Support, T6-06, 373-4314	[] Yes [X] No	07/14/95
	5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Approval Designator
	Tank 241-C-108, Auger Samples and Push Mode	N/A	Q
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.)	9. Related ECN No(s).	10. Related PO No.
	WHC-SD-WM-DP-082, Rev. 0	N/A	N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

This ECN is being generated in order to update/add additional information to the existing document.

13a. Justification (mark one)

Criteria Change	[]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[X]

13b. Justification Details

This ECN will complete the documentation process for this document.

14. Distribution (include name, MSIN, and no. of copies)

See Attached Distribution Sheet.

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OFFICIAL RELEASE BY WHC (2)
DATE JUL 18 1995
Sta 4

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): ECN-623827

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

OPERATIONS AND ENGINEERING	Signature	Date	ARCHITECT-ENGINEER	Signature	Date
Cog. Eng. R.A. Esch	Ruth A. Esch	7-17-95	PE		
Cog. Mgr. A.D. Rice	Arnold D. Rice	7-15-95	QA		
QA T.L. Tung	Tyn Li Tung (see note)	7-17-95	Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

note: Reviewed for requirements of Form IV. T.L. 7/17/95

RELEASE AUTHORIZATION

Document Number:	WHC-SD-WM-DP-082, REV 1
Document Title:	45-Day Final Report for Tank 241-C-108, Auger Samples 94-AUG-012, 94-AUG-014, 94-AUG-015 and Push Mode, Core 61
Release Date:	7/18/95

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 7/18/95

Kara M. Broz

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SUPPORTING DOCUMENT

1. Total Pages 1027

2. Title	3. Number	4. Rev No.
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5. Key Words	6. Author
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7. Abstract

N/A

8. RELEASE STAMP

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RECORD OF REVISION	(1) Document Number WHC-SD-WM-DP-082	Page A

(2) Title

216-Day Final Report for Tank 241-C-108, Auger Samples 94-AUG-012, 94-AUG-014, 94-AUG-015 and Push Mode, Core 61

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-082, REV. 1

ANALYTICAL SERVICES

216-DAY FINAL REPORT FOR TANK 241-C-108, AUGER SAMPLES 94-AUG-012, 94-AUG-014, 94-AUG-015 AND PUSH MODE, CORE 61

Date Printed: JULY 17, 1995

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PART I

WHC-SD-WM-DP-082, REV. 1

45-DAY SAFETY SCREEN RESULTS FOR TANK 241-C-108, AUGERS 94-012, 94-014, AND 94-015 PUSH MODE, CORE 61

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NARRATIVE

45 DAY SAFETY SCREEN RESULTS FOR TANK 241-C-108 AUGERS 94-012, 94-014, 94-015

Summary

Three auger samples from tank C-108 were received by the 222-S laboratories. These samples underwent safety screening analysis (DSC, TGA, and Alpha Total) in accordance with reference below. No results exceeded the notification criteria.

Sample Receipt and Extrusion

Riser 7

Due to the calculated depth of sludge at riser 7, two augers were used to sample the sludge. The first (94-AUG-012) was a ten inch auger, the second (94-AUG-014) was a 20 inch auger.

Auger 94-AUG-012

Auger 94-AUG-012 was sampled on 11/18/94, and received at the 222-S laboratory on 11/21/94. Extrusion took place on 11/22, with the total amount of solid material recovered being about 95 grams. No drainable liquid was recovered. The sample recovery, based on an expected sample length of 10 inches, was 33 percent. The solid material was yellow to brown in color, crumbly in texture, and was deposited along the entire length of the auger, with the heaviest accumulation being on the uppermost flutes (flutes 1 and 2). To test for the presence of an upper layer, the sample was segregated into two portions, with flutes 1 and 2 (containing 29 grams) being designated as quarter segment A1, and the remainder of the auger, flutes 3-9 (containing 67 grams), being designated as quarter segment A2. Results for quarter segment A1 appear on page one of the summary table as sample numbers S94T000288 and S94T000289. Results for quarter segment A2 appear as sample numbers S94T000290 and S94T000296.

Auger 94-AUG-014

Auger 94-AUG-014 was sampled on 11/18/94, and received at the 222-S laboratory on 11/21/94. Extrusion took place on 11/22, with the total amount of solid material recovered being about 349 grams. No drainable liquid was recovered. The sample recovery, based on an expected sample length of 9 inches, was 100 percent. The solid material was tan in color, more moist and paste-like in appearance than the auger 12 sample. The sample was deposited on all but the two uppermost flutes of the auger (flutes 1 and 2). The heaviest accumulation was observed on the lower half of the auger (flutes 10-19). The solids were segregated into two portions, with flutes 3-13 (containing 206 grams) being designated as quarter segment B, and flutes 14-19 (containing 143 grams) being designated as quarter segment C. Results for these quarter segments appear on page 2 of the summary table.

Riser 4

One 20 inch auger (94-AUG-015) was used to sample the tank C-108 contents at riser 4.

Auger 94-AUG-015

Auger 94-AUG-015 was sampled on 12/12/94, and received at the 222-S laboratory on 12/14/94. Extrusion took place on 12/15, with the total amount of solid material recovered being about 295 grams. No drainable liquid was recovered. The expected sample length was 21 inches. The sample recovery was not calculated. The solid material was tan in color, moist and paste-like in appearance, with an off white material embedded throughout. The sample was distributed along the entire length of the auger. The off white chunks were hard, and could not be homogenized. If this material represented a discreet layer, then a significant amount of mixing occurred during the sampling process. Auger 15 was segregated into quarter segments, with flutes 1-4 designated as quarter segment A (105 grams), flutes 5-9 as quarter segment B (70 grams), flutes 10-14 as quarter segment C (55 grams), and flutes 15-19 as quarter segment D (65 grams). Results for these quarter segments appear on page 3 of the summary table.

Analytical Results

TGA (Moisture)

The weight percent water by Thermogravimetric Analysis (TGA) was performed utilizing procedure LA-560-112 with a nitrogen purge. All results were above the notification (Action) limit, therefore no notifications were made. Sample S94T000288, auger 12 quarter segment A1, exceeded the Tank Characterization Plan (TCP) precision criteria of 10% with a Relative Percent Deviation (RPD) between the sample and duplicate of 135. A rerun was requested and analyzed. The rerun result substantiated the apparent heterogeneous nature of the sample. The initial sample result was 15.35% water, its duplicate was 2.99%, and the rerun was 6.01%. Sample S94T000290, auger 12 quarter segment A2, demonstrated very much the same behavior. The sample result was 9.94% water, the duplicate was 27.66%, and the rerun was 11.98%. Rerun results are available in the raw data, but do not appear on the summary table. Two other samples (S94T000292/361) also exceeded the 10% precision criteria, but by a much smaller amount. These samples were not rerun due to the high dose rate of the samples, and the low probability of improving the results, which is a factor of the small amount of sample used (10-20mg) and the homogeneity problems mentioned above. All samples met the TCP accuracy criteria of 10%.

DSC

Differential thermal analyses were performed using procedure LA-514-113, and a Mettler Model 20 Differential Scanning Calorimeter (DSC) under a nitrogen purge. There were no results which exceeded the safety screen notification (Action) limit of 482 joules/g. Two samples (S94T000291/292) exceeded the TCP limit for precision. No rerun was requested due to the small exotherm in each case, the dose rate, and the heterogeneous behavior of these samples. All samples met the TCP accuracy criteria.

Alpha Total

The Alpha Total analyses were performed using procedure LA-508-101. Most of the alpha results for C-108 were below the detection limit. This is due to the very high beta to alpha activity ratio in these samples. Large dilutions are necessary to reduce the beta activity on the sample mount to acceptable levels. The "less than" values reported are significantly below the notification limit. Samples S94T000296 and S94T000298 each had one result above the detection limit, but were still significantly below the notification limit. The TCP requested Alpha Total analysis on a half segment level. Results have been provided on a quarter segment level to make use of existing fusion preparations performed for ICP analyses. The effort involved to provide the additional alpha results is minimal. Spike results were required once for each matrix, but have been provided on a more frequent basis. All spike results met the TCP requirements. The TCP accuracy criteria was met in each case.

Reference

WHC-SD-WM-TP-211, REV. 0, "Tank 241-C-108 Tank Characterization Plan", dated October 26, 1994, Westinghouse Hanford Company, Richland, WA 99352

SAMPLE DATA SUMMARY

45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-012

SEGMENT PORTION: A Top Quarter 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%
S94T000288			% Water by TGA using Mettler	%	n/a	101.000	99.56	n/a	15.35	2.99	9.170	135	n/a	0.000	n/a
S94T000288			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000288			DSC Exotherm using Mettler	Joules/g	n/a	n/a	104.7	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000289			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<2.88e-02	< 4.70e-2	<5.01e-2	n/a	n/a	81.00	0.066	500
S94T000290			% Water by TGA using Mettler	%	n/a	101.000	99.56	n/a	9.94	27.66	18.80	94.3	n/a	0.000	n/a
S94T000290			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000290			DSC Exotherm using Mettler	Joules/g	n/a	n/a	100.5	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000296			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<2.88e-02	< 5.88e-2	1.08e-1	n/a	n/a	88.90	0.063	231.9

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-082, REV. 1

45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-014

SEGMENT PORTION: B Second Quarter 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%
S94T000292			% Water by TGA using Mettler	%	n/a	101.000	98.68	n/a	32.97	39.15	36.06	17.1	n/a	0.000	n/a
S94T000292			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	50.3	35.5	42.90	34.5	n/a	0.000	n/a
S94T000292			DSC Exotherm using Mettler	Joules/g	n/a	n/a	98.42	n/a	33.7	21.6	27.65	43.8	n/a	0.000	n/a
S94T000298			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<3.17e-02	4.81e-2	<4.25e-2	n/a	n/a	n/a	0.071	92.9

SEGMENT PORTION: C Third Quarter 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%
S94T000291			% Water by TGA using Mettler	%	n/a	101.000	98.68	n/a	45.76	46.28	46.02	1.13	n/a	0.000	n/a
S94T000291			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	102.1	116.3	109.2	13.0	n/a	0.000	n/a
S94T000291			DSC Exotherm using Mettler	Joules/g	n/a	n/a	105.4	n/a	55.4	62.5	58.95	12.0	n/a	0.000	n/a
S94T000297			Alpha of Digested Solid	uCi/g	n/a	41.000	89.24	<3.17e-02	< 3.17e-2	<3.17e-2	n/a	n/a	n/a	0.073	196.0

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=> Selected Limit

WHC-SD-WM-DP-082, REV. 1

45 DAY SAFETY SCREEN RESULTS FOR C-108 94-AUG-012/014/015
C-108

CORE NUMBER: n/a
SEGMENT #: 94-AUG-015

SEGMENT PORTION: A Top Quarter 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%
S94T000361			% Water by TGA using Mettler	%	n/a	101.000	100.0	n/a	51.85	46.8	49.33	10.2	n/a	0.000	n/a
S94T000361			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000361			DSC Exotherm using Mettler	Joules/g	n/a	n/a	99.12	n/a	0	0	0.000	0.00	n/a	0.000	n/a
S94T000367			Alpha of Digested Solid	uCi/g	n/a	41.000	99.02	<2.65e-02	< 3.41E-2	<3.41E-2	n/a	n/a	91.10	0.062	500

SEGMENT PORTION: B Second Quarter 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%
S94T000362			% Water by TGA using Mettler	%	n/a	101.000	100.0	n/a	48.57	50.45	49.51	3.80	n/a	0.000	n/a
S94T000362			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000362			DSC Exotherm using Mettler	Joules/g	n/a	n/a	99.12	n/a	0	0	0.000	0.00	n/a	0.000	n/a
S94T000368			Alpha of Digested Solid	uCi/g	n/a	41.000	99.02	<2.65e-02	< 2.90E-2	<3.61E-2	n/a	n/a	87.60	0.068	500

SEGMENT PORTION: C Third Quarter 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%
S94T000363			% Water by TGA using Mettler	%	n/a	101.000	98.48	n/a	52.97	52.41	52.69	1.06	n/a	0.000	n/a
S94T000363			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000363			DSC Exotherm using Mettler	Joules/g	n/a	n/a	102.3	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000369			Alpha of Digested Solid	uCi/g	n/a	41.000	97.17	<3.97e-02	< 3.63E-2	<3.62E-2	n/a	n/a	92.40	0.067	500

SEGMENT PORTION: D Bottom Quarter 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%
S94T000364			% Water by TGA using Mettler	%	n/a	101.000	98.48	n/a	47.79	49.23	48.51	2.97	n/a	0.000	n/a
S94T000364			DSC Exotherm Dry Calculated	Joules/g Dry	n/a	482.000	n/a	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000364			DSC Exotherm using Mettler	Joules/g	n/a	n/a	102.3	n/a	0	0	0.000	n/a	n/a	0.000	n/a
S94T000370			Alpha of Digested Solid	uCi/g	n/a	41.000	96.28	<2.41e-02	< 1.67E-1	<2.46e-2	n/a	n/a	85.60	0.057	459.7

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-062, REV. 1

SAMPLE ANALYSES RESULTS

LABCORE Data Entry Template for Worklist# 186

C108

Analyst: KLV **Instrument:** DSC01 **Method:** LA-514-113 ~~B-0~~ B-1 LAD 1-25-95

Worklist Comment: Please run C-108 under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12N14A			DSC-01	SOLID			N/A	Joule/g
2	SAMPLE	S94T000288	0		DSC-01	SOLID	N/A			Joule/g
3	DUP	S94T000288	0		DSC-01	SOLID			N/A	Joule/g
4	STD				DSC-01	SOLID			N/A	Joule/g
5	SAMPLE	S94T000290	0		DSC-01	SOLID	N/A			Joule/g
6	DUP	S94T000290	0		DSC-01	SOLID			N/A	Joule/g

Final page for worklist # 186

LAD 1-30-95

Analyst Signature

Date

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: See other copy of 186 for data JMF 12/6/94

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 186

Analyst: KLV Instrument: DSC01 _____ Method: LA-514-113 B-1

Worklist Comment: Please run C-108 under N2. JMF

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1 STD	12N14A		DSC-01	SOLID	28.45	29.8	N/A	Joule
2 SAMPLE	S94T000288	0	DSC-01	SOLID	N/A	~~654.0~~ JMF 12/5/94		Joule
3 DUP	S94T000288	0	DSC-01	SOLID	0	0	N/A	Joule
STD	12N14A				28.45	28.6		
4 SAMPLE	S94T000290	0	DSC-01	SOLID	N/A	0		Joule
5 DUP	S94T000290	0	DSC-01	SOLID	0	0	N/A	Joule

Final page for worklist # 186

Analyst Signature

Date 12/2/94

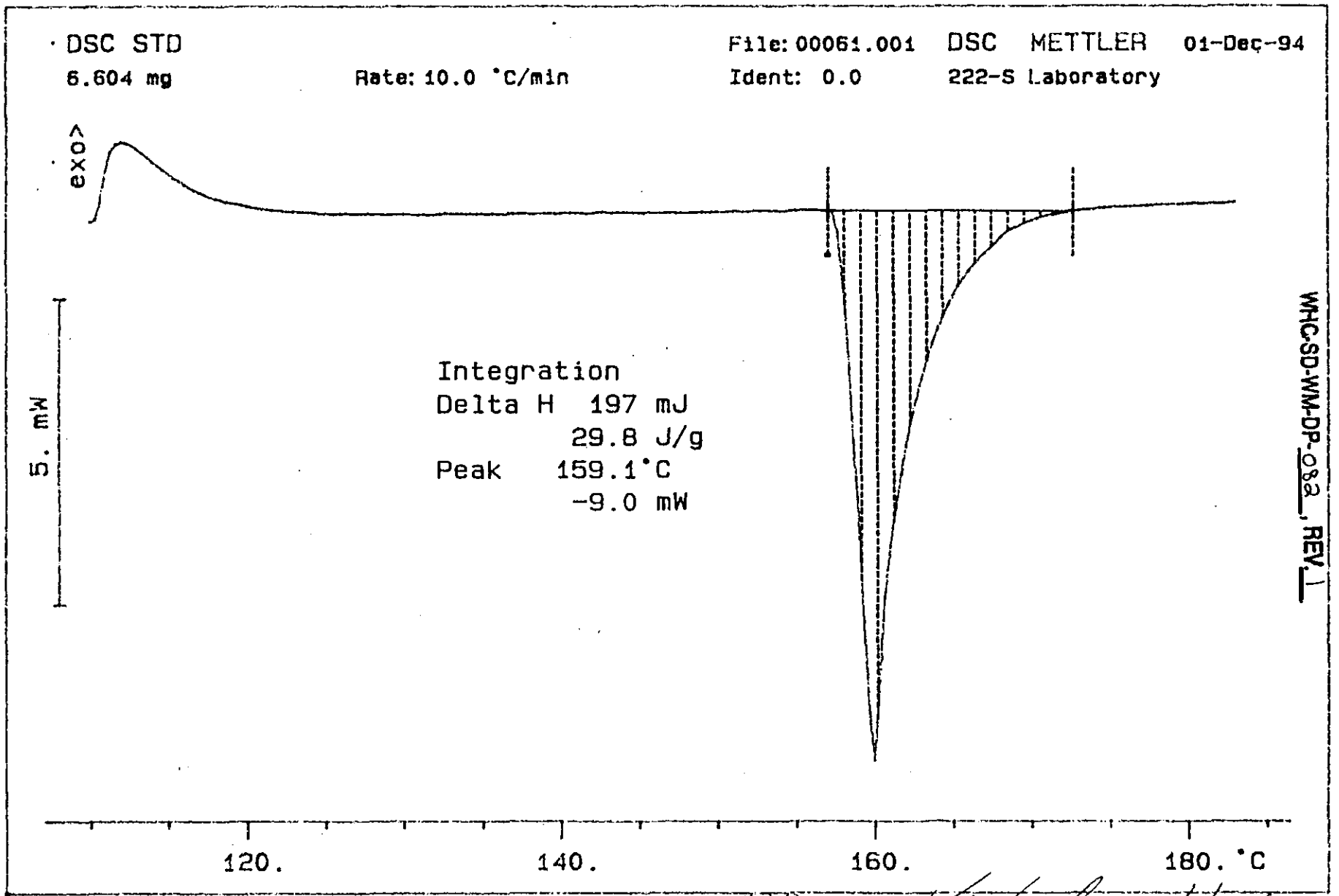
WHC-SD-WM-DP-082, REV. 1

Data entered & verified by B.D. Valenzuela 12/6/94

Data Entry Comments:
12N14A S94T000288 has two endotherms of 453.7 J/g at 110.2°C and 658.1 J/g at 286.3°C; duplicate 366.1 J/g at 112.8°C and 744.3 J/g at 279.3°C. S94T000290 has two endotherms of 512.5 J/g at 122.8°C and 439.6 J/g at 278.3°C; duplicate 397.2 J/g at 112.1°C and 643.1 J/g at 286.2°C. J.M. Fuge 12/5/94

Units shown for QC (SPK) may not reflect the actual units.

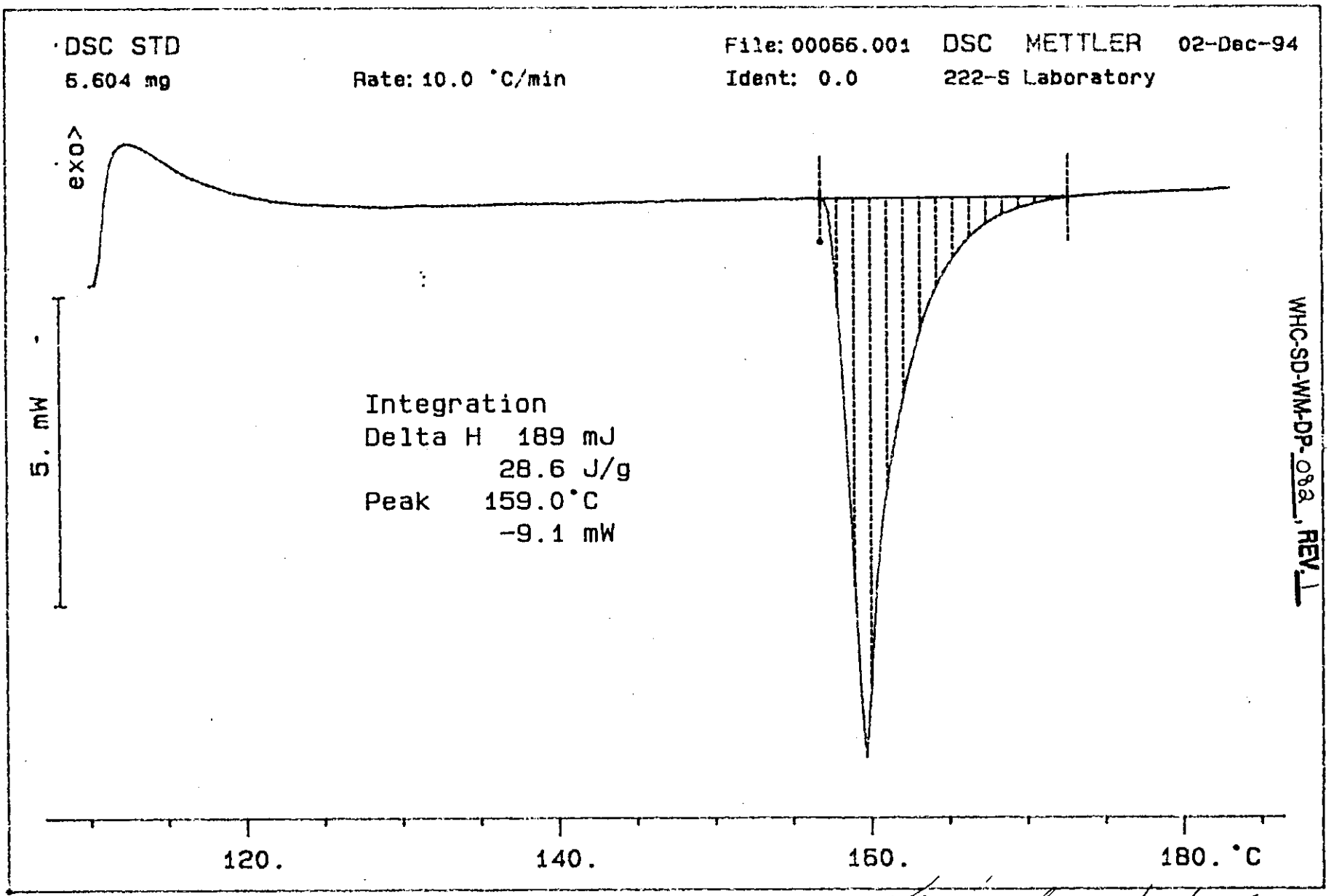
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 13 TO 18.



WHC-SD-WM-DP-082, REV. 1

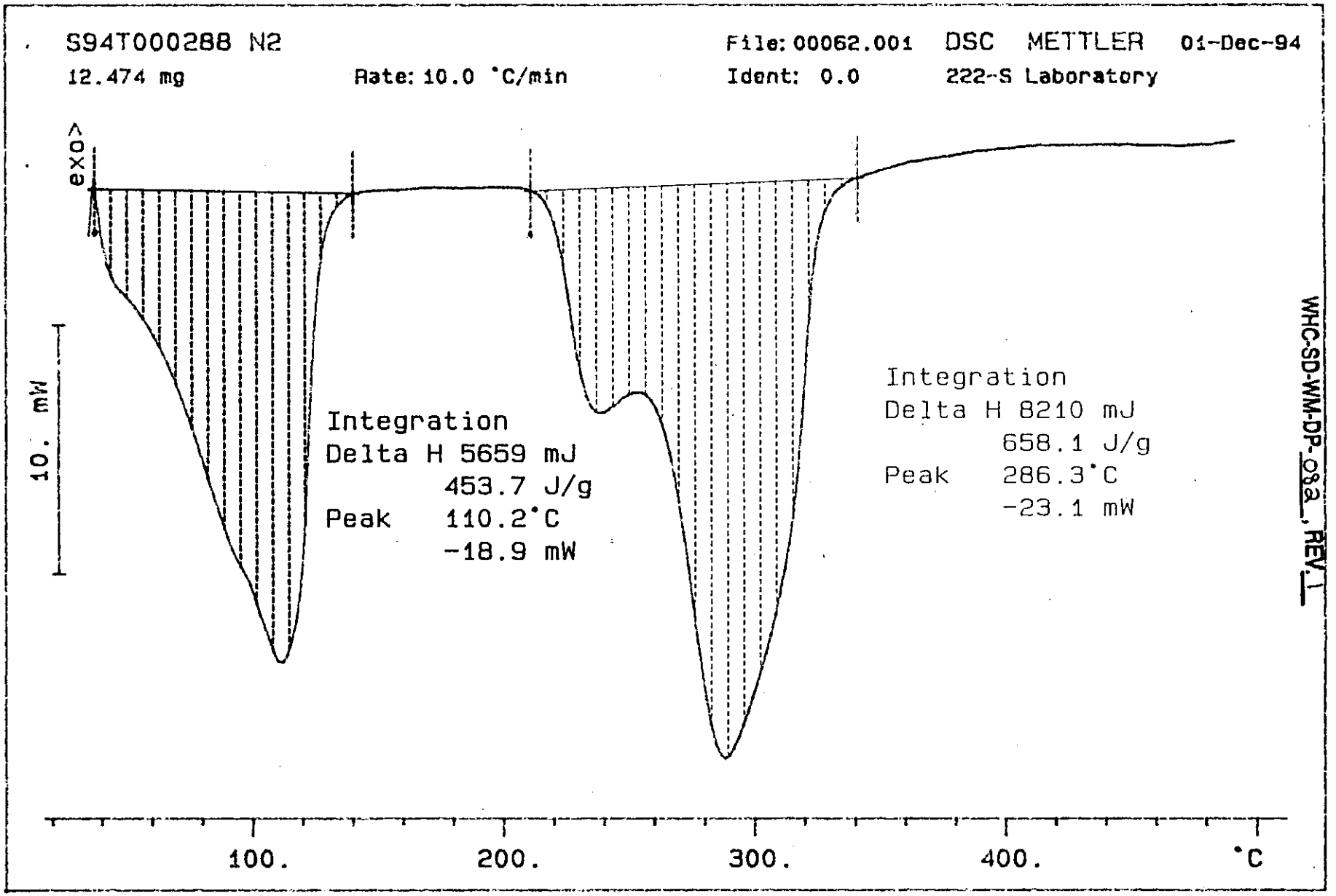
12N14

LAD 12-5-95 ~~42N8A~~ 12/1/94

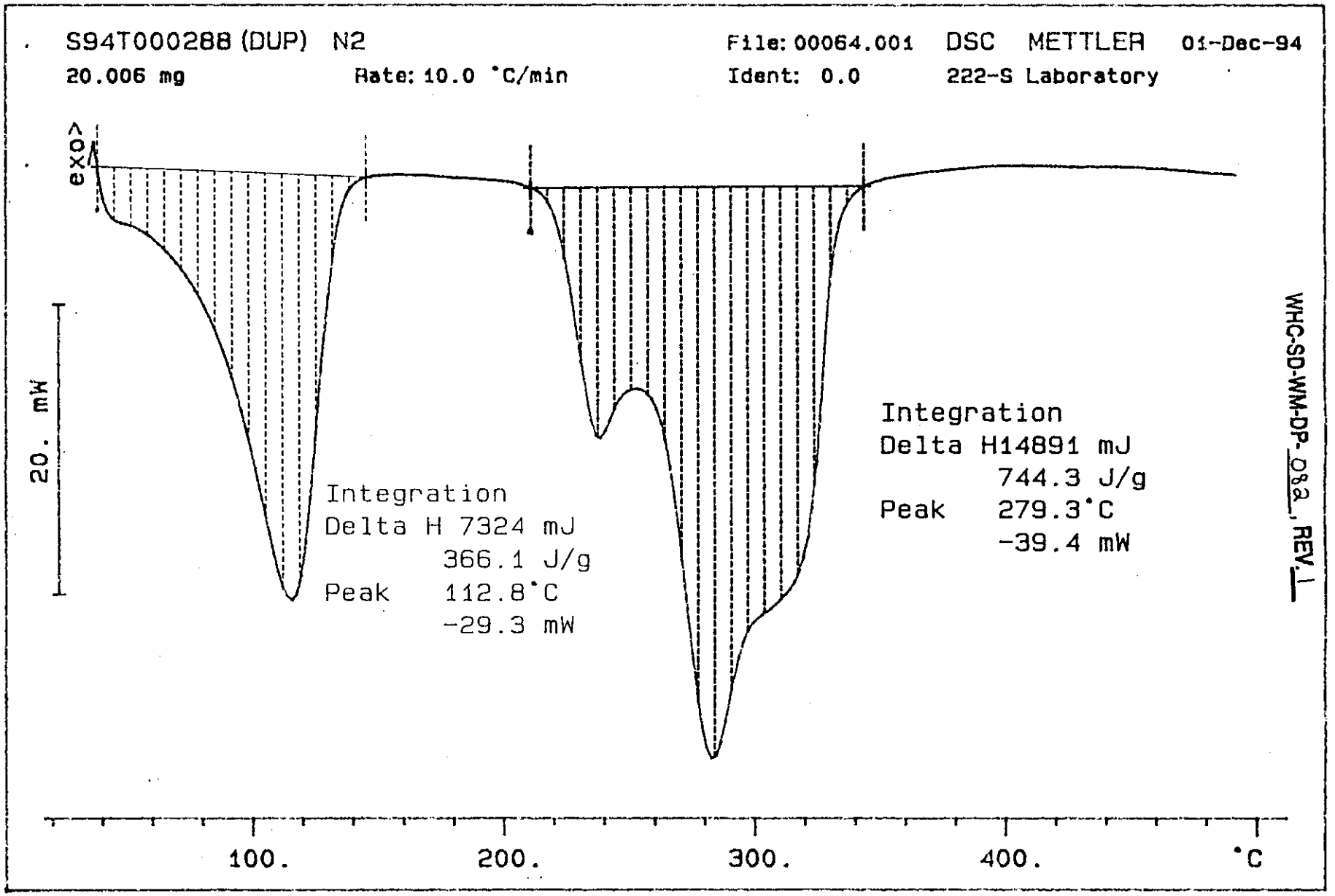


WHC-SD-WM-DP-088, REV. 1

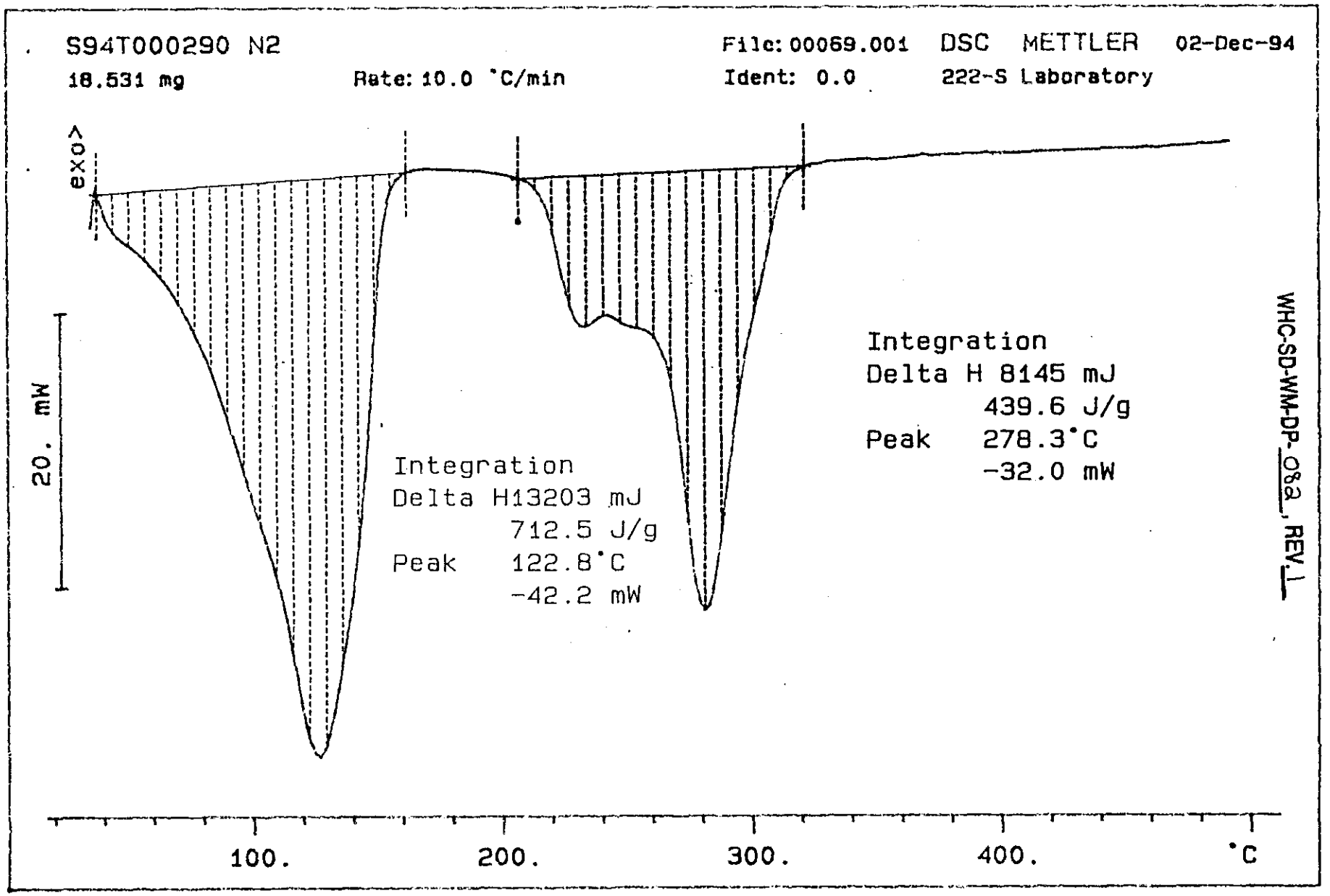
12/2/94



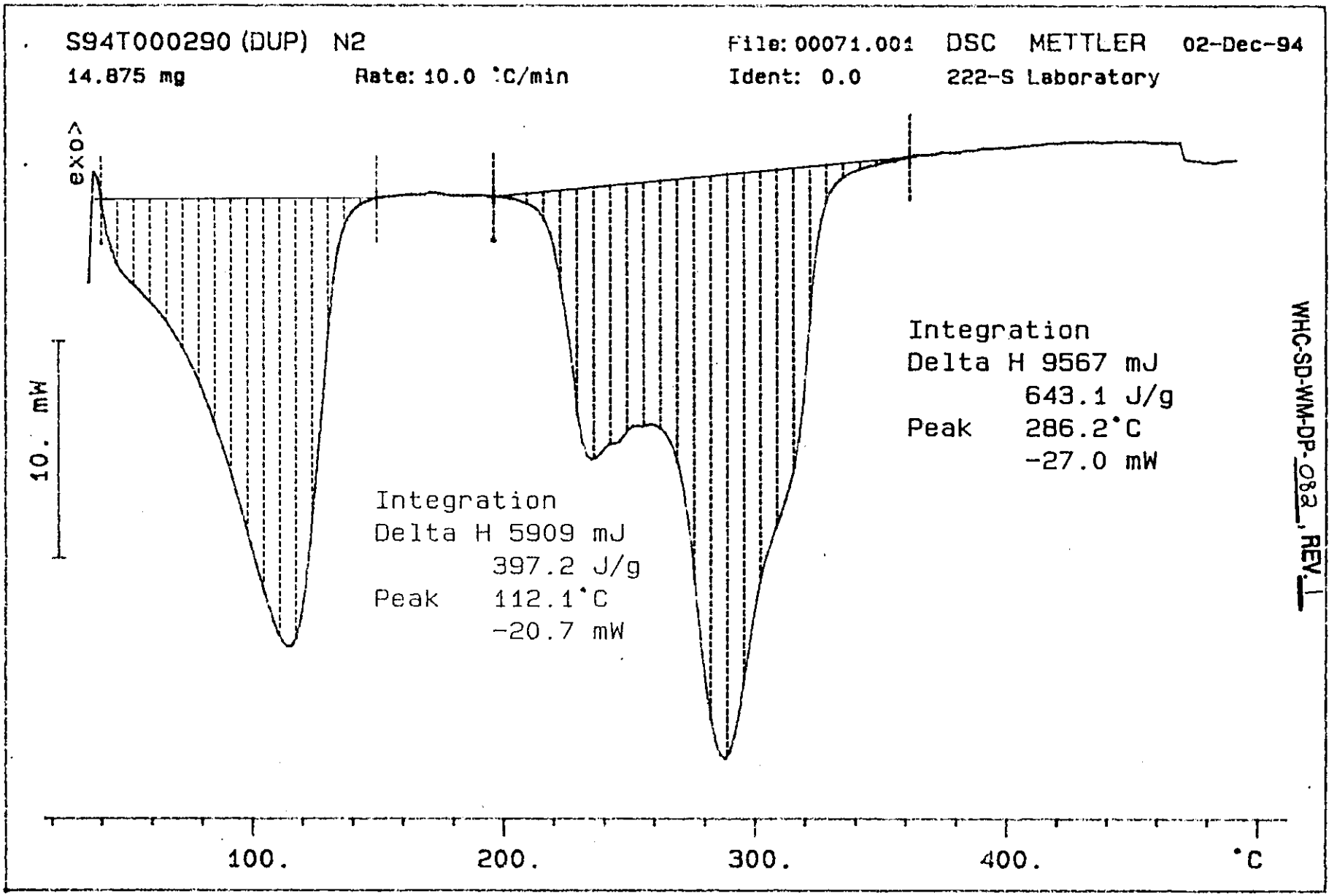
WHC-SD-WM-DP-098, REV. 1



WHC-SD-WM-DP-O&a, REV. 1



WHC-SD-WM-DP-O&a, REV.1



WHC-SD-WM-DP-082, REV. 1

10A

LABCORE Data Entry Template for Worklist# 187

Analyst: DWS **Instrument:** DSC01 _____ **Method:** LA-514-113 ~~B-0~~ B-1 JMF 1/25/95

Worklist Comment: Please run C-108 samples N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	412N14-A			DSC-01	SOLID	28.45	30.0	N/A	Joule/g
2	SAMPLE	S94T000291	0		DSC-01	SOLID	N/A	55.4		Joule/g
3	DUP	S94T000291	0		DSC-01	SOLID	55.4	62.5	N/A	Joule/g
4	SAMPLE	S94T000292	0		DSC-01	SOLID	N/A	25.2		Joule/g
5	DUP	S94T000292	0		DSC-01	SOLID	25.2	19.2	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 187

[signature]
Analyst Signature

11-30-94
Date

WHC-SD-WM-DP-082, REV. 1

Verified 12/7/94. Re run put out on S94T000292. J M Fuge
Re run was not requested for S94T000291 because 30 J/g is the upper administrative limit for the standard. JMF 12/7/94

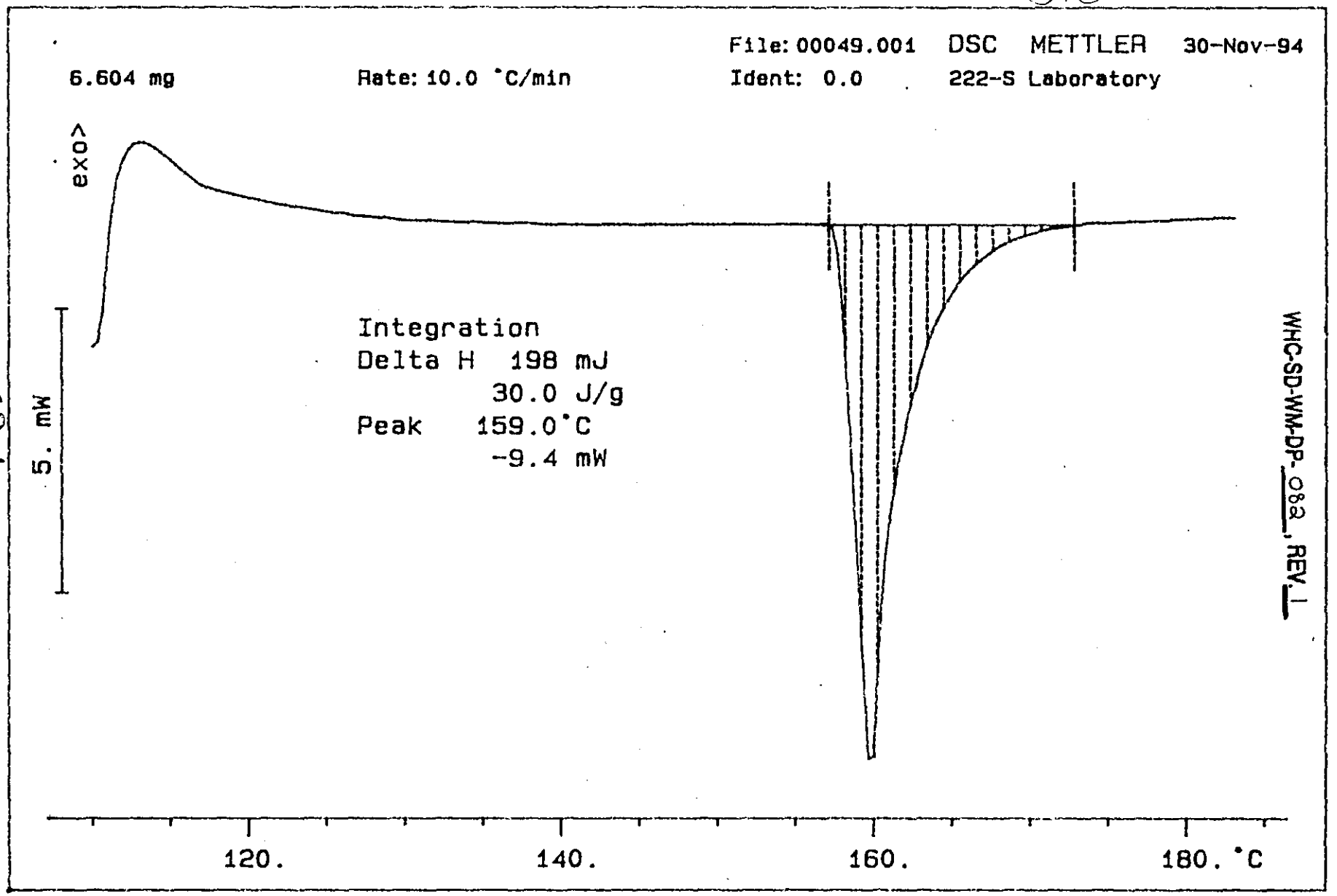
Data Entry Comments:
S94T000291 has two endotherms ~~at~~ of 950.1 J/g at 124.8°C and 140.4 J/g at 283.7°C; Duplicate has 1072.3 J/g at 118.6°C and 114.6 J/g at 278.2°C. The exotherm is at ~~325~~ 325 JMF 1/25/95 °C. S94T000292 has two endotherms of 1050.8 J/g at 127°C and 171.5 J/g at 279.1°C; duplicate has 773.9 J/g at 119.3°C and 254.7 J/g at 282.6°C. The exotherm is at 330°C. J.M. Fuge 12/1/94. See Reports #49 & #50. 9JL. Data Entered 12-2-94 9JL

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 19 TO 23.

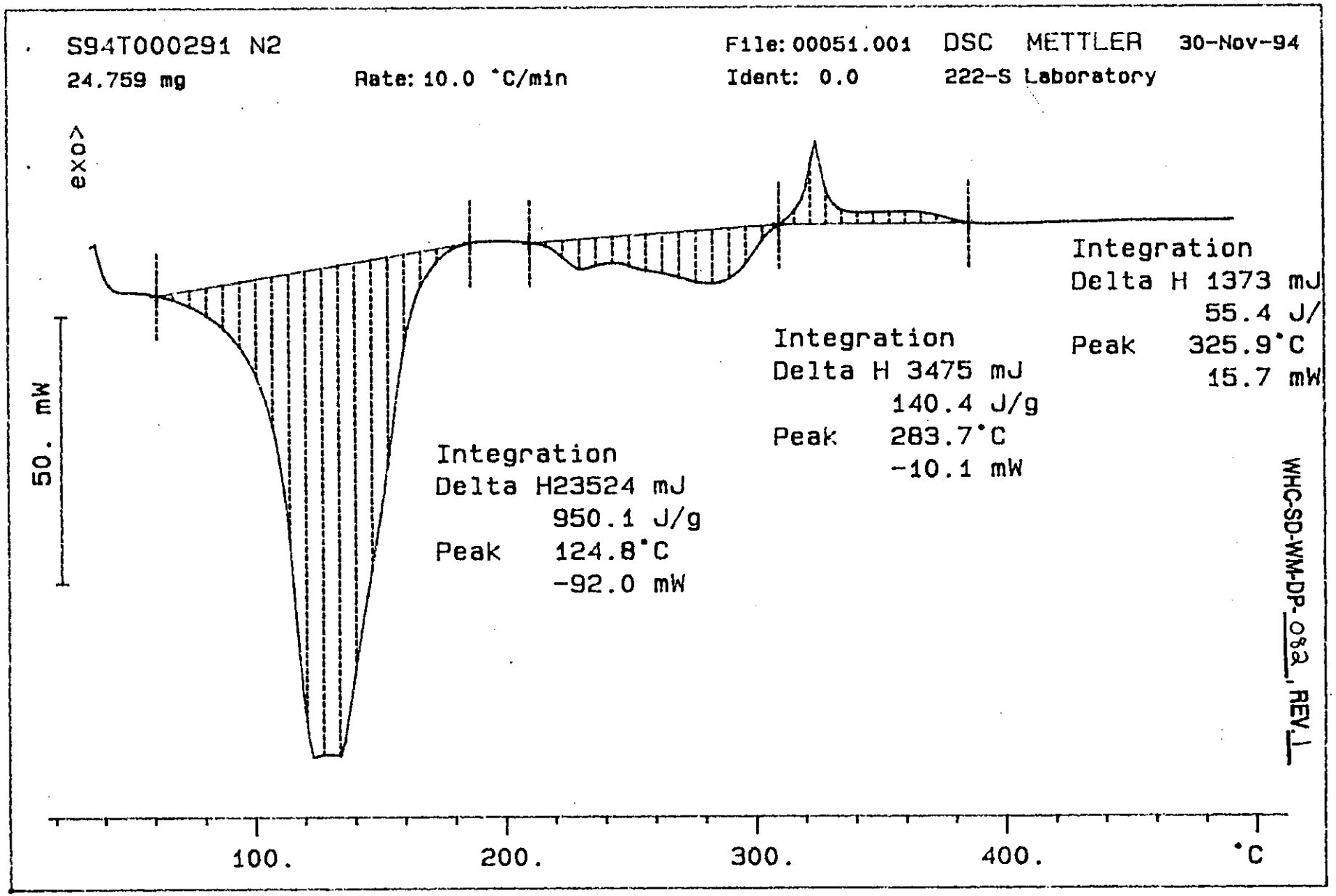
Std



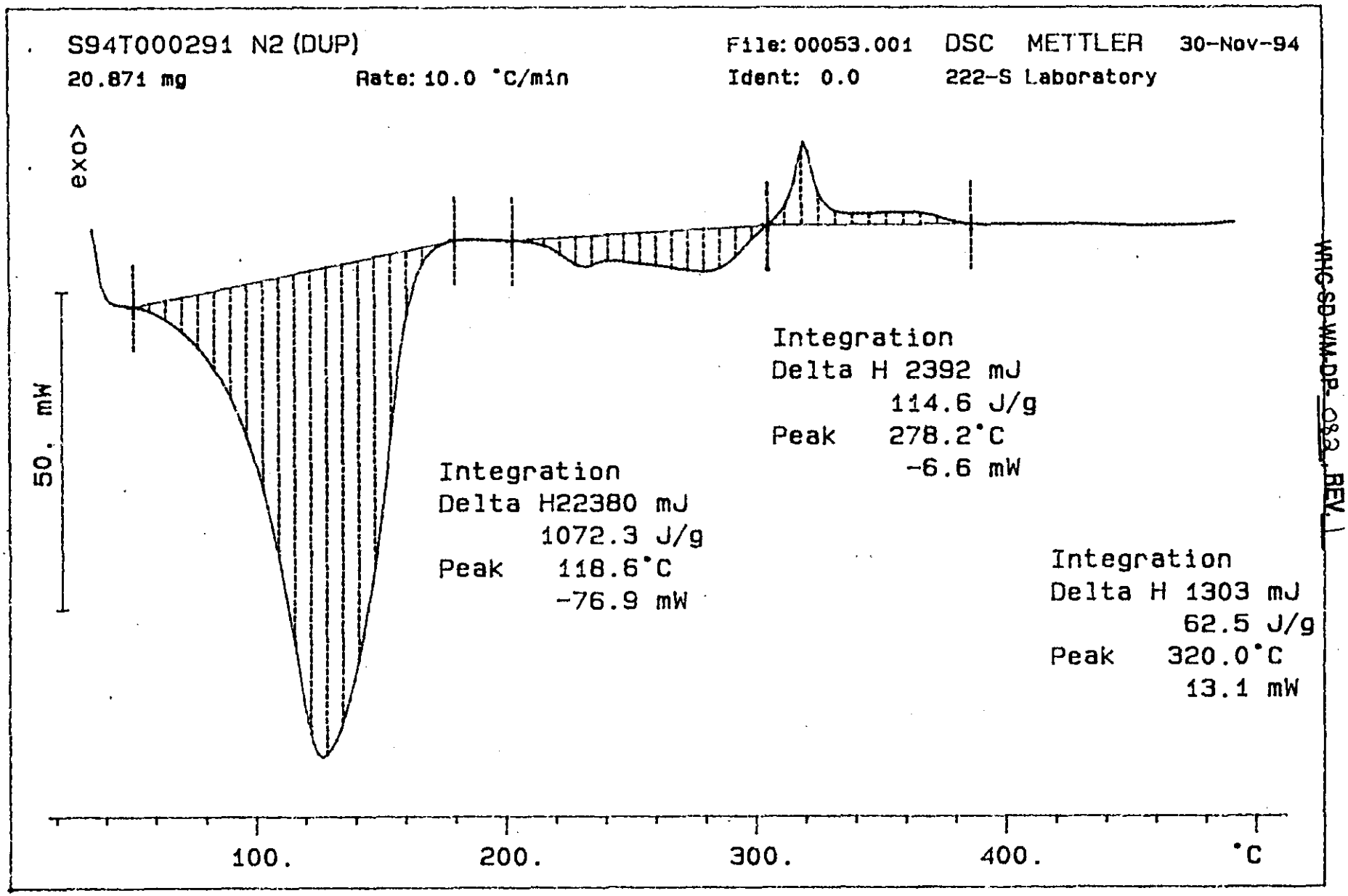
WHC-SD-WM-DP-082, REV. 1

19.1

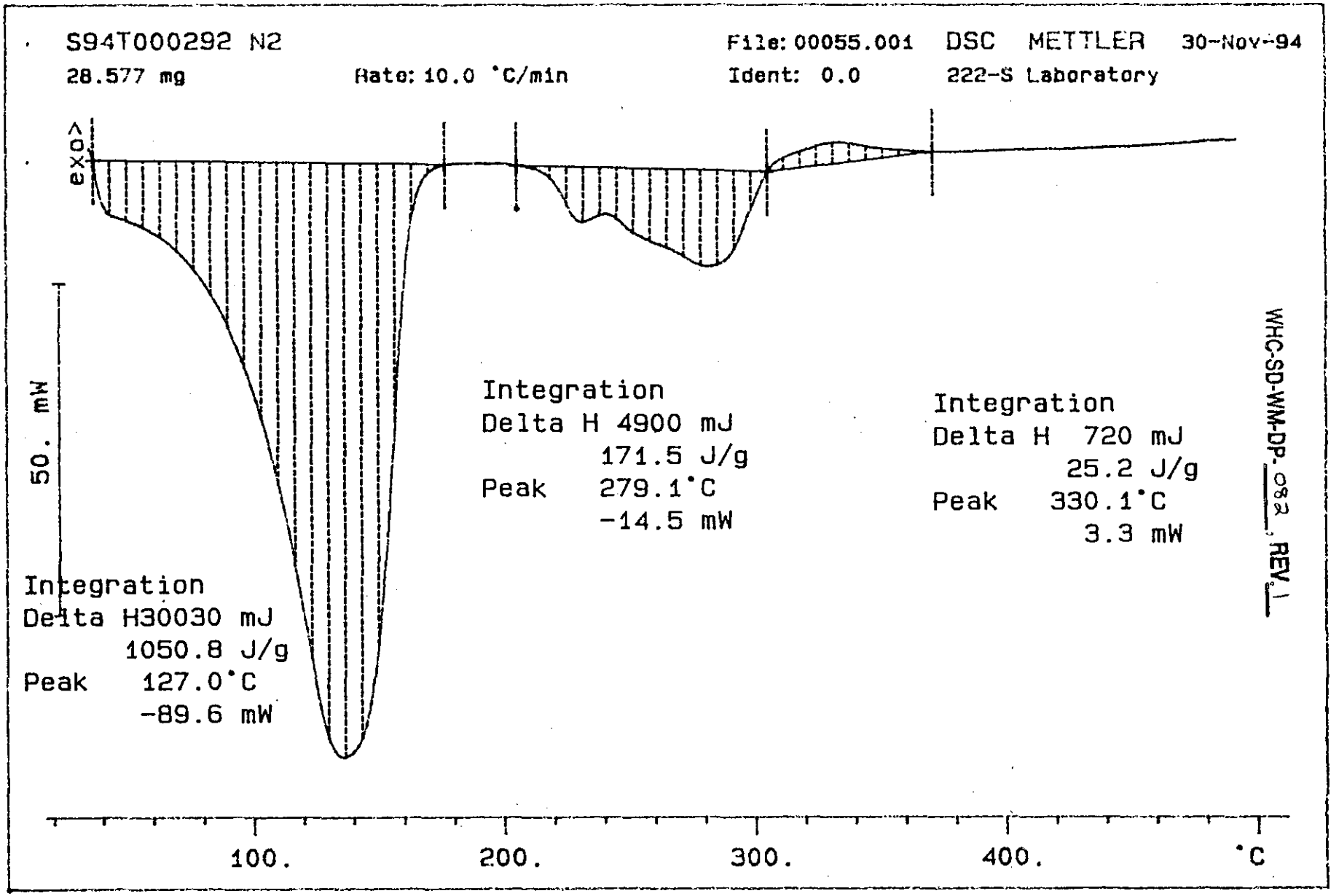
12N14A David W Smith 11-30-94



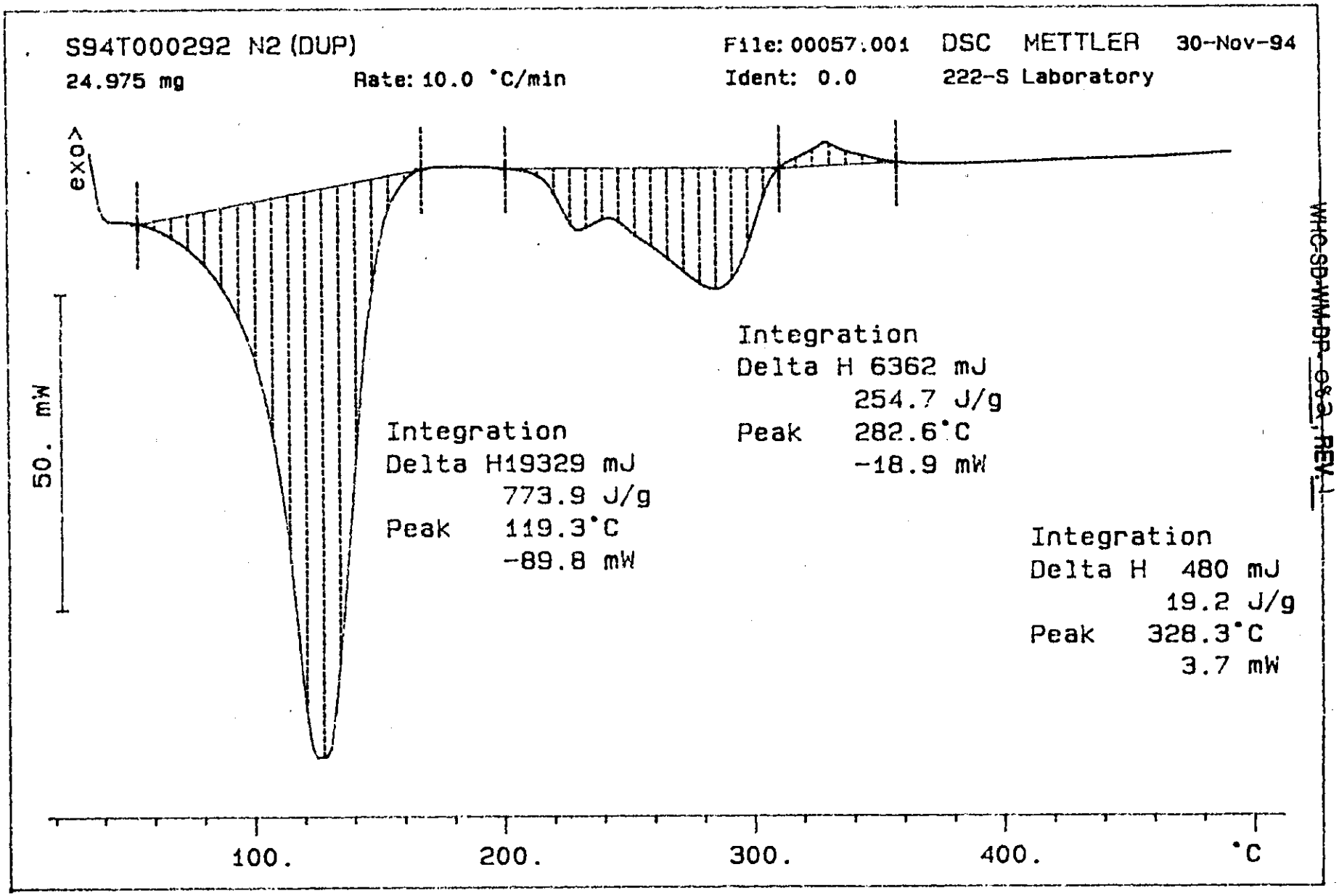
WHC-SD-WM-DP-088, REV. 1



WHC-SD-WM-DP-083, REV. 1



WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-BP-e&a, REV. 1

LABCORE Data Entry Template for Worklist# 220

Analyst: KLV **Instrument:** DSC01 _____ **Method:** LA-514-113/ B-1

Worklist Comment: Please run under N2, this is a rerun due to poor RPD. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	28.0	N/A	Joule/g
2	SAMPLE	S94T000292	0		DSC-01	SOLID	N/A	33.7		Joule/g
3	DUP	S94T000292	0		DSC-01	SOLID	33.7	21.6	N/A	Joule/g

Final page for worklist # 220

LAD 1-30-95

Analyst Signature

12/8/94
Date

WHC-SD-WM-DP-082, REV. 1

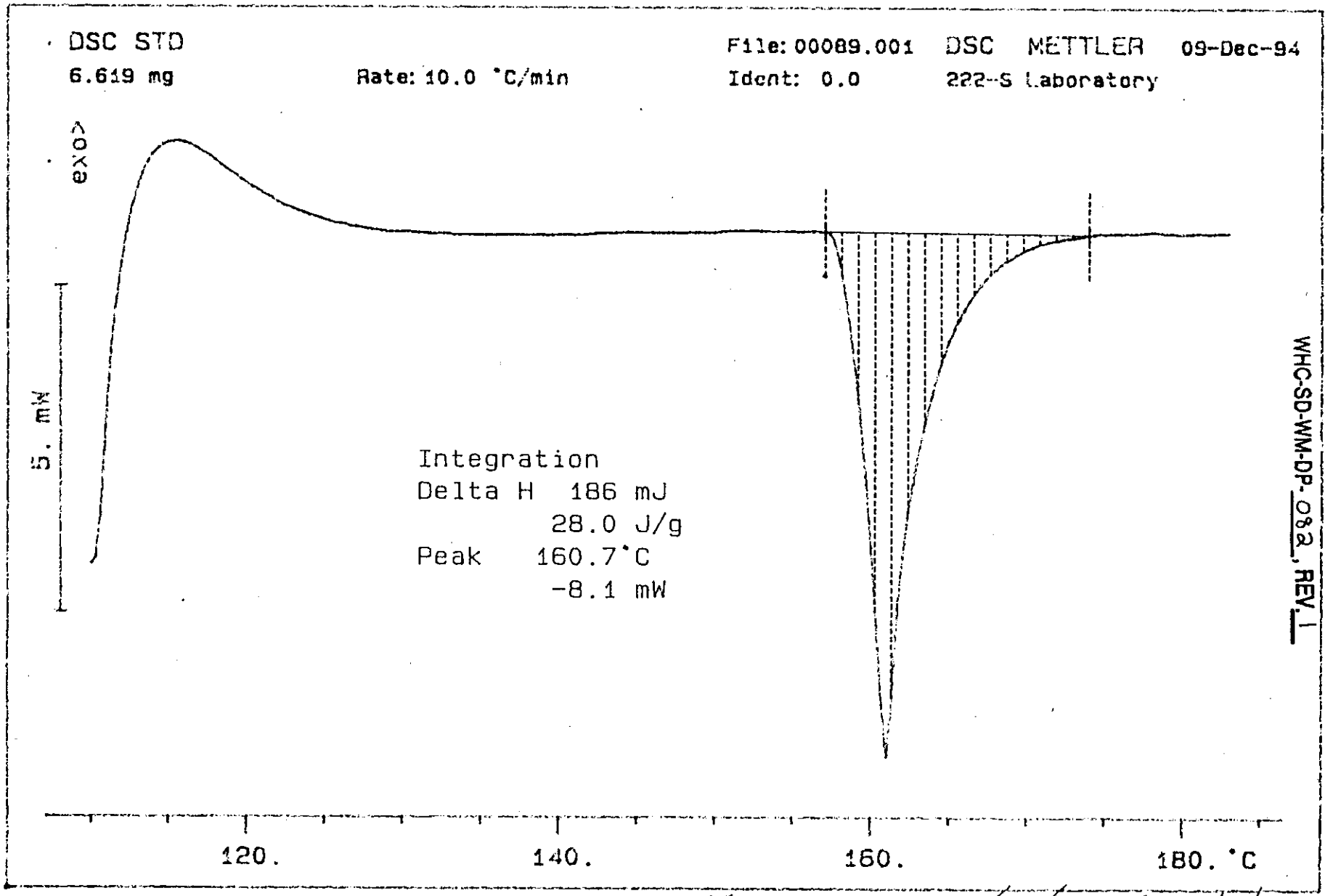
Verified 12/12/94 J. M. Fuge

Data Entry Comments:
Std #12N14A DATA Entered 12-10-94
S94T000292 has two endotherms of 894.6 J/g at 128.7°C and 217.4 J/g at 286.9°C; duplicate has 930.8 J/g at 120.5°C and 282.4 J/g at 284.8

Units shown for QC (SPK) may not reflect the actual units.

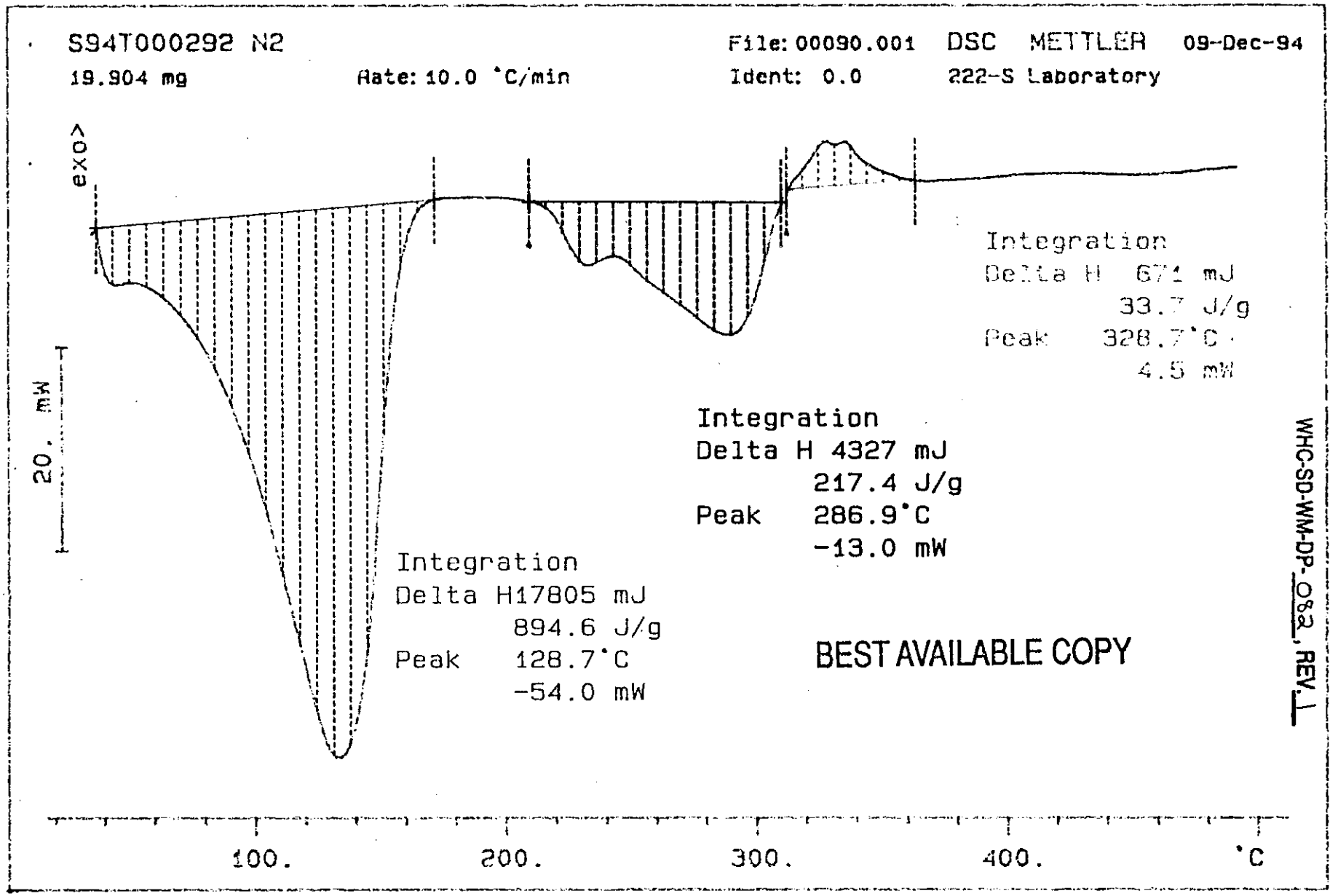
Page: 1 JMF 12/9/94

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 25 TO 27.



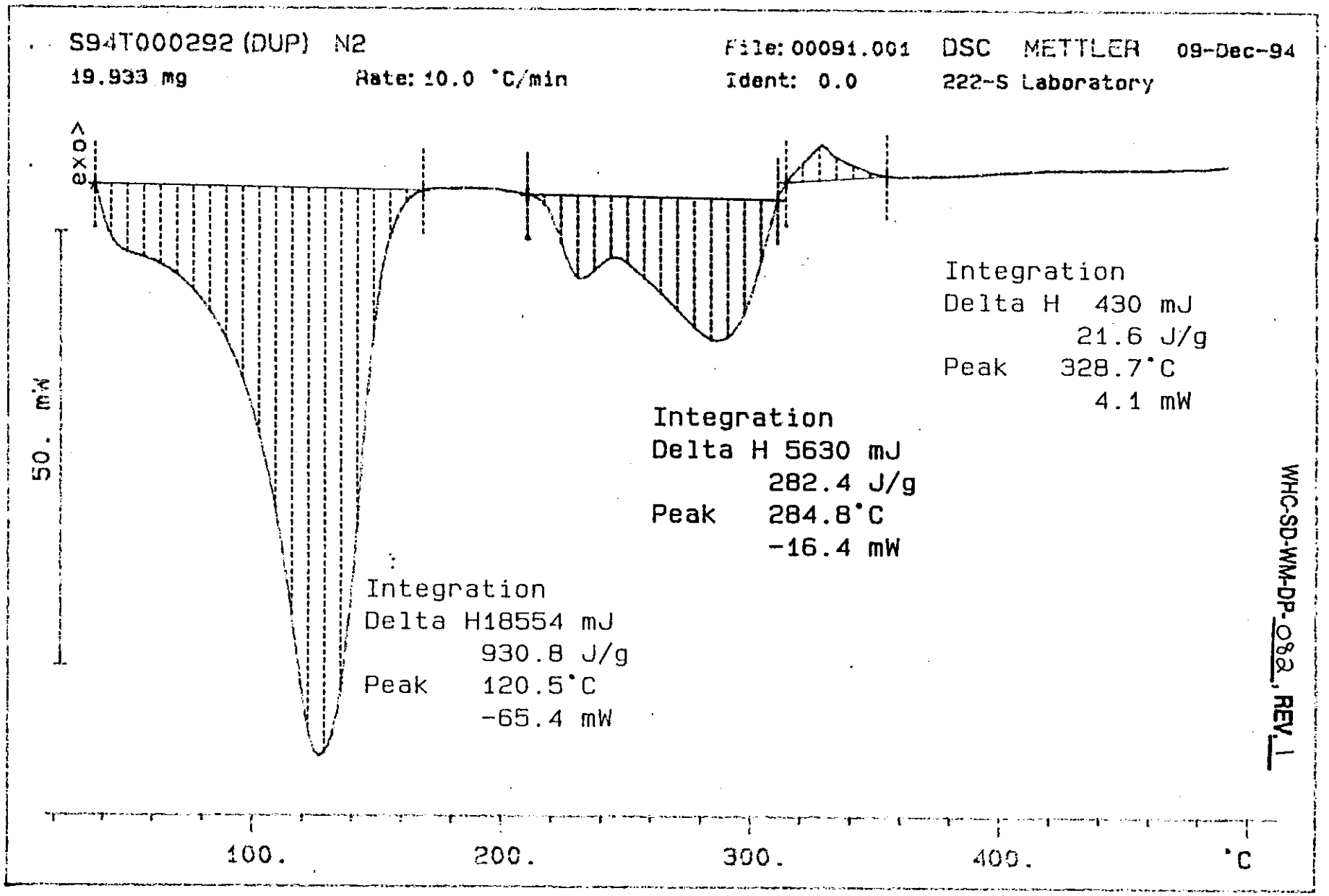
Std# 12N14A K Vogel 12/9/94

WHC-SD-WM-DP-082, REV. 1



BEST AVAILABLE COPY

WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 277

Analyst: KLV **Instrument:** DSC01 _____ **Method:** LA-514-113 B-1

Worklist Comment: Please run C-108 under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12NINA			DSC-01	SOLID	28.45	28.2	N/A	Joule/g
2	SAMPLE	S94T000361	0		DSC-01	SOLID	N/A	~~204.6~~ 0 JMF 1/18/95		Joule/g
3	DUP	S94T000361	0		DSC-01	SOLID	~~204.6~~ 0 JMF 1/18/95	~~157.7~~ 0 JMF 1/18/95	N/A	Joule/g
4	SAMPLE	S94T000362	0		DSC-01	SOLID	N/A	~~128.8~~ 0 JMF 1/18/95		Joule/g
5	DUP	S94T000362	0		DSC-01	SOLID	~~128.8~~ 0 JMF 1/18/95	~~134.8~~ 0 JMF 1/18/95	N/A	Joule/g

LAD 1-30-95

Final page for worklist # 277

Analyst Signature

1-13-95
Date

1-16-95

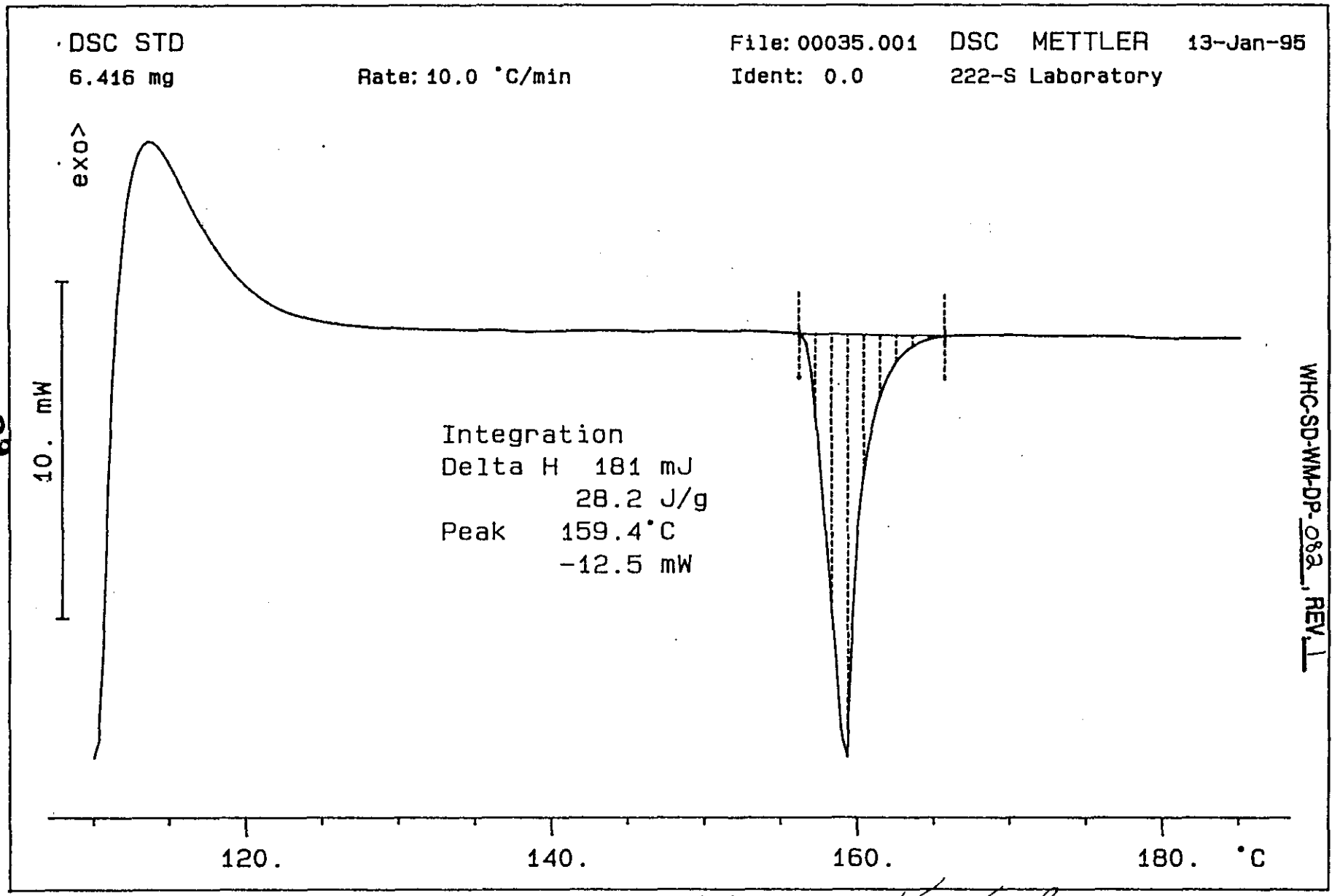
WHC-SD-WM-DP-082, REV. 1

Verified 1/18/95. JMFuge

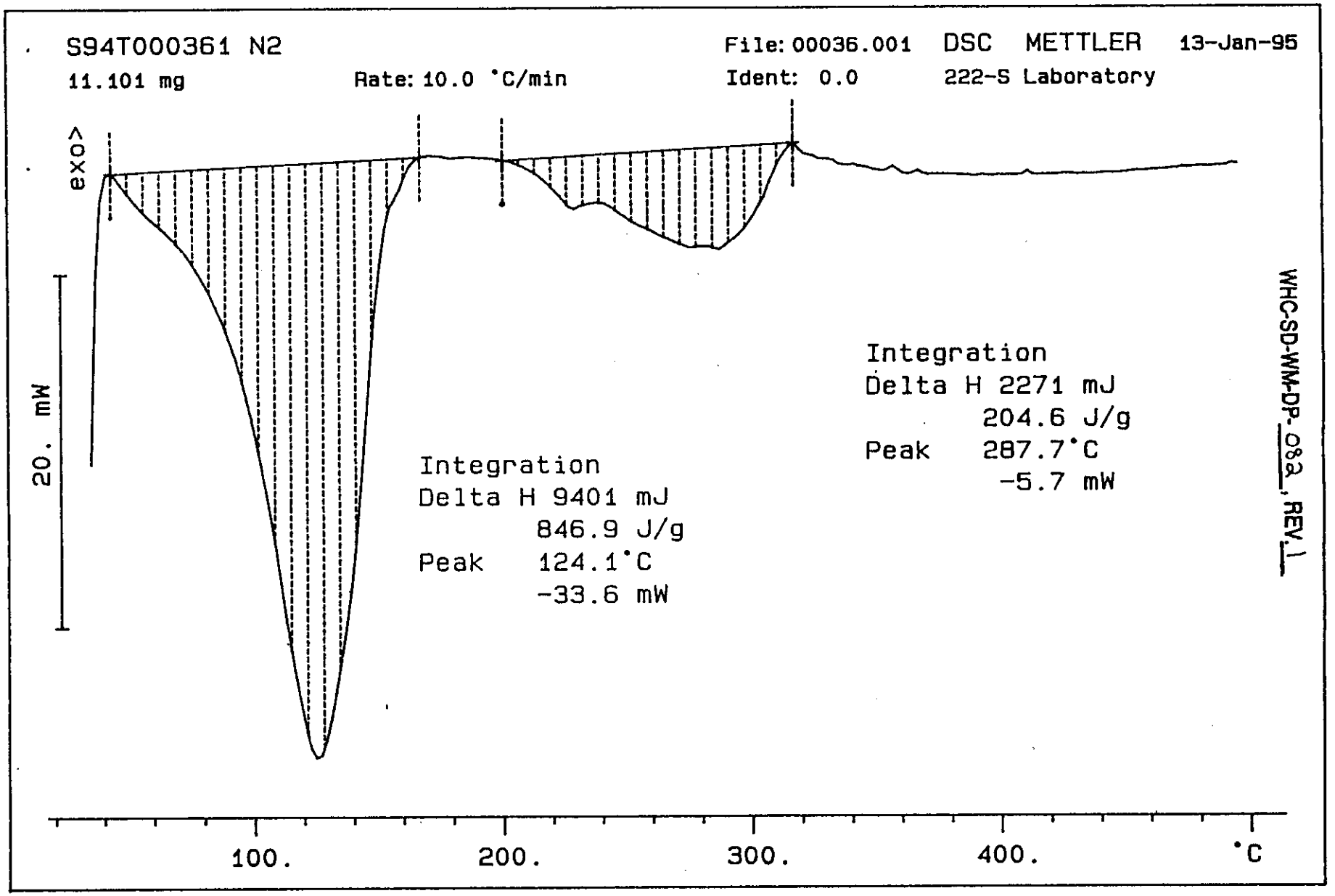
Data Entry Comments:
Sample S94T000361 has two endotherms of 846.9 J/g at 124.1°C and 204.6 J/g at 287.7°C; duplicate has 894.3 J/g at 122.3°C and 157.7 J/g at 283.7°C. S94T000362 has two endotherms of 1137.9 J/g at ~~[illegible]~~ 126.1 and 128.8 J/g at 263.5°C; dup has 880.1 J/g at 125.9°C and 134.8 J/g at 281.7°C. JMF

Units shown for QC (SPK) may not reflect the actual units.

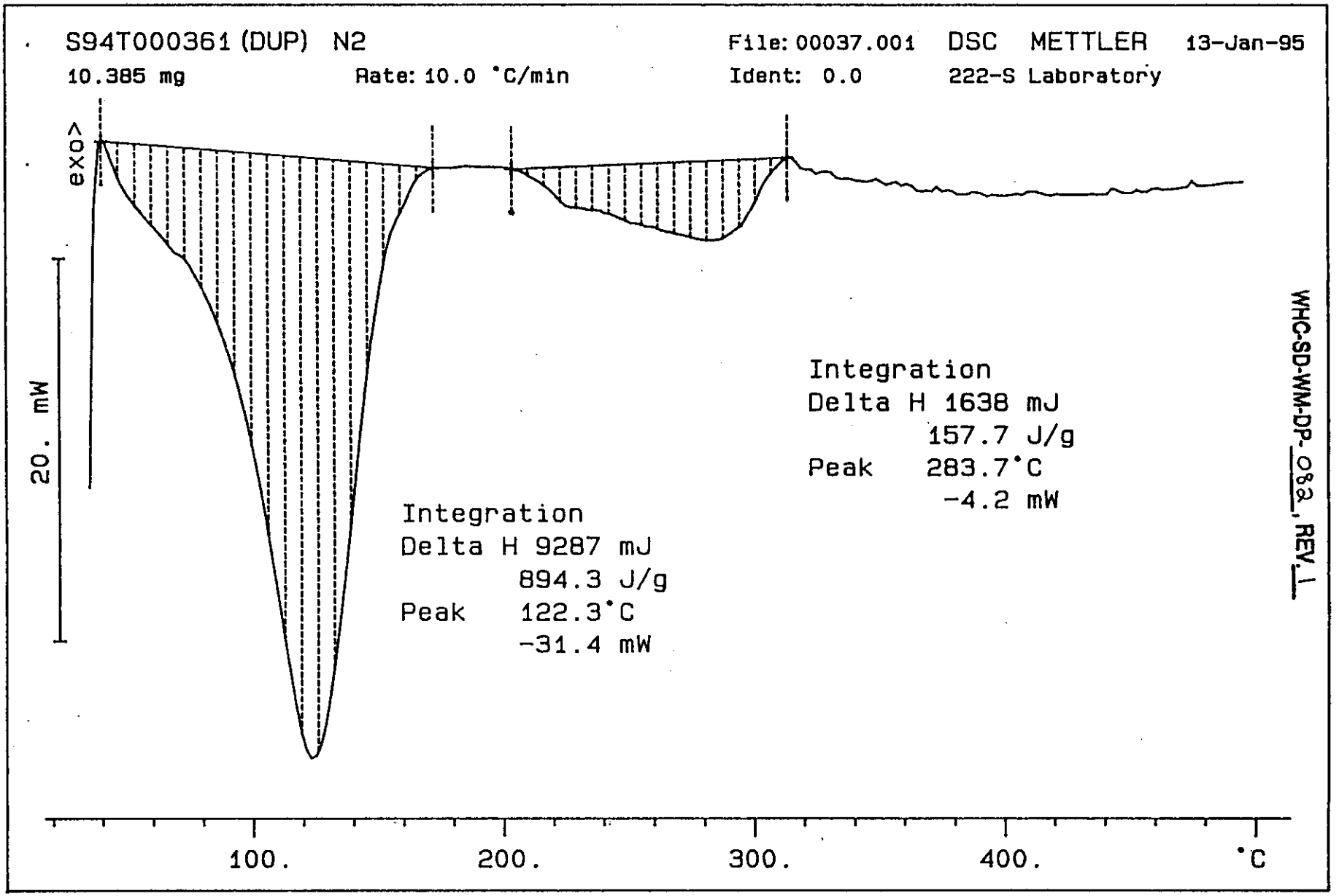
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 29 TO 33.



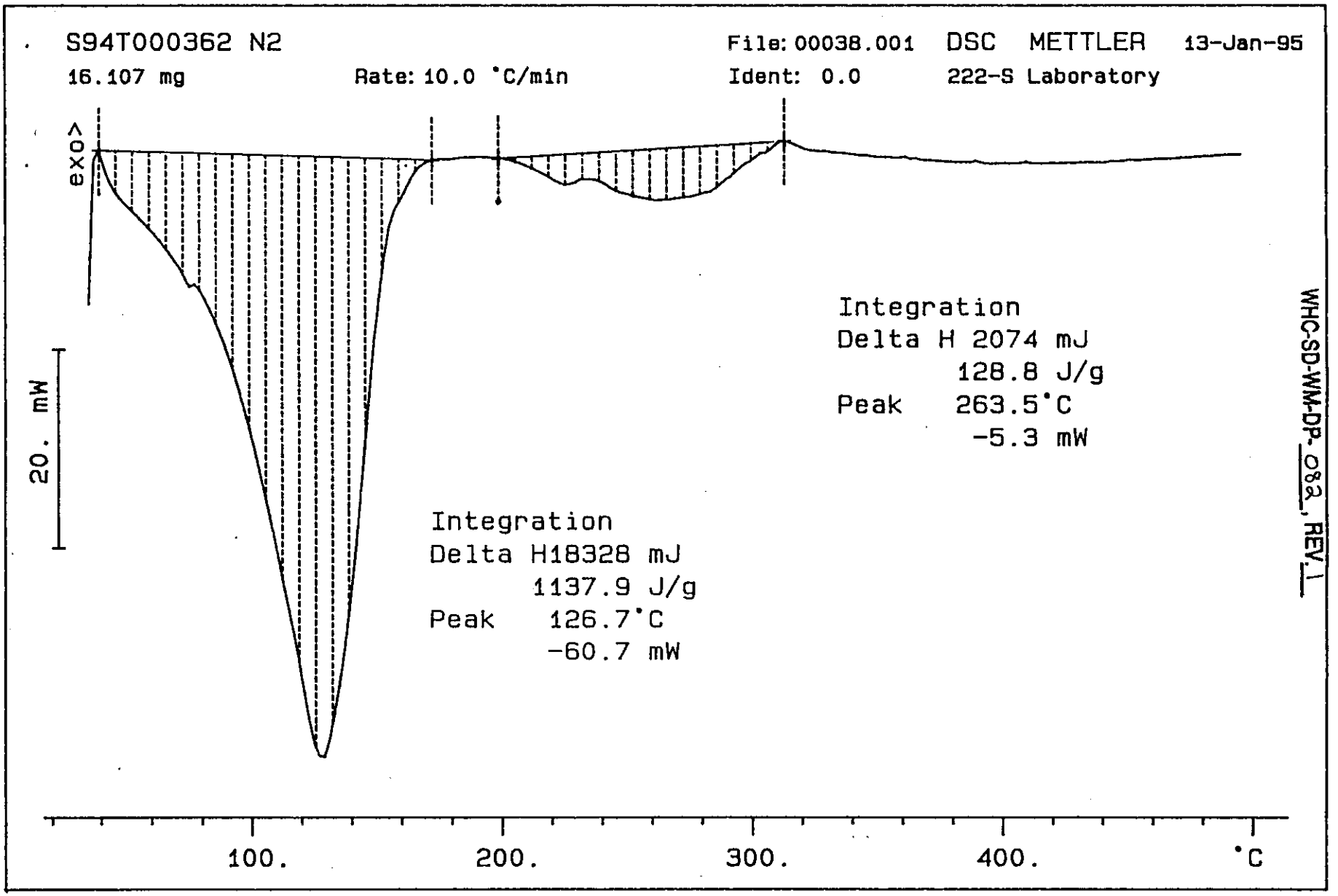
Std # 12N14A [illegible] 1-13-95



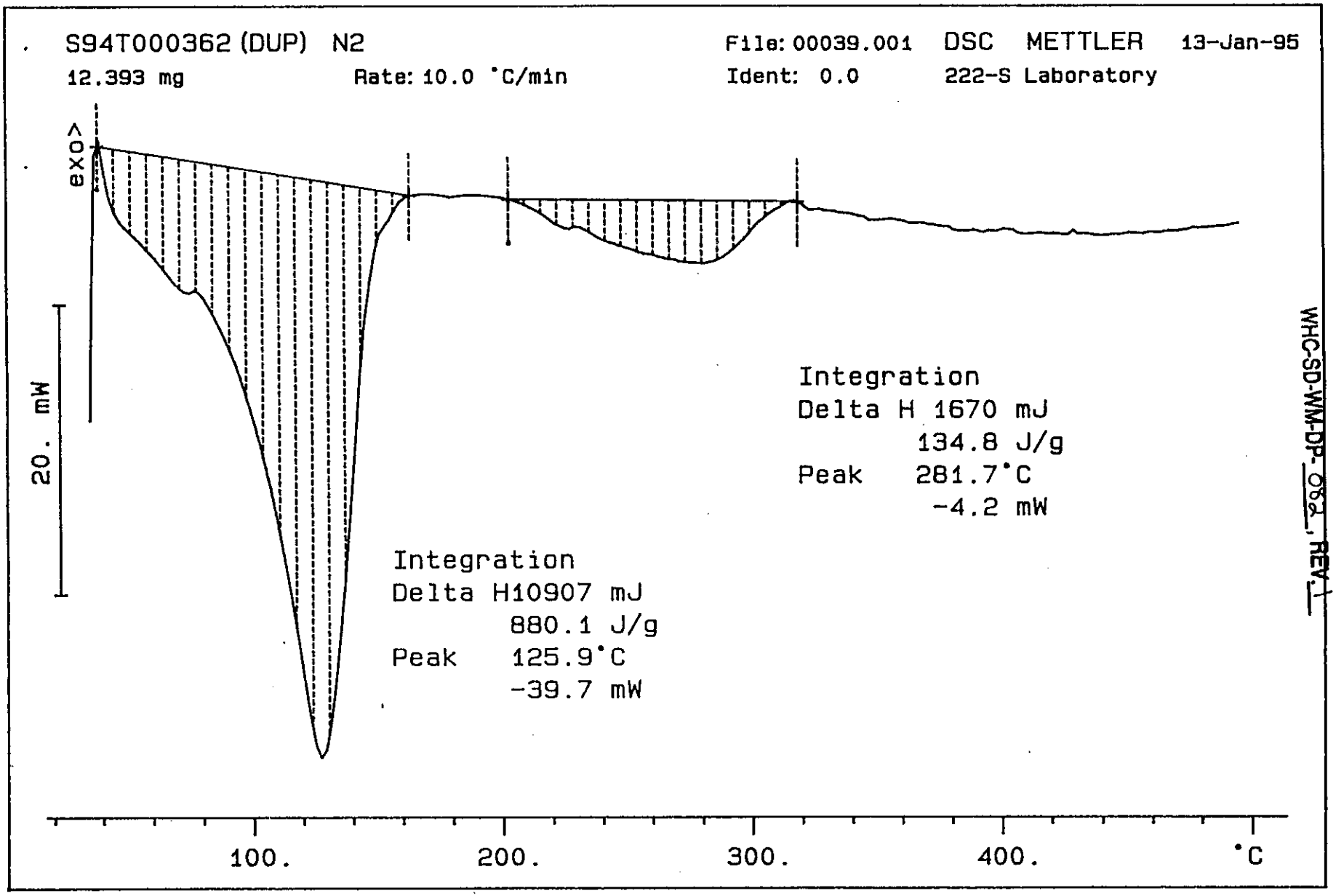
WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-088, REV 1



WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-062, REV. 1

LABCORE Data Entry Template for Worklist# 278

Analyst: DWS **Instrument:** DSC01 **Method:** LA-514-113 B-1

Worklist Comment: Please run C-108 DSC under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD				DSC-01	SOLID	28.45	29.1	N/A	Joule/g
2	SAMPLE	S94T000363	0		DSC-01	SOLID	N/A	Ø		Joule/g
3	DUP	S94T000363	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g
4	SAMPLE	S94T000364	0		DSC-01	SOLID	N/A 1/17/95 BDV	Ø 1/17/95 BDV		Joule/g
5	STD				DSC-01	SOLID	~~Ø~~ 28.45	~~Ø~~ 27.8	N/A	Joule/g
6	DUP	S94T000364	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g

LAD 1-30-9

Final page for worklist # 278

See attached page for signature
Analyst Signature

1-17-95
Date

1-18-95

WHC-SD-WM-DP-082, REV. 1

Verified 1/18/95. J M. Fuge

Data Entry Comments: S94T000363 had one endotherm at 113.3°C with a delta H of 951.8 J/g. S94T000364 had two endotherms one at 113.3°C with a delta H of 952.6 J/g and the second one at 265.2°C with a delta H of 75.1 J/g

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 278

Analyst: Rus **Instrument:** DSC01 **Method:** LA-514-113 - B ~1

klist Comment: Please run C-108 DSC under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	12N14-17			DSC-01	SOLID	28.45	29.1	N/A	Joule/g
2	SAMPLE	S94T000363	0		DSC-01	SOLID	N/A	Ø		Joule/g
3	DUP	S94T000363	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g
4	SAMPLE	S94T000364	0		DSC-01	SOLID	N/A	Ø		Joule/g
5	DUP	S94T000364	0		DSC-01	SOLID	Ø	Ø	N/A	Joule/g

Final page for worklist # 278

LAD 1-30-95

Analyst Signature

1-11-95
Date

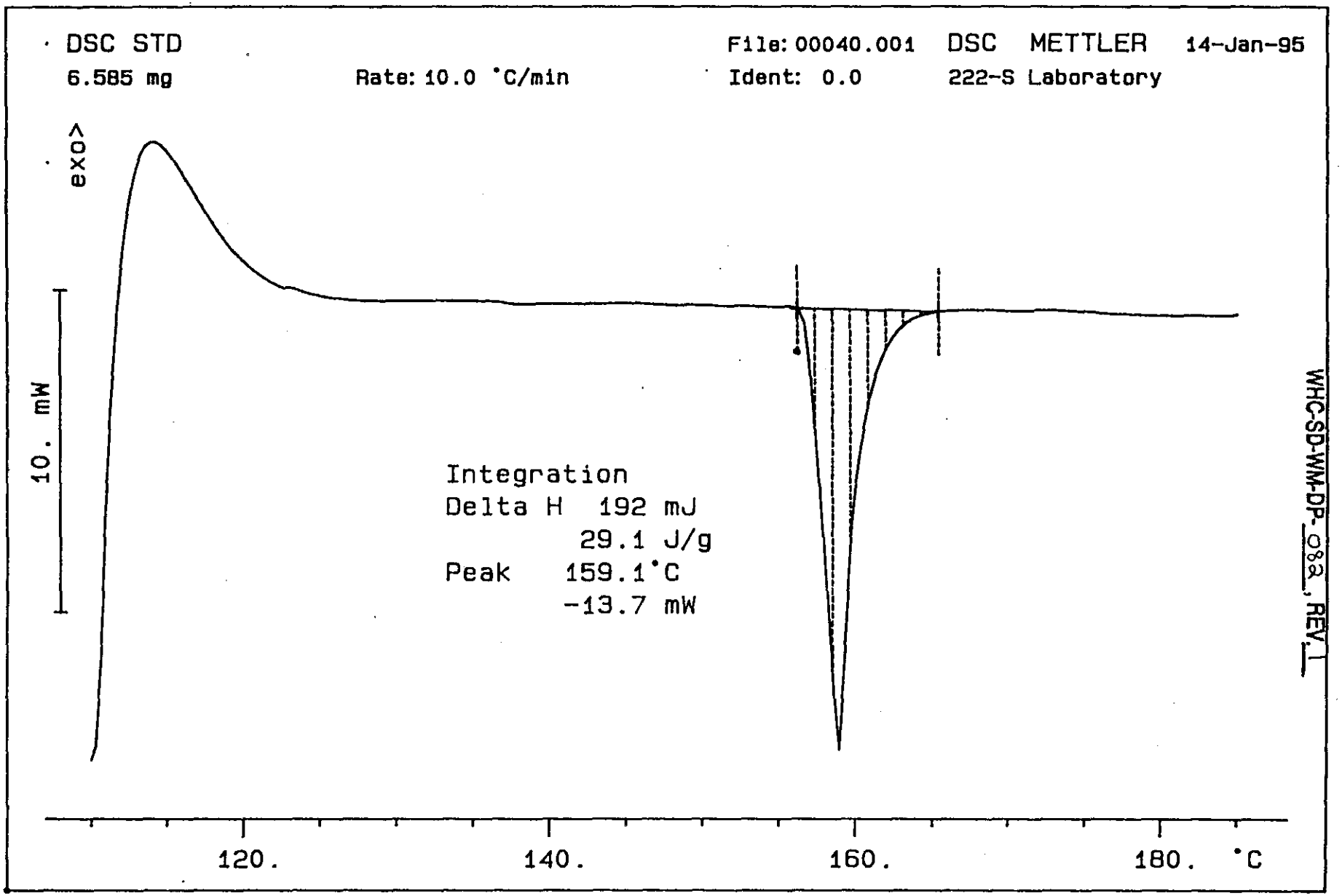
WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

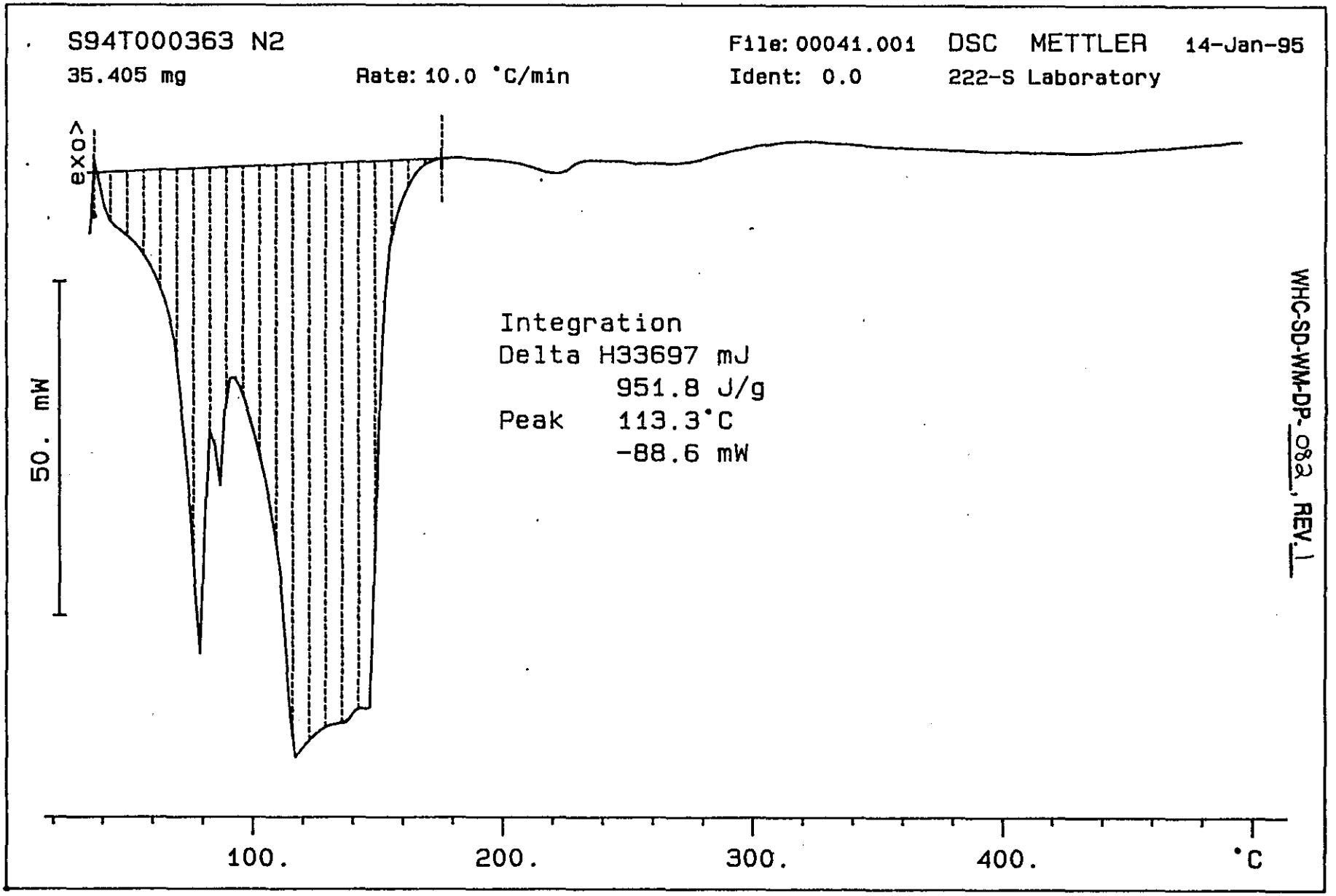
Page: 1

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 36 TO 41.

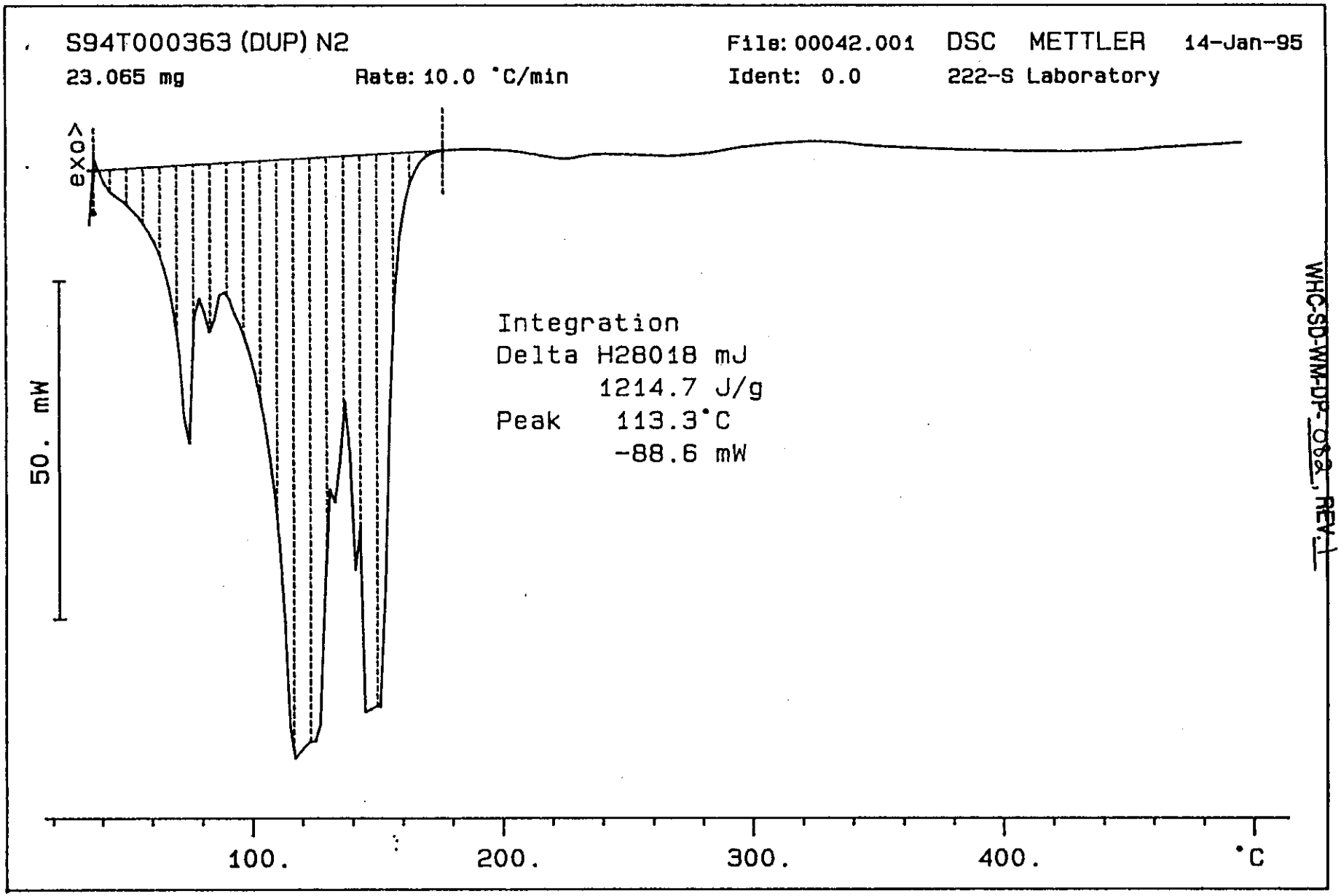


Std #
12N1

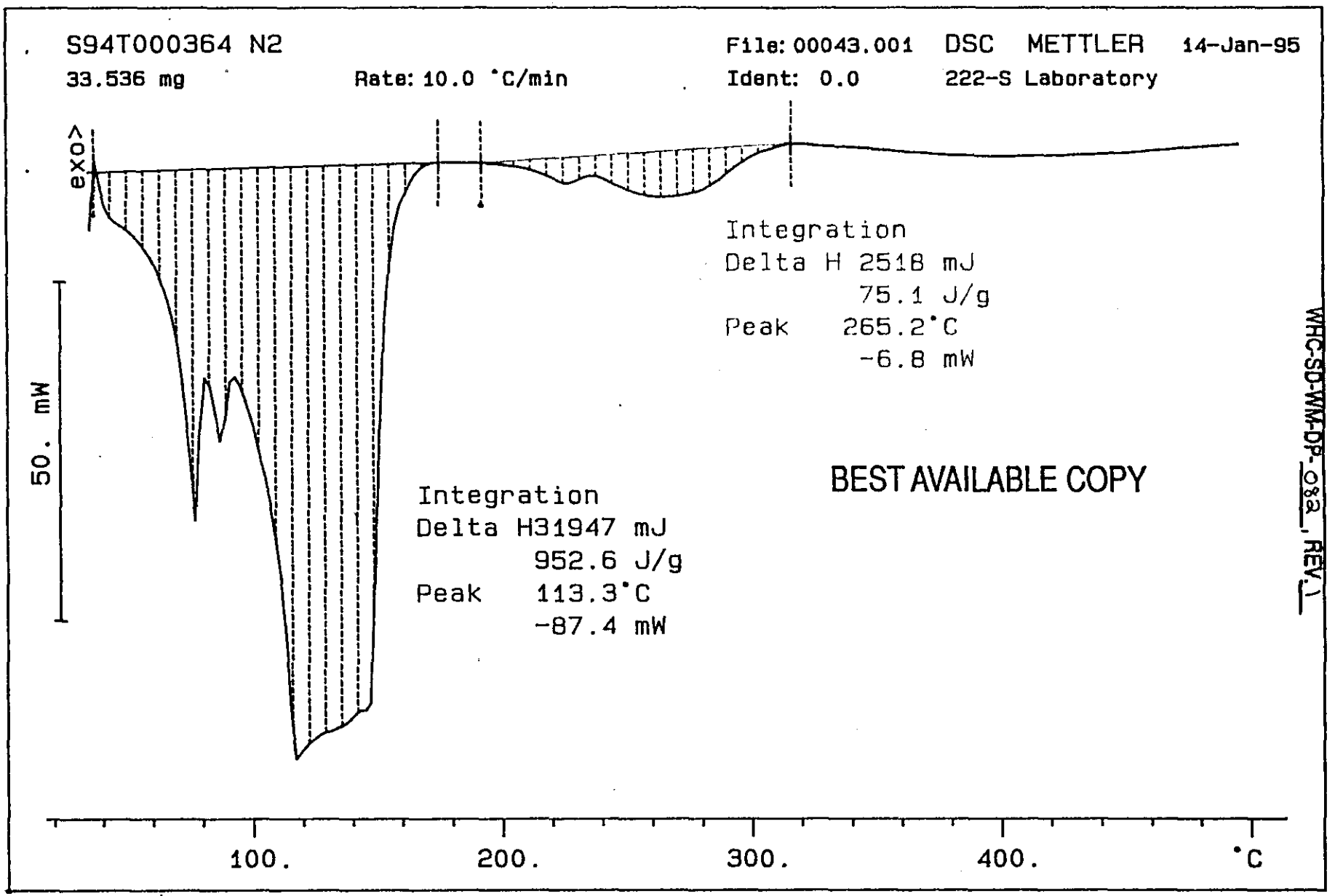
1-14-95



WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-058, REV. 1



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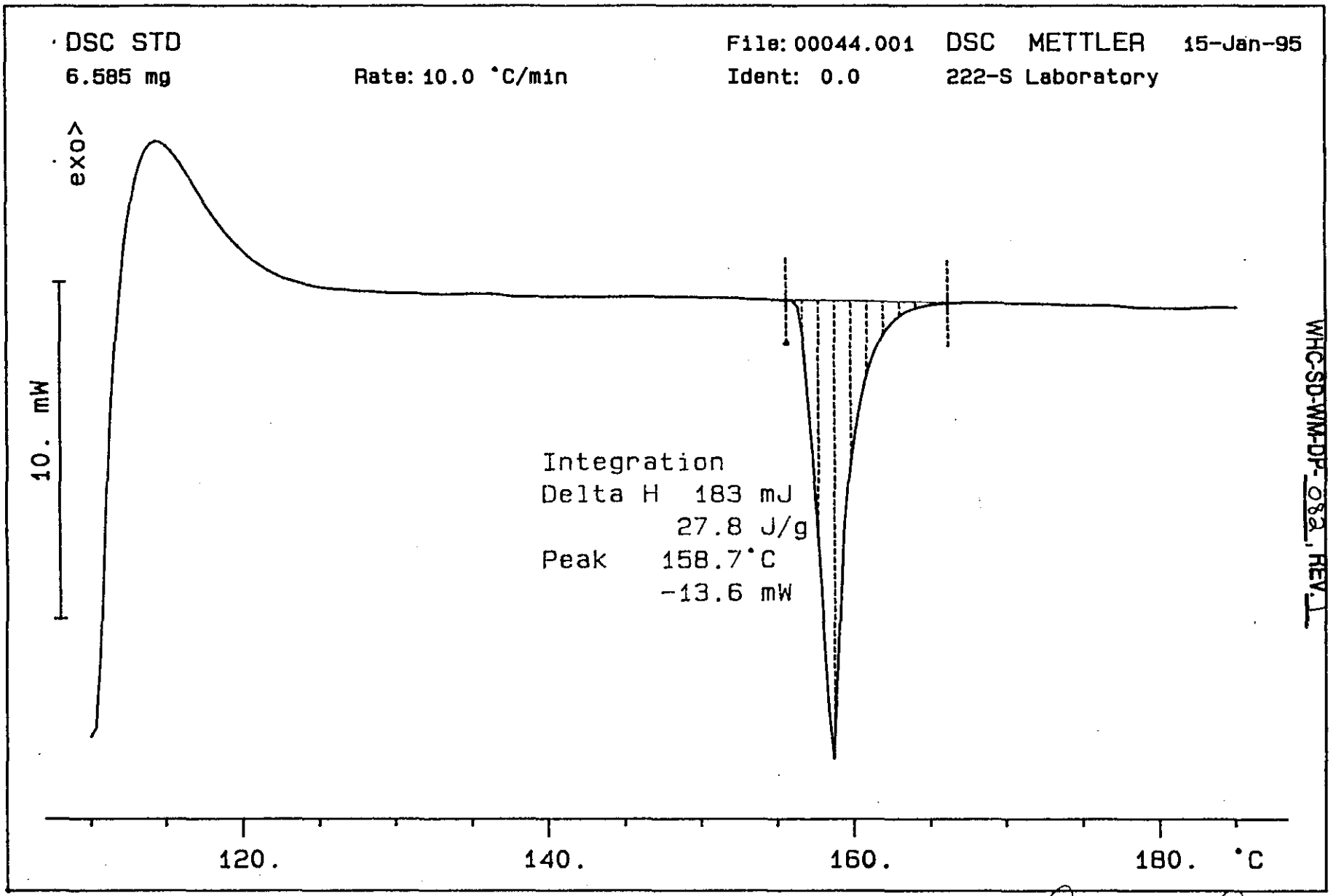
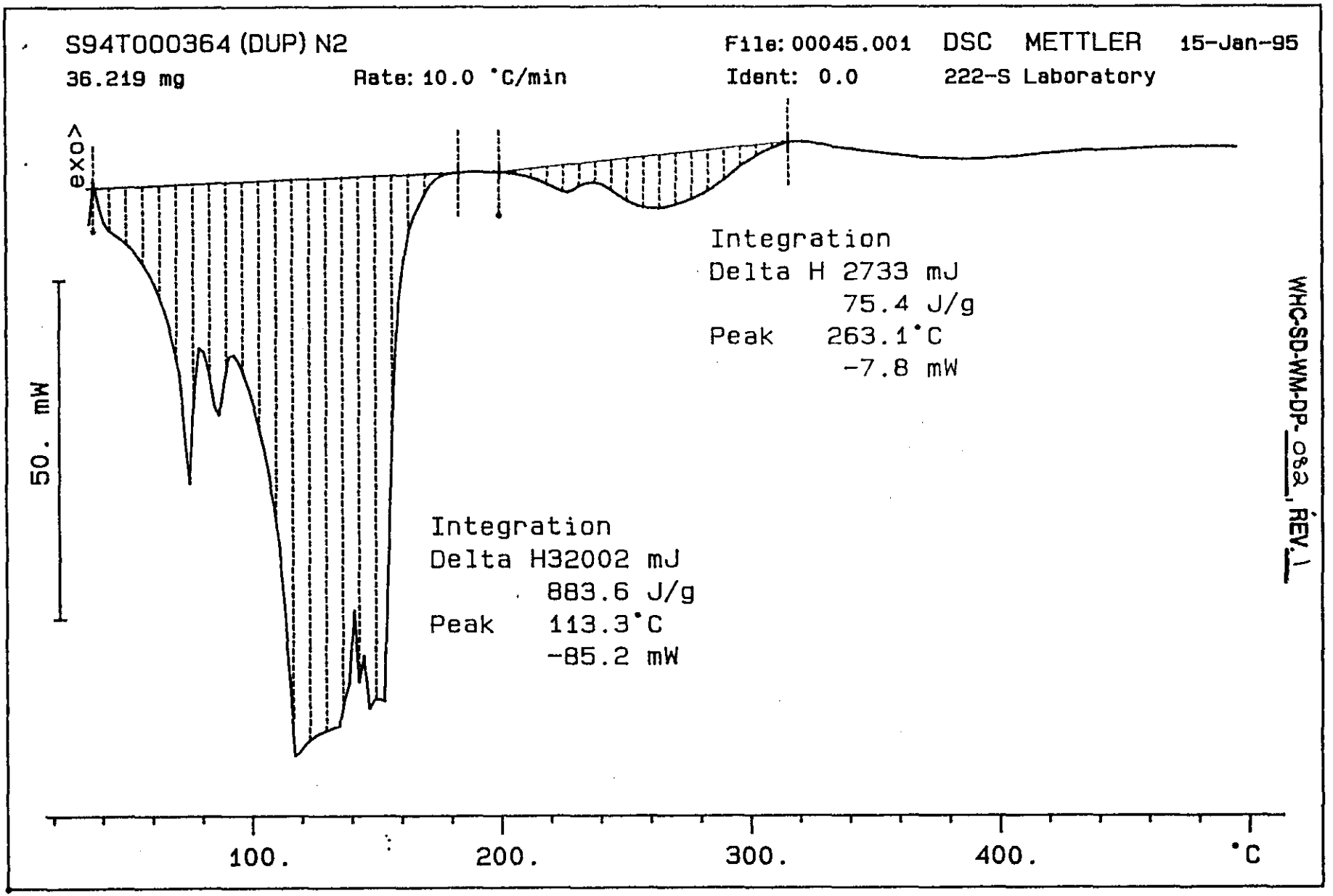
WHC-SD-WM-DP-088, REV. 1



Std # V14-A

1-16-95

WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 401

Analyst: JMF/BDV Instrument: DSC01 _____ Method: LA-514-113 B-1 LAD 1-30-95

Worklist Comment: Calculated C-108 dry DSC. bdv

Seg	Type	Sample#	Rep Al	Test	Matrix	DSC Joule/g ~~Actual~~	TGA % ~~Found~~	DSC02 ~~DL~~ Calc	Unit
1	SAMPLE	S94T000288	0	DSC-02 12-6-94 7-94	SOLID	Ø	15.35	0	DRY Joule/g
2	DUP	S94T000288	0	DSC-02 [illegible]	SOLID	Ø	2.99	0 N/A	Joule/g
3	SAMPLE	S94T000290	0	DSC-02 12/6 12/7	SOLID	Ø	9.94	0	Joule/g
4	DUP	S94T000290	0	DSC-02 12-7-94	SOLID	Ø	11.98	0 N/A	Joule/g
5	SAMPLE	S94T000291	0	DSC-02 11/30 11/30	SOLID	55.4	45.76	102.1	Joule/g
6	DUP	S94T000291	0	DSC-02 11-30-94	SOLID	62.5	46.28	116.3 N/A	Joule/g
7	SAMPLE	S94T000292	0	DSC-02 12/8 11/30	SOLID	33.7	32.97	50.3	Joule/g
8	DUP	S94T000292	0	DSC-02 11-30-94	SOLID	21.6	39.15	35.5 N/A	Joule/g
9	SAMPLE	S94T000361	0	DSC-02 1/13 12/29	SOLID	Ø	51.85	Ø	Joule/g
10	DUP	S94T000361	0	DSC-02	SOLID	Ø	46.80	Ø N/A	Joule/g
11	SAMPLE	S94T000362	0	DSC-02 12/29 1/13	SOLID	Ø	48.57	Ø	Joule/g
12	DUP	S94T000362	0	DSC-02	SOLID	Ø	50.45	Ø N/A	Joule/g
13	SAMPLE	S94T000363	0	DSC-02 1/17 1/4	SOLID	Ø	52.97	Ø	Joule/g
14	DUP	S94T000363	0	DSC-02	SOLID	Ø	52.41	Ø N/A	Joule/g
15	SAMPLE	S94T000364	0	DSC-02 1/17 1/4	SOLID	Ø	47.79	Ø	Joule/g
16	DUP	S94T000364	0	DSC-02	SOLID	Ø	49.23	Ø N/A	Joule/g

LAD 1-30-95

Final page for worklist # 401

Jann Luye
Analyst Signature

WHC-SD-WM-DP-082, REV. 1

1/20/95
Date

Data Entry Comments: Entered and verified 1/20/95. J. M. Luye

Units shown for QC (SPK) may not reflect the actual units.

Blandina Valenzuela

LABCORE Data Entry Template for Worklist# 184

Analyst: KLV **Instrument:** TGA01 _____ **Method:** LA-560-112 A-2

..orklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	42N8A			TGA-01	SOLID	59.19	58.93	N/A	%
2	SAMPLE	S94T000288	0		TGA-01	SOLID	N/A	15.35		%
3	DUP	S94T000288	0		TGA-01	SOLID	15.35	6.01	N/A	%
4	STD				TGA-01	SOLID	59.19	58.45	N/A	%
5	DUP	S94T000288	0		TGA-01	SOLID	15.35	2.99	N/A	%
6	SAMPLE	S94T000290	0		TGA-01	SOLID	N/A	9.94		%
7	DUP	S94T000290	0		TGA-01	SOLID	9.94	27.66	N/A	%
8	STD				TGA-01	SOLID	59.19	58.77	N/A	%
9	DUP	S94T000290	0		TGA-01	SOLID	9.94	11.98	N/A	%

Final page for worklist # 184

Analyst Signature _____ Date 12/7/94

See attached worklist for analyst signature

WHC-SD-WM-DP-082, REV. 1

Reviewed & verified 12/7/94. J M Fye

Data Entry Comments:
S94T000288 has second weight loss step of 27.74% at 277°C; duplicate 1 has 28.54% at 277°C; duplicate 2 has 29.19% at 273°C. JMF
S94T000290 has a second weight loss step of 25.77% at 271°C; duplicate 1 has 2.12% at 271°C; duplicate 2 has 25.10% at 279°C. JMF

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 184

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A-2

Worklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	42N8A			TGA-01	SOLID	59.19	58.93	N/A	%
2	SAMPLE	S94T000288	0		TGA-01	SOLID	N/A	15.35		%
3	DUP	S94T000288	0		TGA-01	SOLID	15.35 ~~15.35~~	6.01 ~~5.99~~	N/A	%
4	SAMPLE	S94T000290	0		TGA-01	SOLID	N/A	9.94		%
5	DUP	S94T000290	0		TGA-01	SOLID	9.94	27.66	N/A	%
	STD	42N8A					59.19	58.45		

Final page for worklist # 184

Analyst Signature

Date 12/2/94

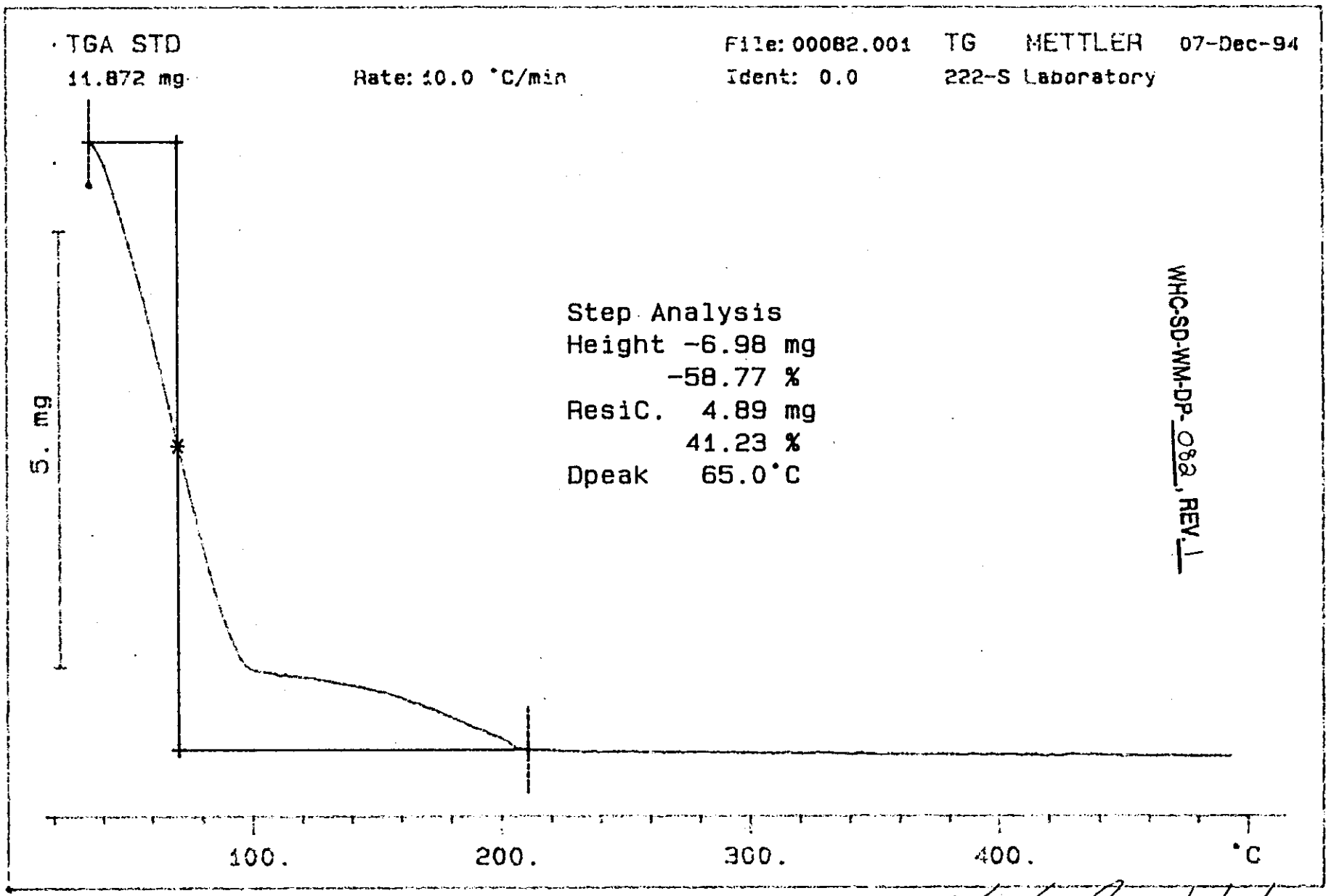
WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:
Std # 42N8A

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

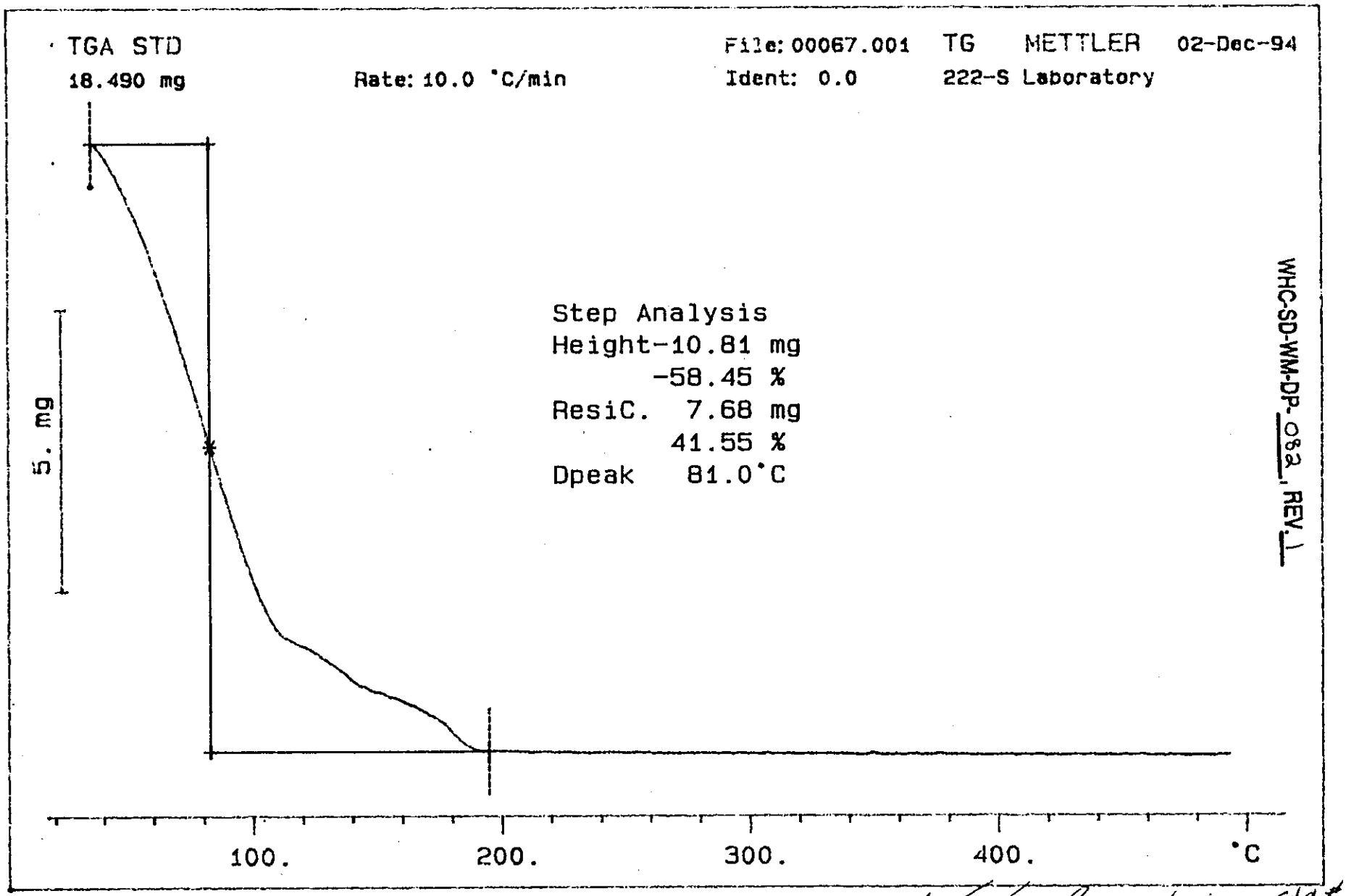
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 45 TO 53.



WHC-SD-WM-DP-082, REV. 1

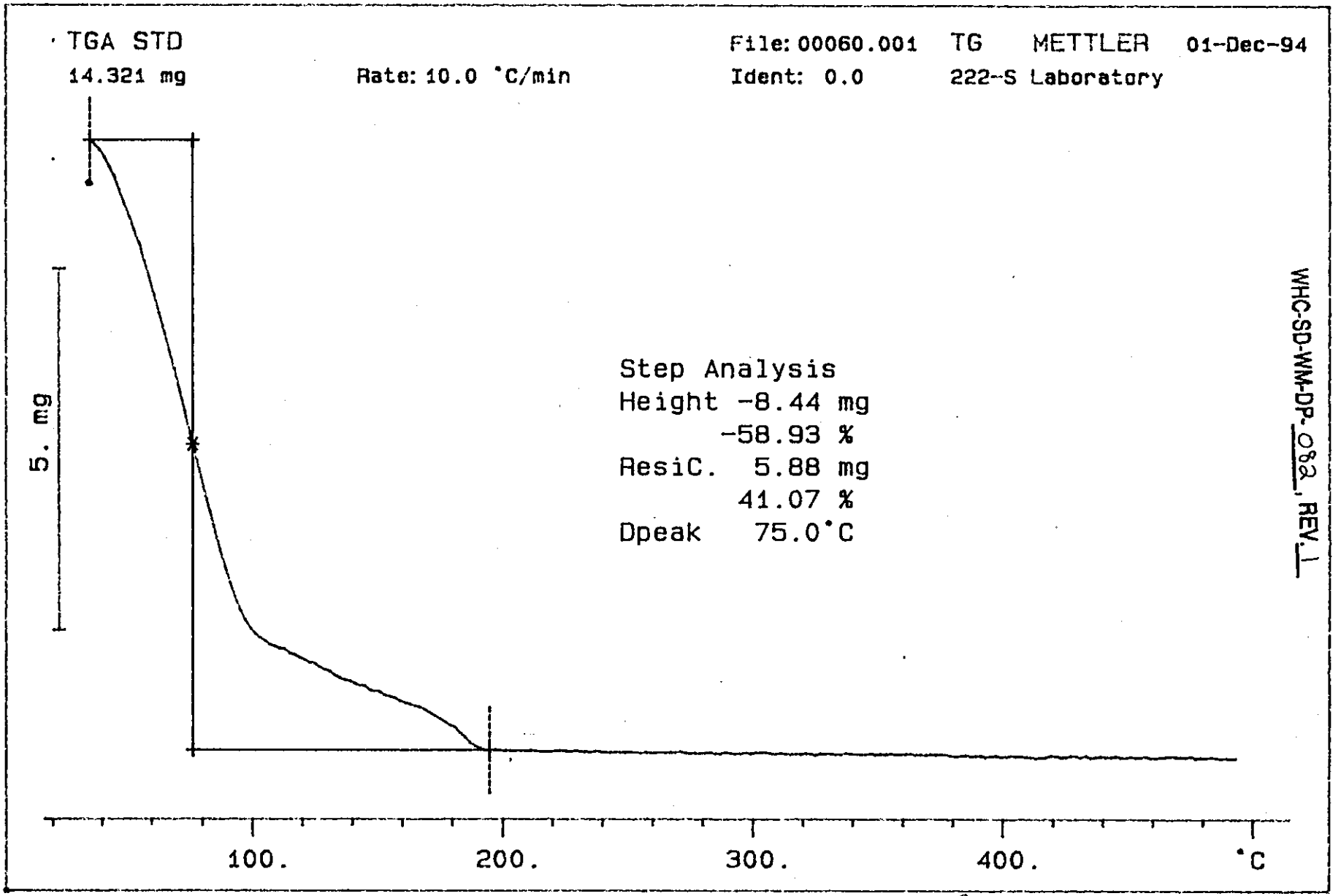
STD# 42N8A

12/7/94



WHC-SD-WM-DP-082, REV. 1

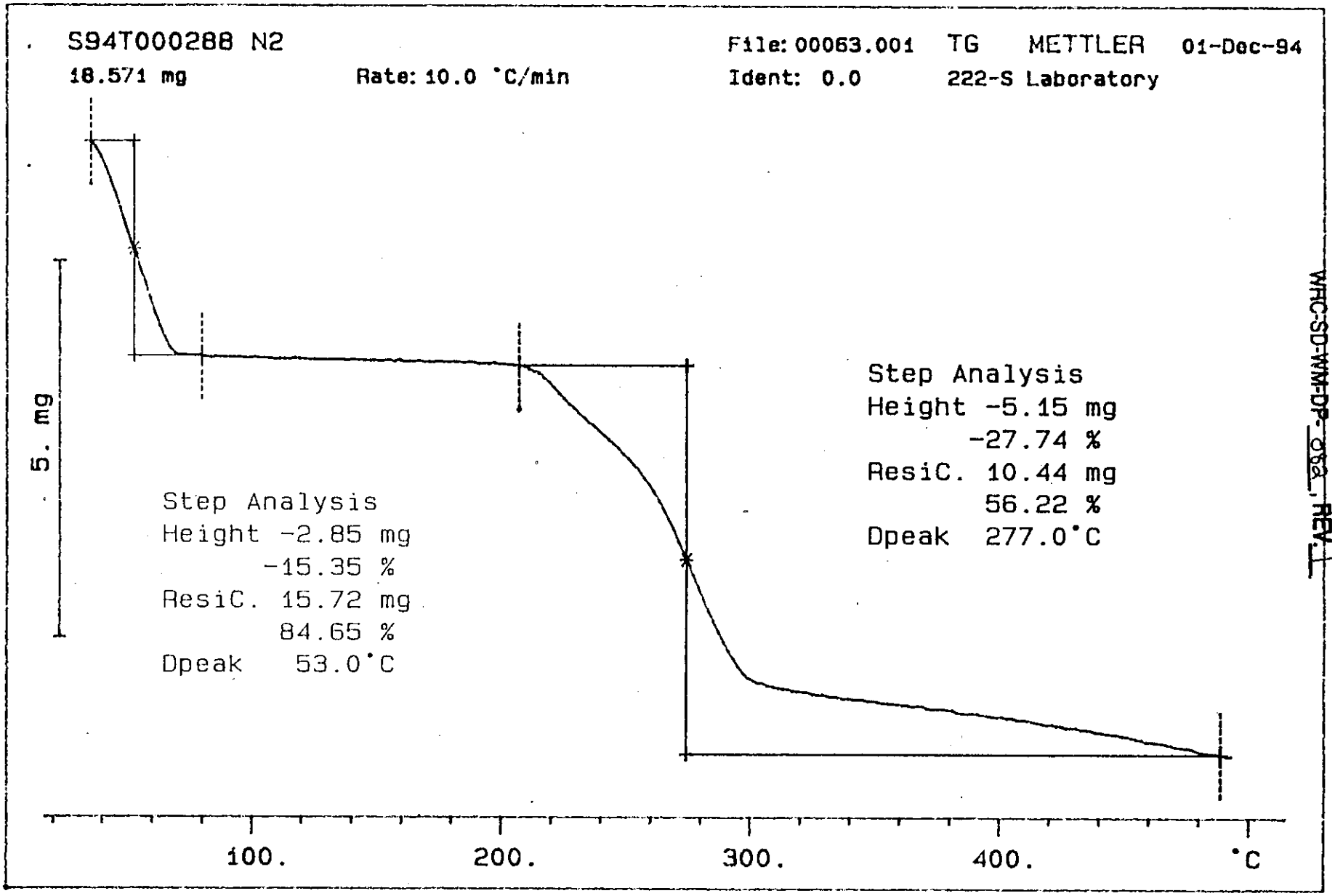
12/2/94 Sta # 42N8A

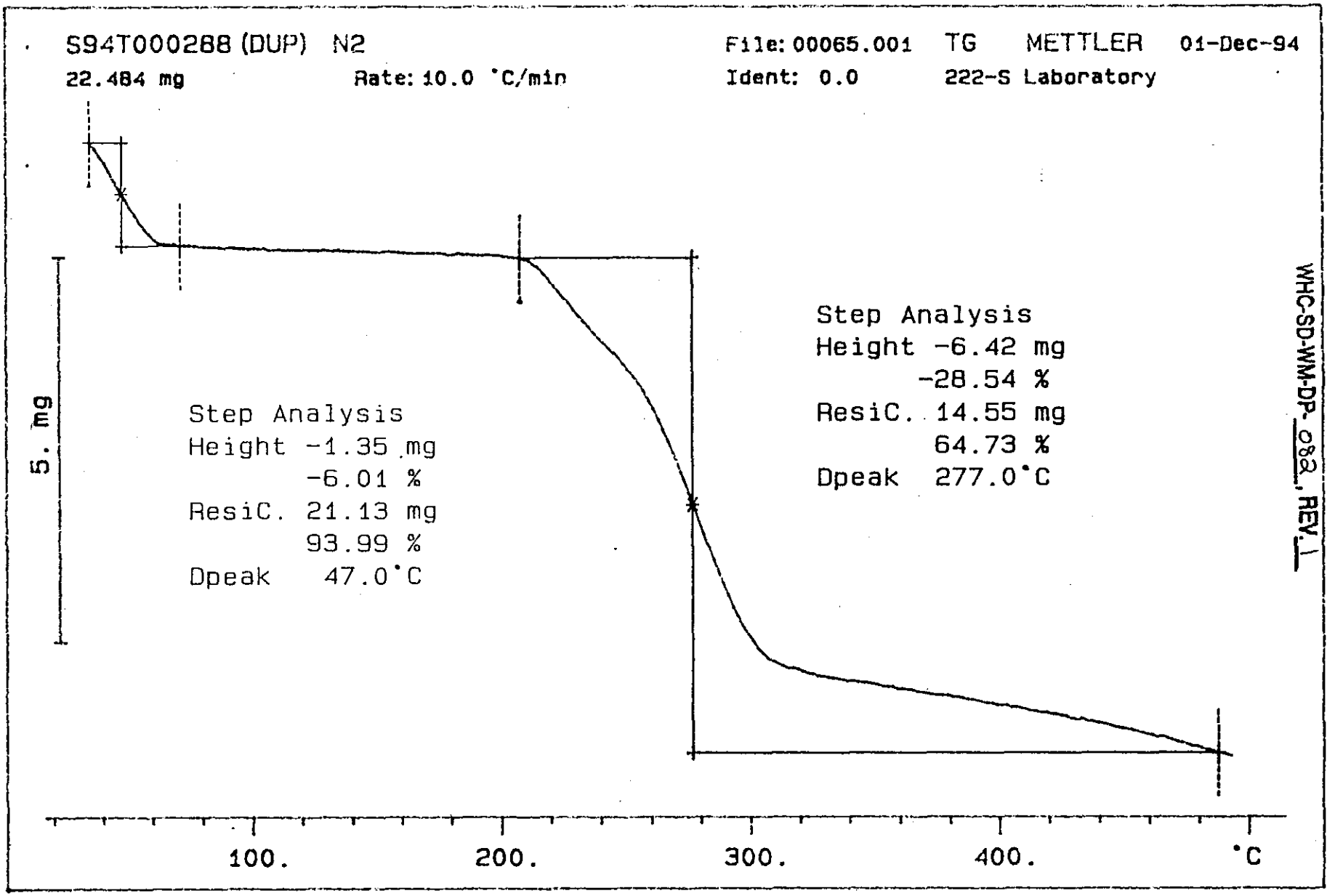


WHC-SD-WM-DP-082, REV. 1

Kl Vogel 12/1/94

STD # H2N 8A


S94T000288 N2
18.571 mg
Rate: 10.0 °C/min
File: 00063.001
TG METTLER 01-Dec-94
Ident: 0.0
222-S Laboratory
5. mg
Step Analysis
Height -2.85 mg
-15.35 %
ResiC. 15.72 mg
84.65 %
Dpeak 53.0°C
Step Analysis
Height -5.15 mg
-27.74 %
ResiC. 10.44 mg
56.22 %
Dpeak 277.0°C
100.
200.
300.
400.
°C



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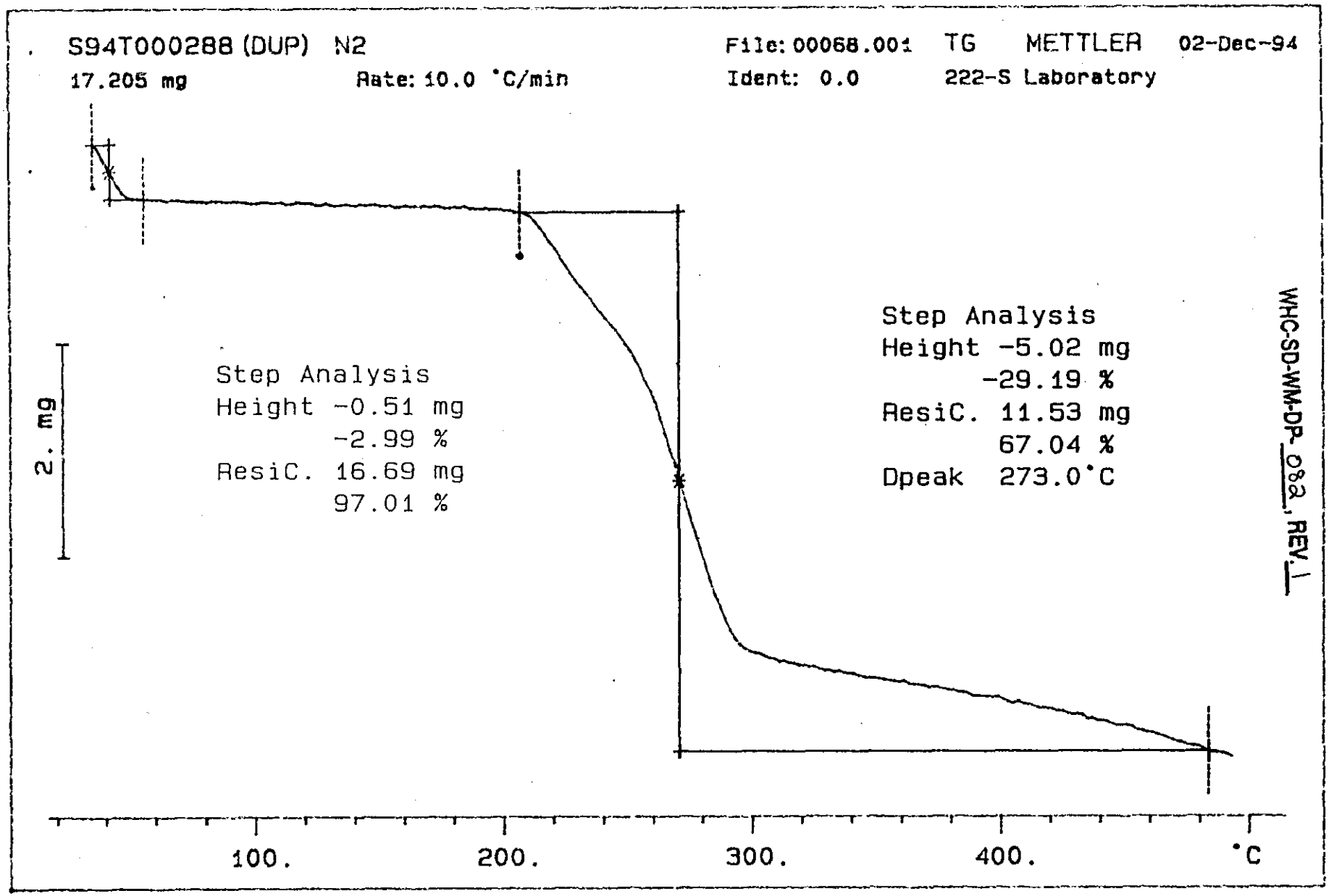

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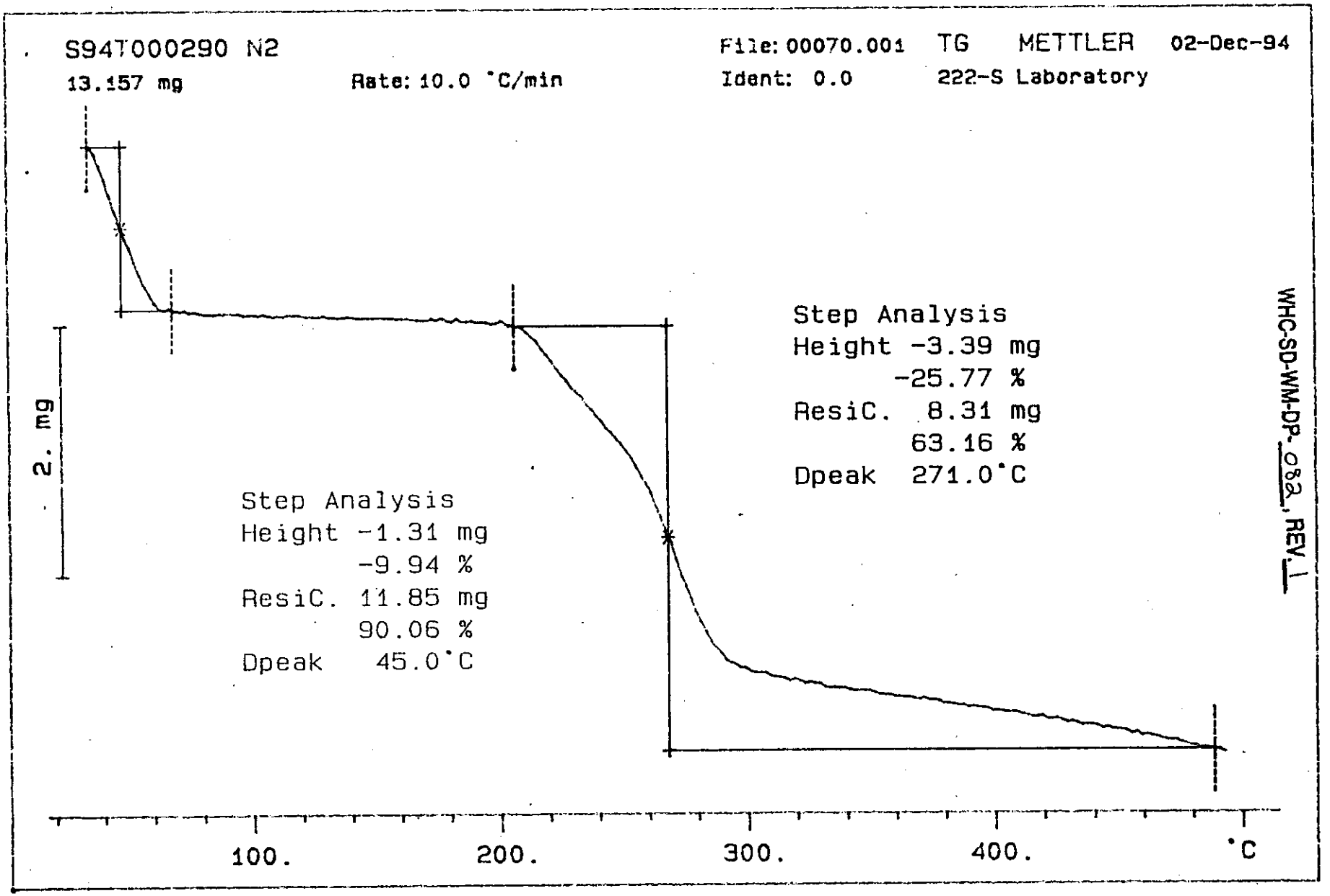

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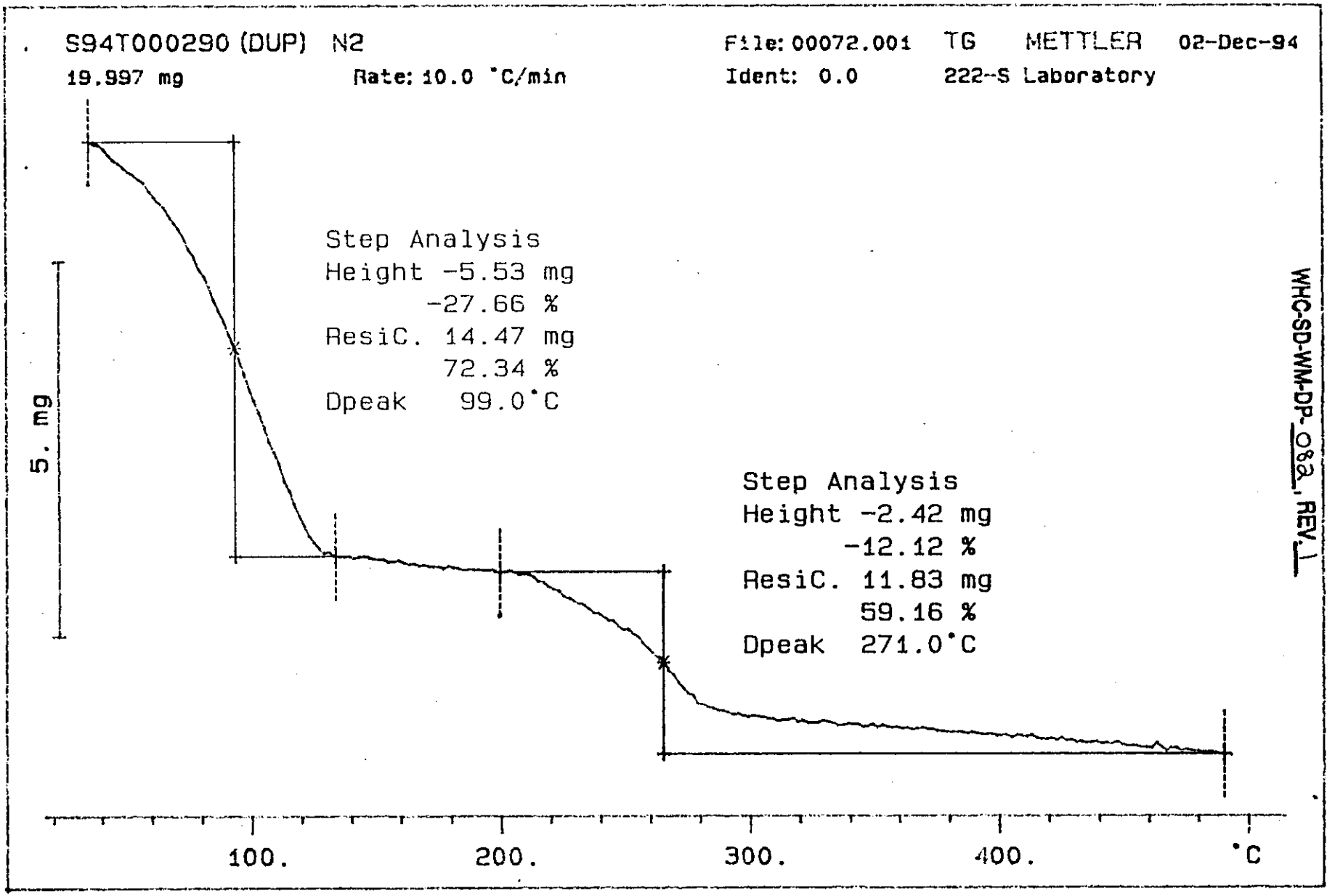
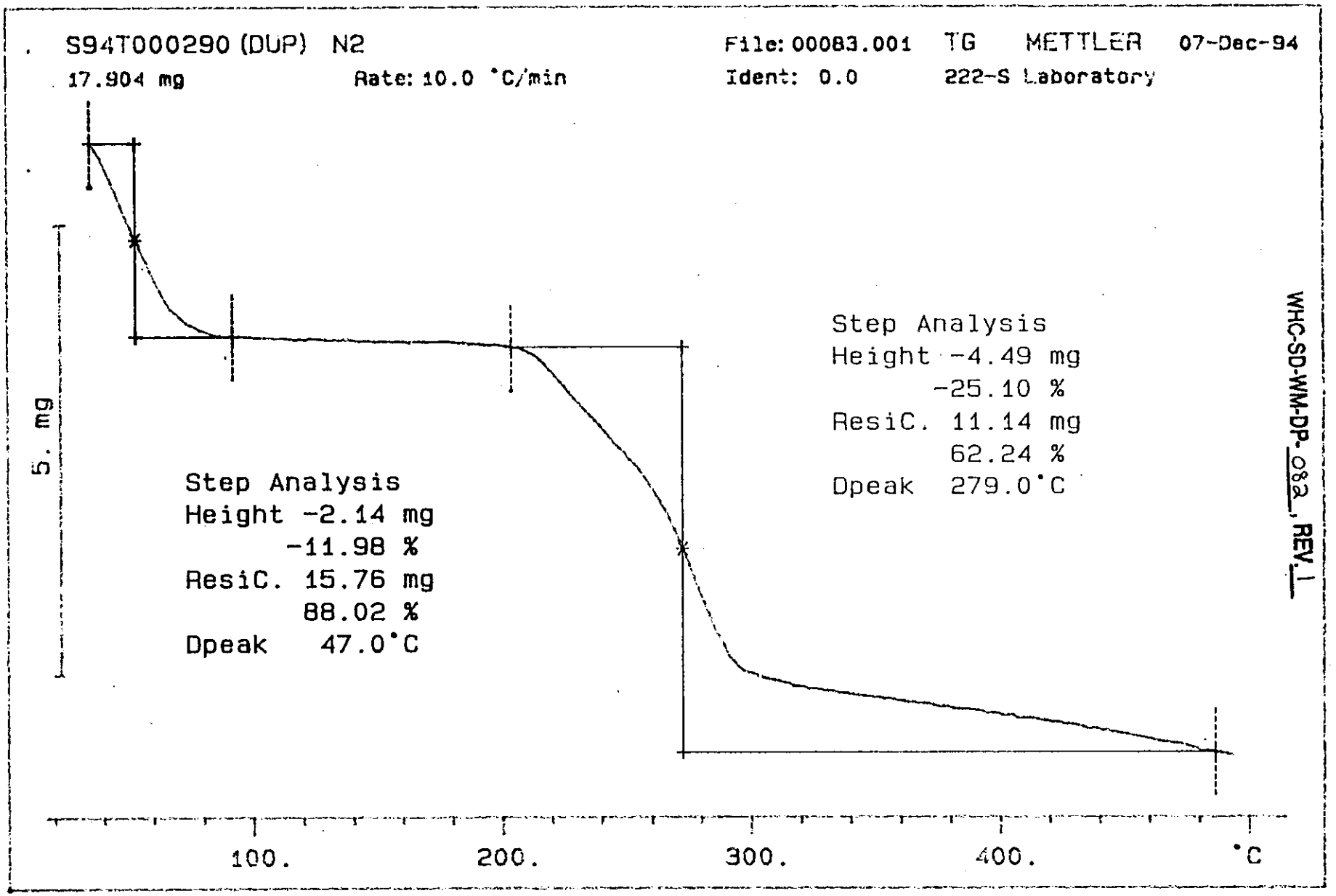


WHC-SD-WM-DP-028, REV. 1



WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 185

'2

Analyst: DWS **Instrument:** TGA01 _____ **Method:** LA-560-112 A-2

Worklist Comment: Please run under N2. JMF

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	#42N84		TGA-01	SOLID	59.19	58.41	N/A	%
2	SAMPLE	S94T000291	0	TGA-01	SOLID	N/A	45.76		%
3	DUP	S94T000291	0	TGA-01	SOLID	45.76	46.28	N/A	%
4	SAMPLE	S94T000292	0	TGA-01	SOLID	N/A	32.97		%
5	DUP	S94T000292	0	TGA-01	SOLID	32.97	39.15	N/A	%

Final page for worklist # 185

Analyst Signature

11-30-94
Date

WHC-SD-WM-DP-082, REV. 1

Verified 12/6/94 J. M. Fuge

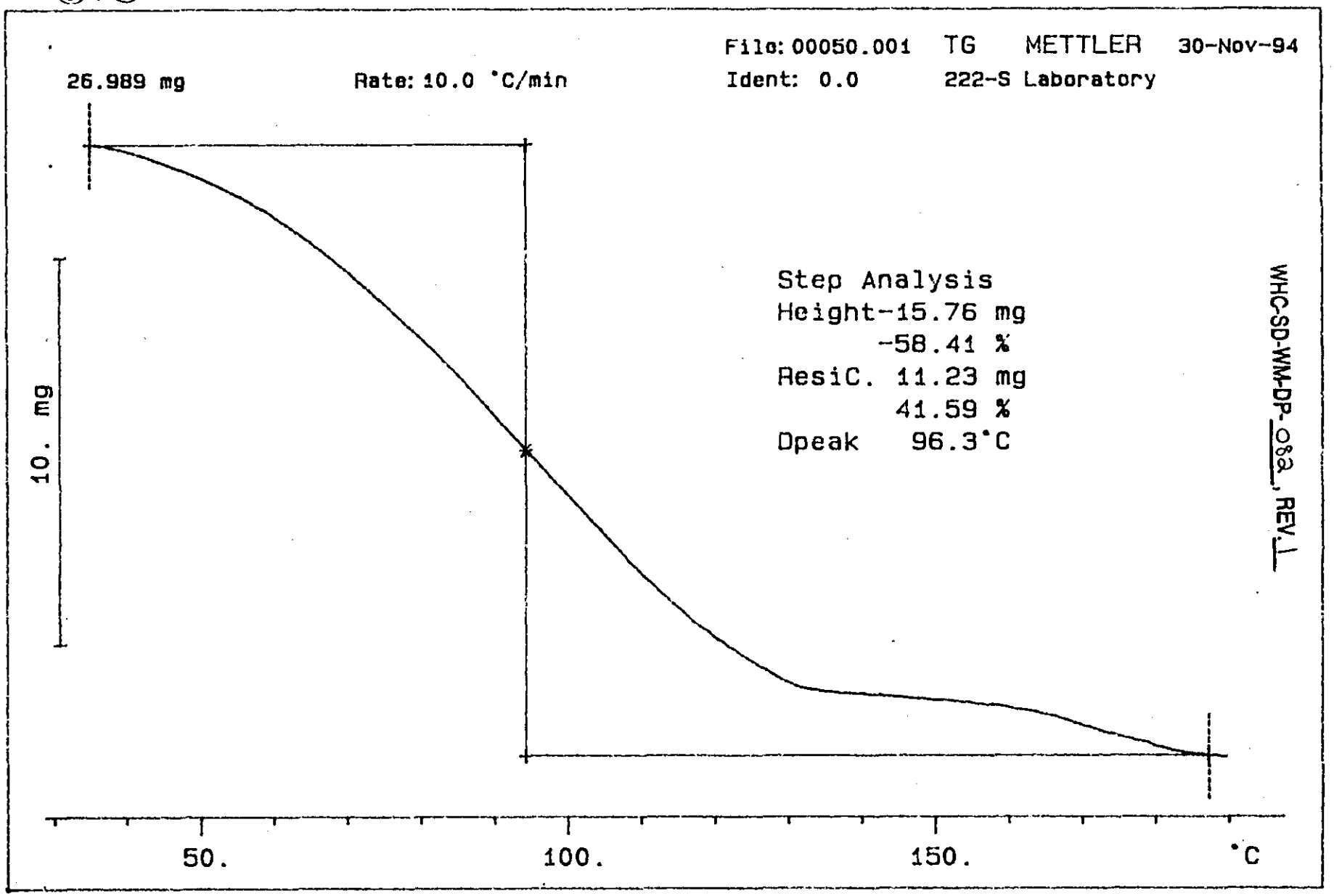
Data Entry Comments: S94T000291 has a second weight loss step of 6.25% at 250°C; duplicate has ~~46.28%~~ 6.79% at 250°C. S94T000292 has a second step of 11.77% at 250°C; duplicate has 9.32% at 250°C. J. M. Fuge 12/1/94

Units shown for QC (SPK) may not reflect the actual units. DATA Entered 12-2-94 SJH

Page: 1

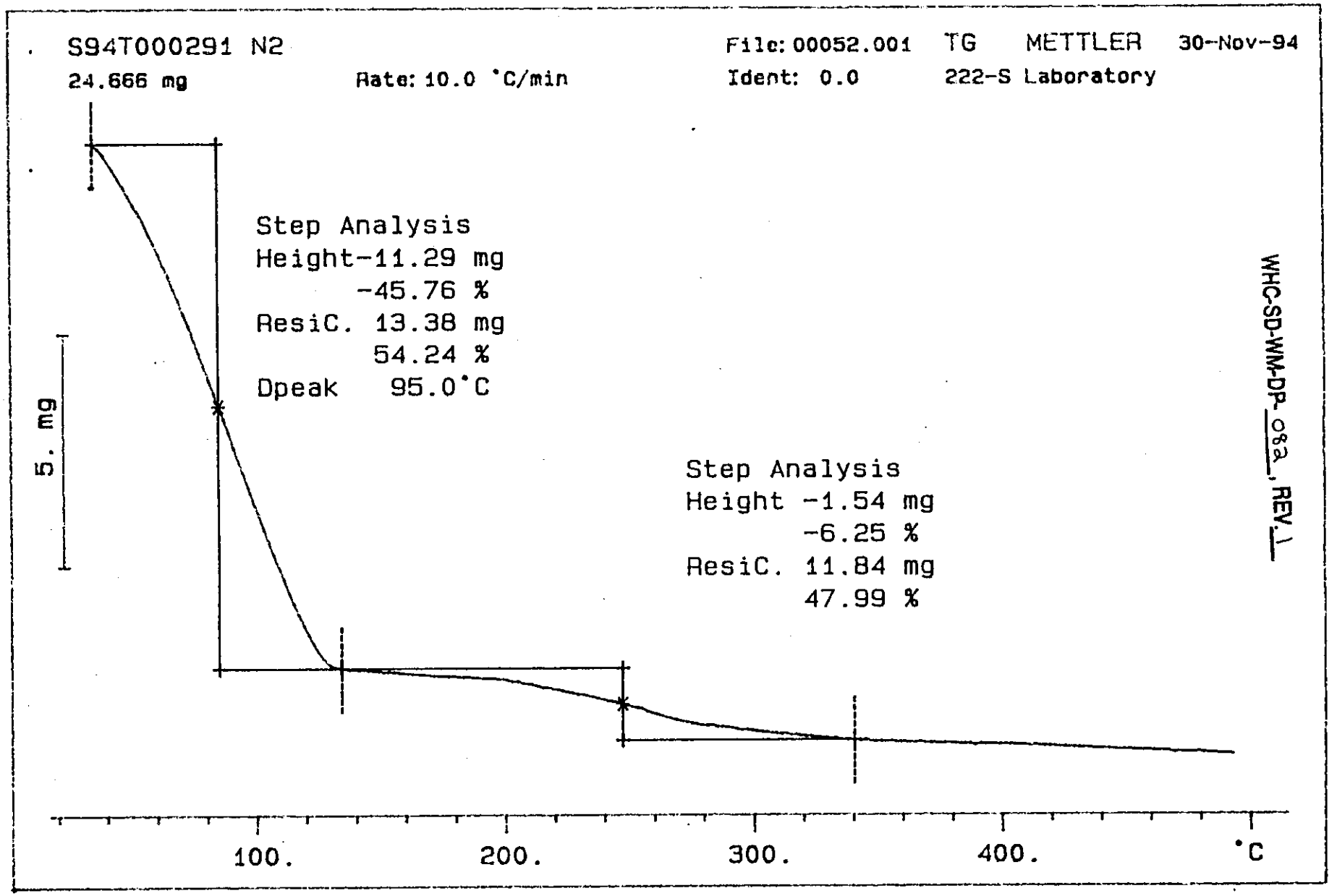
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 55 TO 59.

STD

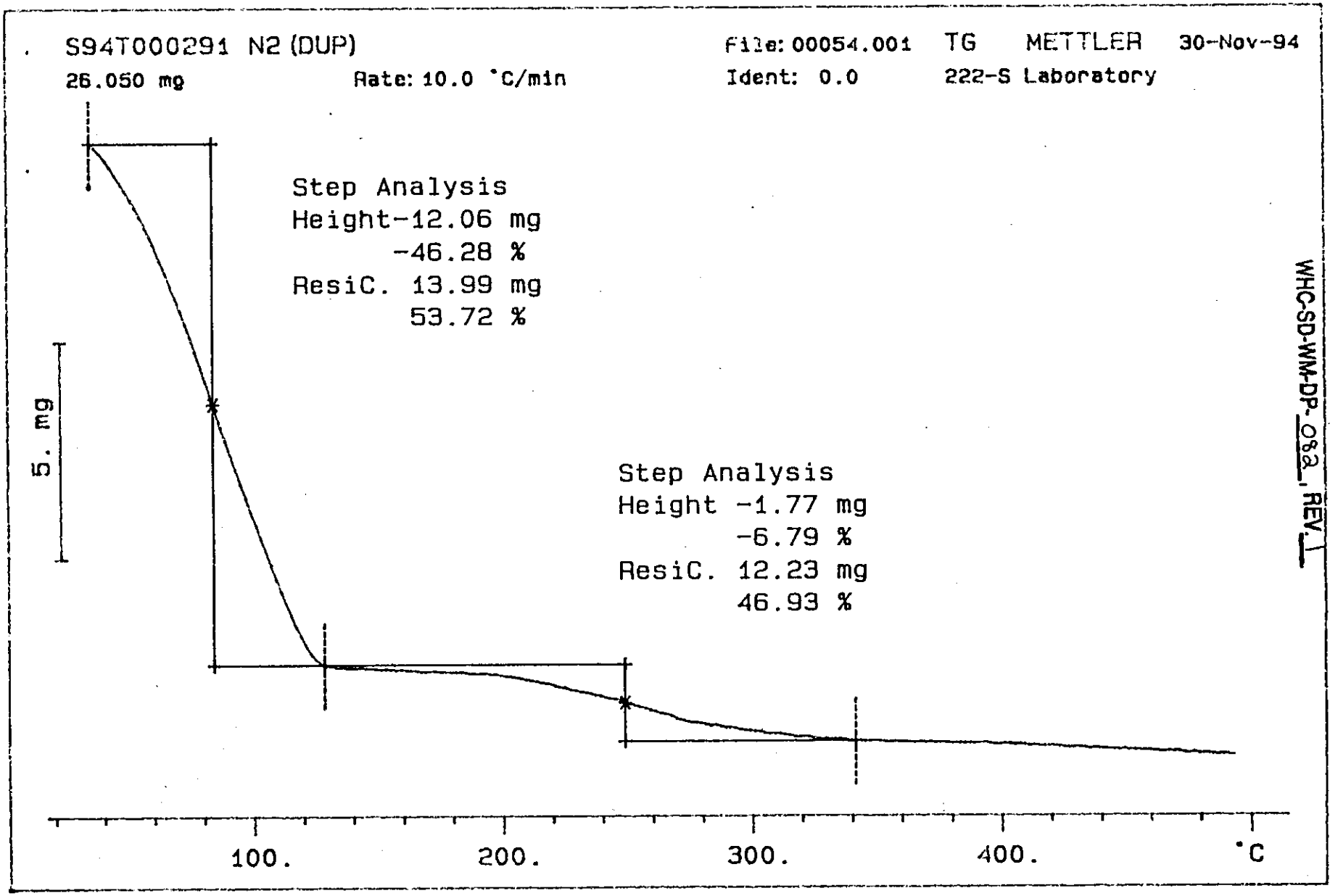


WHC-SD-WM-DP-082, REV. 1

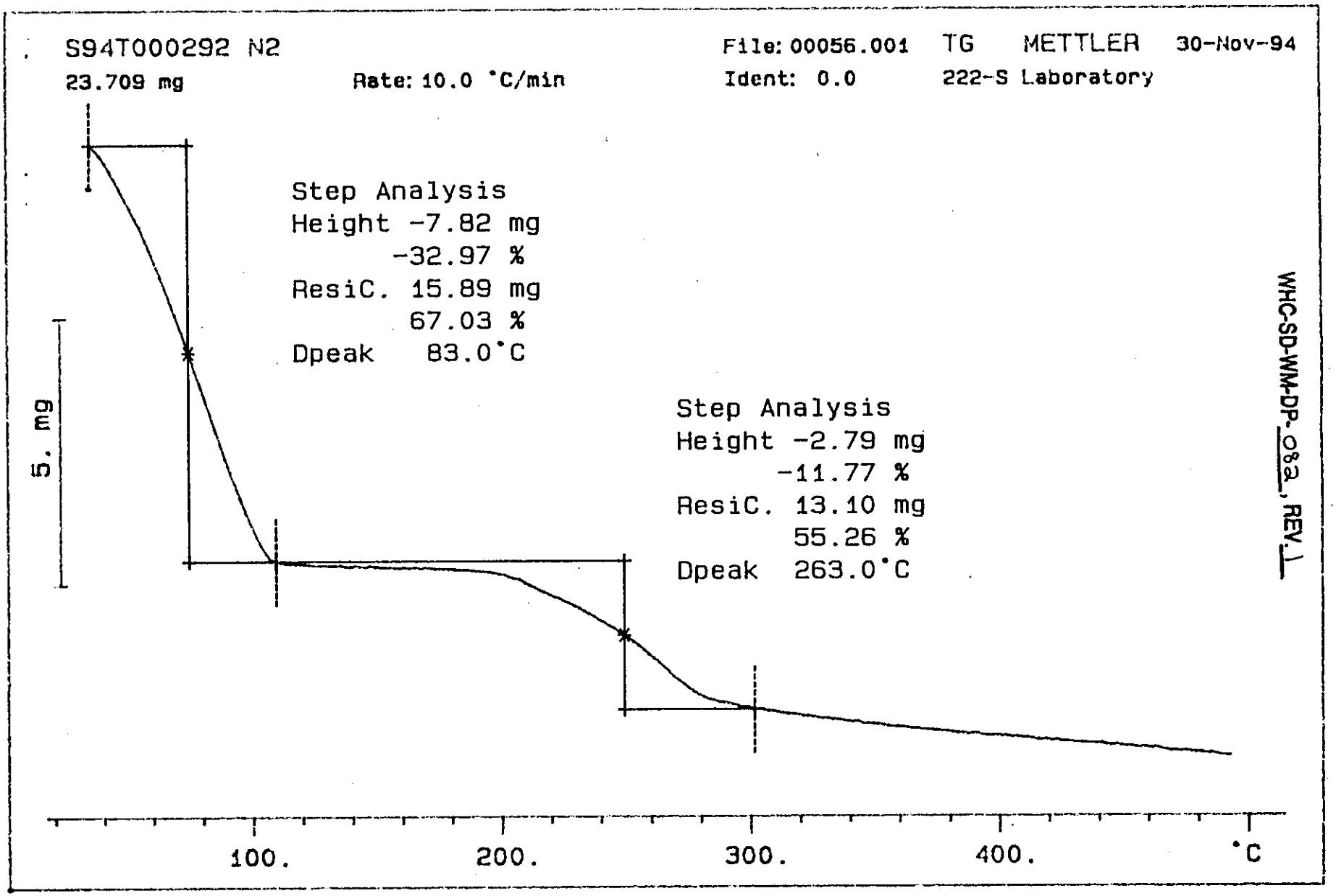
Std# 42N8A David W Smith 11-30-94



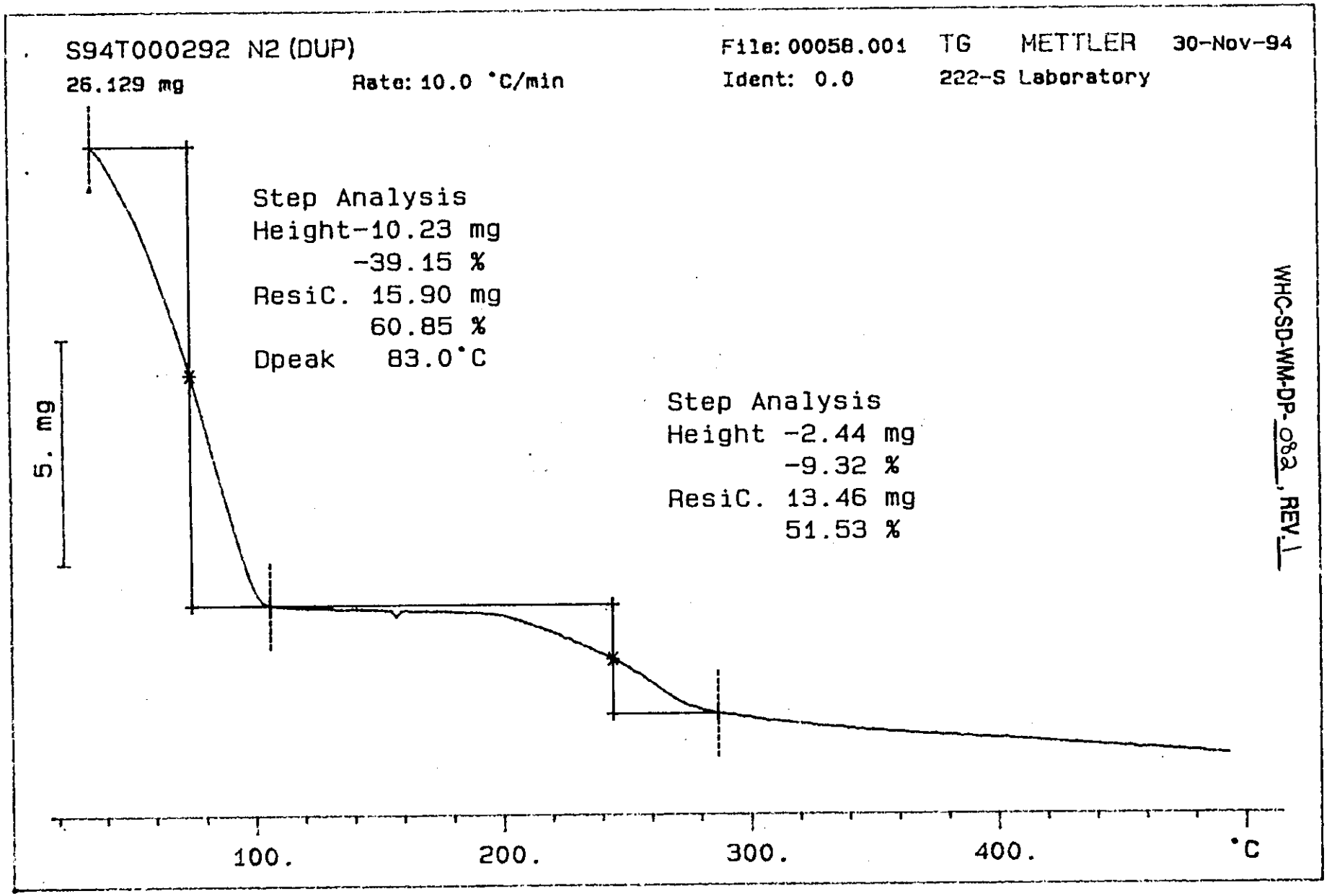
WHC-SD-WM-DP-080, REV. 1



WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-O&a, REV. 1



WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 279

Analyst: KLV **Instrument:** TGA01 _____ **Method:** LA-560-112 A-2

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	KV 12/29/94 ~~T2F~~ 42N8A			TGA-01	SOLID	59.19	59.19	N/A	%
2	SAMPLE	S94T000361	0		TGA-01	SOLID	N/A	51.85		%
3	DUP	S94T000361	0		TGA-01	SOLID	51.85	46.80	N/A	%
4	SAMPLE	S94T000362	0		TGA-01	SOLID	N/A	48.57		%
5	DUP	S94T000362	0		TGA-01	SOLID	48.57	50.45	N/A	%

Final page for worklist # 279

Analyst Signature — Date 12/29/94

1/10/95

Verified by Blandina Valenzuela — 1/11/95

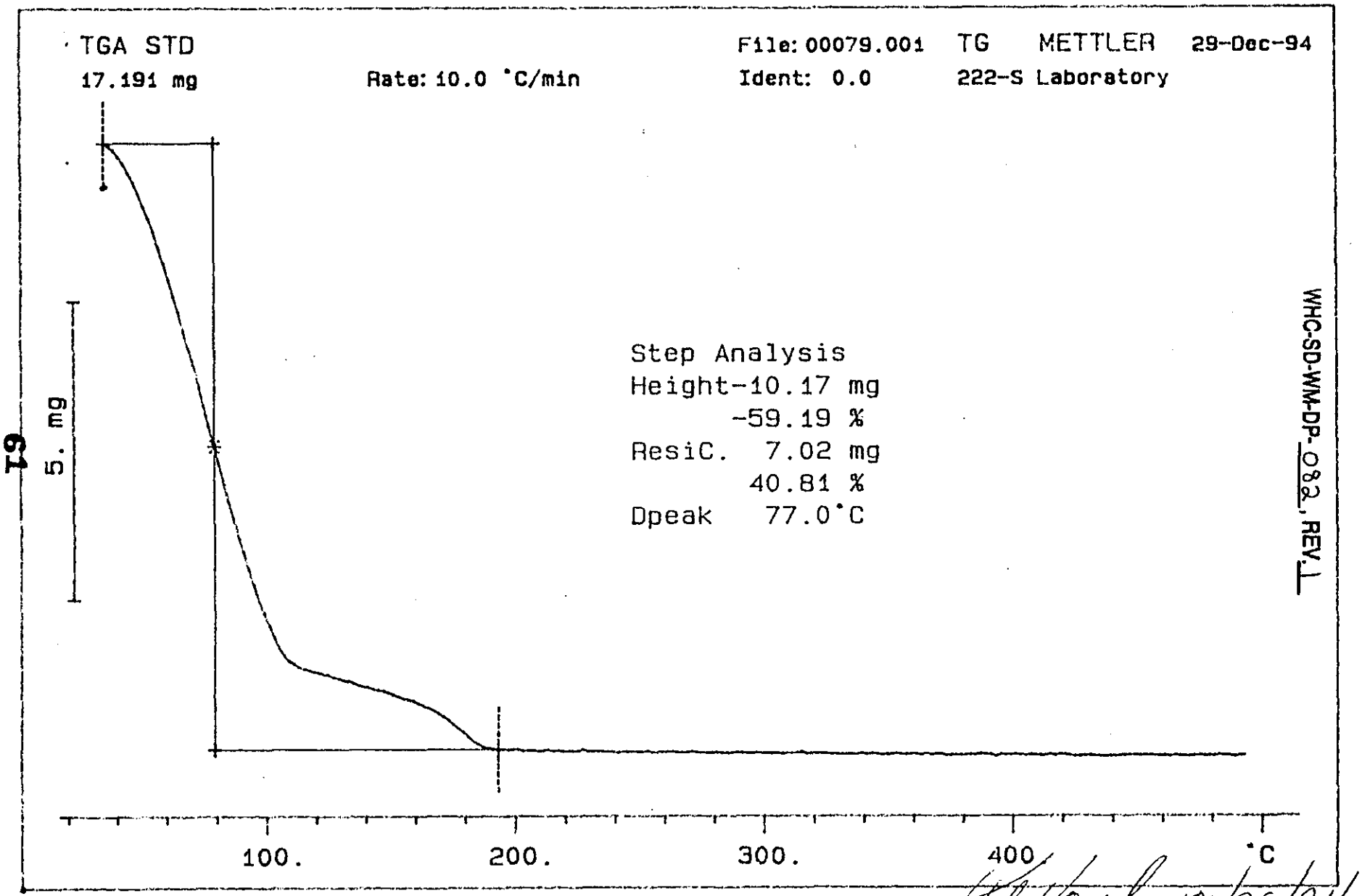
WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:
S94T000361 had a second weight loss step of 6.27%
S94T000362 had a second weight loss step of 8.07%

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

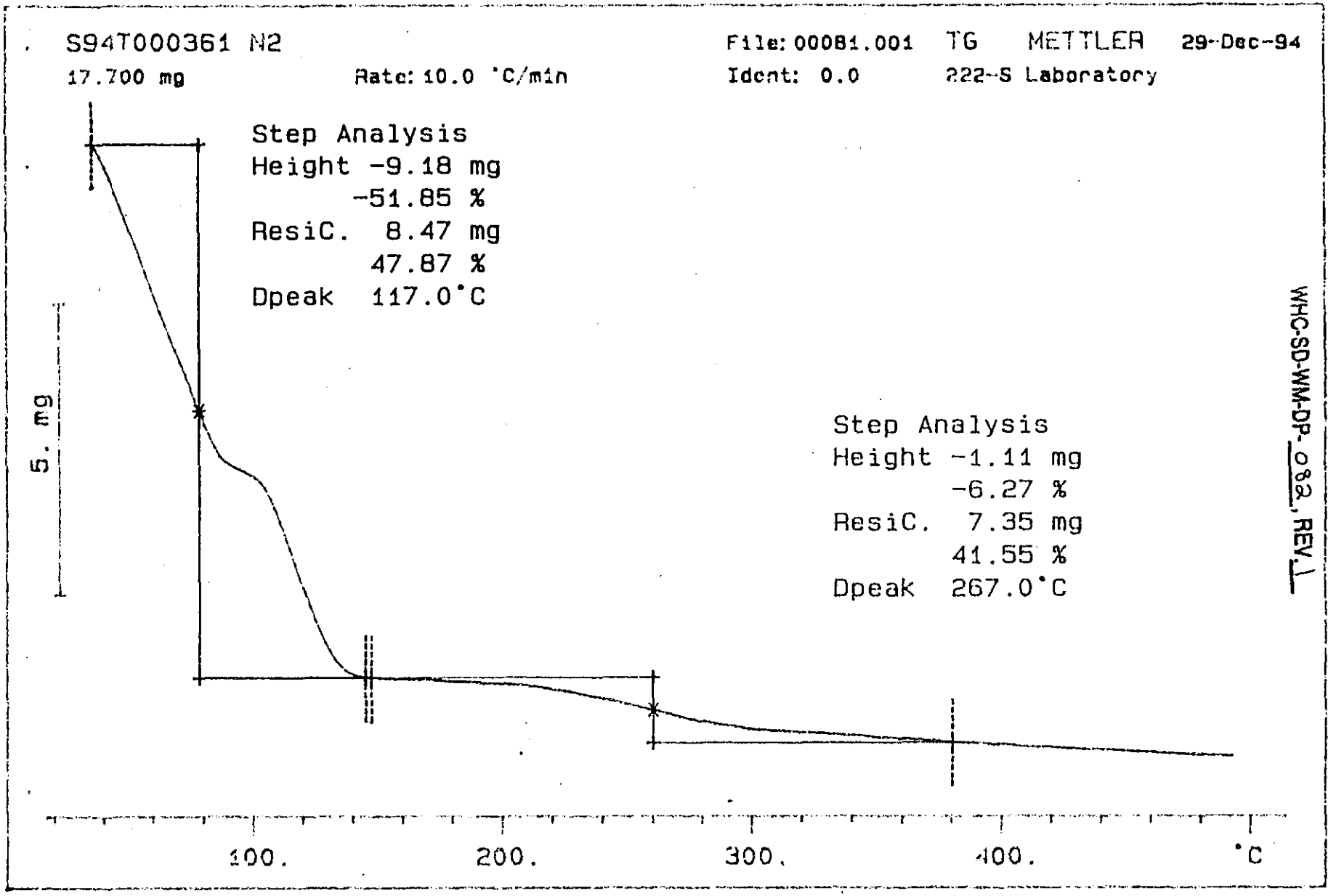
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 61 TO 65.



Std #4208A

12/29/94

WHC-SD-WM-DP-082, REV. 1



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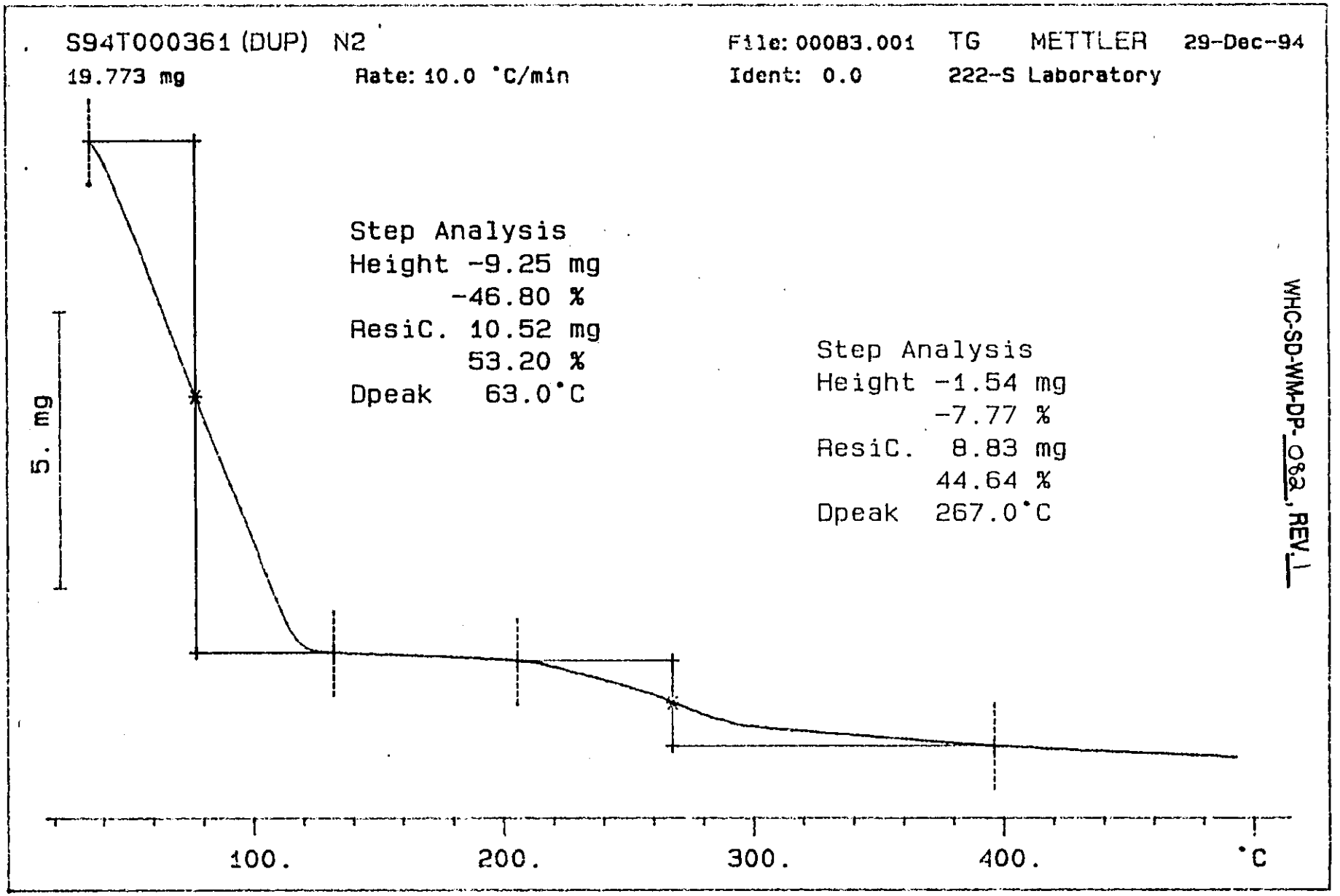

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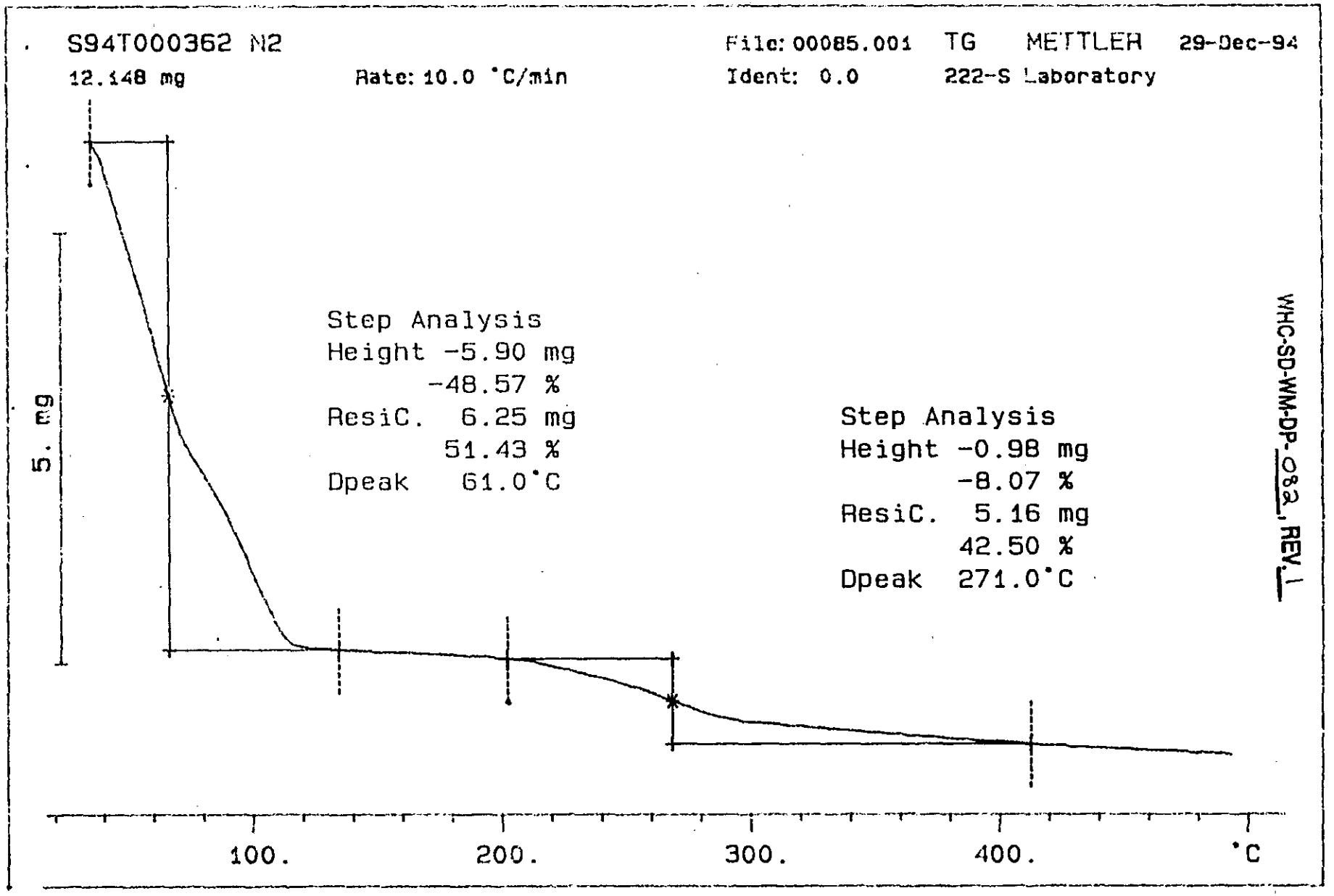
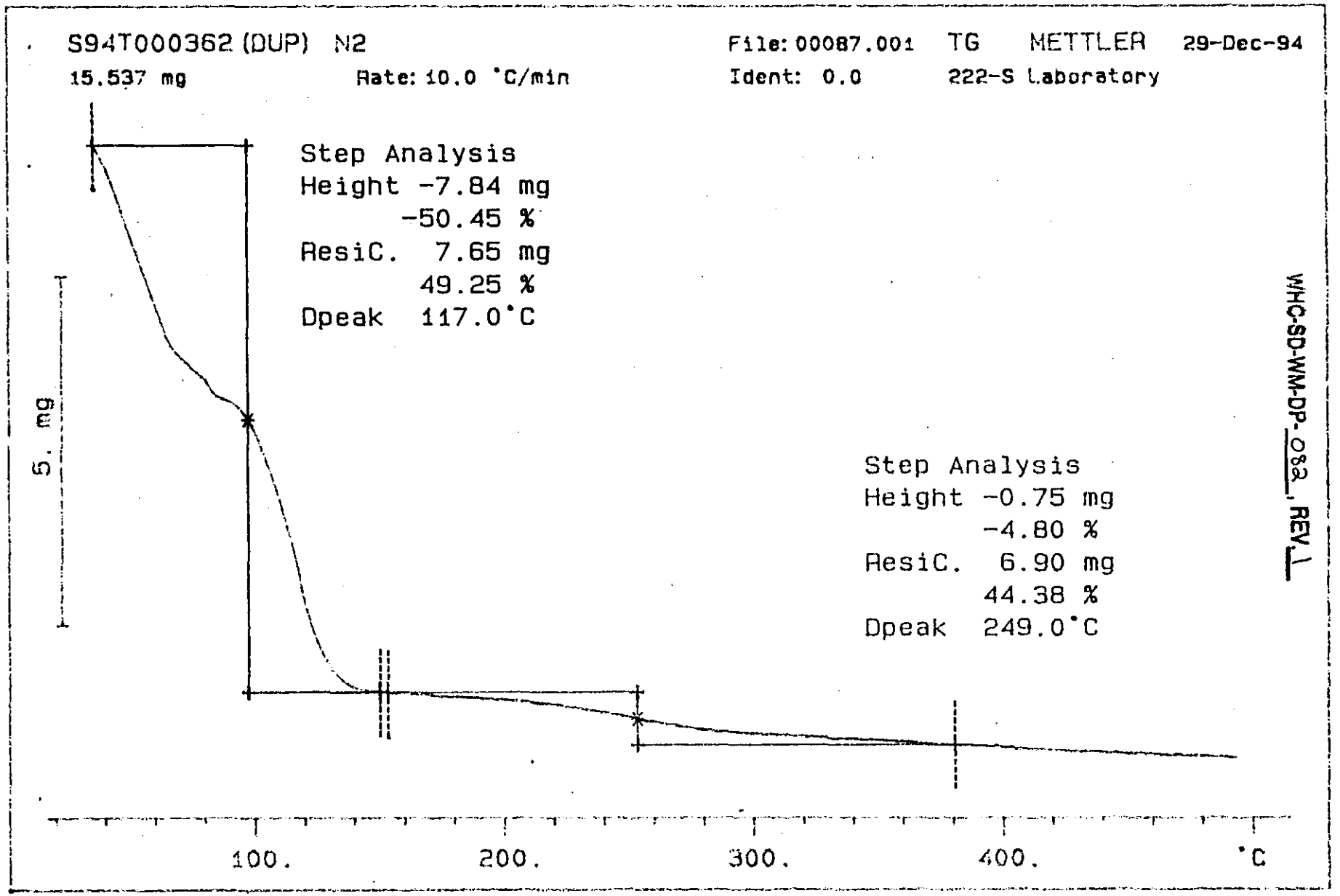


WHC-SD-WM-DP-082, REV. 1



WHC-SD-WM-DP-088, REV 1

LABCORE Data Entry Template for Worklist# 280

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A - 2

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	~~24~~ 42 N8A LAD 1-25-95			TGA-01	SOLID	59.19	58.29	N/A	%
2	SAMPLE	S94T000363	0		TGA-01	SOLID	N/A	52.97		%
3	DUP	S94T000363	0		TGA-01	SOLID	52.97	52.41	N/A	%
4	SAMPLE	S94T000364	0		TGA-01	SOLID	N/A	47.79		%
5	DUP	S94T000364	0		TGA-01	SOLID	47.79	49.23	N/A	%

Final page for worklist # 280

See attached for signatures
Analyst Signature

1/4/95
Date

1/10/95

1/11/95

Verified by Blandina Valenzuela

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:
S94T000363 had a second weight loss of 4.01%
S94T000363 had a second weight loss of 5.00%

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 280

Analyst: KLV **Instrument:** TGA01 **Method:** LA-560-112 A-2

Worklist Comment: Please run C-108 TGA under N2. BDV

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	STD	2N8A			TGA-01	SOLID	59.19	58.29	N/A	%
2	SAMPLE	S94T000363	0		TGA-01	SOLID	N/A ~~52~~ BDV 1/4/95	~~57.55~~ 52.97 BDV 1/4/95		%
3	DUP	S94T000363	0		TGA-01	SOLID	~~57.55~~ BDV 1/4/95	~~56.07~~ BDV 1/4/95	N/A	%
4	SAMPLE	S94T000364	0		TGA-01	SOLID	N/A BDV 1/4/95	~~53.30~~ BDV 1/4/95		%
5	DUP	S94T000364	0		TGA-01	SOLID	~~53.30~~	~~54.06~~	N/A	%

Final page for worklist # 280

Analyst Signature

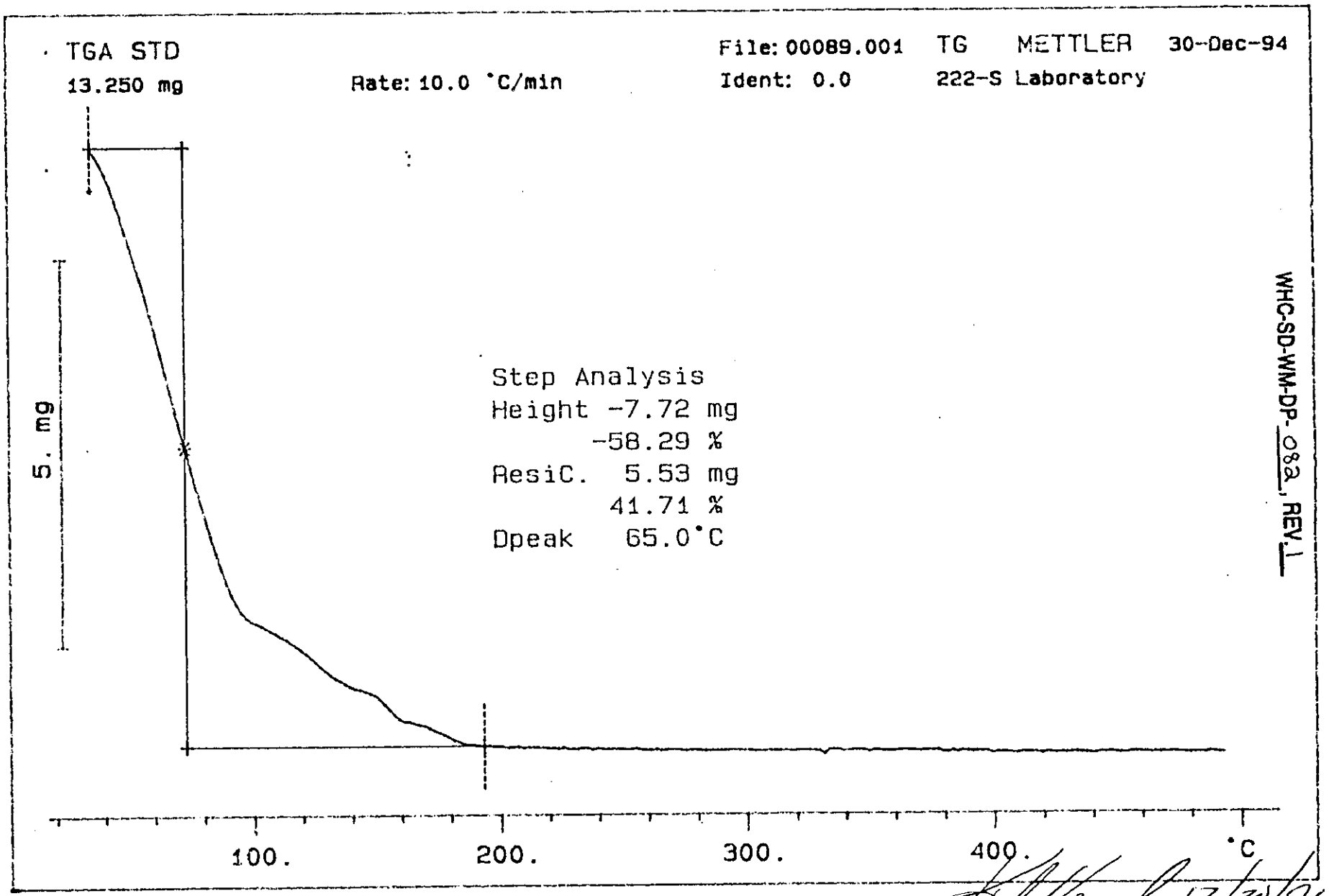
10/30/94
Date

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: S94T000363 had a second weight loss of 4.01%

Units shown for QC (SPK) may not reflect the actual units.

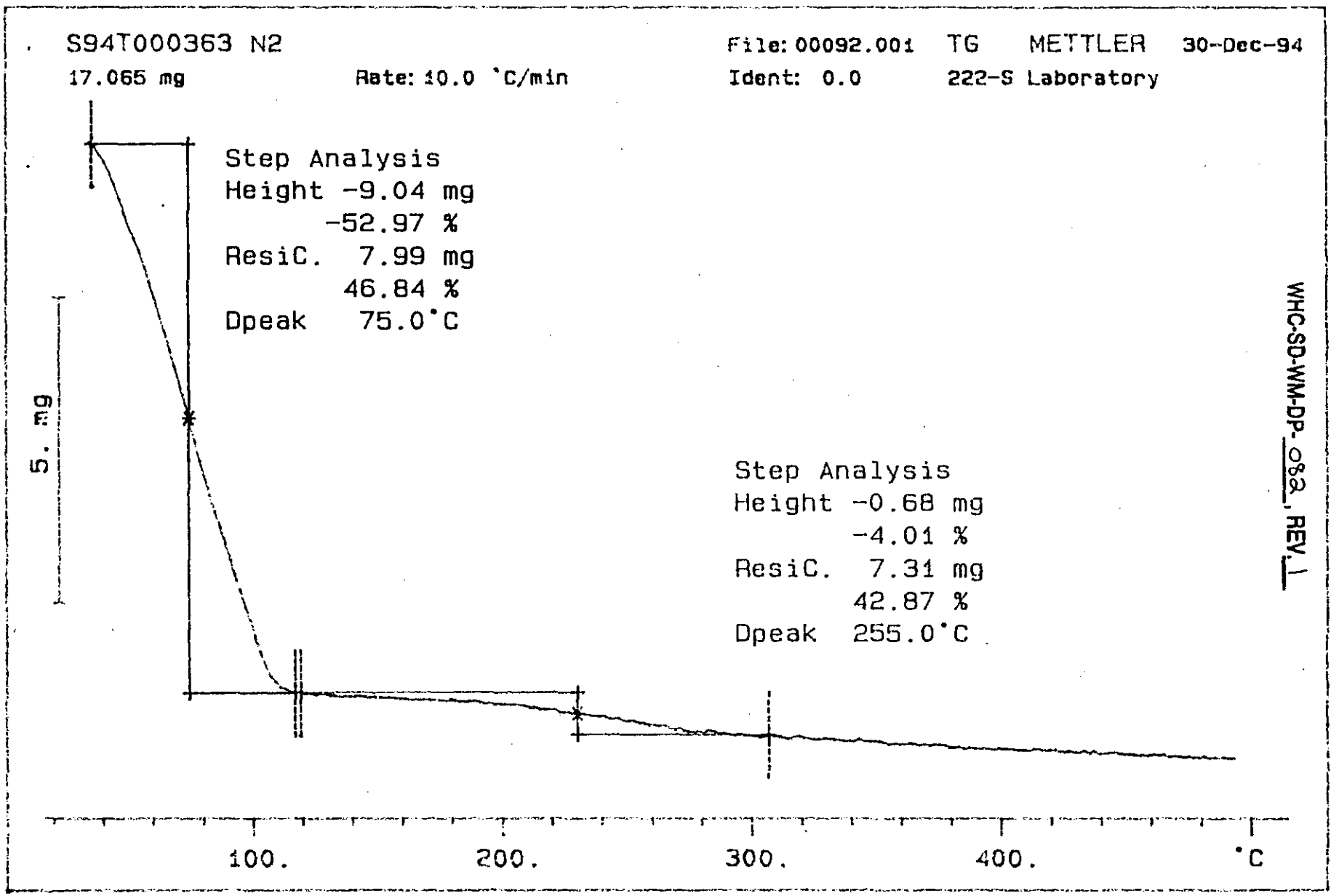
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 65 TO 72.



Std #4208A

12/30/94

WHC-SD-WM-DP-082, REV. 1



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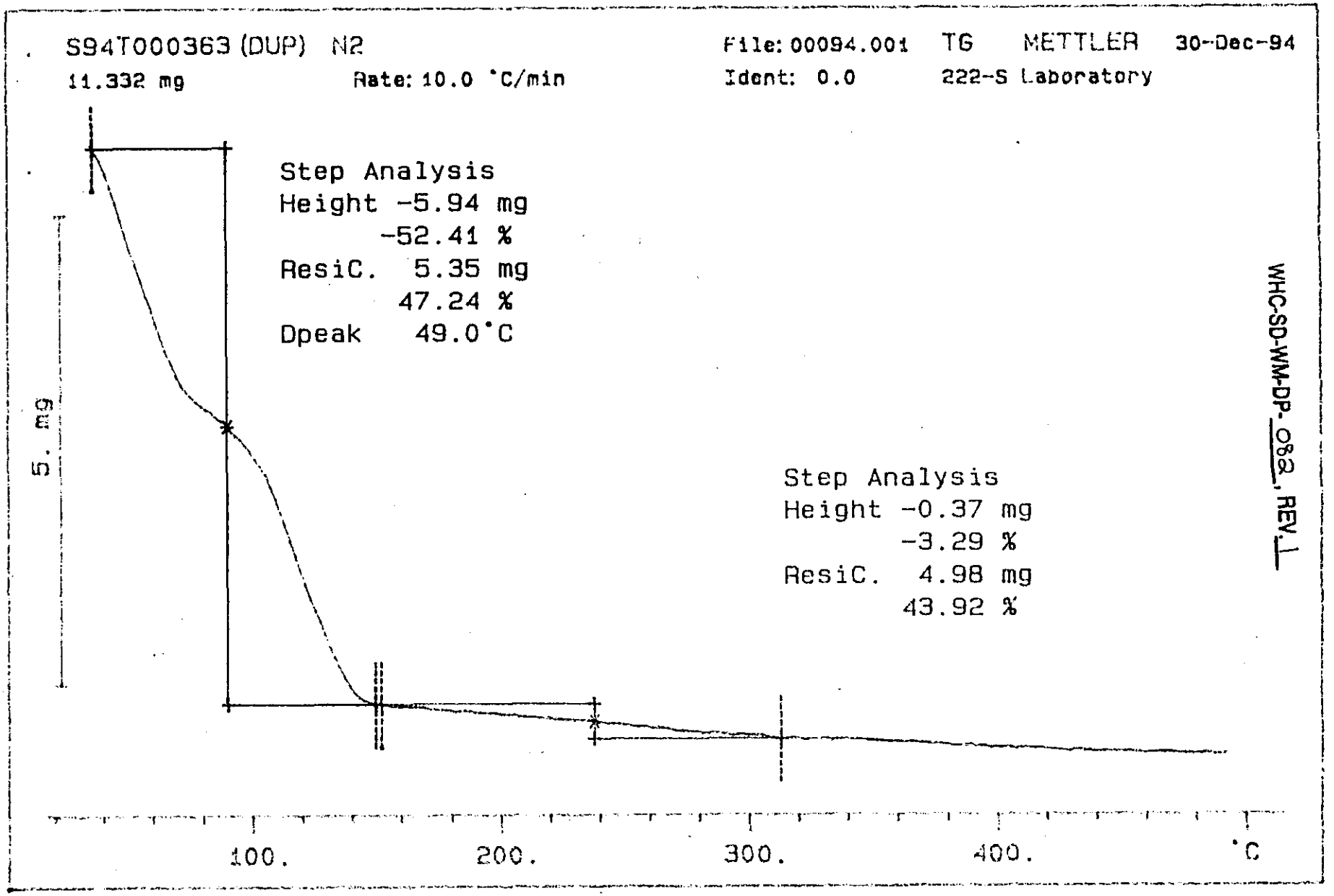

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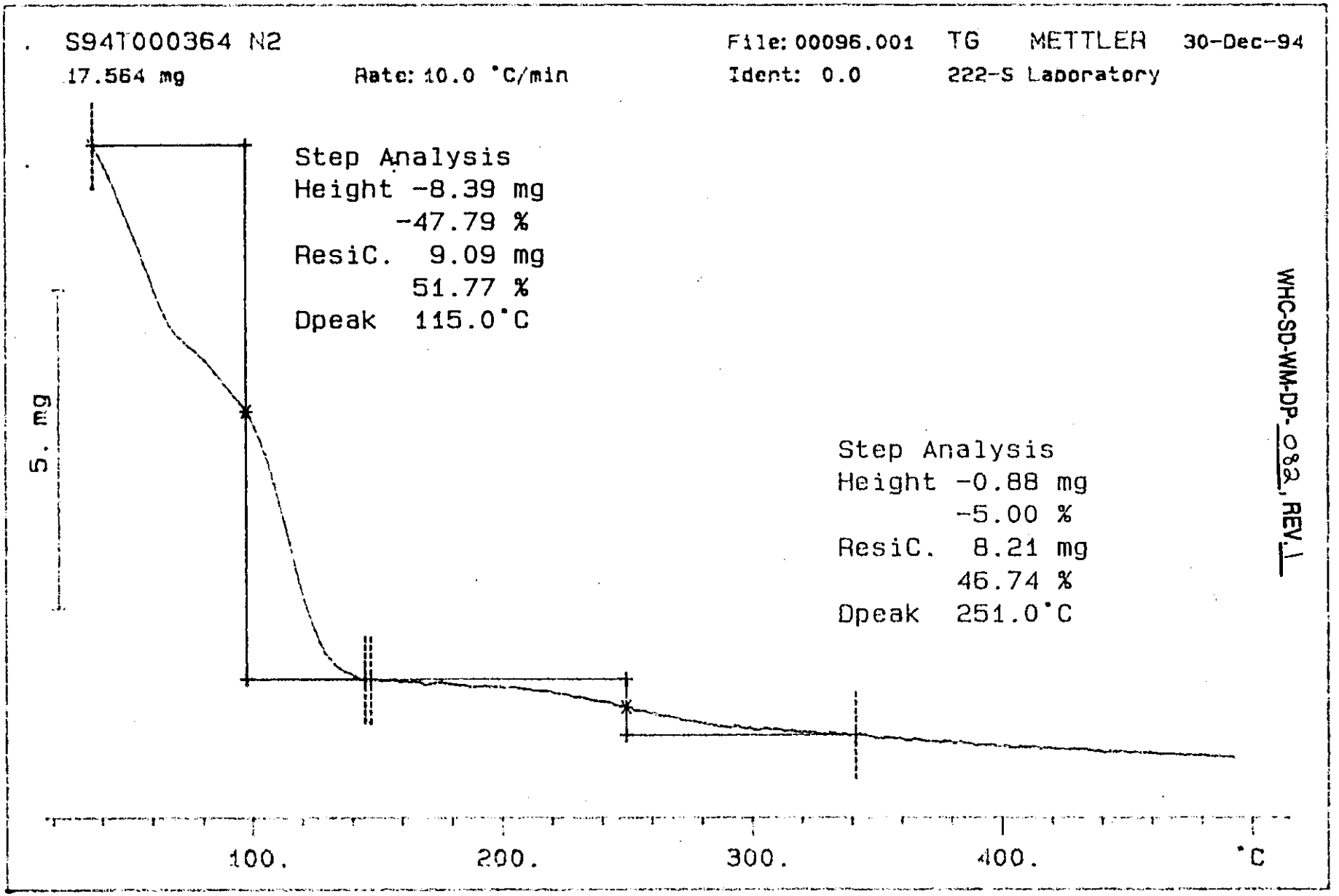

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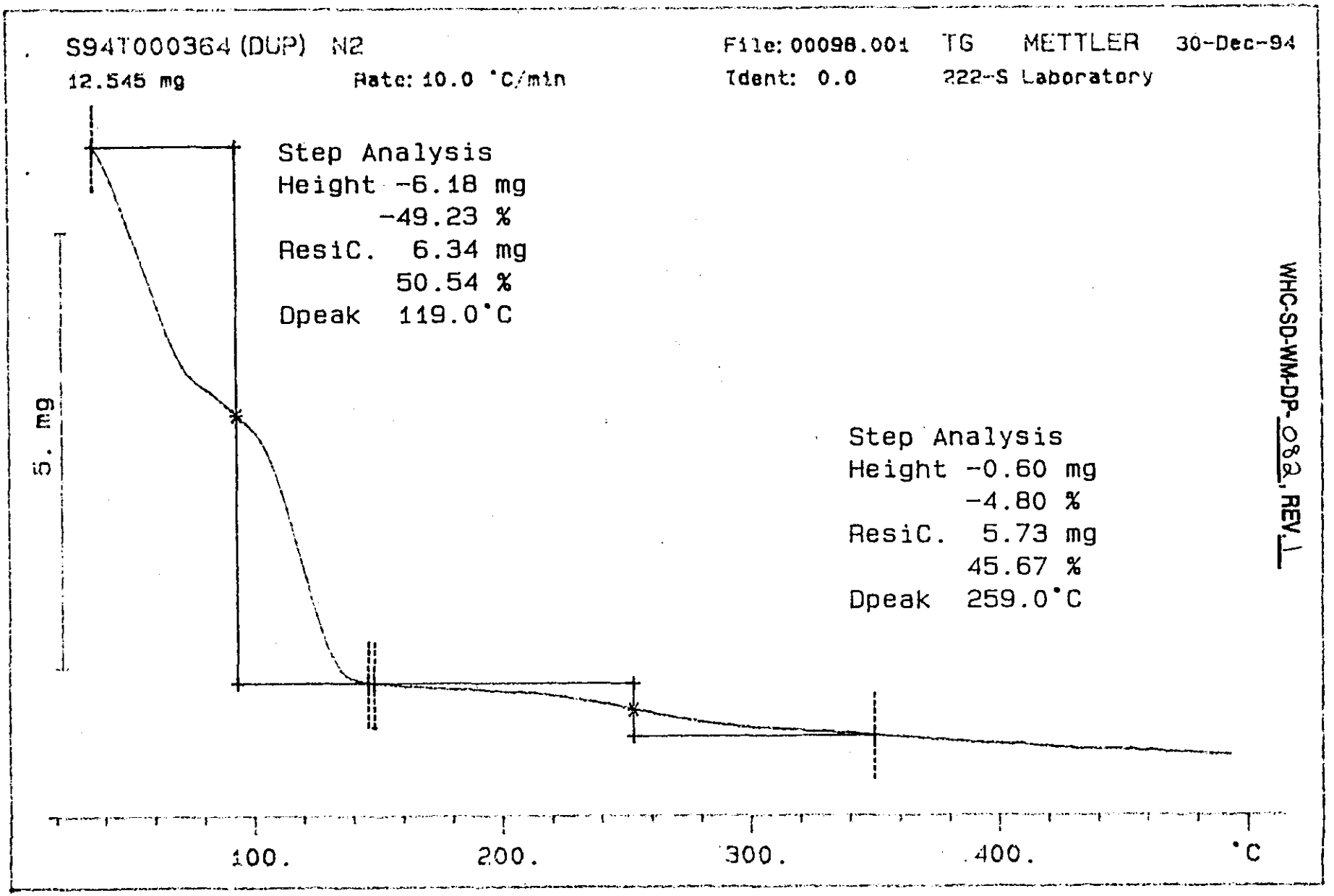

WHC-SD-WM-DP-082, REV. 1

PART II

WHC-SD-WM-DP-082, REV. 1

45-DAY SAFETY SCREENING FOR TANK 241-C-108, CORE 61

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From: Program Support 8E480-94-005
Phone: 373-4225
Date: July 14, 1994
Subject: 45 DAY SAFETY SCREENING FOR TANK 241-C-108 CORE 61

To: D. R. Bratzel

References:

(1) WHC-SD-WM-TP-211, Rev. 1, "Tank 241-C-108 Tank Characterization Plan", Westinghouse Hanford Company, Richland, WA. 99352, dated 4/15/94.

(2) Internal Memo 7E720-94-124, "Analyses to be Performed on Tank 241-C-108 Core 61", Westinghouse Hanford Company, Richland, WA. 99352, dated 6/14/94.

Summary

One core sample, Core 61 from tank C-108 was received by the 222-S laboratories. This core sample underwent Safety Screening Analysis (DSC, TGA, and Alpha Total). No sample results exceeded the notification limits.

Sample Receipt and Extrusion

Core 61

The C-108 sample (core 61) was taken from riser 3 on 6/2/94 and shipped to the 222-S Laboratory the same day. Core 61 was extruded on 6/3/94. This resulted in approximately 1 inch of sample, with a mass of 20.89 grams. About 6 inches of sample was expected. The sample was dark brown, clay-like in consistency, and appeared homogeneous. No drainable liquid or liner liquid was detected.

Due to the low sample recovery, guidance was requested and received from the program concerning how to proceed with analyses. It was decided to perform the safety screening analyses first (DSC, TGA, TA). A Gamma Energy Analysis (GEA) was also requested, and these results will appear in the final report. Other characterization analyses were not to be performed until the safety screen work were completed.

Analytical Results

TGA (Moisture)

The weight percent water by Thermogravimetric Analysis (TGA) was performed utilizing procedure LA-560-112. No analytical problems were encountered. Core 61 contained an average value of 21% water by weight. This was at the low end of the expected range for a typical ferrocyanide sludge sample. The Relative Percent Difference (RPD) for the sample and duplicate was well within the precision limit of 20%, the RPD was 5.2%.

Hanford Operations and Engineering Contractor for the US Department of Energy

DSC
Differential thermal analyses were performed using procedure LA-514-113, and a Mettler Model 20 Differential Scanning Calorimeter (DSC). No analytical problems were noted. Core 61 exhibited no exotherms.

Alpha Total
The Alpha Total analyses were performed using procedure LA-508-101. No analytical problems were noted. The core 61 contained no alpha activity in excess of 41 uCi/g. "Less than detectable" values appear because of the large dilution factor that is necessary to reduce the beta activity to acceptable levels. The "less than" values reported are significantly below the notification limit.

Sincerely,

for JGK

John G. Kristofzski
Program Support Manager
(509) 373-4225

Attachments 1. Summary Data Report
2. Analyses for DSC/TGA

SAMPLE DATA SUMMARY

Safety Screening Summary Table for Tank 241-C-108

Core 61 Segment 1
K 222

Analysis (units)	Notification Limit	Std Recovery	Prep Blank	Sample	Duplicate	Mean	RPD	Spike Rec	Mean/DL	Det Limit
TGA (% water)	((0.0932*DSC)-10.7)	98.5 %	NA	22.1	19.9	21	5.2 %	NA	NA	NA
DSC (cal/g) *	125 cal/g *	105.1 %	NA	no exotherm	no exotherm	NA	NA	NA	NA	NA
Alpha Total (uCi/g)	41 uCi/g	90.7 %	<5.14E-05	<1.38E+00	<9.25E-01	NA	NA	86.5 %	NA	2.59E+00

* Dry weight basis

SAMPLE ANALYSES RESULTS

QA.

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K222	Customer ID: C-108
Analysis: DSC	Sample Prep: Direct

Instrument: WL16134/WL16129	Procedure/ Rev: LA-514-113 ~~A-0~~ B-0 JMF 6/22/94
Technologist: DW Smith [signature]	Date: 6-22-94
Starting Time: 0030	Temperature 25
Ending Time: 0520	Chemist: J. FRYE

Comments: °K scale instead of °C scale on plot does not affect the data. The correct temperature range for the experiment was run.

J. M. Frye 6/22/94

	Description	Lab ID		Description	Lab ID
1	LMCS	K220-5511	11		
2	Sample	K222-5711	12		
3	Sample Dup	K222-5811	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	12N14A 6.690 mg			

A-6000-881 (03/92)

DIFFERENTIAL SCANNING CALORIMETRY ANALYSIS

Batch 3701

Serial No.	Sample Point	Date	Time Issued	Priority
K 220.-5511	C-108	6-15-94	13: 4	20

Determination	Method Standard	Result Units	Charge Code	Reruns
DSC	LA-514-113	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? 6.690	STD

Remarks, Calculations, Results
Indium STD # 12N14A

Result 29.9 J/g
Value 28.45 J/g
% Rec 105.1

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr
6-22-94	0520	J. M. Fryer

54-6800-061 (R-10-83)

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-5711	C-108	6-15-94	13: 5	20

Determination	Method Standard	Result Units	Charge Code	Reruns
DSC	LA-514-113	EXOTHERMS	N4C3G	0

Sample Size	Customer ID
? 17.562 mg	C61S1

Remarks, Calculations, Results:

No exotherms

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr
6-22-94	0520	J. M. Fryer

54-6800-061 (R-10-83)

DIFFERENTIAL SCANNING CALORIMETRY ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-5811	C-108	6-15-94	13: 6	20

Determination	Method Standard	Result Units	Charge Code	Reruns
DSC	LA-514-113	EXOTHERMS	N4C3G	0

Sample Size	Customer ID
? 19.162	C61S1

Remarks, Calculations, Results

DUPLICATE SAMPLE

No Exotherms

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

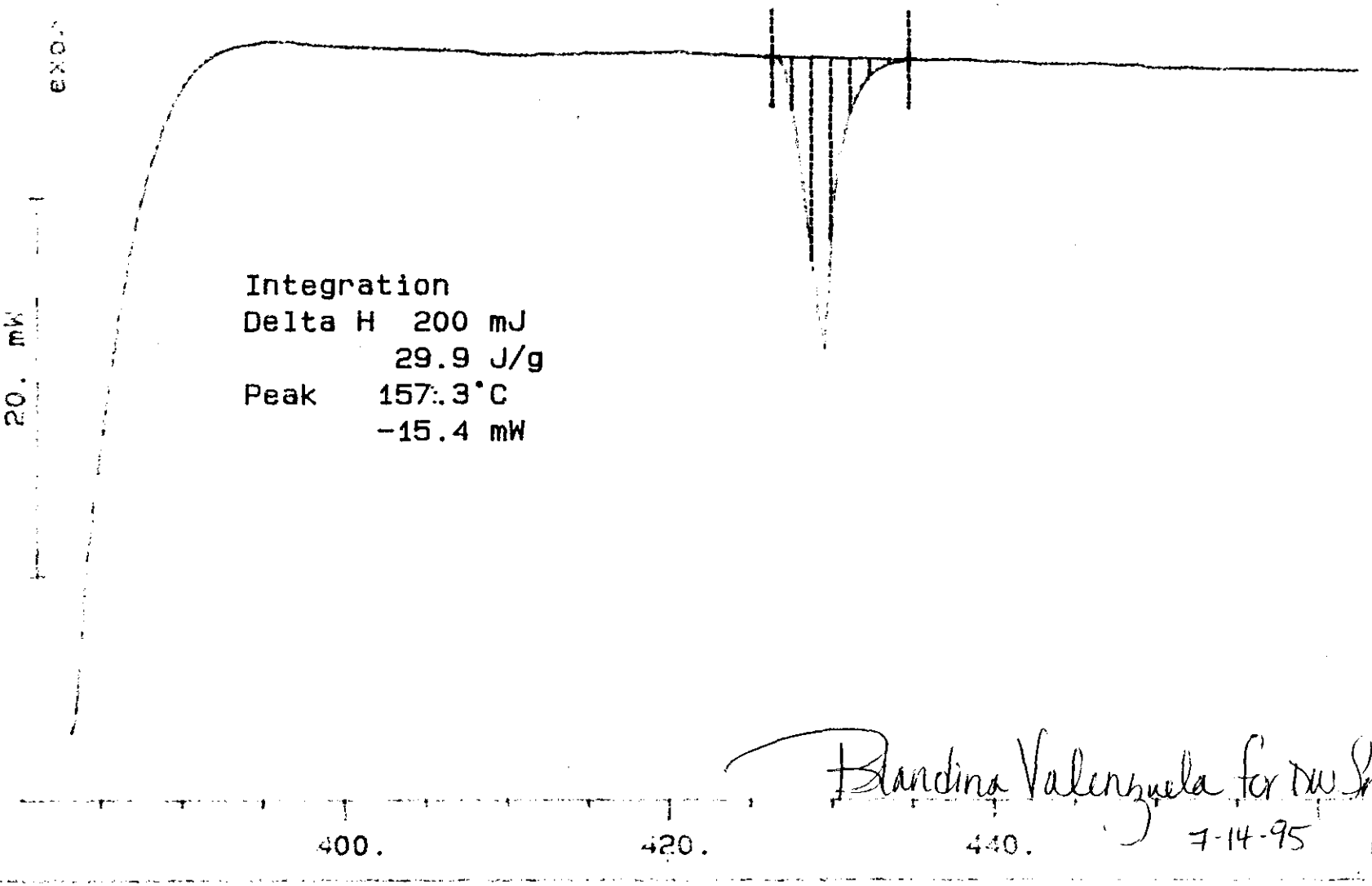
Date	Time Completed	Lab Unit Mgr	
6-22-94	0520	J. M. Luyen	

54-6800-061 (R-10-83)

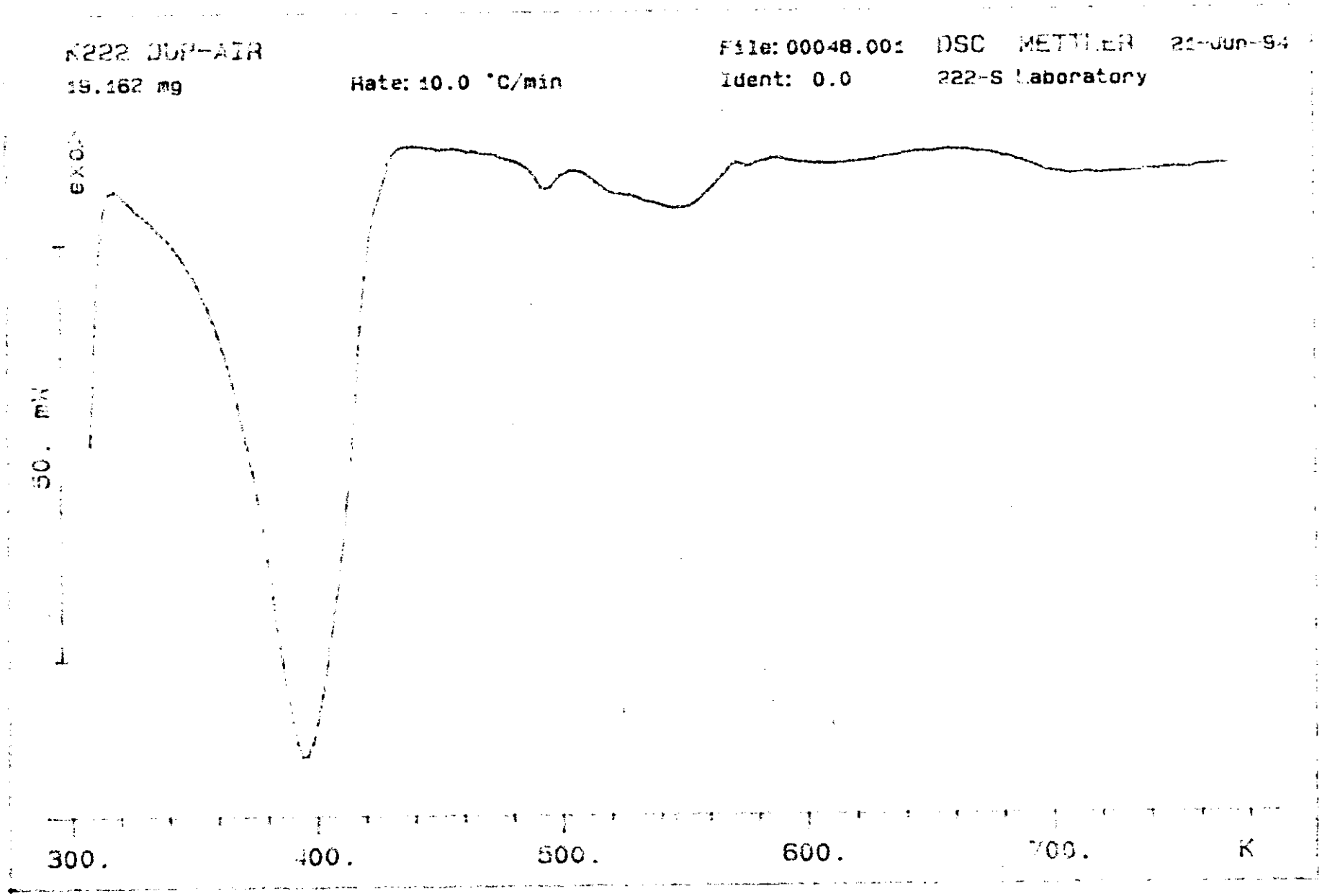
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 53 TO 85.

DSC STD, K220-AIR File: 00046.001 DSC METTLER 21-Jun-94

6.690 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



Blandina Valenzuela for DW Smith 7-14-95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19.162 mg
Rate: 10.0 °C/min
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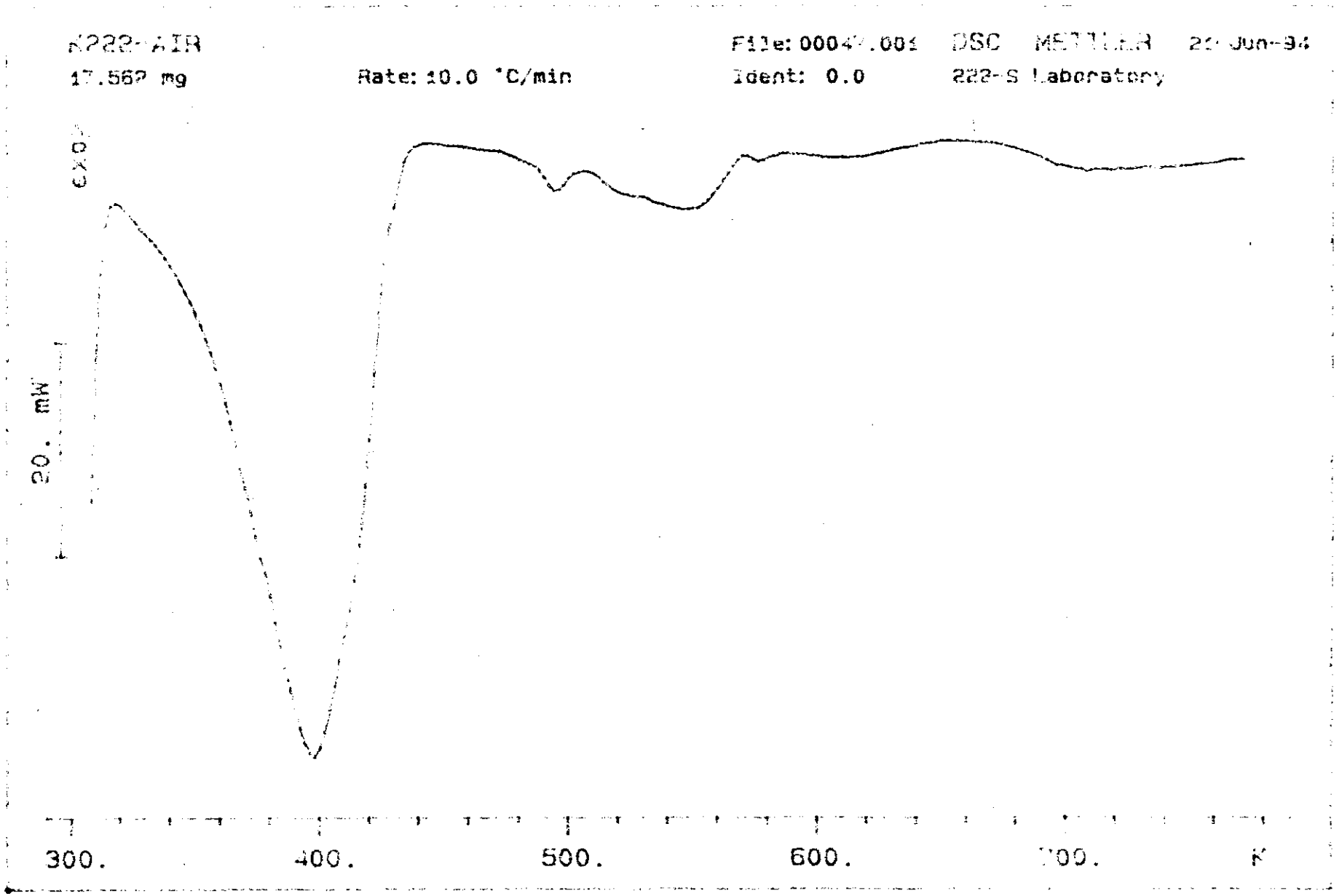
Ident: 0.0
DSC METTLER
222-S Laboratory
21-Jun-94
exo
mW
300.
400.
500.
600.
700.
K


222-AIR
17.562 mg
Rate: 10.0 °C/min
File: 00047.001
Ident: 0.0
DSC METTLER
222-S Laboratory
20. mW
300.
400.
500.
600.
K

CA

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K222	Customer ID: C6151
Analysis: TGA	Sample Prep: Direct

Instrument: WC16124 / WC16129	Procedure/ Rev: LA-560-112-~~A0~~ A1 7/14/94 KK
Technologist: DW Smith [signature]	Date: 7-12-94
Starting Time: 1900	Temperature N/A
Ending Time: 2300	Chemist: J FRYE

Comments:

	Description	Lab ID		Description	Lab ID
1	Cmcs	K220-5512	11		
2	Sample	K222-5712	12		
3	Sample Dup	K222-5812	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
Cmcs	24N8A 13.824ma			

A-6000-881 (03/92)

THERMOGRAVIMETRIC ANALYSIS

BEST AVAILABLE COPY

BATCH # 4016

Serial No	Sample Point	Date	Time Issued	Priority
K 220.-5512	C-108	6-15-94	13: 4	20

Determination	Method Standard	Result Units	Charge Code	Reruns
TGA	LA-560-112	% RECOVERY	N4C8G	1

Sample Size		Customer ID
? 13.824 mg	RERUN	STD

Remarks, Calculations, Results:

STD # 24N8A
STD VAL: 59.25
RESULT: 58.37
% REC. 98.51

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
7-12-94	2300	J. M. Fuge	R. C. Jones

54-6800-061 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
K 220.-5712	C-108	6-15-94	13: 6	20

Determination	Method Standard	Result Units	Charge Code	Reruns
TGA	LA-560-112	% H2O	N4C8G	1

Sample Size		Customer ID
DWS 7-12-94 ~~.010 ML~~ 18.106 mg	RERUN	C61S1

Remarks, Calculations, Results

22.08% H_2O, 9.25% further weight loss
JMF.

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
7-12-94	2300	J. M. Fuge	R. C. Jones

54-6800-061 (R-10-83)

THERMOGRAVIMETRIC ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-5812	C-108	6-15-94	13: 8	20

Determination	Method Standard	Result Units	Charge Code	Reruns
TGA	LA-560-112	% H2O	N4C3G	1

Sample Size	Customer ID
~~.010 ML~~ 7-12-94 13.434 ~~13.434~~ 7/14/94 KK	C61S1

RERUN

Remarks, Calculations, Results

DUPLICATE SAMPLE

19.89% H_2O, 9.68% further weight loss

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
7-12-94	2200	J. M. Fuyer	C. Jones

54-6800-061 (R-10-83)

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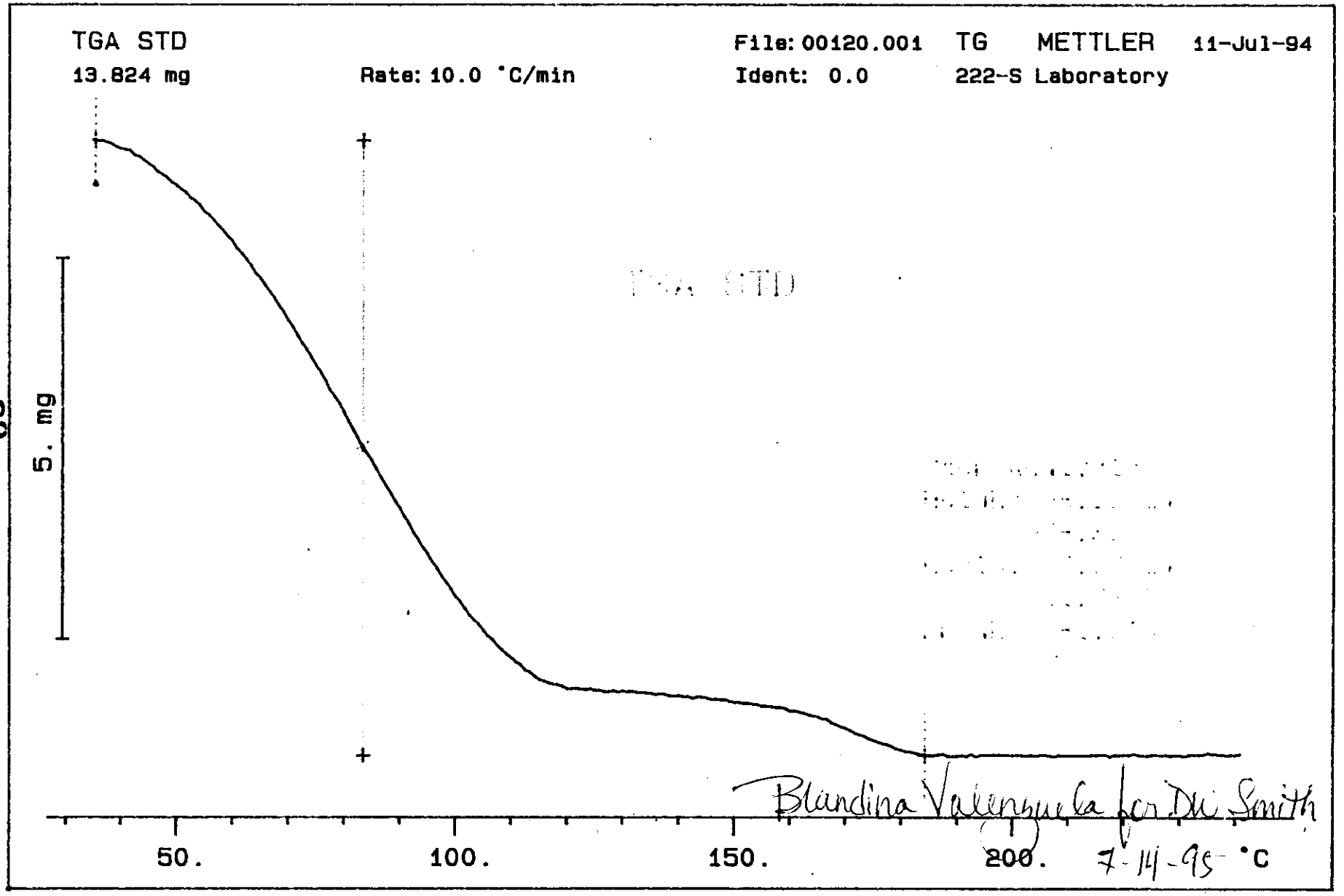
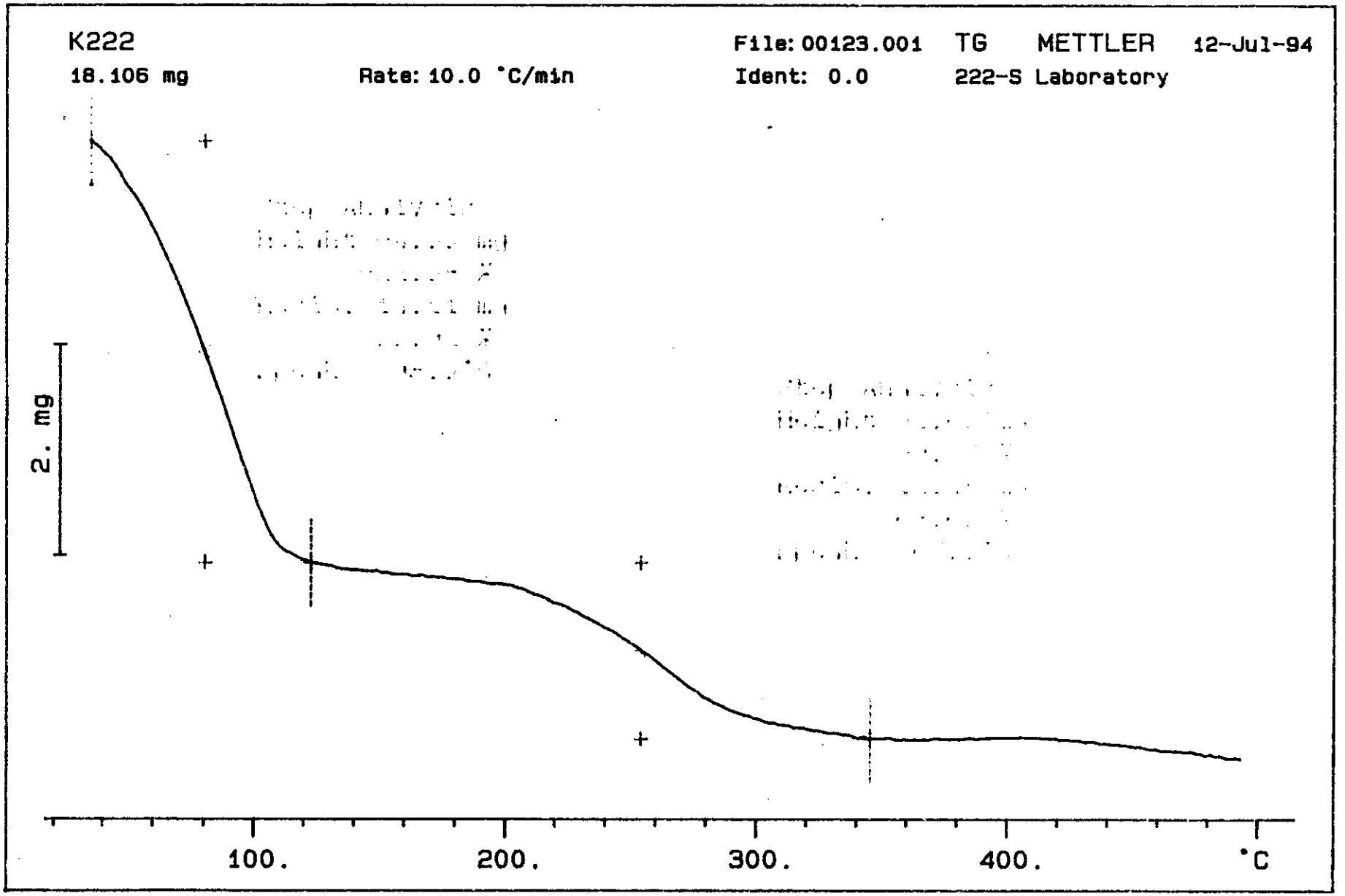
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 89 TO 91.



Blandina Valenzuela for Dee Smith 7-14-95


K222
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Rate: 10.0 °C/min
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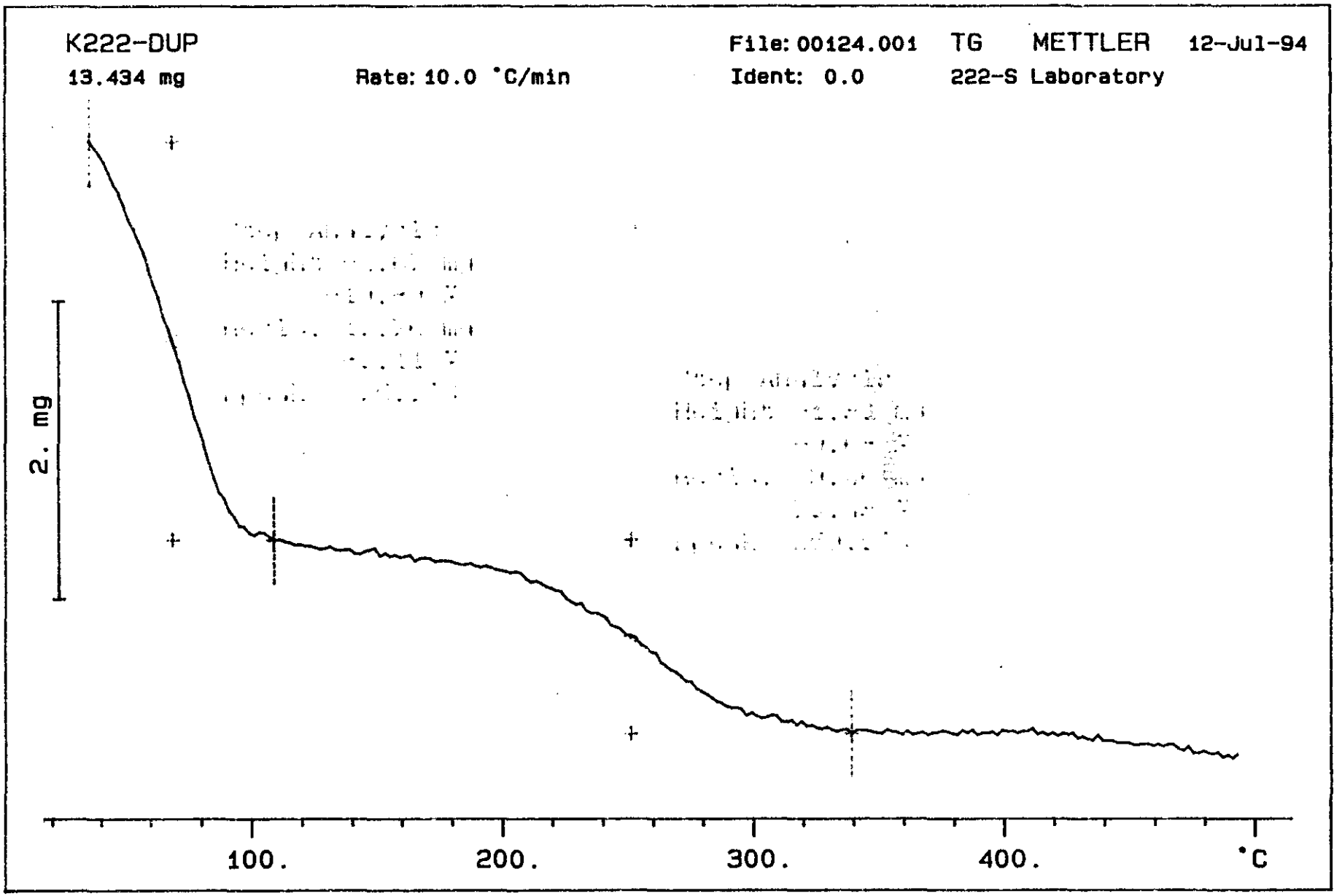
TG
METTLER
12-Jul-94
Ident: 0.0
222-S Laboratory
2. mg
100.
200.
300.
400.
°C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13.434 mg
Rate: 10.0 °C/min
File: 00124.001
TG
METTLER
12-Jul-94
Ident: 0.0
222-S Laboratory
2. mg
100.
200.
300.
400.
°C

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PART III

WHC-SD-WM-DP-082, REV. 1

216-DAY FINAL REPORT FOR TANK 241-C-108, AUGER SAMPLES 94-AUG-012, 94-AUG-014, 94-AUG-015 AND PUSH MODE, CORE 61

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NARRATIVE

216 DAY FINAL REPORT FOR TANK 241-C-108 AUGER SAMPLES 95-AUG-012, 95-AUG-014, AND 95-AUG-015, AND PUSH MODE CORE 61

Summary

Initial sampling of tank C-108 took place 6/2/94. One push mode core sample was taken. Sample recovery was deemed inadequate, so a second, auger sampling event was planned and performed. This represents the final report for these two sampling events, and contains the remaining Ferrocyanide DQO analyses (CN, TIC, TOC, and GEA) from the first sampling event, and the results for the quarter segment, half segment and core composites from the second sampling event.

One core sample from tank C-108, core 61, which was composed of approximately one inch (20.89 grams) of sample, was received by the 222-S laboratory on 6/2/94. This core sample underwent Safety Screening Analysis (DSC, TGA, and Alpha Total) in accordance with references (1) and (2) below, and reported in reference (3) below.

Three auger samples from tank C-108, risers 4 and 7, were received by the 222-S laboratory on 11/21/94 and 12/14/94. These samples underwent Safety Screening Analysis (DSC, TGA, and Alpha Total) in accordance with reference (4) below, and reported in reference (5) below. References (3) and (5) are incorporated into this report as parts I and II.

Core 61

Following the Safety Screening analyses on core 61 (as required in reference (2) below), there was still sufficient sample to perform gamma energy analysis (GEA), inductively coupled plasma (ICP) analysis for nickel, total inorganic carbon (TIC), total organic carbon (TOC), cyanide (CN) and strontium-90 (Sr-90) analyses. The results are reported in Table 1.

Analytical Results

The 222-S Laboratory has a Laboratory Quality Assurance Plan (LABQAP, Meznarich 1995) (reference (6) below) that provides the primary direction for the quality assurance/quality control of analyzing the waste tank samples at the 222-S Laboratory.

Differential Scanning Calorimetry (DSC)

The DSC analysis was performed using LA-514-113 Rev. B-0. Results were reported in the 45 day safety screening report (reference (3) below). The raw data for these analyses has been supplied in this report.

Thermal Gravimetric Analysis (TGA)

The TGA was performed using LA-560-112 Rev. A-1 with a nitrogen purge. As with the DSC analysis, results were reported in the 45 day safety screening report (reference (3) below). The raw data for these analyses has been supplied in this report.

Total Alpha
The Alpha Total analysis was performed using LA-508-101 Rev. D-2 on a fusion preparation. Results were reported in the 45 day safety screening report (reference (3) below). The raw data for these analyses has been supplied in this report.

Gamma Energy Analysis (GEA)
The GEA for cesium-137 (Cs-137) was performed using procedure LA-548-121 Rev. D-0 on a fusion. The TCP criteria for precision and accuracy were met.

ICP
The ICP analysis for nickel (Ni) was performed using LA-505-151 Rev. D-1 on both a fusion and acid digest preparation. The fusion results are identified as such in the analyte column, and with a "F" in the aliquot classification column (A#). The acid digest results are identified with an "A" in this column. The TCP criteria for precision and accuracy were met. Since the Ni result was greater than 1000 μg/g, no spike was required. However, a post digestion spike was analyzed on the fusion preparation. The spike recovery was 95.0%. Raw data for the acid digest ICP could not be located and is not contained in this data package. As a result the detection limit appears in Table 1 as "not available".

The table below is a comparison of Ni results obtained from the fusion and acid digestion preparations, and suggests that nickel in the waste is equally solubilized by both methods.

AVERAGE CONCENTRATION (μg/g)

	Preparation	Result
Nickel	Fusion	1.13E+04
Nickel	Acid digest	9.77E+03

Strontium 90 (Sr-90)
The Sr-90 analysis was performed using procedure LA-220-101 Rev. D1 on both a fusion and acid digest preparation. The TCP criteria for precision and accuracy were met. The method uses a carrier, so no spikes were performed. Raw data for the acid digest Sr-90 could not be located and is not contained in this data package. As a result the detection limit and count error appear in Table 1 as "not available".

The table below is a comparison of Sr-90 results obtained from the fusion and acid digestion preparations, and suggests that Sr-90 in the waste is equally solubilized by both methods.

AVERAGE CONCENTRATION (μCi/g)

	Preparation	Result
Sr-90	Fusion	8.68E+02
Sr-90	Acid digest	8.80E+02

Total Organic and Inorganic Carbon (TOC/TIC)
The Total Organic Carbon (TOC) analysis was performed using procedure LA-342-100 Rev. A-0. No analytical problems were noted, although spike data was not obtained. All precision and accuracy requirements were met, and the notification limit of 30,000 μg/g was not exceeded.

Cyanide (CN)
The Cyanide (CN) analysis was performed using procedure LA-695-102 Rev. B-2. All precision and accuracy requirements were met, and the notification limit of 39,000 μg/g was not exceeded.

Auger Sampling and Compositing

Decisions on how to breakdown and homogenize the samples were made in conjunction with the Ferrocyanide Program representatives who were present during the extrusion of augers 94-AUG-012 and 94-AUG-014 (see correspondence section). Representatives of the Ferrocyanide Program could not attend the extrusion of auger 94-AUG-015, but were contacted concerning the mixing of layers and heterogeneous appearance of the samples. The laboratory was instructed to composite as required in the TCP (reference (4) below).

Riser 7
Due to the calculated depth of the sludge at riser 7, two augers were used to sample the sludge at this riser. Following the extrusion of the augers, the material was split into quarter segments from auger 94-AUG-014 for safety screen analyses. Material from auger 94-AUG-012 was then composited and identified as the upper half of the segment from riser 7. Composited material from auger 94-AUG-014 was identified as the lower half of the segment from riser 7. These two half segments were then composited as the core composite from riser 7. For more detail on the sample extrusion and breakdown, see reference (5) below.

The composition of the half segments and core composite from riser 7 are shown below.

Upper Half of Segment

Auger	Flute #s	¼ Segment	Mass	Percent
94-AUG-012	1-2	A_1	9.0 g	15.8
94-AUG-012	3-9	A_2	48.1 g	84.2

Lower Half of Segment

Auger	Flute #s	¼ Segment	Mass	Percent
94-AUG-014	3-13	B	184.4 g	67.4
94-AUG-014	14-19	C	89.1 g	32.6

Core Composite

Auger	1/2 Segment	Mass	Percent
94-AUG-012	Upper	30.0 g	22.8
94-AUG-014	Lower	101.7 g	77.2

Riser 4

Following the extrusion of auger 94-AUG-015, the material was split into quarter segments for safety screen analyses. The quarter segments were then composited into upper and lower half segments which were then composited and identified as the core composite from riser 4. For more detail on the sample extrusion and breakdown, see reference (5) below.

The composition of the half segments and core composite from riser 4 are shown below.

Upper Half of Segment

Auger	Flute #s	¼ Segment	Mass	Percent
94-AUG-015	1-4	A	89.2 g	65.3
94-AUG-015	5-9	B	47.3 g	34.7

Lower Half of Segment

Auger	Flute #s	¼ Segment	Mass	Percent
94-AUG-015	10-14	C	25.2 g	53.6
94-AUG-015	15-19	D	21.8 g	46.4

Core Composite

Auger	1/2 Segment	Mass	Percent
94-AUG-015	Upper	20.9 g	36.8
94-AUG-015	Lower	35.8 g	63.2

Analytical Results

As described in the 45 day safety screen report (reference (5) below), and as can be seen in the photographs, the material from these three augers is heterogeneous in nature, consisting of a paste-like solid with crumbly, hard chunks of material embedded throughout. These chunks were most evident in the material from augers 94-AUG-012 (riser 7, upper half segment) and 94-AUG-015 (riser 4, throughout the entire segment). The chunky material could not be homogenized with the rest of the material. This made it difficult to meet the accuracy and precision requirements set in the TCP (reference (4) below). In many cases reruns were not requested due to the known heterogeneous nature of the samples.

Differential Scanning Calorimetry (DSC)
The DSC analysis was performed on the quarter segments only, per the TCP, using LA-514-113 Rev. B-1. Results were reported in the 45 day safety screening report (reference (5) below). The raw data for these analyses has been supplied in this report.

Thermal Gravimetric Analysis (TGA)
The TGA was performed on the quarter segments only, per the TCP, using LA-560-112 Rev. A-2 with a nitrogen purge. As with the DSC analysis, results were reported in the 45 day safety screening report (reference (5) below). The raw data for these analyses has been supplied in this report.

Total Alpha
The Alpha Total analysis was performed on the quarter segments only, per the TCP, using LA-508-101 Rev. D-2 on a fusion preparation. Results were reported in the 45 day safety screening report (reference (5) below). The raw data for these analyses has been supplied in this report.

Cyanide (CN)
The cyanide analysis was performed on the half segment composites using procedure LA-695-102 Rev. C-0. The results are reported in Table 2. All sample results were far below the TCP notification limit of 39,000 μg/g.

A few problems were encountered with the CN analysis. However, after a single rerun all precision and accuracy requirements were met, except that slightly high spike recoveries were obtained on both half segments for riser 4. The upper half segment spike recovery was 116%, and the recovery for the lower half was 111%. When the sample is not homogeneous, it is difficult to obtain a spike recovery within the tight limits of 90% - 110% as requested in the TCP (reference (4) below). No rerun was requested.

A dry weight based CN result can be calculated from the wet weight CN result using the experimentally determined percent water (%water) result (by TGA) for that sample as follows. The %water was determined on each quarter segment. The wet CN was determined on each half segment composite. Therefore, to obtain an appropriate %water value for the dry weight based CN determination, a half segment %water result was calculated using a weighted average of the %water results for the corresponding two quarter segments. The wet CN result was then divided by the quantity [1 - (%water/100)] to obtain the dry weight based CN result. An example calculation is shown below.

For riser 4, the upper half segment consisted of 65.3% 1/4Seg A + 34.7% 1/4Seg B. The average %water for 1/4Seg A = 49.33%, for 1/4Seg B = 49.51%.

Average %water (upper half segment) = [(49.33)(.653) + (49.51)(.347)] = 49.39%

Average CN concentration (dry weight)(μg/g) = CN (μg/g) (wet)/(1 - 0.4939)
= 1030/0.5061 = 2035 μg/g (dry)

The table below summarizes the results for each of the two risers.

AVERAGE CN CONCENTRATION* (μg/g)

Riser	Upper Half	Lower Half
4	2.04e+03	2.19e+03
7	9.44e+02	8.31e+03

* Concentration based on dry weight

The data indicates that the material from riser 7, which was sampled using two augers, shows a stratification of CN with the highest concentration in the lower portion of the tank. However, as described in the 45 day safety screen report (reference (5) below), the appearance of the material that was obtained from one auger at riser 4 indicated that a significant amount of mixing

occurred during the sampling process. This mixing would explain the reasonable consistency of the results obtained for CN from this riser.

ICP

The ICP analysis was performed using LA-505-151 Revs. D-1 and D-2, and LA-505-161 Rev. A-1. The latter procedure is not referenced in the TCP because the new ICP was not yet operational at the time the TCP was prepared. Nickel (Ni) was determined on quarter segments on a fusion preparation performed using a zirconium crucible, as indicated by a "Z" in the aliquot classification column (A#). These results are reported in Table 3. The core composites were analyzed for aluminum (Al), calcium (Ca), iron (Fe), sodium (Na) and phosphorous (P) on a fusion preparation using a nickel crucible. These results are reported in Table 4.

The TCP criterium for accuracy was met for nickel in a few of the quarter segment samples, and for calcium and iron in the core composite sample from riser 7. Spike recoveries for all other analytes ranged from 110.2% to 124.3%, except for phosphorous in the core composite from riser 7 which was 89.4%, and riser 4 which was 53.7. The sample results for sodium and aluminum in both core composites were greater than four times the spike added, therefore the spike recovery was not applicable. Several analytes failed to meet the ±10 criterium for precision (RPD). The RPD for nickel in riser 4, quarter segment B, (S94T000368) was 17.4 and in quarter segment D (S94T000370), it was 17.0. Riser 7 segments A1, A2, and B had RPD's of 13.1, 20.7, and 47.8 respectively. In riser 4, core composite (S94T000403), the RPD for aluminum was 63.2 and that for iron was 14.1. In riser 7, core composite (S94T000339), the RPD for phosphorous was 14.6 and for calcium it was 15.9. No reruns were requested due to the known heterogeneous nature of the sample.

The table below summarizes the results for nickel in each of the quarter segments.

AVERAGE Ni CONCENTRATION ($\mu g/g$)

Riser	¼ Seg A or A_1	¼ Seg A_2	¼ Seg B	¼ Seg C	¼ Seg D
4	9.43e+03	n/a	1.05e+04	1.06e+04	7.03e+03
7	6.92e+02	1.66e+03	8.60e+03	1.87e+04	n/a

The data shows that there is a stratification of nickel in riser 7, with the highest concentration in the lower portion of the tank. Also, the apparent mixing of material from riser 4 (as described earlier) would explain the reasonable consistency of the results obtained for nickel from this riser.

The table below summarizes the ICP average results for aluminum (Al), calcium (Ca), iron (Fe), sodium (Na), and phosphorous (P) for the core composite samples.

AVERAGE CONCENTRATIONS
FOR CORE COMPOSITES (μg/g)

Riser	Analyte	Result
4	Al	3.95e+04
4	Ca	8.43e+03
4	Fe	5.41e+03
4	Na	1.15e+05
4	P	3.61e+04
7	Al	6.47e+04
7	Ca	1.69e+04
7	Fe	8.92e+03
7	Na	7.27e+04
7	P	1.74e+04

The table below compares the calculated phosphate concentration based on the ICP phosphorus result with the phosphate data obtained from the IC. The calculated ICP results are typically greater than the IC data due to phosphates which are slightly soluble or insoluble in water. The results from riser 4 for PO_4 further substantiate the mixing of the material during the auger sampling.

AVERAGE PHOSPHATE CONCENTRATION (μg/g)

	Riser 4 Core Composite	Riser 7 Core composite
PO_4 (calculated)	1.11e+05	5.34e+04
PO_4 (from IC)	1.09e+05	2.70e+04

Total Organic and Inorganic Carbon (TOC/TIC) and Total Carbon (TC)
The total organic carbon (TOC) and total inorganic carbon (TIC) analyses were performed using procedure LA-342-100 Rev. A-0. The notification limit of 30,000 μg/g for TOC was not exceeded. The results for TOC, which was performed on half segment composites, are reported in Table 2. The TIC results for the core composites are reported in Table 5.

TOC
Many of the RPD values for the TOC analyses were high due to the heterogeneous nature of the sample described previously. Also, spike data was not obtained. The RPD values obtained on the upper half segments exceeded the TCP criterium of ±20. Riser 4 upper half segment (S94T000384) RPD was 33.6 and riser 7 upper half segment (S94T000331) was 67.4. No further reruns were performed.

The average TOC concentrations for the half segment composites are reported in the table below.

AVERAGE TOC CONCENTRATION (μg/g)

Riser	Upper Half	Lower Half
4	9.68e+02	8.40e+02
7	2.84e+02	1.69e+03

Here again, the consistent results between the upper and lower half segments indicate that significant mixing occurred during the auger sampling of riser 4.

TIC
The RPD values for the TIC analyses for both core composites exceeded the TCP criterium of ±20 due to the heterogeneous nature of the sample described previously. No spike data was obtained. The RPD values obtained were 82.5 for riser 4 (S94T000387) and 23.7 for riser 7 (S94T000334).

The average TIC concentrations for the core composites are reported in the table below.

AVERAGE TIC CONCENTRATION (μg/g)

Riser	Core Composite
4	2.40e+03
7	2.36e+03

TC
The total carbon test was not available when these samples were delivered to the lab. However, the TOC and TIC tests were both performed on the core composite samples. Both results are reported in Table 5.

An estimated total carbon value can be obtained by summing the TOC and TIC results. This value is only an estimate because, by procedure, any volatile organic carbon would have been purged from the sample during the TOC analysis. The table below gives the average TOC, TIC and calculated TC results for the core composite samples.

AVERAGE TOC, TIC and TC CONCENTRATIONS (μg/g)

	Riser 4 Core Composite	Riser 7 Core composite
TOC	8.82e+02	1.62e+03
TIC	2.40e+03	2.36e+03
TC (estimated)	3.28e+03	3.98e+03

Gamma Energy Analysis (GEA)
The GEA was performed using procedure LA-548-121 Rev. D-1 on a fusion and acid digestion preparation for the half segment composites, and an acid digestion only for the core composite samples. The results for the half segments composites are reported in Table 2, and those for the core composites are reported in Table 5.

A few problems were encountered with the GEA analysis. All analyses were rerun at least once. The accuracy and precision requirements were met for the core composite analyses and for the fusion preparations on the half segment composites. However, even after rerunning the acid digest preparation on the riser 4 half segment composites, the precision requirement of ±10 for the RPD could not be met. The RPD for the acid digest of the upper half segment for riser 4 (S94T000401) was 41.9 and for the lower half segment (S94T000402) it was 187. Since this sample, in particular, had a very heterogeneous nature, and the results from both runs were consistent, no further reruns were requested.

The TCP requested that Cs-137, Eu-154/155, and Co-60 be reported. As expected, Cs-137 was the dominant gamma emitting isotope in the waste. The Eu isotopes and Co-60 were all less than detectable. The table below is a comparison of Cs-137 results obtained from the fusion and acid digest preparations of the half segment composites, and suggests that the majority of cesium in the waste is not solubilized by the acid digestion.

AVERAGE Cs-137 CONCENTRATION (μCi/g)

	Riser 4 Upper Half	Riser 4 Lower Half	Riser 7 Upper Half	Riser 7 Lower Half
Cs-137 (f)	335.5	240.0	48.70	413.0
Cs-137 (a)	1.455	11.36	2.035	74.30

(f) fusion (a) acid digest

The table below summarizes the Cs-137 results for the core composite samples.

AVERAGE Cs-137 CONCENTRATION (μCi/g)

Riser	Core Composite
4	12.70
7	222.5

Strontium 90 (Sr-90)

The Sr-90 analysis was performed using procedure LA-220-101 Rev. D1 on a fusion and acid digestion preparation for the half segment composites. The results are reported in Table 2. All samples met the required criterium for accuracy of standards. This method uses a carrier, so no spikes were performed. The results for samples S94T000335, S94T000336, and S94T000401 did not meet the required precision criterium of ±10. Two of the samples (S94T000336 and S94T000401) were reanalyzed to verify the results that were obtained. Reanalysis verified that the results obtained on the first run were correct. However, the second RPD failure on S94T000401 substantiated the heterogeneous nature of the samples. No further reruns were requested. The remainder of the samples met the precision criterium.

The table below is a comparison of Sr-90 results obtained from the fusion and acid digest preparations, and suggests that the vast majority of Sr-90 in the waste is soluble in dilute acid.

AVERAGE CONCENTRATION (μCi/g)

	Riser 4 Upper Half	Riser 4 Lower Half	Riser 7 Upper Half	Riser 7 Lower Half
Sr-90 (f)	29.10	39.90	16.95	21.90
Sr-90 (a)	27.30	37.50	13.30	18.25

(f) fusion (a) acid digest

Strontium values must be multiplied by two when comparing to gross (total beta) results because Sr-90 is in equilibrium with Y-90 in tank wastes, and only Sr-90 is reported.

Ion Chromatography (IC)

The IC analysis was performed on core composite samples only using LA-533-105 Rev C-2, on a water digest preparation indicated by a "W" in the aliquot classification column (A#). Results are reported in Table 5. Difficulty was encountered analyzing these two samples, especially the sample from riser 7. The TCP accuracy criterium of 90% - 110% was met for all analytes in both samples, with the exception of chloride (Cl) and fluoride (F) in the sample from riser 4 (S94T000405), which failed the spike recovery. The spike recoveries for these two analytes were 89.5% for Cl and 83.9% for F. Since the results were only slightly below the TCP limits of 90% - 110%, and were within the laboratories internal acceptance limits of 75% - 125%, no further reruns were requested.

Sample S94T000405 failed the duplicate precision only for fluoride (RPD = 31.6). No rerun was requested for this sample. The riser 7 composite was first analyzed as sample number S94T000341, and had RPD values ranging from 41.7 to 114. This sample was reprepared from a new subsample and analyzed as sample number S95T001188. The RPD values for the rerun ranged from 13.3 to 54.9, substantiating the heterogeneous nature of these samples. No reanalysis was requested.

The table on next page summarizes the IC average results for chloride (Cl), fluoride (F), nitrite (NO_2), nitrate (NO_3), and phosphate (PO_4) for the core composite samples.

AVERAGE CONCENTRATIONS
FOR CORE COMPOSITES (μg/g)

Riser	Analyte	Result
4	Cl	7.12e+02
4	F	2.34e+03
4	NO_2	2.64e+04
4	NO_3	4.80e+04
4	PO_4	1.09e+05
7	Cl	9.77e+02
7	F	2.37e+03
7	NO_2	2.97e+04
7	NO_3	5.28e+04
7	PO_4	2.70e+04

Total Beta

The total beta analysis was performed only on the core composites using LA-508-101 Rev. D-2 on an acid digestion preparation. The results are reported in Table 5. One beta analysis exceeded the TCP precision criteria of ±20. The core composite sample from riser 4 (S94T000404) was rerun once, but this did not correct the problem. No further reruns were requested. Sample S94T000340 met the TCP precision and accuracy criteria.

The average results for total beta are reported in the table below.

AVERAGE TOTAL BETA CONCENTRATION (μCi/g)

Riser	Core Composite
4	108.3
7	291.5

Plutonium 238 and PU-239/240 (Pu-238 239/240)
The Pu-238 239/240 analyses were performed only on the core composite samples using procedure LA-503-156 Rev. D-1 on fusion a preparation. The results are reported in Table 5.

Pu-238
Neither sample exhibited Pu-238 activity above the detection limit. A Pu-238 standard is not used in the procedure, so the accuracy results are the same as for Pu-239/240 below.

Pu-239/240
The Pu-239/240 precision criterium of ±15 was exceeded for sample S94T000403 (RPD = 18.9). This is due in part, or in whole, to the presence of the analyte at levels only slightly above the detection limit. The counting statistics in this region are poor (counting error = 5% for this sample), contributing significantly to the lack of precision. A reanalysis was not requested because the result was only slightly high, and because of the known heterogeneous nature of the sample. The accuracy criterium of 85% - 115% was slightly exceeded for the standard for this analysis. Percent recovery 116.2%. The standard recovery in each case met the laboratory internal quality control limits, so reruns were not performed. The method uses a tracer, so no spikes were performed.

The average Pu-239/240 results are provided in the table below.

AVERAGE Pu-239/240 CONCENTRATION(μCi/g)

Riser	Core Composite	Detection Limit
4	7.47e-03	2.49e-03
7	1.12e-02	2.46e-03

Am-241
The Am-241 analysis was performed on the core composite samples only using procedure LA-953-103 Rev. A-1 on a fusion preparation. The procedure referenced in the TCP (LA-503-156) was superseded by the above procedure. The method uses a tracer, so no spikes were performed. Am-241 results were less than detectable for both samples.

Uranium by Laser Phosphorescence
The uranium analysis was performed on core composite samples only using procedure LA-925-009 Rev. A-0 on a fusion preparation. The procedure referenced in the TCP (LA-925-109) was superseded by the above procedure. The results are reported in Table 5.

The accuracy and precision criteria were met for both samples for this analysis. The average uranium results are presented in the table below.

AVERAGE U CONCENTRATION (μCi/g)

Riser	Core Composite
4	485.5
7	356.5

As the tables indicate, significant concentrations of uranium were found in the samples.

Bulk Density

The laboratory was unable to perform the bulk density test because of the sample consistency and the presence of the large chunks of material in the sample. This test can only be performed accurately when the sample is free of large particles of material, and is sufficiently "free flowing" to fill voids in the centrifuge cone.

Project Coordinator: Ruth A. Esch

References

(1) WHC-SD-WM-TP-211, REV. 1, "Tank 241-C-108 Tank Characterization Plan", dated April 15, 1994, Westinghouse Hanford Company, Richland, WA 99352.

(2) Internal Memo 7E720-94-124, "Analyses to be Performed on Tank 241-C-108 Core 61", Westinghouse Hanford Company, Richland, WA. 99352, dated June 4, 1994.

(3) Internal Memo 8E480-94-005 "45 Day Safety Screening for Tank 241-C-108 Core 61", July 14, 1994, Westinghouse Hanford Company, Richland, WA 99352.

(4) WHC-SD-WM-TP-211, REV. 1A, "Tank 241-C-108 Tank Characterization Plan", dated October 26, 1994, Westinghouse Hanford Company, Richland, WA 99352.

(5) WHC-SD-WM-DP-082, REV. 0, "45 Day Safety Screening for Tank 241-C-108 Augers 94-012, 94-014, 94-015", , Westinghouse Hanford Company, Richland, WA 99352.

(6) WHC-SD-CP-QAPP-016, Rev. 0, "222-S Laboratory Quality Assurance Plan", 1995, Westinghouse Hanford Company, Richland WA 99352.

CORRESPONDENCE

Westinghouse Hanford Company WHC-SD-WM-DP-082, REV. 1 **Internal Memo**

From: Characterization Program 7E720-94-124
Phone: 373-3579
Date: June 14, 1994
Subject: ANALYSES TO BE PERFORMED ON TANK 241-C-108 CORE 61

To: J. G. Kristofzski T6-06
A. D. Rice T6-06

cc: H. Babad S7-30
R. J. Cash S7-15
C. DeFigh-Price S7-31
J. L. Deichman H4-19
DRB:RDS File/LB
G. T. Dukelow S7-15
J. E. Meacham S7-15
R. D. Schreiber R2-12

Reference: WHC-SD-WM-TP-211, Revision 1, "Tank 241-C-108 Tank Characterization Plan", dated May 20, 1994.

Due to the low waste recovery from core 61 of tank 241-C-108, the analyses specified in the Reference cannot be performed in their entirety. This letter serves to transmit the requests of the Characterization Program and the Ferrocyanide Safety Program with respect to the tank 241-C-108 analysis activities so that work may continue on the characterization project.

First, homogenization is requested on the sample from core 61. After homogenization, the differential scanning calorimetry, thermogravimetric analysis, and gamma energy analysis shall be performed. After the results of these tests are available, Characterization Support and the Ferrocyanide Safety Program shall be contacted (see Reference) for further reprioritization.

Since there is a minimal amount of sample material available, the Safety and Characterization Programs are not expecting any archived samples.

If you have any questions, please call R. D. Schreiber at 373-5589.

D. R. Bratzel, Manager
Analytical Integration, Characterization Program

jab

CONCURRENCE:

R. D. Schreiber, Engineer Date 6/15/94
Characterization Support

R. J. Cash, Manager Date 6/14/94
Ferrocyanide Safety Program

Hanford Operations and Engineering Contractor for the US Department of Energy

[39] From: Joseph E Meacham at ~WHC129 12/6/94 2:40PM (987 bytes: 1 ln)
To: Andrew D Rice at ~WHC168
Joseph E Meacham, Robert J (Bob) Cash, Ruth D Schreiber at ~WHC163
ect: Water preparations for GEA and Strontium analyses
-- ---------- Message Contents ----------

Text item 1: Text_1

Andy,

The Ferrocyanide Safety Program does not require a GEA or Strontium analysis on the water soluble fraction of waste from C-108. Therefore, it is not necessary to perform a water prep for these two analyses. However, please verify with Ruth that the driver for these water preps is the Ferrocyanide Safety Program and not some other program.

Thanks,
Joe

p.s. to Ruth.....Could you take a look at the C-111 TCP to make sure we don't have this same request for water prep in this TCP?

[35] From: Joseph E Meacham at ~WHC129 12/5/94 11:05AM (1655 bytes: 1 ln)
To: Andrew D Rice at ~WHC168
cc: Joseph E Meacham, Robert J (Bob) Cash
Subject: Re: C-108 Saltcake

---------- Message Contents ----------

Andy,

Historical waste transfer records of tank C-108 indicate that there should be no saltcake (mostly comprised of sodium nitrate/nitrite) in this tank. I suspect what we saw was aluminum hydroxide waste from aluminum declading, which would look and behave more like what we have defined as saltcake. The bottom line is we do not know how the declading waste has mixed with the ferrocyanide sludge; therefore, please treat all the material from C-108 as sludge and composite as specified in the TCP.

Thanks,
Joe

---------- Reply Separator ----------

Subject: C-108 Saltcake
Author: Andrew D Rice at ~WHC168
Date: 12/1/94 3:41 PM

Joe:

Just a thought. The more I look at the C-108 auger samples, the more I think I am looking at all "saltcake". Could this be the case? Could that explain the smudge of red brown material at the tip of the 20 inch auger? The red stuff is what we saw with C-111 push. The TCP treats saltcake differently than sludge, so if you agree, I need to know before I begin compositing.

AD Rice
PC

WHC-SD-WM-DP-082, REV.1

[146] From: Joseph E Meacham at ~WHC129 12/1/94 11:26AM (1055 bytes: 1 ln)
To: Andrew D Rice at ~WHC168
cc: Joseph E Meacham, Robert J (Bob) Cash
Subject: Nickel analyses by acid or fusion prep
---------- Message Contents ----------

Andy,

Nickel analyses can be performed on ferrocyanide waste by using either acid or fusion preparations. The decision on what preparation to use is left up to the laboratory because the laboratory is the most knowledgeable. This is consistent with what is written in the Ferrocyanide DQO (for some reason this was not translated into the TCP). It is also important to note that nickel analyses are performed on quarter segments of sludge and are not performed on saltcake. Tank BY-106 has an estimated 7.5 ft of sludge; therefore, only the bottom 4 to 5 segments will require nickel analyses.

Thanks,
Joe

[116] From: Joseph E Meacham at ~WHC129 11/23/94 1:37PM (1035 bytes: 1 ln)
To: Andrew D Rice at ~WHC168
cc: Joseph E Meacham, Robert J (Bob) Cash, Gary T Dukelow
Subject: Analyses

---------- Message Contents ----------

Andrew,

For the purposes of the quarter segment analyses (i.e., energetics, water, and nickel) treat the first auger sample as 1 quarter segment and the second auger sample as 2 quarter segments. For the analyses on half segments (i.e., cesium, strontium, total cyanide, and TOC) treat the first auger sample as a half segment and the second auger sample as a half segment (i.e., composite the two quarter segment samples made from the second auger sample). Form a core composite for the tertiary analyses (as specified in the TCP). Please call me at 373-1961 if you have any questions.

Thanks,
Joe

WHC-SD-WM-DP-082, REV. 1

[106] From: Joseph E Meacham at ~WHC129 11/21/94 3:49PM (667 bytes: 1 ln)
To: Andrew D Rice at ~WHC168
c Joseph E Meacham, Robert J (Bob) Cash, Gary T Dukelow
ect: C-108 Auger sample
---------- Message Contents ----------

Andy,

Because of the complexity of the C-108 auger sampling event, the decision on how to divide/compile the two auger samples will be made after Ferrocyanide Safety Program representatives view sample extrusion. Please call me at 373-1961 when you are ready to extrude.

Thanks,
Joe

WHC-SD-WM-DP-082, REV. 1

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SAMPLE DATA SUMMARY

Table 1: Final Results for Tank 241-C-108
Core 61 Segment 1

Lab ID	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
K222	F	Cesium-137 by GEA	uCi/g	106.6	< 3.1E-01	4.69E+02	4.69E+02	4.69E+02	0.0	n/a	3.12E-01	0.71
K222	F	Nickel - ICP-Fusion	ug/g	98.3	6.40E-02	1.14E+04	1.11E+04	1.13E+04	2.7	95.0	not available	n/a
K222	F	Strontium-89/90 High Level	uCi/g	100.0	2.90E+00	8.84E+02	8.52E+02	8.68E+02	3.7	n/a	1.59E+00	0.8
K222	A	Nickel - ICP-Acid Digest	ug/g	90.4	< 2.00E-02	9.83E+03	9.71E+03	9.77E+03	1.2	n/a	not available	n/a
K222	A	Strontium-89/90 High Level	uCi/g	99.5	5.38E-01	8.78E+02	8.81E+02	8.80E+02	0.3	n/a	not available	n/a
K222		TOC by Persulfate/Coulometry	ug/g	90.8	1.67E+01	3.55E+03	3.40E+03	3.48E+03	4.3	n/a	4.00E+02	n/a
K222		Cyanide by Microdist. & Spec. *	ug/g	90.9	< 1.99E-02	4.12E+03	4.17E+03	4.15E+03	1.2	91.2	1.68E+02	n/a

* Dry weight basis

Table 2: Final Half Segment Results for Tank 241-C-108
C-108

RISER: 4
SEGMENT #: 94-AUG-015

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000384			Cyanide Dry - Calculated w TGA	ug/g Dry Wt	n/a	n/a	2.00e+03	2.08e+03	2.04e+03	3.92	n/a	5.000	n/a
S94T000384			Cyanide by Microdist. & Spec.	ug/g	104.8	n/a	1.01e+03	1.05e+03	1.03e+03	3.88	116.0	29.30	n/a
S94T000384			TOC by Persulfate/Coulometry	ug/g	96.67	26.20	805.0	1.13e+03	967.5	33.6	n/a	80.00	n/a
S94T000399		F	Cobalt-60 by GEA	uCi/g	99.00	<1.55e-02	< 1.63E-2	<1.80E-2	n/a	n/a	n/a	1.55e-02	NA
S94T000399		F	Cesium-137 by GEA	uCi/g	98.46	<4.34e-02	332.0	339.0	335.5	2.09	n/a	4.34e-02	.31
S94T000399		F	Europium-154 by GEA	uCi/g	n/a	<5.39e-02	< 8.26E-2	<7.83E-2	n/a	n/a	n/a	5.39e-02	NA
S94T000399		F	Europium-155 by GEA	uCi/g	n/a	<4.13e-02	< 4.94E-2	<5.04E-1	n/a	n/a	n/a	4.13e-02	NA
S94T000399		F	Strontium-89/90 High Level	uCi/g	91.89	1.41e-02	28.50	29.70	29.10	4.12	n/a	2.60e-02	.9
S94T000401		A	Cobalt-60 by GEA	uCi/g	103.0	<3.46e-03	< 2.98E-3	<2.82E-3	n/a	n/a	n/a	3.46e-03	NA
S94T000401		A	Cesium-137 by GEA	uCi/g	100.8	<4.76e-03	1.150	1.760	1.455	41.9	n/a	4.76e-03	2.03
S94T000401		A	Europium-154 by GEA	uCi/g	n/a	<7.40e-03	< 1.23E-2	<1.15E-2	n/a	n/a	n/a	7.40e-03	NA
S94T000401		A	Europium-155 by GEA	uCi/g	n/a	<5.23e-03	< 2.24E-2	<2.16E-2	n/a	n/a	n/a	5.23e-03	NA
S94T000401		A	Strontium-89/90 High Level	uCi/g	109.0	6.31e-03	30.40	24.20	27.30	22.7	n/a	2.29e-03	.4

L Lower Half of Segment: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000385			Cyanide Dry - Calculated w TGA	ug/g Dry Wt	n/a	n/a	2.09e+03	2.28e+03	2.18e+03	8.70	n/a	5.000	n/a
S94T000385			Cyanide by Microdist. & Spec.	ug/g	104.8	n/a	1.03e+03	1.12e+03	1.08e+03	8.37	111.0	22.10	n/a
S94T000385			TOC by Persulfate/Coulometry	ug/g	96.67	26.20	923.0	758.0	840.5	19.6	n/a	80.00	n/a
S94T000400		F	Cobalt-60 by GEA	uCi/g	99.00	<1.55e-02	< 2.23E-2	<1.74E-2	n/a	n/a	n/a	1.55e-02	NA
S94T000400		F	Cesium-137 by GEA	uCi/g	98.46	<4.34e-02	237.0	243.0	240.0	2.50	n/a	4.34e-02	.36
S94T000400		F	Europium-154 by GEA	uCi/g	n/a	<5.39e-02	< 6.85E-2	<4.60E-2	n/a	n/a	n/a	5.39e-02	NA
S94T000400		F	Europium-155 by GEA	uCi/g	n/a	<4.13e-02	< 4.21E-1	<4.24E-1	n/a	n/a	n/a	4.13e-02	NA
S94T000400		F	Strontium-89/90 High Level	uCi/g	91.89	1.41e-02	40.70	39.10	39.90	4.01	n/a	2.53e-02	.7
S94T000402		A	Cobalt-60 by GEA	uCi/g	103.0	<3.46e-03	< 3.28E-3	<3.72E-3	n/a	n/a	n/a	3.46e-03	NA
S94T000402		A	Cesium-137 by GEA	uCi/g	100.8	<4.76e-03	22.00	7.18e-01	11.36	187	n/a	4.76e-03	.46
S94T000402		A	Europium-154 by GEA	uCi/g	n/a	<7.40e-03	< 1.24E-2	<9.02E-3	n/a	n/a	n/a	7.40e-03	NA
S94T000402		A	Europium-155 by GEA	uCi/g	n/a	<5.23e-03	< 4.73E-2	<2.22E-2	n/a	n/a	n/a	5.23e-03	NA
S94T000402		A	Strontium-89/90 High Level	uCi/g	95.50	<8.46e-03	37.80	37.20	37.50	1.60	n/a	9.82e-03	.5

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WHC-SD-WM-DP-082, REV. 1

Table 2: Final Half Segment Results for Tank 241-C-108
C-108

RISER: 7
SEGMENT #: 94-AUG-012

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000331			Cyanide Dry - Calculated W TGA	ug/g Dry Wt	n/a	n/a	961.0	926.0	943.5	3.71	n/a	5.000	n/a
S94T000331			Cyanide by Microdist. & Spec.	ug/g	103.0	6.00e-01	795.0	766.0	780.5	3.72	103.7	40.00	n/a
S94T000331			TOC by Persulfate/Coulometry	ug/g	99.33	37.20	188.0	379.0	283.5	67.4	n/a	80.00	n/a
S94T000335	F		Cobalt-60 by GEA	uCi/g	103.4	<7.69e-03	< 8.62e-3	<7.79e-3	n/a	n/a	n/a	7.69e-03	na
S94T000335	F		Cesium-137 by GEA	uCi/g	103.1	4.49e-02	47.80	49.60	48.70	3.70	n/a	4.49e-02	.38
S94T000335	F		Europium-154 by GEA	uCi/g	n/a	<2.59e-02	< 2.94e-2	<2.95e-2	n/a	n/a	n/a	2.59e-02	na
S94T000335	F		Europium-155 by GEA	uCi/g	n/a	<1.73e-02	< 6.90e-2	<7.08e-2	n/a	n/a	n/a	1.73e-02	na
S94T000335	F		Strontium-89/90 High Level	uCi/g	96.43	1.510	15.70	18.20	16.95	14.7	n/a	1.110	12
S94T000337	A		Cobalt-60 by GEA	uCi/g	103.0	<3.23e-03	< 2.84E-3	<4.18E-3	n/a	n/a	n/a	3.23e-03	NA
S94T000337	A		Cesium-137 by GEA	uCi/g	100.4	<6.89e-03	2.030	2.040	2.035	0.49	n/a	6.89e-03	1.71
S94T000337	A		Europium-154 by GEA	uCi/g	n/a	<1.05e-02	< 1.35E-2	<1.32E-2	n/a	n/a	n/a	1.05e-02	NA
S94T000337	A		Europium-155 by GEA	uCi/g	n/a	<7.52e-03	< 2.40E-2	<2.37E-2	n/a	n/a	n/a	7.52e-03	NA
S94T000337	A		Strontium-89/90 High Level	uCi/g	94.59	3.82e-03	13.40	13.20	13.30	1.50	n/a	1.48e-03	.5

Table 2: Final Half Segment Results for Tank 241-C-108
C-108

RISER: 7
SEGMENT #: 94-AUG-014

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000332			Cyanide Dry - Calculated w TGA	ug/g Dry Wt	n/a	n/a	8.22e+03	8.40e+03	8.31e+03	2.17	n/a	5.000	n/a
S94T000332			Cyanide by Microdist. & Spec.	ug/g	103.0	6.00e-01	4.99e+03	5.10e+03	5.04e+03	2.18	n/a	80.00	n/a
S94T000332			TOC by Persulfate/Coulometry	ug/g	99.33	37.20	1.54e+03	1.84e+03	1.69e+03	17.8	n/a	80.00	n/a
S94T000336		F	Cobalt-60 by GEA	uCi/g	103.4	<7.69e-03	< 1.00e-2	<9.43e-3	n/a	n/a	n/a	7.69e-03	na
S94T000336		F	Cesium-137 by GEA	uCi/g	103.1	4.49e-02	401.0	425.0	413.0	5.81	n/a	4.49e-02	.13
S94T000336		F	Europium-154 by GEA	uCi/g	n/a	<2.59e-02	< 4.37e-2	<4.85e-2	n/a	n/a	n/a	2.59e-02	na
S94T000336		F	Europium-155 by GEA	uCi/g	n/a	<1.73e-02	< 1.93e-1	<1.97e-1	n/a	n/a	n/a	1.73e-02	na
S94T000336		F	Strontium-89/90 High Level	uCi/g	90.18	2.06e-03	22.10	21.70	21.90	1.83	n/a	1.28e-03	.3
S94T000338		A	Cobalt-60 by GEA	uCi/g	103.9	<2.67e-03	< 5.85E-3	<7.14E-3	n/a	n/a	n/a	2.67e-03	NA
S94T000338		A	Cesium-137 by GEA	uCi/g	100.8	<4.35e-03	73.60	75.00	74.30	1.88	n/a	4.35e-03	.34
S94T000338		A	Europium-154 by GEA	uCi/g	n/a	<6.21e-03	< 1.85E-2	<2.24E-2	n/a	n/a	n/a	6.21e-03	NA
S94T000338		A	Europium-155 by GEA	uCi/g	n/a	<5.48e-03	< 1.03E-1	<1.06E-1	n/a	n/a	n/a	5.48e-03	NA
S94T000338		A	Strontium-89/90 High Level	uCi/g	94.59	3.82e-03	18.30	18.20	18.25	0.55	n/a	1.34e-03	.4

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Table 3: Final Quarter Segment Results for Tank 241-C-108

Riser 4
Segment #: 94-AUG-015

Segment Portion: Top Quarter of Segment : A

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000367	Z	Nickel -ICP-Fusion	µg/g	103.6	1.80E-02	9.36E+03	9.50E+03	9.43E+03	1.45	104.5	n/a	90.8	n/a

Segment Portion: Second Quarter of Segment: B

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000368	Z	Nickel -ICP-Fusion	µg/g	103.6	1.80E-02	1.15E+04	9.62E+03	1.05E+04	17.4	93.8	n/a	99.6	n/a

Segment Portion: Third Quarter of Segment: C

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000369	Z	Nickel -ICP-Fusion	µg/g	103.6	1.80E-02	1.10E+04	1.03E+04	1.06E+04	6.31	102.1	n/a	93.3	n/a

Segment Portion: Bottom Quarter of Segment: D

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000370	Z	Nickel -ICP-Fusion	µg/g	103.6	1.80E-02	7.62E+03	6.43E+03	7.03E+03	17.0	116.6	n/a	93.3	n/a

Riser: 7
Segment #: 94-AUG-012

Segment Portion: Top Quarter of Segment : A1

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000301	Z	Nickel -ICP-Fusion	µg/g	98.40	5.00E-03	7.38E+02	6.47E+02	6.92E+02	13.1	n/a	n/a	119.0	n/a

Segment Portion: Top Quarter of Segment : A2

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000302	Z	Nickel -ICP-Fusion	µg/g	98.40	5.00E-03	1.83E+03	1.48E+03	1.66E+03	20.7	n/a	n/a	92.40	n/a

Riser: 7
Segment #: 94-AUG-014
Segment Portion: Second Quarter of Segment: B

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000304	Z	Nickel -ICP-Fusion	µg/g	96.80	0.00E+00	6.55E+03	1.07E+04	8.60E+03	47.8	n/a	n/a	96.10	n/a

Segment Portion: Third Quarter of Segment: C

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000303	Z	Nickel -ICP-Fusion	µg/g	96.80	0.00E+00	1.81E+04	1.92E+04	1.87E+04	5.7	n/a	n/a	81.70	n/a

Table 4: Final Core Composite Results for Tank 241-C-108

Riser: 4
Segment #: 94-AUG-015

Segment Portion: Core Composite

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000403	F	Aluminum -ICP-Fusion	µg/g	99.9	4.22E-01	2.70E+04	5.19E+04	3.95E+04	63.2	124.3	0.63	259	n/a
S94T000403	F	Calcium -ICP-Fusion	µg/g	103.1	8.74E-02	8.79E+03	8.07E+03	8.43E+03	8.57	112	0.03	518	n/a
S94T000403	F	Iron -ICP-Fusion	µg/g	103.5	3.48E-01	5.03E+03	5.79E+03	5.41E+03	14.1	110.2	7.00	259	n/a
S94T000403	F	Sodium -ICP-Fusion	µg/g	97.47	4.14E+00	1.20E+05	1.11E+05	1.15E+05	7.72	n/a	6.80	518	n/a
S94T000403	F	Phosphorus -ICP-Fusio	µg/g	97.1	<2.00E+00	3.87E+04	3.36E+04	3.61E+04	14.2	53.7	3.02	500	n/a

Riser: 7
Segment #: 94-AUG-012/014

Segment Portion: Core Composite

Sample#	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Ser Dil, RPD	Det Limit	Count Err%
S94T000339	F	Aluminum -ICP-Fusion	µg/g	97.49	1.61E-01	6.56E+04	6.37E+04	6.47E+04	2.9	n/a	6.87	274	n/a
S94T000339	F	Calcium -ICP-Fusion	µg/g	101.6	2.52E-01	1.56E+04	1.83E+04	1.69E+04	15.9	98.4	21.2	547	n/a
S94T000339	F	Iron -ICP-Fusion	µg/g	99.98	2.60E-02	8.79E+03	9.05E+03	8.92E+03	2.92	95	44.2	274	n/a
S94T000339	F	Sodium -ICP-Fusion	µg/g	97.72	3.47E+00	7.54E+04	7.00E+04	7.27E+04	7.49	n/a	6.91	547	n/a
S94T000339	F	Phosphorus -ICP-Fusio	µg/g	100.6	<2.00E+00	1.87E+04	1.61E+04	1.74E+04	14.6	89.4	n/a	1090	n/a

Table 5: Final Core Composite Results for Tank 241-C-108
C-108

RISER: 4
SEGMENT #: 94-AUG-015

SEGMENT PORTION: Core Composite

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000387			TOC by Persulfate/Coulometry	ug/g	97.33	28.00	1.27e+03	493.0	881.5	88.1	n/a	80.00	n/a
S94T000387			TIC by Acid/Coulometry	ug/g	98.00	5.300	3.39e+03	1.41e+03	2.40e+03	82.5	n/a	5.000	n/a
S94T000403	F		Uranium by Phosphorescence	ug/g	95.01	<2.02e-02	511.0	460.0	485.5	10.5	125.0	3.70e-08	n/a
S94T000403	F		Am-241 by Extraction	uCi/g	125.3	<2.04e-02	< 1.22e-2	<7.47e-2	n/a	n/a	n/a	1.22e-02	14.8
S94T000403	F		Pu-238 by Ion Exchange	uCi/g	n/a	<2.30e-03	< 2.49e-3	<3.38e-3	n/a	n/a	n/a	2.49e-03	100
S94T000403	F		Pu-239/240 by Ion Exchange	uCi/g	116.9	<2.30e-03	6.76e-03	8.17e-03	7.47e-03	18.9	n/a	2.49e-03	5
S94T000404	A		Beta in Liquid Samples	uCi/g	104.4	2.14e-02	124.0	92.70	108.3	28.9	96.90	2.60e-02	.3
S94T000404	A		Cobalt-60 by GEA	uCi/g	105.4	<2.99e-03	< 2.56E-3	<3.31E-3	n/a	n/a	n/a	2.99e-03	NA
S94T000404	A		Cesium-137 by GEA	uCi/g	101.5	<3.09e-03	13.10	12.30	12.70	6.30	n/a	3.09e-03	.59
S94T000404	A		Europium-154 by GEA	uCi/g	n/a	<7.48e-03	< 9.48E-3	<1.02E-2	n/a	n/a	n/a	7.48e-03	NA
S94T000404	A		Europium-155 by GEA	uCi/g	n/a	<5.29e-03	< 3.52E-2	<3.66E-2	n/a	n/a	n/a	5.29e-03	NA
S94T000405	W		Chloride by IC - Dionex 4000i	ug/g	96.67	<1.00e-01	683.0	742.0	712.5	8.28	89.50	20.20	n/a
S94T000405	W		Fluoride by IC - Dionex 4000i	ug/g	98.93	<2.00e-01	1.97e+03	2.71e+03	2.34e+03	31.6	83.90	10.10	n/a
S94T000405	W		Nitrite by IC - Dionex 4000i	ug/g	94.70	<1.000	2.62e+04	2.67e+04	2.64e+04	1.89	96.60	100.7	n/a
S94T000405	W		Nitrate by IC - Dionex 4000i	ug/g	98.27	<1.000	4.63e+04	4.98e+04	4.80e+04	7.28	91.70	100.7	n/a
S94T000405	W		Phosphate by IC - Dionex 4000i	ug/g	97.67	<1.000	1.05e+05	1.13e+05	1.09e+05	7.34	91.10	100.7	n/a

Table 5: Final Core Composite Results for Tank 241-C-108
C-108

RISER: 7
SEGMENT #: 94-AUG-012/14

SEGMENT PORTION: Core Composite

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S94T000334			TOC by Persulfate/Coulometry	ug/g	99.33	37.20	1.46e+03	1.77e+03	1.62e+03	19.2	n/a	80.00	n/a
S94T000334			TIC by Acid/Coulometry	ug/g	100.2	2.300	2.64e+03	2.08e+03	2.36e+03	23.7	n/a	5.000	n/a
S94T000339		F	Uranium by Phosphorescence	ug/g	95.01	<2.02e-02	353.0	360.0	356.5	1.96	110.0	3.70e-08	n/a
S94T000339		F	Am-241 by Extraction	uCi/g	107.5	<1.42e-02	< 1.69e-2	<1.39e-2	n/a	n/a	n/a	1.69e-02	24.6
S94T000339		F	Pu-238 by Ion Exchange	uCi/g	n/a	<1.88e-03	< 2.46e-3	<2.96e-3	n/a	n/a	n/a	2.46e-03	100
S94T000339		F	Pu-239/240 by Ion Exchange	uCi/g	116.2	<1.88e-03	1.13e-02	1.12e-02	1.12e-02	0.89	n/a	2.46e-03	4.6
S94T000340		A	Beta in Liquid Samples	uCi/g	102.6	4.57e-01	295.0	288.0	291.5	2.40	98.40	3.29e-01	.7
S94T000340		A	Cobalt-60 by GEA	uCi/g	103.9	<2.67e-03	< 6.88E-3	<7.18E-3	n/a	n/a	n/a	2.67e-03	NA
S94T000340		A	Cesium-137 by GEA	uCi/g	100.8	<4.35e-03	226.0	219.0	222.5	3.15	n/a	4.35e-03	.2
S94T000340		A	Europium-154 by GEA	uCi/g	n/a	<6.21e-03	< 4.65E-2	<4.55E-2	n/a	n/a	n/a	6.21e-03	NA
S94T000340		A	Europium-155 by GEA	uCi/g	n/a	<5.48e-03	< 1.89E-1	<1.86E-1	n/a	n/a	n/a	5.48e-03	NA
S94T000341		W	Chloride by IC - Dionex 4000i	ug/g	100.3	<2.00e-01	610.0	387.0	498.5	44.7	103.2	2.00e-01	n/a
S94T000341		W	Fluoride by IC - Dionex 4000i	ug/g	100.5	<1.00e-01	3.47e+03	1.26e+04	8.04e+03	114	113.4	1.00e-01	n/a
S94T000341		W	Nitrite by IC - Dionex 4000i	ug/g	102.5	<1.000	1.98e+04	1.25e+04	1.62e+04	45.2	108.0	9.99e-01	n/a
S94T000341		W	Nitrate by IC - Dionex 4000i	ug/g	101.2	<1.000	3.57e+04	2.30e+04	2.94e+04	43.3	107.3	9.99e-01	n/a
S94T000341		W	Phosphate by IC - Dionex 4000i	ug/g	99.61	<1.000	3.66e+04	1.18e+05	7.73e+04	105	109.5	9.99e-01	n/a
S95T001188		W	Chloride by IC - Dionex 4000i	ug/g	97.68	<8.30e-02	1.10e+03	854.0	977.0	25.2	100.9	858.0	n/a
S95T001188		W	Fluoride by IC - Dionex 4000i	ug/g	96.63	<6.20e-02	1.72e+03	3.02e+03	2.37e+03	54.9	103.3	641.0	n/a
S95T001188		W	Nitrite by IC - Dionex 4000i	ug/g	97.29	<5.32e-01	3.22e+04	2.72e+04	2.97e+04	16.8	97.90	5.50e+03	n/a
S95T001188		W	Nitrate by IC - Dionex 4000i	ug/g	96.43	<7.03e-01	5.63e+04	4.93e+04	5.28e+04	13.3	101.3	7.27e+03	n/a
S95T001188		W	Phosphate by IC - Dionex 4000i	ug/g	92.69	<5.72e-01	2.24e+04	3.17e+04	2.70e+04	34.4	93.00	5.92e+03	n/a

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CHAIN OF CUSTODY FORMS

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number S94-04 (2) Sample Number 94-004 (3) Supervisor* D. E. Melville

(4) Tank 108-C (5) Riser 3 (6) Segment 1 (7) Core 61 (8) Cask Serial Number C-1022

Radiation Survey Data:	(9) FIELD	(26) LABORATORY
Over Top Dose Rate	<.5	<0.5 mR/hr
Side Dose Rate	<.5	<0.5 mR/hr
Bottom Dose Rate	10 - (7 in holder)	6 side 7 mR/hr under
Smearable Contamination	<0 (alpha)	<20 (alpha)
	<0 (beta-gamma)	<1000 (beta-gamma)
	RPT* [signature] (Signature)	RPT* [signature] (Signature)

(10) Shipment Description:

A. Work Package Number	2E-92-01257
B. Cask Seal Number	3779
C. Sampler Number Used	93-005
D. Date and Time Sampler Unseated	6/01/94 12:32 pm.
E. Expected Liquid Content	0 %
F. Expected Solid Content	100 %
G. Dose Rate Through Drill String	400 mrem/hr
H. Expected Sample Length	5.7"

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

Characterization Plan WHC-SD-WM-TP-~~209~~ 211

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(12) Field Comments:

Contacted waste 20½" from bottom of ~~stroke~~ Tank DM. Hit solid object 14" from bottom of ~~stroke~~ DM. Tank.

(27) Laboratory Comments

(13) POINT OF ORIGIN	(14) SENDER NAME	(16) DATE RELEASED	(18) DESTINATION	(20) RECIPIENT NAME	(22) DATE RECEIVED
241-C-108	D.E. Melville	6/2/94	222 S Lab	Sandra Cobb	06-02-94
	(15) SENDER SIGNATURE* Dave Melville	(17) TIME RELEASED 1005		(21) RECIPIENT SIGNATURE* Sandra Cobb	(23) TIME RECEIVED 1115

(19) Seal Intact Upon Release? ☒ Yes ☐ No

(24) Seal Intact Upon Receipt? ☒ Yes ☐ No

(25) Seal Data Consistent with this Record?

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

DISTRIBUTION: White – Office of Sample Management; Pink – Process Engineering, R1-51; Yellow – Recipient of Sample; Goldenrod – Tank Farm Operati T4-01

BC-6000-309 (02/90)

WHC-SD-WM-DP-082, REV. 1

Keith Fuller 6-2-94

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number 200-08-TF (2) Sample Number 94-Aug-012 (3) Supervisor B. Praznik

(4) Tank C-108 (5) Riser 7 (6) Cask Serial Number C1053

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	1 mR/hr	1 mR/hr
Side Dose Rate	10 mR/hr	10 mR/hr
Bottom Dose Rate	1.5 mR/hr	2 mR/hr
Smearable Contamination	< 20 dpm/100cm² (Alpha)	< 20 dpm/100cm² (Alpha)
	< 1000 dpm/100cm² (Beta-Gamma)	< 1000 dpm/100cm² (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description	
A. Work Package Number	ES-94-1152
B. Cask Seal Number	#3684
C. Date and Time Sample Removed from Tank	11-18-94/1300hrs
D. Expected Liquid Content	30%
E. Expected Solid Content	70%
F. Dose Rate Through Drill String	1 R/hr
G. Expected Sample Length	≈ 10'

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

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WHC-SD-WM-DP-082 REV 1

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C-108 R/7	2225	PRAZNIK, R.J.	1044/11-21-94	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
PRAZNIK			1115 11-21-94	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
			1230 11-21-94	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release?	(29) Seal Intact Upon Receipt?	(30) Seal Data Consistent with this Record?		
		Shipment No.	Cask Seal No.	Sample No.
☑ Yes ☐ No	* ☑ Yes ☑ No	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No

* ENTERED IN ERROR 11/29/94

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling, F7-12 Goldenrod - Tank Farm Operations, T4-01 BC-6001-326 (03/94)

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number 200-08-TF (2) Sample Number 94-AUG-014 (3) Supervisor B PRAZNIK

COPY

(4) Tank C-108 R/7 (5) Riser 7 (6) Cask Serial Number 1006C

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	1.1 mR/hr	1 mR/hr
Side Dose Rate	140 mR/hr	140 mR/hr
Bottom Dose Rate	22 mR/hr	20 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<20 dpm/100 cm² (Alpha)
	<1000 dpm/100 cm² (Beta-Gamma)	<1000 dpm/100 cm² (Beta-Gamma)
RCT*	[signature] 8552 (Signature)	RCT* [signature] (Signature)

(8) Shipment Description	
A. Work Package Number	ES-94-1152-W
B. Cask Seal Number	3776
C. Date and Time Sample Removed from Tank	11-18-94 / 12:30 pm
D. Expected Liquid Content	30%
E. Expected Solid Content	70%
F. Dose Rate Through Drill String	8 R/hr
G. Expected Sample Length	± 9" - 20" bit

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

(10) Field Comments

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(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C-108-R/7	222 S	PRAZNIK, RJ. [signature]	11-21-94/1050	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
PRAZNIK RJ [signature]		James R Fenhartz [signature]	1115 11-21-94	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
James R Fenhartz [signature]		[signature]	1230 11-21-94	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release?	(29) Seal Intact Upon Receipt?	(30) Seal Data Consistent with this Record?		
☑ Yes ☐ No	☑ Yes ☐ No	Shipment No. ☑ Yes ☐ No	Cask Seal No. ☑ Yes ☐ No	Sample No. ☑ Yes ☐ No

WHC-SD-WM-DP-082, REV. 1

Nov 27 94

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling, F7-12 Goldenrod - Tank Farm Operations, T4-01 P 001-326 (03/94)

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 94-AUG-015 (3) Supervisor R.J. PRAZNIK

(4) Tank C108 (5) Riser 4 (6) Cask Serial Number 1009C

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<.5 mr/hr	<.5 mr/hr
Side Dose Rate	40 mR/hr	45 mr/hr
Bottom Dose Rate	50 mR/hr	50 mr/hr
Smearable Contamination	<20 (Alpha)	<20 (Alpha)
	<1000 (Beta-Gamma)	<1K (Beta-Gamma)
RCT*	K.J. Vanslyck (Signature)	[signature] (Signature)

(8) Shipment Description

A. Work Package Number	ES-94-01152
B. Cask Seal Number	2318
C. Date and Time Sample Removed from Tank	12-12-94 / 11:30 AM
D. Expected Liquid Content	15%
E. Expected Solid Content	85%
F. Dose Rate Through Drill String	2 R/hr
G. Expected Sample Length	21"

WHC-SD-WM-DP-082, REV. 1

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

128

(10) Field Comments

SEAL # 2318

(32) Laboratory Comments

COPY

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C108 R/4	222S	PRAZNIK, RJ [signature]	12-13-94/0930	Sample held in turn awaiting SMEARS 12-14-94
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
D.A. Krahn		Janie Hensley JANIE HENSLEY	12-14-94 0940	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
Janie Hensley JANIE HENSLEY		Sandra Cobb Sandra Cobb	12-14-94 1025	No Tank No. on Seal
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release? ☑ Yes ☐ No

(29) Seal Intact Upon Receipt? ☑ Yes ☐ No

(30) Seal Data Consistent with this Record?

Shipment No. ☑ Yes ☐ No

Cask Seal No. ☑ Yes ☐ No

Sample No. ☑ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management; Yellow - Recipient of Sample; Pink - Waste Tank Sampling, F7-12; Goldenrod - Tank Farm Operations, T4-01

BC-6001-326 (03/94)

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PHOTOGRAPHS

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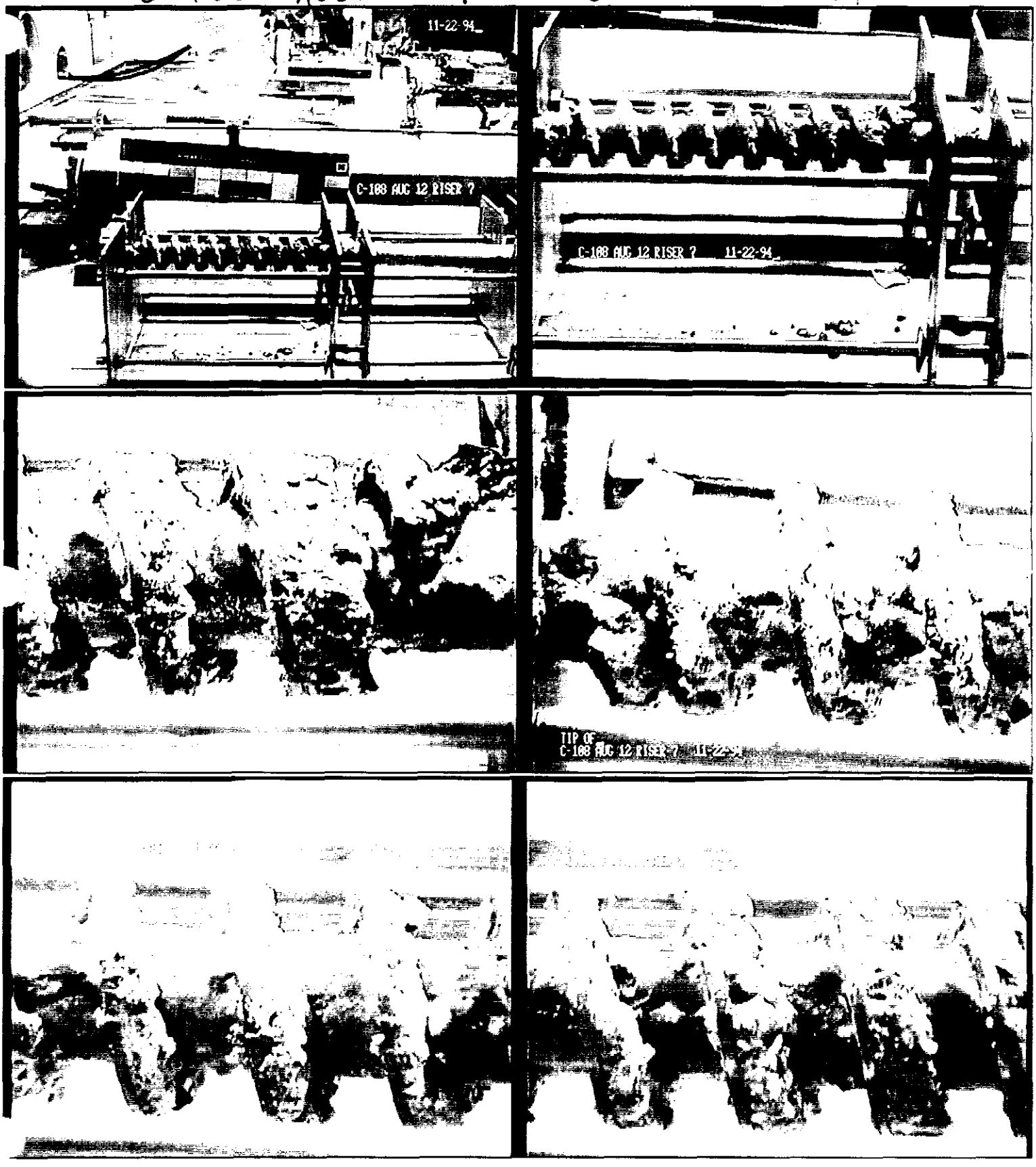
C-108 AUGER 94-AUG-012 11-22-94



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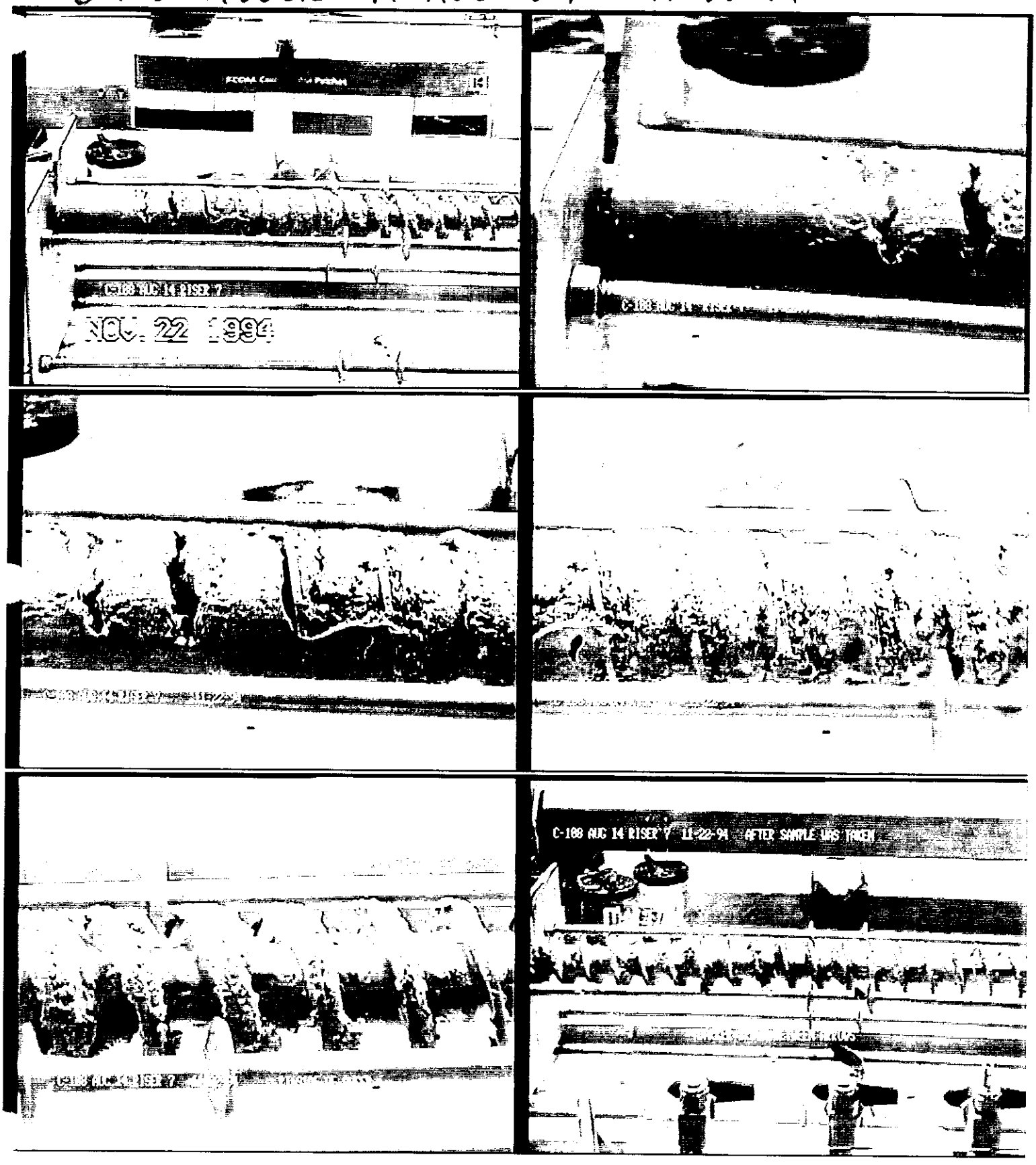
C-108 AUGER 94-AUG-014 11-22-94



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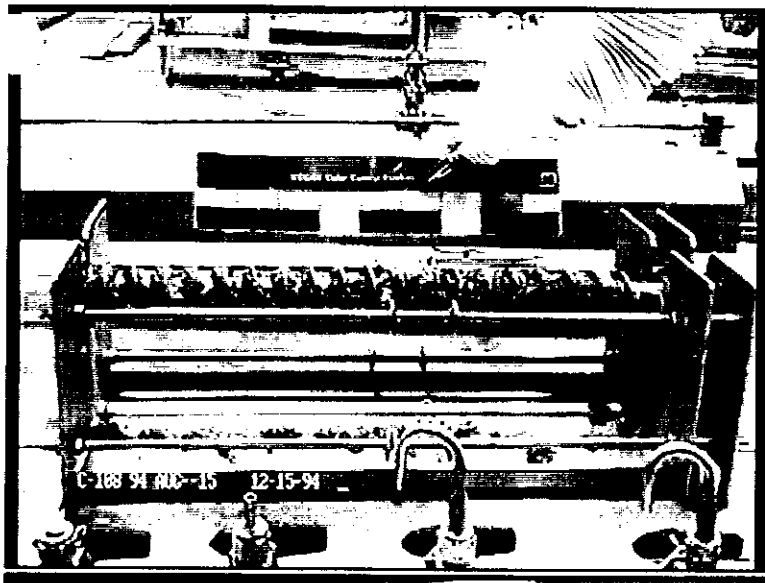
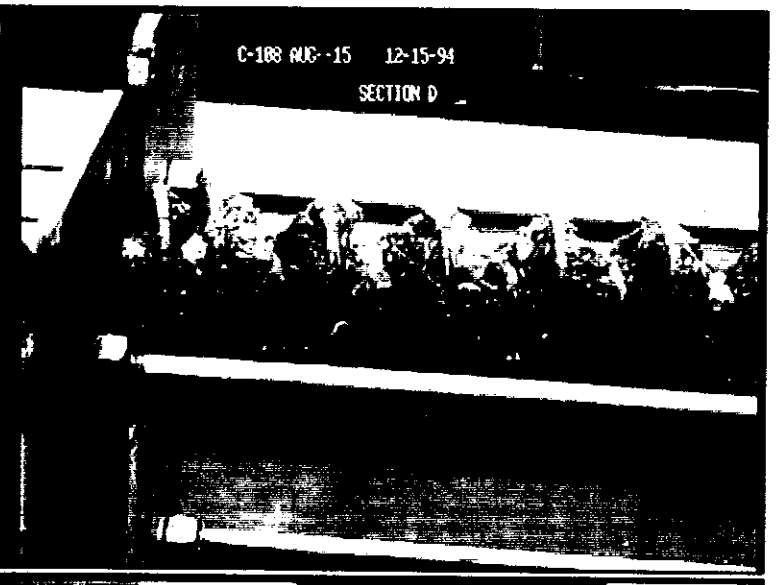
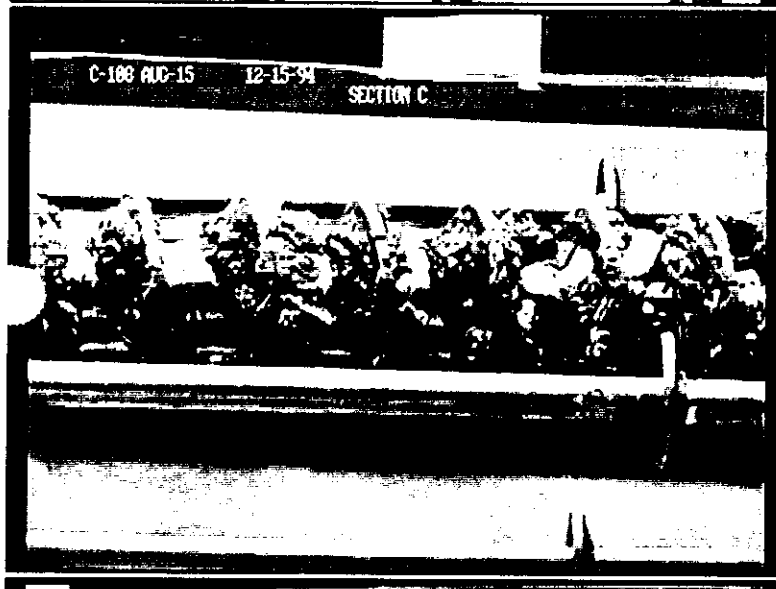
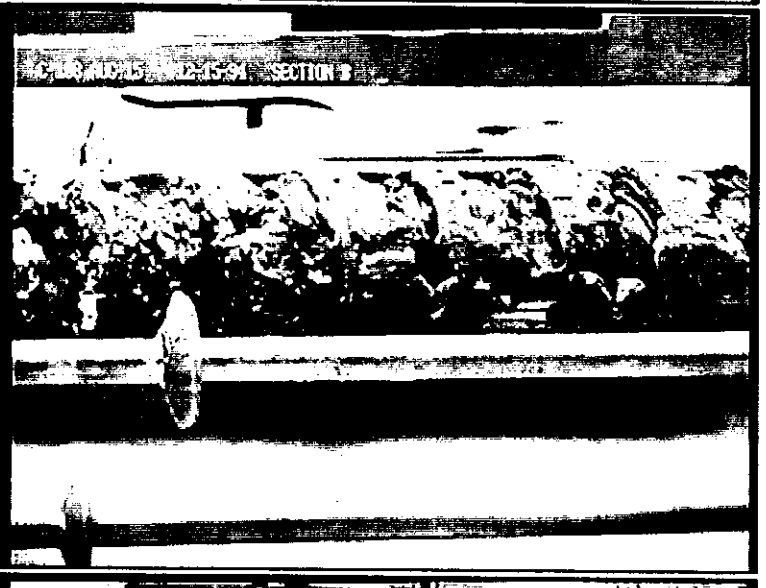
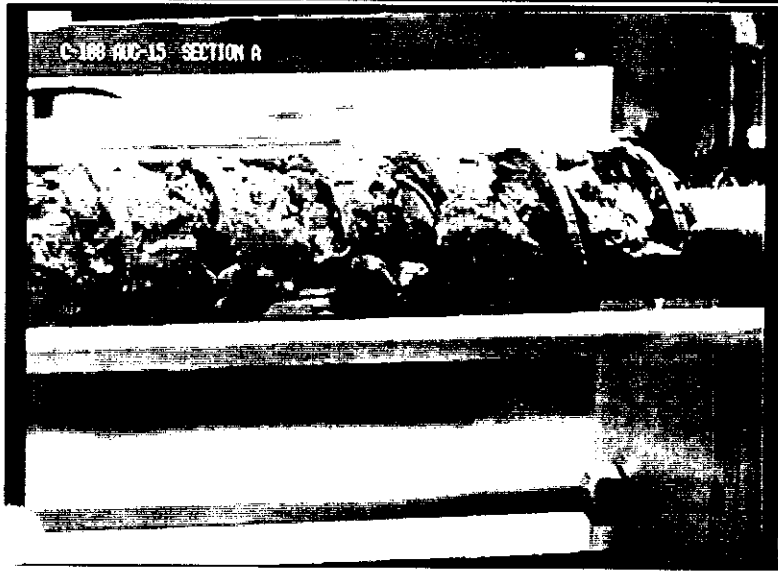
C-108 AUGER 94-AUG-015 12-15-94

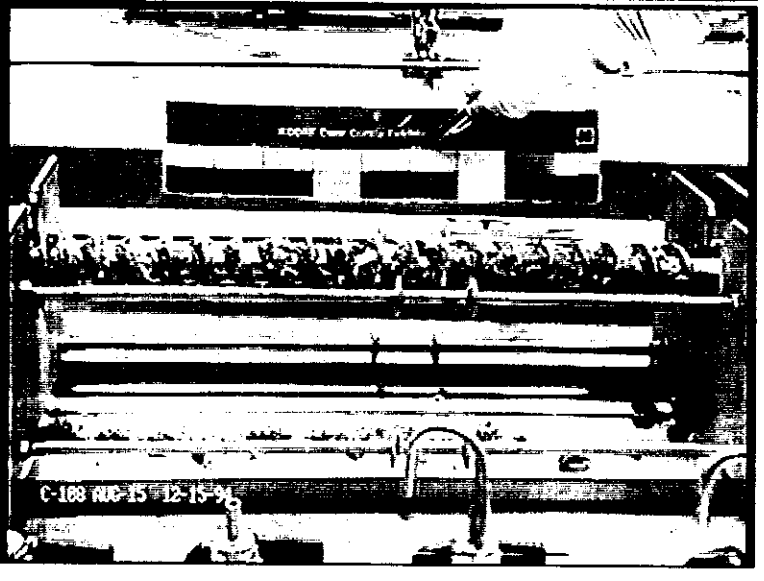












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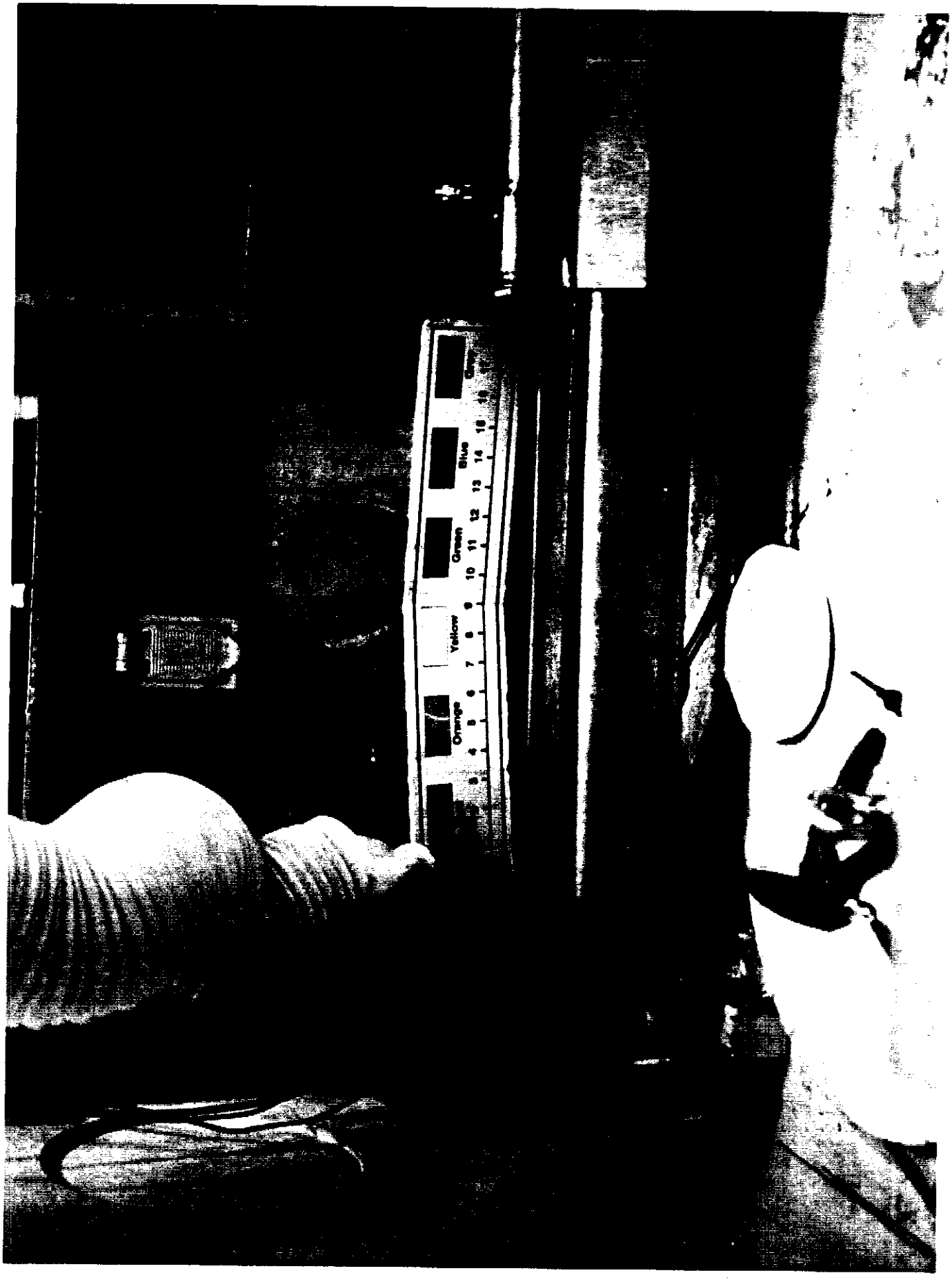
Orange
Yellow
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HOT CELL LOGBOOK

DRS 1.5C

WHC-SD-WM-DP-082, REV. 1

RECORD COPY NOT FOR CIRCULATION MAY 1 4 1993 RECEIVED WHC BCSR DOCUMENT CONTROL	NOTEBOOK NUMBER: WHC-N-743 1
	DATE OF ISSUE: 5-13-93 / SERIES AND COPY: 1
	TITLE (INDICATE SUBJECT CONTENT): TANK C-108

AUTHOR(S) - DEPARTMENT AND SECTION

R. K. Fuller

PERIOD COVERED (INCLUSIVE - MONTH, DATE, YEAR)

FROM TO

IF CONTINUED FROM ANOTHER NOTEBOOK, GIVE NOTEBOOK NUMBER

IF CONTINUED IN ANOTHER NOTEBOOK, GIVE NOTEBOOK NUMBER

ROUTE TO	P.R. NO.	LOCATION	ROUTE DATE	SIGNATURE & DATE
R.K. Fuller	67508	T6-30	MAY 1 4 1993	

Tank 241-C-108 Test
Extruded Segment Description Sheet

20.00 gram 19.982
500.00 gram 499.77

Sample_____ Riser_____ Core_____ Segment_____

General Description of Sample:

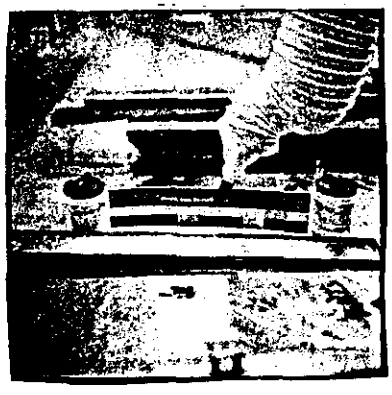
Tare weights: 6031 - 220.84 grams
6030 - 220.16 grams
6032 - 219.75 grams

Valve closed.
Valve closed

9.36 gram 6030 lower
TK108 C5951 L

Sketch:

~~6~~ 6031 Upper
11.79 grams TK108 C5951 U



Sampler Efficiency	Drainable Liquid Density
Volume of Sampler_____	Total Weight_____
%Volume of Air_____	Total Volume_____
%Volume of Liquid_____	Density_____
%Volume of Solids_____	Turbidity_____
Comments:_____	Comments:_____

Solids	Liner Liquid	Drainable Liquid
Color_____	Collection Jar_____	Collection Jar_____
Consistency_____	Gross Wt._____	Gross Wt._____
Homogeneity_____	Tare Wt._____	tare Wt._____
Texture_____	Net Wt._____	Net Wt._____
Penetrometer_____	No. Phases_____	No. Phases_____

Cognizant Scientist:

Reviewed By:

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COPY

WHC-SD-WM-DP-082, REV. 1

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number S94-04 (2) Sample Number 94-004 (3) Supervisor* D. E. Melville

(4) Tank 108-C (5) Riser 3 (6) Segment 1 (7) Core 61 (8) Cask Serial Number C-1022

Radiation Survey Data:	(9) FIELD	(26) LABORATORY
Over Top Dose Rate	<.5	<0.5 mR/hr
Side Dose Rate	<.5	<0.5 mR/hr
Bottom Dose Rate	10 – (7 in holder)	6 side 7 mR/hr under
Smearable Contamination	<0 (alpha)	<20 (alpha)
	<0 (beta-gamma)	<1000 (beta-gamma)
	RPT* J Weiss (Signature)	RPT* C Bebe (Signature)

(10) Shipment Description:

A. Work Package Number	2E-92-01257
B. Cask Seal Number	3779
C. Sampler Number Used	93-005
D. Date and Time Sampler Unseated	6/01/94 12:32 pm.
E. Expected Liquid Content	0 %
F. Expected Solid Content	100 %
G. Dose Rate Through Drill String	400 mrem/hr
H. Expected Sample Length	5.7"

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

Characterization Plan WHC-SD-WM-TP-~~209~~ 211

139

(12) Field Comments:

Contacted waste 20½" from bottom of ~~stroke~~ Tank DM. Hit solid object. 14" from bottom of ~~stroke~~ DM. Tank.

(27) Laboratory Comments

(13) POINT OF ORIGIN	(14) SENDER NAME	(16) DATE RELEASED	(18) DESTINATION	(20) RECIPIENT NAME	(22) DATE RECEIVED
241-C-108	D.E. Melville	6/2/94	222 S Lab	Sandra Cobb	06-02-94
	(15) SENDER SIGNATURE* Dave Melville	(17) TIME RELEASED 1005		(21) RECIPIENT SIGNATURE* Sandra Cobb	(23) TIME RECEIVED 1115

(19) Seal Intact Upon Release? ☒ Yes ☐ No

(24) Seal Intact Upon Receipt? ☒ Yes ☐ No

(25) Seal Data Consistent with this Record?

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

DISTRIBUTION: White – Office of Sample Management; Pink – Process Engineering, R1-51; Yellow – Recipient of Sample; Goldenrod – Tank Farm Operations, T4-01

BC-6000-309 (02/90)

Keith Fuller 6-2-94

Keith Fuller 6-2-94

Tank 241-C-108
Hot Cell Work Plan

WHC-SD-WM-DP-082, REV. 1

I. Overview

A. Core samplers will be loaded into 1-E2 hot cell in accordance with procedure LO-160-101, **Core Segment Receipt and Preparation.** Core segments will extruded and prepared for the 222-S Laboratory in accordance with procedure LO-160-103, **Core Segment Extrusion Process and Sample Preparation.**

B. This hot cell work plan is based upon Tank 241-C-108 Tank Characterization Plan (WHC-SD-WM-TP-211).

II. General Comments

1. Three core samples are expected for 241-C-108. No hydrostatic fluid will be used. One field blank shall be taken during the C-108 event sampling event.

2. Current records indicate that C-108 contains 66 kgal of sludge. About 6 inches of sample are expected.

3. The Cognizant scientist may deviate from this hot cell work plan should unforseen circumstances arise. All deviations shall 1) be recorded in the laboratory notebook WHC-N-743 "Tank C-108" and 2) relayed to the project coordinator.

4. Process records indicate that the underground storage tank 241-C-108 on the Hanford site contains ferrocyanide from in-tank processing. Tank 241-C-108 is one of 20 tanks currently on the ferrocyanide Watch List.

5. If sufficient drainable liquid is available, the TCP requires 40 mLs of sample to be archived.

6. A hot cell blank will be collected and submitted for ICP analyses (metals) and GEA (Cs-137).

III. Pre-job Preparation

1. Hot cell technicians will ensure that vials are tare weighed.

2. Hot cell technicians will ensure that a 250 mL I-chem vial is available and has been calibrated in 10 mL increments.

3. Hot cell technicians will apply labels with next available jar number. Clear tape will be used to cover and protect the labels on jars. Use appropriate outer covering on jars

to minimize decontamination efforts when loaded out of the hot cell.

4. Hot Cell technicians will log all appropriate information about jars into logbook WHC-N-754. Record the date, jar number, jar size, tare weight, tank number, and customer I.D. after the jar contains the sample.

5. Hot Cell technicians will log all appropriate information on archive samples in logbook WHC-N-755. Record the date, jar number, jar size, tare weight, tank number, and customer i.d. after the jar contains the sample.

6. Check out video equipment and ensure battery is charged.

7. Obtain new Super-VHS tape and label 241-C-108.

8. Prepare the following jars for hot cell use:

Quantity	Jar Size
3	125 mL
3	250 mL
4	40 mL
10	20 mL

9. Review design of Rotary mode sampler with chemist prior to performing work.

IV. Sample Extrusion and Direct Sample Breakdown

A. Sample Extrusion (Cores and Field blanks).

1. Collect liner liquid and transfer to jar reserved for liner liquid composite.

2. Set-up video equipment and prepare to record extrusion.

3. Extrude sample according to LO-160-103.

4. Divide extruded segment into 12 cm quarter segments and place in labelled 250 mL jars according cognizant scientist instructions.

NOTE: The 19 inch segments divided into 12 cm quarter segments, will be identified by tank number, core number, segment number, and quarter segment (A, B, C, or D). Quarter segment A is the quarter closest to the sampler valve. Quarter segment D is the quarter that extrudes first.

Keith Fuller 6-2-94

5. Determine weight and volume of drainable liquid and describe color and turbidity of liquid.

6. Weigh all quarter segments collected.

7. Cognizant Scientist will calculate segment recovery based on expected recovery and notify project coordinator.

8. Homogenization and sample breakdown will be performed after notifications on sample recovery have been made to the Characterization Program.

B. Field Blank

1. Extrude segment and collect sample in designated jar.

2. Estimate volume and record in logbook.

3. Weigh jar for total weight and record in logbook.

C. Hot Cell Blank

1. Collect hot cell blank

2. Estimate volume and record in logbook.

3. Weigh jar for total weight and record in logbook.

D. Direct Sample Breakdown

NOTE: One quarter segment per core shall be used for homogenization test. The hot cell chemist will determine which quarter segment to perform the homogenization test.

1. Homogenize each quarter segment according to LO-160-103.

2. Obtain 2 subsamples from quarter sample designated for homogenization test.

   a. Quarter segment A, homogenizied
      (1) Homogenization test
         (a) acid digest
            i) ICP analyses-metals
            ii) GEA (Cs-137)

   b. Quarter segments A, B, C, D, homogenized
      (1) Safety Screening analyses
         (a) direct analyses
            i) DSC
            ii) TGA
            iii) CN
            iv) TOC

Keith Fuller 6-2-94

(b) acid digest

i) ICP-Ni,U,Fe,Mn only
ii) Sr-90

(c) water digest
i) GEA (Cs-137)

(d) fusion digest (Zr crucible)
i) ICP-Ni only
ii) GEA (Cs-137)
iii) Sr-90
iv) Total alpha
v) Pu-239/240 (if TA exceeds limit)
vi) ICP-U,Fe,Mn (if TA exceeds limit)

(e) Archive 40 mL from each quarter segment

c. Drainable liquid

(1) Filter thru 0.45 micron filter
(2) Safety screening analyses
(a) Direct analyses (filtrate)
i) CN
ii) TGA
iii) TOC
iv) acid digest (Refer to TCP)
v) Archive 40 ml portion

d. Hot Cell Blank

(1) Direct analyses
(a) GEA
(b) ICP

e. Field Blank

(1) Safety Screening analyses
(a) Direct analyses

i) TGA
ii) TOC
iii) CN
iv) GEA
v) Sr-90
vi) TA

(b) Acid digest
i) ICP-Ni

Keith Fuller 6-2-94

V. Chemist/Project Coordinator/Hot Cell Technicians

1. Chemist will finalize logbook WHC-N-743.

2. Project Coordinator or designee will contact R.J. Cash of the Ferrocyanide Safety Program and report recovery within 24 hours.

3. Project Coordinator or designee will contact the Characterization Program if there is insufficient sample present in any quarter segment to perform the required analyses.

4. If the amount of material recovered from the core samples from tank C-108 is insufficient to perform the analyses requested and permit a minimum of 10 gram archive on at least one quarter segment, the laboratory project coordinator or designee shall notify the Tank Cognizant Engineer and the manager of Analytical Services, Program Management and Integration. (See page 11 of TCP)

Cognizant Scientist Keith Fuller Date 6/2/94

Project Coordinator [illegible] Date 6-2-94

Keith Fuller 6/3/94

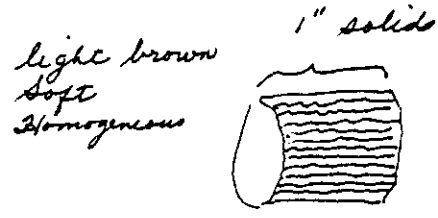
Tank 241-C-108
Extruded Segment Description Sheet

Balance: 20g 20.00
500g 499.80

Sample 94-004 Riser 3 Core 61 Segment 1

General Description of Sample: (1) Valve closed when removed from sampler.
(2) Valve closed after cutting cables
3) No Liner liquid present
4) No Drainable liquid present
5) Extruder approximately 1" of soft light brown solids.

Sketch:



Sampler Efficiency	Drainable Liquid Density
Volume of Sampler see note	Total Weight NA
%Volume of Air see note	Total Volume
%Volume of Liquid see note	Density
%Volume of Solids see note	Turbidity
Comments: See Recovery next page (12).	Comments:

Solids	Liner Liquid	Drainable Liquid
Color light brown	Collection Jar NA	Collection Jar NA
Consistency Soft Fudge	Gross Wt.	Gross Wt.
Homogeneity Homogeneous	Tare Wt.	tare Wt.
Texture Smooth	Net Wt.	Net Wt.
Penetrometer NA	No. Phases	No. Phases

Cognizant Scientist: Keith Fuller 6/3/94

Reviewed By: [signature] 8/10/94

① Drainable liquid collection jar/lid:

NA gross } No drainable liquid
225.82 gram tare }

② C-108 segment #1 solid material (Core 61)
jar # 6017 - 125 mL I Chem vial

151.19 g gross weight
130.30 g tare weight
20.89 g Net weight jar/vial # 6017.

③ Used exposures #1 and #2 on film roll.

④ Universal sampler used for C-108 segment #1.
* Volume of sampler = 309 mLs.
* Based on Chain of Custody information, the expected sampler length was 5.7". Actual recovery was 1".

% Recovery (Sampler) = $\frac{\text{Actual sampler length recovered}}{\text{Expected sampler length}} \times 100$

17.54 % = $\frac{1 \text{ inch}}{5.7 \text{ inches}} \times 100$

Keith Fuller
6/3/94

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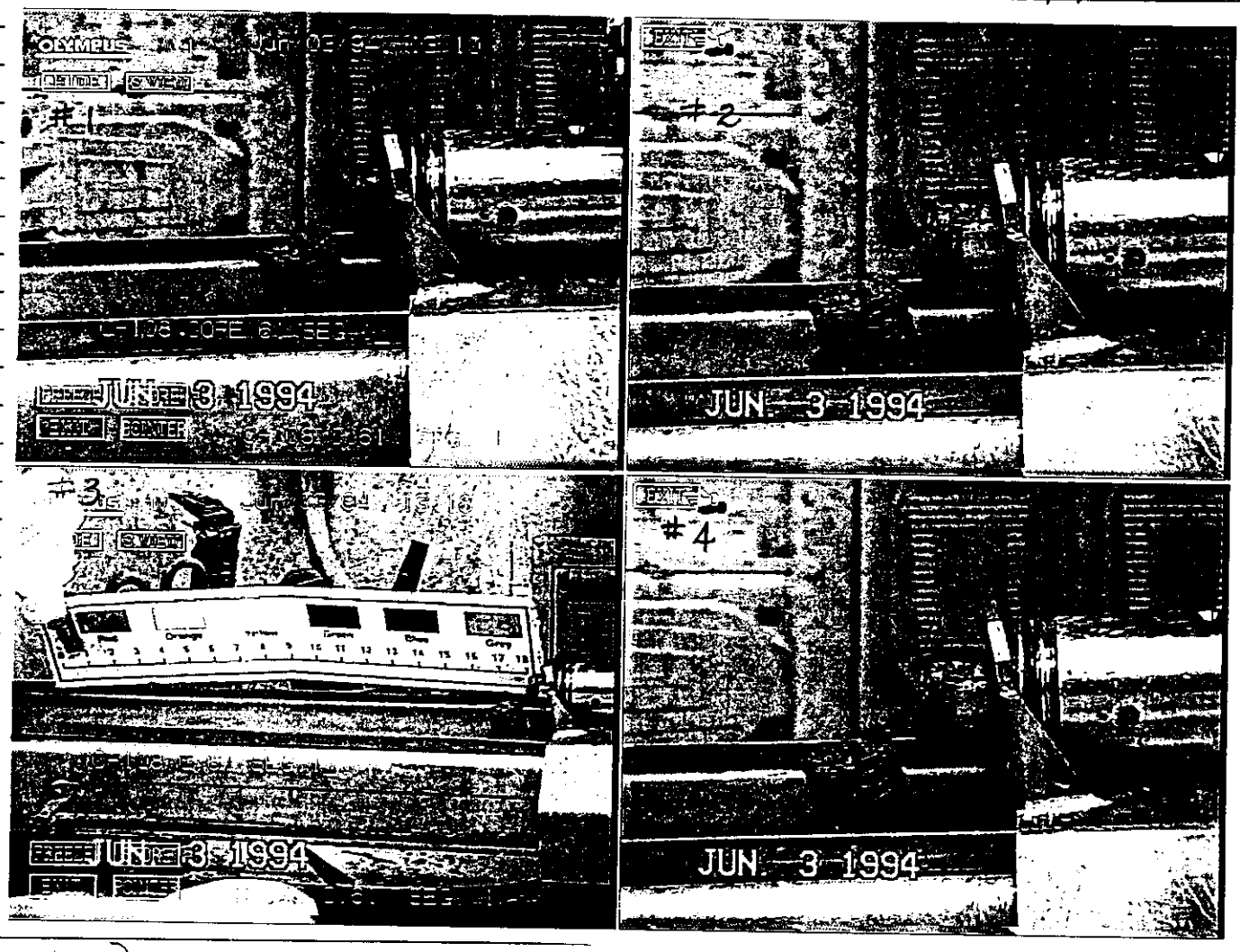
241-C-108 CORE 61 SEGMENT #1 6/3/94 13



#1
#2
#3
#4

Each frame shows C-108 Core ~~60~~ 61 Segment #1.

6/3/94 RKF

Material stored in jar # 6017.
Customer identification : C61S1
Sample Origin : TANK C-108

Keith Fuller
6/3/94

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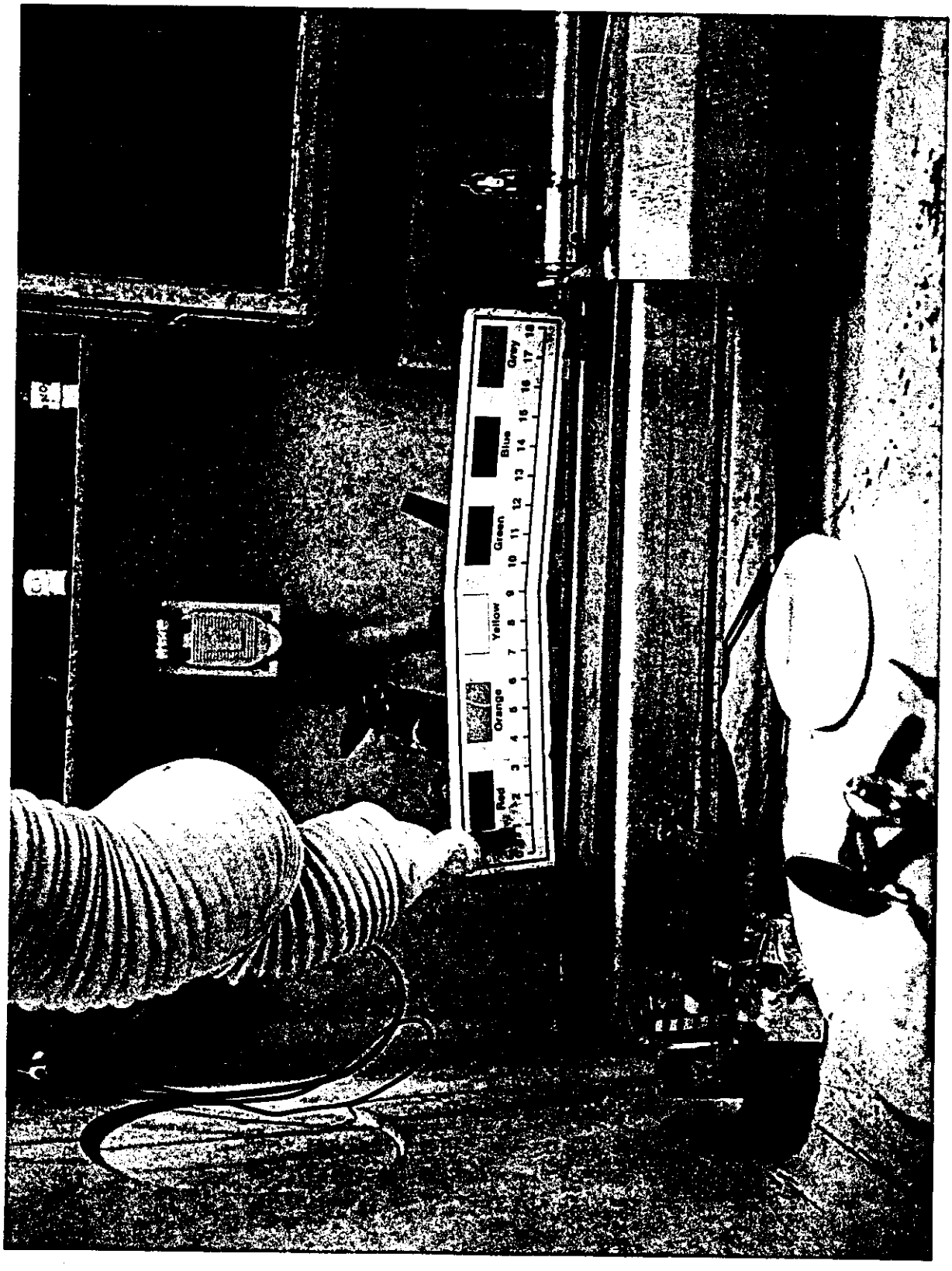
14 Tank C-108 Core 61 Segment #1

C-108 Core 61 Segment #1



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6/15/94

500g = 499.99 grams
10 g = 20.00 grams

6/13/94
RKFuller

C-108 ~~Core~~ Core 61 Seg #1 Homogenization

Homogenized C-108 Core 61 Seg #1 jar # 6017 Homogenized material for 10 minutes.

Transferred a portion of homogenized sample to vial #6034. Submitted sample to laboratory:

RSA# 1962 (TK 108)

Customer i.d.	Vial #	Laboratory id
C6151	6034	K222

WHC-SD-WM-DP-082, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

COPY

(1) Shipment Number 200-08-TF (2) Sample Number 94-Aug-012 (3) Supervisor B. Praznik

(4) Tank C-108 (5) Riser 7 (6) Cask Serial Number C1053

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	1 mR/hr	1 mR/hr
Side Dose Rate	10 mR/hr	10 mR/hr
Bottom Dose Rate	1.5 mR/hr	2 mR/hr
Smearable Contamination	< 20 dpm/100cm² (Alpha)	< 20 dpm/100cm² (Alpha)
	< 1000 dpm/100cm² (Beta-Gamma)	< 1000 dpm/100cm² (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	ES-94-1152
B. Cask Seal Number	#3684
C. Date and Time Sample Removed from Tank	11-18-94/1300hrs
D. Expected Liquid Content	30%
E. Expected Solid Content	70%
F. Dose Rate Through Drill String	1 R/hr
G. Expected Sample Length	≈ 10'

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

150

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C-108 R/7	2225	PRAZNIK, R.J.	1044/11-21-94	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
PRAZNIK			1115 11-21-94	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
			1230 11-21-94	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release?	(29) Seal Intact Upon Receipt?	(30) Seal Data Consistent with this Record?		
		Shipment No.	Cask Seal No.	Sample No.
☑ Yes ☐ No	* ☑ Yes ☑ No	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No

* ENTERED IN ERROR

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling, F7-12 Goldenrod - Tank Farm Operations, T4-01 BC-6001-326 (03/94)

Nov. 22, 1994

Hot Cell Temp - 75.2° F
% Humidity - 20%

Tank 241-C-108
Extruded Segment Description Sheet

20 grams - 19.99 grams
500 grams - 499.92 grams

Sample 94Aug-012 Riser 7 Core Auger Segment

General Description of Sample:
1330 - calibration of balance.
1336 - JAR #6130 zeroed, for Drainable Liquids.
1337 - Plug removed from sleeve. Observed no drainable liquids.
1339 - Removing Auger from Liner with Auger extraction Tool.
1341 - Removing sleeve from Auger.
1345 - Removed Auger from sleeve/solids uniform in color - yellowish brown. crumbly
1350 - 6158# (125ml) JAR, sample from Flutes 1# and 2# (29.0 grams) DSC/TGA.
1355 - 6159# (125ml) JAR, sample from Flutes 3# through 9# (66.57 grams)
95.57 grams Total solids

Sketch:

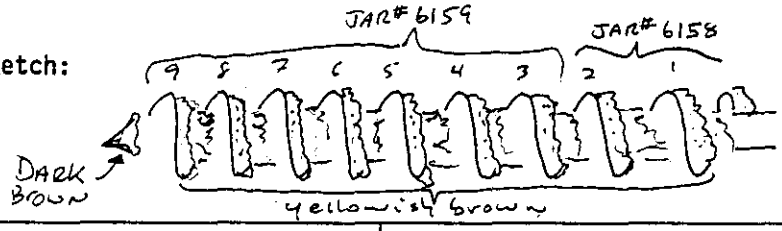


Photo	Sampler Efficiency	Drainable Liquid Density
See photo on page 19	Volume of Sampler NA	Total Weight NA
S94T000205 Lab Sample number	%Volume of Air	Total Volume
	%Volume of Liquid	Density
	%Volume of Solids	Turbidity
	Comments: Auger	Comments: Observed no Drainable Liquids

Solids	Liner Liquid	Drainable Liquid
Color Yellowish/Brown	Collection Jar NA	Collection Jar 6130#
Consistency Chunky/crumbly	Gross Wt.	Gross Wt. NA
Homogeneity Homogenous	Tare Wt.	tare Wt.
Texture Sandy & chunky crumbly	Net Wt.	Net Wt.
Penetrometer	No. Phases	No. Phases

Cognizant Scientist: [signature] 11-5-94

Reviewed By: Keith Fuller 11/29/94

18

Nov. 22, 1994

1. Video taken on C-108 Aug 12# Riser 7#.

2. JAR #6158 (125 ml) contains (29.0 grams), Taken From Flutes 1# and 2#.

3. JAR # 6159 (125 ml) contains (66.57 grams) Taken From Flutes 3# through 9#.

4. Total solids sampled was (95.57 grams)

Nov. 23, 1994

Hotcell Temp: 75.4 °F
% Humidity - 25 %

20 grams — 19.992 grams
500 grams - 499.848 grams

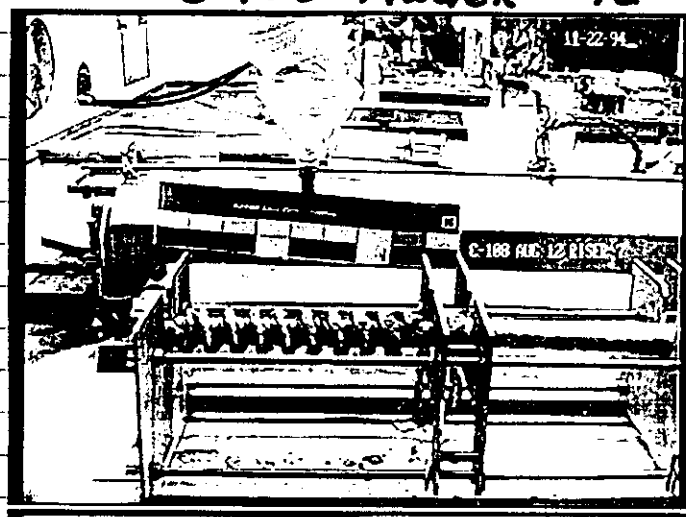
1. Homogenization of samples in JAR #6158 and JAR #6159.

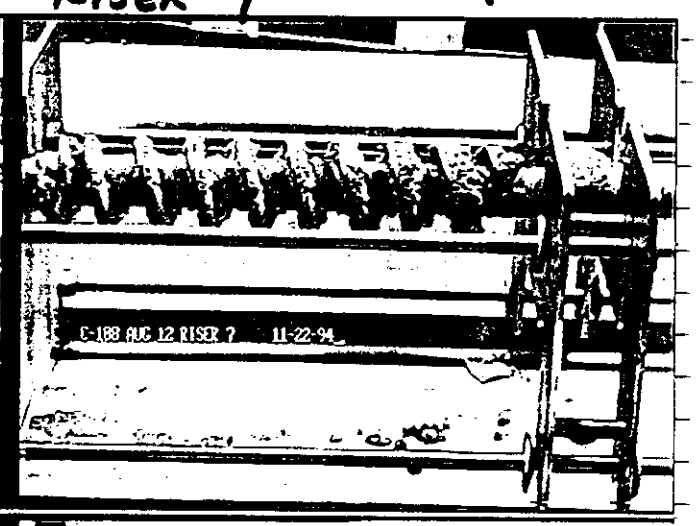
2. vial 6184# (~~20~~ 15 ml) 11-23-94
Transferred 6.065 grams from JAR #6159 to vial 6184#.
Sample remaining in JAR # 6159 = 60.505 grams

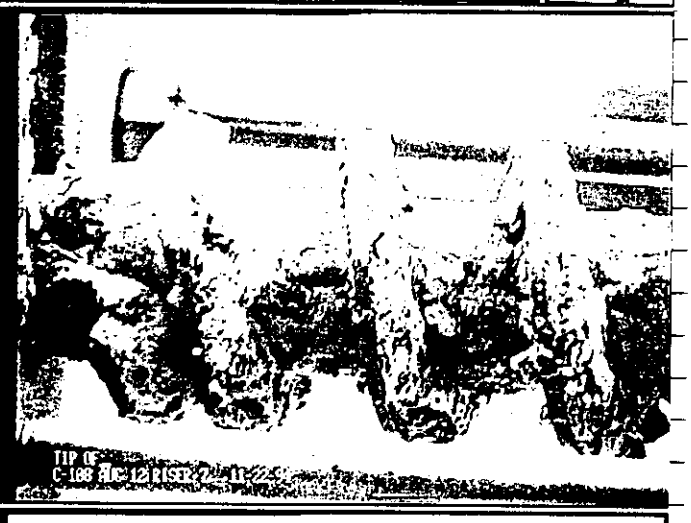
3. vial 6189# (15 ml)
Transferred 6.381 grams from JAR #6158 to vial 6189#
NOTE: ROCK material in sample.
Sample remaining in JAR # 6158 = 22.619 grams

10" AUGER

C-108 AUGER #12 RISER 7 11/22/94







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20 WHC-SD-WM-DP-082 REV 1

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number 200-08-TF (2) Sample Number 94-AUG-014 (3) Supervisor B PRAZNIK

(4) Tank C-108 R/7 (5) Riser 7 (6) Cask Serial Number 1006C

COPY

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	1.1 mR/hr	1 mR/hr
Side Dose Rate	140 mR/hr	140 mR/hr
Bottom Dose Rate	22 mR/hr	20 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<20 dpm/100 cm² (Alpha)
	<1000 dpm/100 cm² (Beta-Gamma)	<1000 dpm/100 cm² (Beta-Gamma)
RCT*	[signature] 8552 (Signature)	RCT* [signature] (Signature)

(8) Shipment Description

A. Work Package Number	ES-94-1152-W
B. Cask Seal Number	3776
C. Date and Time Sample Removed from Tank	11-18-94 / 12:30 pm
D. Expected Liquid Content	30%
E. Expected Solid Content	70%
F. Dose Rate Through Drill String	8 R/hr
G. Expected Sample Length	± 9" - 20" bit

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

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Nov 27 1994

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C-108-R/7	222 S	PRAZNIK, RJ. [signature]	11-21-94/1050	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
PRAZNIK RJ. [signature]		James R Fenhartz [signature]	11-21-94 1115	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
James R Fenhartz [signature]		[signature]	11-21-94 1230	
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release? ☑ Yes ☐ No

(29) Seal Intact Upon Receipt? ☑ Yes ☐ No

(30) Seal Data Consistent with this Record?

Shipment No. ☑ Yes ☐ No

Cask Seal No. ☑ Yes ☐ No

Sample No. ☑ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Waste Tank Sampling, F7-12 Goldenrod - Tank Farm Operations, T4-01 BC-6001-326 (03/94)

Nov. 22, 1994

Hot Cell Temp - 75.4°
% Humidity - 20%

Tank 241-C-108
Extruded Segment Description Sheet

20 grams - 19.99 grams
500 grams - 499.92 grams

Sample 94-Aug-014 Riser 7 Core Auger Segment

General Description of Sample:
1425 - plugged piled, JAR# 6131 (250 ml) (1.893 grams) - ~~Liner Liquid~~ Drainable Liquid. Did not retain
1425 - Auger tool inserted, removing sleeve from Liner. 1430 extraction tool removed.
1431 - Removed sleeve from Auger. Solids. Light Brown, sticky
1438 - 6132# (250 ml) JAR, sampled from Flutes 14 thru 19 (143.01 grams)
1450 - 6133# (250 ml) JAR, sampled from Flutes 1 thru 13 (206.47 grams)
Total solids recovered - 349.48 grams

Sketch:

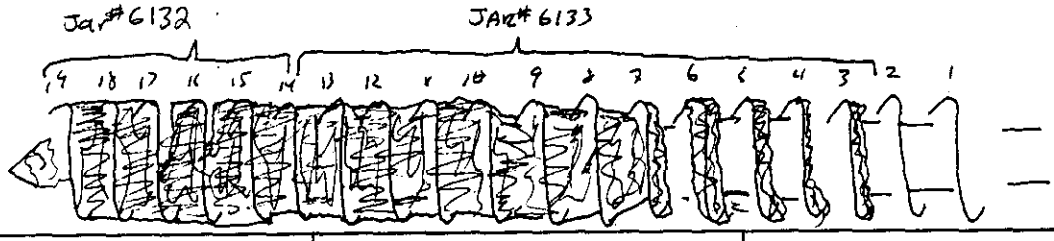

Photo	Sampler Efficiency	Drainable Liquid Density
See photo on page 23	Volume of Sampler NA	Total Weight NA
	%Volume of Air	Total Volume
	%Volume of Liquid	Density
	%Volume of Solids	Turbidity
	Comments: Auger	Comments: Did not retain

Solids	Liner Liquid	Drainable Liquid
Color Light Brown/TAN	Collection Jar NA	Collection Jar 6131
Consistency Paste	Gross Wt.	Gross Wt.
Homogeneity ~~Homogeneous~~	Tare Wt.	tare Wt.
Texture moist/sandy paste	Net Wt.	Net Wt. 1.893 grams
Penetrometer	No. Phases	No. Phases

Cognizant Scientist: [signature] 12/15/94

Reviewed By: Keith Fuller 12/4/94 RK Fuller 12/4/94

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Nov. 22, 1994

1. Video taken on C-108 Aug 14# Riser 7#

2. JAR #6132 (250ml) contains (143.81 grams), Taken From Flutes 14# thru 19#.

3. JAR #6133 (250ml) contains (206.47 grams), Taken From Flutes 1# thru 13#.

4. Total solids recovered was (349.48 grams).

Nov. 23, 1994

Hot Cell Temp - 75.4°F 20 grams - 19.992 grams
% Humidity - 20% 500 grams - 499.848 grams

1. Homogenization of JARS #6132 and #6133.

2. vial #6190 (15ml)
Transferred 5.297 grams from JAR #6132 to vial #6190.
Sample remaining in JAR # 6132 = 137.713 grams

3. vial 6191 (15ml)
Transferred 5.353 grams from JAR #6133 to vial #6191.
Sample remaining in JAR # 6133 = 201.117 grams

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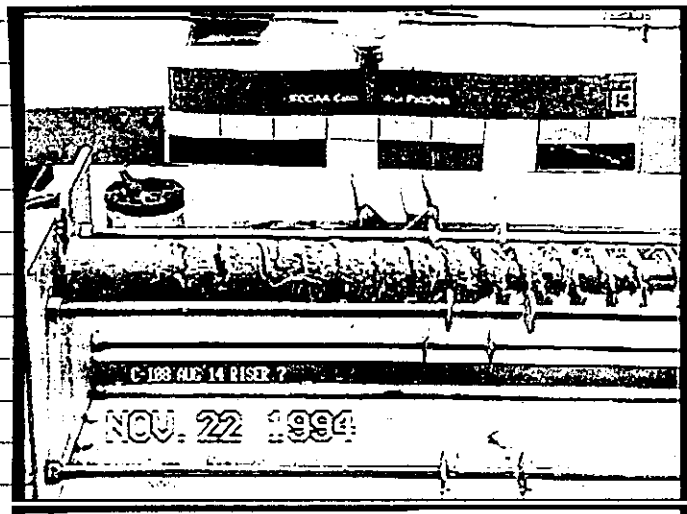
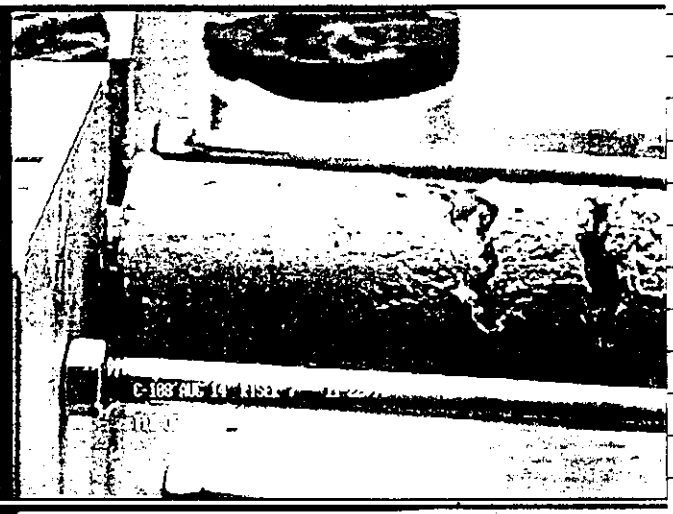
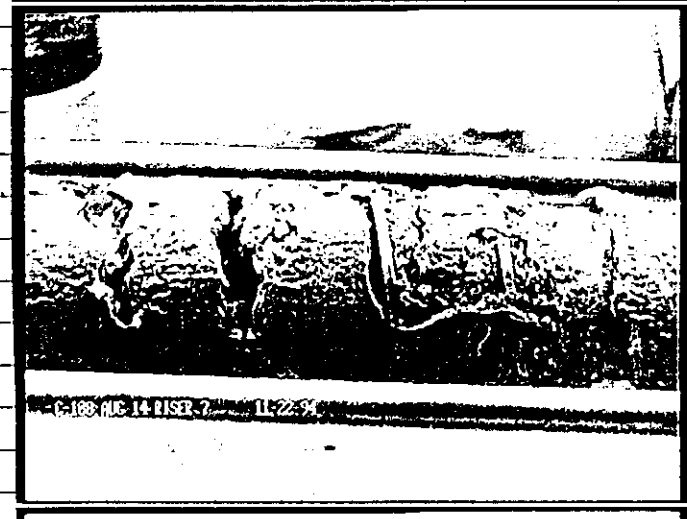
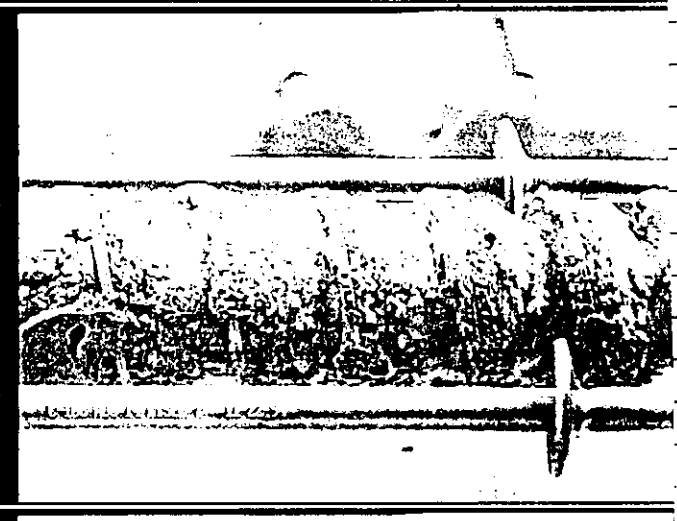
20" AUGER

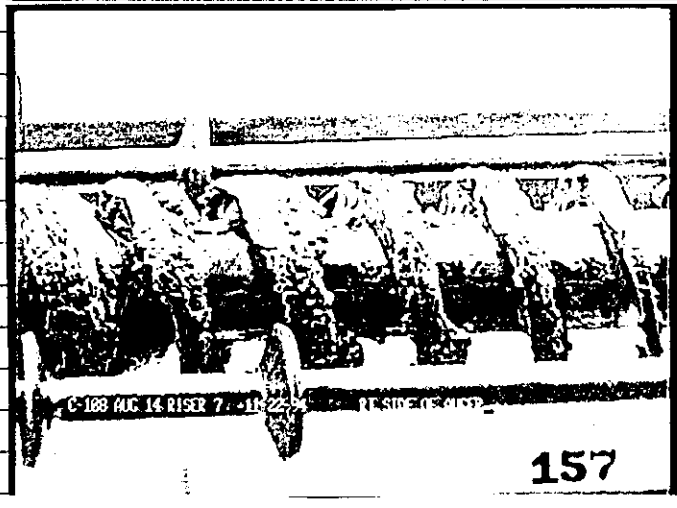
C-108 AUGER #14 RISER 7 11/22/94

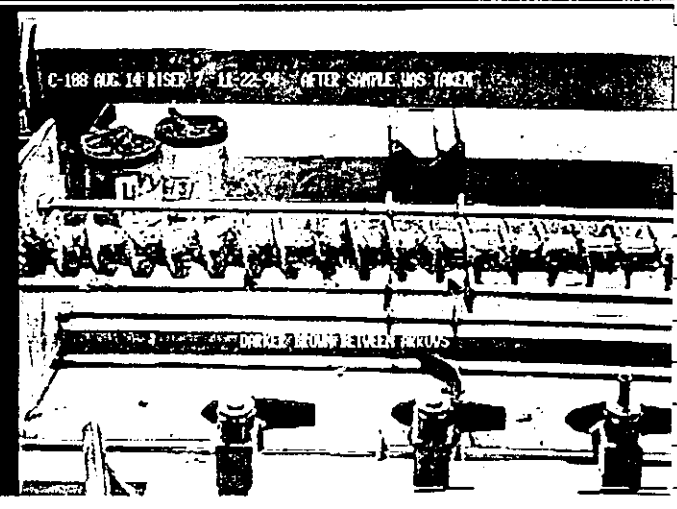












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12/7/94 TANK C-108 Composite INFORMATION

(#1) 10" Auger (94-AUG-012) - Lab i.d. S94T000205
Riser #7 PERFORMING THE ARCHIVE AND COMPOSITING ON THE 10" AUGER THAT WAS extruded on 11/22/94. See pages 16 and 17 of this log book.

J6158
QTR SEG A1
S94 000287
~29 grams of material
125 mL jar size
(Group #17 in labcore)
Flutes 1-2

→ ARCHIVE jar (7034)
#7034 (40mL VIAL size)
Weighed 13.28 grams from
Jar #6158 to J#7034
For ARCHIVE

ID VIAL # 7034

12/07/94 11:04:27
ID 7034
13.285 g

J6159
QTR SEG A2
S94T000293
~66.6 gram available
Flutes 3-9

→ #7037 (40 mL - vial size)
Weighed 12.48 grams from
jar # 6159 to Vial # 7034
For ARCHIVE.

ID 7037

12/07/94 11:19:01
ID 7037
12.475 g

Add the remaining contents of jar # 6158 (125mL jar) to contents in jar 6159 (125mL jar size) to create the $A_1 A_2$ Half segment. Homogenized material - composite - for ~5 minutes.

NOTE: JAR 6159 (125mL jar size) Now contains the composited half segment material. Pdox dbase will be updated to reflect the change in jar contents.

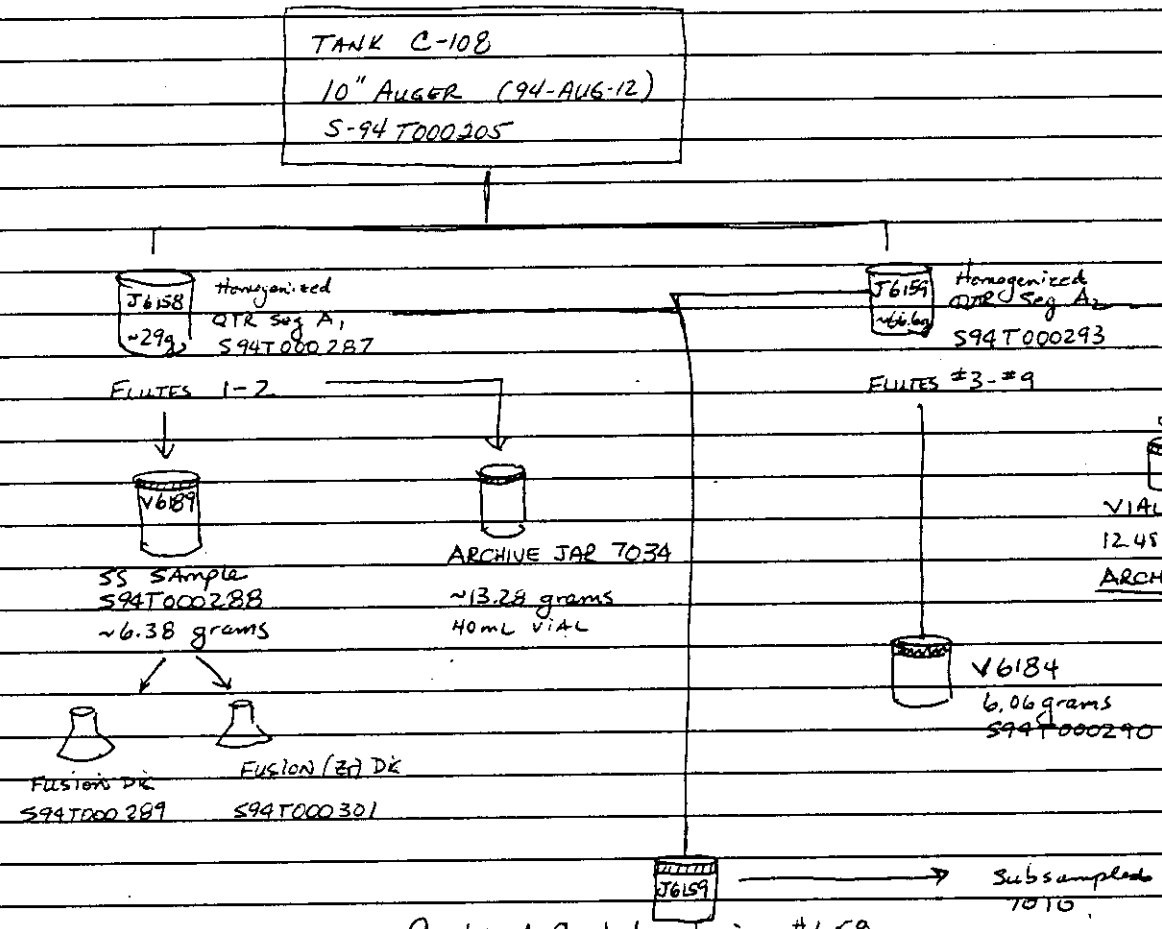
Subsampled 4.83 grams of composite material out of jar # 6159 to Vial # 7010. Vial #7010 will be submitted to lab for analysis. Vial # 7010 contains the Laboratory portion of the Half Segment $A_1 A_2$.

ID Vial i.d: 7010

12/07/94 11:42:05
ID 7010
4.835 g

Keith Fuller 12/7/94

12/7/94



Combined Contents of jar #6158 into J6159.

Jar # 6159 - Contains 9 grams of A_1
- Contains 48.1 grams of A_2
57.1 grams of total Composite

15.8 % of A_1
84.2 % of A_2 } Auger #12 (10" Auger) Composite

12/7/94 C-108 Composite Information

- 20" Auger (94-AUG-014) ; Lab # S94T000206
- Riser #1 ; labcow group # 17.

- Jar # 6132 Quarter Segment B (S94T000294)
- Net weight of jar # 6132 = 358.1 grams
- Subsampling for ARCHIVE into 40mL vial # 7038
- Orginal weight of vial # 7038 = 33.8 grams (empty)

12/8/94 Continuation of C-108 Composite of 20" Auger

12:55pm VIAL 7038 (40mL) VIAL - ARCHIVE OF QTR SEG B (S94T000294)
- FLUTES #14 - #19

Final Weight of 7038	47.60	grams
initial Weight of 7038	33.80	grams
Net Weight of material	13.80	grams ARCHIVE

* JAR # 6133 QTR SEGMENT C (S94T000295). FLUTE # 3 - # 13
- Subsampling JAR # 6133 into 40mL vial 7039.

Initial weight of JAR # 6133 - 421.04 grams

VIAL # 7039	Final weight	53.03	grams
	initial weight	33.68	grams
	net weight	20.35	grams ARCHIVE

Final weight of JAR # 6133 - 397.81 grams (after Archive Subsample)

Initial weight of JAR # 6132 - 335.66 grams (Before compositing)

Compositing jars #6132 and #6133. JAR #6132 will be poured into jar # 6133 to form the C-108 HALF Seg B.C. composite.

JAR # 6132 Final weight	335.66 grams	Jar # 6133 Final	486.87 g
JAR # 6132 initial weight	243.25 grams	JAR # 6133 initial	213.43 g
net weight of sample Added to vial # 6133	92.41 grams	net weight of Material in Jar	273.44 g

* 6133 tare weight = 213.43 grams

Keith Fuller

12/8/94 27
12/9/94

C-108 COMPOSITE

BALANCE CHECK WT. 20g = 19.992g
500g = 499.835g

C-108 COMP. JAR 6133 WT. = 486.146g (START)

HALF SEG BC SAMPLE FROM #6133.
VIAL 6343 WT. TARE = 26.586g
6343 WT. GROSS = 31.414g
6343 WT. NET = 4.828g

C-108 COMP. JAR 6159 WT. = 187.934g (START)

C-108 COMP. FROM 6133 & 6159 COMBINE MATERIAL TOTAL.
JAR 6130 TARE WT. = 221.875g
JAR 6130 GROSS WT. = 353.536g

SAMPLE REMOVED FROM JAR 6159 WT. = 29.990g OF MATL
" " " JAR 6133 WT. = 101.729g OF MATL

JAR AFTER MATERIAL WAS REMOVED.
GROSS JAR 6159 WT. = 156.893g
GROSS JAR 6133 WT. = 377.163g
GROSS JAR 6130 WT. = 346.499g

VIAL WITH COMPOSITE OF C-108 WT. 6344 TARE = 26.289g
WT. 6344 GROSS = 31.455
WT. 6344 NET = 5.166

5-295 ~~595~~
594T000334

12/9/94

Dose Readings:

vials	Window open	Window close
7010	400 mrad	75 mr
6343	1.2 R	750 mr
~~6340~~ 6342 AHB 12/9/94	750 mrad	350 mr

Keith Fuller
12/15/94

30

WHC-SD-WM-DP-082, REV. 1

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number 200W-08 TF (2) Sample Number 94-AUG-015 (3) Supervisor R.J. PRAZNIK

(4) Tank C108 (5) Riser 4 (6) Cask Serial Number 1009C

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<.5 mr/hr	<.5 mr/hr
Side Dose Rate	40 mR/hr	45 mr/hr
Bottom Dose Rate	50 mR/hr	50 mr/hr
Smearable Contamination	<20 (Alpha)	<20 (Alpha)
	<1000 (Beta-Gamma)	<1K (Beta-Gamma)
RCT*	K.J. Vanslyck (Signature)	[signature] (Signature)

(8) Shipment Description	
A. Work Package Number	ES-94-01152
B. Cask Seal Number	2318
C. Date and Time Sample Removed from Tank	12-12-94 / 11:30 AM
D. Expected Liquid Content	15%
E. Expected Solid Content	85%
F. Dose Rate Through Drill String	2 R/hr
G. Expected Sample Length	21"

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

164

(10) Field Comments

SEAL # 2318

(32) Laboratory Comments

COPY

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
C108 R/4	222S	PRAZNIK, RJ [signature]	12-13-94/0930	Sample held in turn awaiting [illegible] 12-14-94
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
DA Krahn D.A. KRAHN		Janie Hensley JANIE HENSLEY	12-14-94 0940	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
Janie Hensley JANIE HENSLEY		Sandra Cobb Sandra Cobb	12-14-94 1025	No Tank No. on Seal
(25) Relinquished By (Sign and PRINT)		(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments

(16) Seal Intact Upon Release?	(29) Seal Intact Upon Receipt?	(30) Seal Data Consistent with this Record?		
☑ Yes ☐ No	☑ Yes ☐ No	Shipment No. ☑ Yes ☐ No	Cask Seal No. ☑ Yes ☐ No	Sample No. ☑ Yes ☐ No

12/15/94

Dec 15 1994

Dec 15, 1994 31

Hot Cell Temp - 77.3°F
% Humidity - 20%

Tank 241-C-108
Extruded Segment Description Sheet

20 grams - 19.991 grams
500 grams - 499.688 grams

Sample 94-AUG-015 Riser 4 Core AUGER Segment

General Description of Sample: ABD 12/15/94
1. Tared Jar 6336 (250) for Liner Liquid, no Liner Liquid observed.
2. 940 Auger extraction. solids: sludge, creamy & crunchy, carmel in color, w/dark shade of Brown; white crust imbedded in sample.

3. Jar 6351 (125 ml) D
4. Jar 6162 (125 ml) C
5. JAR 6356 (125 ml) B
6. JAR 6357 (125 ml) A - Green pellets in sample

Sketch:

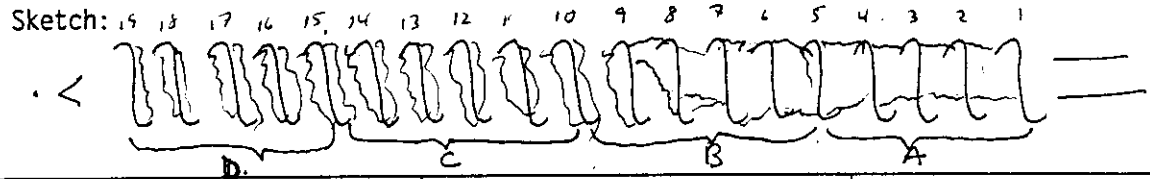


Photo	Sampler Efficiency	Drainable Liquid Density
on page 38	Volume of Sampler NA	Total Weight NA
C-108 R-4 94AUG-015	%Volume of Air	Total Volume
-PROJECT: C-108 | S94T000356	%Volume of Liquid	Density
GROUP: 94000022 | PRESERVATIVE: NONE	%Volume of Solids	Turbidity
CUST ID: C-108 94-Aug-015	Comments: Auger	Comments:
ANALYSIS: DLIQVOL1, DLIQWT01, BST.G/ML, EXTRUD01, FSLDWT01, LLIQWT01, NOTEBOOK, ORGVOL01, PCREVIEW, SLDVOL01, SLDWT-01		

Solids	Liner Liquid ABD 12/15/94	Drainable Liquid
Color carmel in color/Brown	Collection Jar ~~6136~~ 6351	Collection Jar NA
Consistency pasty	Gross Wt. NA	Gross Wt.
Homogeneity Two distinct materials	Tare Wt.	tare Wt.
Texture creamy & crunchy	Net Wt.	Net Wt.
Penetrometer N/A	No. Phases	No. Phases

Cognizant Scientist: [signature] 12-15-94

Reviewed By: Keith Fuller

Dec. 15, 1994

1. Video taken of C-108 Auger 15# Riser 4#

2. Sample:
- Sample is pasty and creamy; Carmel in color with a darker shade near the tip of the Auger.
- Saltcake was embedded throughout the sample. Saltcake is white in color ~~to~~ to off white in color; Refer to the saltcake as crust material. RAE 7/12/95
- There was a few green pellets near flutes one and two. this was recovered in JAR # 6357 (125 ml) (D). Not enough to separate and collect.
- The sample length recovered was 21", which was divided into quarters. STARTING AT the tip of the AUGER AND Labling the first quarter as (D) and so forth. The sample that dropped ~~to~~ on the tray WAS collected and put into its perspective JAR.

3. Subsampling:

(D) Flutes (19) through (15): (D) SEG
JAR 6351# (125 ml) ≅ 65.29 grams
RAE 7/12/95 Final wt (192.171 grams) − Initial wt (~~126.886 g~~ 129.886 RAE 7/12/95) = 65.29 grams
ABB 12/15/94

(C) Flutes (~~15~~ 14) through (10): (C) SEG
JAR 6162# (125 ml) ≅ 54.46 grams
Final wt (196.086) − Initial wt (141.622 g) = 54.46 grams

(B) Flutes (~~10~~ 9) through (5): (B) SEG
ABB 12/15/94
JAR 6356# (125 ml) ≅ 70.50 grams
Final wt (198.109 grams) − Initial wt (127.607 grams) ≅ 70.50 grams.

(A) Flutes (4) through (1): (A) SEG
JAR 6357# (125 ml) ≅ 105.27 grams
Final wt (233.818 g) − Initial wt (128.542) ≅ 105.27 grams

4. Sample: Total sample recovered is 295.52 grams.

Dec. 16, 1994

Dec. 15, 1994 33

Hot Cell Temp: 77.8 °F % Humidity: 20%
20 grams — 19.994 grams
500 grams — 499.655 grams

Homogenization and subsampling Information:
① Homogenized sample in JAR 6351# (D-SEG)
- White crust material in sample did not Homogenize, WAS Hard in texture.
- Transferred 6.152 grams from JAR (6351) to Vial # ~~6259~~ (20 ml).
- Final wt vial # - #6259 — 33.440 grams 6259 used 7/12/95
initial wt vial #6259 - -27.288 grams
Sample in vial # 6259 → 6.152 grams
② Homogenized sample in Jar 6162# (C-SEG)
- white crust material did not homogenize.
- Transferred 8.579 grams from Jar 6162# to Vial # 7014 (20 ml).
- Final wt vial # 7014 - 36.145
initial wt vial # 7014 - -27.566
Sample in vial # 7014 → 8.579 grams
③ Homogenized sample in Jar # 6356 (B-SEG)
- white crust material did not homogenize.
- Transferred 7.600 grams from Jar 6356# to Vial # 7015 (20 ml).
- Final wt vial # 7015 - 35.526 grams
initial wt vial # 7015 - 27.926 grams
Sample in vial # 7015 → 7.600 grams
④ Homogenized sample in Jar # 6357 (A-SEG)
- white crust material did not homogenize.
- Transferred 5.381 grams from Jar # 6357 to Vial # 7016 (20 ml)
- Final wt VIAL # 7016 — 33.590 grams
initial wt VIAL # 7016 — -28.209 grams
Sample in vial # 7016 → 5.381 grams

Dec. 16, 1994

AUGER 15 (RISER 4)

34

12-28-94 HOT CELL TEMP 76° HUMIDITY 20%

20g = 19.991

500g = 499.739

WHC-SD-WM-DP-082, REV. 1

1) ARCHIVE OF QUARTER SEGMENT A (AUGER-015)

VIAL 6377 41.307 FINAL g
25.246 INITIAL g
16.061 WT OF SAMPLE

2) ARCHIVE OF QUARTER SEGMENT B

VIAL 6378 40.138 FINAL g
25.144 INITIAL g
14.994 g SAMPLE

J# 6357 initial weight 233.810 grams

* 16.06 grams were removed for ARCHIVE to V# 6377
* 47.39 grams out of jar # 6356 were composited with remaining material in jar # 6357

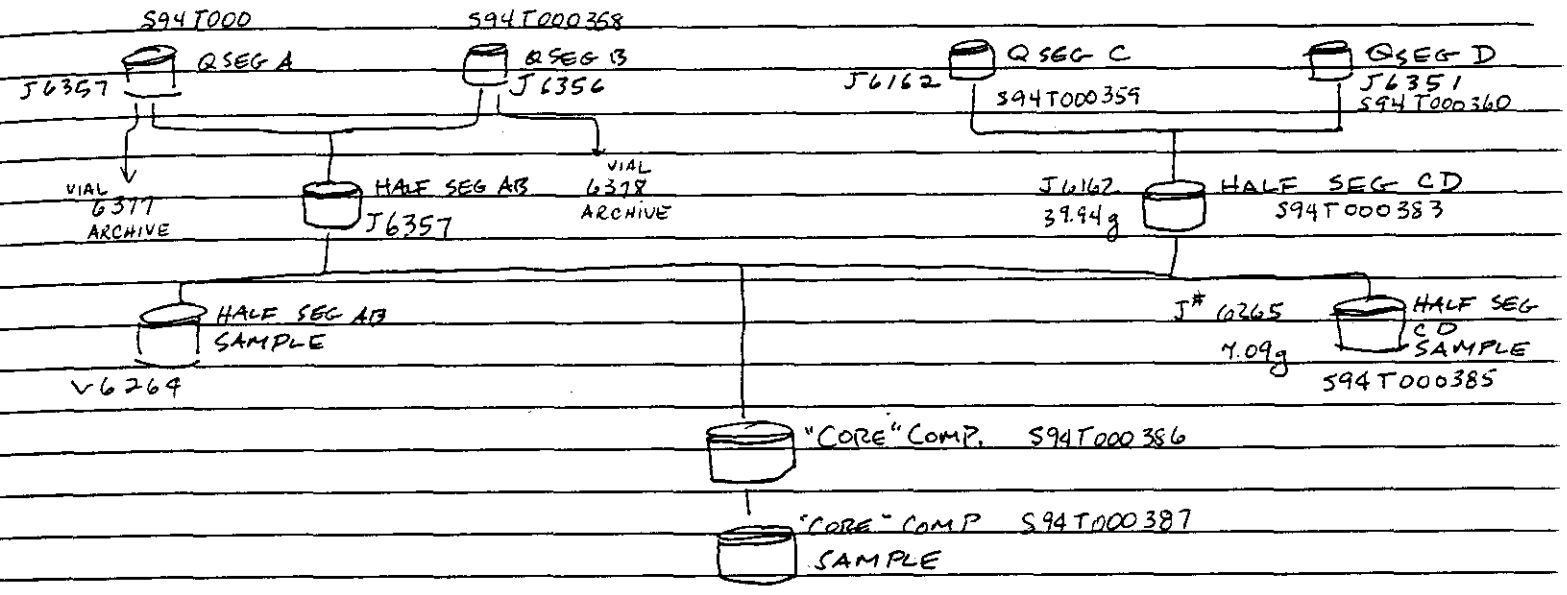
J# 6357 233.810 grams
16.061 grams Archive grams removed V# 6377
217.749 grams total weight of jar 6357

Approximately 217.7 grams total weight
47.3 grams added from J# ~~6357~~ 6356 RKZ 12/28/94
265.0 grams

Actual final weight of J# 6357 is 240.96 grams

Approximately 25 grams lost during subsampling.

12-28-94



HALF SEGMENT AB - tranferred J6356 to J 6357 to build the ½ seg A.B.

Jar# 6357	Final weight	240.96 grams	
	- after combining with J6356		
	- after pulling archive from J6356		
	- after pulling ~~archive~~ sample from 6357 to 6264		
vial ~~J#~~ 6264 Ar2 12-28-94	Final weight	34.132 grams	Sample Analyses for
	initial weight	27.399 grams	HALF Segment AB
	net weight	6.733 grams	
J 6356	FINAL weight	135.723 grams	
	initial weight	198.109 grams	
	net of material removed	62.386 grams	removed from J6356

* 14.99 grams went to ARCHIVE in V# 6378
* 47.39 grams were added to J# 6357

∴ in Jar# 6357 - HALF Segment AB
- 89.21 grams sample from Q Seg A 65.3%
- 47.39 grams sample from Q Seg B 34.7%

136.60 grams total sample weight of HALF SEG AB

QSeg C - ~~J6356~~ RXT 12/28/94 J6162 ARCHIVE

J# 6162 186.408 grams total weight - initial
166.830 grams - final weight
19.6 grams

VIAL # 6379 Archive vial Q Seg C

Final weight 44.552 grams
initial weight 25.46 grams
19.09 grams

* 19.09 grams of material transferred from J#6162 to VIAL #6379 for ARCHIVE

Q Seg D - J 6351 188.24 grams initial weight
162.51 grams initial weight
20.73 grams net transferred

VIAL # 6380 ARCHIVE VIAL Q Seg D

Final weight 45.77 grams
initial weight 25.42 grams
20.35 grams ARCHIVE

* Transferred 20.35 grams from QSeg D J# 6351 to VIAL #6380 FOR ARCHIVE

HALF Segment CD information:
(1) Transferred Q Seg D J# 6351 to Q Seg C J# 6162 to build HALF SEG CD.
RXT 7/12/95
FINAL WEIGHT of J# 6162 188.69 grams
initial weight of J 6162 166.83 grams
net weight of sample added 21.86 grams

J# 6351 final wt 138.47 grams
initial wt 162.51 grams
24.04 grams
Approximate 3 gram loss of sample

Keith Fuller 12/29/94

J # 6162 initial 141.62 grams
Final 166.83 grams
25.21 grams used to combine
↳ available to combine with Q Seg D

Q Seg CD consists of:

21.86 grams of Q Seg D
25.21 grams of Q Seg C
47.07 grams TOTAL OF Q Seg CD

53.5 % Q Seg C
46.5 % Q Seg D

12/29/94
RK Fuller

~~HALF SEG AB & HALF SEG CD CORE~~
~~Composite~~ RKF 12/29/94

* HALF Q Seg CD - subsample for Laboratory analyses RKF 12/29/94
- subsampled out of vial # 6162 to # 6265
ANALYSES JAR/VIAL #6265 (20mL VIAL)

Final weight of V #6265 34.59 grams
initial weight of V #6265 27.50 grams
net weight 7.09 grams V # 6265

- # 6162 transferred material out of vial.

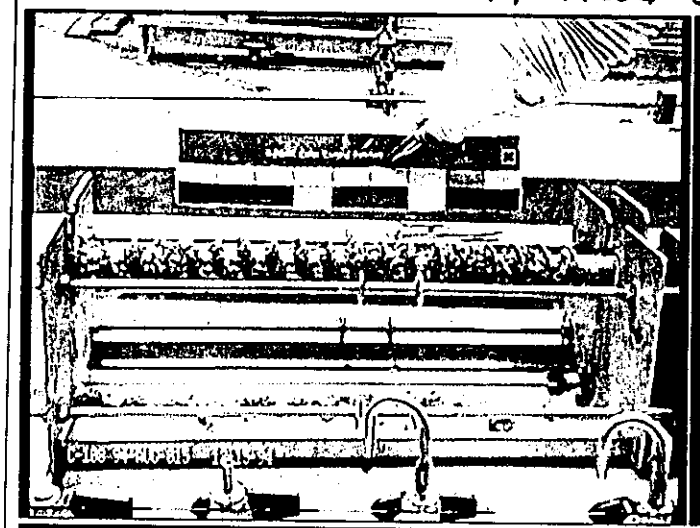
initial weight 188.69 grams
final weight 181.56 grams
7.13 grams

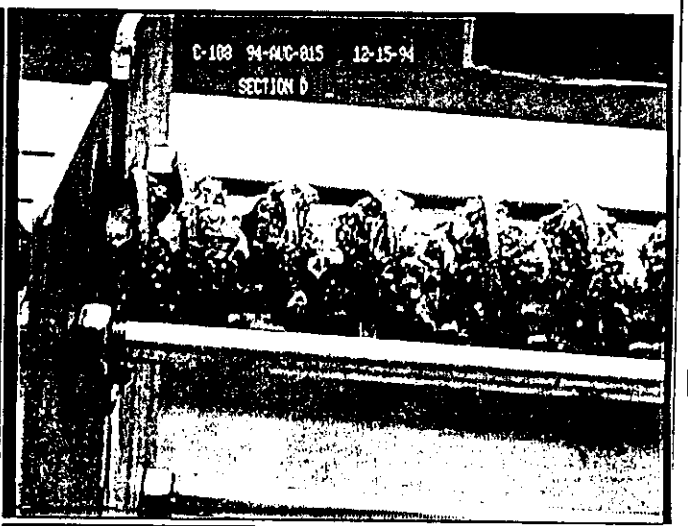
Q Seg CD for mass available:

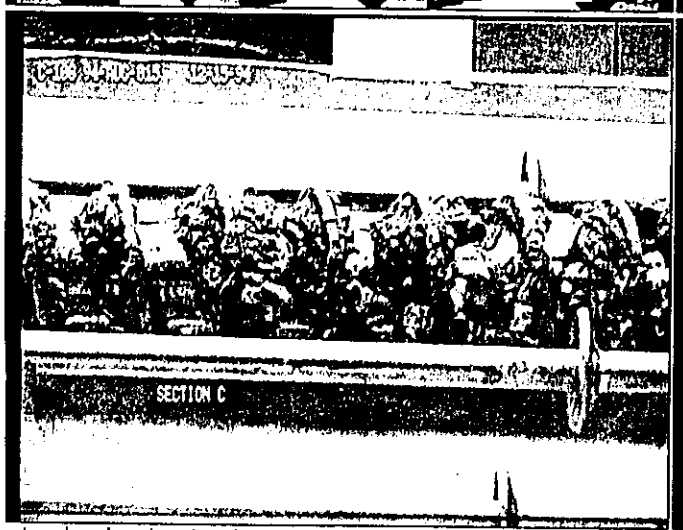
final weight 181.56 grams
initial weight 141.62 grams
39.94 grams

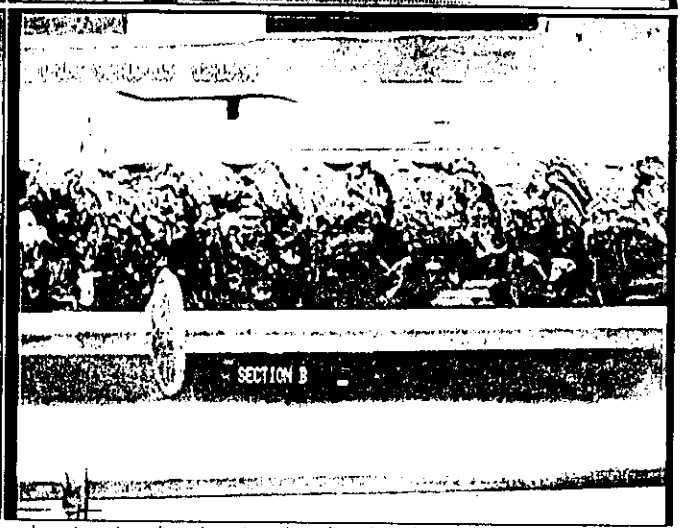
Keith Fuller 12/29/94

C-108 94-AUG-015









12/29/94

WHC-SD-WM-DP-082, REV. 1

C-108 94-AUG-015

172

Floyd Fuller 12/29/94

HALE SEG AB & CD Composite 12/29/94

QSeg A	105.27 grams	35.62 %	% of Each Q Seg
Q Seg B	70.50 grams	23.85 %	
Q Seg C	54.46 grams	18.42 %	
Q Seg D	65.29 grams	22.09 %	
Total	295.52 grams		

HALE RKT 12/29/94
~~Q~~ Seg AB = 59.47 %
HALE ~~Q~~ Seg CD = 40.52 %

Balance check: 20 = 19.98 grams
500 = 499.69 grams

6357 125mL JAR Size

Q Seg AB

initial wt: 240.79 grams
final wt: ~~184.93~~ grams RKT 12/29/94
net ~~55.86~~ grams RKT 12/29/94

final wt: 204.42
net 36.37 grams

6162 125mL JAR Size

Q Seg CD

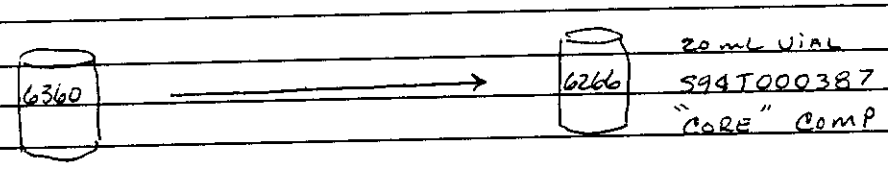
initial wt: 181.37 grams
final wt: 160.14 grams
net 21.23 grams

6360 "core" comp
594T000386
125mL

transfer #1	initial wt	128.22	grams	EMPTY VIAL
6162 → 6360	final wt	149.09	grams	
	net wt	20.87	grams	
transfer #2	initial wt	149.09	grams	
6357 → 6360	final wt	184.93	grams	
		35.84	grams	
	TOTAL	56.71	grams total	

40

* Transfer from 6360 → 6266 (20 mL vial) for laboratory analyses



"Core" Comp
594T000386
J 6360

initial wt	184.93	g
final wt	174.05	g
net	10.88	g
material removed		

→

V # 6266

initial wt	27.40	g
final wt	38.16	g
net	10.76	g
material added		

VIAL #6266 for laboratory analyses = 10.76 grams

SHIPMENT TO PNL
AVG Composite.

February 17, 1995 41
Arlee Bendly

Hot cell temp - 77.2°F
% Humidity - 25%

20 grams - 20.001 grams
500 grams - 499.93 grams

JAR# 6130 (256 ml)
Initial wt 343.181 gr
final wt 267.988 gr
75.193 grams

C108 AVG Riser #7
Composite on 12-9-94.

Sample: Brown in color.
chalk like in texture.
Note: lost 1.82 grams during transfer.

JAR# 6612 (70 ml) (PNL)
Initial wt 73.25 gr (70 ml)
final wt 146.62 gr

S95T000179

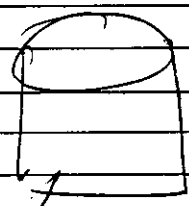
73.27 grams of sample in JAR# 6612
(To Be shipped to PNL).

WHC-SD-WM-DP-082, REV. 1

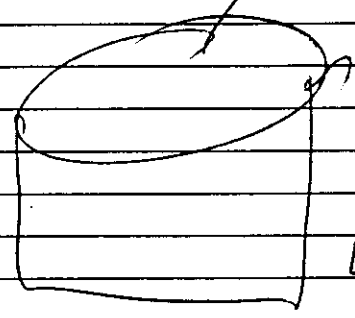
42 Composite + Sub Sampling 6/19/95

Tank C-108

Lab Core # ~~S94T000333~~
S94T000333
RAE 7/12/95



Jar # 6130 250 ml
initial WT 262.45 ~~g~~ g RAE 7/12/95
Final WT 254.16 g
Net WT 8.29 g



Jar # 7100 (20ml)
Initial WT 27.3 g
Final WT ~~32.85~~ g 32.85 RAE 7/12/95
Net WT 5.55 g

Lab Core # S94T000334

Additional mat. for S94T000334 which was exhausted

Not ~~Homogenized~~ Homogenized RAE 7/12/95 sample for 10 min with wooden spatula

WHC-SD-WM-DP-082, REV. 1

Alan B Campbell 6/23/95

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SAMPLE HANDLING

LABCORE Data Entry Template for Worklist# 188

Analyst: EC **Instrument:** BA002 **Method:** LO-160-103/A6

Worklist Comment: C-108 94-AUG-012 Riser 7

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.92	N/A	
3	SAMPLE	S94T000205	0		DLIQVOL1	SOLID	N/A	⊖		mL
4	SAMPLE	S94T000205	0		DLIQWT01	SOLID	N/A	⊖		g
5	SAMPLE	S94T000205	0		EST.G/ML	SOLID	N/A	⊖		g/mL
6	SAMPLE	S94T000205	0		EXTRUD01	SOLID	N/A	Complete		
7	SAMPLE	S94T000205	0		LLIQWT01	SOLID	N/A	⊖		g
8	SAMPLE	S94T000205	0		NOTEBOOK	SOLID	N/A	WHC-N-743		
9	SAMPLE	S94T000205	0		SLDVOL01	SOLID	N/A	75		mL
10	SAMPLE	S94T000205	0		SLDWT-01	SOLID	N/A	95		g

Final page for worklist # 188

Analyst Signature **Date** 11-29-94

SLDVOL 01 – Estimated (Visually)

Data Entry Comments:
Ready for chemist review.
Work list posted by RKFuller on 11/30/94.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 189

Analyst: EC **Instrument:** BA002 **Method:** LO-160-103/A6

..orklist Comment: C-108 94-AUG-014 Riser 7

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.92	N/A	
3	SAMPLE	S94T000206	0		DLIQVOL1	SOLID	N/A	<5		mL
4	SAMPLE	S94T000206	0		DLIQWT01	SOLID	N/A			g
5	SAMPLE	S94T000206	0		EST.G/ML	SOLID	N/A	0		g/mL
6	SAMPLE	S94T000206	0		EXTRUD01	SOLID	N/A	Complete		
7	SAMPLE	S94T000206	0		LLIQWT01	SOLID	N/A	0		g
8	SAMPLE	S94T000206	0		NOTEBOOK	SOLID	N/A	WHC-N-743		
9	SAMPLE	S94T000206	0		SLDVOL01	SOLID	N/A	~~300~~ 300 LAD 12-1-94		mL
10	SAMPLE	S94T000206	0		SLDWT-01	SOLID	N/A	349		g

Final page for worklist # 189

Analyst Signature

Date 11-~~30~~ 30-94 LAD 12-1-94

Data Entry Comments: Ready for chemist review.
Worklist posted on 11/30/94 by RK Fuller

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 261

'OA

Analyst: EC **Instrument:** BA002 **Method:** LO-160-103 A-6

Worklist Comment: C-108 94-AUG-015 Extrusion

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.68	N/A	
3	SAMPLE	S94T000356	0		DLIQVOL1	SOLID	N/A	0		mL
4	SAMPLE	S94T000356	0		DLIQWT01	SOLID	N/A	0		g
5	SAMPLE	S94T000356	0		EST.G/ML	SOLID	N/A	0		g/mL
6	SAMPLE	S94T000356	0		EXTRUD01	SOLID	N/A	complete		
7	SAMPLE	S94T000356	0		LLIQWT01	SOLID	N/A	0		g
8	SAMPLE	S94T000356	0		NOTEBOOK	SOLID	N/A	WAC-N-743		
9	SAMPLE	S94T000356	0		SLDVOL01	SOLID	N/A	300		mL
10	SAMPLE	S94T000356	0		SLDWT-01	SOLID	N/A	295		g
11	SAMPLE	S94T000356	0		ORGVOL01	SOLID	N/A	0		mL
12	SAMPLE	S94T000356	0		FSLDWT01	SOLID	N/A	0		g

Final page for worklist # 261

EC

Analyst Signature

12-16-94

Date

12-16-94

Data Entry Comments:

Worklist Reviewed by [signature] Dec 16, 1994

Units shown for QC (SPK) may not reflect the actual units.

1 QA

LABCORE Data Entry Template for Worklist# 257

Analyst: EC **Instrument:** BA002 WEST = **Method:** LO-160-103 A-6

Worklist Comment: C-108 94-AUG-012 Organic Volume and Filterable Solids

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01			EXTRUD01	SOLID	20	19.995g	N/A	
2	INSTCHK02			EXTRUD01	SOLID	500	499.779g	N/A	
3	SAMPLE	S94T000205	0	ORGVOL01	SOLID	N/A	0		mL
4	SAMPLE	S94T000205	0	FSLDWT01	SOLID	N/A	0		g

Final page for worklist # 257

[signature]
Analyst Signature

12-21-94
Date

ID 20

12/21/94 10:02:17
ID 20
19.995 g

WHC-SD-WM-DP-082, REV. 1

ID 500

12/21/94 10:02:40
ID 500
499.779 g

Data Entry Comments:

Worklist Reviewed by RK Fuller 12/22/94

Units shown for QC (SPK) may not reflect the actual units.

QA

LABCORE Data Entry Template for Worklist# 299

Analyst: EC **Instrument:** BA000 _____ **Method:** LO-160-103 A-6

Worklist Comment: C-108 94-AUG-014

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.994	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.782	N/A	
3	SAMPLE	S94T000206	0		ORGVOL01	SOLID	N/A	⊖		mL
4	SAMPLE	S94T000206	0		FSLDWT01	SOLID	N/A	⊖		g

Final page for worklist # 299

Analyst Signature

12-21-94
Date

12/21/94 10:03:12
ID 20
19.994 g

ID 500

12/21/94 10:03:31
ID 500

499.782 g

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:

Worklist reviewed by RK Fuller 12/22/94

Units shown for QC (SPK) may not reflect the actual units.

C108

WHC-SD-WM-DP-082, REV. 1

worklistrpt Version 2.0 02/21/95
05/02/95 11:07

LABCORE Data Entry Template for Worklist# 1291

Analyst: ABB **Instrument:** BA000 _____ **Book #** N/A

Method: LO-160-103 Rev/Mod A-2

Worklist Comment: Shipment Samples

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	26	19.99	N/A	
		2	INSTCHK02				EXTRUD01	SOLID	500	499.70	N/A	
94000017	C-108	3	SAMPLE	S95T000179	0	P	6130 LANL SHIP-PNL 6612	SOLID	N/A	73.4		
94000012	C-103	4	SAMPLE	S95T000166	0	P	6367 SHIP-PNL 6521	SOLID	N/A	10.60		
95000017	TY-104	5	SAMPLE	S95T000244	0	P	6571 6478 LANL SHIP-PNL 7094	SOLID	N/A	71.94		
95000020	C-107	6	SAMPLE	S95T000860	0	P	6772 LANL SHIP-PNL 7150	SOLID	N/A	69.36		
95000023	C-107	7	SAMPLE	S95T000862	0	P	6773 LANL SHIP-PNL 7149	SOLID	N/A	71.77		
94000020	SY-103	8	SAMPLE	S95T000740	0	P	Seg Comp SHIP-PNL 7095	LIQUID	N/A	132.7		
94000012	C-103	9	SAMPLE	S94T000201	0	P	6539 SHIP-PNL 6770	LIQUID	N/A	34.52		
94000012	C-103	10	SAMPLE	S95T000050	0	P	6539 SHIP-PNL 6771	LIQUID	N/A	30.44		

Final page for worklist # 1291

[signature] 5-2-95
Analyst Signature **Date**

[signature] 5-2-95
Analyst Signature **Date**

Data Entry Comments:

reviewed by [signature] 5-3-95

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.

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SAMPLE PREPARATIONS

LABCORE Data Entry Template for Worklist# 640

Analyst: EC **Instrument:** BA000 **Book #** _____

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

Worklist Comment: C-103 Homogenization and Subsampling

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01				EXTRUD01	SOLID	20.00	19.997	N/A	
		2 INSTCHK02				EXTRUD01	SOLID	500	499.958	N/A	
94000012	C-103	3 SAMPLE	S95T000178	0		HOMGNZ01	SOLID	N/A	Complete		
95000013	C-103	4 SAMPLE	S95T000215	0		HOMGNZ01	SOLID	N/A	Complete		
95000013	C-103	5 SAMPLE	S95T000216	0		HOMGNZ01	SOLID	N/A	Complete		

Final page for worklist # 640

[signature] 3/6/95
Analyst Signature **Date**

[signature] 3-8-95
Analyst Signature **Date**

S95T000178 - J6539 (C103 C63 CORE COMPOSITE)

S95T000215 - C103 SEG3UH V6564

S95T000216 - C103 SEG4 UH V6558

Reviewed by [signature] on 3-14-95

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# 300

Analyst: SC Instrument: BA000 Method: LO-160-103 A-6

Worklist Comment: C-108 94-AUG-015 Homogenization

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.986 g	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.775 g	N/A	
3	SAMPLE	S94T000357	0		HOMGNZ01	SOLID	N/A	105.27		
4	SAMPLE	S94T000358	0		HOMGNZ01	SOLID	N/A	70.50		
5	SAMPLE	S94T000359	0		HOMGNZ01	SOLID	N/A	54.46		
6	SAMPLE	S94T000360	0		HOMGNZ01	SOLID	N/A	65.29		

Final page for worklist # 300

Analyst Signature

12-21-94
Date

WHC-SD-WM-DP-082, REV. 1

ID 20

12/21/94 09:58:03
ID 20
19.986 g

ID 500

12/21/94 09:58:56
ID 500

499.775 g

Data Entry Comments:
Chemist review complete

Units shown for QC (SPK) may not reflect the actual units.

DA

LABCORE Data Entry Template for Worklist# 340

Analyst: RKF **Instrument:** BA000 **Method:** LO-160-103 A-6

Worklist Comment: C-108 Homogenization Test

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	INSTCHK01				EXTRUD01	SOLID	20	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500	499.73	N/A	
3	SAMPLE	S94T000382	0		HOMGNZ01	SOLID	N/A	26.60g		
4	SAMPLE	S94T000383	0		HOMGNZ01	SOLID	N/A			
5	SAMPLE	S94T000386	0		HOMGNZ01	SOLID	N/A			

Final page for worklist # 340

Keith Fuller
Analyst Signature

12/30/94
Date

S94T000382 - C-108 AUG-015 HALF SEG. AB

S94T000383 - C-108 AUG-015 HALF SEG CD

S94T000386 - C-108 AUG-015 "Core" Composite

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments:
Worklist posted 12/30/94 by RKFuller

Units shown for QC (SPK) may not reflect the actual units.

worklistrpt Version 2.0 02/21/95
03/02/95 09:48

LABCORE Data Entry Template for Worklist# 642

Analyst: SC **Instrument:** BA000 _____ **Book #** _____

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

Worklist Comment: C-103 and BY-106 subsampling

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	20.00	~~19.942~~ 19.994 RA 3/6/95	N/A	
		2	INSTCHK02				EXTRUD01	SOLID	500	~~499.908~~ 500.00 RA ~~499.750~~	N/A	
94000012	C-103	3	SAMPLE	S95T000068	0		SUBSMPL1	LIQUID	N/A	6.180		mL
94000012	C-103	4	SAMPLE	S95T000060	0		SUBSMPL1	LIQUID	N/A	2.001		mL
95000013	C-103	5	SAMPLE	S95T000209	0		SUBSMPL1	LIQUID	N/A	8.000		mL
95000013	C-103	6	SAMPLE	S95T000210	0		SUBSMPL1	LIQUID	N/A	41.690		mL
95000013	C-103	7	SAMPLE	S95T000211	0		SUBSMPL1	LIQUID	N/A	41.730		mL
95000013	C-103	8	SAMPLE	S95T000213	0		SUBSMPL1	LIQUID	N/A	41.610		mL
95000013	C-103	9	SAMPLE	S95T000207	0		SUBSMPL1	LIQUID	N/A	36.090		mL
94000012	C-103	10	SAMPLE	S95T000178	0		SUBSMPL1	SOLID	N/A	301.690		g
95000007	BY-106	11	SAMPLE	S95T000108	0		SUBSMPL1	LIQUID	N/A	41.00		mL

Final page for worklist # 642

R. Hunter 3/6/95
Analyst Signature **Date**

3-14-95
Analyst Signature **Date**

3) C-103 Seg 4 J6370 DL
4) C-103 Seg 2 J6371 DL
5) C-103 Seg 1 J6373
6) C-103 Seg 3 J6541
7) C-103 Seg 3 J6543
8) C-103 Seg 4 J6546
9) C-103 FblK J6540
10) C-103 Core Composite J6539
11) BY-106 Seg 12 J6143

Data Entry Comments:

Reviewed by [illegible] March 14, 1995

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# 1290

Analyst: ABB **Instrument:** BA000 **Book #** N/A

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

Worklist Comment: SY-103 and C-108 Subsample

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	20	20	N/A	
		2	INSTCHK02				EXTRUD01	SOLID	500	499.98	N/A	
94000020	SY-103	3	SAMPLE	S94T000265	0		SUBSMPL1 6950	SOLID	N/A	4.54		g
94000020	SY-103	4	SAMPLE	S94T000273	0		SUBSMPL1 6949	SOLID	N/A	5.64		g
94000020	SY-103	5	SAMPLE	S94T000275	0		SUBSMPL1 6187	SOLID	N/A	8.70		g
94000020	SY-103	6	SAMPLE	S94T000274	0		SUBSMPL1 6183	SOLID	N/A	6.86		g
94000017	C-108	7	SAMPLE	S94T000334	0		SUBSMPL1 6344	SOLID	N/A	5.17		g

Final page for worklist # 1290

Analyst Signature 5-2-95 Date

Analyst Signature 5-2-95 Date

Data Entry Comments:

reviewed 5/2/95

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.

19A

Batch # 3703

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K221, K222, K222 DUP.	Customer ID: BLANK, C6151, C6151
Analysis: FUSION	Sample Prep: DIGECT

Instrument:	S.N F04495	Procedure/ Rev:	LA-549-141/C-0
Technologist:	R.D. HALE	Date:	6/17/94
Starting Time:	10:00	Temperature	450°C
Ending Time:	14:00	Chemist:	B. GRIFFIN

Comments: K221 FUSION COMPLETE CLEAR
K222 FUSION COMPLETE YELLOW TINT
K222 DUP. FUSION COMPLETE BROWN TINT

	Description	Lab ID		Description	Lab ID
1	Blank	K24-6600	11		
2	Sample	K222-6800	12		
3	Sample	K222-6800	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard

ANALYTICAL BATCH SUMMARY SHEET

RFRUN-0 S.P.C-108

METHOD:	DATE START:	TIME START:
LA-549-141/C-0	6/17/94	10:00
PREPARED BY:	**DATE COMPLETE:**	**TIME COMPLETE:**
R.D. Hale	6/17/94	14:00

SPL NAME	SPL ID	g/L or DF RESULT	g or mL SAMPLE SIZE	mL FINAL VOL.	STD, SPL, DUP, SPK REMARKS
Blank	K221-6600	—	—	100 mL	100 mL TOTAL VOL.
Sample	K222-6700	1.9890	.4960	250 mL	.4960 g → 250 mL
Sample	K222-6800	2.2172	.5543	250 mL	.5543 g → 250 mL

Bertrand Griffin II
6-17-94

NARRATIVE: [X] NO SPECIAL PROBLEMS/METHOD VARIATIONS IN THIS BATCH
LIST SPECIFIC PROBLEMS/VARATIONS FOR THIS BATCH:

FUSION ANALYSIS

Batch 3703

Serial No.	Sample Point	Date	Time Issued	Priority
K 221.-6600	C-108	6-15-94	13: 5	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
FUSION	LA-549-141	G/L	N4C3G	0

Sample Size	Customer ID
? 100mL TOTAL VOL.	BLANK

Remarks, Calculations, Results

use Zr crucibles

Completed

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
R.D. Hale				
Hrs	Hrs	Hrs	Hrs	Hrs
		Ruketa		

Date	Time Completed	Lab Unit Mgr	
6/17/94	14:00	6-17-94 Bertrand Giff II	[signature] 6/2

54-6800-064 (R-10-83)

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6700	C-108	6-15-94	13: 6	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
FUSION	LA-549-141	G/L	N4C3G	0

Sample Size	Customer ID
? .4960g → 250mL	C61S1

Remarks, Calculations, Results

JAR ID#
GRAMS SAMPLE .4960g

VOLUME ON COMPLETION 250mL

$\frac{.4960g}{250mL} = 1.9840 g/L$

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
R.D. Hale				
Hrs	Hrs	Hrs	Hrs	Hrs
		Ruketa		

Date	Time Completed	Lab Unit Mgr	
6/17/94	14:00	6-17-94 Bertrand Giff II	[signature] 6/21

54-6800-064 (R-10-83)

FUSION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-6800	C-108	6-15-94	13: 6	20

Determination	Method Standard	Result Units	Charge Code	Reruns
FUSION	LA-549-141	G/L	N4C3G	0

Sample Size	Customer ID
? .5543g → 250mL	C61S1

Remarks, Calculations, Results:

DUPLICATE SAMPLE
JAR ID#
GRAMS SAMPLE .5543g

VOLUME ON COMPLETION 250mL

$\frac{.5543g}{.250L} = \cancel{2.2172}$ 2.2172 g/L
BJ II 6-17-94

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
R.D. Hale				
Hrs	Hrs	Hrs	Hrs	Hrs
		Rakita 6-17-94		

Date	Time Completed	Lab Unit Mgr
6/17/94	14:00	Bertrand Griffin II

54-66[illegible] (R-10-83)

LABCORE Data Entry Template for Worklist# 196

Analyst: SRM **Instrument:** FUS01 SN F04495 **Method:** LA-549-141 / C-2

Worklist Comment: C-108 FUSION DIGEST

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250mL	250mL	N/A	g/L
2	SAMPLE	S94T000289 (88)	0	F	FUSION01	SOLID	N/A	1.9992		g/L
3	DUP	S94T000289	0	F	FUSION01	SOLID	1.9992	2.0216	N/A	g/L
4	SAMPLE	S94T000296 (90)	0	F	FUSION01	SOLID	N/A	2.0936		g/L
5	DUP	S94T000296	0	F	FUSION01	SOLID	2.0936	2.0960	N/A	g/L

Final page for worklist # 196

Sonja Morris
Analyst Signature

12-01-94
Date
12-02-94

Sample 289 $\frac{.4998g}{.250mL} = 1.9992 g/L$

DUP $\frac{.5054g}{.250mL} = 2.0216 g/L$

Sample 296 $\frac{.5234g}{.250mL} = 2.0936 g/L$

DUP $\frac{.5240g}{.250mL} = 2.0960 g/L$

Data Entry Comments:

Barbara [illegible] II 7-14-95

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 535

Analyst: [signature] **Instrument:** FUS01 AL11066 **Method:** LA-549-141 C-2

Worklist Comment: C-108 FUSION - 288->289, 290->296 RERUN 1 HP Julia Martin 2mr/hr @C

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250 mL	250 mL	N/A	g/L
2	SAMPLE	S94T000289	1	F	FUSION01	SOLID	N/A	1.9492 g/l		g/L
3	DUP	S94T000289	1	F	FUSION01	SOLID	1.9492 g/l	1.9320 g/l	N/A	g/L
4	SAMPLE	S94T000296	1	F	FUSION01	SOLID	N/A	1.8780 g/l		g/L
5	DUP	S94T000296	1	F	FUSION01	SOLID	1.8780 g/l	1.8532 g/l	N/A	g/L

Final page for worklist # 535

[signature] 2/9/95

Analyst Signature **Date**

289 $\frac{.4873\,g}{.250\,mL} = 1.9492\,g/l$

30mL HCl con

289 Dup $\frac{.4830\,g}{.250\,mL} = 1.9320\,g/l$

30mL con HCl

296 $\frac{.4695\,g}{.250\,mL} = 1.8780\,g/l$

30 mL con HCl

296 Dup $\frac{.4633\,g}{.250\,mL} = 1.8532\,g/l$

30 mL con HCl

Data Entry Comments: Procedure went fine.

[signature] 2-10-95

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 197

Analyst: EAL **Instrument:** FUS01 SNF04495 **Method:** LA-549-141-C/2

Worklist Comment: C-108 FUSION DIGEST from [illegible]

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250ml	250ml	N/A	g/L
2	SAMPLE	S94T000297 91	0	F	FUSION01	SOLID	N/A	1.8164		g/L
3	DUP	S94T000297	0	F	FUSION01	SOLID	1.8164	1.8164	N/A	g/L
4	SAMPLE	S94T000298 92	0	F	FUSION01	SOLID	N/A	1.8528		g/L
5	DUP	S94T000298	0	F	FUSION01	SOLID	1.8528	1.8700	N/A	g/L

Final page for worklist # 197

Analyst Signature

Date 12/01/94

12/2/94

SAM 97

$\frac{.4541g}{.250l} = 1.8164\ g/l$

SAM 97 DUP

$\frac{.4541g}{.250l} = 1.8164\ g/l$

SAM 98

$\frac{.4632g}{.250l} = 1.8528\ g/l$

SAM DUP 98

$\frac{.4675g}{.250l} = 1.8700\ g/l$

Data Entry Comments:

[illegible] II 7-14-95

Units shown for QC (SPK) may not reflect the actual units.

WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 550

Analyst: EAI **Instrument:** FUS01 11066 **Method:** LA-549-141 C-2

Worklist Comment: C-108 FUSION DIGEST - 291->297, 292->298 RERUN 1 23 mt/hr Julie Martin

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250	250	N/A	g/L
2	SAMPLE	S94T000297	1	F	FUSION01	SOLID	N/A	2.0528		g/L
3	DUP	S94T000297	1	F	FUSION01	SOLID	2.0528	2.0728	N/A	g/L
4	SAMPLE	S94T000298	1	F	FUSION01	SOLID	N/A	1.8008		g/L
5	DUP	S94T000298	1	F	FUSION01	SOLID	1.8008	1.8516	N/A	g/L

Final page for worklist # 550

Analyst Signature

Date 02/10/95

2-13-95

35 ml

297 $\frac{.5132}{.250} = 2.0528$ g/l

40 ml

298 $\frac{.4502}{.250} = 1.8008$ g/l

35 ml

297 DUP $\frac{.5182}{.250} = 2.0728$ g/l

40 ml

298 DUP $\frac{.4629}{.250} = 1.8516$ g/l

Data Entry Comments:

Bertland Griffin II 2-13-95

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 259

Analyst: EAL **Instrument:** FUS01 SNF04495 **Method:** LA-549-14 C-2 Chuck Felder 28mr

Worklist Comment: C-108 FUSION DIGEST - 331->335, 332->336, 334->339

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250ml	250ml	N/A	g/L
2	SAMPLE	S94T000335	0	F	FUSION01	SOLID	N/A	1.8792		g/L
3	DUP	S94T000335	0	F	FUSION01	SOLID	1.8792	1.8732	N/A	g/L
4	SAMPLE	S94T000336	0	F	FUSION01	SOLID	N/A	1.8456		g/L
5	DUP	S94T000336	0	F	FUSION01	SOLID	1.8456	1.8760	N/A	g/L
6	SAMPLE	S94T000339	0	F	FUSION01	SOLID	N/A	1.8280		g/L
7	DUP	S94T000339	0	F	FUSION01	SOLID	1.8280	1.8644	N/A	g/L

Final page for worklist # 259

[signature]
Analyst Signature

12/16/94
Date

30ml Con HCL
35 $\frac{.4698}{.250} = 1.8792$ g/l

30ml HCL
35 DUP $\frac{.4683}{.250} = 1.8732$ g/l

80ml Con HCL
36 $\frac{.4614}{.250} = 1.8456$ g/l

80ml Con HC
36 DUP $\frac{.4690}{.250} = 1.8760$ g/l

40ml con HCL
39 $\frac{.4570}{.250} = 1.8280$ g/l

30ml Con HCL
39 DUP $\frac{.4661}{.250} = 1.8644$ g/l

Data Entry Comments: SA S94T000336 had ivory particulates until heated then cleared out. SA: S94T000339 - slightly cloudy. Procedure went okay otherwise.

Units shown for QC (SPK) may not reflect the actual units. Bertrand Griffin II 12-19-94

Page: 1

LABCORE Data Entry Template for Worklist# 358

Analyst: EAL **Instrument:** FUS01 **Method:** LA-549-141 Bob Clements

Worklist Comment: C-108 FUSION DIGEST - 384->399, 385->400, 387->403 C-2 125mt

Seg	Type	Sample#	Rep	AI	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUSION01	SOLID	250	250	N/A	g/L
2	SAMPLE	S94T000399	0	F	FUSION01	SOLID	N/A	1.8420		g/L
3	DUP	S94T000399	0	F	FUSION01	SOLID	1.8420	1.8208	N/A	g/L
4	SAMPLE	S94T000400	0	F	FUSION01	SOLID	N/A	1.8536		g/L
5	DUP	S94T000400	0	F	FUSION01	SOLID	1.8536	1.8480	N/A	g/L
6	SAMPLE	S94T000403	0	F	FUSION01	SOLID	N/A	1.9292		g/L
7	DUP	S94T000403	0	F	FUSION01	SOLID	1.9292	1.9228	N/A	g/L

Final page for worklist # 358

L Ann Lambert
Analyst Signature

01/10/95
Date 1/11/95

EAL 01/10/95
384 $\frac{.4605}{.250}$ = 1.8420g/l 30ml

EAL 01/10/95
384 DUP $\frac{.4552}{250}$ = 1.8208 30ml

400 $\frac{.4634}{.250}$ = 1.8536g/l 40ml

400 DUP $\frac{.4620}{.250}$ = 1.8480g 40ml

403 $\frac{.4823}{.250}$ = 1.9292g/l 40ml

403 DUP $\frac{.4807}{.250}$ = 1.9228g/l 35ml

Data Entry Comments: Samples are cloudy and actually look dirty. (EAL)

Bertrand Huffman II
1-16-95

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

WHC-SD-WM-DP-082, REV. 1

LABCORE Data Entry Template for Worklist# 551

nalyst: BLM **Instrument:** FUS01 AL11066 **Method:** LA-549-141 C2

Worklist Comment: C-108 ZR FUSION DIGEST - 288->301, 290->302 RERUN 1 7 mrad/hr QC uncorr. HPT Sam Shemal

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUS-ZR01	SOLID	250	250 g/L	N/A	g/L
2	SAMPLE	S94T000301	1	Z	FUS-ZR01	SOLID	N/A	1.8724 g/L		g/L
3	DUP	S94T000301	1	Z	FUS-ZR01	SOLID	1.8724	1.8556	N/A	g/L
4	SAMPLE	S94T000302	1	Z	FUS-ZR01	SOLID	N/A	1.8532		g/L
5	DUP	S94T000302	1	Z	FUS-ZR01	SOLID	1.8532	1.8728	N/A	g/L

Final page for worklist # 551

BLMcCracken
Analyst Signature

2/11/95
Date

2/10/95 BLM
S94T000 ~~288~~ 301 40mL HCl

$\frac{.4681 g}{.250 L} = 1.8724 g/L$

S94T000301 Dup 40mL HCl

$\frac{.4639 g}{.250 L} = 1.8556 g/L$

S94T000302 40mL HCl

$\frac{.4633 g}{.250 L} = 1.8532 g/L$

S94T000302 Dup 40mL HCl

$\frac{.4682 g}{.250 L} = 1.8728 g/L$

Data Entry Comments: Samples # 301 & 301 Dup. contained small amount of white precipitate. Bernard Griffin II 2-13-95

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 229

Analyst: EAL **Instrument:** FUS01 SNF04495 **Method:** LA-549-141

Worklist Comment: C-108 FUSION WITH ZR. CRUCIBLES - 291->303, 292->304

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUS-ZR01	SOLID	250ml	250ml	N/A	g/L
2	SAMPLE	S94T000303	0	F	FUS-ZR01	SOLID	N/A	2.4480		g/L
3	DUP	S94T000303	0	F	FUS-ZR01	SOLID	2.4480	2.4584	N/A	g/L
4	SAMPLE	S94T000304	0	F	FUS-ZR01	SOLID	N/A	2.0812		g/L
5	DUP	S94T000304	0	F	FUS-ZR01	SOLID	2.0812	2.0936	N/A	g/L

Final page for worklist # 229

Analyst Signature

Date 12/14/94

SAM303

$\frac{.6120g}{.250l} = 2.4480g/l$

20ml Con HCL

SAM304

$\frac{.5203g}{.250l} = 2.0812g/l$

40ml con HCL

SAM 303 DUP

$\frac{.6146g}{.250l} = 2.4584g/l$

40ml Con HCL

SAM 304 DUP

$\frac{.5234g}{.250l} = 2.0936g/l$

50 ml Con HCL

Data Entry Comments: Sample 304 & Dup bright yellow in color. Sample 303 varies slightly in color from the dups. Procedure went fine. Scotland Griffin II 12-20-94

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 552

Analyst: EAL **Instrument:** FUS01 11066 **Method:** LA-549-141 C-2 20 mr/hr

Worklist Comment: C-108 ZR FUSION DIGEST - 291->303, 292->304 RERUN 1 Julie Martin

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				FUS-ZR01	SOLID	250	250	N/A	g/L
2	SAMPLE	S94T000303	1	Z	FUS-ZR01	SOLID	N/A	1.2144		g/L
3	DUP	S94T000303	1	Z	FUS-ZR01	SOLID	1.2144	1.2532	N/A	g/L
4	SAMPLE	S94T000304	1	Z	FUS-ZR01	SOLID	N/A	1.7664		g/L
5	DUP	S94T000304	1	Z	FUS-ZR01	SOLID	1.7664	1.7896	N/A	g/L

Final page for worklist # 552

Ann Lambel
Analyst Signature

02/10/95
Date 2-13-95

R C Jones

30 ml

303 $\frac{.3036}{.250} = 1.2144$ g/l

50 ml

304 $\frac{.4416}{.250} = 1.7664$ g/l

30 ml

303 DUP $\frac{.3133}{.250} = 1.2532$ g/l

50 ml

304 DUP $\frac{.4474}{.250} = 1.7896$ g/l

Data Entry Comments: SAMPLE 303 & 304 HAVE SUSPENDED FIBROUS PARTICULATES EAL

Bertrand Griffin II 2-15-95

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 310

Analyst: EAL Instrument: FUS01 SNF4495 EAL Method: LA-549-141 C-2 Sig Landos 20mR

Worklist Comment: C-108 94-AUG-015 QSeg A/B Zr-Fus 361>367, 362>368

Seg	Type	Sample#		Rep	AlTest	Matrix	Actual	Found	DL	Uni
1	BLNK-PREP				FUS-ZR01	SOLID	.250ml	.250ml	N/A	g/L
2	SAMPLE	S94T000367	0	Z	FUS-ZR01	SOLID	N/A	2.2024		g/L
3	DUP	S94T000367	0	Z	FUS-ZR01	SOLID	2.2024	2.2016	N/A	g/L
4	SAMPLE	S94T000368	0	Z	FUS-ZR01	SOLID	N/A	2.0076		g/L
5	DUP	S94T000368	0	Z	FUS-ZR01	SOLID	2.0076	1.9964	N/A	g/L

Final page for worklist # 310

J Ann Lambel
Analyst Signature

12/27/94
Date 12/28/94

SAM 367

$\frac{.5506g}{.250l} = 2.2024 g/l$

367 DUP

$\frac{.5504g}{.250l} = 2.2016 g/l$

SAM 368

$\frac{.5019g}{.250l} = 2.0076 g/l$

368 DUP

$\frac{.4991g}{.250l} = 1.9964 g/l$

Data Entry Comments: Sample 368 - slight color difference from the sample to the dup. Bertrand Griffin II 1-14-95

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

.01

LABCORE Data Entry Template for Worklist# 311

Analyst: EAL Instrument: FUS01 S/N F04495 Method: C-2 LA-549-141 Sig Landow 20 mrad/hr

Worklist Comment: C-108 94-AUG-015 QSeg C/D Zr-Fus 363>369,364>370

Seg	Type	Sample#		Rep	AlTest	Matrix	Actual	Found	DL	Uni
1	BLNK-PREP				FUS-ZR01	SOLID	250ml	250ml	N/A	g/L
2	SAMPLE	S94T000369	0	Z	FUS-ZR01	SOLID	N/A	2.1368		g/L
3	DUP	S94T000369	0	Z	FUS-ZR01	SOLID	2.1368	2.1440	N/A	g/L
4	SAMPLE	S94T000370	0	Z	FUS-ZR01	SOLID	N/A	2.1016		g/L
5	DUP	S94T000370	0	Z	FUS-ZR01	SOLID	2.1016	2.0980	N/A	g/L

Final page for worklist # 311

E. Ann Lambert
Analyst Signature

12/28/94
Date

Sam: 369 30ml HCL

$\frac{.5342g}{.250l} = 2.1368 g/l$

369: Dup 30ml HCL

$\frac{.5360g}{.250l} = 2.1440$

370 25ml HCL

$\frac{.5254g}{.250l} = 2.1016 g/l$

370: Dup 25ml HCL

$\frac{.5245g}{.250l} = 2.0980 g/l$

Data Entry Comments:

Bertrand Griffin II 12-28-94

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 873

Analyst: [illegible] **Instrument:** H2O01 _____ **Book #** _____

Method: LA-504-101 Rev/Mod C-0

Worklist Comment: C-108 H2O DGST - S94T000334--->298

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				H2ODIG01	SOLID	I.S.	I.S.	N/A	g/L
94000017	C-108	2	SAMPLE	S95T000298	0	W	H2ODIG01	SOLID	N/A	I.S.		g/L
94000017	C-108	3	DUP	S95T000298	0	W	H2ODIG01	SOLID	I.S.	I.S.	N/A	g/L

Final page for worklist # 873

[illegible] 04/05/95 Bertrand Giff II 4-17-95

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments: Insufficient Sample on 334
Unable to perform Analysis <[illegible] 04/05/95>
Approval to place "I.S." in Labcore was given 4-17-95. Bertrand Giff 4-17-95

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

LABCORE Data Entry Template for Worklist# 272

QA

12/20/94

Analyst: LMHZ **Instrument:** H2O01 ~~SS~~ 12/20/94 [illegible] **Method:** LA-504-101 C/O

Worklist Comment: C-108 WATER DIGEST - 334->341 Dose Rate Daryl Hames < 1 mR/hr [illegible] 12/20/94

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				H2ODIG01	SOLID	100 mL	100 mL	N/A	g/L
2	SAMPLE	S94T000341	0	W	H2ODIG01	SOLID	N/A	9.0480 g/L		g/L
3	DUP	S94T000341	0	W	H2ODIG01	SOLID	9.0480 g/L	9.5230 g/L	N/A	g/L

Final page for worklist # 272

[illegible]
Analyst Signature

12/20/94
Date
12/24/94

S94T000341
G. wt ~~0.0001~~ [illegible] 12/20/94
0.9047 g [illegible] 12/20/94
Tare wt. -0.0001 g
net wt. 0.9048 g

S94T000341 DUP
Gross wt 0.9523 g
Tare wt. 0.0000 g
net wt 0.9523 g

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: Samples were not homogenious. Sample contained a rock like piece while the duplicate did not. [illegible] 12/20/94

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

LABCORE Data Entry Template for Worklist# 1724

Analyst: [illegible] **Instrument:** H2O01 [illegible] **Book #** D/A

Method: LA-504-101 Rev/Mod D-O

Worklist Comment: C-108 WATER - S94T000334->1188

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
100mL Tot		1 BLNK-PREP			H2ODIG01	SOLID	100	100	N/A	g/L
94000017	C-108	2 SAMPLE	S95T001188	0 W	H2ODIG01	SOLID	N/A	9.7660		g/L
0.97660g → 100mL										
94000017	C-108	3 SAMPLE	S95T001188	0	DOSE-02	SOLID	N/A	1		mrad/hour
94000017	C-108	4 DUP	S95T001188	0 W	H2ODIG01	SOLID	9.7660	9.9770	N/A	g/L
0.9977g → 100mL										
94000017	C-108	5 DUP	S95T001188	0	DOSE-02	SOLID	1	1.5	N/A	mrad/hour

Final page for worklist # 1724

[illegible] 7/11/95
Analyst Signature **Date**

[illegible] 7-11-95
Analyst Signature **Date**

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: Sample was non-homogeneous. <[illegible] 07/10/95>
Dose rate by Mary Haines <[illegible] 07/11/95>
[illegible] 7-11-95

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

LABCORE Data Entry Template for Worklist# 270

HPT
Bob Clemons

Analyst: [illegible] **Instrument:** ACD01 **Method:** LA-505-159/ 150 mrad B 2

Worklist Comment: C-108 ACID DGST(SOLID) RADCHEM - 331->337,332->338,334->340

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				ACIDIG01	SOLID	100ml	100ml	N/A	g/L
~~2~~	~~STD-PREP~~				~~ACIDIG01~~	~~SOLID~~	BJII 1-4-95		N/A	g/L
3	SAMPLE	S94T000337 1.0091g → /.100l =	0	A	ACIDIG01 (10.0910g/l)	SOLID	N/A	10.0910g/l		g/L
4	DUP	S94T000337 1.0086g → /.100l =	0	A	ACIDIG01 (10.0860g/l)	SOLID	10.0910g/l	10.0860g/l	N/A	g/L
5	SAMPLE	S94T000338 .5486g → /.050l	0	A	ACIDIG01 (10.9720g/l)	SOLID	N/A	10.9720g/l		g/L
6	DUP	S94T000338 .5403g → /.050l	0	A	ACIDIG01 (10.8060g/l)	SOLID	10.9720g/l	10.8060g/l	N/A	g/L
7	SAMPLE	S94T000340 .2503g → /.025l =	0	A	ACIDIG01 (10.0120g/l)	SOLID	N/A	10.0120g/l		g/L
8	DUP	S94T000340 .2493g → /.025l	0	A	ACIDIG01 (9.9720g/l)	SOLID	10.0120g/l	9.9720g/l	N/A	g/L

Final page for worklist # 270

[signature]
Analyst Signature

1 . 8 . 95
Date

Bertrand Griffin II
1-16-95

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: Sample looked like rocks before and after digestion. Reasons for varying final volume include: not enough sample (S94T000334) to meet procedure compliance and and technical confusion with other samples.

Units shown for QC (SPK) may not reflect the actual units.

BJII
1-16-95

LABCORE Data Entry Template for Worklist# 390 120 mrad

Hot Chuck Felder

Analyst: lmh **Instrument:** ACD01 **Method:** LA-505-159 / B 2

Worklist Comment: C-108 ACID DGST RADCHEM ONLY - 384->401, 385->402, 387->404

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				ACIDIG01	SOLID	.1000	.1000	N/A	g/L
2	SAMPLE	S94T000401	0	A	ACIDIG01	SOLID	N/A	10.1200		g/L
1.0120g → 100 mL = 10.1200 g/L										
3	DUP	S94T000401	0	A	ACIDIG01	SOLID	10.1200	10.1300	N/A	g/L
1.0120g → 100mL 10.1200 g/L										
4	SAMPLE	S94T000402	0	A	ACIDIG01	SOLID	N/A	10.0400		g/L
1.0040g → 100 mL 10.0400 g/L										
5	DUP	S94T000402	0	A	ACIDIG01	SOLID	10.0400	10.1100	N/A	g/L
1.0110g → 100 mL 10.1100 g/L										
6	SAMPLE	S94T000404	0	A	ACIDIG01	SOLID	N/A	10.4200		g/L
1.0420g → 100 mL 10.4200 g/L										
7	DUP	S94T000404	0	A	ACIDIG01	SOLID	10.4200	10.3400	N/A	g/L
1.0340g → 100 mL 10.3400 g/L										

Final page for worklist # 390

Analyst Signature **Date** 1-16-95

WHC-SD-WM-DP-082, REV. 1

Data Entry Comments: Samples all have rock that didn't dissolve.

Units shown for QC (SPK) may not reflect the actual units.

INORGANIC ANALYSES

3702

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K 222	Customer ID: C61S1
Analysis: TGA	Sample Prep: DIRECT

Instrument: WC16124, WC16129	Procedure/ Rev: LA-560-112 A-1
Technologist: KL VOGEL	Date: 06/30/94
Starting Time: 1600	Temperature 25
Ending Time: 2300	Chemist: J. FRYE

Comments:

	Description	Lab ID		Description	Lab ID
1	LMCS STD	K 220-5512	11		
2	SAMPLE	K 222-5712	12		
3	SAMPLE DUP	K 222-5812	13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	24N8A .010 ML			

ANALYTICAL BATCH SUMMARY SHEET

METHOD: La-560-112 **ANALYTE:** TGA **ANALYSIS START DATE** 6/30/94

PREPARED BY: Rob Schroeder **SUMMARY DATE:** 7/07/94

PROJECT C-108 **UNITS:** WT % H2O **SAMPLE PREP:** Direct

SPL ID	SERIAL NO	RESULT #1	RESULT #2	RPD%	% REC	DET LIM	DIG WT
STD	K220-5512	58.13			98.11		
C61S1	K222-5812	~~21.78~~ 30.47	~~30.47~~ 21.75	33.3			

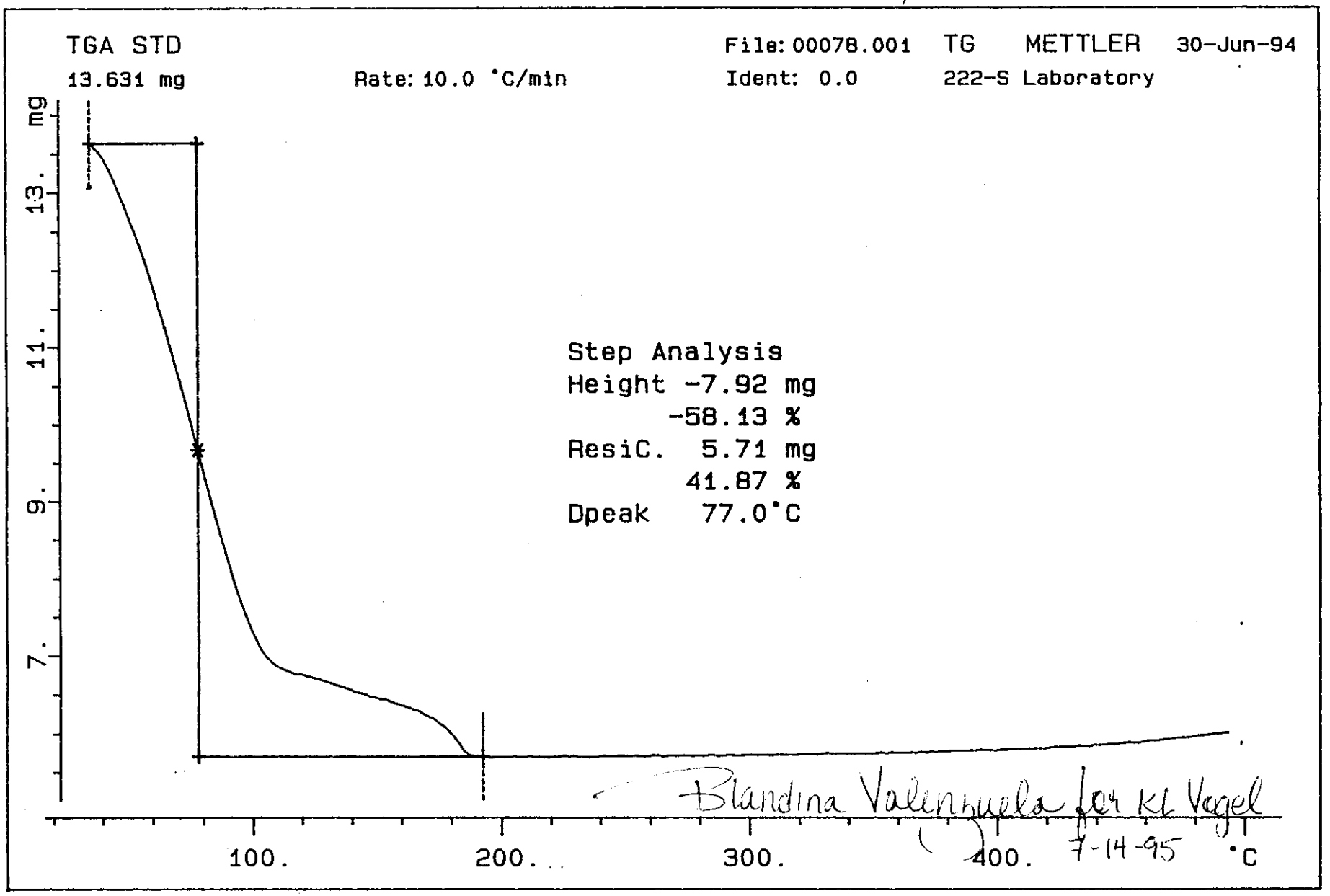
Robert W. Schroeder 7-7-94

[X] NO SPECIAL PROBLEMS / METHOD VARIATIONS IN THIS BATCH

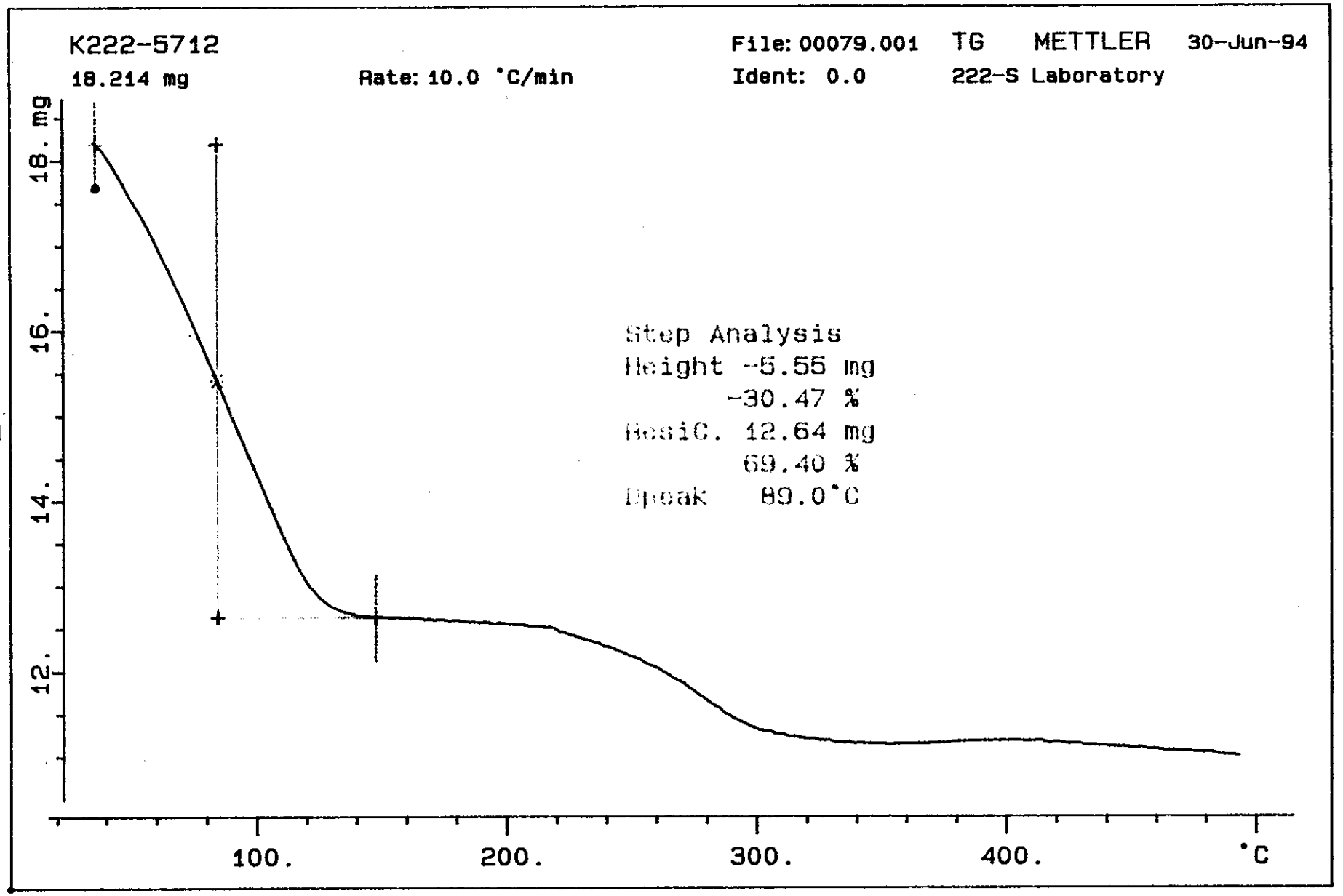
NARRATIVE -- LIST SPECIFIC PROBLEMS / VARIATIONS FOR THIS BATCH
Large RPD is expected to be due to the small sample size and non-homogenous sample ~~aliquats.~~ aliquots

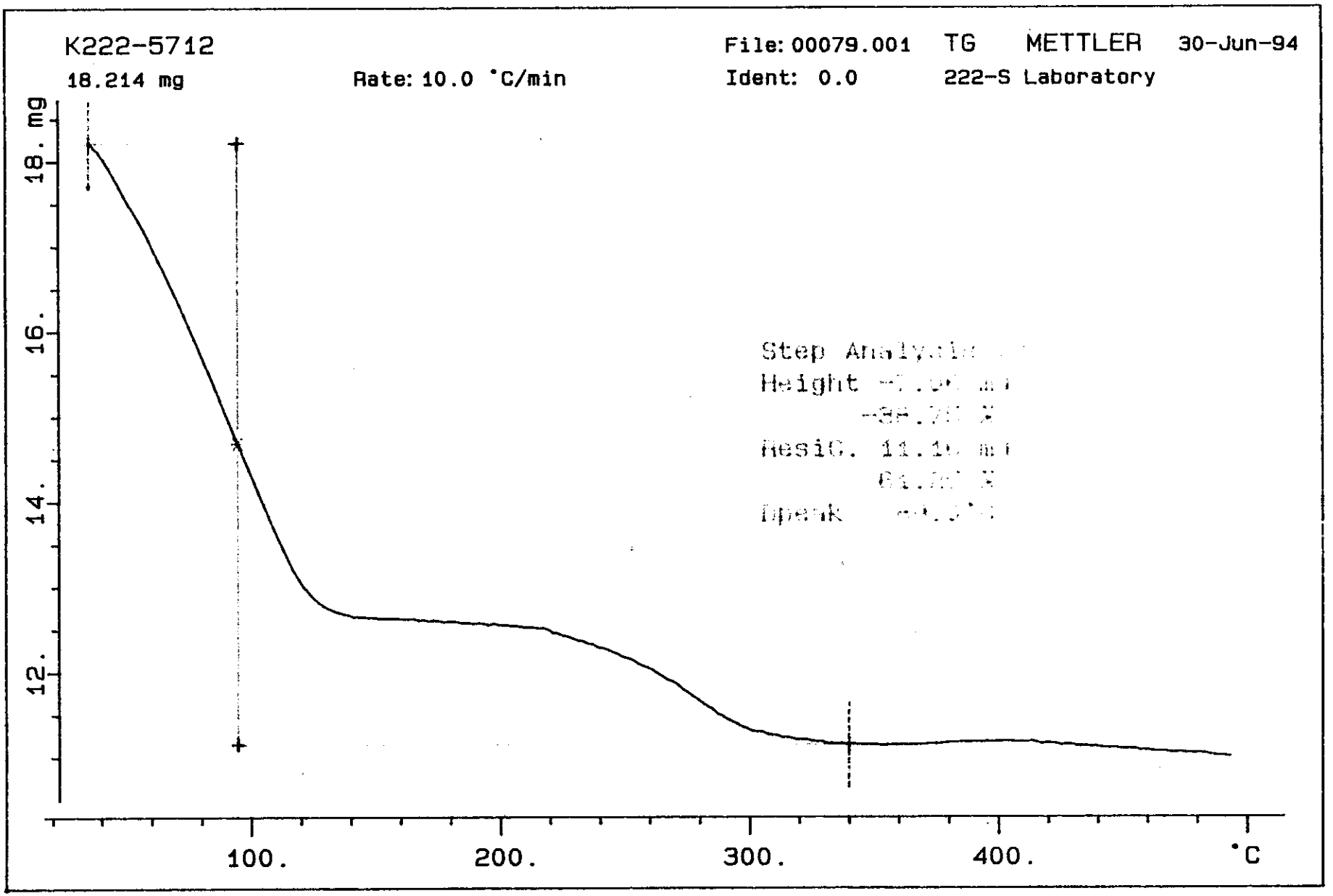
Robert W. Schroeder 7-7-94

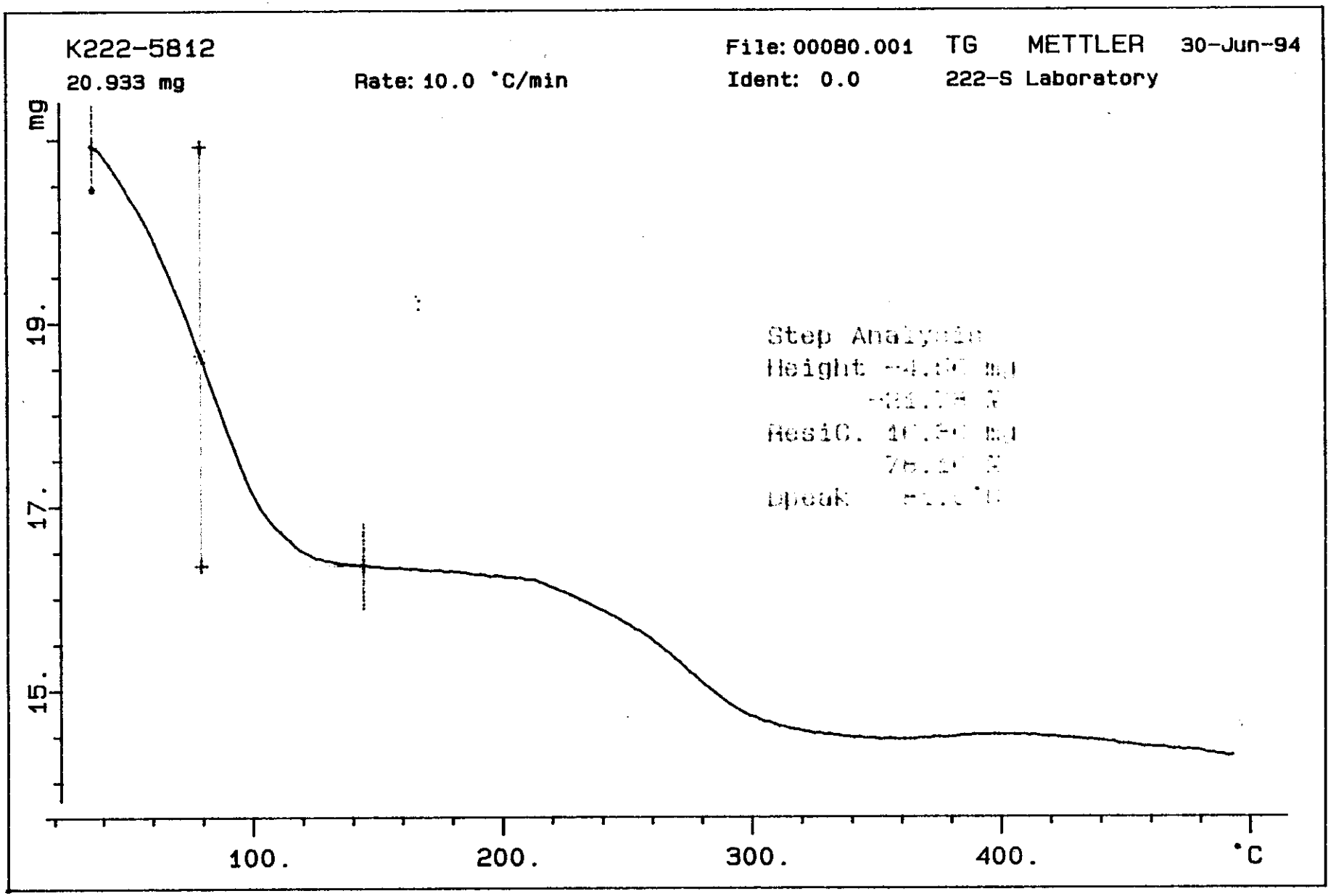
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 214 TO 218.

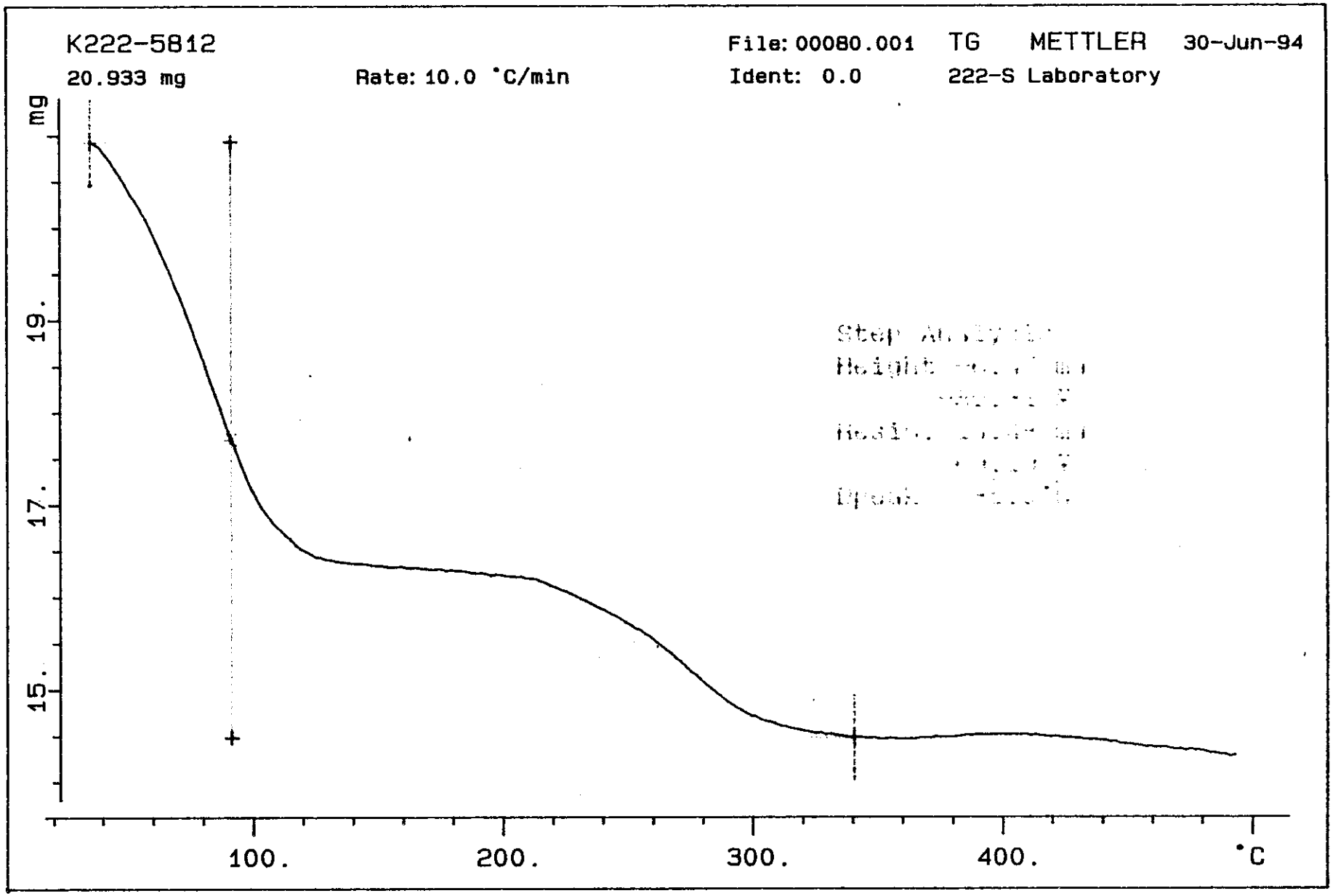


Blandina Valenzuela for KL Vogel 7-14-95


K222-5712
18.214 mg
Rate: 10.0 °C/min
File: 00079.001
TG METTLER 30-Jun-94
Ident: 0.0
222-S Laboratory
18. mg
16.
14.
12.
Step Analysis
Height -5.55 mg
-30.47 %
BasiC. 12.64 mg
69.40 %
Dpeak 89.0°C
100.
200.
300.
400.
°C


K222-5712
18.214 mg
Rate: 10.0 °C/min
File: 00079.001
TG
METTLER
30-Jun-94
Ident: 0.0
222-S Laboratory
18. mg
16.
14.
12.
100.
200.
300.
400.
°C


K222-5812
20.933 mg
Rate: 10.0 °C/min
File: 00080.001
TG METTLER 30-Jun-94
Ident: 0.0
222-S Laboratory
mg
19.
17.
15.
100.
200.
300.
400.
°C


K222-5812
20.933 mg
Rate: 10.0 °C/min
File: 00080.001
Ident: 0.0
TG
METTLER
222-S Laboratory
30-Jun-94
mg
19.
17.
15.
100.
200.
300.
400.
°C

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K222	Customer ID: C61S1
Analysis: CN SOLID	Sample Prep: DIRECT

Instrument: AL 10724	Procedure/ Rev: LA-695-102 B2
Technologist: JAMES T KNIGHT JR.	Date: 08/11/94
Starting Time: 08:00	Temperature 25 CENTIGRADE
Ending Time: 15:00	Chemist: R. SCHROEDER

Comments: BATCH #4113
THE STANDARD WAS ADDED TO 10 ML VOLUME OF .125 MOLAR NaOH FOR THE INITIAL DILUTION.¶THE DILUTIONS WERE MADE WITH 5ML OF EDTA. THE SPIKE USED THE SAME DILUTION THAT WAS USED ON THE FIRST SAMPLE. THE SAMPLE WAS A CRUSTY SOLID.

	Description	Lab ID		Description	Lab ID
1	WATER BLANK		11		
2	INITIAL LMCS STANDARD	K220-5578	12		
3	EDTA BLANK	K221-5678	13		
4	SAMPLE	K222-5778	14		
5	SAMPLE DUPLICATE	K222-5878	15		
6	SAMPLE SPIKED	K222-5978	16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	31N8D 0.100 ML			
SPIKE	31N8D 0.100ML			

A-6000-881 (03/92)

ANALYTICAL BATCH SUMMARY SHEET

METHOD: La-695-102 **ANALYTE:** CN **ANALYSIS START DATE** 8/11/94

PREPARED BY: Rob Schroeder **SUMMARY DATE:** 8/16/94

PROJECT C-108 **UNITS:** ug CN/g **SAMPLE PREP:** dissolution EDTA

SPL ID	SERIAL NO	RESULT #1	RESULT #2	RPD%	% REC	DET LIM	DIG WT
STD	K220-5578	9.35E+2			90.95		
Rea.Bl	K221-5678	<1.99E-2				1.99E-2	
C61S1	K222-5778	4.12E+3				1.68E+2	
C61S1	K222-5878	4.17E+3		1.21		1.72E+2	
C61S1	K222-5978				91.2		

R W Schroeder 8-16-94

[X] NO SPECIAL PROBLEMS / METHOD VARIATIONS IN THIS BATCH

NARRATIVE -- LIST SPECIFIC PROBLEMS / VARIATIONS FOR THIS BATCH
Samples were prepared using the EDTA dissolution/distillation option as directed. R W Schroeder 8-16-94

CYANIDE ANALYSIS

Batch 4113

Serial No.	Sample Point	Date	Time Issued	Priority
K 220.-5578	C-108	6-15-94	13: 5	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
CN	LA-695-102	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? .100ml - 10ml - .500ml	STD

Remarks, Calculations, Results

EDTA DISSOLUTION

S244 KCN

STD# 31N8D RESULT 850.4

STD VAL 9.35E+2 %REC 90.95

$$\frac{(0.684)(-0.004)-(0.00625)}{0.160059} = 4.21 \cdot \frac{10.1}{0.1} / 0.5 = 850.4$$

WR# 5944

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		Rakete		RJones

Date	Time Completed	Lab Unit Mgr	
8-11-94		8-16-94 RW. Schroeder	RJones

54-6800-061 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
K 221.-5678	C-108	6-15-94	13: 6	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
CN	LA-695-102	uG/ML	N4C3G	0

Sample Size	Customer ID
? .020ml EDTA in 5ml H_2O	BLANK

Remarks, Calculations, Results

REAGENT, BLANK

$$\frac{(0.005-0.004)-(0.00625)}{0.160059} = 0.0\,\mu g$$

D.L. = 0.1 µg / 5.02 ml = $\boxed{< 1.99\text{ E-2 } \mu g/mL}$

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		Rakete		

Date	Time Completed	Lab Unit Mgr	
8-11-94		8-16-94 RW Schroeder	RJones

54-6800-061 (R-10-83)

CYANIDE ANALYSIS

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-5778	C-108	6-15-94	13: 8	21

Determination	Method-Standard	Result Units	Charge Code	Reruns
CN LIQ	LA-695-102	uG/~~ML~~g RWS 8-16-94	N4C3G	0

Sample Size: ? .1518 grams in 5ml EDTA .200 in 10ml final

Customer ID: C6131

Remarks, Calculations, Results:

$$\frac{(0.403-0.005)-(0.00625)}{0.160059} = 2.4475 \mu g\ CN^-$$

$$2.45 \mu g\ CN \cdot \left(\frac{10.2}{.2}\right) D.F. = 124.95 \mu g/mL_{EDTA\ dissolution} \cdot \frac{5\ mL\ EDTA\ dissolution}{0.1518 g\ sample} =$$

$$D.L. = 0.1\ (51) \cdot 5/0.1518 = 1.68\ E+2\ \mu g/g$$

$$\boxed{4.12\ E+3\ \mu g\ CN/g}$$

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
8/1/94		8-16-94 RW Schroeder	

54-6800-061 (R-10-83)

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-5878	C-108	6-15-94	13: 8	21

Determination	Method-Standard	Result Units	Charge Code	Reruns
CN LIQ	LA-695-102	uG/~~ML~~g RWS 8-16-94	N4C3G	0

Sample Size: ? .1482 grams in 5ml EDTA .200 in 10ml final

Customer ID: C6131

Remarks, Calculations, Results:

DUPLICATE SAMPLE

$$\frac{(0.399)-0.005)-0.00625)}{0.160059} = 2.4225$$

$$2.42 \mu g\ CN \cdot \left(\frac{10.2}{.2}\ D.F.\right) = 123.55 \mu g/mL_{EDTA} \cdot \frac{5\ mL\ EDTA}{0.1482 g} =$$

RWS 8-16-94

$$D.L. = 0.1\ (51) \cdot 5/0.1482 = 1.72\ E+2\ \mu g/g$$

$$\boxed{4.17\ E+3\ \mu g\ CN/g}$$

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
8/1/94		8-16-94 RW Schroeder	

54-6800-061 (R-10-83)

CYANIDE ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-5978	C-108	6-15-94	13: 8	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
CN	LA-695-102	% RECOVERY	N4C3G	0

Sample Size	Customer ID
?.1518g in 5ml EDTA - .200 - in 10ml - 1ml	C61S1

Remarks, Calculations, Results

SAMPLE SPIKED ID K222-5778

SPIKE ID 31NBD

SPIKE VOLUME .100ml - 10ml - .250ml

$\frac{4.56 - 2.45}{2.314} \times 100 =$ 91.2% rec

$\frac{(0.741 - 0.005) - 0.00625)}{0.160059} = 4.56$ µg CN spt Samp.

2.45 µg CN samp. • 0.1518g / 0.1518g = 2.45 µg CN samp corrected

935 • 0.250 mL / 101 D.F. = 2.314 mg in spk.

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		[signature]		

Date	Time Completed	Lab Unit Mgr.	
8.11.94		8-16-94 RW Schroeder	[signature]

54-6800-061 (R-10-83)

580NM 0.004 A Water Blank
580NM 0.684 A Standard
580NM 0.005 A EDTA Blank
580NM 0.403 A K222
580NM 0.399 A K222 Duplicate
580NM 0.741 A K222 + .250ml Spike

[signature] 8.11.94

worklistrpt Version 2.0 02/21/95
03/09/95 14:25

LABCORE Data Entry Template for Worklist# 569

Analyst: JTK **Instrument:** SP01 WA93252 **Book #** 54N8A

Method: LA-695-102 Rev/Mod C-0

Worklist Comment: CN-, ~~BY-106~~ C-108 RWS 3-9-95, rws 2/13/95

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				CN-01	SOLID	1	6.00e-1	N/A	ug/g
		2	STD				CN-01	SOLID	9.15e2	9.42e2	N/A	~~ug/g~~ mg/mL JWB 3/10/95
94000017	C-108	3	SAMPLE	S94T000331	0		CN-01	SOLID	N/A	7.95e2	3.96e1	ug/g
94000017	C-108	4	DUP	S94T000331	0		CN-01	SOLID	7.95e2	7.66e2	N/A	ug/g
94000017	C-108	5	SPK	S94T000331	0		CN-01	SOLID	100	103.7	N/A	~~ug/g~~ % JWB 3/10/95
94000017	C-108	6	SAMPLE	S94T000332	0		CN-01	SOLID	N/A	4.99e3	7.96e1	ug/g
94000017	C-108	7	DUP	S94T000332	0		CN-01	SOLID	4.99e3	5.10e3	N/A	ug/g
		8	STD				CN-01	SOLID	9.15e2	9.81e2	N/A	~~ug/g~~ mg/mL JWB 3/10/95

Final page for worklist # 569

JTKnight 3.9.95
Analyst Signature **Date**

JTKnight 3.9.95
Analyst Signature **Date**

Data Entry Comments: Data entered [signature] 3/10/95
Data reviewed [signature] 3/13/95

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.

CN: LA-695-102 (C-0)

WOR T	ANALYST SIGNATURE	ANAL DA	ANALYSIS TIME	INSTRUM CODE
569	[illegible]	3-9-95	11:00	WA93252

[X] EDTA or [ ] SAMPLE [X] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [ ] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = 54N8A STD # =
MATRIX: [ ] SOLID [X] LIQUID
SAMPLE VOL. (mL)/WT. (g) .250ml
DISSOLUTION/DILUTION VOL. (mL) 25ml
SAMPLE ALIQUOT VOL. ANALYZED (mL) .500ml
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD 100
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.687

[X] EDTA or [ ] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [ ] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [X] REAGENT BLANK

SAMPLE # = STD # =
MATRIX: [ ] SOLID [X] LIQUID
SAMPLE VOL. (mL)/WT. (g) 5.00
DISSOLUTION/DILUTION VOL. (mL)
SAMPLE ALIQUOT VOL. ANALYZED (mL)
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.015

[X] EDTA or [X] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [ ] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = S94T000331 STD # =
MATRIX: [X] SOLID [ ] LIQUID
SAMPLE VOL. (mL)/WT. (g) 0.2776
DISSOLUTION/DILUTION VOL. (mL) 5.00ml
SAMPLE ALIQUOT VOL. ANALYZED (mL) 1.0ml+10mL-.500
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.299

[ ] EDTA or [X] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [X] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = S94T000331 STD # =
MATRIX: [X] SOLID [ ] LIQUID
SAMPLE VOL. (mL)/WT. (g) 0.2776
DISSOLUTION/DILUTION VOL. (mL) 5.00
SAMPLE ALIQUOT VOL. ANALYZED (mL) 1mL+10ml-0.500
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.288

[X] EDTA or [ ] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [ ] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = S94T000332 STD # =
MATRIX: [X] SOLID [ ] LIQUID
SAMPLE VOL. (mL)/WT. (g) 0.5273
DISSOLUTION/DILUTION VOL. (mL) 5.00ml
SAMPLE ALIQUOT VOL. ANALYZED (mL) 0.500+10.0-0.250
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.922

[ ] EDTA or [X] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [X] SPIKE [ ] PREP BLANK
[ ] DUPLICATE [ ] REAGENT BLANK

SAMPLE # = S94T000331 STD # =
MATRIX: [X] SOLID [ ] LIQUID
SAMPLE VOL. (mL)/WT. (g) 0.2776
DISSOLUTION/DILUTION VOL. (mL) 5.00
SAMPLE ALIQUOT VOL. ANALYZED (mL) 1mL+10mL-0.500
STD/SPIKE VOL. (mL) ~~0.250~~ .1
DILUTION VOL. OF SPIKE/STD 10.1
SPIKE/STD ALIQUOT VOL. ANALYZED .250
ABSORBANCE 0.642

[ ] EDTA or [X] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [ ] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = 54N8A STD # =
MATRIX: [ ] SOLID [X] LIQUID
SAMPLE VOL. (mL)/WT. (g) .250
DISSOLUTION/DILUTION VOL. (mL) 25
SAMPLE ALIQUOT VOL. ANALYZED (mL) .500
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD 100
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.715

[ ] EDTA or [ ] SAMPLE [ ] STANDARD
[ ] WATER :DISSOLUTION/DILUTION [X] DUPLICATE [ ] PREP BLANK
[ ] SPIKE [ ] REAGENT BLANK

SAMPLE # = S94T000332 STD # =
MATRIX: [X] SOLID [ ] LIQUID
SAMPLE VOL. (mL)/WT. (g) 0.5273
DISSOLUTION/DILUTION VOL. (mL) 5.00
SAMPLE ALIQUOT VOL. ANALYZED (mL) 0.5+10.0-0.250
STD/SPIKE VOL. (mL)
DILUTION VOL. OF SPIKE/STD
SPIKE/STD ALIQUOT VOL. ANALYZED
ABSORBANCE 0.941

225

WHC-SD-WM-DP-082, REV. 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

Type		NA	STANDARD
Standard	Standard Aliquot in mL	0.000	0.250
Work List	Diluent + Standard Volume	0.00	25.25
569	Diluted Standard in mL to be Analyzed	0.000	0.500
Test Code	True Value CN- Concentration (µg/mL)	0	915
ICV	Absorbance of Blank	0.000	0.015
Matrix	Absorbance of Standard	0.000	0.687
Liquid	Y-Intercept Value		-0.009320
Sample #	Slope Value		0.146120
STD	µg of CN in Standard	ERR	4.663
Instrument Code			
WA93252			
Analyst		0.0000	
JT Knight			
Date	µg of CN-/mL in Standard	ERR	942
03/09/95			
Time	Standard % Recovery		102.9%
03:00 PM			
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
02/03/95	Original Sample Calculation from Form 695102C1		

µg of CN- in Sample+Spike = [(Absorbance of Sample+Spike - Absorbance of Blank) - (Y-Intercept)] / Slope Value
µg/mL of CN- = µg of CN- in Standard / Diluted Standard * Dilution Factor
Dilution Factor = Flask Volume / Standard Aliquot
Standard % Recovery = (µg of CN-/mL in Standard / True Value CN- Concentration (µg/mL)) * 100

Data Entry by:	K W Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/16/95

Form X2 Rev. 1.0

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Blank		0.00000
Work List		0.00000
569	Blank Aliquot in mL (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN	Absorbance of Blank (Reagent, Prep)	0.015
Matrix	Digest Dilution Factor	18.01
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
BLK	µg of Cyanide	0.166
Instrument Code	µg CN- /mL	6.00E-01
WA93252		
Analyst	µg of Cyanide = [|Absorb. of Blank - Absorb. of Inst. Blank| - (Y-Intercept)] / Slope Value	
JT Knight Jr.	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date		
03/09/95	Detection Limit = 0.1µg Cyanide * Digest Dilution Factor / SS (mL)	
Time	v RESULTS v	
03:00 PM	Cyanide Concentration (µg/mL)	6.00E-01
Calibration Date		
02/03/95		

Detection Limit µg CN- / mL
3.60E-01

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[signature]	Date:	3/10/95

Form 695102C1 Rev. 1.4

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL (Sample+H2O Vol.	11.00000
569	Sample Aliquot Taken from dilution in mL (SS)	0.50000
Test Code	Absorbance of Blank	0.015
CN	Absorbance of Sample	0.299
Matrix	Digest Dilution Factor	18.01
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
S94T000331	µg of Cyanide	2.007
Instrument Code	µg CN- /mL	7.95E+02
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight Jr.	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
03/09/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
03:00 PM	Cyanide Concentration (µg/mL)	7.95E+02
Calibration Date		
02/03/95		

Detection Limit µg CN- / mL
3.96E+01

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/16/95

Form 695102C1 Rev. 1.4

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL (Sample+H2O Vol.	11.00000
569	Sample Aliquot Taken from dilution in mL (SS)	0.50000
Test Code	Absorbance of Blank	0.015
Duplicate	Absorbance of Sample	0.288
Matrix	Digest Dilution Factor	18.01
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
S94T000331	µg of Cyanide	1.932
Instrument Code	µg CN- /mL	7.66E+02
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight Jr.	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
03/09/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
03:00 PM	Cyanide Concentration (µg/mL)	7.66E+02
Calibration Date		
02/03/95		

Detection Limit µg CN- / mL
3.96E+01

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/10/95

Form 695102C1 Rev. 1.4

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

		SPIKE	NA
Type			
Spike	Spike Aliquot in mL	0.250	
Work List	Diluent + Spike Standard Volume	25.25	
569	Diluted Spike Standard in mL	0.250	
Test Code	True Value CN- Concentration (µg/mL)	915	
CN	Absorbance of Blank	0.015	
Matrix	Absorbance of Sample+Spike	0.642	
Liquid	Y-Intercept Value	-0.009320	
Sample #	Slope Value	0.146120	
S94T000331	µg of CN- in Sample+Spike	4.355	
Instrument Code			
WA93252			
Analyst	Known µg of CN- in Original Sample	2.0070	
JT Knight			
Date	µg of CN- in Spike	2.2649	
03/09/95			
Time	Spike % Recovery	103.7%	
03:00 PM			
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
02/03/95	Original Sample Calculation from Form 695102C1		

µg of CN- in Sample (Correced) = Known µg of CN- in Original Sample * g of Sample in Spike / g Used in Original Sample
µg of CN- in Sample+Spike = [(Absorbance of Sample+Spike - Absorbance of Blank) - (Y-Intercept)] / Slope Value
µg of CN- in Spike = LMCS Value (ppm) / Dilution Factor * Diluted Spike Standard
Dilution Factor = Spike Dilution Volume / Spike Aliquot
Spike % Recovery = (µg of CN- in Sample+Spike) - (µg of CN- in Sample) / (µg of CN- in Spike) * 100%

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/10/95

Form X2 Rev. 1.0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

		SAMPLE
Type		
Liquid	Sample Aliquot in mL	0.50000
Work List	Sample Dilution Volume in mL (Sample+H2O Vol.	10.50000
569	Sample Aliquot Taken from dilution in mL (SS)	0.25000
Test Code	Absorbance of Blank	0.015
CN	Absorbance of Sample	0.922
Matrix	Digest Dilution Factor	9.48
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
S94T000332	µg of Cyanide	6.271
Instrument Code	µg CN- /mL	4.99E+03
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight Jr.	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
03/09/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
03:00 PM	Cyanide Concentration (µg/mL)	4.99E+03
Calibration Date		
02/03/95		

Detection Limit µg CN- / mL
7.96E+01

Data Entry by:	Ru Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/10/95

Form 695102C1 Rev. 1.4

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Liquid	Sample Aliquot in mL	0.50000
Work List	Sample Dilution Volume in mL (Sample+H2O Vol.	10.50000
569	Sample Aliquot Taken from dilution in mL (SS)	0.25000
Test Code	Absorbance of Blank	0.015
Duplicate	Absorbance of Sample	0.941
Matrix	Digest Dilution Factor	9.48
Liquid	Y-Intercept Value	-0.009320
Sample #	Slope Value	0.146120
S94T000332	µg of Cyanide	6.401
Instrument Code	µg CN- /mL	5.10E+03
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight Jr.	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
03/09/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
03:00 PM	Cyanide Concentration (µg/mL)	5.10E+03
Calibration Date		
02/03/95		

Detection Limit µg CN- / mL
7.96E+01

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/10/95

Form 695102C1 Rev. 1.4

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

Type		NA	STANDARD
Standard	Standard Aliquot in mL	0.000	0.250
Work List	Diluent + Standard Volume	0.00	25.25
569	Diluted Standard in mL to be Analyzed	0.000	0.500
Test Code	True Value CN- Concentration (µg/mL)	0	915
CCV	Absorbance of Blank	0.000	0.015
Matrix	Absorbance of Standard	0.000	0.715
Liquid	Y-Intercept Value		-0.009320
Sample #	Slope Value		0.146120
STD	µg of CN in Standard	ERR	4.854
Instrument Code			
WA93252			
Analyst		0.0000	
JT Knight			
Date	µg of CN-/mL in Standard	ERR	981
03/09/95			
Time	Standard % Recovery		107.2%
03:00 PM			
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
02/03/95	Original Sample Calculation from Form 695102C1		

µg of CN- in Sample+Spike = [(Absorbance of Sample+Spike - Absorbance of Blank) - (Y-Intercept)] / Slope Value
µg/mL of CN- = µg of CN- in Standard / Diluted Standard * Dilution Factor
Dilution Factor = Flask Volume / Standard Aliquot
Standard % Recovery = (µg of CN-/mL in Standard / True Value CN- Concentration (µg/mL)) * 100

Data Entry by:	RW Schroeder	Date:	03/09/95
Approved by:	[illegible]	Date:	3/10/95

Form X2 Rev. 1.0

CYANIDE CALIBRATION CURVE with EDTA/en and Ammonium sulfamate

DATE: FEBRUARY 3, 1995
CALIBRATION STANDARD: 41N8F
INSTRUMENT I.D. WA93252
WORKING STANARD CONCENTRATION: 931uG/mL / 101D.F. = 9.22 uG/mL

Sample I.D.	uG CN-	Net Abs.	Calc. uG	RPD
Blank	0	0	0	0
0.050mL	0.461	0.073	0.563	-19.9
0.200mL	1.844	0.251	1.782	3.42
0.400mL	3.687	0.516	3.595	2.53
0.600mL	5.531	0.779	5.4	2.4
0.800mL	7.374	1.06	7.318	0.76
1.000mL	9.218	1.371	9.446	-2.44
1.200mL	11.062	1.6	10.886	1.6

Regression Output:

Constant		-0.00932
Std Err of Y Est		0.019149
R Squared		0.999125
No. of Observations		8
Degrees of Freedom		6
X Coefficient(s)	0.14612	
Std Err of Coef.	0.001765	

Robert W. Schroeder 3/9/95

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LABCORE Data Entry Template for Worklist# 405

nalyst: j+k **Instrument:** SP01 **Method:** LA-695-102/C-O

Worklist Comment: CN, C-108

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK				CN-01	SOLID	1	~~0.074~~ <0.020 RWS 1/31/95	N/A	ug/~~g~~mL RWS 1/25/95
2	STD				CN-01	SOLID	9.30 E+2	1.010 E+3	N/A	ug/~~g~~mL RWS 1/25
3	SAMPLE	S94T000384	0		CN-01	SOLID	N/A	1.01 E+3	2.93 E+1	ug/g
4	DUP	S94T000384	0		CN-01	SOLID	1.01 E+3	1.05 E+3	N/A	ug/g
5	SPK	S94T000384	0		CN-01	SOLID	1.00 E+2	~~1.12~~ 1.16 E+2 RWS 1/25/95	N/A	~~ug/g~~ % rec
6	SAMPLE	S94T000385	0		CN-01	SOLID	N/A	1.03 E+3	2.21 E+1	ug/g
7	DUP	S94T000385	0		CN-01	SOLID	1.03 E+3	1.12 E+3	N/A	ug/g
8	SPK	S94T000385	0		CN-01	SOLID	1.00 E+2	1.11 E+2	N/A RWS 1/25/95	~~ug/g~~ % rec
9	STD				CN-01	SOLID	9.30 E+2	9.75 E+2	N/A	ug/~~g~~mL RWS 1/25/95

Final page for worklist # 405

Analyst Signature **Date** 1-18-95 1-26-95

S94T000384 → .34300g in 5ml EDTA/en
S94T000385 → .45210g in 5ml EDTA/en

5 Spike = $\frac{[(.810 - 0.074) - (.810 - .074)] - (-0.00743)}{0.122732}$ = 2.67 x 101/.250 = 1.078E+3/930 = 116

8 Spike = $\frac{[(0.995 - 0.074) - (0.638 - 0.074)] - (-0.00743)}{0.122732}$ = ~~2.97~~ 2.55 RWS 1/25/95 x 100/.250 = ~~1199~~ 1028/930 = ~~130~~ 110.6 RWS 1/25/95 ~~129~~ RWS 1/25/95

Data Entry Comments: Std 4IN8E -.100ml-10ml-.500ml
Sample size .050ml
Spike 4IN8E-.100ml-10ml-.250ml

Units shown for QC (SPK) may not reflect the actual units. Worklist approved RWS 1/30/95 *Page:* 1

CYANIDE ANALYSIS

~~1.17.95~~ 1.18.95 1.18.95

1 580NM 0.074 A
2 580NM 0.683 A
3 580NM 0.490 A
4 580NM 0.507 A
5 580NM 0.815 A

Batch #405

1.18.95 1.18.95

6 580NM 0.638 A 7
7 580NM 0.690 A 6
8 580NM 0.995 A
9 580NM 0.659 A

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Blank		
Work List		
405	Blank Aliquot in mL (SS)	5.00000
Test Code	Absorbance of Instrument Blank	0.000
CN	Absorbance of Blank (Reagent, Prep)	0.074
Matrix	Digest Dilution Factor	1
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
1	µg of Cyanide	
Instrument Code	µg CN- /mL	0.00E+00
Analyst	µg of Cyanide = [|Absorb. of Blank - Absorb. of Inst. Blank| - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide * Digest Dilution Factor / SS (mL)	
Date		
01/18/95	Detection Limit = 0.1µg Cyanide * Digest Dilution Factor / SS (mL)	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/mL)	Detection Limit
Calibration Date	<0.020 µg Cyanide/mL	µg CN- / mL
12/21/94		2.00E-02

Data Entry by:	RW Schroeder	Date:	01/25/95
Approved by:	RW Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
liquid	Sample Aliquot in mL	0.10000
Work List	Sample Dilution Volume in mL	10.10000
405	Sample Aliquot Taken from dilution in mL (SS)	0.50000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.683
Matrix	Digest Dilution Factor	1
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	5.023
Instrument Code	µg CN- /mL	1.01E+03
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/mL)	1.01E+03
Calibration Date		
12/21/94		

Detection Limit µg CN- / mL
2.02E+01

Data Entry by:	Ron Schroeder	Date:	01/25/95
Approved by:	Ron Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL	1.00000
405	Sample Aliquot Taken from dilution in mL (SS)	0.05000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.490
Matrix	Digest Dilution Factor	14.58
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	3.450
Instrument Code	µg CN- /~~mL~~ g RWS 1/25/95	1.01E+03
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/~~mL~~)g RWS 1/25/95	1.01E+03
Calibration Date		
12/21/94		

Detection Limit
µg CN- / ~~mL~~ g RWS 1/25/95
2.92E+01

Data Entry by:	Rus Schroeder	Date:	01/25/95
Approved by:	Rus Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL	1.00000
405	Sample Aliquot Taken from dilution in mL (SS)	0.05000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.507
Matrix	Digest Dilution Factor	14.58
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	3.589
Instrument Code	µg CN- /~~mL~~g RWS 1/25/95	1.05E+03
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/~~mL~~g) RWS 1/25/95	1.05E+03
Calibration Date		
12/21/94		

Detection Limit
µg CN- /~~mL~~g RWS 1/25/95
2.92E+01

Data Entry by:	RW Schroeder	Date:	01/25/95
Approved by:	RW Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL	1.00000
405	Sample Aliquot Taken from dilution in mL (SS)	0.05000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.638
Matrix	Digest Dilution Factor	11.06
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	4.656
Instrument Code	µg CN- /~~mL~~g RWS 1/25/95	1.03E+03
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/~~mL~~)g RWS 1/25/95	1.03E+03
Calibration Date		
12/21/94		

Detection Limit µg CN- / ~~mL~~g RWS 1/25/95
2.21E+01

Data Entry by:	RW Schroeder	Date:	01/25/95
Approved by:	RW Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
liquid	Sample Aliquot in mL	1.00000
Work List	Sample Dilution Volume in mL	1.00000
405	Sample Aliquot Taken from dilution in mL (SS)	0.05000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.690
Matrix	Digest Dilution Factor	11.06
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	5.080
Instrument Code	µg CN- /~~mL~~ g RWS 1-25-95	1.12E+03
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/~~mL~~) g RWS 1/25/95	1.12E+03
Calibration Date		
12/21/94		

Detection Limit
µg CN- / ~~mL~~ g RWS 1/25/95
2.21E+01

Data Entry by:	Ruth Schroeder	Date:	01/25/95
Approved by:	Ruth Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
liquid	Sample Aliquot in mL	0.10000
Work List	Sample Dilution Volume in mL	10.10000
405	Sample Aliquot Taken from dilution in mL (SS)	0.50000
Test Code	Absorbance of Blank	0.074
CN	Absorbance of Sample	0.659
Matrix	Digest Dilution Factor	1
Liquid	Y-Intercept Value	-0.007430
Sample #	Slope Value	0.122732
2	µg of Cyanide	4.827
Instrument Code	µg CN- /mL	9.75E+02
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
JT Knight	µg/mL of Cyanide = µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Date	Dilution Factor = Flask Volume (mL) / Sample Aliquot (mL)	
01/18/95	Detection Limit = 0.1µg Cyanide / SS (mL) * Dilution Factor * Digest Dilution Factor	
Time	v RESULTS v	
04:00 PM	Cyanide Concentration (µg/mL)	9.75E+02
Calibration Date		
12/21/94		

Detection Limit µg CN- / mL
2.02E+01

Data Entry by:	Rui Schroeder	Date:	01/25/95
Approved by:	Rui Schroeder	Date:	1/25/95

Form 695102C1 Rev. 1.2

ug CN	Net Abs.
0	0
0.103	0.011
0.515	0.052
2.06	0.232
4.12	0.496

Regression Output:

Constant	-0.00743	Y-int
Std Err of Y Est	0.009022	
R Squared	0.999315	
No. of Observations	6	
Degrees of Freedom	4	

Coefficient(s)	0.122732	Slope
Err of Coef.	0.001607	

[illegible] OUT
[illegible] Blank

BEST AVAILABLE COPY

Date 12/21/94
Calibration Std: 44N8-B
Inst. ID: 3803002002
Wrk Std #1 = 1029 ug/ml / 100 df = 1029 ug/ml
wrk std #2 = 1029 ug/ml / 10 df = 1029 ug/ml

Sample	Vol.	ug CN
1	0.1 ml WS2	0.103
2	0.05 ml WS1	0.515
3	0.2 ml WS1	2.06
4	0.4 ml WS1	4.12
5	0.6 ml WS1	6.17

[illegible] 0.019 A
[illegible] 0.051 A
[illegible] 0.240 A
[illegible] 0.504 A
[illegible] 0.766 A
[illegible] 0.676 A
[illegible] 0.009 A

Robert W Schroeder
1/30/95

LABCORE Data Entry Template for Worklist# 1826

Analyst: JWB **Instrument:** SP01 _____ **Book #** N/A

Method: LA-695-102 Rev/Mod C-0

Worklist Comment: C-108 dry weight CN

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
94000017	C-108	1 SAMPLE	S94T000331	0		CN-02	SOLID	N/A	9.61e02	5.0	ug/g Dry Wt
94000017	C-108	2 DUP	S94T000331	0		CN-02	SOLID	9.61e02	9.26e02	N/A	ug/g Dry Wt
94000017	C-108	3 SAMPLE	S94T000332	0		CN-02	SOLID	N/A	~~8.28e03~~ 8.22e03	5.0	ug/g Dry Wt
94000017	C-108	4 DUP	S94T000332	0		CN-02	SOLID	~~8.28~~ 8.22 e03 gwb 7/14/95	~~8.46~~ 8.40 e03 gwb 7/14/95 RAE 7/14/95	N/A	ug/g Dry Wt
94000022	C-108	5 SAMPLE	S94T000384	0		CN-02	SOLID	N/A	2.00e03	5.0	ug/g Dry Wt
94000022	C-108	6 DUP	S94T000384	0		CN-02	SOLID	2.00e03	~~2.07~~ 2.08 e03 gwb 7/14/95	N/A	ug/g Dry Wt
94000022	C-108	7 SAMPLE	S94T000385	0		CN-02	SOLID	N/A	2.09e03	5.0	ug/g Dry Wt
94000022	C-108	8 DUP	S94T000385	0		CN-02	SOLID	2.09e03	2.28e03	N/A	ug/g Dry Wt

Final page for worklist # 1826

[signature] 7/14/95
Analyst Signature **Date**

[signature] 7/14/95
Analyst Signature **Date**

[signature] 7/17/95

These results are calculations for converting results from test CN-01 for a dry weight based result. Calculations are ~~shown~~ shown on attached pages.
RAE 7/17/95 ROE 7/17/95

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.

S95T000331

Riser 7, upper half

Seg.	% composition	% water TGA
A1	15.8	9.17
A2	84.2	18.8

Weighted % H_2O = 9.17(.158) + 18.8(.842) = 17.3

100 − 17.3 = 82.7% dry weight

Sample: $\frac{\cancel{1080}\ 795\ \mu g}{g\ wet} \times \frac{1\ g\ wet}{.827\ g\ dry} = 961\ \mu g/g$ GWB 7/14/95

Dup: $766 \times \frac{1}{.827} = 926\ \mu g/g$

S95T000332

Riser 7, lower half

Seg	% comp	% H_2O
B	67.4	36.06
C	32.6	46.02

∴ Weighted % H_2O = ~~39.7~~ 39.3 GWB 7/14/95

60.7 ~~60.3~~ % dry weight GWB 7/14/95

Sample: $4990 \times \frac{1}{.607} = \cancel{8.28}\ 8.22 \times 10^3\ \mu g/g$ GWB 7/14/95

Dup: $5100 \times \frac{1}{.607} = \cancel{8.46}\ 8.40 \times 10^3\ \mu g/g$ GWB 7/14/95

GWB 7/14/95

595T000384

Riser 4, upper half

Seg	% comp	% H_2O
A	65.3	49.33
B	34.7	49.51

weighted % water = 49.33(.653) + 49.51(.347) = 49.4
100 − 49.4 = 50.6 % dry

Sample: $1010 \text{ ug/g}_{wet} \times \frac{1 \text{ g wet}}{0.506 \text{ g dry}} = 2.00 \times 10^3 \text{ ug/g}$

Dup $1050 \times \frac{1}{.506} = 2.08 \times 10^3 \text{ ug/g}$

595T000385

Riser 4, lower half

Seg	% comp	% Water
C	53.6	52.69
D	46.4	48.51

weighted % water = 50.8
dry % wt = 49.2

Sample: $1030 \times 1/.492 = 2.09 \times 10^3 \text{ ug/g}$

Dup: $1120 \times 1/.492 = 2.28 \times 10^3 \text{ ug/g}$

JWB 7/14/95

LABCORE Data Entry Template for Worklist# 406 C-2

Analyst: KLV **Instrument:** IC01 **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@IC-01	CL-02	SOLID	NA	<.2	N/A	ug/g
1	BLNK-PREP				@IC-01	F-02	SOLID	NA	<.1	N/A	ug/g
1	BLNK-PREP				@IC-01	NO2-02	SOLID	NA	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	BR-02	SOLID	NA	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	NO3-02	SOLID	NA	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	PO4-02	SOLID	NA	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	SO4-02	SOLID	NA	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	OXALATE2	SOLID	NA	<1	N/A	ug/g
2	STD	GONQC LAD 12495			@IC-01	F-02	SOLID	56	56.3	N/A	ug/g
2	STD				@IC-01	CL-02	SOLID	75	75.2	N/A	ug/g
2	STD				@IC-01	NO2-02	SOLID	528	541	N/A	ug/g
2	STD				@IC-01	BR-02	SOLID	572	579	N/A	ug
2	STD				@IC-01	NO3-02	SOLID	578	585	N/A	ug/g
2	STD				@IC-01	PO4-02	SOLID	516	514	N/A	ug/g
2	STD				@IC-01	SO4-02	SOLID	599	599	N/A	ug/g
2	STD				@IC-01	OXALATE2	SOLID	520	522	N/A	ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	F-02	SOLID	N/A	3.47E3	~~5~~ 11.05 JMF 1/24	ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	CL-02	SOLID	N/A	6.10E2	~~5~~ 22.1 JMF 1/24	ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	NO2-02	SOLID	N/A	1.93E4	~~5~~ 110.5 JMF 1/24	ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	BR-02	SOLID	N/A	2.32E3 ~~<110.5~~ JMF 1/24/95	~~5~~ 110.5 JMF 1/24/95	ug/g

Data Entry Comments: See attached sheet of worklist for analyst signature. Entered 1/24/95 & reviewed 1/23/95 J. M. Fry
Sample needs to be re prepped, Andy Rice has been advised. J. M. Fry

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 406

Analyst: _____ **Instrument:** IC01 _____ **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
3 SAMPLE	S94T000341	0	W	@IC-01	NO3-02	SOLID	N/A	3.57E4	110.5	ug/g
3 SAMPLE	S94T000341	0	W	@IC-01	PO4-02	SOLID	N/A	3.60E4	110.5	ug/g
3 SAMPLE	S94T000341	0	W	@IC-01	SO4-02	SOLID	N/A	5.70E3	110.5	ug/g
4 DUP	S94T000341	0	W	@IC-01	CL-02	SOLID	6.10E2	3.87E2	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	F-02	SOLID	3.47E3	1.26E4	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	NO2-02	SOLID	1.93E4	1.26E4	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	BR-02	SOLID	<2.32E3	<2.21E3	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	NO3-02	SOLID	3.51E4	2.30E4	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	PO4-02	SOLID	3.60E4	1.19E5	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	SO4-02	SOLID	5.70E3	4.06E3	N/A	ug/g
4 DUP	S94T000341	0	W	@IC-01	OXALATE2	SOLID	<2.32E3	<2.21E3	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	CL-02	SOLID	JMF 100 ~~NA~~	103.2%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	F-02	SOLID	100 ~~NA~~	113.4%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	NO2-02	SOLID	100 ~~NA~~	111.7%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	BR-02	SOLID	100 ~~NA~~	100.4%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	NO3-02	SOLID	100 ~~NA~~	111.6%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	PO4-02	SOLID	100 ~~NA~~	114.3%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	SO4-02	SOLID	100 ~~NA~~	98.8%	N/A	ug/g
5 SPK	S94T000341	0	W	@IC-01	OXALATE2	SOLID	100 ~~NA~~	101.4%	N/A	ug/g
6 REP	S94T000341	0	W	@IC-01	CL-02	SOLID	JMF ~~100 NA~~ NA	6.03E2	N/A	ug/g
6 REP	S94T000341	0	W	@IC-01	F-02	SOLID	JMF ~~100 NA~~ NA	3.34E3	N/A	ug/g

Data Entry Comments: Br spike $\frac{(114.9-0)(10.5)}{(.1)(572)(21)} \times 100 = 100.4\%$

Oxalate spike $\frac{(105.4-0)(10.5)}{(.1)(520)(21)} \times 100 = 101.4\%$

Units shown for QC (SPK) may not reflect the actual units.

Page: 2

LABCORE Data Entry Template for Worklist# 406

Analyst: _____ **Instrument:** IC01 _____ **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
6	REP	S94T000341	0	W	@IC-01	NO2-02	SOLID	NA	1.98E4	N/A	ug/g
6	REP	S94T000341	0	W	@IC-01	NO3-02	SOLID	NA	3.57E4	N/A	ug/g
6	REP	S94T000341	0	W	@IC-01	PO4-02	SOLID	NA	3.66E4	N/A	ug/g
6	REP	S94T000341	0	W	@IC-01	SO4-02	SOLID	NA	5.77E3	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	CL-02	SOLID	6.03E2	3.85E2	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	F-02	SOLID	3.34E3	1.24E4	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	NO2-02	SOLID	1.98E4	1.25E4	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	NO3-02	SOLID	3.57E4	2.30E4	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	PO4-02	SOLID	3.66E4	1.18E5	N/A	ug/g
7	DUP2	S94T000341	0	W	@IC-01	SO4-02	SOLID	5.77E3	4.06E3	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	CL-02	SOLID	100 ~~NA~~	103.6%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	F-02	SOLID	100 ~~NA~~	124.1%	N/A	g
8	SPK	S94T000341	0	W	@IC-01	NO2-02	SOLID	100 ~~NA~~	108.0%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	BR-02	SOLID	100 ~~NA~~	100.4%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	NO3-02	SOLID	100 ~~NA~~	107.3%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	PO4-02	SOLID	100 ~~NA~~	109.5%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	SO4-02	SOLID	100 ~~NA~~	98.3%	N/A	ug/g
8	SPK	S94T000341	0	W	@IC-01	OXALATE2	SOLID	100 ~~NA~~	101.4%	N/A	ug/g
9	REP	S94T000341	0	W	@IC-01	CL-02	SOLID	NA	5.47E2	N/A	ug/g
9	REP	S94T000341	0	W	@IC-01	F-02	SOLID	NA	3.21E3	N/A	ug/g

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 406

Analyst: _____ **Instrument:** IC01 _____ **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
9	REP	S94T000341	0	W	@IC-01	NO2-02	SOLID	NA	1.82E4	N/A	ug/g
9	REP	S94T000341	0	W	@IC-01	NO3-02	SOLID	NA	3.29E4	N/A	ug/g
9	REP	S94T000341	0	W	@IC-01	PO4-02	SOLID	NA	3.37E4	N/A	ug/g
9	REP	S94T000341	0	W	@IC-01	SO4-02	SOLID	NA	5.43E3	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	CL-02	SOLID	5.47E2	4.10E2	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	F-02	SOLID	3.21E3	1.31E4	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	NO2-02	SOLID	1.82E4	1.37E4	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	NO3-02	SOLID	3.29E4	2.46E4 ~~3.37E4~~ gmF 1/23/95	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	PO4-02	SOLID	3.37E4	1.27E5	N/A	ug/g
10	DUP2	S94T000341	0	W	@IC-01	SO4-02	SOLID	5.43E3	4.34E3	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	CL-02	SOLID	100 ~~NA~~	107.0%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	F-02	SOLID	100 ~~NA~~	133.9%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	NO2-02	SOLID	100 ~~NA~~	121.2%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	BR-02	SOLID	100 ~~NA~~	100.4%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	NO3-02	SOLID	100 ~~NA~~	128.9%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	PO4-02	SOLID	100 ~~NA~~	134.7%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	SO4-02	SOLID	100 ~~NA~~	100.9%	N/A	ug/g
11	SPK	S94T000341	0	W	@IC-01	OXALATE2	SOLID	100 ~~NA~~	101.4%	N/A	ug/g

gmF 1/23/95

Final page for worklist # 406

_____ _____

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

Page: 4

LABCORE Data Entry Template for Worklist# 406

Analyst: _____ **Instrument:** IC01 _____ **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg Type	Sample#	Rep AI	Test	Matrix	Actual	Found	DL	Unit

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 406

Analyst: KLV **Instrument:** IC01 **Method:** LA-533-105 C-2

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@IC-01	CL-02	SOLID	<.2	<.2	N/A	ug/g
1	BLNK-PREP				@IC-01	F-02	SOLID	<.1 JMF	<.1	N/A	ug/g
1	BLNK-PREP				@IC-01	NO2-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	BR-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	NO3-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	PO4-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	SO4-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	OXALATE2	SOLID	<1	<1	N/A	ug/g
2	STD	60N9C			@IC-01	F-02	SOLID	56	56.3	N/A	ug/g
2	STD				@IC-01	CL-02	SOLID	75	75.2	N/A	ug/g
2	STD				@IC-01	NO2-02	SOLID	528	541	N/A	ug/g
2	STD				@IC-01	BR-02	SOLID	572	579	N/A	ug/g
2	STD				@IC-01	NO3-02	SOLID	578	585	N/A	ug/g
2	STD				@IC-01	PO4-02	SOLID	516	514	N/A	ug/g
2	STD				@IC-01	SO4-02	SOLID	599	599	N/A	ug/g
2	STD				@IC-01	OXALATE2	SOLID	520	522	N/A	ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	F-02	SOLID	N/A			ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	CL-02	SOLID	N/A			ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	NO2-02	SOLID	N/A			ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	BR-02	SOLID	N/A			ug/g

Digest Weight Sample 9.048 g/L ← had rock
Duplicate 9.523 g/L ← did not have rock

Data Entry Comments:

Sample needs to be upgraded & rerun. JMF

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 406

Analyst: KLV **Instrument:** IC01 **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
3	SAMPLE	S94T000341	0	W	@IC-01	NO3-02	SOLID	N/A			ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	PO4-02	SOLID	N/A			ug/g
3	SAMPLE	S94T000341	0	W	@IC-01	SO4-02	SOLID	N/A			ug/g
4	DUP	S94T000341	0	W	@IC-01	CL-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	F-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	NO2-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	BR-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	NO3-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	PO4-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	SO4-02	SOLID			N/A	ug/g
4	DUP	S94T000341	0	W	@IC-01	OXALATE2	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	CL-02	SOLID			N/A	ug/
5	SPK	S94T000341	0	W	@IC-01	F-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	NO2-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	BR-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	NO3-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W.	@IC-01	PO4-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	SO4-02	SOLID			N/A	ug/g
5	SPK	S94T000341	0	W	@IC-01	OXALATE2	SOLID			N/A	ug/g

Data Entry Comments:
Spike 60N9C

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 406

Analyst: KLV **Instrument:** IC01 **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit

Final page for worklist # 406

K L Vail

Analyst Signature

1-17-95

Date

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

Analytical Batch Summary Sheet

Procedure: A-533-105C-2
Prepared by: Jann Fuge
Analyst: K.+ Vogel
Computer Method: K.+ Met

Date Run: 1/17/95
Date Completed: 1/18/95
Batch: WKL 406
Page 1 of 1.

104.0% JMF 1/25/95

	Units:	ug/ml							
Name	ID #	F	Cl	NO_2	Br	NO_3	PO_4	SO_4	Oxalate
D. L.		<.1	<.2	<1	<1	<1	<1	<1	<1
Blank		n.d. <.1	n.d. <.2	n.d. <1	n.d. <1	n.d. <1	n.d. <1	n.d. <1	n.d. <1
60N9C	17.7 DF	56.7 / 101.3%	78.2 / 104.3%	554 / 104.9%	607 / 106.1%	601 / (104.0%)	529 / 102.5%	624 / 104.2%	525 / 101.0%
60N9C	101 DF	56.3 / 100.5%	75.2 / 100.3%	541 / 102.5%	579 / 101.2%	585 / 101.2%	514 / 99.6%	599 / 100.0%	522 / 100.4%
Pup Blk		n.d. <.1	n.d. <.2	n.d. <1	n.d. <1	(.276) <1	n.d. <1	n.d. <1	n.d. <1
C-108	S94000341	ug/g → 3.47E3	6.10E2	1.93E4	<2.32E3	3.51E4	3.60E4	5.70E3	<2.32E3
First run of sample & dup	Dup	1.26E4	3.87E2	1.26E4	<2.21E3	2.30E4	1.19E5	4.06E3	~~<2.21E3~~ <2.21E3 JMF 1/24/95
~~and Run of~~	~~Rep~~ Spike S94000341	113.4%	103.2%	111.7%	100.4%	111.6%	114.3%	98.8%	106.4%
~~first dilution~~ and	Rep1 341 ~~Dup~~	3.34E3	6.03E2	1.98E4	<2.32E3	3.57E4	3.66E4	5.77E3	<2.32E3
run	Dup Rep1	1.24E4	3.85E2	1.25E4	<2.21E3	2.30E4	1.18E5	4.06E3	<2.21E3
	Rep1 Spike	124.1%	103.6%	108.0%	100.4%	107.3%	109.5%	98.3%	101.4%
New dilution	341	3.21E3	5.47E2	1.82E4	<2.32E3	3.29E4	3.37E4	5.48E3	<2.32E3
	Dup	1.31E4	4.10E2	1.37E4	<2.21E3	2.46E4	1.27E5	4.34E3	<2.21E3
	Spike	133.9%	107.0%	121.2%	122.4%	128.9%	134.7%	100.9%	101.4%

Comments: n.d. = not detected
This needs to be reprepped. The sample had a rock, the dup did not.

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	3.14E+01	5.52E+00	1.75E+02	3.18E+02	3.26E+02	5.16E+01
sample	Sample Prep DF (g/L)	9.048	9.048	9.048	9.048	9.048	9.048
Work List	Sample Dilution Facto	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
wkl 406	Duplicate Conc. (µg/n	1.20E+02	3.69E+00	1.20E+02	2.19E+02	1.14E+03	3.87E+01
Test Code	Duplicate Prep DF (g/	9.523	9.523	9.523	9.523	9.523	9.523
@IC-01	Duplicate Dilution Fac	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
Matrix	Spike+Sample (µg/ml	4.41E+01	2.10E+01	2.93E+02	4.47E+02	4.44E+02	1.70E+02
solid							
Sample #	Volume of Spike (mL)	0.1	0.1	0.1	0.1	0.1	0.1
S94T000341	Spike Book Number	60n9c	60n9c	60n9c	60n9c	60n9c	60n9c
Instrument Code	Total Volume	10.50	10.50	10.50	10.50	10.50	10.50
dionex	Spike Std. (µg/mL)	56	75	528	578	516	599
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
Kit Vogel	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
01/17/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	3.47E+03	1.26E+04	113.6%	1.40E+03	113.4%	1.24E+03
Chloride (µg/g)	6.10E+02	3.87E+02	44.6%	1.71E+03	103.2%	1.66E+03
Nitrite (µg/g)	1.93E+04	1.26E+04	42.2%	1.30E+04	111.7%	1.17E+04
Nitrate (µg/g)	3.51E+04	2.30E+04	41.8%	1.43E+04	111.6%	1.28E+04
Phosphate (µg/g)	3.60E+04	1.19E+05	107.1%	1.30E+04	114.3%	1.14E+04
Sulfate (µg/g)	5.70E+03	4.06E+03	33.6%	1.31E+04	98.8%	1.32E+04

Data Entry by:	Jann Faye	Date:	18-Jan-95
Approved by:	Jann Faye	Date:	1/18/95

Form L1 Rev. 2.0

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)

		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	3.02E+01	5.46E+00	1.79E+02	3.23E+02	3.31E+02	5.22E+01
sample	Sample Prep DF (g/L	9.048	9.048	9.048	9.048	9.048	9.048
Work List	Sample Dilution Factd	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
wkl 406	Duplicate Conc. (µg/n	1.18E+02	3.67E+00	1.20E+02	2.19E+02	1.13E+03	3.87E+01
Test Code	Duplicate Prep DF (g/	9.523	9.523	9.523	9.523	9.523	9.523
@IC-01	Duplicate Dilution Fac	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
Matrix	Spike+Sample (µg/ml	4.41E+01	2.10E+01	2.93E+02	4.47E+02	4.44E+02	1.70E+02
solid							
Sample #	Volume of Spike (mL)	0.1	0.1	0.1	0.1	0.1	0.1
S94T000341reshoot	Spike Book Number	60n9c	60n9c	60n9c	60n9c	60n9c	60n9c
Instrument Code	Total Volume	10.50	10.50	10.50	10.50	10.50	10.50
dionex	Spike Std. (µg/mL)	56	75	528	578	516	599
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
Kit Vogel	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
01/17/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	3.34E+03	1.24E+04	115.1%	1.54E+03	124.1%	1.24E+03
Chloride (µg/g)	6.03E+02	3.85E+02	44.1%	1.72E+03	103.6%	1.66E+03
Nitrite (µg/g)	1.98E+04	1.25E+04	44.8%	1.26E+04	108.0%	1.17E+04
Nitrate (µg/g)	3.57E+04	2.30E+04	43.3%	1.37E+04	107.3%	1.28E+04
Phosphate (µg/g)	3.66E+04	1.18E+05	105.5%	1.25E+04	109.5%	1.14E+04
Sulfate (µg/g)	5.77E+03	4.06E+03	34.7%	1.30E+04	98.3%	1.32E+04

Data Entry by:	Joann Fuge	Date:	18-Jan-95
Approved by:	Joann Fuge	Date:	1/18/95

Form L1 Rev. 2.0

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	2.90E+01	4.95E+00	1.65E+02	2.98E+02	3.05E+02	4.91E+01
sample	Sample Prep DF (g/L)	9.048	9.048	9.048	9.048	9.048	9.048
Work List	Sample Dilution Facto	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
wkl 406	Duplicate Conc. (µg/n	1.25E+02	3.90E+00	1.30E+02	2.34E+02	1.21E+03	4.13E+01
Test Code	Duplicate Prep DF (g/	9.523	9.523	9.523	9.523	9.523	9.523
@IC-01	Duplicate Dilution Fac	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
Matrix	Spike+Sample (µg/ml	4.40E+01	2.10E+01	2.93E+02	4.47E+02	4.44E+02	1.70E+02
solid							
Sample #	Volume of Spike (mL)	0.1	0.1	0.1	0.1	0.1	0.1
S94T000341new diluti	Spike Book Number	60n9c	60n9c	60n9c	60n9c	60n9c	60n9c
Instrument Code	Total Volume	10.50	10.50	10.50	10.50	10.50	10.50
dionex	Spike Std. (µg/mL)	56	75	528	578	516	599
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
Kit Vogel	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
01/17/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

← used 1st spike run

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	3.21E+03	1.31E+04	121.5%	1.66E+03	133.9%	1.24E+03
Chloride (µg/g)	5.47E+02	4.10E+02	28.8%	1.77E+03	107.0%	1.66E+03
Nitrite (µg/g)	1.82E+04	1.37E+04	28.8%	1.41E+04	121.2%	1.17E+04
Nitrate (µg/g)	3.29E+04	2.46E+04	29.1%	1.65E+04	128.9%	1.28E+04
Phosphate (µg/g)	3.37E+04	1.27E+05	116.3%	1.54E+04	134.7%	1.14E+04
Sulfate (µg/g)	5.43E+03	4.34E+03	22.3%	1.34E+04	100.9%	1.32E+04

Data Entry by:	[signature]	Date:	18-Jan-95
Approved by:	[signature]	Date:	1/18/95

Form L1 Rev. 2.0

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)

		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	2.90E+01	4.95E+00	1.65E+02	2.98E+02	3.05E+02	4.91E+01
sample	Sample Prep DF (g/L)	9.048	9.048	9.048	9.048	9.048	9.048
Work List	Sample Dilution Factc	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
wkl 406	Duplicate Conc. (µg/n	1.25E+02	3.90E+00	1.30E+02	2.34E+02	1.21E+03	4.13E+01
Test Code	Duplicate Prep DF (g/	9.523	9.523	9.523	9.523	9.523	9.523
@IC-01	Duplicate Dilution Fac	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
Matrix	Spike+Sample (µg/ml	4.32E+01	2.04E+01	2.89E+02	4.46E+02	4.38E+02	1.68E+02
solid							
Sample #	Volume of Spike (mL)	0.1	0.1	0.1	0.1	0.1	0.1
S94T000341new diluti	Spike Book Number	60n9c	60n9c	60n9c	60n9c	60n9c	60n9c
Instrument Code	Total Volume	10.50	10.50	10.50	10.50	10.50	10.50
dionex	Spike Std. (µg/mL)	56	75	528	578	516	599
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
Kit Vogel	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
01/17/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

← used second spike run

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	3.21E+03	1.31E+04	121.5%	1.57E+03	126.8%	1.24E+03
Chloride (µg/g)	5.47E+02	4.10E+02	28.8%	1.71E+03	103.0%	1.66E+03
Nitrite (µg/g)	1.82E+04	1.37E+04	28.8%	1.37E+04	117.4%	1.17E+04
Nitrate (µg/g)	3.29E+04	2.46E+04	29.1%	1.64E+04	128.0%	1.28E+04
Phosphate (µg/g)	3.37E+04	1.27E+05	116.3%	1.47E+04	128.9%	1.14E+04
Sulfate (µg/g)	5.43E+03	4.34E+03	22.3%	1.31E+04	99.2%	1.32E+04

Data Entry by:	[signature]	Date:	18-Jan-95
Approved by:	[signature]	Date:	1/18/95

Form L1 Rev. 2.0

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)

		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	1.00E-01	2.00E-01	1.00E+00	1.00E+00	1.00E+00	1.00E+00
sample	Sample Prep DF (g/L)	9.048	9.048	9.048	9.048	9.048	9.048
Work List	Sample Dilution Facto	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
WKL 406	Duplicate Conc. (µg/m						
Test Code	Duplicate Prep DF (g/						
CSIC-01	Duplicate Dilution Fac						
Matrix	Spike+Sample (µg/ml						
Liquid							
Sample #	Volume of Spike (mL)						
blank	Spike Book Number						
Instrument Code	Total Volume						
Dionex	Spike Std. (µg/mL)						
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
K L Vogel	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
1/17/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	<11.052	ERR	N/A	-1.11E+01	ERR	ERR
Chloride (µg/g)	<22.104	ERR	N/A	-2.21E+01	ERR	ERR
Nitrite (µg/g)	<110.522	ERR	N/A	-1.11E+02	ERR	ERR
Nitrate (µg/g)	<110.522	ERR	N/A	-1.11E+02	ERR	ERR
Phosphate (µg/g)	<110.522	ERR	N/A	-1.11E+02	ERR	ERR
Sulfate (µg/g)	<110.522	ERR	N/A	-1.11E+02	ERR	ERR

Data Entry by:	[illegible]	Date:	20-Jan-95
Approved by:	[illegible]	Date:	1/25/95

Form L1 Rev. 2.0

Data Reprocessed On 01/17/1995 19:27:32

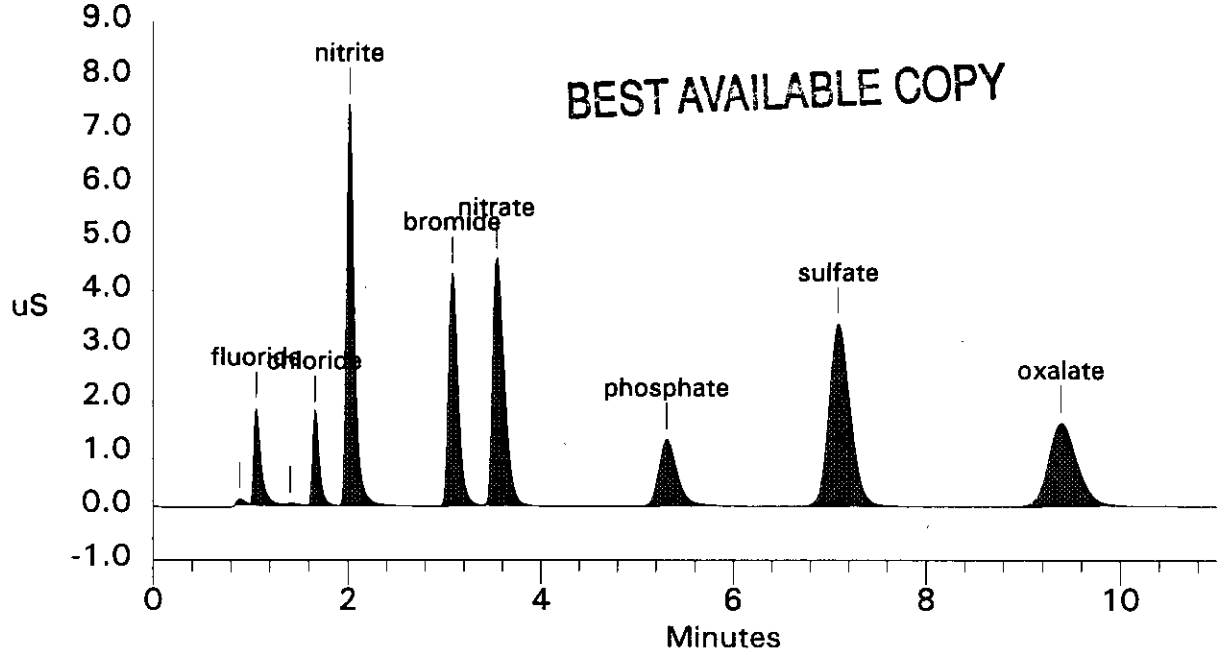
Sample Name: LMCS 60N9-C Date: 01/17/1995 17:22:25
Data File : C:\DX\DATA\95011711.D03
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 3 Detector:CDM-1
Analyst : Column:
1-19-95

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	107	563	2	
2	1.06	fluoride	56.266	1786	9099	2	1.92
3	1.41		0.000	41	300	2	
4	1.66	chloride	75.159	1727	8441	1	-1.19
5	2.02	nitrite	540.730	7454	42087	1	-1.94
6	3.08	bromide	578.890	4315	29662	1	-1.28
7	3.54	nitrate	584.774	4582	38941	1	0.85
8	5.31	phosphate	513.589	1232	16146	1	0.57
9	7.09	sulfate	599.065	3384	51538	1	0.00
10	9.39	oxalate	522.238	1551	31635	1	-0.11
		Totals	3470.710	26179	228413		

File: 95011711.D03 Sample: LMCS 60N9-C



BEST AVAILABLE COPY

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 262 TO 273.

Data Reprocessed On 01/17/1995 19:26:56

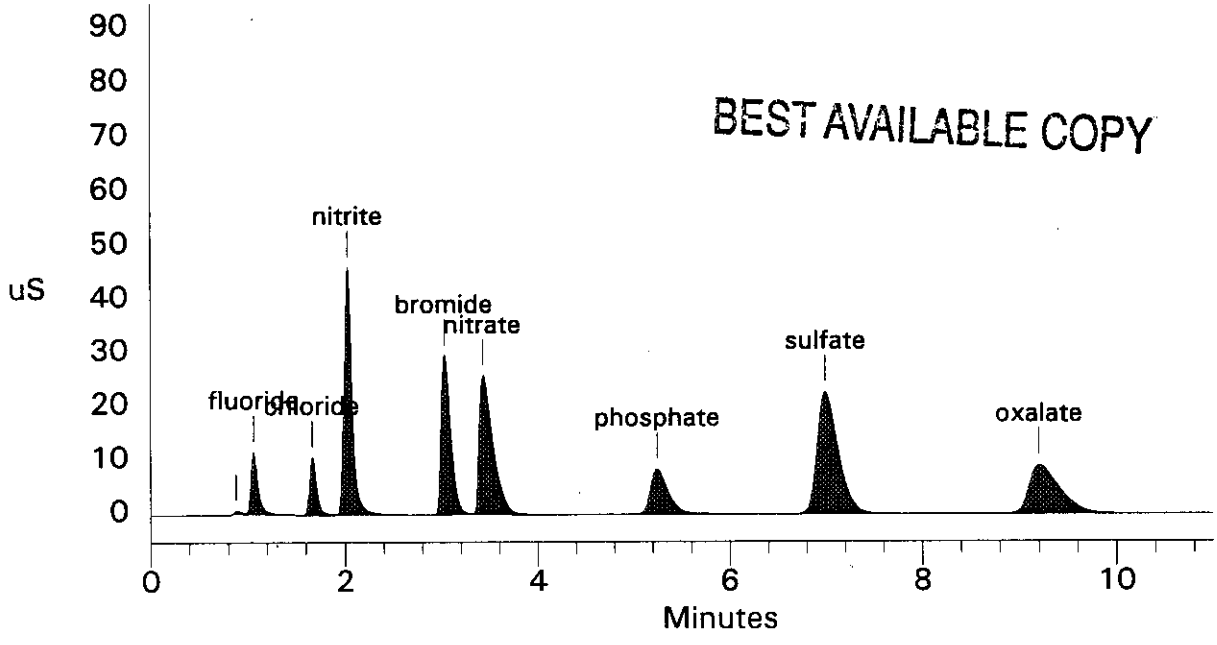
Sample Name: LMCS 60N9-C	Date: 01/17/1995 17:06:43
Data File : C:\DX\DATA\95011711.D02	
ethod : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 2	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	17.7	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	499	2429	2	
2	1.06	fluoride	56.736	11462	56408	2	1.92
3	1.66	chloride	78.199	10571	52695	1	-1.19
4	2.03	nitrite	554.441	46013	261484	1	-1.46
5	3.03	bromide	606.568	29570	202304	1	-2.88
6	3.43	nitrate	601.266	25587	254117	1	-2.28
7	5.24	phosphate	529.110	8392	108073	1	-0.76
8	6.99	sulfate	624.005	22657	344939	1	-1.41
9	9.20	oxalate	525.378	8992	197758	1	-2.13
		Totals	3575.704	163743	1480208		

File: 95011711.D02 Sample: LMCS 60N9-C



BEST AVAILABLE COPY

Data Reprocessed On 01/17/1995 19:26:15

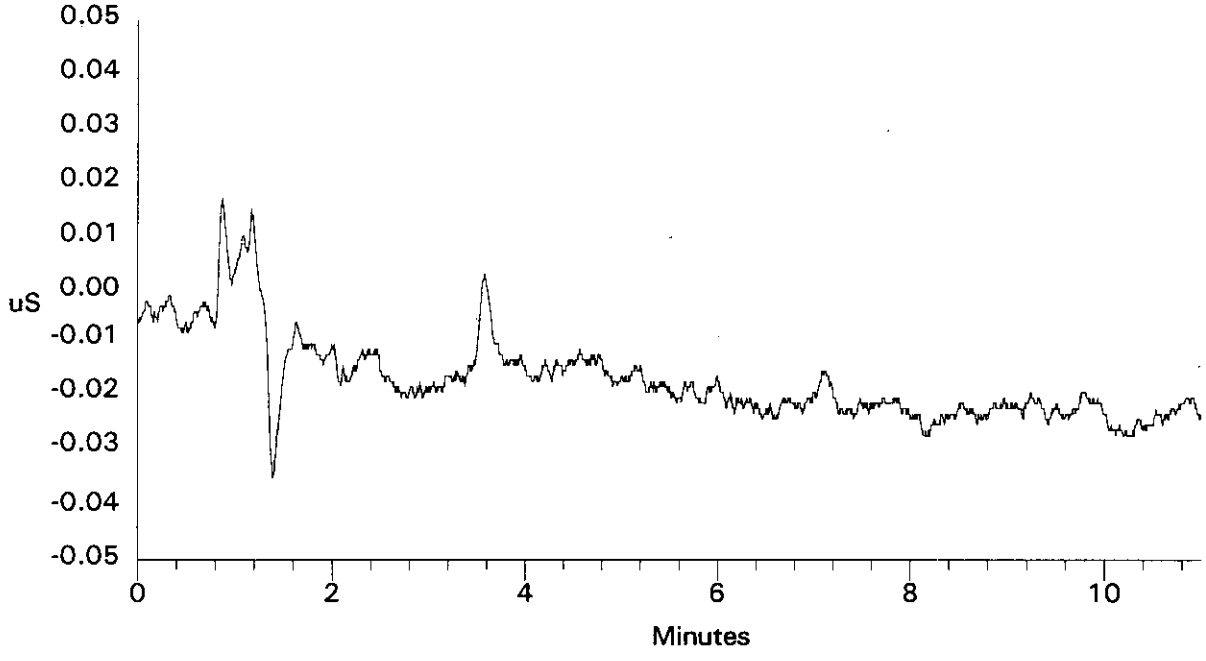
Sample Name: BLANK	Date: 01/17/1995 16:53:27
Data File : C:\DX\DATA\95011711.D01	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 1	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 95011711.D01 Sample: BLANK



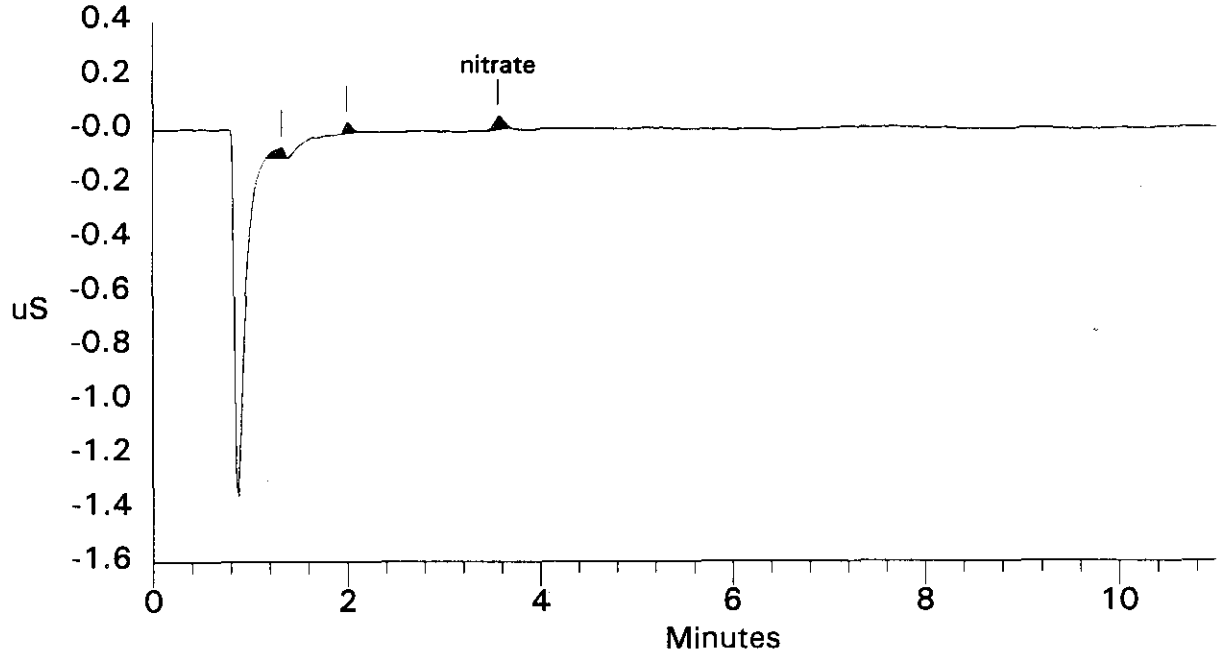
```
==============================================================================
| Sample Name: S94T000341 PREP BLANK          Date: 01/17/1995 19:53:30       |
| Data File  : C:\DX\DATA\95011711.D08                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
  CI Address: 1  System: 1  Inject#: 8                   Detector:CDM-1       |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3300	5Hz	0.00	11.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.32		0.000	41	334	1	
3	3.57	nitrate	0.276	49	335	1	1.71
		Totals	0.276	90	670		

File: 95011711.D08 Sample: S94T000341 PREP BLANK



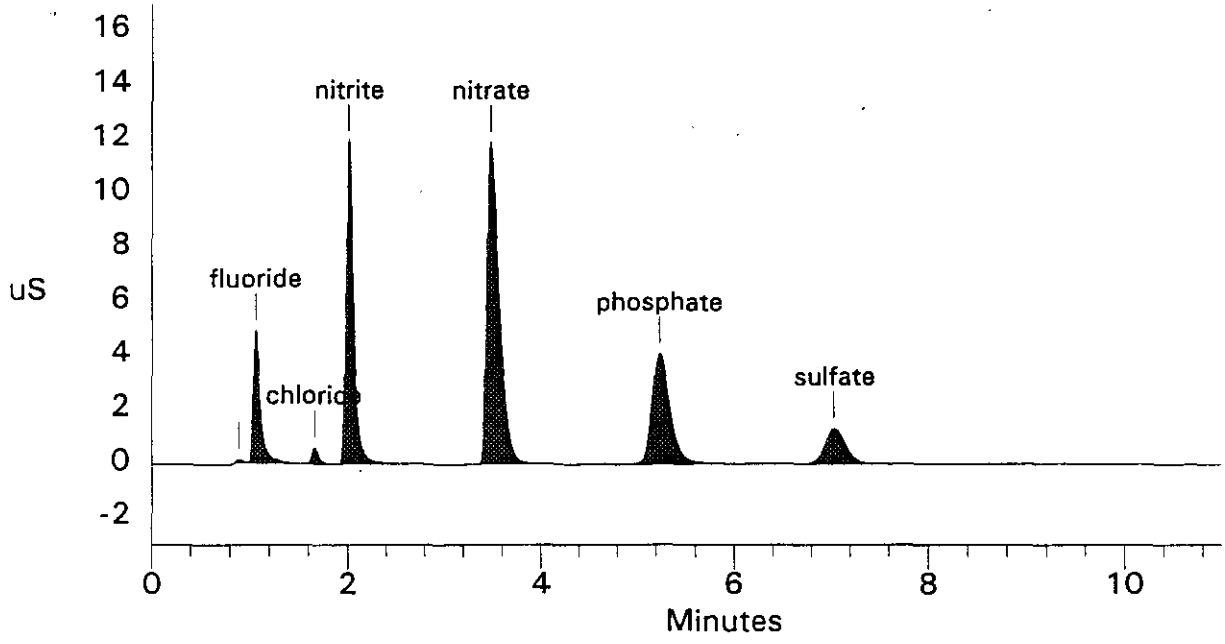
Sample Name: S94T000341 Date: 01/17/1995 20:20:03
Data File : C:\DX\DATA\95011711.D10
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	123	605	2	
2	1.06	fluoride	31.385	4889	25065	2	1.92
3	1.66	chloride	5.520	601	3010	1	-1.19
4	2.01	nitrite	175.055	11914	66708	1	-2.43
5	3.48	nitrate	318.171	11898	106853	1	-0.85
6	5.23	phosphate	326.366	4072	52767	1	-0.95
7	7.03	sulfate	51.643	1312	19998	1	-0.85
		Totals	908.140	34808	275007		

File: 95011711.D10 Sample: S94T000341



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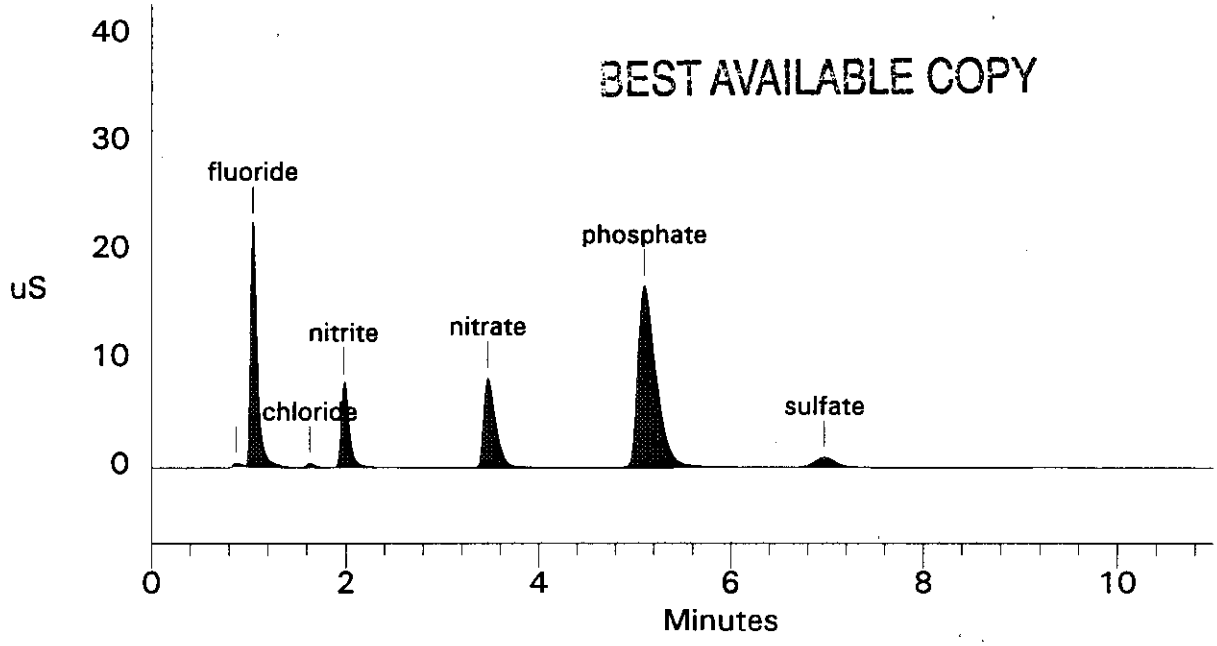
```
==========================================================================
| Sample Name: S94T000341 DUP                    Date: 01/17/1995 21:43:18 |
| Data File  : C:\DX\DATA\95011711.D11                                     |
| Method     : C:\DX\METHOD\KIT.MET                                        |
  CI Address: 1  System: 1  Inject#: 11                  Detector:CDM-1    |
| Analyst    :                Column:                                     |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	288	1363	2	
2	1.04	fluoride	119.617	22399	109119	2	0.00
3	1.63	chloride	3.694	396	2037	1	-2.98
4	1.98	nitrite	119.783	7737	44971	1	-3.88
5	3.47	nitrate	219.459	8302	72361	1	-1.14
6	5.10	phosphate	1135.428	16792	222381	1	-3.41
7	6.97	sulfate	38.717	947	14465	1	-1.69
		Totals	1636.698	56860	466696		

File: 95011711.D11 Sample: S94T000341 DUP



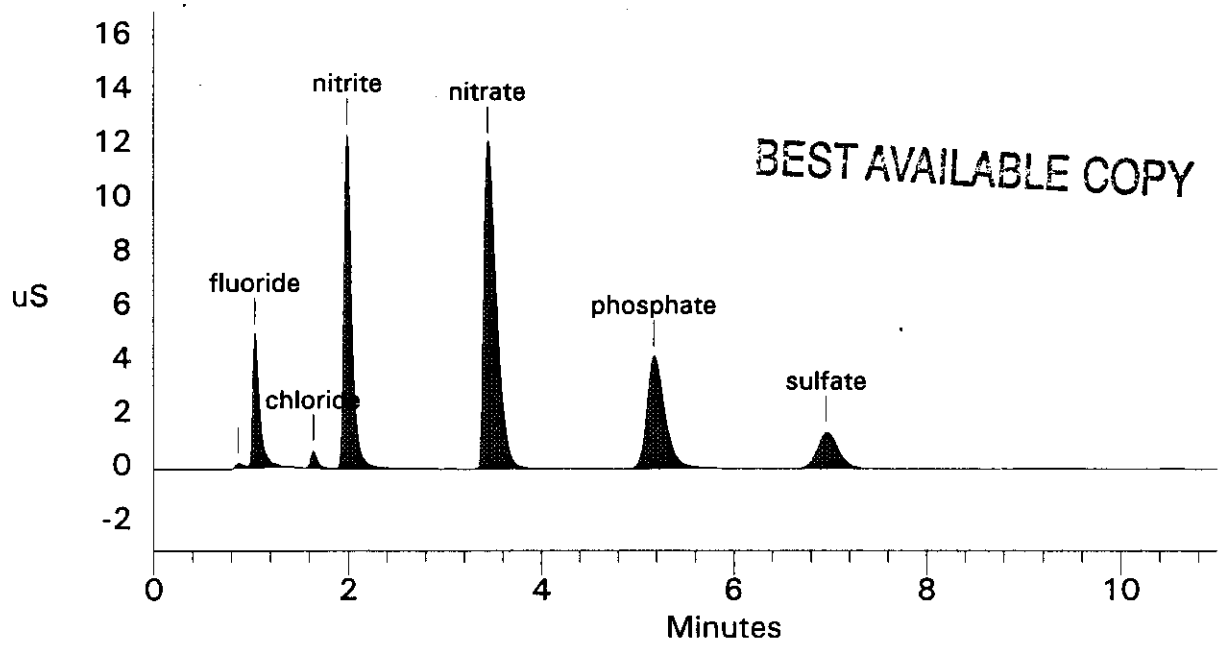
```
==========================================================================
| Sample Name: S94T000341                    Date: 01/17/1995 22:08:04    |
| Data File   : C:\DX\DATA\95011711.D13                                   |
| Method      : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 13                Detector:CDM-1    |
| Analyst     :                Column:                                    |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	141	698	2	
2	1.04	fluoride	30.253	4932	24126	2	0.00
3	1.64	chloride	5.459	629	2978	1	-2.38
4	1.99	nitrite	179.023	12370	68273	1	-3.40
5	3.44	nitrate	323.411	12061	108707	1	-1.99
6	5.17	phosphate	330.737	4164	53524	1	-2.08
7	6.96	sulfate	52.185	1345	20231	1	-1.83
		Totals	921.069	35643	278536		

File: 95011711.D13 Sample: S94T000341



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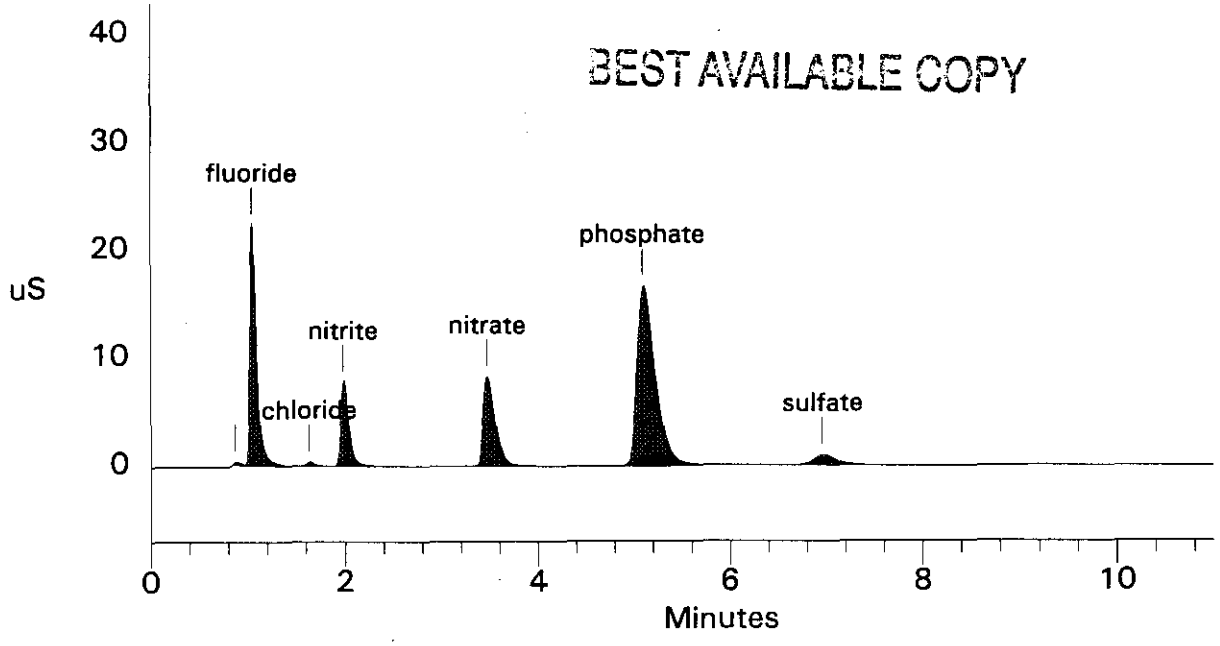
```
==========================================================================
| Sample Name: S94T000341 DUP                    Date: 01/17/1995 21:56:18 |
| Data File   : C:\DX\DATA\95011711.D12                                    |
| Method      : C:\DX\METHOD\KIT.MET                                       |
|  CI Address: 1  System: 1  Inject#: 12                  Detector:CDM-1   |
| Analyst     :                Column:                                     |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	288	1357	2	
2	1.04	fluoride	118.078	22325	107406	2	0.00
3	1.63	chloride	3.674	399	2026	1	-2.98
4	1.98	nitrite	119.534	7756	44873	1	-3.88
5	3.47	nitrate	218.945	8281	72184	1	-1.14
6	5.09	phosphate	1127.196	16657	220200	1	-3.60
7	6.96	sulfate	38.702	943	14458	1	-1.83
		Totals	1626.127	56649	462505		

File: 95011711.D12 Sample: S94T000341 DUP



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Dup of Dup

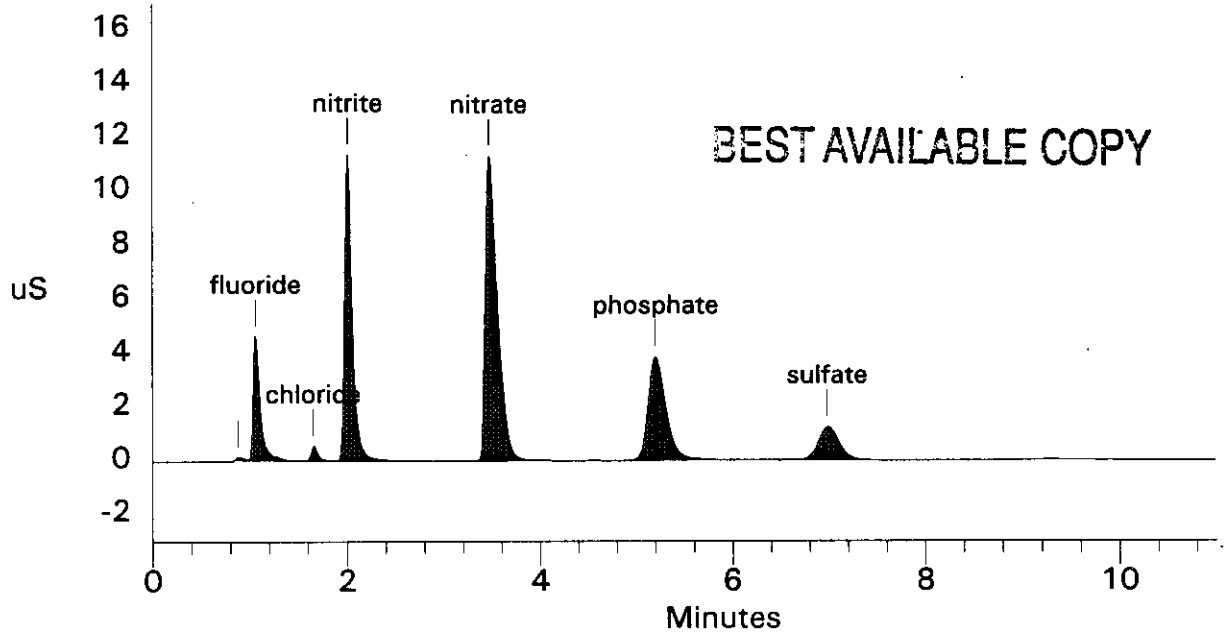
```
==============================================================================
| Sample Name: S94T000341                      Date: 01/17/1995 22:19:58      |
| Data File  : C:\DX\DATA\95011711.D14                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 14                  Detector:CDM-1      |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	103	507	2	
2	1.06	fluoride	28.990	4599	23082	2	1.92
3	1.65	chloride	4.946	546	2704	1	-1.79
4	2.01	nitrite	165.214	11331	62830	1	-2.43
5	3.47	nitrate	298.133	11280	99785	1	-1.14
6	5.20	phosphate	305.405	3833	49153	1	-1.52
7	6.98	sulfate	49.090	1248	18904	1	-1.55
		Totals	851.779	32940	256965		

File: 95011711.D14 Sample: S94T000341



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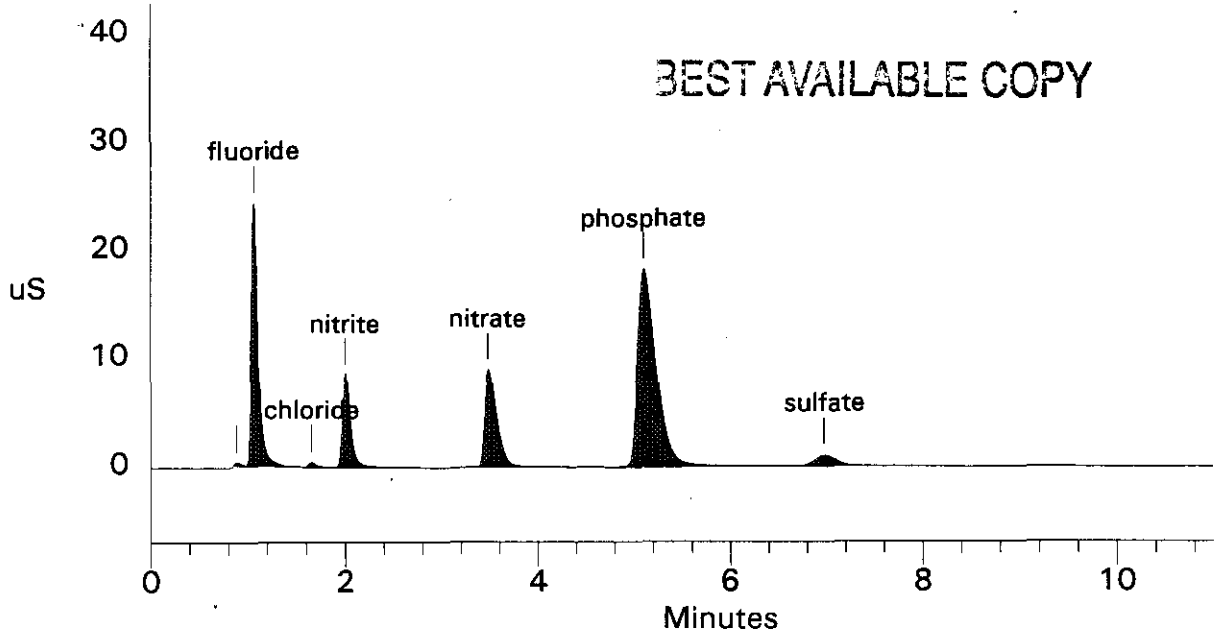
```
==============================================================================
| Sample Name: S94T000341 DUP                    Date: 01/17/1995 22:32:09    |
| Data File  : C:\DX\DATA\95011711.D15                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 15                  Detector:CDM-1      |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	280	1316	2	
2	1.06	fluoride	125.229	24380	115467	2	1.92
3	1.65	chloride	3.899	429	2146	1	-1.79
4	2.00	nitrite	130.147	8450	49039	1	-2.91
5	3.48	nitrate	233.800	8891	77322	1	-0.85
6	5.10	phosphate	1214.643	18194	244190	1	-3.41
7	6.97	sulfate	41.268	1022	15555	1	-1.69
		Totals	1748.986	61645	505035		

File: 95011711.D15 Sample: S94T000341 DUP



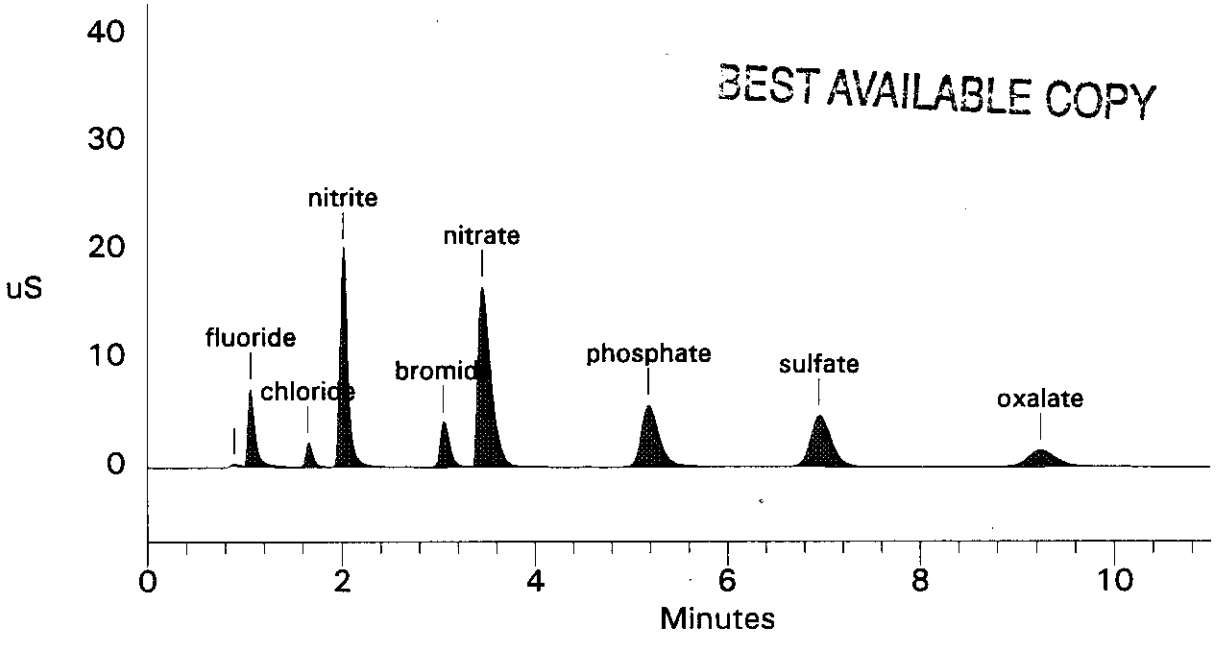
```
==============================================================================
| Sample Name: S94T000341 SPIKE                Date: 01/17/1995 22:55:36      |
| Data File  : C:\DX\DATA\95011711.D17                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 17                  Detector:CDM-1      |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3300	5Hz	0.00	11.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	199	928	2	
2	1.06	fluoride	44.097	7126	35801	2	1.92
3	1.65	chloride	20.986	2242	11352	1	-1.79
4	2.01	nitrite	292.702	20112	113349	1	-2.43
5	3.05	bromide	114.964	4133	28255	1	-2.24
6	3.45	nitrate	446.579	16618	152997	1	-1.71
7	5.18	phosphate	443.891	5712	73551	1	-1.89
8	6.95	sulfate	169.617	4739	71317	1	-1.97
9	9.24	oxalate	105.454	1533	30674	1	-1.70
		Totals	1638.290	62414	518222		

File: 95011711.D17 Sample: S94T000341 SPIKE



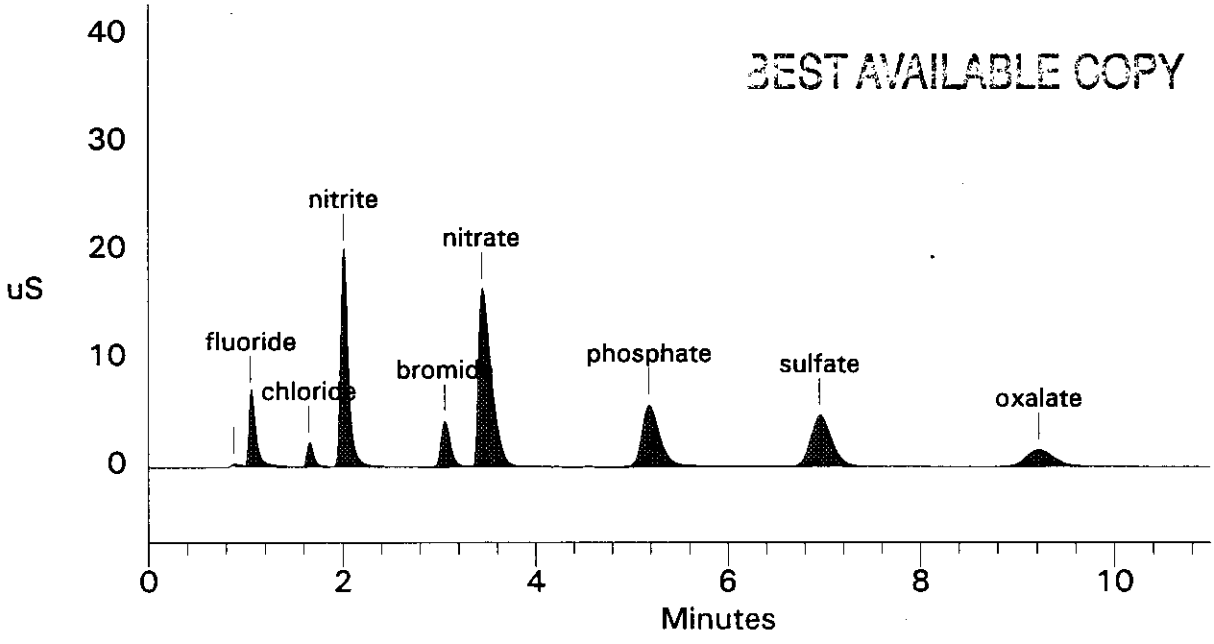
```
==========================================================================
| Sample Name: S94T000341 SPIKE                Date: 01/17/1995 23:08:46  |
| Data File  : C:\DX\DATA\95011711.D18                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
  CI Address: 1  System: 1  Inject#: 18                  Detector:CDM-1   |
| Analyst    :                 Column:                                   |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3300	5Hz	0.00	11.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	198	975	2	
2	1.05	fluoride	43.218	6771	35046	2	0.96
3	1.65	chloride	20.445	2203	11057	1	-1.79
4	2.01	nitrite	288.892	20030	111830	1	-2.43
5	3.06	bromide	114.274	4180	28076	1	-1.92
6	3.44	nitrate	445.827	16416	152722	1	-1.99
7	5.18	phosphate	438.352	5676	72550	1	-1.89
8	6.95	sulfate	168.305	4715	70738	1	-1.97
9	9.22	oxalate	104.750	1525	30457	1	-1.91
		Totals	1624.063	61714	513452		

File: 95011711.D18 Sample: S94T000341 SPIKE



LABCORE Data Entry Template for Worklist# 419

Analyst: [illegible] **Instrument:** IC01 _____ **Method:** LA-533-105 C-2

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@IC-01	CL-02	SOLID	<.1	<.1	N/A	ug/g
1	BLNK-PREP				@IC-01	F-02	SOLID	<.2	<.2	N/A	ug/g
1	BLNK-PREP				@IC-01	NO2-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	BR-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	NO3-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	PO4-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	SO4-02	SOLID	<1	<1	N/A	ug/g
1	BLNK-PREP				@IC-01	OXALATE2	SOLID	<1	<1	N/A	ug/g
2	STD	Dona			@IC-01	F-02	SOLID	56	55.4	N/A	ug/g
2	STD				@IC-01	CL-02	SOLID	75	72.5	N/A	ug/g
2	STD				@IC-01	NO2-02	SOLID	528	500	N/A	ug/g
2	STD				@IC-01	BR-02	SOLID	572	545	N/A	ug/g
2	STD				@IC-01	NO3-02	SOLID	578	568	N/A	ug/g
2	STD				@IC-01	PO4-02	SOLID	516	504	N/A	ug/g
2	STD				@IC-01	SO4-02	SOLID	599	576	N/A	ug/g
2	STD				@IC-01	OXALATE2	SOLID	503	484	N/A	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	F-02	SOLID	N/A	1.97E3 ~~2.05E3~~	<10.1	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	CL-02	SOLID	N/A	6.83E2 ~~6.66E2~~	<20.2	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	NO2-02	SOLID	N/A	2.62E4 ~~2.62E4~~	<100.7	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	BR-02	SOLID	N/A	<100.7	<100.7	ug/g

Sample wt. 9.925g/L
Dup wt. 10.108g/L

Data Entry Comments:

Results are posted 2/3/95 JMF.

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 419

Analyst: _____ **Instrument:** IC01 _____ **Method:** LA-533-105

Worklist Comment: C-108 IC. JMF

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
3	SAMPLE	S94T000405	0	W	@IC-01	NO3-02	SOLID	N/A	4.63E4	<100.7	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	PO4-02	SOLID	N/A	1.05E5	<100.7	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	SO4-02	SOLID	N/A	~~5.49E3~~ 5.53E3 gmF 2/1/95	<100.7	ug/g
3	SAMPLE	S94T000405	0	W	@IC-01	OXALATE2	SOLID	N/A	<100.7	<100.7	ug/g
4	DUP	S94T000405	0	W	@IC-01	CL-02	SOLID	~~6.01E2~~ 6.83E2	~~6.80E2~~ 7.42E2	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	F-02	SOLID gmF 2/1/95	~~2.05E3~~ 1.97E3	~~2.73E3~~ 2.71E3 gmF 2/1/95	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	NO2-02	SOLID	2.62E4	2.67E4	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	BR-02	SOLID	<100.7	~~<100.7~~ <98.9 gmF 2/1/95	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	NO3-02	SOLID	4.63E4	4.98E4	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	PO4-02	SOLID	1.05E5	1.13E5	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	SO4-02	SOLID gmF 2/1/95	~~5.49E3~~ 5.53E3	~~5.81E3~~ 5.86E3 gmF 2/1/95	N/A	ug/g
4	DUP	S94T000405	0	W	@IC-01	OXALATE2	SOLID	<100.7	~~<100.7~~ <98.9 gmF 2/1/95	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	CL-02	SOLID	100	89.5	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	F-02	SOLID	100	82.9	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	NO2-02	SOLID	100	96.6	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	BR-02	SOLID	100	~~91.7~~ 81.8 gmF 2/1/95	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	NO3-02	SOLID	100	91.7	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	PO4-02	SOLID	100	91.1	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	SO4-02	SOLID	100	81.1	N/A	ug/g
5	SPK	S94T000405	0	W	@IC-01	OXALATE2	SOLID	100	81.3	N/A	ug/g

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 419

Analyst: _____ **Instrument:** IC01 ____ **Method:** LA-533-105

Worklist Comment: [illegible]

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit

Final page for worklist # 419

E.H. Colvin
Jann Fuze for Ed Colvin

Analyst Signature

2/7/95

Date

See first page for signature
Jann Fuze
2/1/95

[illegible]

2/2/95

Reviewed 2/3/95 - Jann Fuze

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

Page: 3

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

ANION ANALYSIS ON DIONEX MODEL 4000I - PREPARED SAMPLES

LA-533-105 (C-1)

		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	1.96E+01	6.78E+00	2.60E+02	4.60E+02	1.04E+03	5.49E+01
sample	Sample Prep DF (g/L)	9.925	9.925	9.925	9.925	9.925	9.925
Work List	Sample Dilution Facto	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
419	Duplicate Conc. (µg/m	2.74E+01	7.50E+00	2.70E+02	5.03E+02	1.14E+03	5.92E+01
Test Code	Duplicate Prep DF (g/	10.108	10.108	10.108	10.108	10.108	10.108
@ic-01	Duplicate Dilution Fac	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01	2.10E+01
Matrix	Spike+Sample (µg/ml	2.90E+01	2.02E+01	3.62E+02	5.66E+02	1.14E+03	1.52E+02
solid							
Sample #	Volume of Spike (mL)	0.1	0.1	0.1	0.1	0.1	0.1
S94T000406	Spike Book Number	70n9a	70n9a	70n9a	70n9a	70n9a	70n9a
Instrument Code	Total Volume	10.50	10.50	10.50	10.50	10.50	10.50
ic01	Spike Std. (µg/mL)	56	75	528	578	516	599
Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L						
Ed Colvin	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100						
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor						
01/25/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample						
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa						
	Spike Actual = Spike Found / Spike Recovery						

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	1.97E+03	2.71E+03	31.4%	9.47E+02	83.9%	1.13E+03
Chloride (µg/g)	6.83E+02	7.42E+02	8.3%	1.35E+03	89.5%	1.51E+03
Nitrite (µg/g)	2.62E+04	2.67E+04	1.9%	1.03E+04	96.6%	1.06E+04
Nitrate (µg/g)	4.63E+04	4.98E+04	7.1%	1.07E+04	91.7%	1.16E+04
Phosphate (µg/g)	1.05E+05	1.13E+05	7.6%	9.47E+03	91.1%	1.04E+04
Sulfate (µg/g)	5.53E+03	5.86E+03	5.7%	9.78E+03	81.1%	1.21E+04

Data Entry by:	Jann Lye	Date:	01-Feb-95
Approved by:	Jann Lye	Date:	2/1/95

Form L1 Rev. 2.0

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

JMF 2/1/95 JMF 2/1/95
Bromide Oxalate

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)		FLOURID	CHLORID	~~NITRITE~~	~~NITRATE~~	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL			1.00E+00	1.00E+00		
sample	Sample Prep DF (g/L)	9.925	9.925	9.925	9.925	9.925	9.925
Work List	Sample Dilution Facto			2.10E+01	2.10E+01		
419	Duplicate Conc. (µg/m			1.00E+00	1.00E+00		
Test Code	Duplicate Prep DF (g/	10.108	10.108	10.108	10.108	10.108	10.108
@ic-01	Duplicate Dilution Fac			2.10E+01	2.10E+01		
Matrix	Spike+Sample (µg/ml			9.46E+01	8.28E+01		
solid							
Sample #	Volume of Spike (mL)			0.1	0.1		
S94T000406	Spike Book Number	70n9a	70n9a	70n9a	70n9a	70n9a	70n9a
Instrument Code	Total Volume			10.50	10.50		
	Spike Std. (µg/mL)			572	503		

Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L
Ed Colvin	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor
01/26/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa
	Spike Actual = Spike Found / Spike Recovery

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	<0.000	<0.000	N/A	0.00E+00	ERR	ERR
Chloride (µg/g)	<0.000	<0.000	N/A	0.00E+00	ERR	ERR
~~Nitrite (µg/g)~~ Bromide	<100.756	<98.932	N/A	9.43E+03	81.8%	1.15E+04
~~Nitrate (µg/g)~~ Oxalate	<100.756	<98.932	N/A	8.24E+03	81.3%	1.01E+04
Phosphate (µg/g)	<0.000	<0.000	N/A	0.00E+00	ERR	ERR
Sulfate (µg/g)	<0.000	<0.000	N/A	0.00E+00	ERR	ERR

2/1/95 JMF
2/1/95 JMF

Data Entry by:	Jann Frye	Date:	01-Feb-95
Approved by:	Jann Frye	Date:	2/1/95

Form L1 Rev. 2.0

Detection Limit in sample

ANION ANALYSIS ON DIONEX MODEL 4000i - PREPARED SAMPLES

LA-533-105 (C-1)

		FLOURID	CHLORID	NITRITE	NITRATE	PHOSPHATE	SULFATE
Type	Sample Conc. (µg/mL	1.00E-02	2.00E-02	1.00E-01	1.00E-01	1.00E-01	1.00E-01
blank	Sample Prep DF (g/L)	9.925	9.925	9.925	9.925	9.925	9.925
Work List	Sample Dilution Factc	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
419	Duplicate Conc. (µg/n						
Test Code	Duplicate Prep DF (g/						
	Duplicate Dilution Fac						
Matrix	Spike+Sample (µg/ml						
liquid							
Sample #	Volume of Spike (mL)						
s94t000406	Spike Book Number						
Instrument Code	Total Volume						
IC01	Spike Std. (µg/mL)						

Analyst	Results in µg/g sample = Analyte/(g sample/L) * 1000 mL/L
COLVIN	Relative Percent Difference = ((Sample-Duplicate)/((Sample + Duplicate)/2)) * 100
Date	Less than Values are Calculated from the Detection Limit*Dilution Factor
01/25/95	Spike Recovery = [((Spike+Sample)-(Sample)*(Vol.of Sample&Diluent))/((Spike Vol.)*(Spike Std.)*(Sample
Time	Note: (For Spike Recovery When The Sample Conc. is Less Than Detection Limit You Do NOT Subtract Sa
08:42	Spike Actual = Spike Found / Spike Recovery

v RESULTS v	SAMPLE	DUPLICA	DUP RPD	SPIKE	SPIKE RECV'	SPIKE AC
Flouride (µg/g)	<10.076	ERR	N/A	-1.01E+00	ERR	ERR
Chloride (µg/g)	<20.151	ERR	N/A	-2.02E+00	ERR	ERR
Nitrite (µg/g)	<100.756	ERR	N/A	-1.01E+01	ERR	ERR
Nitrate (µg/g)	<100.756	ERR	N/A	-1.01E+01	ERR	ERR
Phosphate (µg/g)	<100.756	ERR	N/A	-1.01E+01	ERR	ERR
Sulfate (µg/g)	<100.756	ERR	N/A	-1.01E+01	ERR	ERR

Data Entry by:		Date:	01-Feb-95
Approved by:		Date:	2/1/95

Form L1 Rev. 2.0 Page 1 of 1

Sample Name: 70N9-A STD Date: 01/25/1995 08:57:40
Data File : C:\DX\DATA\95012511.D02
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 2 Detector:CDM-1
Analyst : Ed Colvin Column: AG4A-SC,AS4A-SC, SRS

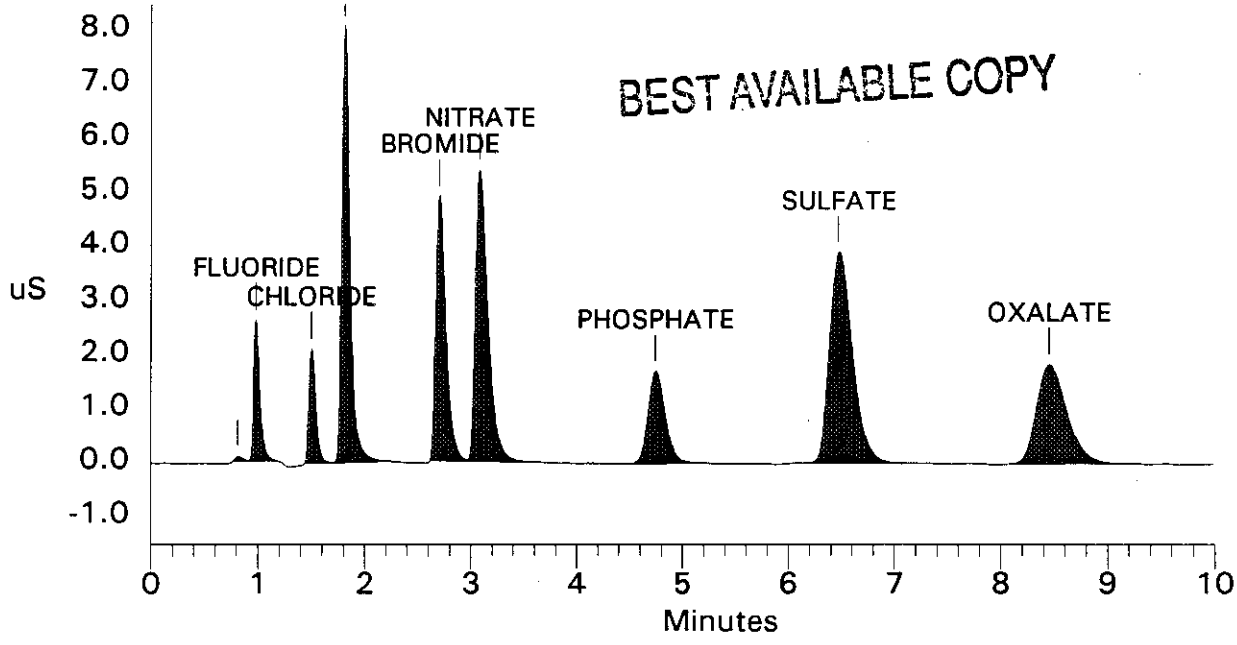
EC 01-25-95

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	88	415	2	
2	0.98	FLUORIDE	55.393	2620	10603	2	0.00
3	1.50	CHLORIDE	72.548	2115	9449	1	0.00
4	1.81	NITRITE	499.629	8054	43404	1	0.00
5	2.70	BROMIDE	544.857	4898	32728	2	0.14
6	3.08	NITRATE	568.494	5396	44229	2	0.00
7	4.74	PHOSPHATE	503.596	1720	19575	1	0.00
8	6.47	SULFATE	576.390	3900	58641	1	0.00
9	8.45	OXALATE	484.071	1856	36660	1	0.00
		Totals	3304.977	30646	255704		

File: 95012511.D02 Sample: 70N9-A STD



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 280 TO 287

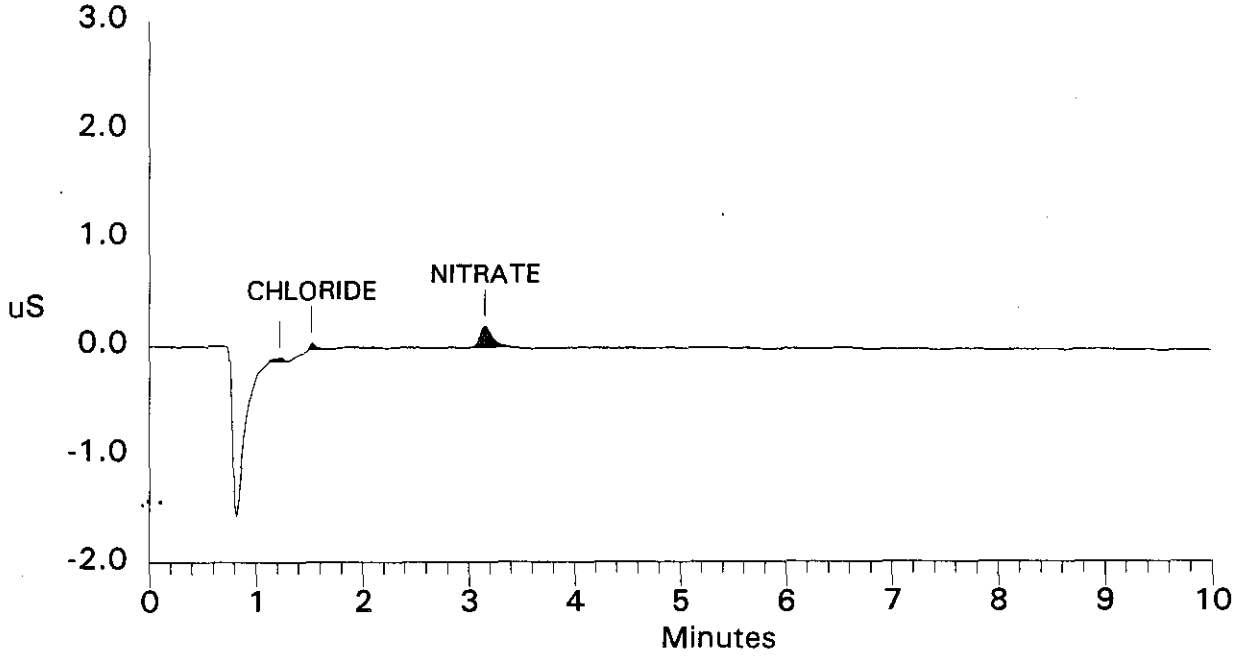
```
==============================================================================
| Sample Name: BLANK                          Date: 01/25/1995 08:42:22       |
| Data File  : C:\DX\DATA\95012511.D01                                        |
| Method     : C:\DX\METHOD\ANIONS.MET                                        |
  CI Address: 1  System: 1  Inject#: 1                   Detector:CDM-1       |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS                    |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.52	CHLORIDE	0.003	56	219	1	0.00
3	3.15	NITRATE	0.586	189	1471	1	0.00
		Totals	0.589	245	1690		

File: 95012511.D01 Sample: BLANK



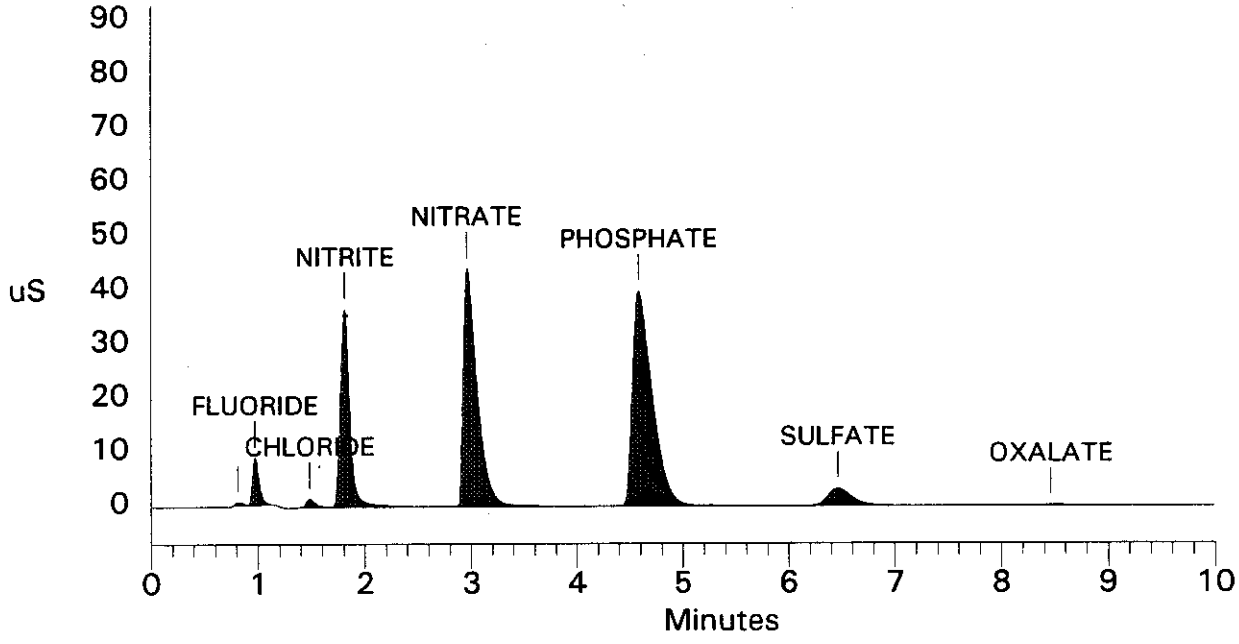
```
==========================================================================
| Sample Name: S94T000405                    Date: 01/25/1995 09:30:45    |
| Data File  : C:\DX\DATA\95012511.D04                                    |
| Method     : C:\DX\METHOD\ANIONS.MET                                    |
| ACI Address: 1  System: 1  Inject#: 4                  Detector:CDM-1   |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS                |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	11	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	553	2472	2	
2	0.97	FLUORIDE	20.319	8730	37317	2	0.00
3	1.48	CHLORIDE	6.561	1475	7858	1	0.00
4	1.81	NITRITE	264.814	36669	222837	1	0.00
5	2.96	NITRATE	470.150	44089	397569	1	0.00
6	4.58	PHOSPHATE	878.540	39834	512962	1	0.00
7	6.46	SULFATE	54.488	3239	50517	1	0.00
8	8.46	OXALATE	1.050	45	729	1	0.00
		Totals	1695.922	134634	1232260		

File: 95012511.D04 Sample: S94T000405



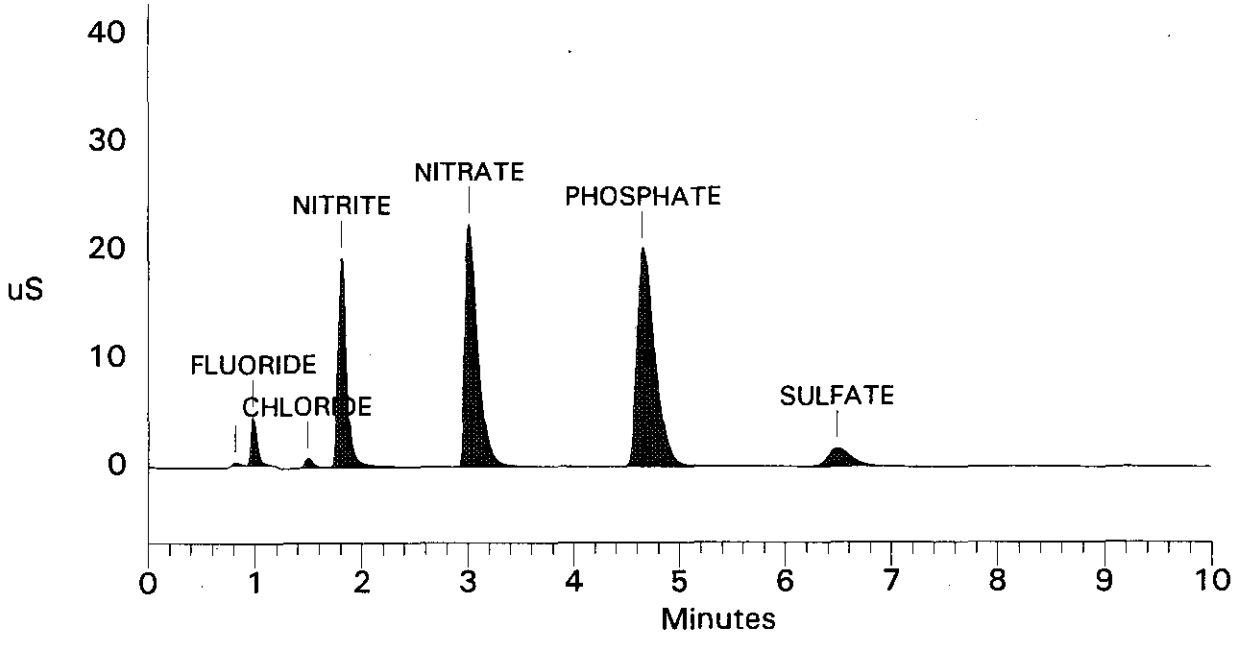
```
==============================================================================
| Sample Name: S94T000405                        Date: 01/25/1995 11:03:33    |
| Data File  : C:\DX\DATA\95012511.D06                                        |
| Method     : C:\DX\METHOD\ANIONS.MET                                        |
  CI Address: 1  System: 1  Inject#: 6                     Detector:CDM-1     |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS                    |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00	200	

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	268	1221	2	
2	0.98	FLUORIDE	19.590	4503	18426	2	0.00
3	1.49	CHLORIDE	6.786	844	4316	2	0.00
4	1.81	NITRITE	260.200	19383	112125	2	0.00
5	3.01	NITRATE	459.775	22453	189714	1	0.00
6	4.65	PHOSPHATE	1041.631	20138	238688	1	0.00
7	6.49	SULFATE	54.855	1665	25480	1	0.00
		Totals	1842.836	69255	589970		

File: 95012511.D06 Sample: S94T000405



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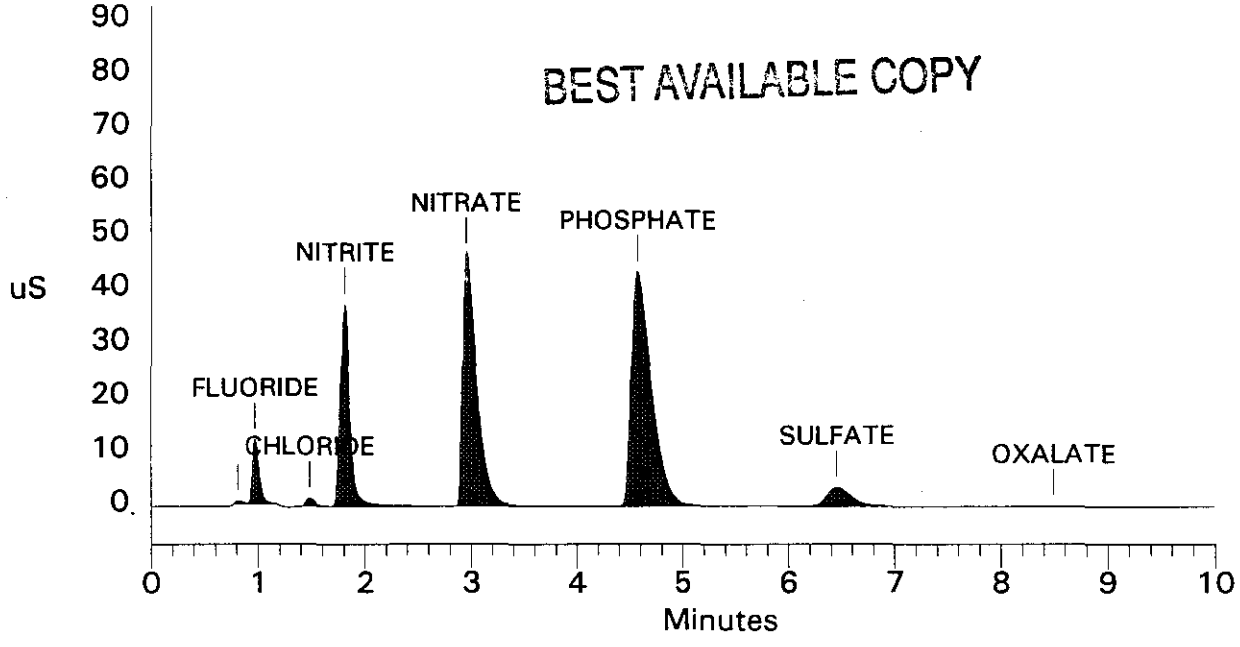
==========================================================================
| Sample Name: S94T000405  DUPLICATE          Date: 01/25/1995 09:43:29  |
| Data File  : C:\DX\DATA\95012511.D05                                   |
| Method     : C:\DX\METHOD\ANIONS.MET                                   |
| ACI Address: 1  System: 1  Inject#: 5                Detector:CDM-1    |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS              |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	598	2641	2	
2	0.97	FLUORIDE	27.575	11846	51205	2	0.00
3	1.48	CHLORIDE	6.873	1516	8227	2	0.00
4	1.81	NITRITE	270.884	37281	228157	2	0.00
5	2.95	NITRATE	499.198	46530	426087	1	0.00
6	4.57	PHOSPHATE	907.364	43266	567295	1	0.00
7	6.45	SULFATE	58.652	3466	54595	1	0.00
8	8.49	OXALATE	1.325	55	919	1	0.00
		Totals	1771.871	144559	1339125		

File: 95012511.D05 Sample: S94T000405 DUPLICATE



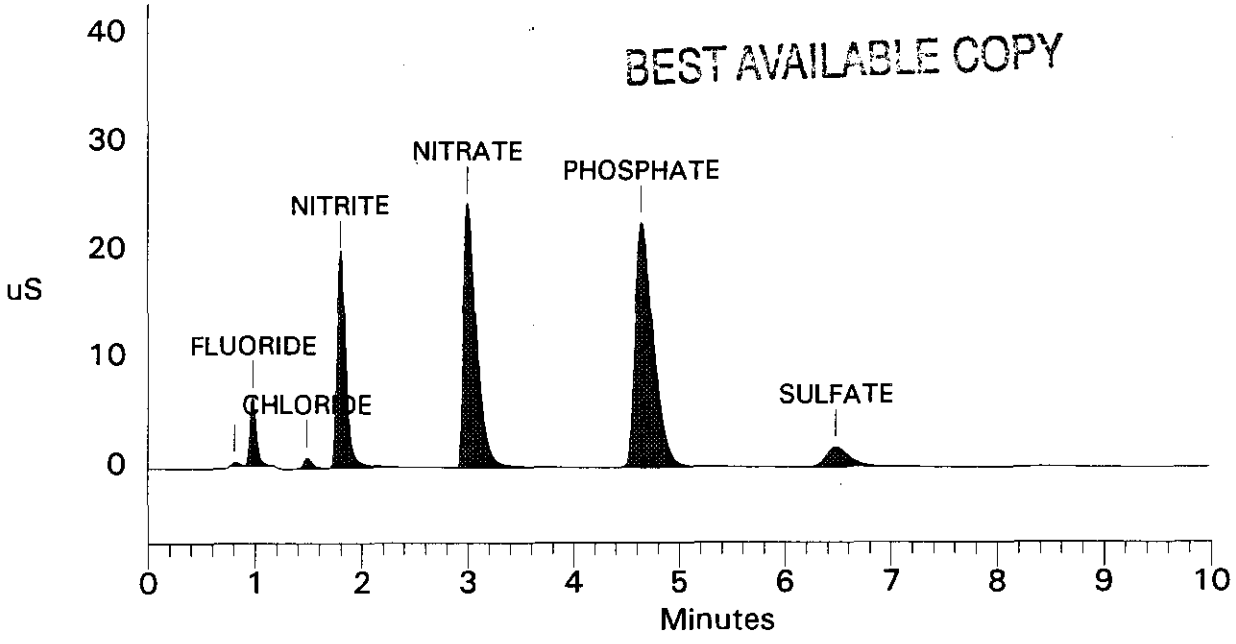
```
==============================================================================
| Sample Name: S94T000405  DUPLICATE          Date: 01/25/1995 11:19:40       |
| Data File  : C:\DX\DATA\95012511.D07                                        |
| Method     : C:\DX\METHOD\ANIONS.MET                                        |
  CI Address: 1  System: 1  Inject#: 7                    Detector:CDM-1      |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS                    |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	306	1373	2	
2	0.98	FLUORIDE	27.424	6201	26084	2	0.00
3	1.49	CHLORIDE	7.503	930	4757	1	0.00
4	1.80	NITRITE	270.237	19432	116584	1	0.00
5	3.00	NITRATE	502.876	24419	208998	1	0.00
6	4.64	PHOSPHATE	1143.512	22599	269721	1	0.00
7	6.48	SULFATE	59.211	1832	27685	1	0.00
		Totals	2010.763	75718	655203		

File: 95012511.D07 Sample: S94T000405 DUPLICATE



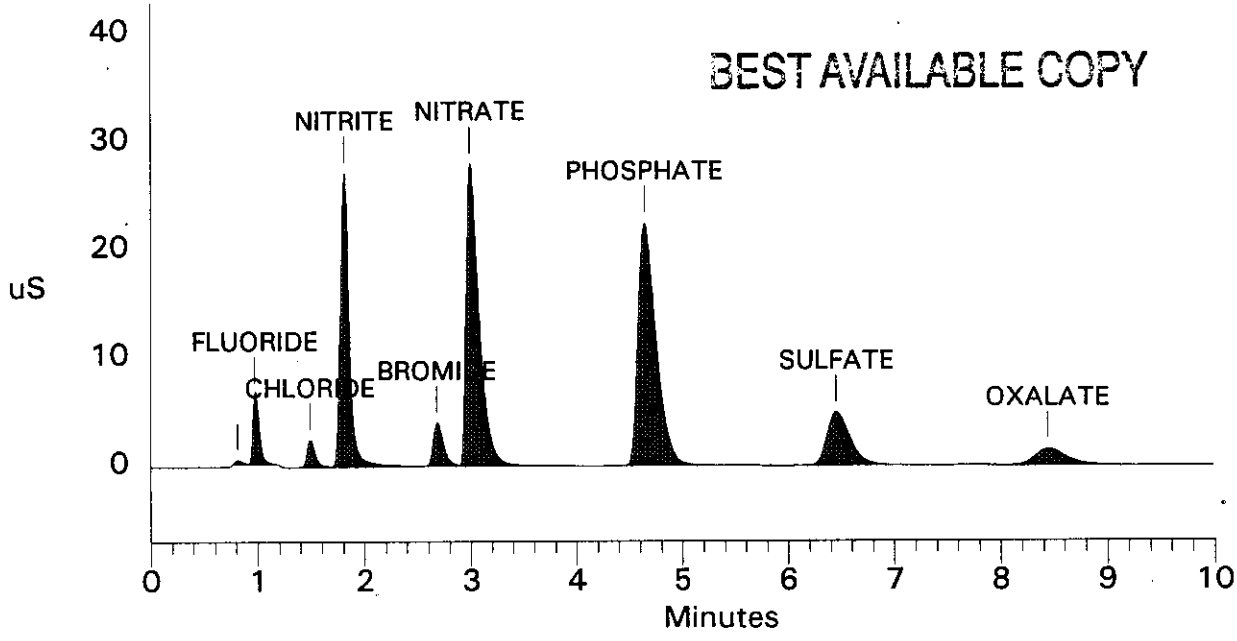
Sample Name: S94T000405 + SPIKE Date: 01/25/1995 11:57:05
Data File : C:\DX\DATA\95012521.D02
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 2 Detector:CDM-1
Analyst : Ed Colvin Column: AG4A-SC,AS4A-SC, SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	337	1475	1	
2	0.97	FLUORIDE	28.977	6476	27611	1	0.00
3	1.49	CHLORIDE	20.211	2437	12663	2	0.00
4	1.81	NITRITE	361.901	27121	157579	2	0.00
5	2.68	BROMIDE	94.567	4011	26944	2	2.39
6	2.99	NITRATE	566.375	27958	237831	2	0.00
7	4.64	PHOSPHATE	1135.106	22466	267070	1	0.00
8	6.45	SULFATE	151.822	4969	75165	1	0.00
9	8.44	OXALATE	82.882	1504	30153	1	0.00
		Totals	2441.840	97280	836492		

File: 95012521.D02 Sample: S94T000405 + SPIKE



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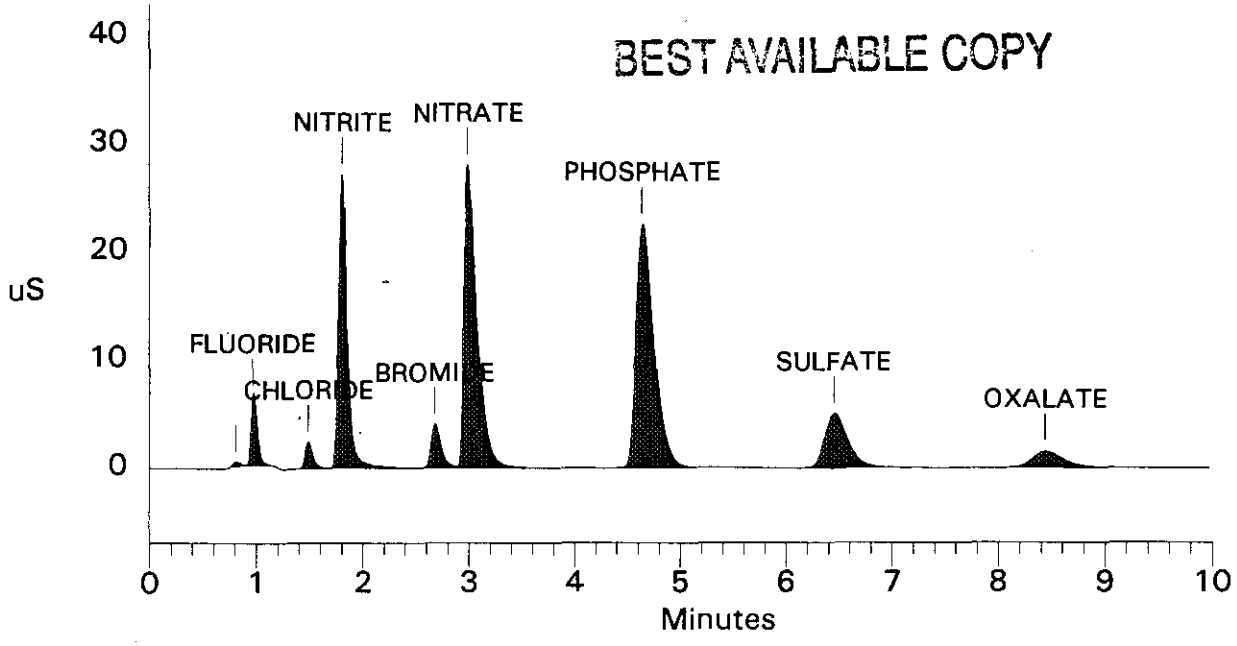
==============================================================================
| Sample Name: S94T000405 + SPIKE          Date: 01/25/1995 11:46:16          |
| Data File  : C:\DX\DATA\95012521.D01                                        |
| Method     : C:\DX\METHOD\ANIONS.MET                                        |
  CI Address: 1  System: 1  Inject#: 1                   Detector:CDM-1       |
| Analyst    : Ed Colvin      Column: AG4A-SC,AS4A-SC, SRS                    |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.81		0.000	354	1626	1	
2	0.97	FLUORIDE	28.292	6454	26937	1	0.00
3	1.49	CHLORIDE	18.987	2392	11893	1	0.00
4	1.81	NITRITE	355.676	27170	154780	1	0.00
5	2.68	BROMIDE	93.177	4024	26516	2	2.39
6	2.99	NITRATE	568.963	28069	239017	2	0.00
7	4.64	PHOSPHATE	1136.968	22513	267655	1	0.00
8	6.45	SULFATE	152.212	4993	75368	1	0.00
9	8.44	OXALATE	82.578	1505	30042	1	0.00
		Totals	2436.852	97475	833833		

File: 95012521.D01 Sample: S94T000405 + SPIKE



LABCORE Data Entry Template for Worklist# 1817

Analyst: ADP **Instrument:** IC01 IC01 **Book #** 96N9B

Method: LA-533-105 Rev/Mod C-2

Worklist Comment: Rush IC on C108. JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				@IC-01 F-02	SOLID		<.062	N/A	ug/g
		1	BLNK-PREP				@IC-01 CL-02	SOLID		<.083	N/A	ug/g
		1	BLNK-PREP				@IC-01 NO2-02	SOLID		<.532	N/A	ug/g
		1	BLNK-PREP				@IC-01 BR-02	SOLID		<.604	N/A	ug/g
		1	BLNK-PREP				@IC-01 NO3-02	SOLID		<.703	N/A	ug/g
		1	BLNK-PREP				@IC-01 PO4-02	SOLID		<.572	N/A	ug/g
		1	BLNK-PREP				@IC-01 SO4-02	SOLID		<.697	N/A	ug/g
		1	BLNK-PREP				@IC-01 OXALATE2	SOLID		<.511	N/A	ug/g
		2	STD				@IC-01 F-02	SOLID	59	57.01	N/A	ug/g
		2	STD				@IC-01 CL-02	SOLID	79	77.17	N/A	ug/g
		2	STD				@IC-01 NO2-02	SOLID	547	532.2	N/A	ug/g
		2	STD				@IC-01 BR-02	SOLID	575	551.5	N/A	ug/g
		2	STD				@IC-01 NO3-02	SOLID	614	592.1	N/A	ug/g
		2	STD				@IC-01 PO4-02	SOLID	546	506.1	N/A	ug/g
		2	STD				@IC-01 SO4-02	SOLID	631	603.3	N/A	ug/g
		2	STD				@IC-01 OXALATE2	SOLID	515	477.8	N/A	ug/g
94000017	C-108	3	SAMPLE	S95T001188	0	W	@IC-01 F-02	SOLID	N/A	1.72e3	6.41e2	ug/g
94000017	C-108	3	SAMPLE	S95T001188	0	W	@IC-01 CL-02	SOLID	N/A	1.10e3	8.58e2	ug/g

Data Entry Comments: Spike # 96N9B .100 ml
Sample 9.766g/L Dup 9.977 0g/L

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# 1817

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	NO2-02	SOLID	N/A	3.22e4	5.50e3	ug/g
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	BR-02	SOLID	N/A	<6.25e4 5 gmF 7/13/95	6.25e3	ug/g
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	NO3-02	SOLID	N/A	5.63e4	7.27e3	ug/g
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	PO4-02	SOLID	N/A	2.24e4	5.92e3	ug/g
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	SO4-02	SOLID	N/A	9.98e3	7.21e3	ug/g
94000017	C-108	3 SAMPLE	S95T001188	0	W	@IC-01	OXALATE2	SOLID	N/A	<6.11e4	5.28e3	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	F-02	SOLID	1.72e3	3.02e3	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	CL-02	SOLID	1.10e3	8.54e2	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	NO2-02	SOLID	3.22e4	2.72e4	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	BR-02	SOLID	<6.25e4 3	<6.11e4 3 gmF 7/13/95	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	NO3-02	SOLID	5.63e4	4.93e4	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	PO4-02	SOLID	2.24e4	3.17e4	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	SO4-02	SOLID	9.98e3	9.01e3	N/A	ug/g
94000017	C-108	4 DUP	S95T001188	0	W	@IC-01	OXALATE2	SOLID	<5.28e3	<5.17e3	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	CL-02	SOLID		106.9	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	F-02	SOLID		103.3	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	NO2-02	SOLID		97.9	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	BR-02	SOLID		93.4	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	NO3-02	SOLID		101.3	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	PO4-02	SOLID		93.0	N/A	ug/g
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	SO4-02	SOLID		94.4	N/A	ug/g

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# 1817

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
94000017	C-108	5 SPK	S95T001188	0	W	@IC-01	OXALATE2	SOLID		96.0	N/A	ug/g

Final page for worklist # 1817

Analyst Signature 7-13-95 Date

Analyst Signature 7-14-95 Date

Verified by ADR for Blondina Valenzuela 7-14-95

Data Entry Comments:

Sample prep noted that sample + dup appeared non-homogeneous. We ran a replicate of the sample and got good RPD's. There was also some evidence of organic acid interference with Fluoride. JMF

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.

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001188		
TEST CODE:	@ic-01	ANALYST:	Anthony Purinton
INSTRUMENT:	ic01(4000i)	ANALYSIS DATE:	07/13/95
WORK LIST #:	1817	SAMPLE POINT:	C108
BATCH ID:		SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
96N9B	96.6%	97.7%	97.3%	96.4%	92.7%	95.6%	95.9%	92.8%
S95T001188	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.98E+03	<6246.57	<5284.76
S95T001188 dup	3.02E+03	8.54E+02	2.72E+04	4.93E+04	3.17E+04	9.01E+03	<6114.46	<5173.00
Duplicate 1 RPD	55.0%	24.8%	17.1%	13.2%	34.4%	10.2%	N/A	N/A
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
S95T001188 spk	103.3%	100.9%	97.9%	101.3%	93.0%	94.4%	93.4%	96.0%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Janice Fuge	Date:	7/13/95
Chemist Approval:	Janice Fuge	Date:	7/13/95

LAB LEADER INFO	
Method:	LA-533-105 C-2
Matrix:	solid
Test Code:	@ic-01
Work List #:	1817
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	96N9B
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	07/13/95
Chemist:	Jann Frye
Analyst:	Anthony Purinton
Analysis Date:	07/13/95
Time Complete:	02:55 PM
Instrument Code:	Ic01(4000I)
Rerun:	0
Sample Prep:	water digest
Sample Point:	C106
Sample Type	
STANDARD	96N9B
SAMPLE 1	S95T001198
DUPLICATE 1	S95T001198 dup
SAMPLE 2	
DUPLICATE 2	
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001198 spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.082	<.083	<.532	<.703	<.572	<.697	<.604	<.511
Standard Data (µg/mL)	57.01	77.17	532.2	592.1	506.1	603.3	551.5	477.8
Sample 1 Data (µg/mL)	1.88E+01	1.07E+01	3.15E+02	5.50E+02	2.18E+02	9.75E+01	<.604	<.511
Sample 1 Dilution Factor	101	101	101	101	101	101	101	101
Sample 1 Prep DF	9.766	9.766	9.766	9.766	9.766	9.766	9.766	9.766
Duplicate 1 Data (µg/mL)	3.02E+01	8.52E+00	2.71E+02	4.92E+02	3.16E+02	8.99E+01	<.604	<.511
Duplicate 1 Dilution Factor	101	101	101	101	101	101	101	101
Duplicate 1 Prep DF	9.977	9.977	9.977	9.977	9.977	9.977	9.977	9.977
Sample 2 Data (µg/mL)								
Sample 2 Dilution Factor								
Sample 2 Prep DF								
Duplicate 2 Data (µg/mL)								
Duplicate 2 Dilution Factor								
Duplicate 2 Prep DF								
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	7.77E+01	9.04E+01	8.50E+02	1.17E+03	7.26E+02	6.93E+02	5.37E+02	4.94E+02
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
Std. Conc. (µg/mL)	58	79	547	614	548	631	575	515
Detection Limit	0.082	0.083	0.532	0.703	0.572	0.697	0.604	0.511
Matrix Detection Limit 1	5.41E+02	8.58E+02	5.60E+03	7.27E+03	5.92E+03	7.21E+03	6.25E+03	5.28E+03
Matrix Detection Limit 2	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	96.6%	97.7%	97.3%	96.4%	92.7%	95.6%	95.9%	92.8%
Sample 1 in µg/g	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.98E+03	<6246.57	<5284.76
Duplicate 1 in µg/g	3.02E+03	8.54E+02	2.72E+04	4.93E+04	3.17E+04	9.01E+03	<6114.46	<5173.00
Duplicate 1 RPD	55.0%	24.8%	17.1%	13.2%	34.4%	10.2%	N/A	N/A
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Spike % Recovery	103.3%	100.9%	97.9%	101.3%	93.0%	94.4%	93.4%	96.0%

Data Entry by: Jann Frye Date: 07/13/95
Approved by: Jann Frye Date: 7/13/95
Form DIONEX.WB1 Rev. 1.3

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WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001188 & sample		
TEST CODE:	@ic-01	ANALYST:	Anthony Purinton
INSTRUMENT:	ic01(4000i)	ANALYSIS DATE:	07/13/95
WORK LIST #:	1817	SAMPLE POINT:	C108
BATCH ID:		SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
96N9B	96.6%	97.7%	97.3%	96.4%	92.7%	95.6%	95.9%	92.8%
S95T001188	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.98E+03	<6246.57	<5284.76
S95T001188 dup	3.02E+03	8.54E+02	2.72E+04	4.93E+04	3.17E+04	9.01E+03	<6114.46	<5173.00
Duplicate 1 RPD	55.0%	24.8%	17.1%	13.2%	34.4%	10.2%	N/A	N/A
sample	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.99E+03	<6246.57	<5284.76
sample rep	2.22E+03	1.14E+03	3.16E+04	5.75E+04	2.29E+04	1.02E+04	<6246.57	<5284.76
Duplicate 2 RPD	25.5%	3.9%	1.9%	2.1%	2.4%	2.0%	N/A	N/A
S95T001188 spk	103.3%	100.9%	97.9%	101.3%	93.0%	94.4%	93.4%	96.0%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

The F peak in the replicate needed to be baseline adjusted - some evidence of org. acid. int. with F. But rest agreed perfectly. Problem w. sample non-homogeneity. JMF

Form Completed By:	J. M. Hyde	Date:	7/13/95
Chemist Approval:	J. M. Hyde	Date:	7/13/95

LAB LEADER INFO	
Method:	LA-533-106 C-2
Matrix:	solid
Test Code:	@ic-01
Work List #:	1817
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	96N9B
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	07/13/95
Chemist:	Jann Frye
Analyst:	Anthony Purinton
Analysis Date:	07/13/95
Time Complete:	02:55 PM
Instrument Code:	ic01(4000I)
Rerun:	0
Sample Prep:	water digest
Sample Point:	C108
Sample Type	
STANDARD	96N9B
SAMPLE 1	S95T001188
DUPLICATE 1	S95T001188 dup
SAMPLE 2	sample
DUPLICATE 2	sample rep
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001188 spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.532	<.703	<.572	<.697	<.604	<.511
Standard Data (µg/mL)	57.01	77.17	532.2	592.1	506.1	603.3	551.5	477.8
Sample 1 Data (µg/mL)	1.68E+01	1.07E+01	3.15E+02	5.50E+02	2.18E+02	9.75E+01	<.604	<.511
Sample 1 Dilution Factor	101	101	101	101	101	101	101	101
Sample 1 Prep DF	9.766	9.766	9.766	9.766	9.766	9.766	9.766	9.766
Duplicate 1 Data (µg/mL)	3.02E+01	8.52E+00	2.71E+02	4.92E+02	3.18E+02	8.99E+01	<.604	<.511
Duplicate 1 Dilution Factor	101	101	101	101	101	101	101	101
Duplicate 1 Prep DF	9.977	9.977	9.977	9.977	9.977	9.977	9.977	9.977
Sample 2 Data (µg/mL)	1.68E+01	1.07E+01	3.15E+02	5.49E+02	2.19E+02	9.76E+01	<.604	<.511
Sample 2 Dilution Factor	101	101	101	101	101	101	101	101
Sample 2 Prep DF	9.766	9.766	9.766	9.766	9.766	9.766	9.766	9.766
Duplicate 2 Data (µg/mL)	2.17E+01	1.11E+01	3.09E+02	5.81E+02	2.24E+02	9.95E+01	<.604	<.511
Duplicate 2 Dilution Factor	101	101	101	101	101	101	101	101
Duplicate 2 Prep DF	9.766	9.766	9.766	9.766	9.766	9.766	9.766	9.766
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	7.77E+01	9.04E+01	8.50E+02	1.17E+03	7.26E+02	6.93E+02	5.37E+02	4.94E+02
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
Std. Conc. (µg/mL)	59	79	547	614	546	631	575	515
Detection Limit	0.062	0.083	0.532	0.703	0.572	0.697	0.604	0.511
Matrix Detection Limit 1	6.41E+02	8.58E+02	5.50E+03	7.27E+03	5.92E+03	7.21E+03	6.25E+03	5.28E+03
Matrix Detection Limit 2	6.41E+02	8.58E+02	5.50E+03	7.27E+03	5.92E+03	7.21E+03	6.25E+03	5.28E+03
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	96.8%	97.7%	97.3%	96.4%	92.7%	95.6%	95.9%	92.8%
Sample 1 in µg/g	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.98E+03	<6246.67	<5284.76
Duplicate 1 in µg/g	3.02E+03	8.54E+02	2.72E+04	4.93E+04	3.17E+04	9.01E+03	<6114.46	<5173.00
Duplicate 1 RPD	55.0%	24.9%	17.1%	13.2%	34.4%	10.2%	N/A	N/A
Sample 2 in µg/g	1.72E+03	1.10E+03	3.22E+04	5.63E+04	2.24E+04	9.99E+03	<6246.67	<5284.76
Duplicate 2 in µg/g	2.22E+03	1.14E+03	3.16E+04	5.75E+04	2.29E+04	1.02E+04	<6246.67	<5284.76
Duplicate 2 RPD	25.5%	3.9%	1.9%	2.1%	2.4%	2.0%	N/A	N/A
Spike % Recovery	103.3%	100.9%	97.9%	101.3%	93.0%	94.4%	93.4%	96.0%

Data Entry by: Jann Frye Date: 07/13/95
Approved by: Jann Frye Date: 7/13/95
Form DIONEX.WB1 Rev. 1.3

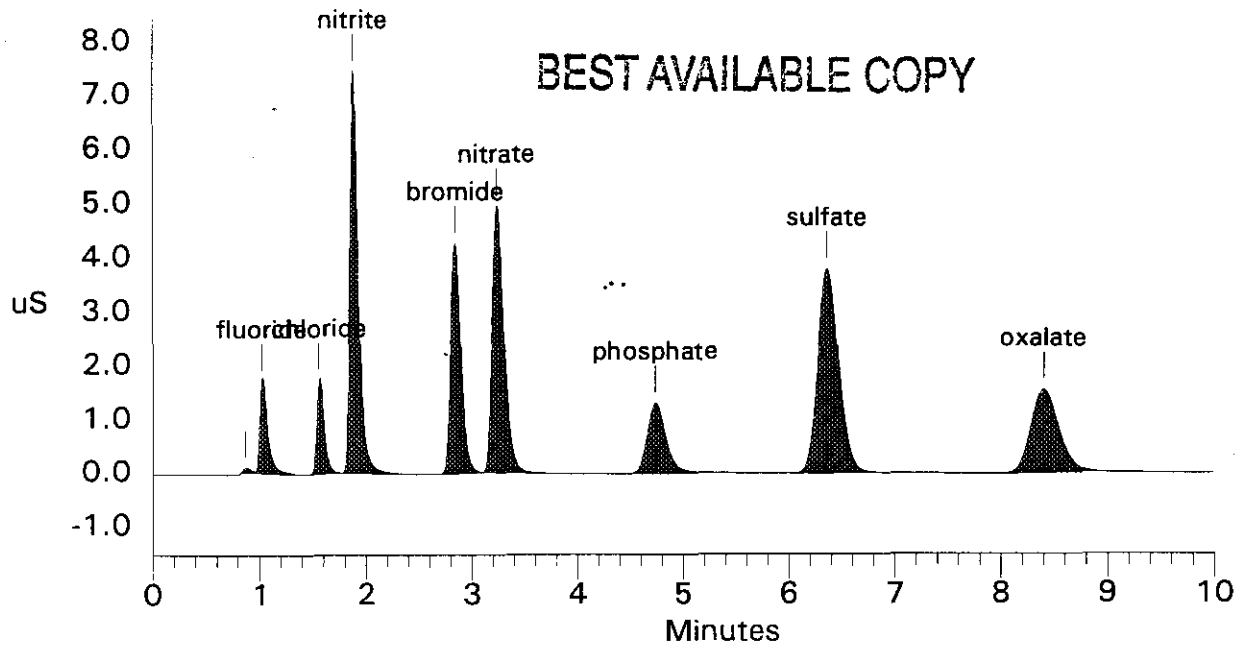
Sample Name: 96N9B LMCS Date: 07/13/1995 13:37:33
Data File : C:\DX\DATA\95071351.D02
Method : C:\DX\METHOD\KIT.MET
CI Address: 1 System: 1 Inject#: 2 Detector:CDM-1
Analyst : SS. 100-10 Column: Anthony Punto 11-13-95

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml		Height	Area	Bl. Code	%Delta
1	0.87		0.000		91	421	2	
2	1.02	fluoride	57.008	76.62	1718	9115	2	0.99
3	1.56	chloride	77.168	97.68	1753	8514	1	1.96
4	1.88	nitrite	532.183	97.29	7459	40996	1	1.62
5	2.84	bromide	551.534	95.92	4290	28785	1	1.43
6	3.23	nitrate	592.123	96.41	4954	38496	1	0.94
7	4.73	phosphate	506.096	92.69	1317	16326	1	-1.46
8	6.36	sulfate	603.344	95.62	3803	52375	1	-2.60
9	8.40	oxalate	477.830	92.08	1560	28775	1	-2.33
		Totals	3397.286		26944	223802		

File: 95071351.D02 Sample: 96N9B LMCS



BEST AVAILABLE COPY

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 295 TO 301.

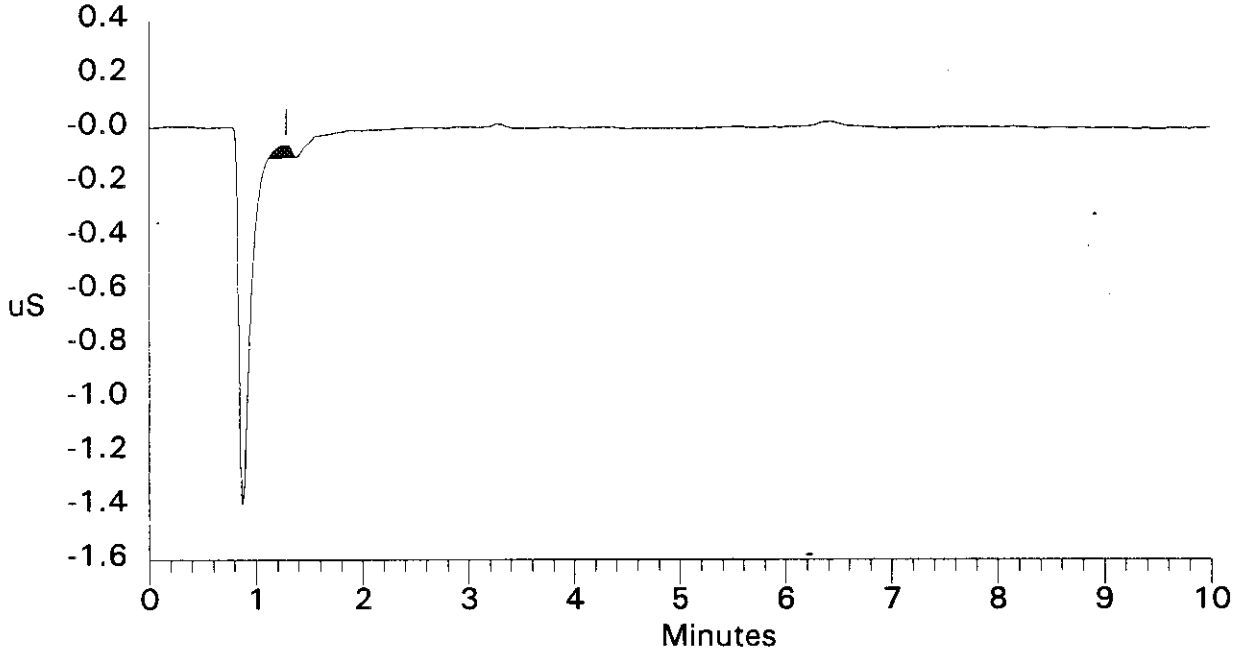
```
==============================================================================
| Sample Name: PREP BLANK                      Date: 07/13/1995 14:55:47      |
| Data File  : C:\DX\DATA\95071351.D08                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 8                   Detector:CDM-1      |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.28		0.000	44	454	1	
		Totals	0.000	44	454		

File: 95071351.D08 Sample: PREP BLANK



WHC-SD-WM-DP-082, REV. 1

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==============================================================================
| Sample Name: BLANK                          Date: 07/13/1995 13:49:13       |
| Data File  : C:\DX\DATA\95071351.D03                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 3                  Detector:CDM-1       |
| Analyst    :                Column:                                         |
==============================================================================
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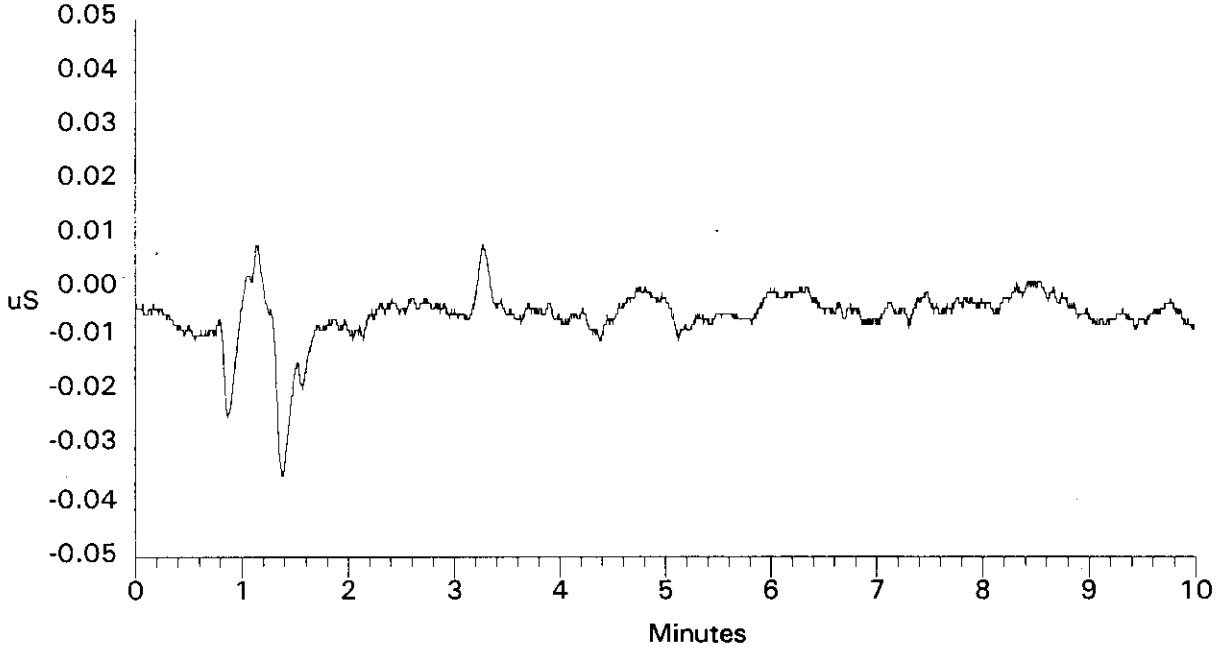
Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 95071351.D03 Sample: BLANK



WHC-SD-WM-DP-082, REV. 1

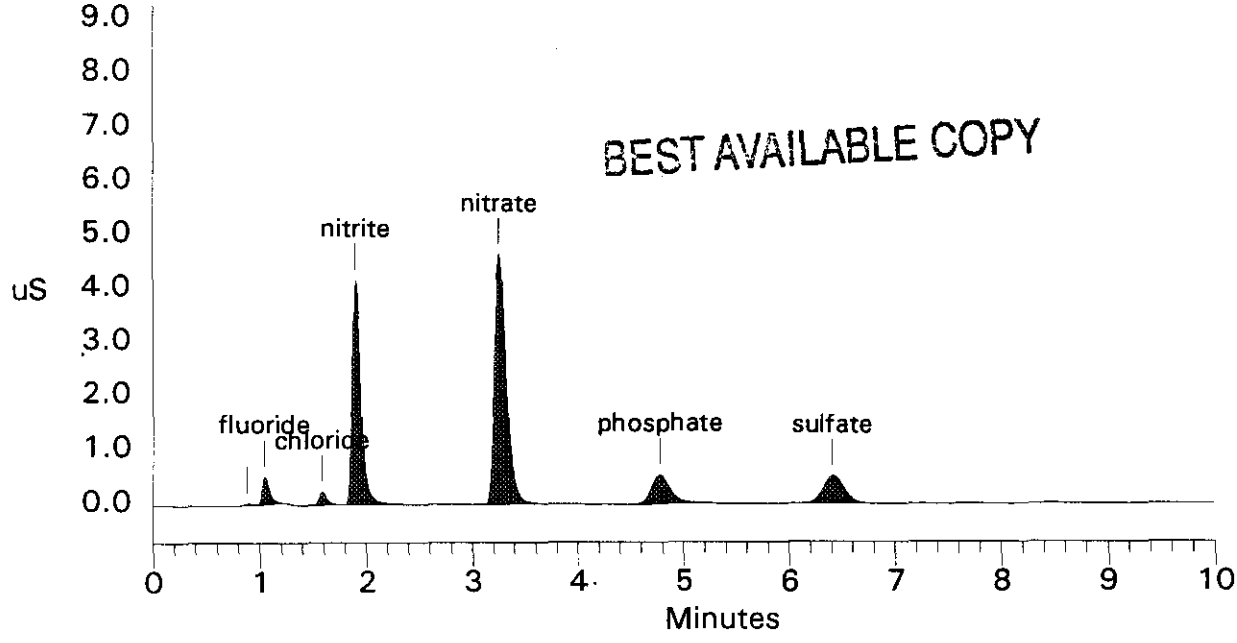
Sample Name:	S95001188	Date: 07/13/1995 14:01:48	
Data File :	C:\DX\DATA\95071351.D04		
Method :	C:\DX\METHOD\KIT.MET		
ACI Address:	1 System: 1 Inject#: 4		Detector:CDM-1
Analyst :	Column: SS .100-10		

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.04	fluoride	16.789	503	2450	1	2.97
3	1.58	chloride	10.701	237	1170	1	3.27
4	1.90	nitrite	314.916	4164	23488	1	2.70
5	3.25	nitrate	549.479	4633	35547	1	1.56
6	4.77	phosphate	218.295	533	6433	1	-0.63
7	6.40	sulfate	97.524	500	6888	1	-1.99
		Totals	1207.703	10571	75974		

File: 95071351.D04 Sample: S95001188



BEST AVAILABLE COPY

WHC-SD-WM-DP-082, REV. 1

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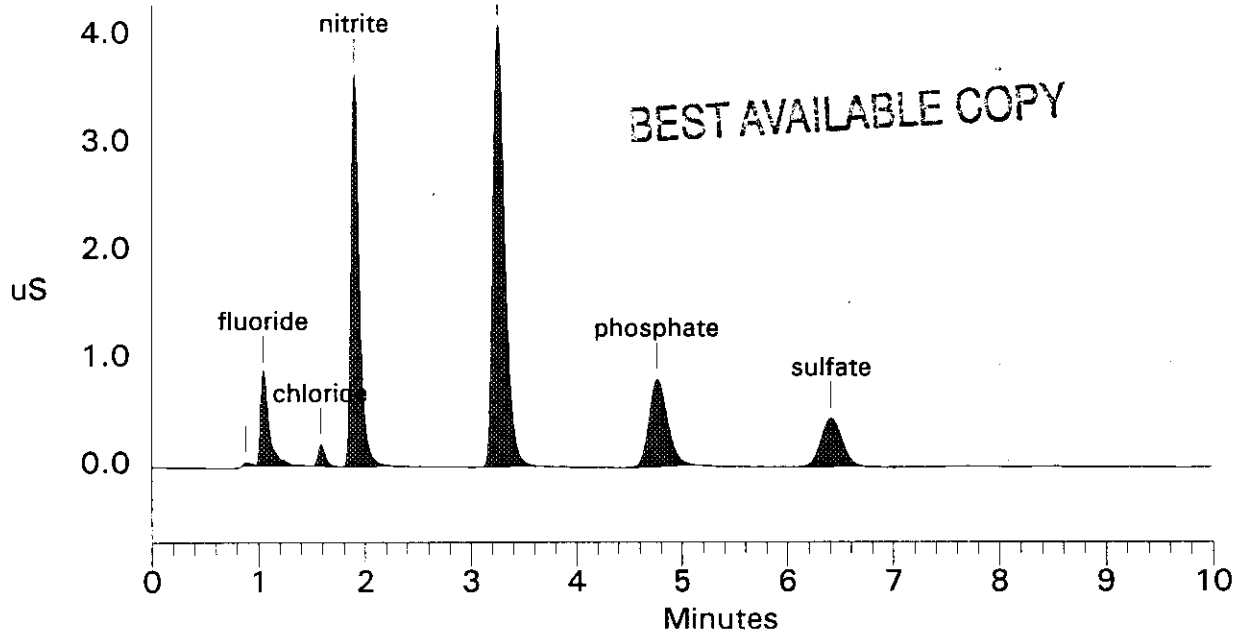
==============================================================================
| Sample Name: S95001188 DUP                    Date: 07/13/1995 14:19:28      |
| Data File  : C:\DX\DATA\95071351.D05                                         |
| Method     : C:\DX\METHOD\KIT.MET                                            |
| CI Address: 1  System: 1  Inject#: 5                    Detector:CDM-1       |
| Analyst    :                  Column: SS 100-10                             |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.04	fluoride	30.519	866	4718	2	2.97
3	1.58	chloride	8.517	197	930	1	3.27
4	1.90	nitrite	270.946	3638	19947	1	2.70
5	3.25	nitrate	491.757	4094	31562	1	1.56
6	4.76	phosphate	315.855	809	9769	1	-0.83
7	6.41	sulfate	89.919	451	6212	1	-1.84
		Totals	1207.512	10055	73138		

File: 95071351.D05 Sample: S95001188 DUP



BEST AVAILABLE COPY

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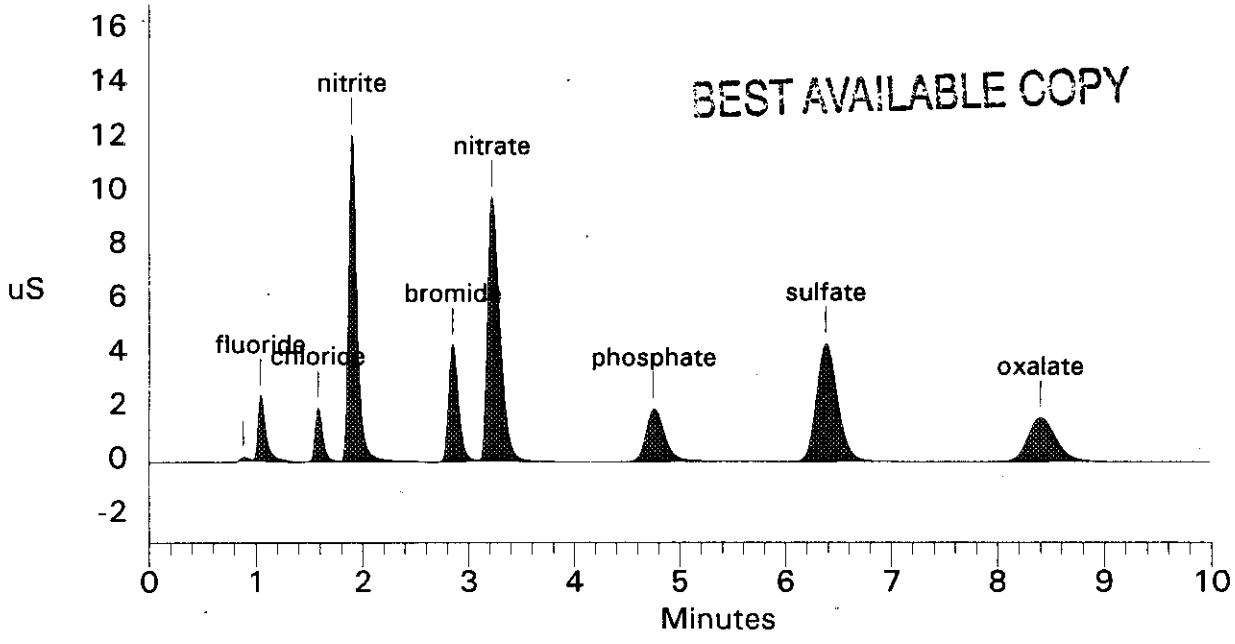
==============================================================================
| Sample Name: S95001188 SPK                    Date: 07/13/1995 14:31:55      |
| Data File  : C:\DX\DATA\95071351.D06                                         |
| Method     : C:\DX\METHOD\KIT.MET                                            |
| ACI Address: 1  System: 1  Inject#: 6                   Detector:CDM-1       |
| Analyst    :                Column:                                          |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	117	574	2	
2	1.04	fluoride	77.729	2404	12575	2	2.97
3	1.58	chloride	90.381	2001	9986	1	3.27
4	1.90	nitrite	850.308	12126	66665	1	2.70
5	2.85	bromide	537.267	4345	27988	1	1.79
6	3.22	nitrate	1171.273	9807	79084	1	0.63
7	4.75	phosphate	725.982	1955	23993	1	-1.04
8	6.38	sulfate	692.993	4389	60558	1	-2.30
9	8.40	oxalate	494.339	1637	29821	1	-2.33
		Totals	4640.273	38781	311243		

File: 95071351.D06 Sample: S95001188 SPK



BEST AVAILABLE COPY

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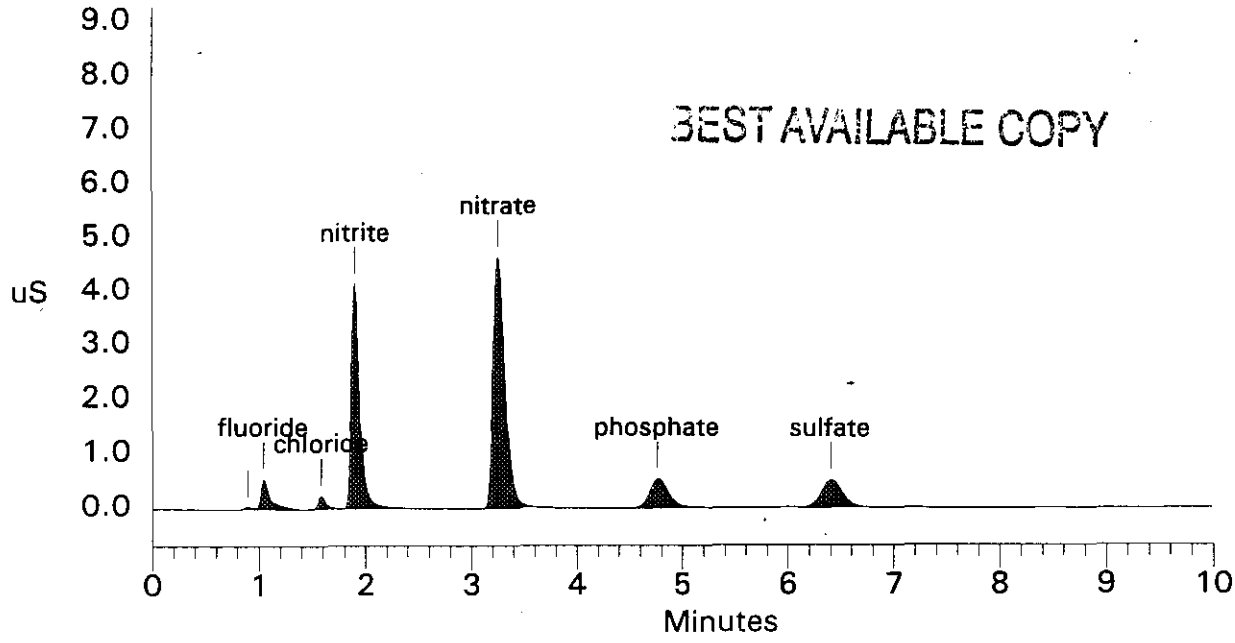
==========================================================================
| Sample Name: S95001188 SAM                    Date: 07/13/1995 14:43:02  |
| Data File  : C:\DX\DATA\95071351.D07                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| CI Address: 1  System: 1  Inject#: 7                  Detector:CDM-1    |
| Analyst    :                  Column: SS .100-10                        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.04	fluoride	21.697	546	3260	2	2.97
3	1.58	chloride	11.134	252	1217	1	3.27
4	1.90	nitrite	308.857	4155	23000	1	2.70
5	3.25	nitrate	561.273	4655	36362	1	1.56
6	4.76	phosphate	223.607	541	6614	1	-0.83
7	6.40	sulfate	99.487	510	7062	1	-1.99
		Totals	1226.056	10659	77515		

File: 95071351.D07 Sample: S95001188 SAM



BEST AVAILABLE COPY

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K220-222	Customer ID: C6151
Analysis: ICP	Sample Prep: FUS

Instrument: UB 38939	Procedure/ Rev: LA-505-151 ID-1
Technologist: B. GUECKE	Date: 8-9-94
Starting Time: 1230	Temperature NA
Ending Time: 1430	Chemist: B. WELS

Comments:

	Description	Lab ID		Description	Lab ID
1	SST4 ICP STD. (ICV)	K220-5550	11		
2	REAG. BLK. DIGESTED	K221-6650	12		
3	C-108 sample	K222-6755	13		
4	C-108 DUP.	K222-6855	14		
5	C-108 post spike	K222-6950	15		
6			16		
7			17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
SST4 ICP (ICV)	32848C DIRECT			DIRECT
post spike	32848C 2mL			10mL

302

INDUCTIVELY COUPLED PLASMA ANALYSIS

RUSH Batch 4182

Serial No.	Sample Point	Date	Time Issued	Priority
K 220.-5550	C-108	6-15-94	13: 5	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
ICP	LA-505-151	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? SSTY 32648C DIRECT (ICV)	STD

Remarks, Calculations, Results
LMCS CHECK SAMPLE
Ni ONLY
4.916 / 5 (100) = 98.32 ?

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
		08/10/94		
Date	Time Completed	Lab Unit Mgr		
8-8-94	1030	S. Parry	8-10-94	

54-6800-061 (R-10-83)

RUSH

Serial No.	Sample Point	Date	Time Issued	Priority
K 221.-6650	C-108	6-15-94	13: 6	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
ICP	LA-505-151	uG/ML	N4C3G	0

Sample Size	Customer ID
? DIRECT	BLANK

Remarks, Calculations, Results
REAGENT BLANK
Ni .064 ug/mL ?

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
		08/10/94		
Date	Time Completed	Lab Unit Mgr		
8-8-94	1030	S. Parry	8-10-94	

54-6800-061 (R-10-83)

INDUCTIVELY COUPLED PLASMA ANALYSIS

RUSH

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6755	C-108	6-15-94	13: 8	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
ICP-SOL	LA-505-151	uG/G Rec	N4C3G	0

Sample Size	Customer ID
?, 4960 g in 250 mL, -1 mL-5 mL, -1 mL-4 mL	C61S1

Remarks, Calculations, Results:

Ni 2.26 (10)(250)/.4960 = 1.14E4 ug/g ✓

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		[signature]		[signature]
Date	Time Completed	Lab Unit Mgr 08/10/94		
8-9-94	1030	S. Parry		8-10-94

54-6800-061 (R-10-83)

RUSH

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6855	C-108	6-15-94	13: 8	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
ICP-SOL	LA-505-151	uG/G Rec	N4C3G	0

Sample Size	Customer ID
?, 5543 g in 250 mL, -1 mL-5 mL, -1 mL-4 mL	C61S1

Remarks, Calculations, Results:

DUPLICATE SAMPLE

Ni 2.46 (10)(250)/.5543 = 1.11E4 ug/g ✓

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		[signature]		[signature]
Date	Time Completed	Lab Unit Mgr 08/10/94		
8-9-94	1030	S. Parry		8-10-94

54-6800-061 (R-10-83)

INDUCTIVELY COUPLED PLASMA ANALYSIS

RUSH

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6950	C-108	6-15-94	13: 8	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
ICP	LA-505-151	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? 1mL sample - 9mL	C61S1

Remarks, Calculations, Results

SAMPLE SPIKED ID
SPIKE ID 32B48C
SPIKE VOLUME 2mL
STD SPIKE : 1ppm

Ni 3.21 - 2.26 (100) = 95.00% ✓

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
[signature]				
Hrs	Hrs	Hrs	Hrs	Hrs
		Rakota	[signature]	

Date	Time Completed	Lab Unit Mgr	
8-9-94	1030	08/10/94 S. Parong	8-10-94

54-6800-061 (R-10-83)

Identity 1: wp284 Identity 2: wp284 12:57 PM August 9, 1994 WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.002	0.001	-0.002	0.384	0.144	0.046	0.011	0.001
S.D.	0.001	0.000	0.004	0.003	0.007	0.000	0.000	0.001
% R.S.D.	34.563	11.716	183.243	0.836	5.031	0.087	3.574	56.953

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.014	0.017	-0.003	0.036	0.032	0.010	0.032	-0.086
S.D.	0.000	0.002	0.002	0.005	0.000	0.001	0.022	0.040
% R.S.D.	0.631	13.011	68.880	14.919	0.941	10.201	70.117	46.708

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.001	-0.017	0.029	-0.017	0.179	0.001	0.031	0.123
S.D.	0.014	0.020	0.000	0.012	0.004	0.000	0.002	0.008
% R.S.D.	1055.841	121.178	0.706	67.638	2.213	12.528	6.986	6.565

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.000	-0.007	-0.001	0.047	0.000	0.010	0.036	-0.056
S.D.	0.001	0.005	0.001	0.003	0.001	0.000	0.001	0.002
% R.S.D.	194.438	70.590	74.978	5.804	18413.563	1.650	2.761	2.936

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.012	0.020	0.132	0.030	0.003
S.D.	0.000	0.034	0.000	0.000	0.013
% R.S.D.	3.453	168.178	0.201	0.842	398.936

8-9-94
K220-222
FUS
50X, 10X
Ni Only

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 306 TO 323.

Identity 1: icv Identity 2: 32b48c 1:01 PM August 9, 1994

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	4.894	4.874	4.877	4.577	4.903	4.964	5.005	4.976
S.D.	0.024	0.027	0.021	0.024	0.023	0.028	0.023	0.025
% R.S.D.	0.496	0.545	0.427	0.527	0.466	0.572	0.465	0.499

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	4.897	4.916	4.962	4.976	5.012	4.940	5.154	9.218
S.D.	0.025	0.024	0.028	0.023	0.027	0.025	0.025	0.036
% R.S.D.	0.512	0.496	0.558	0.452	0.546	0.506	0.491	0.394

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	4.782	4.771	4.918	4.845	4.792	4.864	4.805	4.879
S.D.	0.022	0.023	0.027	0.114	0.036	0.026	0.029	0.028
% R.S.D.	0.457	0.479	0.543	2.348	0.756	0.535	0.610	0.566

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	4.863	4.877	5.081	4.879	4.780	4.919	4.858	4.961
S.D.	0.023	0.018	0.024	0.016	0.025	0.021	0.020	0.032
% R.S.D.	0.482	0.374	0.478	0.332	0.528	0.434	0.422	0.641

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	4.974	4.637	4.889	5.044	4.753
S.D.	0.018	0.026	0.026	0.027	0.005
% R.S.D.	0.367	0.555	0.522	0.545	0.106

Identity 1: icb Identity 2: icb 1:04 PM August 9, 1994 WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.001	0.002	-0.000	0.000	0.005	0.002	0.002	0.002
S.D.	0.001	0.000	0.009	0.002	0.005	0.001	0.000	0.001
% R.S.D.	126.341	12.125	2103.051	1144.273	98.302	63.985	10.071	43.323

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	-0.001	0.003	0.002	0.003	0.001	0.006	0.032	-0.129
S.D.	0.000	0.002	0.002	0.002	0.000	0.000	0.006	0.051
% R.S.D.	42.540	58.211	128.035	80.624	28.347	5.659	19.289	39.923

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.016	-0.029	0.001	0.009	0.002	0.001	0.001	0.022
S.D.	0.006	0.016	0.000	0.006	0.005	0.000	0.002	0.009
% R.S.D.	41.505	54.227	29.481	64.182	254.632	30.199	302.766	41.238

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.005	0.026	0.001	0.020	0.001	0.001	0.003	-0.030
S.D.	0.000	0.015	0.000	0.010	0.000	0.000	0.001	0.027
% R.S.D.	5.516	55.936	25.828	49.599	48.457	41.622	38.261	90.085

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	-0.000	0.011	-0.000	0.001	-0.053
S.D.	0.000	0.022	0.001	0.000	0.002
% R.S.D.	36.143	191.970	233.295	22.500	3.795

Identity 1: icsa Identity 2: icsa 1:07 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

eak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.003	0.002	0.024	0.098	246.265	0.001	-0.008	0.002
S.D.	0.002	0.000	0.013	0.000	1.362	0.000	0.001	0.001
% R.S.D.	64.343	8.498	52.402	0.191	0.553	50.362	6.833	33.018

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.007	-0.039	0.015	95.758	45.194	-0.007	0.048	-0.067
S.D.	0.000	0.001	0.001	0.517	0.265	0.001	0.015	0.105
% R.S.D.	3.700	2.888	4.453	0.540	0.587	12.223	32.156	158.334

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.003	0.065	-0.000	0.068	0.615	43.472	0.022	0.019
S.D.	0.012	0.030	0.000	0.002	0.008	0.235	0.006	0.012
% R.S.D.	448.698	45.351	814.769	3.262	1.242	0.540	27.342	63.097

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	-0.002	0.051	0.002	-0.051	0.000	-0.002	-0.004	-0.026
S.D.	0.002	0.007	0.001	0.003	0.000	0.000	0.001	0.040
% R.S.D.	74.903	13.131	54.023	5.373	131.830	26.057	17.026	157.527

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.018	0.057	-0.001	0.002	-0.052
S.D.	0.000	0.005	0.001	0.000	0.033
% R.S.D.	1.018	9.013	84.969	5.847	63.865

Identity 1: xxx Identity 2: rinse 1:11 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.002	0.001	-0.013	-0.003	0.040	0.002	0.000	0.001
S.D.	0.002	0.000	0.003	0.001	0.011	0.001	0.001	0.001
% R.S.D.	80.094	17.870	26.124	29.609	26.427	68.921	136.384	115.172

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	-0.002	0.001	-0.000	0.023	0.009	0.003	0.009	-0.166
S.D.	0.000	0.002	0.001	0.002	0.001	0.001	0.007	0.058
% R.S.D.	7.922	218.865	142.433	7.743	11.765	50.370	77.799	34.969

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.015	-0.046	-0.000	-0.003	0.008	0.009	0.004	0.009
S.D.	0.011	0.021	0.000	0.009	0.000	0.001	0.003	0.003
% R.S.D.	76.832	45.755	3822.441	293.654	5.170	11.958	80.730	37.496

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.001	-0.007	-0.002	-0.010	-0.001	0.001	0.002	-0.045
S.D.	0.001	0.012	0.001	0.005	0.000	0.000	0.001	0.017
% R.S.D.	70.342	160.073	43.336	53.946	82.195	51.262	35.962	38.475

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	-0.001	0.016	-0.000	0.000	-0.046
S.D.	0.000	0.010	0.000	0.000	0.013
% R.S.D.	15.058	63.923	248.413	24.125	28.923

Identity 1: K221 dig blk Identity 2: direct 1:14 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	4.199	0.005	-0.001	0.326	0.067	0.001	0.008	0.003
S.D.	0.010	0.000	0.018	0.004	0.000	0.001	0.001	0.000
% R.S.D.	0.237	4.517	3036.394	1.118	0.637	137.839	7.004	18.764

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.013	0.064	0.001	0.076	0.205	0.020	0.006	1.171
S.D.	0.000	0.002	0.001	0.001	0.001	0.001	0.017	0.055
% R.S.D.	2.538	3.031	79.201	0.747	0.250	6.712	295.047	4.687

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.008	-0.038	0.035	-0.010	0.063	0.009	0.009	9.587
S.D.	0.014	0.017	0.000	0.005	0.003	0.000	0.000	0.157
% R.S.D.	182.074	45.706	0.933	52.509	5.105	1.851	3.689	1.639

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	-0.003	0.015	0.003	0.015	0.002	0.002	0.004	-259.712
S.D.	0.001	0.007	0.000	0.005	0.000	0.000	0.001	0.000
% R.S.D.	34.169	51.048	13.799	30.736	18.680	16.257	12.231	0.000

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	-0.000	0.011	0.039	0.000	-0.075
S.D.	0.000	0.013	0.001	0.000	0.013
% R.S.D.	39.011	121.278	2.675	65.792	16.706

Identity 1: K222 sam dil Identity 2: .4960gin250ml-50x 1:19 PM August 9, 1994 WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.133	0.010	0.043	0.064	1.614	-0.095	0.001	-0.000
S.D.	0.001	0.000	0.007	0.001	0.005	0.001	0.000	0.000
% R.S.D.	1.087	0.103	16.764	1.767	0.294	1.112	60.973	276.523

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.009	0.471	-0.009	0.789	0.809	0.011	0.021	-0.616
S.D.	0.000	0.001	0.001	0.006	0.002	0.001	0.019	0.023
% R.S.D.	2.966	0.156	6.379	0.741	0.219	12.748	89.743	3.718

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.050	-0.202	-0.001	0.470	0.178	0.035	0.003	2.978
S.D.	0.001	0.005	0.000	0.023	0.001	0.000	0.006	0.005
% R.S.D.	3.011	2.607	2.017	4.893	0.824	0.525	203.195	0.164

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.002	-0.010	-0.009	0.053	0.001	0.012	-0.000	224.178
S.D.	0.001	0.008	0.000	0.004	0.000	0.000	0.000	0.787
% R.S.D.	73.743	79.743	3.712	6.821	30.894	2.586	58.160	0.351

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.016	0.005	-0.005	-0.000	-0.227
S.D.	0.000	0.022	0.000	0.000	0.014
% R.S.D.	2.108	418.333	10.866	116.074	6.260

Identity 1: K222 dup dil Identity 2: .5543g in 250ml-50x 1:24 PM August 9, 1994

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

n-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.128	0.011	0.019	0.093	1.988	0.002	0.002	0.002
S.D.	0.003	0.000	0.005	0.001	0.001	0.001	0.000	0.001
% R.S.D.	2.718	0.245	27.162	1.359	0.054	60.486	18.296	35.179

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.001	0.518	0.004	0.655	0.863	0.014	0.017	0.294
S.D.	0.000	0.004	0.001	0.007	0.002	0.001	0.010	0.038
% R.S.D.	47.992	0.782	27.922	1.022	0.249	6.899	60.258	12.941

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.042	0.031	0.003	0.413	0.165	0.019	0.008	3.206
S.D.	0.003	0.005	0.000	0.020	0.006	0.000	0.002	0.005
% R.S.D.	7.018	15.461	2.995	4.784	3.370	1.106	21.770	0.153

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.002	0.023	0.002	0.063	0.009	0.013	0.001	217.922
S.D.	0.000	0.006	0.000	0.002	0.000	0.000	0.001	0.569
% R.S.D.	22.928	25.023	18.800	3.726	0.715	2.615	157.070	0.261

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.018	-0.026	0.003	-0.000	0.026
S.D.	0.000	0.009	0.000	0.000	0.012
% R.S.D.	1.108	33.675	14.216	54.821	46.236

Identity 1: K222 sam dil Identity 2: .4960g in 250ml-10x 1:27 PM August 9, 1994

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.700	0.047	0.070	0.315	7.754	0.001	0.007	0.001
S.D.	0.046	0.000	0.011	0.001	0.008	0.001	0.000	0.000
% R.S.D.	6.621	0.039	16.034	0.460	0.102	170.344	6.561	46.851

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.033	2.259	0.001	3.812	3.776	0.062	0.040	0.682
S.D.	0.000	0.010	0.003	0.015	0.008	0.002	0.009	0.024
% R.S.D.	0.735	0.438	204.526	0.389	0.224	3.225	23.834	3.579

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.038	-0.055	0.009	2.193	0.741	0.081	0.007	14.252
S.D.	0.008	0.005	0.000	0.026	0.002	0.000	0.002	0.022
% R.S.D.	20.068	9.235	1.018	1.179	0.229	0.392	22.374	0.157

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.005	-0.004	-0.000	0.231	0.027	0.055	0.001	1044.505
S.D.	0.001	0.007	0.001	0.003	0.000	0.000	0.001	3.142
% R.S.D.	29.181	169.658	839.777	1.163	1.327	0.898	120.138	0.301

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.087	-0.017	0.006	0.000	-0.069
S.D.	0.001	0.016	0.002	0.000	0.011
% R.S.D.	0.847	94.800	27.354	503.959	15.763

Identity 1: K222 dup dil Identity 2: .5543g in 250ml-10x 1:31 PM August 9, 1994

WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.506	0.050	0.088	0.389	9.490	0.000	0.003	-0.001
S.D.	0.025	0.001	0.006	0.009	0.165	0.002	0.001	0.001
% R.S.D.	4.882	1.599	6.679	2.236	1.743	833.752	18.430	159.906

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.021	2.465	-0.005	3.125	4.126	0.068	0.016	0.458
S.D.	0.001	0.033	0.001	0.052	0.071	0.001	0.015	0.098
% R.S.D.	2.494	1.337	25.849	1.672	1.712	1.582	93.386	21.465

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.015	-0.100	0.008	2.340	0.828	0.089	0.004	15.418
S.D.	0.021	0.030	0.000	0.069	0.013	0.001	0.003	0.278
% R.S.D.	140.997	30.237	5.461	2.933	1.548	1.642	68.131	1.801

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.008	-0.000	-0.003	0.268	0.038	0.062	0.001	1025.607
S.D.	0.001	0.001	0.001	0.004	0.000	0.001	0.002	15.843
% R.S.D.	7.711	611.479	18.112	1.580	1.207	2.152	199.246	1.545

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.091	-0.011	0.002	-0.001	-0.093
S.D.	0.001	0.016	0.001	0.000	0.027
% R.S.D.	1.290	147.141	79.558	28.548	28.463

Identity 1: K222 post spike Identity 2: 1ml sample-9ml 1:35 PM August 9, 1994 WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	3.389	0.996	1.014	1.205	8.694	0.962	0.998	0.958
S.D.	0.057	0.003	0.013	0.003	0.016	0.002	0.002	0.003
% R.S.D.	1.680	0.273	1.275	0.227	0.189	0.215	0.186	0.285

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.958	3.207	0.974	4.755	4.691	1.026	1.054	3.216
S.D.	0.003	0.008	0.002	0.010	0.016	0.001	0.011	0.023
% R.S.D.	0.344	0.258	0.207	0.203	0.336	0.134	1.080	0.719

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.891	0.900	0.969	3.825	1.703	1.013	0.965	15.122
S.D.	0.012	0.008	0.003	0.013	0.014	0.002	0.006	0.049
% R.S.D.	1.294	0.941	0.285	0.335	0.817	0.225	0.639	0.324

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.951	0.941	0.329	1.190	0.967	1.006	0.950	1039.461
S.D.	0.002	0.018	0.001	0.007	0.002	0.002	0.001	3.720
% R.S.D.	0.227	1.920	0.259	0.564	0.244	0.190	0.148	0.358

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	1.052	0.929	0.986	0.979	0.864
S.D.	0.002	0.019	0.002	0.003	0.002
% R.S.D.	0.207	2.066	0.199	0.267	0.260

Identity 1: ccv_1 Identity 2: ccv_1 1:38 PM August 9, 1994

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

Peak Integrations : 3 Off-Peak Integrations : 1

WHC-SD-WM-DP-082, REV. 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	6.706	4.926	4.927	4.611	4.971	5.011	5.085	5.020
S.D.	0.241	0.010	0.012	0.019	0.015	0.016	0.004	0.006
% R.S.D.	3.595	0.206	0.250	0.405	0.306	0.323	0.087	0.128

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	4.975	5.018	5.039	5.099	5.097	5.021	5.301	10.108
S.D.	0.007	0.009	0.014	0.010	0.008	0.010	0.018	0.093
% R.S.D.	0.145	0.177	0.285	0.189	0.148	0.191	0.341	0.923

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	4.777	4.844	4.973	5.129	4.865	4.926	4.904	4.932
S.D.	0.025	0.006	0.009	0.118	0.063	0.012	0.007	0.006
% R.S.D.	0.522	0.128	0.179	2.308	1.286	0.252	0.149	0.130

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	4.898	4.940	3.496	5.047	4.834	5.016	4.967	8.299
S.D.	0.022	0.040	0.071	0.012	0.010	0.005	0.008	0.169
% R.S.D.	0.439	0.804	2.017	0.235	0.200	0.101	0.159	2.038

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	5.066	4.752	4.994	5.129	4.820
S.D.	0.006	0.012	0.005	0.013	0.030
% R.S.D.	0.118	0.242	0.102	0.251	0.624

Identity 1: ccb_1 Identity 2: ccb_1 1:41 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.002	0.002	-0.009	-0.003	-0.000	0.003	0.003	0.003
S.D.	0.001	0.000	0.025	0.002	0.007	0.001	0.001	0.001
% R.S.D.	64.838	19.923	269.719	72.890	3771.835	21.288	30.686	24.288

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.002	-0.001	-0.000	0.007	0.002	0.004	0.042	-0.267
S.D.	0.000	0.001	0.001	0.001	0.000	0.001	0.007	0.067
% R.S.D.	21.034	109.911	132.494	11.562	18.359	26.992	16.363	25.220

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.014	-0.065	0.001	0.009	0.006	0.002	0.006	0.020
S.D.	0.019	0.021	0.001	0.006	0.003	0.000	0.004	0.007
% R.S.D.	132.838	32.298	64.244	63.676	43.611	13.609	66.060	36.462

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.006	-0.009	0.436	0.005	0.000	0.002	0.002	1.506
S.D.	0.001	0.023	0.019	0.004	0.001	0.001	0.002	0.059
% R.S.D.	22.731	267.859	4.323	75.150	208.859	44.792	83.896	3.926

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.000	-0.018	0.000	0.002	-0.082
S.D.	0.000	0.020	0.001	0.000	0.028
% R.S.D.	228.437	111.441	644.683	29.379	34.258

Identity 1: icsaf Identity 2: icsaf 1:45 PM August 9, 1994

WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	-0.001	0.002	0.018	0.104	248.870	0.002	-0.009	0.001
S.D.	0.001	0.000	0.014	0.002	0.781	0.002	0.001	0.001
% R.S.D.	90.585	5.514	75.473	2.158	0.314	98.804	9.077	133.494

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.015	-0.039	0.017	98.210	45.914	-0.004	0.045	0.064
S.D.	0.000	0.002	0.002	0.453	0.203	0.001	0.008	0.074
% R.S.D.	2.182	4.618	9.549	0.462	0.442	31.366	17.312	115.614

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.032	0.095	0.001	0.042	0.611	43.716	0.033	0.025
S.D.	0.011	0.017	0.000	0.004	0.006	0.146	0.006	0.012
% R.S.D.	33.723	18.415	37.686	8.431	0.996	0.335	17.985	47.029

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	-0.001	0.009	0.497	-0.074	0.001	-0.003	-0.002	1.191
S.D.	0.001	0.011	0.008	0.005	0.000	0.000	0.003	0.032
% R.S.D.	75.255	119.044	1.684	6.569	15.530	2.656	167.714	2.691

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.018	0.066	0.000	0.002	0.005
S.D.	0.000	0.026	0.001	0.000	0.026
% R.S.D.	0.990	38.989	138.519	3.984	501.222

Identity 1: icsabf Identity 2: icsabf 1:48 PM August 9, 1994

Task name : TWC93

WHC-SD-WM-DP-082, REV.1

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.000	0.002	-0.005	0.100	252.299	0.475	0.481	0.000
S.D.	0.001	0.000	0.010	0.004	2.712	0.005	0.004	0.001
% R.S.D.	361.790	12.090	179.343	4.366	1.075	0.954	0.893	203.634

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.963	0.916	0.015	99.155	46.461	0.481	0.005	0.028
S.D.	0.007	0.010	0.003	0.613	0.355	0.005	0.020	0.123
% R.S.D.	0.693	1.127	18.829	0.618	0.764	1.090	398.627	431.109

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.001	0.096	0.490	0.040	0.596	44.174	0.030	0.018
S.D.	0.019	0.034	0.005	0.013	0.007	0.431	0.008	0.006
% R.S.D.	1303.730	35.046	1.050	32.276	1.169	0.976	27.597	35.293

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	-0.002	0.034	1.098	0.877	-0.000	0.976	-0.005	1.064
S.D.	0.001	0.006	0.007	0.003	0.001	0.007	0.001	0.032
% R.S.D.	57.692	18.170	0.625	0.295	1338.922	0.680	22.818	2.963

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	0.511	0.045	0.488	0.502	-0.014
S.D.	0.004	0.018	0.005	0.006	0.050
% R.S.D.	0.875	39.204	1.037	1.098	350.604

Identity 1: xxx Identity 2: rinse 1:52 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1
Task name : TWC93
Sample Weight : 1.0000 Solution Volume : 1.00
eak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.000	0.000	0.020	0.005	0.050	0.001	0.000	0.000
S.D.	0.005	0.000	0.022	0.007	0.020	0.002	0.002	0.002
% R.S.D.	1066.572	243.427	106.683	132.372	39.864	329.417	421.517	4887.785

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	-0.001	-0.001	0.004	0.025	0.012	-0.000	0.011	0.034
S.D.	0.000	0.001	0.004	0.005	0.001	0.002	0.015	0.221
% R.S.D.	10.831	279.847	81.503	19.533	7.742	606.592	137.006	643.864

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	0.030	0.020	0.000	-0.013	-0.002	0.011	0.001	0.003
S.D.	0.044	0.063	0.001	0.010	0.002	0.001	0.004	0.016
% R.S.D.	148.628	313.218	211.476	78.296	100.413	8.040	693.423	503.319

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.000	-0.026	0.015	-0.001	-0.000	0.000	-0.000	0.715
S.D.	0.001	0.018	0.003	0.001	0.001	0.001	0.001	0.058
% R.S.D.	222.117	68.849	22.428	153.435	6407.222	576.141	576.260	8.061

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	-0.002	-0.030	0.001	-0.000	0.008
S.D.	0.000	0.022	0.002	0.000	0.058
% R.S.D.	7.416	74.330	164.574	56.799	742.431

Identity 1: ccv_2 Identity 2: ccv_2 1:55 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	5.421	4.909	4.894	4.587	5.030	4.947	5.104	4.983
S.D.	0.022	0.013	0.024	0.018	0.009	0.008	0.021	0.009
% R.S.D.	0.415	0.259	0.488	0.392	0.173	0.153	0.413	0.182

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	4.921	4.974	5.075	5.126	5.129	4.981	5.422	9.807
S.D.	0.009	0.024	0.015	0.015	0.023	0.008	0.043	0.035
% R.S.D.	0.188	0.481	0.300	0.291	0.448	0.151	0.784	0.352

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	4.665	4.696	4.974	4.643	4.688	4.864	4.824	4.885
S.D.	0.010	0.020	0.015	0.038	0.015	0.008	0.010	0.005
% R.S.D.	0.205	0.419	0.297	0.819	0.331	0.170	0.212	0.100

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	4.814	4.828	4.312	4.991	4.799	4.985	4.971	6.275
S.D.	0.011	0.017	0.098	0.016	0.009	0.007	0.019	0.071
% R.S.D.	0.225	0.343	2.274	0.321	0.181	0.135	0.383	1.137

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	5.061	4.734	4.970	5.084	4.866
S.D.	0.019	0.056	0.016	0.011	0.005
% R.S.D.	0.369	1.186	0.317	0.219	0.100

Identity 1: ccb_2 Identity 2: ccb_2 1:58 PM August 9, 1994 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ug/mL)	Sr (ug/mL)	Bi (ug/mL)	Si (ug/mL)	Al (ug/mL)	Co (ug/mL)	Cu (ug/mL)	Li (ug/mL)
Mean	0.001	0.002	0.009	0.000	0.019	0.004	0.004	0.003
S.D.	0.001	0.000	0.009	0.003	0.004	0.001	0.000	0.000
% R.S.D.	85.464	11.880	99.979	765.331	23.012	18.193	9.951	4.032

	Zn (ug/mL)	Ni (ug/mL)	La (ug/mL)	Fe (ug/mL)	Ca (ug/mL)	Cr (ug/mL)	Nd (ug/mL)	U (ug/mL)
Mean	0.001	0.001	0.001	0.011	0.004	0.005	0.048	-0.085
S.D.	0.000	0.001	0.002	0.002	0.001	0.002	0.002	0.073
% R.S.D.	31.601	98.944	131.517	14.078	15.019	29.072	3.826	86.327

	Ce (ug/mL)	Sm (ug/mL)	Ba (ug/mL)	P (ug/mL)	S (ug/mL)	Mg (ug/mL)	As (ug/mL)	Na (ug/mL)
Mean	-0.002	-0.015	0.002	-0.004	0.006	0.004	0.007	0.030
S.D.	0.008	0.015	0.000	0.011	0.006	0.001	0.003	0.008
% R.S.D.	414.302	105.495	7.568	306.561	105.743	17.765	42.890	26.963

	Mo (ug/mL)	Se (ug/mL)	Ag (ug/mL)	Pb (ug/mL)	Ti (ug/mL)	Cd (ug/mL)	B (ug/mL)	K (ug/mL)
Mean	0.006	0.027	0.506	0.012	0.002	0.003	0.005	0.456
S.D.	0.000	0.013	0.020	0.007	0.000	0.000	0.001	0.003
% R.S.D.	4.385	47.486	3.883	57.727	11.181	12.535	19.265	0.625

	Mn (ug/mL)	Sb (ug/mL)	V (ug/mL)	Be (ug/mL)	Tl (ug/mL)
Mean	-0.000	0.028	0.003	0.002	-0.031
S.D.	0.000	0.003	0.000	0.000	0.023
% R.S.D.	341.010	10.194	16.756	28.826	75.065

FILE # 941229A

LABCORE Data Entry Template for Worklist# 282

Analyst: [illegible] **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** 376485
REV MOD / B-1

Worklist Comment: ICP Fusion-02 C-108

Seq	Type	Sample#	R	A	Test	Matrix	Analytes Requested
1	ICV				@ICP-QC	QC	
2	ICB				@ICP-QC	QC	
3	ICSA				@ICP-QC	QC	
4	PREPBLKARL				@ICP-F02	SOLID	
5	SAMPLE	S94T000297	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
6	DUP	S94T000297	0	F	@ICP-F02	SOLID	
7	CCV				@ICP-QC	QC	
8	CCB				@ICP-QC	QC	
9	SAMPLE	S94T000298	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
10	DUP	S94T000298	0	F	@ICP-F02	SOLID	
11	ICSA				@ICP-QC	QC	
12	CCV				@ICP-QC	QC	
13	CCB				@ICP-QC	QC	

Final page for worklist # 282

[signature] 12-29-94
Analyst Signature **Date**

Leslie Diaz for
SAM PARONG 7-15-95
Analyst Signature **Date**

Data Entry Comments: Rerun for Aluminum and Calcium in 297 and Iron in 298.

Issue

WHC-SD-WM-DP-082, REV.1

LMD 7-15-95

								Avg Raw Value	Raw Readings			Sample Wt.	DF
Ag	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.941	4.9254	4.9294	4.9696	1	1
Al	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.848	4.832	4.8334	4.8788	1	1
As	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.867	4.856	4.8335	4.9106	1	1
B	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.863	4.8453	4.844	4.8983	1	1
Ba	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.815	4.7939	4.7978	4.8529	1	1
Be	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	5.070	5.053	5.0488	5.1089	1	1
Bi	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.832	4.7859	4.835	4.8752	1	1
Ca	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.941	4.92	4.9246	4.9787	1	1
Cd	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.970	4.9485	4.9617	5.0003	1	1
Ce	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.844	4.8224	4.8223	4.8877	1	1
Co	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	5.056	5.0247	5.0595	5.0827	1	1
Cr	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.939	4.9262	4.9209	4.9703	1	1
Cu	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.969	4.9495	4.9517	5.0051	1	1
Fe	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.905	4.8876	4.8904	4.936	1	1
K	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.772	4.7641	4.7595	4.7917	1	1
La	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.839	4.8211	4.8261	4.8709	1	1
Li	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.831	4.8243	4.8144	4.8553	1	1
Mg	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.914	4.8943	4.9036	4.9437	1	1
Mn	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.906	4.8902	4.8943	4.9349	1	1
Mo	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.990	4.9602	4.9841	5.0267	1	1
Na	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.802	4.8038	4.7897	4.8133	1	1
Nd	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.860	4.8546	4.8224	4.9041	1	1
Ni	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.922	4.895	4.9244	4.9475	1	1
P	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	5.002	4.9955	4.9446	5.0654	1	1
Pb	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.898	4.8831	4.8789	4.932	1	1
S	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.965	4.9635	4.9358	4.9956	1	1
Sb	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.667	4.6091	4.7044	4.6884	1	1
Se	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	5.310	5.2944	5.3034	5.333	1	1
Si	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.629	4.6109	4.6173	4.6589	1	1
Sm	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.844	4.8168	4.8325	4.8823	1	1
Sr	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.806	4.7854	4.7892	4.8432	1	1
Ti	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.783	4.7645	4.7687	4.8171	1	1
Tl	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.681	4.6603	4.6834	4.698	1	1
U	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	9.540	9.5087	9.5072	9.6035	1	1
V	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.911	4.8934	4.8974	4.9436	1	1
Zn	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	5.050	5.0319	5.0427	5.0742	1	1
Zr	ICV	LIQ	C-108	ICV	01/04/95	12 49	BJG	4.847	4.8304	4.8335	4.8784	1	1
Ag	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.003	0.0042	0.0033	0.0029	1	1
Al	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.008	0.0178	0.0032	0.0033	1	1
As	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0005	-0.0015	0.0026	1	1
B	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.006	0.0071	0.0062	0.0055	1	1
Ba	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.002	0.0021	0.0015	0.0015	1	1
Be	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0014	0.0007	0.0007	1	1
Bi	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.014	0.016	0.0065	0.0197	1	1
Ca	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.007	0.008	0.0064	0.0054	1	1
Cd	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.003	0.0039	0.0026	0.0023	1	1
Ce	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.033	0.0438	0.0302	0.0251	1	1
Co	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0032	0.0013	-0.0007	1	1
Cr	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0013	0.0004	0.0015	1	1
Cu	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.000	0.0009	0.0001	0	1	1
Fe	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.002	0.0021	0.0037	-0.0004	1	1
K	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.047	0.0872	0.0298	0.0229	1	1
La	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0021	0.0001	0.0011	1	1
Li	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.002	0.0013	0.0009	1	1
Mg	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0013	0.0009	0.0007	1	1
Mn	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	-0.001	-0.0008	-0.0014	-0.0016	1	1
Mo	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.005	0.0072	0.0049	0.0041	1	1
Na	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.009	0.0141	0.0094	0.0047	1	1
Nd	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.021	0.0232	0.0212	0.0195	1	1
Ni	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.005	0.0047	0.0052	0.005	1	1
P	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.027	0.0289	0.0189	0.0343	1	1
Pb	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.023	0.0233	0.0234	0.0227	1	1
S	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	-0.003	-0.0038	-0.0028	-0.0011	1	1
Sb	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.023	0.0246	0.0248	0.0195	1	1
Se	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.004	-0.004	0.0174	-0.0019	1	1
Si	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.008	0.0124	0.0068	0.0052	1	1
Sm	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.047	0.0558	0.0411	0.0446	1	1
Sr	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0016	0.0011	0.001	1	1
Ti	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.003	0.0033	0.0024	0.0027	1	1
Tl	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.051	0.0653	0.0411	0.0466	1	1
U	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.164	0.2034	0.1479	0.141	1	1
V	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.002	0.0032	0.0015	0.0019	1	1
Zn	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.001	0.0021	0.0012	0.0011	1	1
Zr	ICB	LIQ	C-108	ICB	01/04/95	12 52	BJG	0.004	0.0047	0.0029	0.0035	1	1
Ag	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.008	0.0078	0.0078	0.007	1	1
Al	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	189.322	188.5994	189.1623	190.2035	1	1
As	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.015	0.0155	0.0121	0.0166	1	1
B	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	-0.023	-0.0235	-0.0225	-0.0241	1	1
Ba	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.001	0.0011	0.0012	0.0011	1	1
Be	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.003	0.0025	0.0026	0.0025	1	1
Bi	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.012	0.0133	0.0153	0.0075	1	1
Ca	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	17.648	17.5718	17.6079	17.7655	1	1

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 325 TO 331.

Cd	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.008	0.0084	0.0083	0.008	1	1
Ce	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.011	0.0113	0.0117	0.0089	1	1
Co	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.016	0.0167	0.0148	0.0167	1	1
Cr	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.004	0.0066	0.0043	0.0025	1	1
Cu	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	-0.006	-0.006	-0.0057	-0.0062	1	1
Fe	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	140.137	139.5248	140.0448	140.8418	1	1
K	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.108	0.1147	0.1147	0.094	1	1
La	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.010	0.0089	0.01	0.0121	1	1
Li	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.002	0.0022	0.0023	0.0022	1	1
Mg	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	18.371	18.2896	18.3433	18.4797	1	1
Mn	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.009	0.0094	0.0086	0.0089	1	1
Mo	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.005	0.0048	0.0062	0.0048	1	1
Na	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	181.751	181.5817	181.2757	182.396	1	1
Nd	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.020	0.0213	0.0188	0.0185	1	1
Ni	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.007	0.0061	0.0074	0.0075	1	1
P	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.069	0.0758	0.0627	0.0674	1	1
Pb	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.000	-0.0001	-0.0068	0.0083	1	1
S	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.208	0.2028	0.2128	0.2087	1	1
Sb	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	-0.008	0.0037	-0.0058	-0.0216	1	1
Se	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.021	-0.0057	0.0373	0.0316	1	1
Si	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.057	0.056	0.0605	0.0541	1	1
Sm	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.054	0.0598	0.0556	0.0462	1	1
Sr	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.001	0.0013	0.0013	0.0013	1	1
Ti	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.002	0.0021	0.0021	0.0019	1	1
Tl	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.031	0.0349	0.0351	0.0235	1	1
U	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.221	0.2192	0.2365	0.2071	1	1
V	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.000	0.0005	-0.0001	-0.0003	1	1
Zn	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.001	0.0004	0.0007	0.0006	1	1
Zr	ICSA	LIQ	C-108	ICSA	01/04/95	12 55	BJG	0.003	0.0037	0.0026	0.0024	1	1
Ag	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.046	0.0362	0.0583	0.0428	1	10
Al	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.593	0.7257	0.5769	0.4764	1	10
As	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.033	0.0466	0.0837	-0.0319	1	10
B	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.096	0.102	0.0998	0.0865	1	10
Ba	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.040	0.0426	0.0413	0.0358	1	10
Be	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.015	0.0205	0.0137	0.0108	1	10
Bi	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.058	-0.0455	0.1507	0.0691	1	10
Ca	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.269	0.2913	0.2595	0.2553	1	10
Cd	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.042	0.0442	0.0459	0.0359	1	10
Ce	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.110	0.022	0.2508	0.0559	1	10
Co	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.058	0.0513	0.0511	0.0706	1	10
Cr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.016	0.0308	0.0097	0.0089	1	10
Cu	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.007	0.0068	0.0146	-0.0014	1	10
Fe	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.522	0.6521	0.4767	0.4363	1	10
K	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	10077.376	10102.81	9991.911	10137.4	1	10
La	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.011	0.0109	0.0212	0.0009	1	10
Li	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.021	0.0241	0.0241	0.0136	1	10
Mg	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.072	0.0944	0.0652	0.0576	1	10
Mn	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	-0.006	-0.0041	-0.0061	-0.008	1	10
Mo	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.022	0.0228	0.0238	0.0196	1	10
Na	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	4.048	4.2366	3.9542	3.9542	1	10
Nd	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.042	0.0223	0.1052	-0.0024	1	10
Ni	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.090	0.094	0.1002	0.0758	1	10
P	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.232	0.1963	0.2418	0.2579	1	10
Pb	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.089	0.1362	0.0792	0.053	1	10
S	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.264	0.3043	0.2216	0.2662	1	10
Sb	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.179	-0.0789	-0.029	0.6439	1	10
Se	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.121	0.1766	0.1082	0.0773	1	10
Si	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.099	0.0811	0.1476	0.0682	1	10
Sm	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.492	0.4279	0.6469	0.4011	1	10
Sr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.019	0.0225	0.0179	0.0153	1	10
Ti	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.029	0.0298	0.0363	0.0218	1	10
Tl	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.407	0.2176	0.676	0.3268	1	10
U	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	2.432	2.1376	3.1086	2.0508	1	10
V	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.054	0.0471	0.0659	0.0475	1	10
Zn	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	0.032	0.0376	0.0295	0.0296	1	10
Zr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/04/95	13 2	BJG	3.016	3.0144	3.0126	3.021	1	10

Ag	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	257.369	275.9688	256.0026	240.1353	0.4193	2500
Al	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	263481.023	261307	263591.3	265544.7	0.4193	2500
As	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	29.570	51.6502	49.6705	-12.6108	0.4193	2500
B	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	57.466	54.3637	54.4837	63.5493	0.4193	2500
Ba	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	30.958	32.9259	30.1409	29.8059	0.4193	2500
Be	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	5.873	6.7314	5.8629	5.0244	0.4193	2500
Bi	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	109.176	179.7394	109.1713	38.6187	0.4193	2500
Ca	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	700.579	702.4543	700.3448	698.9385	0.4193	2500
Cd	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	13.621	14.9585	16.9082	8.9948	0.4193	2500
Ce	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	261.816	327.4485	256.7985	201.2009	0.4193	2500
Co	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	30.168	30.1236	41.7095	18.6702	0.4193	2500
Cr	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	176.722	183.9059	173.501	172.7587	0.4193	2500
Cu	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	23.976	27.5891	23.8583	20.4795	0.4193	2500
Fe	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	10130.163	10051.32	10203.31	10135.86	0.4193	2500
K	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	6415967.638	6378965	6428623	6440316	0.4193	2500
La	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	27.103	33.1524	15.2131	32.9447	0.4193	2500
Li	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	10.187	13.036	8.0877	9.438	0.4193	2500
Mg	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	104.030	104.0387	104.0278	104.0248	0.4193	2500
Mn	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	82.497	84.0484	81.7145	81.7283	0.4193	2500
Mo	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	16.703	20.4614	16.0768	13.5714	0.4193	2500
Na	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	27070.393	26845.86	27140.56	27224.76	0.4193	2500
Nd	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	96.046	131.3233	70.4857	86.3304	0.4193	2500
Ni	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	737.818	734.2234	742.6323	736.597	0.4193	2500
P	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	2088.248	2052.819	2099.034	2112.891	0.4193	2500
Pb	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	164.093	242.4347	120.1918	129.6516	0.4193	2500
S	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	865.072	873.4492	838.2016	863.5639	0.4193	2500
Sb	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	285.993	-31.1594	469.3774	419.7619	0.4193	2500
Se	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	66.994	136.1786	70.1187	-5.3159	0.4193	2500
Si	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	1113.347	1123.649	1108.355	1108.036	0.4193	2500
Sm	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	610.910	733.441	598.0006	501.2885	0.4193	2500
Sr	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	13.714	14.961	13.358	12.8234	0.4193	2500
Ti	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	91.731	93.7692	89.4209	92.0029	0.4193	2500
Tl	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	775.032	884.4052	789.0746	651.6163	0.4193	2500
U	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	3850.750	4188.437	3743.658	3620.155	0.4193	2500
V	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	59.659	68.3349	55.5933	55.0478	0.4193	2500
Zn	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	75.397	75.9599	75.0977	75.1348	0.4193	2500
Zr	S94T000301	SOLID	C-108	S94T000301	01/04/95	13 12	BJG	4190.105	4234.479	4157.545	4178.291	0.4193	2500
Ag	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	61.632	64.5355	66.2823	54.0789	0.4191	2500
Al	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	224039.335	223608.9	222631.7	225877.4	0.4191	2500
As	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-47.039	-46.3219	-51.1153	-43.6786	0.4191	2500
B	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	38.364	43.0781	36.821	35.194	0.4191	2500
Ba	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	20.516	20.619	21.1302	19.7991	0.4191	2500
Be	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	3.770	4.8692	3.2397	3.202	0.4191	2500
Bi	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	46.270	9.3578	15.645	113.8081	0.4191	2500
Ca	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	641.351	642.2891	638.0682	643.6961	0.4191	2500
Cd	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	7.459	6.7946	7.7968	7.7844	0.4191	2500
Ce	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-14.237	-14.2009	51.4845	-79.9942	0.4191	2500
Co	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-4.164	7.377	-15.7277	-4.1406	0.4191	2500
Cr	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	80.593	82.796	90.0169	68.9663	0.4191	2500
Cu	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	5.297	5.1533	6.0062	4.7303	0.4191	2500
Fe	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	5168.774	5186.372	5139.867	5180.081	0.4191	2500
K	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	6126755.112	6123681	6098642	6157942	0.4191	2500
La	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-2.225	1.7166	-4.1202	-4.2711	0.4191	2500
Li	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-0.606	-0.4562	1.3437	-2.7067	0.4191	2500
Mg	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	81.066	80.5606	80.5672	82.0716	0.4191	2500
Mn	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	37.158	36.7685	37.9304	36.776	0.4191	2500
Mo	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-3.133	2.2978	-5.2222	-6.4756	0.4191	2500
Na	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	48578.684	48466.36	48354.04	48915.65	0.4191	2500
Nd	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-21.303	-68.3678	6.3027	-1.8442	0.4191	2500
Ni	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	646.804	632.2528	656.5184	651.6422	0.4191	2500
P	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	11575.852	11413.56	11514.45	11799.55	0.4191	2500
Pb	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	233.964	266.9175	286.7143	148.2595	0.4191	2500
S	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	841.591	848.4615	815.5135	860.7965	0.4191	2500
Sb	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	195.997	69.1101	355.7389	163.142	0.4191	2500
Se	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	-134.658	-179.478	-87.0769	-137.418	0.4191	2500
Si	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	1157.493	1153.476	1166.391	1152.611	0.4191	2500
Sm	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	65.653	44.2509	152.3507	0.356	0.4191	2500
Sr	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	8.201	8.5593	8.5558	7.488	0.4191	2500
Ti	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	76.442	77.3023	78.4431	73.582	0.4191	2500
Tl	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	90.732	128.8575	160.076	-16.7377	0.4191	2500
U	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	1981.031	1936.33	2204.926	1801.836	0.4191	2500
V	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	38.785	40	38.9322	37.4239	0.4191	2500
Zn	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	49.014	49.072	51.0068	46.9639	0.4191	2500
Zr	S94T000301	SOLID	C-108	S94T000301_D	01/04/95	13 16	BJG	4153.766	4101.709	4209.405	4150.185	0.4191	2500

Ag	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	3.091	2.9614	3.0869	3.2237	1	1
Al	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.852	4.8554	4.8768	4.8225	1	1
As	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.775	4.7672	4.81	4.7487	1	1
B	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.836	4.8357	4.8658	4.8061	1	1
Ba	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.785	4.7893	4.8247	4.7424	1	1
Be	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.963	4.9645	4.9989	4.9248	1	1
Bi	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.787	4.7634	4.8078	4.7906	1	1
Ca	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.912	4.9145	4.9476	4.874	1	1
Cd	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.860	4.8608	4.8781	4.8422	1	1
Ce	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.759	4.7582	4.7797	4.7402	1	1
Co	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.946	4.9493	4.9609	4.9281	1	1
Cr	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.861	4.8609	4.8887	4.832	1	1
Cu	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.972	4.975	5.0128	4.9272	1	1
Fe	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.852	4.862	4.8767	4.8185	1	1
K	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	5.891	6.0005	5.9316	5.7413	1	1
La	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.814	4.8271	4.8371	4.7774	1	1
Li	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.903	4.897	4.9687	4.8421	1	1
Mg	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.831	4.8331	4.8533	4.8072	1	1
Mn	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.844	4.8488	4.8668	4.8154	1	1
Mo	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.891	4.8936	4.9113	4.8678	1	1
Na	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.929	4.9239	4.9827	4.8792	1	1
Nd	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.892	4.8869	4.9355	4.8539	1	1
Ni	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.851	4.8526	4.8662	4.8346	1	1
P	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	5.023	5.0385	5.0585	4.9731	1	1
Pb	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.848	4.8816	4.8621	4.8	1	1
S	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.939	4.9517	4.9443	4.9206	1	1
Sb	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.680	4.7259	4.6621	4.6519	1	1
Se	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	5.195	5.2176	5.1986	5.1691	1	1
Si	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.599	4.602	4.6216	4.5722	1	1
Sm	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.745	4.7464	4.7832	4.7055	1	1
Sr	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.761	4.7649	4.7964	4.7217	1	1
Ti	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.722	4.7254	4.7511	4.6889	1	1
Tl	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.724	4.7386	4.7154	4.7186	1	1
U	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	9.642	9.6739	9.6757	9.5773	1	1
V	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.860	4.8647	4.8857	4.8281	1	1
Zn	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	5.014	5.0119	5.0357	4.9954	1	1
Zr	CCV_1	LIQ	C-108	CCV_1	01/04/95	13 22	BJG	4.918	4.9503	4.9449	4.8574	1	1
Ag	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.393	0.387	0.3793	0.4137	1	1
Al	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.011	0.0149	0.0153	0.004	1	1
As	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.002	-0.0061	0.0034	-0.0045	1	1
B	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.005	0.0049	0.006	0.0043	1	1
Ba	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0017	0.0017	0.001	1	1
Be	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0014	0.0011	0.0008	1	1
Bi	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.011	0.0217	0.0066	0.0041	1	1
Ca	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.003	0.0032	0.0032	0.0031	1	1
Cd	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0028	0.0018	0.0013	1	1
Ce	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.016	0.0217	0.0276	-0.0003	1	1
Co	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.003	0.0032	0.0032	0.0032	1	1
Cr	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0013	0.0018	0.0004	1	1
Cu	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.000	0.0004	0.0004	-0.0012	1	1
Fe	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.001	-0.0009	0.0006	-0.0023	1	1
K	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.494	0.5207	0.5092	0.4519	1	1
La	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0021	0.0011	0.002	1	1
Li	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0018	0.0017	0.0014	1	1
Mg	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0011	0.0009	0.0008	1	1
Mn	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.002	-0.0016	-0.0018	-0.0018	1	1
Mo	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0025	0.0009	0.0015	1	1
Na	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.080	0.08	0.0847	0.0753	1	1
Nd	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.010	0.0173	0.0104	0.0013	1	1
Ni	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.003	0.0029	0.0025	0.0023	1	1
P	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.022	0.0173	0.0289	0.0189	1	1
Pb	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.007	0.0067	0.0046	0.0089	1	1
S	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.002	-0.0056	0.001	-0.0021	1	1
Sb	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.006	0.0079	0.0172	-0.0066	1	1
Se	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	-0.002	-0.004	0.0096	-0.0101	1	1
Si	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.006	0.0083	0.0073	0.0026	1	1
Sm	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.048	0.0573	0.0645	0.0236	1	1
Sr	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0013	0.0013	0.0009	1	1
Ti	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0028	0.0028	0.0018	1	1
Tl	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.066	0.0709	0.083	0.0426	1	1
U	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.168	0.1739	0.219	0.1098	1	1
V	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.001	0.0014	0.0017	0.0006	1	1
Zn	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.002	0.0023	0.0023	0.0018	1	1
Zr	CCB_1	LIQ	C-108	CCB_1	01/04/95	13 26	BJG	0.005	0.0058	0.005	0.0034	1	1

Ag	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	461.165	471.2096	461.2187	451.0668	0.5414	2500
Al	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	214613.493	213920.3	215387.2	215133	0.5414	2500
As	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	-1.044	8.0954	0.3193	-11.546	0.5414	2500
B	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	28.222	28.1222	23.9284	32.6156	0.5414	2500
Ba	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	18.113	17.8924	17.8924	18.5534	0.5414	2500
Be	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	4.902	5.104	5.104	4.4973	0.5414	2500
Bi	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	98.430	106.6983	52.186	136.4069	0.5414	2500
Ca	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	1580.090	1579.818	1584.719	1575.733	0.5414	2500
Cd	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	12.955	10.3948	17.3016	11.1672	0.5414	2500
Ce	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	26.206	9.2378	-22.1214	91.503	0.5414	2500
Co	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	32.283	32.3014	23.3701	41.1775	0.5414	2500
Cr	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	161.659	168.0533	157.2951	159.6294	0.5414	2500
Cu	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	28.145	26.8065	27.1911	30.4377	0.5414	2500
Fe	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	5519.075	5528.095	5501.958	5527.171	0.5414	2500
K	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	5174848.488	5186545	5187763	5150237	0.5414	2500
La	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	9.535	1.8339	6.4225	20.3487	0.5414	2500
Li	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	4.175	4.8724	3.1299	4.5228	0.5414	2500
Mg	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	61.793	61.2041	62.3764	61.7991	0.5414	2500
Mn	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	19.502	21.0165	18.3017	19.1865	0.5414	2500
Mo	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	7.600	11.4809	4.6894	6.6298	0.5414	2500
Na	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	52161.487	52244.81	52310.02	51929.63	0.5414	2500
Nd	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	8.078	-54.2202	36.9149	41.5401	0.5414	2500
Ni	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	1827.400	1798.617	1833.347	1850.236	0.5414	2500
P	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	7980.125	7952.938	8013.397	7974.039	0.5414	2500
Pb	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	71.564	92.6179	67.7579	54.315	0.5414	2500
S	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	1524.288	1491.206	1547.159	1534.5	0.5414	2500
Sb	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	-103.256	-69.1055	-83.6062	-157.055	0.5414	2500
Se	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	24.024	45.0027	-5.5601	32.6295	0.5414	2500
Si	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	677.329	672.0383	674.1676	685.7801	0.5414	2500
Sm	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	85.754	46.6283	68.6355	141.9968	0.5414	2500
Sr	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	16.723	16.5862	16.5862	16.9968	0.5414	2500
Ti	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	38.808	40.1215	38.496	37.8051	0.5414	2500
Tl	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	127.061	71.0717	121.2937	188.8186	0.5414	2500
U	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	2194.912	2074.623	2074.804	2435.309	0.5414	2500
V	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	27.930	26.2674	27.872	29.6495	0.5414	2500
Zn	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	74.674	72.9071	75.9092	75.2047	0.5414	2500
Zr	S94T000302	SOLID	C-108	S94T000302	01/04/95	13 42	BJG	2739.534	2737.698	2779.08	2701.825	0.5414	2500
Ag	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	1833.386	1926.456	1846.929	1726.772	0.5472	2500
Al	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	153983.132	153166.9	155132.6	153649.9	0.5472	2500
As	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	-38.135	-14.6082	-56.5241	-43.272	0.5472	2500
B	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	47.182	48.8621	45.7442	46.9405	0.5472	2500
Ba	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	17.623	18.0377	16.7769	18.0556	0.5472	2500
Be	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	3.649	4.4962	3.2052	3.2452	0.5472	2500
Bi	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	114.080	141.8593	109.2399	91.1412	0.5472	2500
Ca	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	1323.215	1318.725	1334.619	1316.3	0.5472	2500
Cd	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	9.382	9.6386	11.1408	7.368	0.5472	2500
Ce	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	68.598	96.986	0.2123	108.5942	0.5472	2500
Co	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	20.098	23.0395	14.2374	23.0182	0.5472	2500
Cr	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	146.302	145.8713	142.8678	150.1654	0.5472	2500
Cu	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	27.641	29.3922	25.7377	27.7937	0.5472	2500
Fe	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	9603.554	9585.768	9659.381	9565.513	0.5472	2500
K	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	5028948.715	5006697	5062731	5017418	0.5472	2500
La	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	4.417	-1.6356	7.3678	7.5185	0.5472	2500
Li	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	8.841	9.3004	7.5772	9.6446	0.5472	2500
Mg	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	50.524	50.7177	51.2914	49.5622	0.5472	2500
Mn	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	26.562	28.3551	25.6708	25.6597	0.5472	2500
Mo	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	5.280	4.1597	6.0796	5.5996	0.5472	2500
Na	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	88212.795	87746.82	88832.9	88058.66	0.5472	2500
Nd	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	-24.909	-2.6769	-74.6587	2.6088	0.5472	2500
Ni	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	1484.626	1483.702	1505.019	1465.156	0.5472	2500
P	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	26229.501	26530.91	26309.41	25848.18	0.5472	2500
Pb	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	92.874	124.0544	96.939	57.6287	0.5472	2500
S	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	1385.071	1376.111	1417.144	1361.959	0.5472	2500
Sb	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	49.984	38.7583	158.9839	-47.7899	0.5472	2500
Se	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	-14.551	-17.6712	-50.4685	24.4854	0.5472	2500
Si	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	561.572	571.5541	548.6932	564.4679	0.5472	2500
Sm	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	205.146	234.0273	126.6236	254.7883	0.5472	2500
Sr	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	13.523	13.9336	13.1151	13.5204	0.5472	2500
Ti	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	29.522	29.5311	27.8372	31.1985	0.5472	2500
Tl	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	262.279	274.5907	163.7878	348.4571	0.5472	2500
U	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	2881.561	2907.788	2654.676	3082.218	0.5472	2500
V	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	49.960	50.3852	49.009	50.4859	0.5472	2500
Zn	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	58.712	56.9547	58.4154	60.7659	0.5472	2500
Zr	S94T000302	SOLID	C-108	S94T000302_D	01/04/95	13 46	BJG	5210.276	5148.987	5351.087	5130.755	0.5472	2500

Ag	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.011	0.0097	0.0126	0.011	1	1
Al	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	193.889	194.6982	192.4016	194.5661	1	1
As	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.013	0.0124	0.0087	0.0172	1	1
B	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	-0.026	-0.0257	-0.0282	-0.0254	1	1
Ba	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.001	0.0005	0.0012	0.0006	1	1
Be	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.002	0.0025	0.0022	0.0022	1	1
Bi	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.008	0.0027	0.017	0.0057	1	1
Ca	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	17.952	18.0254	17.7836	18.0479	1	1
Cd	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.006	0.006	0.0061	0.0065	1	1
Ce	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.028	0.015	0.0497	0.0202	1	1
Co	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.015	0.0129	0.0148	0.0167	1	1
Cr	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.000	0.0007	0.0002	0.0001	1	1
Cu	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	-0.007	-0.0073	-0.006	-0.0069	1	1
Fe	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	143.219	143.6141	142.3469	143.6953	1	1
K	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	1.281	1.3304	1.2845	1.2295	1	1
La	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.010	0.0076	0.0084	0.0126	1	1
Li	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.002	0.0014	0.0021	0.0015	1	1
Mg	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	18.724	18.7477	18.6082	18.8169	1	1
Mn	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.009	0.0094	0.0089	0.0092	1	1
Mo	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.005	0.0055	0.0042	0.0046	1	1
Na	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	185.992	187.6024	183.6035	186.7692	1	1
Nd	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.032	0.0277	0.0384	0.0284	1	1
Ni	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.008	0.0064	0.0083	0.009	1	1
P	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.046	0.0505	0.0519	0.0358	1	1
Pb	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.020	0.0191	0.0274	0.0142	1	1
S	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.180	0.1761	0.1817	0.1834	1	1
Sb	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	-0.029	-0.0102	-0.0492	-0.0282	1	1
Se	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.019	0.0279	0.0163	0.0133	1	1
Si	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.059	0.0635	0.0575	0.0545	1	1
Sm	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.037	0.0183	0.0657	0.0262	1	1
Sr	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.001	0.001	0.0012	0.001	1	1
Ti	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.001	0.0006	0.0019	0.0014	1	1
Tl	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.008	-0.0111	0.0459	-0.0099	1	1
U	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.159	0.0857	0.259	0.1326	1	1
V	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	-0.001	-0.0024	-0.0002	-0.0014	1	1
Zn	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	-0.001	-0.0011	-0.0012	-0.0015	1	1
Zr	ICSA	LIQ	C-108	ICSA	01/04/95	13 50	BJG	0.005	0.0046	0.0069	0.0036	1	1
Ag	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	3.807	3.8064	3.7438	3.8706	1	1
Al	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.883	4.8615	4.9043	4.8825	1	1
As	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.841	4.8406	4.8562	4.827	1	1
B	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.903	4.8757	4.9381	4.8951	1	1
Ba	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.816	4.7885	4.8497	4.8108	1	1
Be	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.062	5.0408	5.0888	5.0562	1	1
Bi	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.839	4.7965	4.8932	4.826	1	1
Ca	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.974	4.9484	5.0049	4.9693	1	1
Cd	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.991	4.9759	4.998	4.9995	1	1
Ce	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.766	4.7422	4.7871	4.7681	1	1
Co	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.029	4.9957	5.0518	5.0382	1	1
Cr	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.960	4.9498	4.9717	4.958	1	1
Cu	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.000	4.9755	5.0357	4.9899	1	1
Fe	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.985	4.9618	5.0295	4.963	1	1
K	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.590	5.583	5.6587	5.5279	1	1
La	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.889	4.869	4.9177	4.8799	1	1
Li	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.835	4.7998	4.8912	4.8129	1	1
Mg	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.908	4.8885	4.9252	4.909	1	1
Mn	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.942	4.9284	4.9565	4.9406	1	1
Mo	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.933	4.8966	4.9575	4.9453	1	1
Na	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.905	4.8839	4.9592	4.8721	1	1
Nd	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.970	4.9631	5.0011	4.9466	1	1
Ni	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.955	4.9388	4.9669	4.9595	1	1
P	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.051	5.0561	4.986	5.1116	1	1
Pb	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.943	4.9319	4.9658	4.9305	1	1
S	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.928	4.9174	4.9045	4.9627	1	1
Sb	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.670	4.668	4.7203	4.6221	1	1
Se	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.282	5.2427	5.3398	5.2624	1	1
Si	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.641	4.6223	4.6573	4.6425	1	1
Sm	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.781	4.7614	4.8083	4.7719	1	1
Sr	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.796	4.7684	4.8281	4.7927	1	1
Ti	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.773	4.7485	4.798	4.771	1	1
Tl	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.773	4.7652	4.7856	4.7668	1	1
U	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	9.780	9.7942	9.8076	9.7372	1	1
V	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	4.941	4.9237	4.9614	4.9382	1	1
Zn	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.081	5.0609	5.1005	5.0829	1	1
Zr	CCV_2	LIQ	C-108	CCV_2	01/04/95	13 56	BJG	5.006	5.0184	5.0289	4.9708	1	1
Ag	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.408	0.4262	0.404	0.3947	1	1
Al	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.009	0.0131	0.007	0.0058	1	1
As	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	-0.007	-0.0057	-0.0108	-0.0054	1	1
B	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.005	0.0056	0.0054	0.0042	1	1
Ba	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.002	0.0025	0.002	0.002	1	1
Be	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.001	0.0012	0.0009	0.0007	1	1
Bi	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.017	0.0141	0.0238	0.0143	1	1
Ca	CCB_2	LIQ	C-108	CCB_2	01/04/95	14 0	BJG	0.004	0.0045	0.0043	0.0042	1	1

Cd	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.003	0.0031	0.0039	0.0026	1	1
Ce	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.023	0.031	0.0183	0.0192	1	1
Co	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.004	0.007	0.0032	0.0032	1	1
Cr	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	-0.002	-0.0009	-0.002	-0.0017	1	1
Cu	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	-0.001	-0.0005	-0.001	-0.0013	1	1
Fe	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.009	0.0111	0.0089	0.0079	1	1
K	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.567	0.562	0.5757	0.5643	1	1
La	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.004	0.0021	0.0041	0.0051	1	1
Li	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.001	0.0016	0.0007	0.0007	1	1
Mg	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.002	0.0021	0.0017	0.0017	1	1
Mn	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	-0.002	-0.0014	-0.0016	-0.0018	1	1
Mo	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.004	0.004	0.0043	0.0025	1	1
Na	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.102	0.1036	0.0989	0.1036	1	1
Nd	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.003	0.0071	0.0039	-0.0026	1	1
Ni	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.004	0.006	0.0035	0.0033	1	1
P	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.024	0.0319	0.0188	0.0211	1	1
Pb	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	-0.006	-0.0004	-0.0087	-0.0101	1	1
S	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.007	0.0055	0.0062	0.0086	1	1
Sb	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	-0.008	-0.0186	-0.0007	-0.0049	1	1
Se	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.007	0.0241	-0.0147	0.0127	1	1
Si	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.015	0.0184	0.0127	0.0143	1	1
Sm	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.071	0.0777	0.0677	0.067	1	1
Sr	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.001	0.0014	0.0011	0.0011	1	1
Ti	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.003	0.004	0.003	0.003	1	1
Tl	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.105	0.1193	0.0964	0.1005	1	1
U	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.273	0.3022	0.2555	0.2624	1	1
V	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.004	0.0045	0.0028	0.0033	1	1
Zn	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.002	0.0022	0.0016	0.0014	1	1
Zr	CCB_2	LIQ	C-108	CCB_2	01/04/95	14	0	BJG	0.006	0.0068	0.0055	0.0058	1	1

FILE # 950104A

LABCORE Data Entry Template for Worklist# 283

Analyst: B.J. Goecke **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** 37134813
REV MOD D 1

Worklist Comment: ICP Fusion-02 C-108

Seq	Type	Sample#	R A	Test	Matrix	Analytes Requested
1	ICV			@ICP-QC	QC	
2	ICB			@ICP-QC	QC	
3	ICSA			@ICP-QC	QC	
4	PREPBLKARL			@ICP-F02	SOLID	
5	SAMPLE	S94T000301	0 F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
6	DUP	S94T000301	0 F	@ICP-F02	SOLID	
7	CCV			@ICP-QC	QC	
8	CCB			@ICP-QC	QC	
9	SAMPLE	S94T000302	0 F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
10	DUP	S94T000302	0 F	@ICP-F02	SOLID	
11	ICSA			@ICP-QC	QC	
12	CCV			@ICP-QC	QC	
13	CCB			@ICP-QC	QC	

Final page for worklist # 283

B.J. Goecke 1-4-95
Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments: Rerun for Aluminum and Iron and Calcium (302).
Ni only used in pkg rc 7-15-95

F.C. # 950301A

LABCORE Data Entry Template for Worklist# 572

Analyst: B. Goecke **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** 38B48A
Rev. Mod D-1

Worklist Comment: ICP Fusion C108 rerun

Seq	Type	Sample#	R A	Test	Matrix	Analytes Requested
1	ICV			@ICP-QC	QC	
2	ICB			@ICP-QC	QC	
3	ICSA			@ICP-QC	QC	
4	ICSAB			@ICP-QC	QC	
5	PREPBLKARL			@ICP-F02	SOLID	
6	SAMPLE	S94T000301	0 Z	@ICP-F02	SOLID	AL-F-01 , FE-F-01
7	DUP	S94T000301	0 Z	@ICP-F02	SOLID	
8	CCV			@ICP-QC	QC	
9	CCB			@ICP-QC	QC	
10	SAMPLE	S94T000302	0 Z	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , FE-F-01
11	DUP	S94T000302	0 Z	@ICP-F02	SOLID	
12	ICSA			@ICP-QC	QC	
13	ICSAB			@ICP-QC	QC	
14	CCV			@ICP-QC	QC	
15	CCB			@ICP-QC	QC	

Final page for worklist # 572

[signature] 3-7-95
Analyst Signature Date

Leslie Diaz for Sam Parong 7-15-95
Analyst Signature Date

Data Entry Comments: Fe, Ca failed duplicate QC. Al failed duplicate QC in sample 302. No rerun requested (BW)

Worklist 572

WHC-SD-WM-DP-082, REV. 1

7-15-95 LAD

A	A	B	C	D	E	F	G (Final Results)	H (D.F.)	I (date)	J (time)	K (OID)	L (D.L.)	M
1	572	1		ICV	AG		4.8582	1	3/7/95	08:46	bjg	0.01	@ICP-QC
2	572	1		ICV	AL		4.9367	1	3/7/95	08:46	bjg	0.05	@ICP-QC
3	572	1		ICV	AS		4.8812	1	3/7/95	08:46	bjg	0.05	@ICP-QC
4	572	1		ICV	B		4.934	1	3/7/95	08:46	bjg	0.05	@ICP-QC
5	572	1		ICV	BA		5.0446	1	3/7/95	08:46	bjg	0.05	@ICP-QC
6	572	1		ICV	BE		5.1556	1	3/7/95	08:46	bjg	0.005	@ICP-QC
7	572	1		ICV	BI		4.8756	1	3/7/95	08:46	bjg	0.1	@ICP-QC
8	572	1		ICV	CA		5.1683	1	3/7/95	08:46	bjg	0.1	@ICP-QC
9	572	1		ICV	CD		4.9428	1	3/7/95	08:46	bjg	0.01	@ICP-QC
10	572	1		ICV	CE		4.9395	1	3/7/95	08:46	bjg	0.1	@ICP-QC
11	572	1		ICV	CO		4.9557	1	3/7/95	08:46	bjg	0.02	@ICP-QC
12	572	1		ICV	CR		4.9439	1	3/7/95	08:46	bjg	0.01	@ICP-QC
13	572	1		ICV	CU		5.0875	1	3/7/95	08:46	bjg	0.01	@ICP-QC
14	572	1		ICV	FE		4.9562	1	3/7/95	08:46	bjg	0.05	@ICP-QC
15	572	1		ICV	K		5.0163	1	3/7/95	08:46	bjg	0.3	@ICP-QC
16	572	1		ICV	LA		4.9921	1	3/7/95	08:46	bjg	0.05	@ICP-QC
17	572	1		ICV	LI		5.1362	1	3/7/95	08:46	bjg	0.01	@ICP-QC
18	572	1		ICV	MG		4.9185	1	3/7/95	08:46	bjg	0.1	@ICP-QC
19	572	1		ICV	MN		4.9353	1	3/7/95	08:46	bjg	0.01	@ICP-QC
20	572	1		ICV	MO		4.9197	1	3/7/95	08:46	bjg	0.05	@ICP-QC
21	572	1		ICV	NA		5.0784	1	3/7/95	08:46	bjg	0.1	@ICP-QC
22	572	1		ICV	ND		5.174	1	3/7/95	08:46	bjg	0.1	@ICP-QC
23	572	1		ICV	NI		4.9024	1	3/7/95	08:46	bjg	0.02	@ICP-QC
24	572	1		ICV	P		4.8876	1	3/7/95	08:46	bjg	0.2	@ICP-QC
25	572	1		ICV	PB		4.8526	1	3/7/95	08:46	bjg	0.1	@ICP-QC
26	572	1		ICV	S		4.8455	1	3/7/95	08:46	bjg	0.05	@ICP-QC
27	572	1		ICV	SB		4.7022	1	3/7/95	08:46	bjg	0.2	@ICP-QC
28	572	1		ICV	SE		5.219	1	3/7/95	08:46	bjg	0.1	@ICP-QC
29	572	1		ICV	SI		4.6876	1	3/7/95	08:46	bjg	0.05	@ICP-QC
30	572	1		ICV	SM		4.9734	1	3/7/95	08:46	bjg	0.1	@ICP-QC
31	572	1		ICV	SR		5.0026	1	3/7/95	08:46	bjg	0.01	@ICP-QC
32	572	1		ICV	TI		4.8215	1	3/7/95	08:46	bjg	0.01	@ICP-QC
33	572	1		ICV	TL		4.6976	1	3/7/95	08:46	bjg	0.2	@ICP-QC
34	572	1		ICV	U		9.5317	1	3/7/95	08:46	bjg	0.4	@ICP-QC
35	572	1		ICV	V		4.9108	1	3/7/95	08:46	bjg	0.05	@ICP-QC
36	572	1		ICV	ZN		4.9063	1	3/7/95	08:46	bjg	0.01	@ICP-QC
37	572	1		ICV	ZR		4.9007	1	3/7/95	08:46	bjg	0.01	@ICP-QC
38	572	2		ICB	AG		0.0049	1	3/7/95	08:50	bjg	0.01	@ICP-QC
39	572	2		ICB	AL		-0.0151	1	3/7/95	08:50	bjg	0.05	@ICP-QC
40	572	2		ICB	AS		0.0055	1	3/7/95	08:50	bjg	0.05	@ICP-QC
41	572	2		ICB	B		0.0075	1	3/7/95	08:50	bjg	0.05	@ICP-QC
42	572	2		ICB	BA		0.006	1	3/7/95	08:50	bjg	0.05	@ICP-QC
43	572	2		ICB	BE		0.0066	1	3/7/95	08:50	bjg	0.005	@ICP-QC
44	572	2		ICB	BI		-0.0019	1	3/7/95	08:50	bjg	0.1	@ICP-QC
45	572	2		ICB	CA		0.0046	1	3/7/95	08:50	bjg	0.1	@ICP-QC
46	572	2		ICB	CD		0.0055	1	3/7/95	08:50	bjg	0.01	@ICP-QC
47	572	2		ICB	CE		-0.044	1	3/7/95	08:50	bjg	0.1	@ICP-QC
48	572	2		ICB	CO		0.0009	1	3/7/95	08:50	bjg	0.02	@ICP-QC
49	572	2		ICB	CR		0.0042	1	3/7/95	08:50	bjg	0.01	@ICP-QC
50	572	2		ICB	CU		-0.0043	1	3/7/95	08:50	bjg	0.01	@ICP-QC
51	572	2		ICB	FE		0.0016	1	3/7/95	08:50	bjg	0.05	@ICP-QC
52	572	2		ICB	K		-0.0491	1	3/7/95	08:50	bjg	0.3	@ICP-QC
53	572	2		ICB	LA		0.005	1	3/7/95	08:50	bjg	0.05	@ICP-QC
54	572	2		ICB	LI		0.0056	1	3/7/95	08:50	bjg	0.01	@ICP-QC
55	572	2		ICB	MG		0.0066	1	3/7/95	08:50	bjg	0.1	@ICP-QC
56	572	2		ICB	MN		-0.0007	1	3/7/95	08:50	bjg	0.01	@ICP-QC
57	572	2		ICB	MO		0.0086	1	3/7/95	08:50	bjg	0.05	@ICP-QC
58	572	2		ICB	NA		-0.0158	1	3/7/95	08:50	bjg	0.1	@ICP-QC
59	572	2		ICB	ND		-0.012	1	3/7/95	08:50	bjg	0.1	@ICP-QC
60	572	2		ICB	NI		0.0075	1	3/7/95	08:50	bjg	0.02	@ICP-QC
61	572	2		ICB	P		0.0231	1	3/7/95	08:50	bjg	0.2	@ICP-QC
62	572	2		ICB	PB		-0.0131	1	3/7/95	08:50	bjg	0.1	@ICP-QC
63	572	2		ICB	S		0.0033	1	3/7/95	08:50	bjg	0.05	@ICP-QC
64	572	2		ICB	SB		-0.0258	1	3/7/95	08:50	bjg	0.2	@ICP-QC
65	572	2		ICB	SE		-0.0062	1	3/7/95	08:50	bjg	0.1	@ICP-QC
66	572	2		ICB	SI		0.0039	1	3/7/95	08:50	bjg	0.05	@ICP-QC
67	572	2		ICB	SM		-0.0175	1	3/7/95	08:50	bjg	0.1	@ICP-QC
68	572	2		ICB	SR		0.0063	1	3/7/95	08:50	bjg	0.01	@ICP-QC
69	572	2		ICB	TI		0.0055	1	3/7/95	08:50	bjg	0.01	@ICP-QC
70	572	2		ICB	TL		-0.0381	1	3/7/95	08:50	bjg	0.2	@ICP-QC
71	572	2		ICB	U		-0.0676	1	3/7/95	08:50	bjg	0.4	@ICP-QC
72	572	2		ICB	V		0.0045	1	3/7/95	08:50	bjg	0.05	@ICP-QC
73	572	2		ICB	ZN		0.0042	1	3/7/95	08:50	bjg	0.01	@ICP-QC
74	572	2		ICB	ZR		0.0032	1	3/7/95	08:50	bjg	0.01	@ICP-QC
75	572	3		ICSA	AG		0.002	1	3/7/95	08:54	bjg	0.01	@ICP-QC
76	572	3		ICSA	AL		216.49	1	3/7/95	08:54	bjg	0.05	@ICP-QC
77	572	3		ICSA	AS		0.0211	1	3/7/95	08:54	bjg	0.05	@ICP-QC
78	572	3		ICSA	B		-0.0396	1	3/7/95	08:54	bjg	0.05	@ICP-QC
79	572	3		ICSA	BA		0.0011	1	3/7/95	08:54	bjg	0.05	@ICP-QC
80	572	3		ICSA	BE		0.0047	1	3/7/95	08:54	bjg	0.005	@ICP-QC
81	572	3		ICSA	BI		-0.0075	1	3/7/95	08:54	bjg	0.1	@ICP-QC
82	572	3		ICSA	CA		20.0278	1	3/7/95	08:54	bjg	0.1	@ICP-QC
83	572	3		ICSA	CD		0.0149	1	3/7/95	08:54	bjg	0.01	@ICP-QC
84	572	3		ICSA	CE		-0.0552	1	3/7/95	08:54	bjg	0.1	@ICP-QC
85	572	3		ICSA	CO		0.0085	1	3/7/95	08:54	bjg	0.02	@ICP-QC
86	572	3		ICSA	CR		0.005	1	3/7/95	08:54	bjg	0.01	@ICP-QC
87	572	3		ICSA	CU		-0.0171	1	3/7/95	08:54	bjg	0.01	@ICP-QC
88	572	3		ICSA	FE		160.1337	1	3/7/95	08:54	bjg	0.05	@ICP-QC

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 334 TO 338

Rec'd Dig 7-15-95 for Sum Pg 2/16

A	A	B	C	D	E	F	G	H	I	J	K	L	M
89	572	3		ICSA	K		-0.0152	1	3/7/95	08:54	bjg	0.3	@ICP-QC
90	572	3		ICSA	LA		0.0124	1	3/7/95	08:54	bjg	0.05	@ICP-QC
91	572	3		ICSA	LI		0.0017	1	3/7/95	08:54	bjg	0.01	@ICP-QC
92	572	3		ICSA	MG		20.9645	1	3/7/95	08:54	bjg	0.1	@ICP-QC
93	572	3		ICSA	MN		0.0114	1	3/7/95	08:54	bjg	0.01	@ICP-QC
94	572	3		ICSA	MO		0.0078	1	3/7/95	08:54	bjg	0.05	@ICP-QC
95	572	3		ICSA	NA		205.717	1	3/7/95	08:54	bjg	0.1	@ICP-QC
96	572	3		ICSA	ND		-0.0362	1	3/7/95	08:54	bjg	0.1	@ICP-QC
97	572	3		ICSA	NI		0.0039	1	3/7/95	08:54	bjg	0.02	@ICP-QC
98	572	3		ICSA	P		0.0569	1	3/7/95	08:54	bjg	0.2	@ICP-QC
99	572	3		ICSA	PB		0.0243	1	3/7/95	08:54	bjg	0.1	@ICP-QC
100	572	3		ICSA	S		0.2217	1	3/7/95	08:54	bjg	0.05	@ICP-QC
101	572	3		ICSA	SB		-0.0046	1	3/7/95	08:54	bjg	0.2	@ICP-QC
102	572	3		ICSA	SE		0.0487	1	3/7/95	08:54	bjg	0.1	@ICP-QC
103	572	3		ICSA	SI		0.0625	1	3/7/95	08:54	bjg	0.05	@ICP-QC
104	572	3		ICSA	SM		-0.0526	1	3/7/95	08:54	bjg	0.1	@ICP-QC
105	572	3		ICSA	SR		0.0023	1	3/7/95	08:54	bjg	0.01	@ICP-QC
106	572	3		ICSA	TI		0.0009	1	3/7/95	08:54	bjg	0.01	@ICP-QC
107	572	3		ICSA	TL		-0.1166	1	3/7/95	08:54	bjg	0.2	@ICP-QC
108	572	3		ICSA	U		-0.1551	1	3/7/95	08:54	bjg	0.4	@ICP-QC
109	572	3		ICSA	V		-0.0053	1	3/7/95	08:54	bjg	0.05	@ICP-QC
110	572	3		ICSA	ZN		0.0029	1	3/7/95	08:54	bjg	0.01	@ICP-QC
111	572	3		ICSA	ZR		-0.0058	1	3/7/95	08:54	bjg	0.01	@ICP-QC
112	572	4		ICSAB	AG		0.0698	1	3/7/95	08:57	bjg	0.01	@ICP-QC
113	572	4		ICSAB	AL		212.7204	1	3/7/95	08:57	bjg	0.05	@ICP-QC
114	572	4		ICSAB	AS		0.0084	1	3/7/95	08:57	bjg	0.05	@ICP-QC
115	572	4		ICSAB	B		-0.039	1	3/7/95	08:57	bjg	0.05	@ICP-QC
116	572	4		ICSAB	BA		0.5258	1	3/7/95	08:57	bjg	0.05	@ICP-QC
117	572	4		ICSAB	BE		0.5437	1	3/7/95	08:57	bjg	0.005	@ICP-QC
118	572	4		ICSAB	BI		0.0101	1	3/7/95	08:57	bjg	0.1	@ICP-QC
119	572	4		ICSAB	CA		19.8316	1	3/7/95	08:57	bjg	0.1	@ICP-QC
120	572	4		ICSAB	CD		1.101	1	3/7/95	08:57	bjg	0.01	@ICP-QC
121	572	4		ICSAB	CE		0.0047	1	3/7/95	08:57	bjg	0.1	@ICP-QC
122	572	4		ICSAB	CO		0.5465	1	3/7/95	08:57	bjg	0.02	@ICP-QC
123	572	4		ICSAB	CR		0.5484	1	3/7/95	08:57	bjg	0.01	@ICP-QC
124	572	4		ICSAB	CU		0.5107	1	3/7/95	08:57	bjg	0.01	@ICP-QC
125	572	4		ICSAB	FE		159.058	1	3/7/95	08:57	bjg	0.05	@ICP-QC
126	572	4		ICSAB	K		0.0366	1	3/7/95	08:57	bjg	0.3	@ICP-QC
127	572	4		ICSAB	LA		0.0174	1	3/7/95	08:57	bjg	0.05	@ICP-QC
128	572	4		ICSAB	LI		1.0079	1	3/7/95	08:57	bjg	0.01	@ICP-QC
129	572	4		ICSAB	MG		20.7236	1	3/7/95	08:57	bjg	0.1	@ICP-QC
130	572	4		ICSAB	MN		0.5559	1	3/7/95	08:57	bjg	0.01	@ICP-QC
131	572	4		ICSAB	MO		0.0057	1	3/7/95	08:57	bjg	0.05	@ICP-QC
132	572	4		ICSAB	NA		200.2555	1	3/7/95	08:57	bjg	0.1	@ICP-QC
133	572	4		ICSAB	ND		-0.0433	1	3/7/95	08:57	bjg	0.1	@ICP-QC
134	572	4		ICSAB	NI		1.0812	1	3/7/95	08:57	bjg	0.02	@ICP-QC
135	572	4		ICSAB	P		0.037	1	3/7/95	08:57	bjg	0.2	@ICP-QC
136	572	4		ICSAB	PB		1.0867	1	3/7/95	08:57	bjg	0.1	@ICP-QC
137	572	4		ICSAB	S		0.1988	1	3/7/95	08:57	bjg	0.05	@ICP-QC
138	572	4		ICSAB	SB		-0.0436	1	3/7/95	08:57	bjg	0.2	@ICP-QC
139	572	4		ICSAB	SE		0.0652	1	3/7/95	08:57	bjg	0.1	@ICP-QC
140	572	4		ICSAB	SI		0.0621	1	3/7/95	08:57	bjg	0.05	@ICP-QC
141	572	4		ICSAB	SM		0.0115	1	3/7/95	08:57	bjg	0.1	@ICP-QC
142	572	4		ICSAB	SR		0.0017	1	3/7/95	08:57	bjg	0.01	@ICP-QC
143	572	4		ICSAB	TI		0.0025	1	3/7/95	08:57	bjg	0.01	@ICP-QC
144	572	4		ICSAB	TL		-0.0086	1	3/7/95	08:57	bjg	0.2	@ICP-QC
145	572	4		ICSAB	U		0.0791	1	3/7/95	08:57	bjg	0.4	@ICP-QC
146	572	4		ICSAB	V		0.5278	1	3/7/95	08:57	bjg	0.05	@ICP-QC
147	572	4		ICSAB	ZN		1.0777	1	3/7/95	08:57	bjg	0.01	@ICP-QC
148	572	4		ICSAB	ZR		-0.0001	1	3/7/95	08:57	bjg	0.01	@ICP-QC
149	572	5		PREPBLKARL	AG-F-01		0.0158	10	3/7/95	09:05	bjg	0.01	@ICP-F0
150	572	5		PREPBLKARL	AL-F-01		0.9912	10	3/7/95	09:05	bjg	0.05	@ICP-F0
151	572	5		PREPBLKARL	AS-F-01		-0.0235	10	3/7/95	09:05	bjg	0.05	@ICP-F0
152	572	5		PREPBLKARL	B-F-01		0.0631	10	3/7/95	09:05	bjg	0.05	@ICP-F0
153	572	5		PREPBLKARL	BA-F-01		0.0392	10	3/7/95	09:05	bjg	0.05	@ICP-F0
154	572	5		PREPBLKARL	BE-F-01		0.0221	10	3/7/95	09:05	bjg	0.005	@ICP-F0
155	572	5		PREPBLKARL	BI-F-01		-0.1164	10	3/7/95	09:05	bjg	0.1	@ICP-F0
156	572	5		PREPBLKARL	CA-F-01		0.2197	10	3/7/95	09:05	bjg	0.1	@ICP-F0
157	572	5		PREPBLKARL	CD-F-01		0.02	10	3/7/95	09:05	bjg	0.01	@ICP-F0
158	572	5		PREPBLKARL	CE-F-01		-0.4605	10	3/7/95	09:05	bjg	0.1	@ICP-F0
159	572	5		PREPBLKARL	CO-F-01		-0.0512	10	3/7/95	09:05	bjg	0.02	@ICP-F0
160	572	5		PREPBLKARL	CR-F-01		0.0156	10	3/7/95	09:05	bjg	0.01	@ICP-F0
161	572	5		PREPBLKARL	CU-F-01		-0.0941	10	3/7/95	09:05	bjg	0.01	@ICP-F0
162	572	5		PREPBLKARL	FE-F-01		0.9453	10	3/7/95	09:05	bjg	0.05	@ICP-F0
163	572	5		PREPBLKARL	K-F-01		10144.29	10	3/7/95	09:05	bjg	0.3	@ICP-F0
164	572	5		PREPBLKARL	LA-F-01		0.0405	10	3/7/95	09:05	bjg	0.05	@ICP-F0
165	572	5		PREPBLKARL	LI-F-01		0.0029	10	3/7/95	09:05	bjg	0.01	@ICP-F0
166	572	5		PREPBLKARL	MG-F-01		0.1352	10	3/7/95	09:05	bjg	0.1	@ICP-F0
167	572	5		PREPBLKARL	MN-F-01		-0.0502	10	3/7/95	09:05	bjg	0.01	@ICP-F0
168	572	5		PREPBLKARL	MO-F-01		0.018	10	3/7/95	09:05	bjg	0.05	@ICP-F0
169	572	5		PREPBLKARL	NA-F-01		4.3776	10	3/7/95	09:05	bjg	0.1	@ICP-F0
170	572	5		PREPBLKARL	ND-F-01		-0.1332	10	3/7/95	09:05	bjg	0.1	@ICP-F0
171	572	5		PREPBLKARL	NI-F-01		0.0994	10	3/7/95	09:05	bjg	0.02	@ICP-F0
172	572	5		PREPBLKARL	P-F-01		0.0252	10	3/7/95	09:05	bjg	0.2	@ICP-F0
173	572	5		PREPBLKARL	PB-F-01		0.0726	10	3/7/95	09:05	bjg	0.1	@ICP-F0
174	572	5		PREPBLKARL	S-F-01		0.1069	10	3/7/95	09:05	bjg	0.05	@ICP-F0
175	572	5		PREPBLKARL	SB-F-01		-0.1856	10	3/7/95	09:05	bjg	0.2	@ICP-F0
176	572	5		PREPBLKARL	SE-F-01		-0.1666	10	3/7/95	09:05	bjg	0.1	@ICP-F0

A	A	B	C	D	E	F	G	H	I	J	K	L	M
177	572	5		PREPBLKARL	SI-F-01		0.0336	10	3/7/95	09:05	bjg	0.05	@ICP-F0
178	572	5		PREPBLKARL	SM-F-01		-0.0249	10	3/7/95	09:05	bjg	0.1	@ICP-F0
179	572	5		PREPBLKARL	SR-F-01		0.0171	10	3/7/95	09:05	bjg	0.01	@ICP-F0
180	572	5		PREPBLKARL	TI-F-01		0.0266	10	3/7/95	09:05	bjg	0.01	@ICP-F0
181	572	5		PREPBLKARL	TL-F-01		0.1098	10	3/7/95	09:05	bjg	0.2	@ICP-F0
182	572	5		PREPBLKARL	U-F-01		0.8614	10	3/7/95	09:05	bjg	0.4	@ICP-F0
183	572	5		PREPBLKARL	V-F-01		0.0616	10	3/7/95	09:05	bjg	0.05	@ICP-F0
184	572	5		PREPBLKARL	ZN-F-01		0.0113	10	3/7/95	09:05	bjg	0.01	@ICP-F0
185	572	5		PREPBLKARL	ZR-F-01		4.9163	10	3/7/95	09:05	bjg	0.01	@ICP-F0
186	572	6	S94T000301		AL-F-01		276355.4	5340.739	3/7/95	09:17	bjg	0.05	@ICP-F0
187	572	6	S94T000301		FE-F-01		9301.15	5340.739	3/7/95	09:17	bjg	0.05	@ICP-F0
188	572	7	S94T000301	DUP	AL-F-01	276355.4	292958.3	5389.093	3/7/95	09:22	bjg	0.05	@ICP-F0
189	572	7	S94T000301	DUP	FE-F-01	9301.15	11506.03	5389.093	3/7/95	09:22	bjg	0.05	@ICP-F0
190	572	8		CCV	AG		2.3237	1	3/7/95	09:31	bjg	0.01	@ICP-QC
191	572	8		CCV	AL		5.0973	1	3/7/95	09:31	bjg	0.05	@ICP-QC
192	572	8		CCV	AS		4.9581	1	3/7/95	09:31	bjg	0.05	@ICP-QC
193	572	8		CCV	B		5.0165	1	3/7/95	09:31	bjg	0.05	@ICP-QC
194	572	8		CCV	BA		5.149	1	3/7/95	09:31	bjg	0.05	@ICP-QC
195	572	8		CCV	BE		5.2671	1	3/7/95	09:31	bjg	0.005	@ICP-QC
196	572	8		CCV	BI		4.9794	1	3/7/95	09:31	bjg	0.1	@ICP-QC
197	572	8		CCV	CA		5.2734	1	3/7/95	09:31	bjg	0.1	@ICP-QC
198	572	8		CCV	CD		5.0354	1	3/7/95	09:31	bjg	0.01	@ICP-QC
199	572	8		CCV	CE		5.0701	1	3/7/95	09:31	bjg	0.1	@ICP-QC
200	572	8		CCV	CO		5.034	1	3/7/95	09:31	bjg	0.02	@ICP-QC
201	572	8		CCV	CR		5.0342	1	3/7/95	09:31	bjg	0.01	@ICP-QC
202	572	8		CCV	CU		5.1791	1	3/7/95	09:31	bjg	0.01	@ICP-QC
203	572	8		CCV	FE		5.0727	1	3/7/95	09:31	bjg	0.05	@ICP-QC
204	572	8		CCV	K		7.1238	1	3/7/95	09:31	bjg	0.3	@ICP-QC
205	572	8		CCV	LA		5.1038	1	3/7/95	09:31	bjg	0.05	@ICP-QC
206	572	8		CCV	LI		5.184	1	3/7/95	09:31	bjg	0.01	@ICP-QC
207	572	8		CCV	MG		4.9995	1	3/7/95	09:31	bjg	0.1	@ICP-QC
208	572	8		CCV	MN		5.0286	1	3/7/95	09:31	bjg	0.01	@ICP-QC
209	572	8		CCV	MO		5.0087	1	3/7/95	09:31	bjg	0.05	@ICP-QC
210	572	8		CCV	NA		5.2114	1	3/7/95	09:31	bjg	0.1	@ICP-QC
211	572	8		CCV	ND		5.3198	1	3/7/95	09:31	bjg	0.1	@ICP-QC
212	572	8		CCV	NI		4.9895	1	3/7/95	09:31	bjg	0.02	@ICP-QC
213	572	8		CCV	P		4.9326	1	3/7/95	09:31	bjg	0.2	@ICP-QC
214	572	8		CCV	PB		4.9198	1	3/7/95	09:31	bjg	0.1	@ICP-QC
215	572	8		CCV	S		4.8643	1	3/7/95	09:31	bjg	0.05	@ICP-QC
216	572	8		CCV	SB		4.7289	1	3/7/95	09:31	bjg	0.2	@ICP-QC
217	572	8		CCV	SE		5.3509	1	3/7/95	09:31	bjg	0.1	@ICP-QC
218	572	8		CCV	SI		4.7488	1	3/7/95	09:31	bjg	0.05	@ICP-QC
219	572	8		CCV	SM		5.1058	1	3/7/95	09:31	bjg	0.1	@ICP-QC
220	572	8		CCV	SR		5.1021	1	3/7/95	09:31	bjg	0.01	@ICP-QC
221	572	8		CCV	TI		4.9177	1	3/7/95	09:31	bjg	0.01	@ICP-QC
222	572	8		CCV	TL		4.841	1	3/7/95	09:31	bjg	0.2	@ICP-QC
223	572	8		CCV	U		9.8249	1	3/7/95	09:31	bjg	0.4	@ICP-QC
224	572	8		CCV	V		5.0088	1	3/7/95	09:31	bjg	0.05	@ICP-QC
225	572	8		CCV	ZN		4.9675	1	3/7/95	09:31	bjg	0.01	@ICP-QC
226	572	8		CCV	ZR		5.177	1	3/7/95	09:31	bjg	0.01	@ICP-QC
227	572	9		CCB	AG		0.1831	1	3/7/95	09:34	bjg	0.01	@ICP-QC
228	572	9		CCB	AL		0.0275	1	3/7/95	09:34	bjg	0.05	@ICP-QC
229	572	9		CCB	AS		0.0001	1	3/7/95	09:34	bjg	0.05	@ICP-QC
230	572	9		CCB	B		0.0038	1	3/7/95	09:34	bjg	0.05	@ICP-QC
231	572	9		CCB	BA		0.0028	1	3/7/95	09:34	bjg	0.05	@ICP-QC
232	572	9		CCB	BE		0.0037	1	3/7/95	09:34	bjg	0.005	@ICP-QC
233	572	9		CCB	BI		-0.0131	1	3/7/95	09:34	bjg	0.1	@ICP-QC
234	572	9		CCB	CA		0.0036	1	3/7/95	09:34	bjg	0.1	@ICP-QC
235	572	9		CCB	CD		0.0034	1	3/7/95	09:34	bjg	0.01	@ICP-QC
236	572	9		CCB	CE		-0.068	1	3/7/95	09:34	bjg	0.1	@ICP-QC
237	572	9		CCB	CO		-0.0008	1	3/7/95	09:34	bjg	0.02	@ICP-QC
238	572	9		CCB	CR		0.0042	1	3/7/95	09:34	bjg	0.01	@ICP-QC
239	572	9		CCB	CU		-0.0091	1	3/7/95	09:34	bjg	0.01	@ICP-QC
240	572	9		CCB	FE		0.0151	1	3/7/95	09:34	bjg	0.05	@ICP-QC
241	572	9		CCB	K		1.3022	1	3/7/95	09:34	bjg	0.3	@ICP-QC
242	572	9		CCB	LA		0.0017	1	3/7/95	09:34	bjg	0.05	@ICP-QC
243	572	9		CCB	LI		0.0021	1	3/7/95	09:34	bjg	0.01	@ICP-QC
244	572	9		CCB	MG		0.0048	1	3/7/95	09:34	bjg	0.1	@ICP-QC
245	572	9		CCB	MN		-0.0042	1	3/7/95	09:34	bjg	0.01	@ICP-QC
246	572	9		CCB	MO		0.0064	1	3/7/95	09:34	bjg	0.05	@ICP-QC
247	572	9		CCB	NA		0.0425	1	3/7/95	09:34	bjg	0.1	@ICP-QC
248	572	9		CCB	ND		-0.0235	1	3/7/95	09:34	bjg	0.1	@ICP-QC
249	572	9		CCB	NI		0.0019	1	3/7/95	09:34	bjg	0.02	@ICP-QC
250	572	9		CCB	P		0.0158	1	3/7/95	09:34	bjg	0.2	@ICP-QC
251	572	9		CCB	PB		0.0008	1	3/7/95	09:34	bjg	0.1	@ICP-QC
252	572	9		CCB	S		0.0028	1	3/7/95	09:34	bjg	0.05	@ICP-QC
253	572	9		CCB	SB		-0.0211	1	3/7/95	09:34	bjg	0.2	@ICP-QC
254	572	9		CCB	SE		-0.0339	1	3/7/95	09:34	bjg	0.1	@ICP-QC
255	572	9		CCB	SI		-0.001	1	3/7/95	09:34	bjg	0.05	@ICP-QC
256	572	9		CCB	SM		-0.0344	1	3/7/95	09:34	bjg	0.1	@ICP-QC
257	572	9		CCB	SR		0.0029	1	3/7/95	09:34	bjg	0.01	@ICP-QC
258	572	9		CCB	TI		0.0026	1	3/7/95	09:34	bjg	0.01	@ICP-QC
259	572	9		CCB	TL		-0.0364	1	3/7/95	09:34	bjg	0.2	@ICP-QC
260	572	9		CCB	U		-0.1272	1	3/7/95	09:34	bjg	0.4	@ICP-QC
261	572	9		CCB	V		0.0008	1	3/7/95	09:34	bjg	0.05	@ICP-QC
262	572	9		CCB	ZN		0.004	1	3/7/95	09:34	bjg	0.01	@ICP-QC
263	572	9		CCB	ZR		0.0019	1	3/7/95	09:34	bjg	0.01	@ICP-QC
264	572	10	S94T000302		AL-F-01		181200.7	5396.072	3/7/95	09:44	bjg	0.05	@ICP-F0

A	A	B	C	D	E	F	G	H	I	J	K	L	M
265	572	10	S94T000302		CA-F-01		1520.948	5396.072	3/7/95	09:44	bjg	0.1	@ICP-F0
266	572	10	S94T000302		FE-F-01		12473.13	5396.072	3/7/95	09:44	bjg	0.05	@ICP-F0
267	572	11	S94T000302	DUP	AL-F-01	181200.7	260317.5	5339.599	3/7/95	09:48	bjg	0.05	@ICP-F0
268	572	11	S94T000302	DUP	CA-F-01	1520.948	2056.676	5339.599	3/7/95	09:48	bjg	0.1	@ICP-F0
269	572	11	S94T000302	DUP	FE-F-01	12473.13	6829.296	5339.599	3/7/95	09:48	bjg	0.05	@ICP-F0
270	572	12		ICSA	AG		0.0387	1	3/7/95	09:55	bjg	0.01	@ICP-QC
271	572	12		ICSA	AL		217.2748	1	3/7/95	09:55	bjg	0.05	@ICP-QC
272	572	12		ICSA	AS		0.0155	1	3/7/95	09:55	bjg	0.05	@ICP-QC
273	572	12		ICSA	B		-0.0474	1	3/7/95	09:55	bjg	0.05	@ICP-QC
274	572	12		ICSA	BA		0.0016	1	3/7/95	09:55	bjg	0.05	@ICP-QC
275	572	12		ICSA	BE		0.0045	1	3/7/95	09:55	bjg	0.005	@ICP-QC
276	572	12		ICSA	BI		0.0041	1	3/7/95	09:55	bjg	0.1	@ICP-QC
277	572	12		ICSA	CA		20.0475	1	3/7/95	09:55	bjg	0.1	@ICP-QC
278	572	12		ICSA	CD		0.0152	1	3/7/95	09:55	bjg	0.01	@ICP-QC
279	572	12		ICSA	CE		-0.0276	1	3/7/95	09:55	bjg	0.1	@ICP-QC
280	572	12		ICSA	CO		0.0034	1	3/7/95	09:55	bjg	0.02	@ICP-QC
281	572	12		ICSA	CR		0.0044	1	3/7/95	09:55	bjg	0.01	@ICP-QC
282	572	12		ICSA	CU		-0.0173	1	3/7/95	09:55	bjg	0.01	@ICP-QC
283	572	12		ICSA	FE		159.0307	1	3/7/95	09:55	bjg	0.05	@ICP-QC
284	572	12		ICSA	K		4.316	1	3/7/95	09:55	bjg	0.3	@ICP-QC
285	572	12		ICSA	LA		0.0169	1	3/7/95	09:55	bjg	0.05	@ICP-QC
286	572	12		ICSA	LI		0.0019	1	3/7/95	09:55	bjg	0.01	@ICP-QC
287	572	12		ICSA	MG		20.6785	1	3/7/95	09:55	bjg	0.1	@ICP-QC
288	572	12		ICSA	MN		0.0113	1	3/7/95	09:55	bjg	0.01	@ICP-QC
289	572	12		ICSA	MO		0.0072	1	3/7/95	09:55	bjg	0.05	@ICP-QC
290	572	12		ICSA	NA		205.3648	1	3/7/95	09:55	bjg	0.1	@ICP-QC
291	572	12		ICSA	ND		-0.0319	1	3/7/95	09:55	bjg	0.1	@ICP-QC
292	572	12		ICSA	NI		0.0086	1	3/7/95	09:55	bjg	0.02	@ICP-QC
293	572	12		ICSA	P		0.0555	1	3/7/95	09:55	bjg	0.2	@ICP-QC
294	572	12		ICSA	PB		0.0423	1	3/7/95	09:55	bjg	0.1	@ICP-QC
295	572	12		ICSA	S		0.2188	1	3/7/95	09:55	bjg	0.05	@ICP-QC
296	572	12		ICSA	SB		-0.0497	1	3/7/95	09:55	bjg	0.2	@ICP-QC
297	572	12		ICSA	SE		0.0364	1	3/7/95	09:55	bjg	0.1	@ICP-QC
298	572	12		ICSA	SI		0.0701	1	3/7/95	09:55	bjg	0.05	@ICP-QC
299	572	12		ICSA	SM		-0.0273	1	3/7/95	09:55	bjg	0.1	@ICP-QC
300	572	12		ICSA	SR		0.0022	1	3/7/95	09:55	bjg	0.01	@ICP-QC
301	572	12		ICSA	TI		0.0022	1	3/7/95	09:55	bjg	0.01	@ICP-QC
302	572	12		ICSA	TL		-0.0533	1	3/7/95	09:55	bjg	0.2	@ICP-QC
303	572	12		ICSA	U		-0.0528	1	3/7/95	09:55	bjg	0.4	@ICP-QC
304	572	12		ICSA	V		-0.0029	1	3/7/95	09:55	bjg	0.05	@ICP-QC
305	572	12		ICSA	ZN		0.0017	1	3/7/95	09:55	bjg	0.01	@ICP-QC
306	572	12		ICSA	ZR		0.0019	1	3/7/95	09:55	bjg	0.01	@ICP-QC
307	572	13		ICSAB	AG		0.0642	1	3/7/95	10:01	bjg	0.01	@ICP-QC
308	572	13		ICSAB	AL		211.3743	1	3/7/95	10:01	bjg	0.05	@ICP-QC
309	572	13		ICSAB	AS		0.0216	1	3/7/95	10:01	bjg	0.05	@ICP-QC
310	572	13		ICSAB	B		-0.0471	1	3/7/95	10:01	bjg	0.05	@ICP-QC
311	572	13		ICSAB	BA		0.5215	1	3/7/95	10:01	bjg	0.05	@ICP-QC
312	572	13		ICSAB	BE		0.531	1	3/7/95	10:01	bjg	0.005	@ICP-QC
313	572	13		ICSAB	BI		0.0106	1	3/7/95	10:01	bjg	0.1	@ICP-QC
314	572	13		ICSAB	CA		19.6258	1	3/7/95	10:01	bjg	0.1	@ICP-QC
315	572	13		ICSAB	CD		1.0681	1	3/7/95	10:01	bjg	0.01	@ICP-QC
316	572	13		ICSAB	CE		-0.0022	1	3/7/95	10:01	bjg	0.1	@ICP-QC
317	572	13		ICSAB	CO		0.5294	1	3/7/95	10:01	bjg	0.02	@ICP-QC
318	572	13		ICSAB	CR		0.5299	1	3/7/95	10:01	bjg	0.01	@ICP-QC
319	572	13		ICSAB	CU		0.508	1	3/7/95	10:01	bjg	0.01	@ICP-QC
320	572	13		ICSAB	FE		155.5208	1	3/7/95	10:01	bjg	0.05	@ICP-QC
321	572	13		ICSAB	K		1.4896	1	3/7/95	10:01	bjg	0.3	@ICP-QC
322	572	13		ICSAB	LA		0.0163	1	3/7/95	10:01	bjg	0.05	@ICP-QC
323	572	13		ICSAB	LI		1.0042	1	3/7/95	10:01	bjg	0.01	@ICP-QC
324	572	13		ICSAB	MG		20.1144	1	3/7/95	10:01	bjg	0.1	@ICP-QC
325	572	13		ICSAB	MN		0.5394	1	3/7/95	10:01	bjg	0.01	@ICP-QC
326	572	13		ICSAB	MO		0.0031	1	3/7/95	10:01	bjg	0.05	@ICP-QC
327	572	13		ICSAB	NA		199.6095	1	3/7/95	10:01	bjg	0.1	@ICP-QC
328	572	13		ICSAB	ND		-0.0376	1	3/7/95	10:01	bjg	0.1	@ICP-QC
329	572	13		ICSAB	NI		1.0518	1	3/7/95	10:01	bjg	0.02	@ICP-QC
330	572	13		ICSAB	P		0.0284	1	3/7/95	10:01	bjg	0.2	@ICP-QC
331	572	13		ICSAB	PB		1.0754	1	3/7/95	10:01	bjg	0.1	@ICP-QC
332	572	13		ICSAB	S		0.1921	1	3/7/95	10:01	bjg	0.05	@ICP-QC
333	572	13		ICSAB	SB		-0.0127	1	3/7/95	10:01	bjg	0.2	@ICP-QC
334	572	13		ICSAB	SE		0.0633	1	3/7/95	10:01	bjg	0.1	@ICP-QC
335	572	13		ICSAB	SI		0.0554	1	3/7/95	10:01	bjg	0.05	@ICP-QC
336	572	13		ICSAB	SM		0.0029	1	3/7/95	10:01	bjg	0.1	@ICP-QC
337	572	13		ICSAB	SR		0.0003	1	3/7/95	10:01	bjg	0.01	@ICP-QC
338	572	13		ICSAB	TI		0.0013	1	3/7/95	10:01	bjg	0.01	@ICP-QC
339	572	13		ICSAB	TL		-0.0124	1	3/7/95	10:01	bjg	0.2	@ICP-QC
340	572	13		ICSAB	U		0.039	1	3/7/95	10:01	bjg	0.4	@ICP-QC
341	572	13		ICSAB	V		0.5131	1	3/7/95	10:01	bjg	0.05	@ICP-QC
342	572	13		ICSAB	ZN		1.0444	1	3/7/95	10:01	bjg	0.01	@ICP-QC
343	572	13		ICSAB	ZR		-0.0002	1	3/7/95	10:01	bjg	0.01	@ICP-QC
344	572	14		CCV	AG		3.1962	1	3/7/95	10:08	bjg	0.01	@ICP-QC
345	572	14		CCV	AL		5.1523	1	3/7/95	10:08	bjg	0.05	@ICP-QC
346	572	14		CCV	AS		5.0171	1	3/7/95	10:08	bjg	0.05	@ICP-QC
347	572	14		CCV	B		5.0302	1	3/7/95	10:08	bjg	0.05	@ICP-QC
348	572	14		CCV	BA		5.056	1	3/7/95	10:08	bjg	0.05	@ICP-QC
349	572	14		CCV	BE		5.2801	1	3/7/95	10:08	bjg	0.005	@ICP-QC
350	572	14		CCV	BI		4.9979	1	3/7/95	10:08	bjg	0.1	@ICP-QC
351	572	14		CCV	CA		5.2223	1	3/7/95	10:08	bjg	0.1	@ICP-QC
352	572	14		CCV	CD		5.127	1	3/7/95	10:08	bjg	0.01	@ICP-QC

A	A	B	C	D	E	F	G	H	I	J	K	L	M
353	572	14		CCV	CE		5.036	1	3/7/95	10:08	bjg	0.1	@ICP-QC
354	572	14		CCV	CO		5.1405	1	3/7/95	10:08	bjg	0.02	@ICP-QC
355	572	14		CCV	CR		5.1471	1	3/7/95	10:08	bjg	0.01	@ICP-QC
356	572	14		CCV	CU		5.0889	1	3/7/95	10:08	bjg	0.01	@ICP-QC
357	572	14		CCV	FE		5.1932	1	3/7/95	10:08	bjg	0.05	@ICP-QC
358	572	14		CCV	K		5.9003	1	3/7/95	10:08	bjg	0.3	@ICP-QC
359	572	14		CCV	LA		5.0591	1	3/7/95	10:08	bjg	0.05	@ICP-QC
360	572	14		CCV	LI		5.1258	1	3/7/95	10:08	bjg	0.01	@ICP-QC
361	572	14		CCV	MG		5.1213	1	3/7/95	10:08	bjg	0.1	@ICP-QC
362	572	14		CCV	MN		5.1094	1	3/7/95	10:08	bjg	0.01	@ICP-QC
363	572	14		CCV	MO		5.0939	1	3/7/95	10:08	bjg	0.05	@ICP-QC
364	572	14		CCV	NA		5.249	1	3/7/95	10:08	bjg	0.1	@ICP-QC
365	572	14		CCV	ND		5.1841	1	3/7/95	10:08	bjg	0.1	@ICP-QC
366	572	14		CCV	NI		5.0831	1	3/7/95	10:08	bjg	0.02	@ICP-QC
367	572	14		CCV	P		5.0771	1	3/7/95	10:08	bjg	0.2	@ICP-QC
368	572	14		CCV	PB		5.042	1	3/7/95	10:08	bjg	0.1	@ICP-QC
369	572	14		CCV	S		5.0234	1	3/7/95	10:08	bjg	0.05	@ICP-QC
370	572	14		CCV	SB		4.7789	1	3/7/95	10:08	bjg	0.2	@ICP-QC
371	572	14		CCV	SE		5.3952	1	3/7/95	10:08	bjg	0.1	@ICP-QC
372	572	14		CCV	SI		4.8122	1	3/7/95	10:08	bjg	0.05	@ICP-QC
373	572	14		CCV	SM		5.008	1	3/7/95	10:08	bjg	0.1	@ICP-QC
374	572	14		CCV	SR		5.0403	1	3/7/95	10:08	bjg	0.01	@ICP-QC
375	572	14		CCV	TI		4.9177	1	3/7/95	10:08	bjg	0.01	@ICP-QC
376	572	14		CCV	TL		4.853	1	3/7/95	10:08	bjg	0.2	@ICP-QC
377	572	14		CCV	U		9.543	1	3/7/95	10:08	bjg	0.4	@ICP-QC
378	572	14		CCV	V		5.0555	1	3/7/95	10:08	bjg	0.05	@ICP-QC
379	572	14		CCV	ZN		5.128	1	3/7/95	10:08	bjg	0.01	@ICP-QC
380	572	14		CCV	ZR		5.0166	1	3/7/95	10:08	bjg	0.01	@ICP-QC
381	572	15		CCB	AG		0.2898	1	3/7/95	10:14	bjg	0.01	@ICP-QC
382	572	15		CCB	AL		0.0678	1	3/7/95	10:14	bjg	0.05	@ICP-QC
383	572	15		CCB	AS		-0.003	1	3/7/95	10:14	bjg	0.05	@ICP-QC
384	572	15		CCB	B		0.0022	1	3/7/95	10:14	bjg	0.05	@ICP-QC
385	572	15		CCB	BA		0.0019	1	3/7/95	10:14	bjg	0.05	@ICP-QC
386	572	15		CCB	BE		0.0022	1	3/7/95	10:14	bjg	0.005	@ICP-QC
387	572	15		CCB	BI		0.0065	1	3/7/95	10:14	bjg	0.1	@ICP-QC
388	572	15		CCB	CA		0.0076	1	3/7/95	10:14	bjg	0.1	@ICP-QC
389	572	15		CCB	CD		0.0023	1	3/7/95	10:14	bjg	0.01	@ICP-QC
390	572	15		CCB	CE		-0.0204	1	3/7/95	10:14	bjg	0.1	@ICP-QC
391	572	15		CCB	CO		-0.0017	1	3/7/95	10:14	bjg	0.02	@ICP-QC
392	572	15		CCB	CR		0.0017	1	3/7/95	10:14	bjg	0.01	@ICP-QC
393	572	15		CCB	CU		-0.0094	1	3/7/95	10:14	bjg	0.01	@ICP-QC
394	572	15		CCB	FE		0.0499	1	3/7/95	10:14	bjg	0.05	@ICP-QC
395	572	15		CCB	K		0.6954	1	3/7/95	10:14	bjg	0.3	@ICP-QC
396	572	15		CCB	LA		0.004	1	3/7/95	10:14	bjg	0.05	@ICP-QC
397	572	15		CCB	LI		0.0015	1	3/7/95	10:14	bjg	0.01	@ICP-QC
398	572	15		CCB	MG		0.0085	1	3/7/95	10:14	bjg	0.1	@ICP-QC
399	572	15		CCB	MN		-0.005	1	3/7/95	10:14	bjg	0.01	@ICP-QC
400	572	15		CCB	MO		0.0041	1	3/7/95	10:14	bjg	0.05	@ICP-QC
401	572	15		CCB	NA		0.111	1	3/7/95	10:14	bjg	0.1	@ICP-QC
402	572	15		CCB	ND		-0.0166	1	3/7/95	10:14	bjg	0.1	@ICP-QC
403	572	15		CCB	NI		0.0022	1	3/7/95	10:14	bjg	0.02	@ICP-QC
404	572	15		CCB	P		0.0013	1	3/7/95	10:14	bjg	0.2	@ICP-QC
405	572	15		CCB	PB		0.0013	1	3/7/95	10:14	bjg	0.1	@ICP-QC
406	572	15		CCB	S		0.0001	1	3/7/95	10:14	bjg	0.05	@ICP-QC
407	572	15		CCB	SB		-0.0064	1	3/7/95	10:14	bjg	0.2	@ICP-QC
408	572	15		CCB	SE		-0.0175	1	3/7/95	10:14	bjg	0.1	@ICP-QC
409	572	15		CCB	SI		0.0036	1	3/7/95	10:14	bjg	0.05	@ICP-QC
410	572	15		CCB	SM		-0.0022	1	3/7/95	10:14	bjg	0.1	@ICP-QC
411	572	15		CCB	SR		0.0019	1	3/7/95	10:14	bjg	0.01	@ICP-QC
412	572	15		CCB	TI		0.002	1	3/7/95	10:14	bjg	0.01	@ICP-QC
413	572	15		CCB	TL		0.0125	1	3/7/95	10:14	bjg	0.2	@ICP-QC
414	572	15		CCB	U		-0.0333	1	3/7/95	10:14	bjg	0.4	@ICP-QC
415	572	15		CCB	V		0.0005	1	3/7/95	10:14	bjg	0.05	@ICP-QC
416	572	15		CCB	ZN		0.0028	1	3/7/95	10:14	bjg	0.01	@ICP-QC

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A-0004-0

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LABCORE Data Entry Template for Worklist# 284

Analyst: B.J. Goecke **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** 3718488
REV. MOD. D-1

Worklist Comment: ICP Fusion-02 C-108

Seq	Type	Sample#	R	A	Test	Matrix	Analytes Requested
1	ICV				@ICP-QC	QC	
2	ICB				@ICP-QC	QC	
3	ICSA				@ICP-QC	QC	
4	PREPBLKARL				@ICP-F02	SOLID	
5	SAMPLE	S94T000303	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
6	DUP	S94T000303	0	F	@ICP-F02	SOLID	
7	CCV				@ICP-QC	QC	
8	CCB				@ICP-QC	QC	
9	SAMPLE	S94T000304	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
10	DUP	S94T000304	0	F	@ICP-F02	SOLID	
11	ICSA				@ICP-QC	QC	
12	CCV				@ICP-QC	QC	
13	CCB				@ICP-QC	QC	

Final page for worklist # 284

B.J. Goecke 1-6-95
Analyst Signature **Date**

Leslie Diaz for
Sam PARONG 7-15-95
Analyst Signature **Date**

Data Entry Comments: Rerun required for Fe (303, 304), and Al and Ca (304)

Ag	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.847	4.8179	4.8698	4.8526	1	1
Al	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.737	4.7182	4.7628	4.729	1	1
As	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.783	4.7654	4.7981	4.7862	1	1
B	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.777	4.7456	4.8033	4.7833	1	1
Ba	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.719	4.6909	4.7483	4.7169	1	1
Be	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.971	4.9502	4.9949	4.9668	1	1
Bi	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.711	4.676	4.7192	4.7379	1	1
Ca	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.841	4.8073	4.8694	4.8461	1	1
Cd	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.892	4.8638	4.9188	4.8942	1	1
Ce	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.702	4.6912	4.7233	4.6909	1	1
Co	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.964	4.9472	4.9905	4.9531	1	1
Cr	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.869	4.8346	4.902	4.8695	1	1
Cu	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.881	4.8489	4.91	4.8852	1	1
Fe	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.831	4.798	4.8421	4.8518	1	1
K	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.684	4.6646	4.6764	4.7119	1	1
La	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.752	4.724	4.7701	4.7609	1	1
Li	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.715	4.6956	4.7349	4.7143	1	1
Mg	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.822	4.8019	4.8442	4.8196	1	1
Mn	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.823	4.7952	4.847	4.8281	1	1
Mo	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.907	4.886	4.936	4.8987	1	1
Na	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.689	4.6743	4.6962	4.6962	1	1
Nd	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.781	4.7093	4.8283	4.8042	1	1
Ni	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.842	4.8165	4.8682	4.8407	1	1
P	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.923	4.8893	4.8868	4.9943	1	1
Pb	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.850	4.8059	4.8685	4.8762	1	1
S	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.847	4.8459	4.8359	4.8581	1	1
Sb	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.542	4.4665	4.5607	4.5978	1	1
Se	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	5.253	5.2795	5.2135	5.2657	1	1
Si	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.520	4.4994	4.5358	4.5247	1	1
Sm	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.628	4.5811	4.6612	4.6425	1	1
Sr	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.707	4.6817	4.7357	4.7034	1	1
Ti	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.698	4.6769	4.7248	4.6932	1	1
Tl	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.613	4.5915	4.6163	4.6318	1	1
U	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	9.230	9.1618	9.2637	9.2636	1	1
V	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.832	4.8075	4.8547	4.8346	1	1
Zn	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.967	4.9461	4.9825	4.9718	1	1
Zr	ICV	LIQ	C-108	ICV	01/06/95	10 8	BJG	4.764	4.7378	4.7903	4.7636	1	1
Ag	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.000	0.0001	0.0003	0.0005	1	1
Al	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.008	-0.0089	-0.0092	-0.0066	1	1
As	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.014	0.0158	0.0175	0.0101	1	1
B	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.006	0.0072	0.0042	0.0059	1	1
Ba	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0007	0.0006	0.0006	1	1
Be	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.001	0.001	0.0006	1	1
Bi	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0128	-0.002	-0.0082	1	1
Ca	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0018	0.0014	0.0012	1	1
Cd	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.002	0.0026	0.0016	0.0013	1	1
Ce	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.024	-0.0306	-0.0225	-0.0181	1	1
Co	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.001	-0.0026	-0.0006	-0.0006	1	1
Cr	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.003	-0.0019	-0.0033	-0.0032	1	1
Cu	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0005	0.0009	0.0008	1	1
Fe	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.005	0.004	0.0038	0.006	1	1
K	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.046	-0.0741	-0.0386	-0.0244	1	1
La	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.001	-0.0001	0.002	-0.0041	1	1
Li	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0006	0.0011	0.001	1	1
Mg	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0018	0.0012	0.0011	1	1
Mn	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0011	0.0005	0.0005	1	1
Mo	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.005	0.0045	0.0058	0.0043	1	1
Na	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.009	-0.0065	-0.0113	-0.0089	1	1
Nd	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.017	-0.0217	-0.0132	-0.0156	1	1
Ni	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.000	0.0007	-0.0014	0.0005	1	1
P	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.014	0.0242	0.0107	0.0067	1	1
Pb	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.003	-0.0108	-0.0032	0.0045	1	1
S	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.003	-0.0038	-0.0024	-0.0017	1	1
Sb	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.056	-0.0485	-0.0836	-0.0358	1	1
Se	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.000	-0.0092	0.0032	0.0064	1	1
Si	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.004	-0.0048	-0.0029	-0.0049	1	1
Sm	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.036	-0.0434	-0.035	-0.0285	1	1
Sr	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0012	0.0009	0.0009	1	1
Ti	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.001	0.0013	0.0012	0.0014	1	1
Tl	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.045	-0.0612	-0.0432	-0.0305	1	1
U	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.101	-0.1322	-0.0835	-0.0872	1	1
V	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.002	0.0021	0.0019	0.0021	1	1
Zn	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	0.002	0.0024	0.0017	0.0019	1	1
Zr	ICB	LIQ	C-108	ICB	01/06/95	10 11	BJG	-0.001	-0.002	-0.0012	-0.0007	1	1
Ag	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.004	0.0049	0.0034	0.0033	1	1
Al	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	198.137	196.8716	199.3881	198.1499	1	1
As	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.020	0.0156	0.0181	0.0261	1	1
B	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.018	-0.0193	-0.0163	-0.0186	1	1
Ba	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.000	0.0005	-0.0001	-0.0002	1	1
Be	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.002	0.0023	0.0024	0.0023	1	1
Bi	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.043	0.0507	0.0571	0.0223	1	1
Ca	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	18.634	18.4939	18.7367	18.6704	1	1

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS PAGES 340 TO 340.

Cd	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.006	0.0065	0.0056	0.005	1	1
Ce	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.039	0.0516	0.0305	0.0344	1	1
Co	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.011	0.0131	0.0112	0.0092	1	1
[illegible]	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.001	0.0011	-0.0029	-0.0023	1	1
[illegible]	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.006	-0.0055	-0.0064	-0.0062	1	1
Fe	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	149.136	148.3062	149.9925	149.1097	1	1
K	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.148	0.1576	0.1458	0.1411	1	1
La	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.014	0.0161	0.0132	0.0131	1	1
Li	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.002	0.0023	0.0017	0.0011	1	1
Mg	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	19.454	19.3421	19.5435	19.4752	1	1
Mn	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.012	0.0122	0.0126	0.0125	1	1
Mo	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.005	0.0047	0.0072	0.0042	1	1
Na	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	188.571	187.3526	189.2701	189.0902	1	1
Nd	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.011	-0.0034	-0.0228	-0.006	1	1
Ni	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.004	0.0037	0.0045	0.0036	1	1
P	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.039	0.0424	0.0425	0.0322	1	1
Pb	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.003	0.0103	-0.0099	-0.0092	1	1
S	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.192	0.1952	0.1948	0.1874	1	1
Sb	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.074	-0.0244	-0.0996	-0.0985	1	1
Se	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.033	0.0486	0.0281	0.0236	1	1
Si	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.045	0.0479	0.0419	0.0458	1	1
Sm	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.041	-0.0197	-0.0512	-0.0535	1	1
Sr	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.001	0.0012	0.001	0.0009	1	1
Ti	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.000	0.0008	-0.0002	0.0001	1	1
Tl	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.081	-0.0568	-0.0973	-0.0895	1	1
U	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.097	-0.0038	-0.1571	-0.13	1	1
V	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.003	-0.002	-0.0039	-0.0034	1	1
Zn	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	0.001	0.0012	0.0011	0.0008	1	1
Zr	ICSA	LIQ	C-108	ICSA	01/06/95	10 14	BJG	-0.004	-0.0013	-0.005	-0.0051	1	1
Ag	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.020	0.0358	0.0209	0.0037	1	10
Al	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.500	0.584	0.4879	0.4278	1	10
As	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.077	0.1163	0.0574	0.058	1	10
B	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.129	0.1283	0.1233	0.1346	1	10
Ba	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.015	0.0189	0.0175	0.0085	1	10
Be	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.001	0.0006	-0.0009	-0.0039	1	10
Bi	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.024	0.1333	-0.0982	-0.1066	1	10
Ca	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.240	0.256	0.2316	0.2335	1	10
Cd	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.006	0.0111	0.0044	0.001	1	10
Ce	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.155	0.371	0.2732	-0.1804	1	10
Co	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.033	-0.0264	-0.0263	-0.0458	1	10
Cr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.013	-0.005	-0.0047	-0.0301	1	10
[illegible]	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.018	0.0289	0.0198	0.0045	1	10
Fe	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.549	0.5653	0.5132	0.5678	1	10
K	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	10275.345	10197.75	10219.83	10408.46	1	10
La	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.007	0.0006	0.0004	-0.0208	1	10
Li	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.004	0.008	0.0096	-0.006	1	10
Mg	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.061	0.0654	0.0537	0.0627	1	10
Mn	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.003	0.0032	0.0052	0.0013	1	10
Mo	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.005	0.0075	-0.014	-0.0075	1	10
Na	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	4.042	4.1154	4.0181	3.9938	1	10
Nd	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.118	-0.086	-0.0529	-0.2158	1	10
Ni	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.066	0.0664	0.0561	0.0745	1	10
P	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.109	-0.0381	0.2648	0.0989	1	10
Pb	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.047	0.0707	-0.0262	0.095	1	10
S	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.097	0.1739	0.0718	0.0464	1	10
Sb	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.291	-0.1097	-0.2143	-0.5489	1	10
Se	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.054	0.0333	-0.1516	-0.0449	1	10
Si	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.038	0.0104	-0.0195	-0.1042	1	10
Sm	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.365	-0.1545	-0.2158	-0.7233	1	10
Sr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.002	0.005	0.0031	-0.0015	1	10
Ti	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.000	0.0098	0.0042	-0.0128	1	10
Tl	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	-0.287	0.1064	-0.1718	-0.7953	1	10
U	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.348	1.3821	0.7872	-1.1241	1	10
V	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.047	0.0596	0.0496	0.0305	1	10
Zn	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	0.043	0.0451	0.0431	0.0403	1	10
Zr	PREPBLKARL	SOLID	C-108	PREPBLKARL	01/06/95	10 20	BJG	6.085	6.0118	6.0715	6.1725	1	10

Ag	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	17.055	18.1855	10.2857	22.6926	0.612	2500	
Al	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	40025.166	39832.1	40616.79	39626.61	0.612	2500	204
As	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	26.466	36.8451	21.6159	20.9366	0.612	2500	
B	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	51.404	61.6274	48.2768	44.3092	0.612	2500	
Ba	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	29.374	29.1362	27.4951	31.4893	0.612	2500	
Be	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-0.161	0.0254	-1.157	0.6494	0.612	2500	
Bi	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	226.211	240.312	203.3332	234.9891	0.612	2500	
Ca	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	16178.682	16106.35	16460.31	15969.39	0.612	2500	408
Cd	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	10.615	11.5436	10.8103	9.4915	0.612	2500	
Ce	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-98.343	-114.139	-193.994	13.105	0.612	2500	
Co	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	13.044	18.4229	10.3866	10.3229	0.612	2500	
Cr	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	361.781	370.7375	359.4861	355.1188	0.612	2500	40.8
Cu	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	20.983	19.2802	18.6997	24.9699	0.612	2500	
Fe	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	9080.687	8997.794	9259.864	8984.402	0.612	2500	204
K	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	4367299.191	4361339	4443058	4297500	0.612	2500	
La	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	0.274	-2.5582	-10.9922	14.3722	0.612	2500	
Li	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	10.669	11.5174	8.0209	12.4695	0.612	2500	
Mg	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	304.118	302.3607	308.1464	301.8462	0.612	2500	
Mn	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	58.125	58.409	58.3943	57.5713	0.612	2500	
Mo	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	8.197	1.3173	9.2213	14.0515	0.612	2500	
Na	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	84690.905	84637.96	86206.55	83228.21	0.612	2500	408
Nd	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-86.124	-84.5457	-129.178	-44.6465	0.612	2500	
Ni	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	18141.988	18027.95	18417.11	17980.9	0.612	2500	81.7
P	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	21268.004	20829.11	21879.51	21095.4	0.612	2500	
Pb	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	443.415	428.2894	420.2522	481.7039	0.612	2500	
S	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	3457.661	3434.677	3537.9	3400.407	0.612	2500	
Sb	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-15.747	-97.8978	97.809	-47.1531	0.612	2500	
Se	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-67.793	-31.8554	-112.868	-58.6543	0.612	2500	
Si	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	1078.389	1065.869	1067.788	1101.509	0.612	2500	
Sm	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-55.966	-71.2566	-199.037	102.3962	0.612	2500	
Sr	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	132.230	131.4663	133.7634	131.4598	0.612	2500	
Ti	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	52.658	51.523	50.6843	55.7681	0.612	2500	
Tl	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	-161.621	-165.026	-307.578	-12.2605	0.612	2500	
U	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	10639.267	10570.41	10283.04	11064.35	0.612	2500	
V	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	73.538	70.9094	72.0519	77.6515	0.612	2500	
Zn	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	74.717	73.2406	74.4025	76.5085	0.612	2500	40.8
Zr	S94T000303	SOLID	C-108	S94T000303	01/06/95	10 32	BJG	9581.302	9460.081	9772.402	9511.423	0.612	2500	40.8
Ag	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	20.069	15.3885	17.9522	26.8675	0.6146	2500	
Al	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	40735.557	40899.46	41041.3	40265.91	0.6146	2500	
As	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	56.705	55.0724	70.4648	44.5782	0.6146	2500	
B	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	46.841	48.4013	43.5865	48.5344	0.6146	2500	
Ba	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	31.875	31.121	31.023	33.4806	0.6146	2500	
Be	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	-0.029	0.3292	-0.8064	0.3902	0.6146	2500	
Bi	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	219.079	175.8468	240.4546	240.9364	0.6146	2500	
Ca	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	16948.741	17007.98	17120.35	16717.89	0.6146	2500	
Cd	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	18.259	18.4773	17.0973	19.2024	0.6146	2500	
Ce	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	27.789	-1.0995	-22.8426	107.3092	0.6146	2500	
Co	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	7.905	10.6059	10.5774	2.533	0.6146	2500	
Cr	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	387.160	385.6027	386.0716	389.8051	0.6146	2500	
Cu	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	25.448	23.263	23.17	29.9105	0.6146	2500	
Fe	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	7782.659	7818.891	7905.314	7623.774	0.6146	2500	
K	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	4253362.858	4263344	4289852	4206892	0.6146	2500	
La	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	15.648	12.7696	12.8489	21.3242	0.6146	2500	
Li	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	12.850	11.1622	11.4782	15.9091	0.6146	2500	
Mg	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	312.029	313.5956	314.6483	307.8433	0.6146	2500	
Mn	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	57.888	58.4384	56.7996	58.4269	0.6146	2500	
Mo	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	18.656	18.3645	19.6763	17.9273	0.6146	2500	
Na	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	82803.628	83261.67	83459.39	81689.82	0.6146	2500	
Nd	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	46.767	43.3115	-23.2439	120.2347	0.6146	2500	
Ni	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	19202.834	19242.99	19324.18	19041.33	0.6146	2500	
P	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	19904.179	19787.8	20357.52	19567.21	0.6146	2500	
Pb	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	367.144	344.838	392.8896	363.7037	0.6146	2500	
S	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	3732.586	3772.041	3800.696	3625.02	0.6146	2500	
Sb	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	-342.286	-374.684	-275.857	-376.319	0.6146	2500	
Se	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	-16.297	-17.1532	9.196	-40.9323	0.6146	2500	
Si	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	989.231	983.4943	996.0011	988.1967	0.6146	2500	
Sm	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	103.522	42.6015	35.8044	232.1615	0.6146	2500	
Sr	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	132.848	133.2322	133.6107	131.7012	0.6146	2500	
Ti	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	50.538	48.1083	51.1162	52.3899	0.6146	2500	
Tl	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	29.697	-85.2955	-46.0874	220.4753	0.6146	2500	
U	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	7893.597	7622.207	7783.531	8275.053	0.6146	2500	
V	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	39.415	39.5303	38.1665	40.5469	0.6146	2500	
Zn	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	75.450	74.4462	75.4938	76.4101	0.6146	2500	
Zr	S94T000303	SOLID	C-108	S94T000303_D	01/06/95	10 35	BJG	4652.115	4664.047	4691.262	4601.036	0.6146	2500	

Ag	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	2.756	2.7701	2.7446	2.7522	1	1
Al	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.900	4.923	4.9113	4.8664	1	1
As	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.881	4.9	4.8924	4.8513	1	1
	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.956	4.9797	4.9744	4.913	1	1
a	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.968	4.992	4.9888	4.9223	1	1
Be	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.130	5.1578	5.1438	5.0876	1	1
Bi	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.925	4.9546	4.9194	4.9002	1	1
Ca	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.078	5.1016	5.0972	5.0344	1	1
Cd	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.993	5.0117	5.0054	4.9619	1	1
Ce	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.906	4.9246	4.9167	4.8775	1	1
Co	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.054	5.0789	5.0632	5.0199	1	1
Cr	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.971	4.9969	4.9779	4.9384	1	1
Cu	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.131	5.1569	5.1498	5.087	1	1
Fe	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.005	5.028	5.0233	4.9633	1	1
K	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	6.201	6.2749	6.2229	6.1047	1	1
La	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.968	4.9937	4.9937	4.9158	1	1
Li	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.986	5.0108	5.0068	4.9414	1	1
Mg	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.924	4.9429	4.9359	4.894	1	1
Mn	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.957	4.9796	4.9677	4.9227	1	1
Mo	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.014	5.0372	5.0187	4.987	1	1
Na	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.028	5.0535	5.0462	4.9854	1	1
Nd	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.084	5.1286	5.1037	5.0208	1	1
Ni	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.958	4.9784	4.9735	4.9218	1	1
P	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.053	5.0438	5.0439	5.0726	1	1
Pb	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.933	4.9671	4.9685	4.862	1	1
S	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.918	4.9118	4.9101	4.9306	1	1
Sb	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.725	4.7329	4.7394	4.7015	1	1
Se	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.406	5.4338	5.3927	5.3905	1	1
Si	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.639	4.6503	4.6517	4.6139	1	1
Sm	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.937	4.9669	4.9607	4.8842	1	1
Sr	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.932	4.9556	4.9512	4.8879	1	1
Ti	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.871	4.8925	4.887	4.8331	1	1
Tl	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.809	4.8337	4.7918	4.8007	1	1
U	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	9.879	9.9454	9.8933	9.7993	1	1
V	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	4.998	5.0223	5.0124	4.9591	1	1
Zn	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.059	5.0742	5.0662	5.0379	1	1
Zr	CCV_1	LIQ	C-108	CCV_1	01/06/95	10 42	BJG	5.144	5.1953	5.1619	5.0762	1	1
Ag	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.160	0.1522	0.151	0.1769	1	1
Al	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.007	-0.0023	0.0133	0.0109	1	1
As	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.019	0.0218	0.0192	0.0166	1	1
	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.005	0.004	0.0069	0.0046	1	1
a	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.000	-0.0005	0.0004	0.0001	1	1
de	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	0.001	0.001	0.0009	1	1
Bi	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	-0.004	0.0013	0.0068	1	1
Ca	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.002	0.0024	0.0023	0.0017	1	1
Cd	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.003	0.0018	0.0028	0.0031	1	1
Ce	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.050	-0.0715	-0.0421	-0.0359	1	1
Co	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	0.0033	-0.0006	-0.0006	1	1
Cr	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.001	-0.0018	-0.0002	-0.0016	1	1
Cu	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.002	0.0009	0.0022	0.0021	1	1
Fe	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.005	0.0053	0.0042	0.0049	1	1
K	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.705	0.7275	0.7322	0.6566	1	1
La	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	-0.0012	0.001	0.002	1	1
Li	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.002	0.0011	0.0025	0.0022	1	1
Mg	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	0.0014	0.0012	0.0006	1	1
Mn	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	0.0005	0.0009	0.0005	1	1
Mo	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.005	0.0045	0.0056	0.0054	1	1
Na	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.088	0.0737	0.0956	0.0932	1	1
Nd	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.014	0.0051	0.0212	0.0148	1	1
Ni	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.000	0.0003	-0.0001	0.0011	1	1
P	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.008	0.0092	0.0044	0.0107	1	1
Pb	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.013	0.0084	0.013	0.0165	1	1
S	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.005	-0.0018	-0.0049	-0.0077	1	1
Sb	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.001	-0.0214	-0.0091	0.0281	1	1
Se	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.014	-0.0156	-0.0271	-0.0005	1	1
Si	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.009	-0.013	-0.0064	-0.0067	1	1
Sm	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.070	-0.1005	-0.0533	-0.0561	1	1
Sr	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.001	0.0009	0.0013	0.0011	1	1
Ti	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.001	-0.0015	0	-0.0007	1	1
Tl	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.077	-0.1305	-0.04	-0.0596	1	1
U	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.232	-0.3395	-0.17	-0.1862	1	1
V	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.002	-0.0031	-0.0001	-0.0023	1	1
Zn	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	0.002	0.0023	0.0024	0.0022	1	1
Zr	CCB_1	LIQ	C-108	CCB_1	01/06/95	10 45	BJG	-0.003	-0.0056	-0.0017	-0.0027	1	1

Ag	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	1909.473	1897.974	1915.834	1914.611	0.5203	2500	
Al	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	59561.587	60100.95	59191.81	59391.99	0.5203	2500	24
As	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	13.862	-0.903	23.0626	19.4274	0.5203	2500	
B	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	18.809	23.0134	14.5019	18.9129	0.5203	2	
Ba	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	20.391	18.2464	21.8817	21.0443	0.5203	2	
Be	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-1.492	-1.5543	-2.1294	-0.7929	0.5203	2500	
Bi	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	144.454	59.4012	156.3822	217.5782	0.5203	2500	
Ca	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	7254.438	7335.914	7194.111	7233.29	0.5203	2500	48
Cd	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	0.594	-0.7665	3.2973	-0.7478	0.5203	2500	
Ce	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-34.251	-155.276	62.6296	-10.1073	0.5203	2500	
Co	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-16.800	-13.5652	-13.7056	-23.1303	0.5203	2500	
Cr	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	133.284	129.1802	138.6145	132.0569	0.5203	2500	48
Cu	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	3.201	0.9369	6.5324	2.1344	0.5203	2500	
Fe	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	3336.782	3361.216	3324.529	3324.601	0.5203	2500	24
K	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	4774497.030	4826072	4739472	4757947	0.5203	2500	
La	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	3.601	1.7037	11.9805	-2.8816	0.5203	2500	
Li	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-1.133	-5.1198	1.6084	0.1133	0.5203	2500	
Mg	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	146.062	147.9044	144.8347	145.4481	0.5203	2500	
Mn	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	28.810	27.884	29.7462	28.8012	0.5203	2500	
Mo	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-3.099	-3.6155	2.5825	-8.264	0.5203	2500	
Na	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	130504.334	131890.1	129496.2	130126.8	0.5203	2500	48
Nd	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	168.325	-225.726	-81.7491	-182.501	0.5203	2500	
Ni	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	6546.855	6595.281	6519.184	6526.099	0.5203	2500	46
P	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	45408.041	45770.53	45238.19	45215.4	0.5203	2500	
Pb	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	130.066	93.1214	131.5987	165.4768	0.5203	2500	
S	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	1779.897	1767.252	1762.614	1809.827	0.5203	2500	
Sb	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-78.989	-114.678	4.813	-127.102	0.5203	2500	
Se	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-36.421	-118.521	-6.8806	16.1397	0.5203	2500	
Si	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	1741.009	1736.663	1738.253	1748.11	0.5203	2500	
Sm	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	0.860	-152.16	125.1119	29.6274	0.5203	2500	
Sr	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	56.600	56.3094	56.7444	56.7476	0.5203	2500	
Ti	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	23.543	20.266	25.8768	24.4865	0.5203	2500	
Tl	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	-9.115	-269.403	191.3538	50.7052	0.5203	2500	
U	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	3423.786	2759.672	3877.3	3634.385	0.5203	2500	
V	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	52.380	44.2115	55.9818	56.9475	0.5203	2500	
Zn	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	50.935	52.4898	50.8275	49.4868	0.5203	2500	48
Zr	S94T000304	SOLID	C-108	S94T000304	01/06/95	10 55	BJG	6054.008	6037.852	5992.422	6131.751	0.5203	2500	48
Ag	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	3789.391	3805.73	3795.271	3767.171	0.5234	2500	
Al	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	94690.703	94400.16	94391.22	95280.73	0.5234	2500	
As	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	39.319	14.3242	54.4959	49.1363	0.5234	2500	
B	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	37.407	40.5462	41.2214	30.4526	0.5234	2	
Ba	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	30.697	30.8347	31.9363	29.3204	0.5234	2	
Be	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-1.038	-1.26	-0.5619	-1.2907	0.5234	2500	
Bi	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	207.186	183.0194	211.1981	227.3403	0.5234	2500	
Ca	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	41682.553	11648.35	11643.41	11755.89	0.5234	2500	
Cd	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	9.359	10.9677	8.5606	8.5472	0.5234	2500	
Ce	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-127.639	-137.553	-44.033	-201.33	0.5234	2500	
Co	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-1.719	4.5482	4.5129	-14.2178	0.5234	2500	
Cr	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	244.623	244.8306	244.0362	245.0035	0.5234	2500	
Cu	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	22.957	24.8508	24.7262	19.2935	0.5234	2500	
Fe	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	5651.387	5640.479	5641.268	5672.414	0.5234	2500	
K	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	5344129.018	5327439	5318449	5386499	0.5234	2500	
La	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	19.616	27.7804	27.8752	3.192	0.5234	2500	
Li	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	5.063	5.3104	6.7967	3.0808	0.5234	2500	
Mg	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	245.419	245.0088	245.0147	246.2323	0.5234	2500	
Mn	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	48.560	49.1944	47.2787	49.2074	0.5234	2500	
Mo	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	9.584	8.7285	15.9166	4.1075	0.5234	2500	
Na	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	81266.388	80798.18	80728.53	82272.45	0.5234	2500	
Nd	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-55.986	-56.1842	-27.3815	-84.3927	0.5234	2500	
Ni	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	10663.025	10616.5	10654.85	10717.73	0.5234	2500	
P	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	20420.719	20709.64	20222.85	20329.67	0.5234	2500	
Pb	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	172.203	157.6087	173.9244	185.0752	0.5234	2500	
S	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	2821.734	2872.133	2818.485	2774.585	0.5234	2500	
Sb	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-51.169	-5.6349	-168.406	20.5342	0.5234	2500	
Se	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	-41.442	-91.8015	-44.8899	12.3666	0.5234	2500	
Si	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	1811.127	1809.413	1820.706	1803.262	0.5234	2500	
Sm	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	137.357	137.1893	228.6703	46.2128	0.5234	2500	
Sr	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	98.243	98.3917	98.3885	97.9491	0.5234	2500	
Ti	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	41.252	40.2505	45.1005	38.4057	0.5234	2500	
Tl	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	224.110	237.4583	289.9972	144.8758	0.5234	2500	
U	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	5762.706	5791.635	6032.739	5463.746	0.5234	2500	
V	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	58.525	57.2794	63.1072	55.1898	0.5234	2500	
Zn	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	71.369	70.4696	71.9476	71.6901	0.5234	2500	
Zr	S94T000304	SOLID	C-108	S94T000304_D	01/06/95	10 59	BJG	6494.769	6605.135	6495.247	6383.924	0.5234	2500	

Ag	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.026	0.0253	0.0268	0.0252	1	1
Al	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	194.983	196.784	193.0257	195.1381	1	1
As	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.018	0.0251	0.0166	0.013	1	1
B	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.022	-0.0214	-0.0227	-0.0228	1	1
Ba	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.000	-0.0003	0.0005	-0.0001	1	1
Be	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.002	0.0015	0.0016	0.0015	1	1
Bi	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.009	0	0.0126	0.0138	1	1
Ca	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	18.322	18.5133	18.0951	18.3573	1	1
Cd	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.006	0.0061	0.0057	0.0058	1	1
Ce	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.004	-0.0127	0.021	0.0042	1	1
Co	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.007	0.0072	0.0072	0.0072	1	1
Cr	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.002	-0.0021	-0.0013	-0.0019	1	1
Cu	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.009	-0.0091	-0.0078	-0.0089	1	1
Fe	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	145.346	146.6602	143.9905	145.3869	1	1
K	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	1.227	1.2312	1.2832	1.1673	1	1
La	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.016	0.0158	0.0143	0.0166	1	1
Li	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.000	-0.0007	0.0005	-0.0001	1	1
Mg	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	18.795	18.9406	18.6135	18.8306	1	1
Mn	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.011	0.011	0.0111	0.0107	1	1
Mo	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.006	0.0084	0.0047	0.0053	1	1
Na	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	187.176	188.9031	184.9465	187.6782	1	1
Nd	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.019	-0.0203	-0.0102	-0.026	1	1
Ni	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.006	0.0049	0.006	0.0075	1	1
P	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.045	0.0536	0.0439	0.0368	1	1
Pb	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.001	-0.0065	-0.0025	0.0072	1	1
S	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.180	0.1811	0.1823	0.1773	1	1
Sb	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.034	-0.0316	-0.0317	-0.0401	1	1
Se	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.021	0.0321	0.01	0.0212	1	1
Si	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.052	0.0482	0.0551	0.0526	1	1
Sm	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.006	-0.0176	0.036	-0.0014	1	1
Sr	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.000	-0.0002	0.0001	-0.0002	1	1
Ti	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.001	0.0003	0.0016	0.0008	1	1
Tl	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.012	-0.0368	0.0281	-0.028	1	1
U	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.101	0.0053	0.2161	0.081	1	1
V	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.002	-0.0029	-0.0002	-0.0025	1	1
Zn	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	-0.001	-0.0014	-0.0016	-0.0013	1	1
Zr	ICSA	LIQ	C-108	ICSA	01/06/95	11	5	BJG	0.001	0.0002	0.0033	-0.0002	1	1
Ag	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	3.595	3.5194	3.649	3.6165	1	1
Al	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.893	4.9423	4.9179	4.82	1	1
As	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.884	4.9078	4.9088	4.8342	1	1
B	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.872	4.9098	4.8926	4.8128	1	1
Ba	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.837	4.884	4.8732	4.7542	1	1
Be	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.071	5.1118	5.105	4.9966	1	1
Bi	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.858	4.9006	4.8613	4.8127	1	1
Ca	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.954	4.9947	4.9858	4.8802	1	1
Cd	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.973	4.9921	5.0012	4.926	1	1
Ce	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.859	4.902	4.8781	4.798	1	1
Co	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.056	5.0888	5.0809	4.9983	1	1
Cr	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.961	4.9931	4.9835	4.9052	1	1
Cu	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.998	5.043	5.0348	4.917	1	1
Fe	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.976	5.0135	4.9963	4.9169	1	1
K	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.574	5.5986	5.6199	5.5041	1	1
La	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.855	4.8922	4.885	4.7876	1	1
Li	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.859	4.9171	4.9054	4.7555	1	1
Mg	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.925	4.9565	4.9468	4.8702	1	1
Mn	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.925	4.9623	4.9398	4.8739	1	1
Mo	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.014	5.0451	5.0434	4.9546	1	1
Na	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.946	5.0048	4.9854	4.8469	1	1
Nd	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.878	4.9054	4.9139	4.8141	1	1
Ni	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.936	4.967	4.952	4.8889	1	1
P	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.143	5.2868	5.1356	5.006	1	1
Pb	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.919	4.9542	4.927	4.8757	1	1
S	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.955	5.0299	4.9829	4.8524	1	1
Sb	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.608	4.6393	4.6054	4.578	1	1
Se	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.338	5.3698	5.3292	5.3157	1	1
Si	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.631	4.6568	4.6537	4.5839	1	1
Sm	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.746	4.7987	4.7788	4.6604	1	1
Sr	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.823	4.8674	4.8566	4.744	1	1
Ti	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.807	4.8449	4.8361	4.7388	1	1
Tl	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.781	4.8014	4.7861	4.7556	1	1
U	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	9.589	9.6398	9.6	9.5273	1	1
V	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	4.938	4.9715	4.9667	4.8764	1	1
Zn	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.078	5.1046	5.1029	5.0251	1	1
Zr	CCV_2	LIQ	C-108	CCV_2	01/06/95	11	10	BJG	5.000	5.0586	5.024	4.9187	1	1
Ag	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.182	0.1664	0.1861	0.1947	1	1
Al	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.016	0.011	0.0074	0.0292	1	1
As	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.013	0.0137	0.0117	0.0145	1	1
B	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.005	0.003	0.0047	0.0058	1	1
Ba	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.000	-0.0001	-0.0003	0.001	1	1
Be	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.000	0.0006	0.0002	0.0003	1	1
Bi	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	-0.005	-0.0124	-0.0004	-0.0026	1	1
Ca	CCB_2	LIQ	C-108	CCB_2	01/06/95	11	13	BJG	0.002	0.0027	0.0021	0.0018	1	1

Cd	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0004	0.0009	0.0006	1	1
Ce	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.036	-0.0564	-0.0537	0.0023	1	1
Co	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.000	-0.0006	-0.0006	0.0013	1	1
Cr	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.002	-0.0038	-0.0032	-0.0001	1	1
Cu	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0006	0.0001	0.0031	1	1
Fe	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.011	0.0121	0.0107	0.0097	1	1
K	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.671	0.666	0.6518	0.6944	1	1
La	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.000	-0.0001	-0.0031	0.0041	1	1
Li	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0011	0.0006	0.0022	1	1
Mg	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.002	0.0018	0.0015	0.0015	1	1
Mn	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0009	0.0005	0.0009	1	1
Mo	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.004	0.0034	0.0043	0.0056	1	1
Na	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.109	0.1005	0.1053	0.1199	1	1
Nd	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.009	0.0012	0.0077	0.0183	1	1
Ni	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.002	-0.002	-0.0034	-0.0016	1	1
P	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.013	0.0091	0.0115	0.0177	1	1
Pb	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.007	0.0109	0.0005	0.0092	1	1
S	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.001	-0.0014	-0.0045	0.0016	1	1
Sb	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.026	-0.0166	-0.0515	-0.0088	1	1
Se	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.002	-0.026	0.0022	0.0304	1	1
Si	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.004	-0.0065	-0.0097	0.0046	1	1
Sm	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.025	-0.0447	-0.054	0.0229	1	1
Sr	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0008	0.0006	0.0012	1	1
Ti	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0004	-0.0003	0.0015	1	1
Tl	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.028	-0.0484	-0.0765	0.0403	1	1
U	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.077	-0.161	-0.1737	0.1023	1	1
V	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	-0.000	-0.0008	-0.001	0.0018	1	1
Zn	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.002	0.0015	0.0014	0.0022	1	1
Zr	CCB_2	LIQ	C-108	CCB_2	01/06/95	11 13	BJG	0.001	0.0007	-0.0015	0.0049	1	1

FILE # 950308A

A-0004-0

LABCORE Data Entry Template for Worklist# 573

Analyst: B. Cooke **Instrument:** ICP01 **Method:** LA-505-151 **Book#** 38848

Rev Mod D-2

Worklist Comment: ICP Fusion C108 rerun

Seq	Type	Sample#	R	A	Test	Matrix	Analytes Requested
1	ICV				@ICP-QC	QC	
2	ICB				@ICP-QC	QC	
3	ICSA				@ICP-QC	QC	
4	ICSAB				@ICP-QC	QC	
5	PREPBLKARL				@ICP-F02	SOLID	
6	SAMPLE	S94T000303	0	Z	@ICP-F02	SOLID	FE-F-01
7	DUP	S94T000303	0	Z	@ICP-F02	SOLID	
8	CCV				@ICP-QC	QC	
9	CCB				@ICP-QC	QC	
10	SAMPLE	S94T000304	0	Z	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , FE-F-01
11	DUP	S94T000304	0	Z	@ICP-F02	SOLID	
12	ICSA				@ICP-QC	QC	
13	ICSAB				@ICP-QC	QC	
14	CCV				@ICP-QC	QC	
15	CCB				@ICP-QC	QC	

Final page for worklist # 573

B. Cooke 3-8-95
Analyst Signature Date

Leslie Diaz for SAM PARONG 7-15-95
Analyst Signature Date

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 573

Analyst: _____ **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** _____

Worklist Comment: ICP Fusion C108 rerun

Seq	Type	Sample#	R	A	Test	Matrix	Analytes Requested
1	ICV				@ICP-QC	QC	
2	ICB				@ICP-QC	QC	
3	ICSA				@ICP-QC	QC	
4	ICSAB				@ICP-QC	QC	
5	PREPBLKARL				@ICP-F02	SOLID	
6	SAMPLE	S94T000303	0	Z	@ICP-F02	SOLID	FE-F-01
7	DUP	S94T000303	0	Z	@ICP-F02	SOLID	
8	CCV				@ICP-QC	QC	
9	CCB				@ICP-QC	QC	
10	SAMPLE	S94T000304	0	Z	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , FE-F-01
11	DUP	S94T000304	0	Z	@ICP-F02	SOLID	
12	ICSA				@ICP-QC	QC	
13	ICSAB				@ICP-QC	QC	
14	CCV				@ICP-QC	QC	
15	CCB				@ICP-QC	QC	

Final page for worklist # 573

Leslie Diaz
Sam Parong 7-15-95

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments: Fe failed duplicate in #304.

ICP MACRO

OUTPUT	A	B	C	D	E	F	H	J	K	L	M	N	O
1	573	1			ICV	AG	5.0985	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
2	573	1			ICV	AL	5.0781	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
3	573	1			ICV	AS	5.1154	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
4	573	1			ICV	B	5.0693	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
	573	1			ICV	BA	5.0874	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
	573	1			ICV	BE	5.3387	1.0000	03/08/95	10:00	bjg	0.005	@ICP-QC
	573	1			ICV	BI	5.3133	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
8	573	1			ICV	CA	5.2521	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
9	573	1			ICV	CD	5.1958	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
10	573	1			ICV	CE	5.1269	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
11	573	1			ICV	CO	5.2351	1.0000	03/08/95	10:00	bjg	0.02	@ICP-QC
12	573	1			ICV	CR	5.2786	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
13	573	1			ICV	CU	5.1001	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
14	573	1			ICV	FE	5.1740	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
15	573	1			ICV	K	5.1170	1.0000	03/08/95	10:00	bjg	0.3	@ICP-QC
16	573	1			ICV	LA	5.0956	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
17	573	1			ICV	LI	5.1163	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
18	573	1			ICV	MG	5.2046	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
19	573	1			ICV	MN	5.1783	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
20	573	1			ICV	MO	5.1987	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
21	573	1			ICV	NA	5.0743	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
22	573	1			ICV	ND	5.1497	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
23	573	1			ICV	NI	5.1667	1.0000	03/08/95	10:00	bjg	0.02	@ICP-QC
24	573	1			ICV	P	5.1029	1.0000	03/08/95	10:00	bjg	0.2	@ICP-QC
25	573	1			ICV	PB	5.0654	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
26	573	1			ICV	S	5.1178	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
27	573	1			ICV	SB	1.5425	1.0000	03/08/95	10:00	bjg	0.2	@ICP-QC
28	573	1			ICV	SE	5.4384	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
29	573	1			ICV	SI	4.9104	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
30	573	1			ICV	SM	5.0445	1.0000	03/08/95	10:00	bjg	0.1	@ICP-QC
31	573	1			ICV	SR	5.0819	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
32	573	1			ICV	TI	4.9746	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
33	573	1			ICV	TL	5.0249	1.0000	03/08/95	10:00	bjg	0.2	@ICP-QC
34	573	1			ICV	U	9.8804	1.0000	03/08/95	10:00	bjg	0.4	@ICP-QC
35	573	1			ICV	V	5.1225	1.0000	03/08/95	10:00	bjg	0.05	@ICP-QC
36	573	1			ICV	ZN	5.2082	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
37	573	1			ICV	ZR	5.0315	1.0000	03/08/95	10:00	bjg	0.01	@ICP-QC
38	573	2			ICB	AG	0.0081	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
39	573	2			ICB	AL	0.0033	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
40	573	2			ICB	AS	0.0104	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
41	573	2			ICB	B	0.0085	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
42	573	2			ICB	BA	0.0058	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
43	573	2			ICB	BE	0.0057	1.0000	03/08/95	10:03	bjg	0.005	@ICP-QC
44	573	2			ICB	BI	0.5323	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
	573	2			ICB	CA	0.0045	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
	573	2			ICB	CD	0.0045	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
	573	2			ICB	CE	0.0042	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
48	573	2			ICB	CO	0.0027	1.0000	03/08/95	10:03	bjg	0.02	@ICP-QC
49	573	2			ICB	CR	0.0050	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
50	573	2			ICB	CU	-0.0054	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
51	573	2			ICB	FE	0.0024	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
52	573	2			ICB	K	0.0441	1.0000	03/08/95	10:03	bjg	0.3	@ICP-QC
53	573	2			ICB	LA	0.0012	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
54	573	2			ICB	LI	0.0053	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
55	573	2			ICB	MG	0.0048	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
56	573	2			ICB	MN	-0.0028	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
57	573	2			ICB	MO	0.0073	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
58	573	2			ICB	NA	0.0007	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
59	573	2			ICB	ND	0.0023	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
60	573	2			ICB	NI	0.0098	1.0000	03/08/95	10:03	bjg	0.02	@ICP-QC
61	573	2			ICB	P	0.0160	1.0000	03/08/95	10:03	bjg	0.2	@ICP-QC
62	573	2			ICB	PB	-0.0021	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
63	573	2			ICB	S	-0.0076	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
64	573	2			ICB	SB	0.0139	1.0000	03/08/95	10:03	bjg	0.2	@ICP-QC
65	573	2			ICB	SE	0.0006	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
66	573	2			ICB	SI	0.0154	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
67	573	2			ICB	SM	0.0525	1.0000	03/08/95	10:03	bjg	0.1	@ICP-QC
68	573	2			ICB	SR	0.0048	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
69	573	2			ICB	TI	0.0067	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
70	573	2			ICB	TL	0.1076	1.0000	03/08/95	10:03	bjg	0.2	@ICP-QC
71	573	2			ICB	U	0.1931	1.0000	03/08/95	10:03	bjg	0.4	@ICP-QC
72	573	2			ICB	V	0.0066	1.0000	03/08/95	10:03	bjg	0.05	@ICP-QC
73	573	2			ICB	ZN	0.0010	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
74	573	2			ICB	ZR	0.0100	1.0000	03/08/95	10:03	bjg	0.01	@ICP-QC
75	573	3			ICSA	AG	0.0089	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
76	573	3			ICSA	AL	219.3143	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
77	573	3			ICSA	AS	0.0121	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
78	573	3			ICSA	B	-0.0465	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
79	573	3			ICSA	BA	0.0005	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
80	573	3			ICSA	BE	0.0037	1.0000	03/08/95	10:07	bjg	0.005	@ICP-QC
81	573	3			ICSA	BI	0.5366	1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
82	573	3			ICSA	CA	20.2456	1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
83	573	3			ICSA	CD	0.0145	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
84	573	3			ICSA	CE	0.0185	1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
	573	3			ICSA	CO	0.0127	1.0000	03/08/95	10:07	bjg	0.02	@ICP-QC
	573	3			ICSA	CR	0.0054	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
	573	3			ICSA	CU	-0.0182	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
88	573	3			ICSA	FE	161.8343	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
89	573	3			ICSA	K	-0.0120	1.0000	03/08/95	10:07	bjg	0.3	@ICP-QC
90	573	3			ICSA	LA	0.0097	1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
91	573	3			ICSA	LI	0.0015	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
92	573	3			ICSA	MG	21.0928	1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
93	573	3			ICSA	MN	0.0109	1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 349 TO 353.

OUTPUT	A	B	C	D	E	F	H	I	J	K	L	M	N	O
94	573	3			ICSA	MO	0.0071		1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
95	573	3			ICSA	NA	205.8812		1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
96	573	3			ICSA	ND	-0.0112		1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
97	573	3			ICSA	NI	0.0022		1.0000	03/08/95	10:07	bjg	0.02	@ICP-QC
98	573	3			ICSA	P	0.0390		1.0000	03/08/95	10:07	bjg	0.2	@ICP-QC
99	573	3			ICSA	PB	0.0123		1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
100	573	3			ICSA	S	0.2148		1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
101	573	3			ICSA	SB	-0.0133		1.0000	03/08/95	10:07	bjg	0.2	@ICP-QC
102	573	3			ICSA	SE	0.0239		1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
103	573	3			ICSA	SI	0.0633		1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
104	573	3			ICSA	SM	-0.0357		1.0000	03/08/95	10:07	bjg	0.1	@ICP-QC
105	573	3			ICSA	SR	0.0013		1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
106	573	3			ICSA	TI	0.0013		1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
107	573	3			ICSA	TL	-0.0605		1.0000	03/08/95	10:07	bjg	0.2	@ICP-QC
108	573	3			ICSA	U	-0.0668		1.0000	03/08/95	10:07	bjg	0.4	@ICP-QC
109	573	3			ICSA	V	-0.0050		1.0000	03/08/95	10:07	bjg	0.05	@ICP-QC
110	573	3			ICSA	ZN	0.0019		1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
111	573	3			ICSA	ZR	-0.0033		1.0000	03/08/95	10:07	bjg	0.01	@ICP-QC
112	573	4			ICSAB	AG	0.0765		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
113	573	4			ICSAB	AL	215.0397		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
114	573	4			ICSAB	AS	0.0136		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
115	573	4			ICSAB	B	-0.0406		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
116	573	4			ICSAB	BA	0.5280		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
117	573	4			ICSAB	BE	0.5448		1.0000	03/08/95	10:11	bjg	0.005	@ICP-QC
118	573	4			ICSAB	BI	0.5427		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
119	573	4			ICSAB	CA	19.9079		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
120	573	4			ICSAB	CD	1.1087		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
121	573	4			ICSAB	CE	0.0725		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
122	573	4			ICSAB	CO	0.5585		1.0000	03/08/95	10:11	bjg	0.02	@ICP-QC
123	573	4			ICSAB	CR	0.5550		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
124	573	4			ICSAB	CU	0.5128		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
125	573	4			ICSAB	FE	160.8616		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
126	573	4			ICSAB	K	0.0882		1.0000	03/08/95	10:11	bjg	0.3	@ICP-QC
127	573	4			ICSAB	LA	0.0144		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
128	573	4			ICSAB	LI	1.0074		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
129	573	4			ICSAB	MG	20.9955		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
130	573	4			ICSAB	MN	0.5605		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
131	573	4			ICSAB	MO	0.0042		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
132	573	4			ICSAB	NA	198.8905		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
133	573	4			ICSAB	ND	-0.0208		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
134	573	4			ICSAB	NI	1.0903		1.0000	03/08/95	10:11	bjg	0.02	@ICP-QC
135	573	4			ICSAB	P	0.0261		1.0000	03/08/95	10:11	bjg	0.2	@ICP-QC
136	573	4			ICSAB	PB	1.1127		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
137	573	4			ICSAB	S	0.1909		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
138	573	4			ICSAB	SB	-0.0072		1.0000	03/08/95	10:11	bjg	0.2	@ICP-QC
139	573	4			ICSAB	SE	0.0622		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
140	573	4			ICSAB	SI	0.0690		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
141	573	4			ICSAB	SM	0.0472		1.0000	03/08/95	10:11	bjg	0.1	@ICP-QC
142	573	4			ICSAB	SR	0.0001		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
143	573	4			ICSAB	TI	0.0024		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
144	573	4			ICSAB	TL	0.0541		1.0000	03/08/95	10:11	bjg	0.2	@ICP-QC
145	573	4			ICSAB	U	0.2201		1.0000	03/08/95	10:11	bjg	0.4	@ICP-QC
146	573	4			ICSAB	V	0.5331		1.0000	03/08/95	10:11	bjg	0.05	@ICP-QC
147	573	4			ICSAB	ZN	1.0937		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
148	573	4			ICSAB	ZR	0.0024		1.0000	03/08/95	10:11	bjg	0.01	@ICP-QC
149	573	5			PREPBL	AG-F-01	0.0336		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
150	573	5			PREPBL	AL-F-01	1.1835		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
151	573	5			PREPBL	AS-F-01	-0.0029		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
152	573	5			PREPBL	B-F-01	0.0833		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
153	573	5			PREPBL	BA-F-01	0.0296		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
154	573	5			PREPBL	BE-F-01	0.0118		10.0000	03/08/95	10:18	bjg	0.005	@ICP-F0
155	573	5			PREPBL	BI-F-01	5.4081		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
156	573	5			PREPBL	CA-F-01	0.2380		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
157	573	5			PREPBL	CD-F-01	0.0261		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
158	573	5			PREPBL	CE-F-01	0.6656		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
159	573	5			PREPBL	CO-F-01	0.0088		10.0000	03/08/95	10:18	bjg	0.02	@ICP-F0
160	573	5			PREPBL	CR-F-01	0.0165		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
161	573	5			PREPBL	CU-F-01	-0.0872		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
162	573	5			PREPBL	FE-F-01	0.9296		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
163	573	5			PREPBL	K-F-01	10172.9551		10.0000	03/08/95	10:18	bjg	0.3	@ICP-F0
164	573	5			PREPBL	LA-F-01	-0.0291		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
165	573	5			PREPBL	LI-F-01	0.0107		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
166	573	5			PREPBL	MG-F-01	0.1272		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
167	573	5			PREPBL	MN-F-01	-0.0684		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
168	573	5			PREPBL	MO-F-01	0.0159		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
169	573	5			PREPBL	NA-F-01	4.5786		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
170	573	5			PREPBL	ND-F-01	0.1104		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
171	573	5			PREPBL	NI-F-01	0.1016		10.0000	03/08/95	10:18	bjg	0.02	@ICP-F0
172	573	5			PREPBL	P-F-01	0.0237		10.0000	03/08/95	10:18	bjg	0.2	@ICP-F0
173	573	5			PREPBL	PB-F-01	0.2852		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
174	573	5			PREPBL	S-F-01	0.0580		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
175	573	5			PREPBL	SB-F-01	0.3035		10.0000	03/08/95	10:18	bjg	0.2	@ICP-F0
176	573	5			PREPBL	SE-F-01	0.0550		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
177	573	5			PREPBL	SI-F-01	0.1367		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
178	573	5			PREPBL	SM-F-01	0.2162		10.0000	03/08/95	10:18	bjg	0.1	@ICP-F0
179	573	5			PREPBL	SR-F-01	0.0092		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
180	573	5			PREPBL	TI-F-01	0.0177		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
181	573	5			PREPBL	TL-F-01	0.3401		10.0000	03/08/95	10:18	bjg	0.2	@ICP-F0
182	573	5			PREPBL	U-F-01	1.4856		10.0000	03/08/95	10:18	bjg	0.4	@ICP-F0
183	573	5			PREPBL	V-F-01	0.0319		10.0000	03/08/95	10:18	bjg	0.05	@ICP-F0
184	573	5			PREPBL	ZN-F-01	0.1734		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
185	573	5			PREPBL	ZR-F-01	2.6560		10.0000	03/08/95	10:18	bjg	0.01	@ICP-F0
186	573	6	S94T000303			FE-F-01	9994.0124		8234.5191	03/08/95	10:31	bjg	0.05	@ICP-F0

ICP MACRO

OUTPUT	A	B	C	D	E	F	H	J	K	L	M	N	O
187	573	8	S94T000303		DUP	FE-F-01	10410.0306	7979.5723	03/08/95	10:34	bjg	0.05	@ICP-F0
188	573	9			CCV	AG	2.1819	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
189	573	9			CCV	AL	5.0935	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
190	573	9			CCV	AS	5.0895	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
91	573	9			CCV	B	5.1029	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
.92	573	9			CCV	BA	5.0782	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
193	573	9			CCV	BE	5.3189	1.0000	03/08/95	10:42	bjg	0.005	@ICP-QC
194	573	9			CCV	BI	5.2982	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
195	573	9			CCV	CA	5.2651	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
196	573	9			CCV	CD	5.1730	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
197	573	9			CCV	CE	5.0613	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
198	573	9			CCV	CO	5.1800	1.0000	03/08/95	10:42	bjg	0.02	@ICP-QC
199	573	9			CCV	CR	5.2152	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
200	573	9			CCV	CU	5.1138	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
201	573	9			CCV	FE	5.1988	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
202	573	9			CCV	K	7.4760	1.0000	03/08/95	10:42	bjg	0.3	@ICP-QC
203	573	9			CCV	LA	5.1008	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
204	573	9			CCV	LI	5.0840	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
205	573	9			CCV	MG	5.1602	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
206	573	9			CCV	MN	5.1677	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
207	573	9			CCV	MO	5.1360	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
208	573	9			CCV	NA	5.1320	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
209	573	9			CCV	ND	5.2333	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
210	573	9			CCV	NI	5.1310	1.0000	03/08/95	10:42	bjg	0.02	@ICP-QC
211	573	9			CCV	P	4.9280	1.0000	03/08/95	10:42	bjg	0.2	@ICP-QC
212	573	9			CCV	PB	5.0688	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
213	573	9			CCV	S	4.9779	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
214	573	9			CCV	SB	4.7697	1.0000	03/08/95	10:42	bjg	0.2	@ICP-QC
215	573	9			CCV	SE	5.3351	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
216	573	9			CCV	SI	4.8915	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
217	573	9			CCV	SM	5.0753	1.0000	03/08/95	10:42	bjg	0.1	@ICP-QC
218	573	9			CCV	SR	5.0636	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
219	573	9			CCV	TI	4.9399	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
220	573	9			CCV	TL	4.9810	1.0000	03/08/95	10:42	bjg	0.2	@ICP-QC
221	573	9			CCV	U	9.8303	1.0000	03/08/95	10:42	bjg	0.4	@ICP-QC
222	573	9			CCV	V	5.1125	1.0000	03/08/95	10:42	bjg	0.05	@ICP-QC
223	573	9			CCV	ZN	5.1841	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
224	573	9			CCV	ZR	5.0600	1.0000	03/08/95	10:42	bjg	0.01	@ICP-QC
225	573	10			CCB	AG	0.1315	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
226	573	10			CCB	AL	0.0211	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
227	573	10			CCB	AS	-0.0004	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
228	573	10			CCB	B	0.0100	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
229	573	10			CCB	BA	0.0069	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
230	573	10			CCB	BE	0.0066	1.0000	03/08/95	10:46	bjg	0.005	@ICP-QC
31	573	10			CCB	BI	0.5362	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
.32	573	10			CCB	CA	0.0099	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
233	573	10			CCB	CD	0.0073	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
234	573	10			CCB	CE	0.0283	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
235	573	10			CCB	CO	0.0054	1.0000	03/08/95	10:46	bjg	0.02	@ICP-QC
236	573	10			CCB	CR	0.0058	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
237	573	10			CCB	CU	-0.0036	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
238	573	10			CCB	FE	0.0148	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
239	573	10			CCB	K	2.0128	1.0000	03/08/95	10:46	bjg	0.3	@ICP-QC
240	573	10			CCB	LA	0.0023	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
241	573	10			CCB	LI	0.0066	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
242	573	10			CCB	MG	0.0074	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
243	573	10			CCB	MN	-0.0012	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
244	573	10			CCB	MO	0.0115	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
245	573	10			CCB	NA	0.0863	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
246	573	10			CCB	ND	0.0162	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
247	573	10			CCB	NI	0.0127	1.0000	03/08/95	10:46	bjg	0.02	@ICP-QC
248	573	10			CCB	P	0.0066	1.0000	03/08/95	10:46	bjg	0.2	@ICP-QC
249	573	10			CCB	PB	0.0021	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
250	573	10			CCB	S	0.0012	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
251	573	10			CCB	SB	0.0159	1.0000	03/08/95	10:46	bjg	0.2	@ICP-QC
252	573	10			CCB	SE	0.0112	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
253	573	10			CCB	SI	0.0146	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
254	573	10			CCB	SM	0.0450	1.0000	03/08/95	10:46	bjg	0.1	@ICP-QC
255	573	10			CCB	SR	0.0064	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
256	573	10			CCB	TI	0.0077	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
257	573	10			CCB	TL	0.0726	1.0000	03/08/95	10:46	bjg	0.2	@ICP-QC
258	573	10			CCB	U	0.1611	1.0000	03/08/95	10:46	bjg	0.4	@ICP-QC
259	573	10			CCB	V	0.0075	1.0000	03/08/95	10:46	bjg	0.05	@ICP-QC
260	573	10			CCB	ZN	0.0029	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
261	573	10			CCB	ZR	0.0123	1.0000	03/08/95	10:46	bjg	0.01	@ICP-QC
262	573	11	S94T000304			AL-F-01	131424.8343	5661.2319	03/08/95	11:01	bjg	0.05	@ICP-F0
263	573	11	S94T000304			CA-F-01	17577.7614	5661.2319	03/08/95	11:01	bjg	0.1	@ICP-F0
264	573	11	S94T000304			FE-F-01	11452.6072	5661.2319	03/08/95	11:01	bjg	0.05	@ICP-F0
265	573	12	S94T000304		DUP	AL-F-01	123084.2654	5587.8409	03/08/95	11:05	bjg	0.05	@ICP-F0
266	573	12	S94T000304		DUP	CA-F-01	16477.2661	5587.8409	03/08/95	11:05	bjg	0.1	@ICP-F0
267	573	12	S94T000304		DUP	FE-F-01	7634.0543	5587.8409	03/08/95	11:05	bjg	0.05	@ICP-F0
268	573	13			ICSA	AG	0.0420	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
269	573	13			ICSA	AL	213.5418	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
270	573	13			ICSA	AS	0.0148	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
71	573	13			ICSA	B	-0.0401	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
72	573	13			ICSA	BA	0.0016	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
273	573	13			ICSA	BE	0.0039	1.0000	03/08/95	11:13	bjg	0.005	@ICP-QC
274	573	13			ICSA	BI	0.5511	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
275	573	13			ICSA	CA	19.8430	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
276	573	13			ICSA	CD	0.0148	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
277	573	13			ICSA	CE	0.0785	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
278	573	13			ICSA	CO	0.0072	1.0000	03/08/95	11:13	bjg	0.02	@ICP-QC
279	573	13			ICSA	CR	-0.0093	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC

ICP MACRO

OUTPUT	A	B	C	D	E	F	H	J	K	L	M	N	O
280	573	13			ICSA	CU	-0.0249	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
281	573	13			ICSA	FE	153.6567	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
282	573	13			ICSA	K	2.5448	1.0000	03/08/95	11:13	bjg	0.3	@ICP-QC
283	573	13			ICSA	LA	0.0131	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
284	573	13			ICSA	LI	0.0020	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
285	573	13			ICSA	MG	19.9247	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
286	573	13			ICSA	MN	0.0024	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
287	573	13			ICSA	MO	-0.0027	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
288	573	13			ICSA	NA	194.6954	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
289	573	13			ICSA	ND	-0.0031	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
290	573	13			ICSA	NI	-0.0500	1.0000	03/08/95	11:13	bjg	0.02	@ICP-QC
291	573	13			ICSA	P	0.0533	1.0000	03/08/95	11:13	bjg	0.2	@ICP-QC
292	573	13			ICSA	PB	0.0272	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
293	573	13			ICSA	S	0.1634	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
294	573	13			ICSA	SB	-0.0288	1.0000	03/08/95	11:13	bjg	0.2	@ICP-QC
295	573	13			ICSA	SE	0.0795	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
296	573	13			ICSA	SI	0.1044	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
297	573	13			ICSA	SM	0.0346	1.0000	03/08/95	11:13	bjg	0.1	@ICP-QC
298	573	13			ICSA	SR	0.0015	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
299	573	13			ICSA	TI	0.0030	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
300	573	13			ICSA	TL	0.0481	1.0000	03/08/95	11:13	bjg	0.2	@ICP-QC
301	573	13			ICSA	U	0.1759	1.0000	03/08/95	11:13	bjg	0.4	@ICP-QC
302	573	13			ICSA	V	-0.0014	1.0000	03/08/95	11:13	bjg	0.05	@ICP-QC
303	573	13			ICSA	ZN	-0.0045	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
304	573	13			ICSA	ZR	0.0068	1.0000	03/08/95	11:13	bjg	0.01	@ICP-QC
305	573	14			ICSAB	AG	0.0689	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
306	573	14			ICSAB	AL	212.9420	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
307	573	14			ICSAB	AS	0.0225	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
308	573	14			ICSAB	B	-0.0432	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
309	573	14			ICSAB	BA	0.5237	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
310	573	14			ICSAB	BE	0.5374	1.0000	03/08/95	11:15	bjg	0.005	@ICP-QC
311	573	14			ICSAB	BI	0.5338	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
312	573	14			ICSAB	CA	19.7479	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
313	573	14			ICSAB	CD	1.0900	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
314	573	14			ICSAB	CE	0.0336	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
315	573	14			ICSAB	CO	0.5423	1.0000	03/08/95	11:15	bjg	0.02	@ICP-QC
316	573	14			ICSAB	CR	0.5432	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
317	573	14			ICSAB	CU	0.5121	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
318	573	14			ICSAB	FE	159.2025	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
319	573	14			ICSAB	K	1.5203	1.0000	03/08/95	11:15	bjg	0.3	@ICP-QC
320	573	14			ICSAB	LA	0.0122	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
321	573	14			ICSAB	LI	1.0078	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
322	573	14			ICSAB	MG	20.5431	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
323	573	14			ICSAB	MN	0.5512	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
324	573	14			ICSAB	MO	0.0048	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
325	573	14			ICSAB	NA	198.7405	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
326	573	14			ICSAB	ND	-0.0107	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
327	573	14			ICSAB	NI	1.0692	1.0000	03/08/95	11:15	bjg	0.02	@ICP-QC
328	573	14			ICSAB	P	0.0437	1.0000	03/08/95	11:15	bjg	0.2	@ICP-QC
329	573	14			ICSAB	PB	1.0749	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
330	573	14			ICSAB	S	0.1800	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
331	573	14			ICSAB	SB	-0.0200	1.0000	03/08/95	11:15	bjg	0.2	@ICP-QC
332	573	14			ICSAB	SE	0.0485	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
333	573	14			ICSAB	SI	0.0619	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
334	573	14			ICSAB	SM	0.0194	1.0000	03/08/95	11:15	bjg	0.1	@ICP-QC
335	573	14			ICSAB	SR	0.0006	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
336	573	14			ICSAB	TI	0.0019	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
337	573	14			ICSAB	TL	0.0158	1.0000	03/08/95	11:15	bjg	0.2	@ICP-QC
338	573	14			ICSAB	U	0.1447	1.0000	03/08/95	11:15	bjg	0.4	@ICP-QC
339	573	14			ICSAB	V	0.5244	1.0000	03/08/95	11:15	bjg	0.05	@ICP-QC
340	573	14			ICSAB	ZN	1.0723	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
341	573	14			ICSAB	ZR	0.0029	1.0000	03/08/95	11:15	bjg	0.01	@ICP-QC
342	573	15			CCV	AG	2.4807	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
343	573	15			CCV	AL	5.2812	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
344	573	15			CCV	AS	5.0419	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
345	573	15			CCV	B	5.0657	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
346	573	15			CCV	BA	5.0650	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
347	573	15			CCV	BE	5.2792	1.0000	03/08/95	11:19	bjg	0.005	@ICP-QC
348	573	15			CCV	BI	5.2820	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
349	573	15			CCV	CA	5.2624	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
350	573	15			CCV	CD	5.1461	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
351	573	15			CCV	CE	5.0392	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
352	573	15			CCV	CO	5.1402	1.0000	03/08/95	11:19	bjg	0.02	@ICP-QC
353	573	15			CCV	CR	5.1737	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
354	573	15			CCV	CU	5.1043	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
355	573	15			CCV	FE	5.3278	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
356	573	15			CCV	K	6.2423	1.0000	03/08/95	11:19	bjg	0.3	@ICP-QC
357	573	15			CCV	LA	5.0832	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
358	573	15			CCV	LI	5.0898	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
359	573	15			CCV	MG	5.1401	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
360	573	15			CCV	MN	5.1346	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
361	573	15			CCV	MO	5.0916	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
362	573	15			CCV	NA	5.3404	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
363	573	15			CCV	ND	5.2287	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
364	573	15			CCV	NI	5.1016	1.0000	03/08/95	11:19	bjg	0.02	@ICP-QC
365	573	15			CCV	P	4.9906	1.0000	03/08/95	11:19	bjg	0.2	@ICP-QC
366	573	15			CCV	PB	5.0756	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
367	573	15			CCV	S	4.9903	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
368	573	15			CCV	SB	4.7590	1.0000	03/08/95	11:19	bjg	0.2	@ICP-QC
369	573	15			CCV	SE	5.3243	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
370	573	15			CCV	SI	4.8475	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
371	573	15			CCV	SM	5.0267	1.0000	03/08/95	11:19	bjg	0.1	@ICP-QC
372	573	15			CCV	SR	5.0471	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC

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ICP MACRO

OUTPUT	A	B	C	D	E	F	H	J	K	L	M	N	O
373	573	15			CCV	TI	4.9163	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
374	573	15			CCV	TL	4.9164	1.0000	03/08/95	11:19	bjg	0.2	@ICP-QC
375	573	15			CCV	U	9.7206	1.0000	03/08/95	11:19	bjg	0.4	@ICP-QC
376	573	15			CCV	V	5.0788	1.0000	03/08/95	11:19	bjg	0.05	@ICP-QC
7	573	15			CCV	ZN	5.1513	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
8	573	15			CCV	ZR	5.0297	1.0000	03/08/95	11:19	bjg	0.01	@ICP-QC
379	573	16			CCB	AG	0.1555	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
380	573	16			CCB	AL	0.1857	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
381	573	16			CCB	AS	0.0051	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
382	573	16			CCB	B	0.0095	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
383	573	16			CCB	BA	0.0057	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
384	573	16			CCB	BE	0.0067	1.0000	03/08/95	11:22	bjg	0.005	@ICP-QC
385	573	16			CCB	BI	0.5494	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
386	573	16			CCB	CA	0.0251	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
387	573	16			CCB	CD	0.0065	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
388	573	16			CCB	CE	0.0578	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
389	573	16			CCB	CO	0.0081	1.0000	03/08/95	11:22	bjg	0.02	@ICP-QC
390	573	16			CCB	CR	0.0059	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
391	573	16			CCB	CU	-0.0040	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
392	573	16			CCB	FE	0.1380	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
393	573	16			CCB	K	1.3078	1.0000	03/08/95	11:22	bjg	0.3	@ICP-QC
394	573	16			CCB	LA	-0.0022	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
395	573	16			CCB	LI	0.0064	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
396	573	16			CCB	MG	0.0230	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
397	573	16			CCB	MN	-0.0020	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
398	573	16			CCB	MO	0.0119	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
399	573	16			CCB	NA	0.2422	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
400	573	16			CCB	ND	-0.0004	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
401	573	16			CCB	NI	0.0101	1.0000	03/08/95	11:22	bjg	0.02	@ICP-QC
402	573	16			CCB	P	0.0253	1.0000	03/08/95	11:22	bjg	0.2	@ICP-QC
403	573	16			CCB	PB	0.0031	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
404	573	16			CCB	S	-0.0042	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
405	573	16			CCB	SB	0.0217	1.0000	03/08/95	11:22	bjg	0.2	@ICP-QC
406	573	16			CCB	SE	0.0021	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
407	573	16			CCB	SI	0.0032	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
408	573	16			CCB	SM	0.0030	1.0000	03/08/95	11:22	bjg	0.1	@ICP-QC
409	573	16			CCB	SR	0.0056	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
410	573	16			CCB	TI	0.0061	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
411	573	16			CCB	TL	0.0045	1.0000	03/08/95	11:22	bjg	0.2	@ICP-QC
412	573	16			CCB	U	0.0216	1.0000	03/08/95	11:22	bjg	0.4	@ICP-QC
413	573	16			CCB	V	0.0056	1.0000	03/08/95	11:22	bjg	0.05	@ICP-QC
414	573	16			CCB	ZN	0.0027	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC
415	573	16			CCB	ZR	0.0063	1.0000	03/08/95	11:22	bjg	0.01	@ICP-QC

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LABCORE Data Entry Template for Worklist# 1828

Analyst: BJG **Instrument:** ICP~~01~~ 02 MC 7/17/95 **Book#** 43B48B

Method: LA-505-151 Rev/Mod D-2

Worklist Comment: C-108 ICP

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPBLKTJA				@ICP-F02	SOLID		
6	SAMPLE	S94T000339	0	F	@ICP-F02	SOLID	94000017	C-108
	Analytes Requested:	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01						
7	DUP	S94T000339	0	F	@ICP-F02	SOLID		
	SPK	S94T000339	0	F	@ICP-F02	SOLID		
9	ICSA				@ICP-QC	QC		
10	ICSAB				@ICP-QC	QC		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		

Final page for worklist # 1828

Susie Diaz for Bill Gucke 7-15-95
Analyst Signature **Date**

Susie Diaz for Mike Lindberg 7-15-95
Analyst Signature **Date**

Data Entry Comments:

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

Sample No.		Results in PPM Sample	Duplicate	RPD*	Spike % Rec.	Detect limit Sample	Detect Limit Dup	Spike Am
S94T000339	AG	< 5.47E+01	< 5.36E+01	N/A	9.06E+01	5.47E+01	5.36E+01	5470
	AL	6.56E+04	6.37E+04	2.90E+00	N/A	2.74E+02	2.68E+02	5470
	AS	< 5.47E+02	< 5.36E+02	N/A	9.92E+01	5.47E+02	5.36E+02	5470
	B	< 2.74E+02	< 2.68E+02	N/A	9.32E+01	2.74E+02	2.68E+02	5470
	BA	< 2.74E+02	< 2.68E+02	N/A	8.85E+01	2.74E+02	2.68E+02	5470
	BE	< 2.74E+01	< 2.68E+01	N/A	9.87E+01	2.74E+01	2.68E+01	5470
	BI	< 5.47E+02	< 5.36E+02	N/A	9.60E+01	5.47E+02	5.36E+02	5470
	CA	1.56E+04	1.83E+04	1.59E+01	9.84E+01	5.47E+02	5.36E+02	5470
	CD	< 5.47E+01	< 5.36E+01	N/A	9.70E+01	5.47E+01	5.36E+01	5470
	CE	< 5.47E+02	< 5.36E+02	N/A	9.25E+01	5.47E+02	5.36E+02	5470
	CO	< 1.09E+02	< 1.07E+02	N/A	9.71E+01	1.09E+02	1.07E+02	5470
	CR	3.22E+02	3.51E+02	8.45E+00	9.77E+01	5.47E+01	5.36E+01	5470
	CU	< 5.47E+01	< 5.36E+01	N/A	9.13E+01	5.47E+01	5.36E+01	5470
	EU	n/a	n/a		N/A		0.00E+00	
	FE	8.79E+03	9.05E+03	2.92E+00	9.50E+01	2.74E+02	2.68E+02	5470
	K	5.64E+06	5.88E+06	4.03E+00	N/A	2.74E+03	2.68E+03	5470
	LA	< 2.74E+02	< 2.68E+02	N/A	9.23E+01	2.74E+02	2.68E+02	5470
	LI	< 5.47E+01	< 5.36E+01	N/A	8.77E+01	5.47E+01	5.36E+01	5470
	MG	< 5.47E+02	< 5.36E+02	N/A	8.77E+01	5.47E+02	5.36E+02	5470
	MN	6.95E+01	6.94E+01	2.09E-01	9.20E+01	5.47E+01	5.36E+01	5470
	MO	< 2.74E+02	< 2.68E+02	N/A	9.74E+01	2.74E+02	2.68E+02	5470
	NA	7.54E+04	7.00E+04	7.49E+00	N/A	5.47E+02	5.36E+02	5470
	ND	< 5.47E+02	< 5.36E+02	N/A	9.41E+01	5.47E+02	5.36E+02	5470
	NI	2.40E+04	2.33E+04	2.88E+00	N/A	1.09E+02	1.07E+02	5470
	P	1.87E+04	1.61E+04	1.46E+01	8.94E+01	1.09E+03	1.07E+03	5470
	PB	< 5.47E+02	< 5.36E+02	N/A	9.51E+01	5.47E+02	5.36E+02	5470
	S	3.68E+03	3.81E+03	3.56E+00	9.29E+01	5.47E+02	5.36E+02	5470
	SB	< 3.28E+02	< 3.22E+02	N/A	9.16E+01	3.28E+02	3.22E+02	5470
	SE	< 5.47E+02	< 5.36E+02	N/A	9.67E+01	5.47E+02	5.36E+02	5470
	SI	4.17E+03	3.56E+03	1.57E+01	8.28E+01	2.74E+02	2.68E+02	5470
	SM	< 5.47E+02	< 5.36E+02	N/A	9.20E+01	5.47E+02	5.36E+02	5470
	SR	1.11E+02	1.16E+02	4.29E+00	9.06E+01	5.47E+01	5.36E+01	5470
	TH	n/a	n/a		N/A		0.00E+00	
	TI	< 5.47E+01	< 5.36E+01	N/A	9.21E+01	5.47E+01	5.36E+01	5470
	TL	< 1.09E+03	< 1.07E+03	N/A	9.39E+01	1.09E+03	1.07E+03	5470
	U	3.40E+03	3.96E+03	1.52E+01	9.14E+01	2.74E+03	2.68E+03	10940
	V	< 2.74E+02	< 2.68E+02	N/A	9.55E+01	2.74E+02	2.68E+02	5470
	Y	n/a	n/a		N/A		0.00E+00	
	ZN	7.35E+02	3.73E+02	6.54E+01	8.77E+01	5.47E+01	5.36E+01	5470
	ZR	6.92E+01	< 5.36E+01	N/A	9.39E+01	5.47E+01	5.36E+01	5470

N/A For Spike Recovery indicated that Sample Conc is 4 times greater than Spike Amt

Leslie Duay for
Sam Paeong
7-15-95
LAD

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 360 TO 364.

1828	1	ICV	AG	4.8273	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	AL	4.8748	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	AS	4.9687	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	B	4.9348	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	BA	4.8636	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	BE	5.036	1	07/14/95	13:12	bjg	0.005 @ICP-QC
1828	1	ICV	BI	4.9048	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	CA	5.081	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	CD	4.981	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	CE	4.9472	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	CO	5.0163	1	07/14/95	13:12	bjg	0.02 @ICP-QC
1828	1	ICV	CR	5.0217	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	CU	4.8632	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	EU	0.007	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	FE	4.9992	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	K	4.7717	1	07/14/95	13:12	bjg	0.3 @ICP-QC
1828	1	ICV	LA	4.9283	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	LI	4.9073	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	MG	4.8535	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	MN	4.8886	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	MO	4.998	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	NA	4.8858	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	ND	5.0636	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	NI	4.9992	1	07/14/95	13:12	bjg	0.02 @ICP-QC
1828	1	ICV	P	5.0292	1	07/14/95	13:12	bjg	0.2 @ICP-QC
1828	1	ICV	PB	4.9883	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	S	4.9874	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	SB	4.696	1	07/14/95	13:12	bjg	0.2 @ICP-QC
1828	1	ICV	SE	4.8487	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	SI	4.9145	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	SM	4.9329	1	07/14/95	13:12	bjg	0.1 @ICP-QC
1828	1	ICV	SR	4.847	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	TH	0.0192	1	07/14/95	13:12	bjg	0 @ICP-QC
1828	1	ICV	TI	4.805	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	TL	4.8863	1	07/14/95	13:12	bjg	0.2 @ICP-QC
1828	1	ICV	U	9.8765	1	07/14/95	13:12	bjg	0.4 @ICP-QC
1828	1	ICV	V	4.9493	1	07/14/95	13:12	bjg	0.05 @ICP-QC
1828	1	ICV	Y	0.0132	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	ZN	4.9941	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	1	ICV	ZR	4.8905	1	07/14/95	13:12	bjg	0.01 @ICP-QC
1828	2	ICB	AG	-0.0001	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	AL	0.0059	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	AS	0.0036	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	B	0.0047	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	BA	-0.0001	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	BE	0	1	07/14/95	13:15	bjg	0.005 @ICP-QC
1828	2	ICB	BI	-0.0352	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	CA	0.0003	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	CD	-0.0013	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	CE	0.004	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	CO	0.0008	1	07/14/95	13:15	bjg	0.02 @ICP-QC
1828	2	ICB	CR	0.0004	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	CU	-0.0006	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	EU	0.0007	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	FE	0.0012	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	K	0.0728	1	07/14/95	13:15	bjg	0.3 @ICP-QC
1828	2	ICB	LA	0.0009	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	LI	0.0009	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	MG	-0.0008	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	MN	0.0001	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	MO	0.0016	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	NA	0.0046	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	ND	0.0012	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	NI	0.0017	1	07/14/95	13:15	bjg	0.02 @ICP-QC
1828	2	ICB	P	0.001	1	07/14/95	13:15	bjg	0.2 @ICP-QC
1828	2	ICB	PB	-0.0033	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	S	0.008	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	SB	-0.0053	1	07/14/95	13:15	bjg	0.2 @ICP-QC
1828	2	ICB	SE	0.0125	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	SI	0.0156	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	SM	0.011	1	07/14/95	13:15	bjg	0.1 @ICP-QC
1828	2	ICB	SR	0.0001	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	TH	0.0034	1	07/14/95	13:15	bjg	0 @ICP-QC
1828	2	ICB	TI	0	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	TL	-0.0005	1	07/14/95	13:15	bjg	0.2 @ICP-QC
1828	2	ICB	U	0.0352	1	07/14/95	13:15	bjg	0.4 @ICP-QC
1828	2	ICB	V	0.0017	1	07/14/95	13:15	bjg	0.05 @ICP-QC
1828	2	ICB	Y	0.0005	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	ZN	-0.0015	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	2	ICB	ZR	0.0006	1	07/14/95	13:15	bjg	0.01 @ICP-QC
1828	3	ICSA	AG	-0.0021	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	AL	244.2238	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	AS	0.0077	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	B	0.0005	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	BA	0.0014	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	BE	0.0002	1	07/14/95	13:19	bjg	0.005 @ICP-QC
1828	3	ICSA	BI	-0.0397	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	CA	241.9353	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	CD	0.0012	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	CE	0.007	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	CO	0.0008	1	07/14/95	13:19	bjg	0.02 @ICP-QC
1828	3	ICSA	CR	0.0065	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	CU	-0.0101	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	EU	-0.0109	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	FE	91.8675	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	K	-0.0128	1	07/14/95	13:19	bjg	0.3 @ICP-QC
1828	3	ICSA	LA	-0.0038	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	LI	0.0024	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	MG	245.0359	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	MN	-0.0059	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	MO	-0.0073	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	NA	188.864	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	ND	0.0004	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	NI	-0.014	1	07/14/95	13:19	bjg	0.02 @ICP-QC
1828	3	ICSA	P	-0.0288	1	07/14/95	13:19	bjg	0.2 @ICP-QC
1828	3	ICSA	PB	0.0109	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	S	-0.0105	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	SB	0.0034	1	07/14/95	13:19	bjg	0.2 @ICP-QC
1828	3	ICSA	SE	-0.0059	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	SI	0.026	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	SM	-0.0049	1	07/14/95	13:19	bjg	0.1 @ICP-QC
1828	3	ICSA	SR	0.0017	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	TH	-0.0089	1	07/14/95	13:19	bjg	0 @ICP-QC
1828	3	ICSA	TI	0.0013	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3	ICSA	TL	0.0908	1	07/14/95	13:19	bjg	0.2 @ICP-QC
1828	3	ICSA	U	-0.1263	1	07/14/95	13:19	bjg	0.4 @ICP-QC
1828	3	ICSA	V	0.0004	1	07/14/95	13:19	bjg	0.05 @ICP-QC
1828	3	ICSA	Y	0.0076	1	07/14/95	13:19	bjg	0.01 @ICP-QC

1828	3		ICSA	ZN		-0.0017	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	3		ICSA	ZR		-0.0015	1	07/14/95	13:19	bjg	0.01 @ICP-QC
1828	4		ICSAB	AG		0.9397	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	AL		246.1824	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	AS		0.0051	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	B		-0.0041	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	BA		0.4844	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	BE		0.4791	1	07/14/95	13:34	bjg	0.005 @ICP-QC
1828	4		ICSAB	BI		-0.0376	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	CA		264.9973	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	CD		0.9484	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	CE		0.0101	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	CO		0.4684	1	07/14/95	13:34	bjg	0.02 @ICP-QC
1828	4		ICSAB	CR		0.4799	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	CU		0.4767	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	EU		-0.0305	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	FE		93.5785	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	K		0.9339	1	07/14/95	13:34	bjg	0.3 @ICP-QC
1828	4		ICSAB	LA		-0.0033	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	LI		0.9572	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	MG		250.045	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	MN		0.6102	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	MO		-0.0093	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	NA		190.7239	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	ND		-0.0018	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	NI		0.916	1	07/14/95	13:34	bjg	0.02 @ICP-QC
1828	4		ICSAB	P		-0.0098	1	07/14/95	13:34	bjg	0.2 @ICP-QC
1828	4		ICSAB	PB		0.9787	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	S		5.759	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	SB		-0.0084	1	07/14/95	13:34	bjg	0.2 @ICP-QC
1828	4		ICSAB	SE		-0.0028	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	SI		0.6174	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	SM		-0.0077	1	07/14/95	13:34	bjg	0.1 @ICP-QC
1828	4		ICSAB	SR		0.0809	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	TH		-0.0069	1	07/14/95	13:34	bjg	0 @ICP-QC
1828	4		ICSAB	TI		0.0006	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	TL		0.0809	1	07/14/95	13:34	bjg	0.2 @ICP-QC
1828	4		ICSAB	U		-0.1913	1	07/14/95	13:34	bjg	0.4 @ICP-QC
1828	4		ICSAB	V		0.468	1	07/14/95	13:34	bjg	0.05 @ICP-QC
1828	4		ICSAB	Y		0.008	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	ZN		1.0994	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	4		ICSAB	ZR		-0.0019	1	07/14/95	13:34	bjg	0.01 @ICP-QC
1828	5		PREPBL	AG-F-01		-0.0017	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	AL-F-01		0.1609	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	AS-F-01		0.1206	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	B-F-01		0.0279	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	BA-F-01		0.0185	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	BE-F-01		0.0002	10	07/14/95	13:40	bjg	0.005 @ICP-F0
1828	5		PREPBL	BI-F-01		-0.015	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	CA-F-01		0.2517	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	CD-F-01		-0.0139	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	CE-F-01		-0.0046	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	CO-F-01		0.0009	10	07/14/95	13:40	bjg	0.02 @ICP-F0
1828	5		PREPBL	CR-F-01		0.0056	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	CU-F-01		0.0145	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	EU-F-01		0.0059	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	FE-F-01		0.028	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	K-F-01		10665.28	10	07/14/95	13:40	bjg	0.3 @ICP-F0
1828	5		PREPBL	LA-F-01		-0.0063	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	LI-F-01		0.0044	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	MG-F-01		0.2094	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	MN-F-01		0.0349	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	MO-F-01		-0.0123	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	NA-F-01		3.4713	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	ND-F-01		-0.0129	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	NI-F-01		10.5311	10	07/14/95	13:40	bjg	0.02 @ICP-F0
1828	5		PREPBL	P-F-01		-0.1681	10	07/14/95	13:40	bjg	0.2 @ICP-F0
1828	5		PREPBL	PB-F-01		0.1491	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	S-F-01		0.4294	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	SB-F-01		-0.1206	10	07/14/95	13:40	bjg	0.2 @ICP-F0
1828	5		PREPBL	SE-F-01		0.2774	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	SI-F-01		1.2402	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	SM-F-01		0.0565	10	07/14/95	13:40	bjg	0.1 @ICP-F0
1828	5		PREPBL	SR-F-01		0.0014	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	TH-F-01		0.1922	10	07/14/95	13:40	bjg	0 @ICP-F0
1828	5		PREPBL	TI-F-01		0.0043	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	TL-F-01		-0.1144	10	07/14/95	13:40	bjg	0.2 @ICP-F0
1828	5		PREPBL	U-F-01		-2.8148	10	07/14/95	13:40	bjg	0.4 @ICP-F0
1828	5		PREPBL	V-F-01		0.0187	10	07/14/95	13:40	bjg	0.05 @ICP-F0
1828	5		PREPBL	Y-F-01		0.0008	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	ZN-F-01		0.3763	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	5		PREPBL	ZR-F-01		0.0283	10	07/14/95	13:40	bjg	0.01 @ICP-F0
1828	6	S94T000339		AL-F-01		65608.68	5470	07/14/95	13:47	bjg	0.05 @ICP-F0
1828	6	S94T000339		CA-F-01		15564.5	5470	07/14/95	13:47	bjg	0.1 @ICP-F0
1828	6	S94T000339		CR-F-01		322.2302	5470	07/14/95	13:47	bjg	0.01 @ICP-F0
1828	6	S94T000339		FE-F-01		8786.432	5470	07/14/95	13:47	bjg	0.05 @ICP-F0
1828	6	S94T000339		K-F-01		5644961	5470	07/14/95	13:47	bjg	0.3 @ICP-F0
1828	6	S94T000339		NA-F-01		75444.73	5470	07/14/95	13:47	bjg	0.1 @ICP-F0
1828	6	S94T000339		NI-F-01		23998.88	5470	07/14/95	13:47	bjg	0.02 @ICP-F0
1828	6	S94T000339		ZN-F-01		735.0775	5470	07/14/95	13:47	bjg	0.01 @ICP-F0
1828	6	S94T000339		ZR-F-01		69.1577	5470	07/14/95	13:47	bjg	0.01 @ICP-F0
1828	7	S94T000339	DUP	AL-F-01	65608.68	63734.29	5364	07/14/95	13:51	bjg	0.05 @ICP-F0
1828	7	S94T000339	DUP	CA-F-01	15564.5	18259.03	5364	07/14/95	13:51	bjg	0.1 @ICP-F0
1828	7	S94T000339	DUP	CR-F-01	322.2302	350.6611	5364	07/14/95	13:51	bjg	0.01 @ICP-F0
1828	7	S94T000339	DUP	FE-F-01	8786.432	9046.702	5364	07/14/95	13:51	bjg	0.05 @ICP-F0
1828	7	S94T000339	DUP	K-F-01	5644961	5877163	5364	07/14/95	13:51	bjg	0.3 @ICP-F0
1828	7	S94T000339	DUP	NA-F-01	75444.73	69995.08	5364	07/14/95	13:51	bjg	0.1 @ICP-F0
1828	7	S94T000339	DUP	NI-F-01	23998.88	23317.48	5364	07/14/95	13:51	bjg	0.02 @ICP-F0
1828	7	S94T000339	DUP	ZN-F-01	735.0775	372.8067	5364	07/14/95	13:51	bjg	0.01 @ICP-F0
1828	7	S94T000339	DUP	ZR-F-01	69.1577	<53.6400	5364	07/14/95	13:51	bjg	0.01 @ICP-F0
1828	8	S94T000339_A		AL-F-01		69317.35	5470	07/14/95	13:56	bjg	0.05 @ICP-F0
1828	8	S94T000339_A		CA-F-01		20945.96	5470	07/14/95	13:56	bjg	0.1 @ICP-F0
1828	8	S94T000339_A		CR-F-01		5667.442	5470	07/14/95	13:56	bjg	0.01 @ICP-F0
1828	8	S94T000339_A		FE-F-01		13981.36	5470	07/14/95	13:56	bjg	0.05 @ICP-F0
1828	8	S94T000339_A		K-F-01		5496310	5470	07/14/95	13:56	bjg	0.3 @ICP-F0
1828	8	S94T000339_A		NA-F-01		77933.13	5470	07/14/95	13:56	bjg	0.1 @ICP-F0
1828	8	S94T000339_A		NI-F-01		29010.4	5470	07/14/95	13:56	bjg	0.02 @ICP-F0
1828	8	S94T000339_A		ZN-F-01		5530.872	5470	07/14/95	13:56	bjg	0.01 @ICP-F0
1828	8	S94T000339_A		ZR-F-01		5204.891	5470	07/14/95	13:56	bjg	0.01 @ICP-F0
1828	8		ICSA	AG		-0.0011	1	07/14/95	14:01	bjg	0.01 @ICP-QC
1828	9		ICSA	AL		243.2517	1	07/14/95	14:01	bjg	0.05 @ICP-QC
1828	9		ICSA	AS		0.0135	1	07/14/95	14:01	bjg	0.05 @ICP-QC
1828	9		ICSA	B		-0.002	1	07/14/95	14:01	bjg	0.05 @ICP-QC
1828	9		ICSA	BA		0.0015	1	07/14/95	14:01	bjg	0.05 @ICP-QC
1828	9		ICSA	BE		0	1	07/14/95	14:01	bjg	0.005 @ICP-QC
1828	9		ICSA	BI		-0.0238	1	07/14/95	14:01	bjg	0.1 @ICP-QC
1828	9		ICSA	CA		251.1956	1	07/14/95	14:01	bjg	0.1 @ICP-QC
1828	9		ICSA	CD		0.0023	1	07/14/95	14:01	bjg	0.01 @ICP-QC

1828	9	ICSA	CE	0.0115	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	CO	0.0004	1	07/14/95	14:01	bjg	0.02	@ICP-QC
1828	9	ICSA	CR	0.0056	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	CU	-0.0103	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	EU	-0.029	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	FE	92.933	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	K	0.2098	1	07/14/95	14:01	bjg	0.3	@ICP-QC
1828	9	ICSA	LA	-0.0035	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	LI	0.0036	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	MG	245.5551	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	MN	-0.0053	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	MO	-0.0134	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	NA	185.3456	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	ND	0.0002	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	NI	-0.0162	1	07/14/95	14:01	bjg	0.02	@ICP-QC
1828	9	ICSA	P	-0.017	1	07/14/95	14:01	bjg	0.2	@ICP-QC
1828	9	ICSA	PB	0.0308	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	S	-0.0151	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	SB	-0.0037	1	07/14/95	14:01	bjg	0.2	@ICP-QC
1828	9	ICSA	SE	0.0226	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	SI	0.0264	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	SM	0.0122	1	07/14/95	14:01	bjg	0.1	@ICP-QC
1828	9	ICSA	SR	0.0016	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	TH	-0.0072	1	07/14/95	14:01	bjg	0	@ICP-QC
1828	9	ICSA	TI	0.0009	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	TL	0.0916	1	07/14/95	14:01	bjg	0.2	@ICP-QC
1828	9	ICSA	U	-0.1236	1	07/14/95	14:01	bjg	0.4	@ICP-QC
1828	9	ICSA	V	0.0041	1	07/14/95	14:01	bjg	0.05	@ICP-QC
1828	9	ICSA	Y	0.0086	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	ZN	-0.0028	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	9	ICSA	ZR	0.0005	1	07/14/95	14:01	bjg	0.01	@ICP-QC
1828	10	ICSAB	AG	0.851	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	AL	246.0538	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	AS	0.0225	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	B	-0.0056	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	BA	0.4792	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	BE	0.4826	1	07/14/95	14:05	bjg	0.005	@ICP-QC
1828	10	ICSAB	BI	-0.0188	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	CA	271.7465	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	CD	0.9651	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	CE	0.0067	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	CO	0.477	1	07/14/95	14:05	bjg	0.02	@ICP-QC
1828	10	ICSAB	CR	0.4865	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	CU	0.4732	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	EU	-0.0415	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	FE	94.5785	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	K	0.9747	1	07/14/95	14:05	bjg	0.3	@ICP-QC
1828	10	ICSAB	LA	-0.0037	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	LI	0.9416	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	MG	251.1611	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	MN	0.6194	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	MO	-0.0078	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	NA	187.3752	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	ND	0	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	NI	0.9097	1	07/14/95	14:05	bjg	0.02	@ICP-QC
1828	10	ICSAB	P	-0.0346	1	07/14/95	14:05	bjg	0.2	@ICP-QC
1828	10	ICSAB	PB	0.9919	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	S	5.8083	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	SB	-0.0058	1	07/14/95	14:05	bjg	0.2	@ICP-QC
1828	10	ICSAB	SE	0.0271	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	SI	0.6328	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	SM	0.0031	1	07/14/95	14:05	bjg	0.1	@ICP-QC
1828	10	ICSAB	SR	0.0803	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	TH	-0.0076	1	07/14/95	14:05	bjg	0	@ICP-QC
1828	10	ICSAB	TI	0.0006	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	TL	0.072	1	07/14/95	14:05	bjg	0.2	@ICP-QC
1828	10	ICSAB	U	-0.2107	1	07/14/95	14:05	bjg	0.4	@ICP-QC
1828	10	ICSAB	V	0.475	1	07/14/95	14:05	bjg	0.05	@ICP-QC
1828	10	ICSAB	Y	0.0086	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	ZN	1.1147	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	10	ICSAB	ZR	-0.0005	1	07/14/95	14:05	bjg	0.01	@ICP-QC
1828	11	CCV	AG	4.8879	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	AL	4.9099	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	AS	5.081	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	B	4.9993	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	BA	4.8657	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	BE	5.16	1	07/14/95	14:12	bjg	0.005	@ICP-QC
1828	11	CCV	BI	5.053	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	CA	5.3049	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	CD	5.1083	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	CE	5	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	CO	5.1317	1	07/14/95	14:12	bjg	0.02	@ICP-QC
1828	11	CCV	CR	5.1335	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	CU	4.9181	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	EU	0.0072	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	FE	5.0983	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	K	4.8165	1	07/14/95	14:12	bjg	0.3	@ICP-QC
1828	11	CCV	LA	4.9926	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	LI	4.8577	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	MG	4.9167	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	MN	4.9657	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	MO	5.1222	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	NA	4.8297	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	ND	5.1048	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	NI	5.1087	1	07/14/95	14:12	bjg	0.02	@ICP-QC
1828	11	CCV	P	5.0501	1	07/14/95	14:12	bjg	0.2	@ICP-QC
1828	11	CCV	PB	5.0901	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	S	5.0566	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	SB	4.7577	1	07/14/95	14:12	bjg	0.2	@ICP-QC
1828	11	CCV	SE	4.9788	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	SI	4.9393	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	SM	4.9803	1	07/14/95	14:12	bjg	0.1	@ICP-QC
1828	11	CCV	SR	4.9158	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	TH	0.0222	1	07/14/95	14:12	bjg	0	@ICP-QC
1828	11	CCV	TI	4.9013	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	TL	4.915	1	07/14/95	14:12	bjg	0.2	@ICP-QC
1828	11	CCV	U	9.9655	1	07/14/95	14:12	bjg	0.4	@ICP-QC
1828	11	CCV	V	5.0553	1	07/14/95	14:12	bjg	0.05	@ICP-QC
1828	11	CCV	Y	0.0133	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	ZN	5.083	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	11	CCV	ZR	4.9731	1	07/14/95	14:12	bjg	0.01	@ICP-QC
1828	12	CCB	AG	0.0038	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	AL	0.0056	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	AS	0.0115	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	B	0.0033	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	BA	0	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	BE	0	1	07/14/95	14:15	bjg	0.005	@ICP-QC
1828	12	CCB	BI	-0.0341	1	07/14/95	14:15	bjg	0.1	@ICP-QC

1828	12	CCB	CA	0.007	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	CD	-0.0012	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	CE	0.007	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	CO	0.002	1	07/14/95	14:15	bjg	0.02	@ICP-QC
1828	12	CCB	CR	-0.0001	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	CU	-0.0006	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	EU	0.001	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	FE	0.002	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	K	0.1711	1	07/14/95	14:15	bjg	0.3	@ICP-QC
1828	12	CCB	LA	0.001	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	LI	0.0011	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	MG	-0.0037	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	MN	0.0004	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	MO	0.0007	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	NA	0.0072	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	ND	0.0001	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	NI	-0.0009	1	07/14/95	14:15	bjg	0.02	@ICP-QC
1828	12	CCB	P	-0.0189	1	07/14/95	14:15	bjg	0.2	@ICP-QC
1828	12	CCB	PB	0.0023	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	S	0.0021	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	SB	-0.0077	1	07/14/95	14:15	bjg	0.2	@ICP-QC
1828	12	CCB	SE	0.0037	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	SI	0.0089	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	SM	0.0128	1	07/14/95	14:15	bjg	0.1	@ICP-QC
1828	12	CCB	SR	0.0001	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	TH	-0.0016	1	07/14/95	14:15	bjg	0	@ICP-QC
1828	12	CCB	TI	-0.0006	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	TL	-0.0148	1	07/14/95	14:15	bjg	0.2	@ICP-QC
1828	12	CCB	U	0.0455	1	07/14/95	14:15	bjg	0.4	@ICP-QC
1828	12	CCB	V	0.0029	1	07/14/95	14:15	bjg	0.05	@ICP-QC
1828	12	CCB	Y	0.0006	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	ZN	-0.002	1	07/14/95	14:15	bjg	0.01	@ICP-QC
1828	12	CCB	ZR	0.0024	1	07/14/95	14:15	bjg	0.01	@ICP-QC

LABCORE Data Entry Template for Worklist# 1816

Analyst: S [illegible] Instrument: ~~ICP01~~ ICP02 Book# 5248 A

Method: LA-505-~~151~~ 161 Rev/Mod A-1

Worklist Comment: ICP C-108

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPBLKTJA				@ICP-F02	SOLID		
6	SAMPLE	S94T000367	0	Z	@ICP-F02	SOLID	94000022	C-108
	Analytes Requested: NI-F-01							
7	DUP	S94T000367	0	Z	@ICP-F02	SOLID		
8	SPK	S94T000367	0	Z	@ICP-F02	SOLID		
9	SAMPLE	S94T000368	0	Z	@ICP-F02	SOLID	94000022	C-108
	Analytes Requested: NI-F-01							
10	DUP	S94T000368	0	Z	@ICP-F02	SOLID		
11	SPK	S94T000368	0	Z	@ICP-F02	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	PREPBLKTJA				@ICP-F02	SOLID		
15	SAMPLE	S94T000369	0	Z	@ICP-F02	SOLID	94000022	C-108
	Analytes Requested: NI-F-01							
16	DUP	S94T000369	0	Z	@ICP-F02	SOLID		
17	SPK	S94T000369	0	Z	@ICP-F02	SOLID		

Data Entry Comments:

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

LABCORE Data Entry Template for Worklist# 1816

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	SAMPLE	S94T000370	0	Z	@ICP-F02	SOLID	94000022	C-108
		Analytes Requested: NI-F-01						
19	DUP	S94T000370	0	Z	@ICP-F02	SOLID		
20	SPK	S94T000370	0	Z	@ICP-F02	SOLID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 1816

S. Parry 07/13/95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

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

	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	950713A	ICP2	07/13/95	09:55	SMP	Q	CONC
2	ICB	950713A	ICP2	07/13/95	09:58	SMP	Q	CONC
3	ICSA	950713A	ICP2	07/13/95	10:03	SMP	Q	CONC
4	ICSAB	950713A	ICP2	07/13/95	10:06	SMP	Q	CONC
5	PREPBLKTJA	950713A	ICP2	07/13/95	10:12	SMP	S	CONC
6	S94T000367	950713A	ICP2	07/13/95	10:32	SMP	S	CONC
7	S94T000367_D	950713A	ICP2	07/13/95	10:40	SMP	S	CONC
8	S94T000367_D	950713A	ICP2	07/13/95	10:46	SMP	S	CONC
9	S94T000367_A	950713A	ICP2	07/13/95	10:52	SMP	S	CONC
10	S94T000368	950713A	ICP2	07/13/95	10:58	SMP	S	CONC
11	S94T000368_D	950713A	ICP2	07/13/95	11:02	SMP	S	CONC
12	S94T000368_A	950713A	ICP2	07/13/95	11:07	SMP	S	CONC
13	CCV	950713A	ICP2	07/13/95	11:21	SMP	Q	CONC
14	CCB	950713A	ICP2	07/13/95	11:24	SMP	Q	CONC
15	PREPBLKTJA	950713A	ICP2	07/13/95	11:28	SMP	S	CONC
16	S94T000369	950713A	ICP2	07/13/95	11:34	SMP	S	CONC
17	S94T000369_D	950713A	ICP2	07/13/95	11:38	SMP	S	CONC
18	S94T000369_S	950713A	ICP2	07/13/95	11:42	SMP	S	CONC
19	S94T000370	950713A	ICP2	07/13/95	11:45	SMP	S	CONC
20	S94T000370_D	950713A	ICP2	07/13/95	11:49	SMP	S	CONC
21	S94T000370_A	950713A	ICP2	07/13/95	11:52	SMP	S	CONC
22	ICSA	950713A	ICP2	07/13/95	11:57	SMP	Q	CONC
23	ICSAB	950713A	ICP2	07/13/95	12:00	SMP	Q	CONC
24	CCV_1	950713A	ICP2	07/13/95	12:04	SMP	Q	CONC
25	CCB_1	950713A	ICP2	07/13/95	12:07	SMP	Q	CONC

WHC-SD-WM-DP-082, REV. 1

Leslie Diaz for
SAM Parong 7-15-95

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 367 TO 375.

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.112	5.082	5.296	5.007	5.116	5.354
2	ICB	.0016	-.0018	.0147	.0075	.0001	.0002
3	ICSA	.0016	247.4	.0274	-.0015	.0019	.0002
4	ICSAB	.9855	247.8	.0084	-.0009	.4740	.4886
5	PREPBLKTJA	.0247	.0313	.0471	.0563	.0235	-.0002
6	S94T000367	16.82	24350.	26.32	22.71	21.45	.8139
7	S94T000367_D	24.29	54110.	111.1	22.61	42.33	.0575
8	S94T000367_D	11.46	24480.	29.13	5.653	22.65	.4725
9	S94T000367_A	3874.	46440.	4180.	3810.	3626.	4137.
10	S94T000368	13.81	29420.	54.17	6.868	24.42	.6722
11	S94T000368_D	13.73	23290.	9.836	37.68	22.95	.6940
12	S94T000368_A	4793.	34310.	5440.	4766.	4580.	5196.
13	CCV	4.978	4.967	5.122	4.845	4.934	5.118
14	CCB	.0048	-.0088	.0072	.0097	.0002	.0002
15	PREPBLKTJA	.0237	-.0440	-.0117	.0275	.0193	.0005
16	S94T000369	11.39	15380.	76.64	23.39	22.36	.2281
17	S94T000369_D	11.68	15260.	-25.31	9.163	22.58	.2206
18	S94T000369_S	4180.	19400.	4700.	4276.	4142.	4504.
19	S94T000370	23.23	20080.	24.33	40.42	24.16	.5079
20	S94T000370	15.17	17780.	-50.33	23.49	22.12	.2426
21	S94T000370_A	4215.	24760.	4638.	4349.	4303.	4565.
22	ICSA	.0021	245.7	-.0263	.0054	.0019	.0002
23	ICSAB	.9503	246.7	-.0889	-.0006	.4660	.4733
24	CCV_1	4.906	4.984	5.018	4.874	4.987	5.082
25	CCB_1	.0022	.0006	-.0051	.0143	.0002	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.155	5.096	5.254	5.184	5.281	5.270
2	ICB	-.0131	.0017	-.0004	-.0002	.0009	.0012
3	ICSA	-.0301	243.7	.0017	.0058	.0023	.0078
4	ICSAB	-.0055	246.7	.9758	.0077	.4835	.4936
5	PREPBLKTJA	-.3641	.4830	.0011	.0483	.0203	.0274
6	S94T000367	79.58	8812.	-.0224	30.25	10.80	224.4
7	S94T000367_D	141.2	19100.	.1444	43.73	16.01	500.5
8	S94T000367_D	85.56	9067.	.8928	16.30	7.162	234.1
9	S94T000367_A	4046.	20040.	4107.	3749.	4111.	4524.
10	S94T000368	134.4	10740.	1.875	-22.51	25.47	344.1
11	S94T000368_D	250.8	8664.	6.329	51.34	19.68	302.8
12	S94T000368_A	5136.	16320.	5349.	4715.	5298.	5660.
13	CCV	5.038	5.057	5.038	5.048	5.086	5.069
14	CCB	.0050	.0047	.0008	.0081	.0030	.0018
15	PREPBLKTJA	-.2913	.2885	-.0023	.0129	-.0006	-.0102
16	S94T000369	112.0	7511.	3.681	33.87	22.47	296.4
17	S94T000369_D	152.4	8092.	-.9648	30.49	12.30	331.3
18	S94T000369_S	4538.	12420.	4520.	4377.	4516.	4822.
19	S94T000370	169.7	6309.	2.432	35.63	17.82	271.1
20	S94T000370	-56.23	5490.	1.509	23.56	9.148	227.8
21	S94T000370_A	4541.	10320.	4404.	4477.	4437.	4706.
22	ICSA	-.0094	231.7	.0016	.0177	.0023	.0062
23	ICSAB	.0430	232.3	.9166	.0185	.4578	.4668
24	CCV_1	4.935	4.884	4.853	5.099	4.924	4.920

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	CCB_1	-.0009	.0050	-.0000	.0083	.0010	.0015

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.061	.0057	5.223	4.934	5.113	5.054
2	ICB	.0002	.0011	-.0007	-.0289	-.0004	.0009
3	ICSA	-.0088	-.0287	93.67	.1099	-.0043	.0030
4	ICSAB	.4777	-.0308	93.99	.0514	-.0034	.9667
5	PREPBLKTJA	.0159	.0307	.1825	10270.	.0017	.0204
6	S94T000367	9.350	19.17	2965.	4569e3	3.460	9.252
7	S94T000367_D	19.44	30.87	7794.	8059e3	3.742	14.08
8	S94T000367_D	10.18	22.77	3032.	4560e3	1.061	13.27
9	S94T000367_A	3672.	36.60	9248.	7816e3	3684.	3519.
10	S94T000368	12.53	30.50	4763.	5084e3	-3.148	21.17
11	S94T000368_D	15.06	28.85	5228.	4982e3	6.864	19.52
12	S94T000368_A	4586.	36.39	9943.	5089e3	4668.	4284.
13	CCV	4.949	.0112	5.036	4.995	4.989	4.987
14	CCB	.0009	.0064	-.0006	.0891	.0004	.0061
15	PREPBLKTJA	-.0057	.0628	.0594	10560.	-.0138	.0619
16	S94T000369	12.75	34.15	4101.	5076e3	3.771	25.16
17	S94T000369_D	11.56	40.66	5827.	4738e3	.9060	32.26
18	S94T000369_S	4205.	47.99	8571.	4878e3	4256.	4189.
19	S94T000370	18.51	39.83	7541.	4803e3	4.677	33.08
20	S94T000370	12.60	44.72	7258.	5178e3	1.665	39.04
21	S94T000370_A	4431.	35.15	11740.	4916e3	4413.	4534.
22	ICSA	-.0101	.0061	89.86	.2192	-.0036	.0069
23	ICSAB	.4783	.0095	89.82	.1500	-.0030	1.021
24	CCV_1	5.029	.0097	4.919	4.968	5.047	5.265
25	CCB_1	.0001	.0039	.0010	.1017	.0003	.0038

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.080	5.124	5.213	5.064	5.267	5.178
2	ICB	.0030	.0006	.0028	.0114	.0014	.0077
3	ICSA	248.0	-.0050	-.0057	191.0	.0025	-.0201
4	ICSAB	248.3	.4610	-.0066	192.1	-.0003	.9394
5	PREPBLKTJA	.1105	.0135	.0499	3.395	.0082	.0971
6	S94T000367	168.7	39.29	23.85	137000.	5.045	9359.
7	S94T000367_D	421.7	87.20	45.33	209100.	17.93	21860.
8	S94T000367_D	195.7	40.94	17.33	136800.	5.926	9496.
9	S94T000367_A	3995.	3961.	4143.	239300.	3775.	20610.
10	S94T000368	228.1	52.76	29.51	112000.	11.69	11450.
11	S94T000368_D	230.3	51.15	30.27	116300.	22.82	9615.
12	S94T000368_A	4885.	5068.	5315.	116300.	4759.	16760.
13	CCV	4.955	4.951	5.012	5.000	5.160	4.993
14	CCB	.0046	.0023	.0020	.0537	.0037	.0108
15	PREPBLKTJA	-.0650	.0226	.0047	3.814	-.0238	.0180
16	S94T000369	226.2	45.69	29.22	124100.	21.20	10990.
17	S94T000369_D	181.4	50.53	32.63	119400.	15.90	10320.
18	S94T000369_S	4420.	4315.	4531.	122600.	4405.	15560.
19	S94T000370	199.0	58.73	23.98	123400.	23.18	7621.
20	S94T000370	138.6	53.31	24.75	127500.	16.00	6430.

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
21	S94T000370_A	4544.	4281.	4493.	133300.	4599.	11620.
22	ICSA	247.2	-.0050	-.0032	195.7	.0048	-.0110
23	ICSAB	248.0	.4363	-.0080	197.6	.0070	.8880
24	CCV_1	4.963	4.803	4.895	5.155	5.247	4.864
25	CCB_1	-.0011	.0016	.0019	.0360	.0027	.0038

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.472	5.228	5.238	4.930	5.269	4.929
2	ICB	.0022	.0108	.0030	-.0036	.0142	.0084
3	ICSA	-.0207	.0300	-.0122	-.0027	.0342	.0208
4	ICSAB	.0139	1.018	.0083	-.0013	.0174	.0685
5	PREPBLKTJA	.1763	.0585	.2684	.0610	.2930	.1211
6	S94T000367	47770.	126.4	2238.	-19.48	-205.7	310.0
7	S94T000367_D	67020.	279.3	4987.	42.20	-409.4	694.0
8	S94T000367_D	48880.	78.15	2364.	-11.73	-285.4	335.1
9	S94T000367_A	92300.	4374.	8448.	3902.	3576.	4577.
10	S94T000368	33210.	208.9	3216.	8.662	85.38	457.7
11	S94T000368_D	35070.	204.2	2680.	52.53	28.28	415.0
12	S94T000368_A	39410.	5465.	8529.	4905.	5094.	5484.
13	CCV	4.952	5.055	4.994	4.746	5.100	4.799
14	CCB	-.0032	-.0002	-.0040	.0012	Q.1025	.0391
15	PREPBLKTJA	.3201	.0253	.0914	-.0390	.9846	.3419
16	S94T000369	32870.	147.3	2704.	8.979	-6.713	428.3
17	S94T000369_D	30230.	180.2	2729.	36.39	17.16	447.4
18	S94T000369_S	46720.	4788.	7267.	4322.	4550.	4850.
19	S94T000370	35050.	236.0	2373.	-4.831	143.3	616.4
20	S94T000370	42570.	206.4	1970.	17.22	92.32	541.4
21	S94T000370_A	39600.	4551.	6812.	4305.	4376.	4914.
22	ICSA	.0198	.0207	-.0120	.0018	.0042	.0346
23	ICSAB	-.0104	.9444	-.0007	.0086	-.0126	.0789
24	CCV_1	5.035	4.868	4.980	4.690	5.015	4.695
25	CCB_1	.0243	.0113	.0041	.0033	.0859	.0237

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.133	5.078	.0137	5.003	5.121	10.18
2	ICB	.0114	.0003	-.0036	.0000	.0283	.0565
3	ICSA	.0023	.0022	-.0119	.0017	.1229	-.1014
4	ICSAB	.0018	.0021	-.0122	.0017	.1086	-.1164
5	PREPBLKTJA	.2920	.0079	.1236	.0090	.3960	-1.698
6	S94T000367	97.04	68.42	72.39	8.864	125.7	1224.
7	S94T000367_D	133.0	143.8	131.3	19.58	187.1	2631.
8	S94T000367_D	159.6	70.05	57.34	10.89	72.63	1411.
9	S94T000367_A	3819.	3775.	131.7	3765.	4160.	9241.
10	S94T000368	242.9	90.48	24.53	13.11	208.8	2466.
11	S94T000368_D	228.0	75.23	68.01	14.23	142.2	1986.
12	S94T000368_A	4826.	4723.	63.87	4781.	5071.	11540.
13	CCV	5.038	4.917	-.0004	4.829	4.946	10.11
14	CCB	.0691	.0007	-.0171	.0007	.0288	.2900
15	PREPBLKTJA	.6589	.0049	-.0087	-.0031	.3662	-.3068
16	S94T000369	261.1	76.16	36.23	8.034	143.7	2779.

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
	S94T000369_D	358.6	87.20	5.861	13.96	220.6	3161.
18	S94T000369_S	4558.	4257.	77.16	4217.	4559.	11540.
19	S94T000370	381.7	164.4	13.23	16.82	153.7	6966.
20	S94T000370	437.8	144.2	-35.94	11.39	76.07	6198.
	S94T000370_A	4654.	4511.	49.74	4315.	4216.	15420.
	ICSA	.0476	.0030	-.0173	.0019	.1068	.2431
	ICSAB	.0413	.0030	-.0182	.0015	.0993	.2305
	CCV_1	5.123	4.983	-.0026	4.822	4.824	10.27
25	CCB_1	.0429	.0006	-.0062	.0007	.0473	.1761

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.123	.0136	5.184	5.096
2	ICB	.0026	.0008	.0003	.0038
3	ICSA	.0030	.0082	-.0009	.0021
4	ICSAB	.4777	.0082	.9927	.0019
5	PREPBLKTJA	.0681	.0172	.1383	9.177
6	S94T000367	31.78	8.899	201.2	1772.
7	S94T000367_D	43.80	12.81	172.3	2251.
8	S94T000367_D	44.03	12.46	63.76	3323.
9	S94T000367_A	3985.	25.63	4323.	9312.
10	S94T000368	60.20	16.78	55.57	280.1
11	S94T000368_D	63.03	16.88	68.32	364.2
12	S94T000368_A	5106.	31.23	5470.	5193.
13	CCV	4.948	.0174	5.016	4.943
14	CCB	.0146	.0042	-.0005	Q.0113
15	PREPBLKTJA	.1503	.0400	.1780	6.382
16	S94T000369	65.74	19.01	154.6	282.9
17	S94T000369_D	79.55	23.47	277.8	425.5
18	S94T000369_S	4441.	38.38	4699.	17700.
19	S94T000370	88.21	26.32	254.7	198.9
20	S94T000370	98.30	29.88	195.8	76.79
21	S94T000370_A	4442.	31.43	4591.	4535.
	ICSA	.0093	.0107	.0024	.0063
	ICSAB	.4666	.0104	.9364	.0063
24	CCV_1	4.880	.0159	4.860	4.913
25	CCB_1	.0090	.0026	.0011	.0072

WHC-SD-WM-DP-082, REV. 1

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ICP MACRO

OUTPUT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	1816	1			ICV	AG				5.1125		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
2	1816	1			ICV	AL				5.0821		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
3	1816	1			ICV	AS				5.2981		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
4	1816	1			ICV	B				5.0071		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
5	1816	1			ICV	BA				5.1158		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
6	1816	1			ICV	BE				5.3541		1.0000	07/13/95	09:55	smp	0.005	@ICP-Q
7	1816	1			ICV	BI				5.1554		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
8	1816	1			ICV	CA				5.0960		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
9	1816	1			ICV	CD				5.2541		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
10	1816	1			ICV	CE				5.1840		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
11	1816	1			ICV	CO				5.2810		1.0000	07/13/95	09:55	smp	0.02	@ICP-Q
12	1816	1			ICV	CR				5.2895		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
13	1816	1			ICV	CU				5.0613		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
14	1816	1			ICV	EU				0.0057		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
15	1816	1			ICV	FE				5.2230		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
16	1816	1			ICV	K				4.9342		1.0000	07/13/95	09:55	smp	0.3	@ICP-Q
17	1816	1			ICV	LA				5.1129		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
18	1816	1			ICV	LI				5.0537		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
19	1816	1			ICV	MG				5.0796		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
20	1816	1			ICV	MN				5.1236		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
21	1816	1			ICV	MO				5.2127		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
22	1816	1			ICV	NA				5.0644		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
23	1816	1			ICV	ND				5.2867		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
24	1816	1			ICV	NI				5.1777		1.0000	07/13/95	09:55	smp	0.02	@ICP-Q
25	1816	1			ICV	P				5.4724		1.0000	07/13/95	09:55	smp	0.2	@ICP-Q
26	1816	1			ICV	PB				5.2277		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
27	1816	1			ICV	S				5.2378		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
28	1816	1			ICV	SB				4.9295		1.0000	07/13/95	09:55	smp	0.2	@ICP-Q
29	1816	1			ICV	SE				5.2686		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
30	1816	1			ICV	SI				4.9294		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
31	1816	1			ICV	SM				5.1331		1.0000	07/13/95	09:55	smp	0.1	@ICP-Q
32	1816	1			ICV	SR				5.0780		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
33	1816	1			ICV	TH				0.0137		1.0000	07/13/95	09:55	smp	0	@ICP-Q
34	1816	1			ICV	TI				5.0032		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
35	1816	1			ICV	TL				5.1212		1.0000	07/13/95	09:55	smp	0.2	@ICP-Q
36	1816	1			ICV	U				10.1759		1.0000	07/13/95	09:55	smp	0.4	@ICP-Q
37	1816	1			ICV	V				5.1233		1.0000	07/13/95	09:55	smp	0.05	@ICP-Q
38	1816	1			ICV	Y				0.0136		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
39	1816	1			ICV	ZN				5.1840		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
40	1816	1			ICV	ZR				5.0957		1.0000	07/13/95	09:55	smp	0.01	@ICP-Q
41	1816	2			ICB	AG				0.0016		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
42	1816	2			ICB	AL				-0.0018		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
43	1816	2			ICB	AS				0.0147		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
44	1816	2			ICB	B				0.0075		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
45	1816	2			ICB	BA				0.0001		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
46	1816	2			ICB	BE				0.0002		1.0000	07/13/95	09:58	smp	0.005	@ICP-Q
47	1816	2			ICB	BI				-0.0131		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
48	1816	2			ICB	CA				0.0017		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
49	1816	2			ICB	CD				-0.0004		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
50	1816	2			ICB	CE				-0.0002		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
51	1816	2			ICB	CO				0.0009		1.0000	07/13/95	09:58	smp	0.02	@ICP-Q
52	1816	2			ICB	CR				0.0012		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
53	1816	2			ICB	CU				0.0002		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
54	1816	2			ICB	EU				0.0011		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
55	1816	2			ICB	FE				-0.0007		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
56	1816	2			ICB	K				-0.0289		1.0000	07/13/95	09:58	smp	0.3	@ICP-Q
57	1816	2			ICB	LA				-0.0004		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
58	1816	2			ICB	LI				0.0009		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
59	1816	2			ICB	MG				0.0030		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
60	1816	2			ICB	MN				0.0006		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
61	1816	2			ICB	MO				0.0026		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
62	1816	2			ICB	NA				0.0114		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
63	1816	2			ICB	ND				0.0014		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
64	1816	2			ICB	NI				0.0077		1.0000	07/13/95	09:58	smp	0.02	@ICP-Q
65	1816	2			ICB	P				0.0022		1.0000	07/13/95	09:58	smp	0.2	@ICP-Q
66	1816	2			ICB	PB				0.0108		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
67	1816	2			ICB	S				0.0030		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
68	1816	2			ICB	SB				-0.0036		1.0000	07/13/95	09:58	smp	0.2	@ICP-Q
69	1816	2			ICB	SE				0.0142		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
70	1816	2			ICB	SI				0.0084		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
71	1816	2			ICB	SM				0.0114		1.0000	07/13/95	09:58	smp	0.1	@ICP-Q
72	1816	2			ICB	SR				0.0003		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
73	1816	2			ICB	TH				-0.0036		1.0000	07/13/95	09:58	smp	0	@ICP-Q
74	1816	2			ICB	TI				0.0000		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
75	1816	2			ICB	TL				0.0283		1.0000	07/13/95	09:58	smp	0.2	@ICP-Q
76	1816	2			ICB	U				0.0565		1.0000	07/13/95	09:58	smp	0.4	@ICP-Q
77	1816	2			ICB	V				0.0026		1.0000	07/13/95	09:58	smp	0.05	@ICP-Q
78	1816	2			ICB	Y				0.0008		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
79	1816	2			ICB	ZN				0.0003		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
80	1816	2			ICB	ZR				0.0038		1.0000	07/13/95	09:58	smp	0.01	@ICP-Q
81	1816	3			ICSA	AG				0.0016		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
82	1816	3			ICSA	AL				247.4467		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
83	1816	3			ICSA	AS				0.0274		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
84	1816	3			ICSA	B				-0.0015		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
85	1816	3			ICSA	BA				0.0019		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
86	1816	3			ICSA	BE				0.0002		1.0000	07/13/95	10:03	smp	0.005	@ICP-Q
87	1816	3			ICSA	BI				-0.0301		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
88	1816	3			ICSA	CA				243.7342		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
89	1816	3			ICSA	CD				0.0017		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
90	1816	3			ICSA	CE				0.0058		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
91	1816	3			ICSA	CO				0.0023		1.0000	07/13/95	10:03	smp	0.02	@ICP-Q
92	1816	3			ICSA	CR				0.0078		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
93	1816	3			ICSA	CU				-0.0088		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
94	1816	3			ICSA	EU				-0.0287		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
95	1816	3			ICSA	FE				93.6690		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
96	1816	3			ICSA	K				0.1099		1.0000	07/13/95	10:03	smp	0.3	@ICP-Q
97	1816	3			ICSA	LA				-0.0043		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
98	1816	3			ICSA	LI				0.0030		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
99	1816	3			ICSA	MG				247.9584		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
100	1816	3			ICSA	MN				-0.0050		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
101	1816	3			ICSA	MO				-0.0057		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
102	1816	3			ICSA	NA				190.9902		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
103	1816	3			ICSA	ND				0.0025		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
104	1816	3			ICSA	NI				-0.0201		1.0000	07/13/95	10:03	smp	0.02	@ICP-Q
105	1816	3			ICSA	P				-0.0207		1.0000	07/13/95	10:03	smp	0.2	@ICP-Q
106	1816	3			ICSA	PB				0.0300		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
107	1816	3			ICSA	S				-0.0122		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
108	1816	3			ICSA	SB				-0.0027		1.0000	07/13/95	10:03	smp	0.2	@ICP-Q
109	1816	3			ICSA	SE				0.0342		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
110	1816	3			ICSA	SI				0.0208		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
111	1816	3			ICSA	SM				0.0023		1.0000	07/13/95	10:03	smp	0.1	@ICP-Q
112	1816	3			ICSA	SR				0.0022		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
113	1816	3			ICSA	TH				-0.0119		1.0000	07/13/95	10:03	smp	0	@ICP-Q
114	1816	3			ICSA	TI				0.0017		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
115	1816	3			ICSA	TL				0.1229		1.0000	07/13/95	10:03	smp	0.2	@ICP-Q
116	1816	3			ICSA	U				-0.1014		1.0000	07/13/95	10:03	smp	0.4	@ICP-Q
117	1816	3			ICSA	V				0.0030		1.0000	07/13/95	10:03	smp	0.05	@ICP-Q
118	1816	3			ICSA	Y				0.0082		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
119	1816	3			ICSA	ZN				-0.0009		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
120	1816	3			ICSA	ZR				0.0021		1.0000	07/13/95	10:03	smp	0.01	@ICP-Q
121	1816	4			ICSAB	AG				0.9655		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
122	1816	4			ICSAB	AL				247.7513		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q

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OUTPUT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
123	1816	4			ICSAB	AS				0.0084		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
124	1816	4			ICSAB	B				-0.0009		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
125	1816	4			ICSAB	BA				0.4740		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
126	1816	4			ICSAB	BE				0.4886		1.0000	07/13/95	10:06	smp	0.005	@ICP-Q
127	1816	4			ICSAB	BI				-0.0055		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
128	1816	4			ICSAB	CA				246.7139		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
	1816	4			ICSAB	CD				0.9758		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
	1816	4			ICSAB	CE				0.0077		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
	1816	4			ICSAB	CO				0.4835		1.0000	07/13/95	10:06	smp	0.02	@ICP-Q
132	1816	4			ICSAB	CR				0.4936		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
133	1816	4			ICSAB	CU				0.4777		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
134	1816	4			ICSAB	EU				-0.0308		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
135	1816	4			ICSAB	FE				93.9884		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
136	1816	4			ICSAB	K				0.0514		1.0000	07/13/95	10:06	smp	0.3	@ICP-Q
137	1816	4			ICSAB	LA				-0.0034		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
138	1816	4			ICSAB	LI				0.9667		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
139	1816	4			ICSAB	MG				248.2507		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
140	1816	4			ICSAB	MN				0.4610		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
141	1816	4			ICSAB	MO				-0.0066		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
142	1816	4			ICSAB	NA				192.0607		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
143	1816	4			ICSAB	ND				-0.0003		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
144	1816	4			ICSAB	NI				0.9394		1.0000	07/13/95	10:06	smp	0.02	@ICP-Q
145	1816	4			ICSAB	P				0.0139		1.0000	07/13/95	10:06	smp	0.2	@ICP-Q
146	1816	4			ICSAB	PB				1.0183		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
147	1816	4			ICSAB	S				0.0083		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
148	1816	4			ICSAB	SB				-0.0013		1.0000	07/13/95	10:06	smp	0.2	@ICP-Q
149	1816	4			ICSAB	SE				0.0174		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
150	1816	4			ICSAB	SI				0.0685		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
151	1816	4			ICSAB	SM				0.0018		1.0000	07/13/95	10:06	smp	0.1	@ICP-Q
152	1816	4			ICSAB	SR				0.0021		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
153	1816	4			ICSAB	TH				-0.0122		1.0000	07/13/95	10:06	smp	0	@ICP-Q
154	1816	4			ICSAB	TI				0.0017		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
155	1816	4			ICSAB	TL				0.1086		1.0000	07/13/95	10:06	smp	0.2	@ICP-Q
156	1816	4			ICSAB	U				-0.1164		1.0000	07/13/95	10:06	smp	0.4	@ICP-Q
157	1816	4			ICSAB	V				0.4777		1.0000	07/13/95	10:06	smp	0.05	@ICP-Q
158	1816	4			ICSAB	Y				0.0082		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
159	1816	4			ICSAB	ZN				0.9927		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
160	1816	4			ICSAB	ZR				0.0019		1.0000	07/13/95	10:06	smp	0.01	@ICP-Q
161	1816	5			PREPBLKTJA	AG-F-01				0.0247		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
162	1816	5			PREPBLKTJA	AL-F-01				0.0313		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
163	1816	5			PREPBLKTJA	AS-F-01				0.0471		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
164	1816	5			PREPBLKTJA	B-F-01				0.0563		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
165	1816	5			PREPBLKTJA	BA-F-01				0.0235		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
166	1816	5			PREPBLKTJA	BE-F-01				-0.0002		10.0000	07/13/95	10:12	smp	0.005	@ICP-F0
167	1816	5			PREPBLKTJA	BI-F-01				-0.3641		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
168	1816	5			PREPBLKTJA	CA-F-01				0.4830		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
169	1816	5			PREPBLKTJA	CD-F-01				0.0011		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
170	1816	5			PREPBLKTJA	CE-F-01				0.0483		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
171	1816	5			PREPBLKTJA	CO-F-01				0.0203		10.0000	07/13/95	10:12	smp	0.02	@ICP-F0
172	1816	5			PREPBLKTJA	CR-F-01				0.0274		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
173	1816	5			PREPBLKTJA	CU-F-01				0.0159		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
174	1816	5			PREPBLKTJA	EU-F-01				0.0307		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
175	1816	5			PREPBLKTJA	FE-F-01				0.1825		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
176	1816	5			PREPBLKTJA	K-F-01				10266.8496		10.0000	07/13/95	10:12	smp	0.3	@ICP-F0
177	1816	5			PREPBLKTJA	LA-F-01				0.0017		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
178	1816	5			PREPBLKTJA	LI-F-01				0.0204		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
179	1816	5			PREPBLKTJA	MG-F-01				0.1105		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
180	1816	5			PREPBLKTJA	MN-F-01				0.0135		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
	1816	5			PREPBLKTJA	MO-F-01				0.0499		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
	1816	5			PREPBLKTJA	NA-F-01				3.3953		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
	1816	5			PREPBLKTJA	ND-F-01				0.0082		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
184	1816	5			PREPBLKTJA	NI-F-01				0.0971		10.0000	07/13/95	10:12	smp	0.02	@ICP-F0
185	1816	5			PREPBLKTJA	P-F-01				0.1763		10.0000	07/13/95	10:12	smp	0.2	@ICP-F0
186	1816	5			PREPBLKTJA	PB-F-01				0.0585		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
187	1816	5			PREPBLKTJA	S-F-01				0.2684		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
188	1816	5			PREPBLKTJA	SB-F-01				0.0610		10.0000	07/13/95	10:12	smp	0.2	@ICP-F0
189	1816	5			PREPBLKTJA	SE-F-01				0.2930		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
190	1816	5			PREPBLKTJA	SI-F-01				0.1211		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
191	1816	5			PREPBLKTJA	SM-F-01				0.2920		10.0000	07/13/95	10:12	smp	0.1	@ICP-F0
192	1816	5			PREPBLKTJA	SR-F-01				0.0079		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
193	1816	5			PREPBLKTJA	TH-F-01				0.1236		10.0000	07/13/95	10:12	smp	0	@ICP-F0
194	1816	5			PREPBLKTJA	TI-F-01				0.0090		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
195	1816	5			PREPBLKTJA	TL-F-01				0.3960		10.0000	07/13/95	10:12	smp	0.2	@ICP-F0
196	1816	5			PREPBLKTJA	U-F-01				-1.6977		10.0000	07/13/95	10:12	smp	0.4	@ICP-F0
197	1816	5			PREPBLKTJA	V-F-01				0.0681		10.0000	07/13/95	10:12	smp	0.05	@ICP-F0
198	1816	5			PREPBLKTJA	Y-F-01				0.0172		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
199	1816	5			PREPBLKTJA	ZN-F-01				0.1383		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
200	1816	5			PREPBLKTJA	ZR-F-01				9.1773		10.0000	07/13/95	10:12	smp	0.01	@ICP-F0
201	1816	6	S94T000367			NI-F-01				9359.3301		4542.0000	07/13/95	10:32	smp	0.02	@ICP-F0
202	1816	7	S94T000367		DUP	NI-F-01		9359.3301		9495.9893		4542.0000	07/13/95	10:46	smp	0.02	@ICP-F0
203	1816	8	S94T000367_A		SPK	NI-F-01		4346		4542		4542.0000	07/13/95	10:52	smp	0.02	@ICP-F0
204	1816	9	S94T000368			NI-F-01				11453.4580		4981.0000	07/13/95	10:58	smp	0.02	@ICP-F0
205	1816	10	S94T000368		DUP	NI-F-01		11453.4580		9615.4736		5009.0000	07/13/95	11:02	smp	0.02	@ICP-F0
206	1816	11	S94T000368_A		SPK	NI-F-01		5310		4981		4981.0000	07/13/95	11:07	smp	0.02	@ICP-F0
207	1816	12			CCV	AG				4.9780		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
208	1816	12			CCV	AL				4.9671		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
209	1816	12			CCV	AS				5.1223		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
210	1816	12			CCV	B				4.8446		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
211	1816	12			CCV	BA				4.9340		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
212	1816	12			CCV	BE				5.1182		1.0000	07/13/95	11:21	smp	0.005	@ICP-Q
213	1816	12			CCV	BI				5.0383		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
214	1816	12			CCV	CA				5.0570		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
215	1816	12			CCV	CD				5.0380		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
216	1816	12			CCV	CE				5.0484		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
217	1816	12			CCV	CO				5.0856		1.0000	07/13/95	11:21	smp	0.02	@ICP-Q
218	1816	12			CCV	CR				5.0689		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
219	1816	12			CCV	CU				4.9488		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
220	1816	12			CCV	EU				0.0112		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
221	1816	12			CCV	FE				5.0361		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
222	1816	12			CCV	K				4.9945		1.0000	07/13/95	11:21	smp	0.3	@ICP-Q
223	1816	12			CCV	LA				4.9885		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
224	1816	12			CCV	LI				4.9868		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
225	1816	12			CCV	MG				4.9553		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
226	1816	12			CCV	MN				4.9513		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
227	1816	12			CCV	MO				5.0116		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
228	1816	12			CCV	NA				4.9996		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
229	1816	12			CCV	ND				5.1604		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
230	1816	12			CCV	NI				4.9931		1.0000	07/13/95	11:21	smp	0.02	@ICP-Q
231	1816	12			CCV	P				4.9517		1.0000	07/13/95	11:21	smp	0.2	@ICP-Q
232	1816	12			CCV	PB				5.0552		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
	1816	12			CCV	S				4.9944		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
	1816	12			CCV	SB				4.7463		1.0000	07/13/95	11:21	smp	0.2	@ICP-Q
	1816	12			CCV	SE				5.0996		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
	1816	12			CCV	SI				4.7992		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
237	1816	12			CCV	SM				5.0381		1.0000	07/13/95	11:21	smp	0.1	@ICP-Q
238	1816	12			CCV	SR				4.9170		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
239	1816	12			CCV	TH				-0.0004		1.0000	07/13/95	11:21	smp	0	@ICP-Q
240	1816	12			CCV	TI				4.8292		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
241	1816	12			CCV	TL				4.9457		1.0000	07/13/95	11:21	smp	0.2	@ICP-Q
242	1816	12			CCV	U				10.1066		1.0000	07/13/95	11:21	smp	0.4	@ICP-Q
243	1816	12			CCV	V				4.9475		1.0000	07/13/95	11:21	smp	0.05	@ICP-Q
244	1816	12			CCV	Y				0.0174		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q

ICP MACRO

OUTPUT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
245	1816	12			CCV	ZN				5.0163		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
246	1816	12			CCV	ZR				4.9430		1.0000	07/13/95	11:21	smp	0.01	@ICP-Q
247	1816	13			CCB	AG				0.0048		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
248	1816	13			CCB	AL				-0.0088		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
249	1816	13			CCB	AS				0.0072		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
250	1816	13			CCB	B				0.0097		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
251	1816	13			CCB	BA				0.0002		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
252	1816	13			CCB	BE				0.0002		1.0000	07/13/95	11:24	smp	0.005	@ICP-Q
253	1816	13			CCB	BI				0.0050		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
254	1816	13			CCB	CA				0.0047		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
255	1816	13			CCB	CD				0.0008		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
256	1816	13			CCB	CE				0.0081		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
257	1816	13			CCB	CO				0.0030		1.0000	07/13/95	11:24	smp	0.02	@ICP-Q
258	1816	13			CCB	CR				0.0018		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
259	1816	13			CCB	CU				0.0009		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
260	1816	13			CCB	EU				0.0064		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
261	1816	13			CCB	FE				-0.0006		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
262	1816	13			CCB	K				0.0891		1.0000	07/13/95	11:24	smp	0.3	@ICP-Q
263	1816	13			CCB	LA				0.0004		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
264	1816	13			CCB	LI				0.0061		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
265	1816	13			CCB	MG				0.0046		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
266	1816	13			CCB	MN				0.0023		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
267	1816	13			CCB	MO				0.0020		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
268	1816	13			CCB	NA				0.0537		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
269	1816	13			CCB	ND				0.0037		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
270	1816	13			CCB	NI				0.0108		1.0000	07/13/95	11:24	smp	0.02	@ICP-Q
271	1816	13			CCB	P				-0.0032		1.0000	07/13/95	11:24	smp	0.2	@ICP-Q
272	1816	13			CCB	PB				-0.0002		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
273	1816	13			CCB	S				-0.0040		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
274	1816	13			CCB	SB				0.0012		1.0000	07/13/95	11:24	smp	0.2	@ICP-Q
275	1816	13			CCB	SE				0.1025		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
276	1816	13			CCB	SI				0.0391		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
277	1816	13			CCB	SM				0.0691		1.0000	07/13/95	11:24	smp	0.1	@ICP-Q
278	1816	13			CCB	SR				0.0007		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
279	1816	13			CCB	TH				-0.0171		1.0000	07/13/95	11:24	smp	0	@ICP-Q
280	1816	13			CCB	TI				0.0007		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
281	1816	13			CCB	TL				0.0288		1.0000	07/13/95	11:24	smp	0.2	@ICP-Q
282	1816	13			CCB	U				0.2900		1.0000	07/13/95	11:24	smp	0.4	@ICP-Q
283	1816	13			CCB	V				0.0146		1.0000	07/13/95	11:24	smp	0.05	@ICP-Q
284	1816	13			CCB	Y				0.0042		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
285	1816	13			CCB	ZN				-0.0005		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
286	1816	13			CCB	ZR				0.0113		1.0000	07/13/95	11:24	smp	0.01	@ICP-Q
287	1816	14			PREPBLKTJA	AG-F-01				0.0237		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
288	1816	14			PREPBLKTJA	AL-F-01				-0.0440		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
289	1816	14			PREPBLKTJA	AS-F-01				-0.0117		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
290	1816	14			PREPBLKTJA	B-F-01				0.0275		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
291	1816	14			PREPBLKTJA	BA-F-01				0.0193		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
292	1816	14			PREPBLKTJA	BE-F-01				0.0005		10.0000	07/13/95	11:28	smp	0.005	@ICP-F0
293	1816	14			PREPBLKTJA	BI-F-01				-0.2913		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
294	1816	14			PREPBLKTJA	CA-F-01				0.2885		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
295	1816	14			PREPBLKTJA	CD-F-01				-0.0023		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
296	1816	14			PREPBLKTJA	CE-F-01				0.0129		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
297	1816	14			PREPBLKTJA	CO-F-01				-0.0006		10.0000	07/13/95	11:28	smp	0.02	@ICP-F0
298	1816	14			PREPBLKTJA	CR-F-01				-0.0102		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
299	1816	14			PREPBLKTJA	CU-F-01				-0.0057		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
300	1816	14			PREPBLKTJA	EU-F-01				0.0628		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
301	1816	14			PREPBLKTJA	FE-F-01				0.0594		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
302	1816	14			PREPBLKTJA	K-F-01				10557.9023		10.0000	07/13/95	11:28	smp	0.3	@ICP-F0
303	1816	14			PREPBLKTJA	LA-F-01				-0.0138		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
304	1816	14			PREPBLKTJA	LI-F-01				0.0619		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
305	1816	14			PREPBLKTJA	MG-F-01				-0.0650		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
306	1816	14			PREPBLKTJA	MN-F-01				0.0226		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
307	1816	14			PREPBLKTJA	MO-F-01				0.0047		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
308	1816	14			PREPBLKTJA	NA-F-01				3.8137		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
309	1816	14			PREPBLKTJA	ND-F-01				-0.0236		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
310	1816	14			PREPBLKTJA	NI-F-01				0.0160		10.0000	07/13/95	11:28	smp	0.02	@ICP-F0
311	1816	14			PREPBLKTJA	P-F-01				0.3201		10.0000	07/13/95	11:28	smp	0.2	@ICP-F0
312	1816	14			PREPBLKTJA	PB-F-01				0.0253		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
313	1816	14			PREPBLKTJA	S-F-01				0.0914		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
314	1816	14			PREPBLKTJA	SB-F-01				-0.0390		10.0000	07/13/95	11:28	smp	0.2	@ICP-F0
315	1816	14			PREPBLKTJA	SE-F-01				0.9846		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
316	1816	14			PREPBLKTJA	SI-F-01				0.3419		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
317	1816	14			PREPBLKTJA	SM-F-01				0.6559		10.0000	07/13/95	11:28	smp	0.1	@ICP-F0
318	1816	14			PREPBLKTJA	SR-F-01				0.0049		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
319	1816	14			PREPBLKTJA	TH-F-01				-0.0087		10.0000	07/13/95	11:28	smp	0	@ICP-F0
320	1816	14			PREPBLKTJA	TI-F-01				-0.0031		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
321	1816	14			PREPBLKTJA	TL-F-01				0.3662		10.0000	07/13/95	11:28	smp	0.2	@ICP-F0
322	1816	14			PREPBLKTJA	U-F-01				-0.3068		10.0000	07/13/95	11:28	smp	0.4	@ICP-F0
323	1816	14			PREPBLKTJA	V-F-01				0.1503		10.0000	07/13/95	11:28	smp	0.05	@ICP-F0
324	1816	14			PREPBLKTJA	Y-F-01				0.0400		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
325	1816	14			PREPBLKTJA	ZN-F-01				0.1780		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
326	1816	14			PREPBLKTJA	ZR-F-01				6.3815		10.0000	07/13/95	11:28	smp	0.01	@ICP-F0
327	1816	15	S94T000369			NI-F-01				10992.2334		4664.0000	07/13/95	11:34	smp	0.02	@ICP-F0
328	1816	16	S94T000369		DUP	NI-F-01		10992.2334		10320.0547		4680.0000	07/13/95	11:38	smp	0.02	@ICP-F0
329	1816	17	S94T000369_A		SPK	NI-F-01		4570		4664		4664.0000	07/13/95	11:42	smp	0.02	@ICP-F0
330	1816	18	S94T000370			NI-F-01				7621.1978		4664.0000	07/13/95	11:45	smp	0.02	@ICP-F0
331	1816	19	S94T000370		DUP	NI-F-01		7621.1978		6429.8008		4766.0000	07/13/95	11:49	smp	0.02	@ICP-F0
332	1816	20	S94T000370_A		SPK	NI-F-01		3999		4664		4664.0000	07/13/95	11:52	smp	0.02	@ICP-F0
333	1816	21			ICSA	AG				0.0021		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
334	1816	21			ICSA	AL				245.7189		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
335	1816	21			ICSA	AS				-0.0263		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
336	1816	21			ICSA	B				0.0054		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
337	1816	21			ICSA	BA				0.0019		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
338	1816	21			ICSA	BE				0.0002		1.0000	07/13/95	11:57	smp	0.005	@ICP-Q
339	1816	21			ICSA	BI				-0.0094		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
340	1816	21			ICSA	CA				231.7399		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
341	1816	21			ICSA	CD				0.0016		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
342	1816	21			ICSA	CE				0.0177		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
343	1816	21			ICSA	CO				0.0023		1.0000	07/13/95	11:57	smp	0.02	@ICP-Q
344	1816	21			ICSA	CR				0.0062		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
345	1816	21			ICSA	CU				-0.0101		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
346	1816	21			ICSA	EU				0.0061		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
347	1816	21			ICSA	FE				89.8618		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
348	1816	21			ICSA	K				0.2192		1.0000	07/13/95	11:57	smp	0.3	@ICP-Q
349	1816	21			ICSA	LA				-0.0036		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
350	1816	21			ICSA	LI				0.0069		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
351	1816	21			ICSA	MG				247.2011		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
352	1816	21			ICSA	MN				-0.0050		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
353	1816	21			ICSA	MO				-0.0032		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
354	1816	21			ICSA	NA				195.7333		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
355	1816	21			ICSA	ND				0.0048		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
356	1816	21			ICSA	NI				-0.0110		1.0000	07/13/95	11:57	smp	0.02	@ICP-Q
357	1816	21			ICSA	P				0.0198		1.0000	07/13/95	11:57	smp	0.2	@ICP-Q
358	1816	21			ICSA	PB				0.0207		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
359	1816	21			ICSA	S				-0.0120		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
360	1816	21			ICSA	SB				0.0018		1.0000	07/13/95	11:57	smp	0.2	@ICP-Q
361	1816	21			ICSA	SE				0.0042		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
362	1816	21			ICSA	SI				0.0346		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
363	1816	21			ICSA	SM				0.0476		1.0000	07/13/95	11:57	smp	0.1	@ICP-Q
364	1816	21			ICSA	SR				0.0030		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
365	1816	21			ICSA	TH				-0.0173		1.0000	07/13/95	11:57	smp	0	@ICP-Q
366	1816	21			ICSA	TI				0.0019		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q

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OUTPUT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
367	1816	21			ICSA	TL				0.1068		1.0000	07/13/95	11:57	smp	0.2	@ICP-Q
368	1816	21			ICSA	U				0.2431		1.0000	07/13/95	11:57	smp	0.4	@ICP-Q
369	1816	21			ICSA	V				0.0093		1.0000	07/13/95	11:57	smp	0.05	@ICP-Q
370	1816	21			ICSA	Y				0.0107		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
371	1816	21			ICSA	ZN				0.0024		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
372	1816	21			ICSA	ZR				0.0063		1.0000	07/13/95	11:57	smp	0.01	@ICP-Q
	1816	22			ICSAB	AG				0.9503		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
	1816	22			ICSAB	AL				246.6505		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
	1816	22			ICSAB	AS				-0.0889		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
376	1816	22			ICSAB	B				-0.0006		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
377	1816	22			ICSAB	BA				0.4660		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
378	1816	22			ICSAB	BE				0.4733		1.0000	07/13/95	12:00	smp	0.005	@ICP-Q
379	1816	22			ICSAB	BI				0.0430		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
380	1816	22			ICSAB	CA				232.2706		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
381	1816	22			ICSAB	CD				0.9166		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
382	1816	22			ICSAB	CE				0.0185		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
383	1816	22			ICSAB	CO				0.4578		1.0000	07/13/95	12:00	smp	0.02	@ICP-Q
384	1816	22			ICSAB	CR				0.4868		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
385	1816	22			ICSAB	CU				0.4783		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
386	1816	22			ICSAB	EU				0.0095		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
387	1816	22			ICSAB	FE				89.8185		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
388	1816	22			ICSAB	K				0.1500		1.0000	07/13/95	12:00	smp	0.3	@ICP-Q
389	1816	22			ICSAB	LA				-0.0030		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
390	1816	22			ICSAB	LI				1.0206		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
391	1816	22			ICSAB	MG				247.9985		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
392	1816	22			ICSAB	MN				0.4363		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
393	1816	22			ICSAB	MO				-0.0080		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
394	1816	22			ICSAB	NA				197.5673		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
395	1816	22			ICSAB	ND				0.0070		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
396	1816	22			ICSAB	NI				0.8880		1.0000	07/13/95	12:00	smp	0.02	@ICP-Q
397	1816	22			ICSAB	P				-0.0104		1.0000	07/13/95	12:00	smp	0.2	@ICP-Q
398	1816	22			ICSAB	PB				0.9444		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
399	1816	22			ICSAB	S				-0.0007		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
400	1816	22			ICSAB	SB				0.0086		1.0000	07/13/95	12:00	smp	0.2	@ICP-Q
401	1816	22			ICSAB	SE				-0.0126		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
402	1816	22			ICSAB	SI				0.0789		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
403	1816	22			ICSAB	SM				0.0413		1.0000	07/13/95	12:00	smp	0.1	@ICP-Q
404	1816	22			ICSAB	SR				0.0030		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
405	1816	22			ICSAB	TH				-0.0182		1.0000	07/13/95	12:00	smp	0	@ICP-Q
406	1816	22			ICSAB	TI				0.0015		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
407	1816	22			ICSAB	TL				0.0994		1.0000	07/13/95	12:00	smp	0.2	@ICP-Q
408	1816	22			ICSAB	U				0.2305		1.0000	07/13/95	12:00	smp	0.4	@ICP-Q
409	1816	22			ICSAB	V				0.4666		1.0000	07/13/95	12:00	smp	0.05	@ICP-Q
410	1816	22			ICSAB	Y				0.0104		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
411	1816	22			ICSAB	ZN				0.9364		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
412	1816	22			ICSAB	ZR				0.0063		1.0000	07/13/95	12:00	smp	0.01	@ICP-Q
413	1816	23			CCV	AG				4.9060		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
414	1816	23			CCV	AL				4.9841		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
415	1816	23			CCV	AS				5.0178		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
416	1816	23			CCV	B				4.8742		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
417	1816	23			CCV	BA				4.9875		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
418	1816	23			CCV	BE				5.0817		1.0000	07/13/95	12:04	smp	0.005	@ICP-Q
419	1816	23			CCV	BI				4.9352		1.0000	07/13/95	12:04	smp	0.1	@ICP-Q
420	1816	23			CCV	CA				4.8835		1.0000	07/13/95	12:04	smp	0.1	@ICP-Q
421	1816	23			CCV	CD				4.8532		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
422	1816	23			CCV	CE				5.0993		1.0000	07/13/95	12:04	smp	0.1	@ICP-Q
423	1816	23			CCV	CO				4.9241		1.0000	07/13/95	12:04	smp	0.02	@ICP-Q
424	1816	23			CCV	CR				4.9203		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
	1816	23			CCV	CU				5.0290		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
	1816	23			CCV	EU				0.0097		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
	1816	23			CCV	FE				4.9191		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
	1816	23			CCV	K				4.9652		1.0000	07/13/95	12:04	smp	0.3	@ICP-Q
425	1816	23			CCV	LA				5.0467		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q
430	1816	23			CCV	LI				5.2651		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
431	1816	23			CCV	MG				4.9626		1.0000	07/13/95	12:04	smp	0.1	@ICP-Q
432	1816	23			CCV	MN				4.8030		1.0000	07/13/95	12:04	smp	0.01	@ICP-Q
433	1816	23			CCV	MO				4.8950		1.0000	07/13/95	12:04	smp	0.05	@ICP-Q

WHC-SD-WM-DP-082, REV. 1

375

FILE # 95051A

LABCORE Data Entry Template for Worklist# 479

Analyst: [signature] **Instrument:** ICP01 _____ **Method:** LA-505-151 **Book#** 38B4F
REV MOD. D-1

Worklist Comment: ICP Fusion C-108

Seq	Type	Sample#	R	A	Test	Matrix	Analytes Requested
1	ICV				@ICP-QC	QC	
2	ICB				@ICP-QC	QC	
3	ICSA				@ICP-QC	QC	
4	ICSAB				@ICP-QC	QC	
5	PREPBLKARL				@ICP-F02	SOLID	
6	SAMPLE	S94T000~~339~~ 399 LAD 7-15-95	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01 , P-F-01
7	DUP	S94T000~~339~~ 399	0	F	@ICP-F02	SOLID	
8	CCV				@ICP-QC	QC	
9	CCB				@ICP-QC	QC	
10	SAMPLE	S94T000403	0	F	@ICP-F02	SOLID	AL-F-01 , CA-F-01 , CR-F-01 , FE-F-01 , K-F-01 , NA-F-01 , NI-F-01 , ZN-F-01 , ZR-F-01
11	DUP	S94T000403	0	F	@ICP-F02	SOLID	
12	ICSA				@ICP-QC	QC	
13	ICSAB				@ICP-QC	QC	
14	CCV				@ICP-QC	QC	
15	CCB				@ICP-QC	QC	

Final page for worklist # 479

[signature] 1-31-95
Analyst Signature **Date**

Leslie Diaz for SAM PARONG 7-15-95
Analyst Signature **Date**

Data Entry Comments: Rerun for Al and Ni in 403 and P in 339.

403's blank data are from ICB LAD 7-15-95

Identity 1: ICV Identity 2: Quality Control 1:05 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	5.038	4.961	5.038	4.768	4.995	5.311	5.083	4.878
S.D.	0.028	0.037	0.030	0.016	0.027	0.023	0.035	0.028
% R.S.D.	0.557	0.746	0.603	0.332	0.533	0.426	0.694	0.581

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	5.237	5.175	5.042	5.175	5.156	5.232	5.068	10.163
S.D.	0.015	0.022	0.030	0.021	0.035	0.018	0.047	0.048
% R.S.D.	0.277	0.417	0.593	0.397	0.678	0.349	0.919	0.468

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	4.994	4.889	4.957	4.855	4.990	5.170	5.081	4.874
S.D.	0.030	0.040	0.039	0.080	0.029	0.020	0.021	0.019
% R.S.D.	0.606	0.822	0.792	1.639	0.580	0.396	0.408	0.396

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	5.209	5.167	5.132	5.173	4.963	5.234	5.108	5.010
S.D.	0.028	0.026	0.019	0.031	0.031	0.024	0.024	0.022
% R.S.D.	0.537	0.509	0.363	0.594	0.624	0.457	0.473	0.449

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	5.185	4.820	5.154	5.286	4.951
S.D.	0.014	0.029	0.027	0.029	0.015
% R.S.D.	0.264	0.610	0.523	0.556	0.297

1-31-95
C-108 Fusion
S94T 000399
S94T 000403
50X, 10X

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 377 TO 397.

BEST AVAILABLE COPY

Identity 1: ICB Identity 2: Quality Control 1:09 PM January 31, 1995 **WHC-SD-WM-DP-082, REV. 1**

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.010	0.008	0.013	0.012	0.014	0.008	0.007	0.008
S.D.	0.002	0.001	0.006	0.003	0.005	0.003	0.001	0.001
% R.S.D.	15.271	11.168	46.571	23.690	33.507	34.644	13.879	11.656

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	0.014	0.011	0.012	0.010	0.009	0.009	0.005	0.135
S.D.	0.001	0.001	0.002	0.002	0.001	0.001	0.006	0.048
% R.S.D.	6.652	10.916	18.375	18.857	9.392	11.358	119.090	35.242

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.040	0.035	0.009	-0.017	0.014	0.009	0.014	0.003
S.D.	0.009	0.014	0.001	0.010	0.003	0.001	0.002	0.005
% R.S.D.	23.477	39.313	10.899	56.596	21.044	9.290	13.516	188.766

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.010	0.026	0.010	-0.011	0.009	0.007	0.015	0.047
S.D.	0.001	0.004	0.001	0.009	0.001	0.001	0.001	0.021
% R.S.D.	10.189	13.794	9.974	83.136	13.365	11.895	7.721	45.074

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.008	-0.003	0.009	0.009	0.043
S.D.	0.001	0.008	0.002	0.001	0.018
% R.S.D.	12.875	234.833	17.127	12.088	42.665

Identity 1: ICSA Identity 2: ICSA 1:11 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

k name : TWC93

ple Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.009	0.007	0.020	0.078	202.166	0.022	0.003	0.008
S.D.	0.002	0.001	0.005	0.004	1.471	0.002	0.001	0.000
% R.S.D.	26.021	6.986	23.003	5.009	0.728	10.288	19.196	4.192

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-0.141	0.016	0.024	152.013	19.018	0.011	0.005	0.288
S.D.	0.001	0.002	0.001	0.678	0.186	0.002	0.012	0.131
% R.S.D.	0.358	13.508	4.645	0.446	0.977	17.846	261.904	45.503

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.053	0.057	0.008	0.031	0.131	19.745	0.026	191.202
S.D.	0.025	0.035	0.000	0.006	0.004	0.075	0.003	1.780
% R.S.D.	47.451	61.751	3.375	20.345	2.670	0.381	12.749	0.931

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.014	0.064	0.012	0.011	0.009	0.015	-0.023	0.130
S.D.	0.001	0.014	0.001	0.006	0.000	0.001	0.001	0.021
% R.S.D.	4.170	21.340	9.126	50.676	1.934	3.387	3.320	16.331

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.025	-0.018	0.007	0.009	0.086
S.D.	0.001	0.006	0.001	0.001	0.061
% R.S.D.	5.689	34.914	13.708	7.497	71.178

Identity 1: ICSAB Identity 2: ICSAB 1:14 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.002	0.004	0.017	0.058	204.542	0.538	0.521	0.984
S.D.	0.000	0.000	0.014	0.000	0.296	0.005	0.002	0.010
% R.S.D.	14.970	7.220	82.795	0.362	0.145	1.000	0.368	0.975

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	0.901	1.030	0.020	153.404	19.292	0.525	0.010	0.107
S.D.	0.001	0.006	0.002	0.174	0.025	0.005	0.002	0.011
% R.S.D.	0.080	0.587	8.090	0.113	0.131	0.871	19.505	10.471

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.046	0.004	0.516	0.033	0.113	19.744	0.017	193.961
S.D.	0.006	0.005	0.001	0.013	0.004	0.034	0.007	1.680
% R.S.D.	13.480	120.293	0.238	39.918	3.323	0.171	39.786	0.866

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.008	0.068	0.066	1.037	0.005	1.050	-0.031	0.113
S.D.	0.000	0.006	0.001	0.008	0.000	0.003	0.002	0.013
% R.S.D.	2.314	9.427	0.834	0.761	5.890	0.246	5.046	11.783

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.540	0.015	0.519	0.525	-0.037
S.D.	0.003	0.031	0.002	0.001	0.012
% R.S.D.	0.625	209.254	0.336	0.284	32.483

Identity 1: prepblkarl Identity 2: 1ml-9ml 1:23 PM January 31, 1995

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 10.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.044	0.017	0.022	0.247	0.422	0.062	0.025	0.022
S.D.	0.011	0.003	0.065	0.017	0.047	0.023	0.002	0.005
% R.S.D.	24.115	16.351	301.537	6.796	11.050	37.649	7.587	21.632

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-1.428	4.363	0.054	0.348	0.087	0.040	0.246	0.041
S.D.	0.004	0.038	0.011	0.038	0.007	0.009	0.048	0.460
% R.S.D.	0.251	0.864	19.648	11.026	8.498	22.312	19.317	1110.582

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.329	0.053	0.036	0.059	-0.411	0.050	0.091	4.142
S.D.	0.101	0.122	0.002	0.093	0.017	0.007	0.017	0.032
% R.S.D.	30.755	230.338	6.372	157.488	4.247	13.518	19.051	0.766

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.061	0.080	0.084	0.013	0.002	0.147	10444.385
S.D.	0.003	0.092	0.006	0.047	0.004	0.010	0.018	44.556
% R.S.D.	346.410	151.418	8.005	55.307	27.990	517.495	12.302	0.427

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.056	0.382	0.020	0.011	-0.011
S.D.	0.003	0.129	0.005	0.001	0.210
% R.S.D.	4.840	33.729	24.734	9.038	1915.155

Identity 1: S94T000399_L Identity 2: .4605gin250-l-9-1-4 1:28 PM January 31, 1995

Task name : TWC93

WHC-SD-WM-DP-082, REV.1

Sample Weight : 0.4605 Solution Volume : 12500.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	146.493	94.568	280.258	672.056	29705.946	103.004	3.744	28.144
S.D.	54.775	5.724	94.772	96.531	132.649	0.315	13.787	12.061
% R.S.D.	37.391	6.052	33.816	14.364	0.447	0.305	368.230	42.854

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-3997.238	18956.155	147.694	3976.667	8997.040	252.568	367.041	4669.401
S.D.	6.658	94.392	29.988	18.199	78.673	28.096	238.193	2450.970
% R.S.D.	0.167	0.498	20.304	0.458	0.874	11.124	64.896	52.490

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	899.696	539.255	40.701	44897.682	973.358	147.532	220.080	143139.407
S.D.	562.587	575.363	10.677	762.352	75.400	9.369	46.434	1298.976
% R.S.D.	62.531	106.696	26.233	1.698	7.746	6.351	21.099	0.907

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	44.143	-302.071	113.730	-372.656	27.299	21.714	249.843	6145059.410
S.D.	22.044	247.132	31.858	252.132	20.776	3.183	27.235	52711.964
% R.S.D.	49.937	81.812	28.012	67.658	76.105	14.660	10.901	0.858

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	71.162	-226.039	42.024	7.565	436.278
S.D.	12.617	411.218	30.679	5.137	1125.375
% R.S.D.	17.730	181.923	73.004	67.900	257.949

Identity 1: S94T000399 Identity 2: .4605gin250-l-9 1:49 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

ple Weight : 0.4605 Solution Volume : 2500.00

Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	101.695	80.471	93.627	642.816	28983.273	27.332	9.464	11.827
S.D.	7.711	0.285	82.155	2.475	150.470	7.323	2.764	1.919
% R.S.D.	7.583	0.354	87.747	0.385	0.519	26.794	29.208	16.223

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-779.514	18747.116	19.519	3786.240	8938.587	251.383	52.897	3580.088
S.D.	2.465	61.667	5.929	19.407	48.664	5.686	13.818	323.796
% R.S.D.	0.316	0.329	30.375	0.513	0.544	2.262	26.123	9.044

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	134.419	199.968	28.814	44426.598	2221.277	203.767	29.371	133245.812
S.D.	65.021	82.524	1.352	808.688	32.816	0.819	17.501	1494.250
% R.S.D.	48.372	41.269	4.693	1.820	1.477	0.402	59.586	1.121

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	22.292	-46.382	66.446	103.477	16.471	3.903	119.589	5630929.125
S.D.	0.662	19.836	7.226	37.381	1.681	1.697	2.615	49341.847
% R.S.D.	2.970	42.767	10.875	36.125	10.204	43.465	2.187	0.876

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	77.155	2.396	18.199	2.046	277.301
S.D.	1.258	80.159	1.992	0.523	151.139
% R.S.D.	1.630	3345.194	10.944	25.576	54.504

Identity 1: S94T000399_A Identity 2: .4605gin250-l-9 post 1:52 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 0.4605 Solution Volume : 2500.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	5603.856	5491.457	5598.643	5963.994	35016.568	5784.666	5548.257	4893.101
S.D.	13.748	28.409	33.676	17.736	156.157	19.271	31.269	54.561
% R.S.D.	0.245	0.517	0.601	0.297	0.446	0.333	0.564	1.115

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	4943.410	24649.390	5483.159	9385.163	14694.408	5995.480	5431.460	13574.737
S.D.	17.237	62.141	16.657	13.096	66.889	19.206	49.275	255.446
% R.S.D.	0.349	0.252	0.304	0.140	0.455	0.320	0.907	1.882

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	5496.373	5261.423	5396.717	51668.261	7764.280	5819.939	5508.423	141127.577
S.D.	62.810	47.808	28.955	246.069	77.001	10.773	66.919	1323.125
% R.S.D.	1.143	0.909	0.537	0.476	0.992	0.185	1.215	0.938

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	5682.946	5542.694	4157.531	5689.213	5432.511	5618.381	5408.911	5733102.870
S.D.	52.133	79.208	11.719	47.873	17.459	15.791	16.438	41884.117
% R.S.D.	0.917	1.429	0.282	0.841	0.321	0.281	0.304	0.731

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	5703.950	5093.990	5643.387	5608.485	5158.892
S.D.	18.280	73.320	13.380	23.210	87.732
% R.S.D.	0.320	1.439	0.237	0.414	1.701

Identity 1: S94T000399_DL Identity 2: .4552gin250-1-9-1-4 1:56 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

'e Weight : 0.4552 Solution Volume : 12500.00

eak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	210.204	156.099	464.089	755.105	33513.770	231.801	80.384	88.925
S.D.	34.614	2.914	198.048	64.824	138.122	0.218	12.804	8.600
% R.S.D.	16.467	1.867	42.675	8.585	0.412	0.094	15.928	9.671

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-4008.976	18545.596	82.004	4822.132	9653.861	375.041	718.432	7160.419
S.D.	6.251	39.497	17.464	214.230	39.794	36.094	143.185	1676.166
% R.S.D.	0.156	0.213	21.297	4.443	0.412	9.624	19.930	23.409

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	1042.989	928.956	109.322	37430.193	1399.095	334.016	294.097	124910.157
S.D.	345.692	357.777	8.236	1202.537	86.452	12.559	52.645	959.946
% R.S.D.	33.144	38.514	7.533	3.213	6.179	3.760	17.901	0.769

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	88.197	-64.496	150.714	104.025	105.631	95.132	235.122	5819768.665
S.D.	19.625	252.616	18.767	25.385	3.437	11.738	22.020	47053.315
% R.S.D.	22.251	391.675	12.452	24.403	3.254	12.339	9.365	0.809

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	148.734	1.436	146.398	72.787	1366.893
S.D.	6.308	376.368	26.405	5.111	859.510
% R.S.D.	4.241	26207.849	18.036	7.022	62.881

Identity 1: S94T000399_D Identity 2: .4552gin250-i-9 2:00 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 0.4552 Solution Volume : 2500.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	68.039	91.483	183.232	620.799	31962.502	23.430	16.329	13.243
S.D.	7.209	1.264	29.905	10.679	44.640	7.411	3.863	2.708
% R.S.D.	10.595	1.382	16.321	1.720	0.140	31.631	23.661	20.452

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-743.631	18303.476	35.471	3892.818	9659.920	279.331	103.084	3754.269
S.D.	3.488	76.519	3.492	21.024	30.999	2.043	7.241	292.840
% R.S.D.	0.469	0.418	9.846	0.540	0.321	0.731	7.025	7.800

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	139.013	166.445	33.035	35234.121	2263.980	220.099	87.745	116803.464
S.D.	59.414	56.191	1.585	546.907	12.005	2.967	12.467	573.965
% R.S.D.	42.740	33.759	4.798	1.552	0.530	1.348	14.209	0.491

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	30.813	15.640	44.594	163.895	22.952	6.946	81.938	5457477.400
S.D.	3.689	22.042	5.435	31.982	3.485	4.268	7.634	20704.352
% R.S.D.	11.973	140.935	12.187	19.513	15.183	61.449	9.317	0.379

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	86.163	143.957	24.013	7.274	233.502
S.D.	1.947	99.050	2.643	1.349	137.254
% R.S.D.	2.260	68.805	11.006	18.541	58.781

Identity 1: CCV_1 Identity 2: CCV_1 2:04 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

ample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	5.010	4.973	4.956	4.670	5.002	5.170	5.124	4.952
S.D.	0.132	0.137	0.144	0.123	0.110	0.132	0.146	0.152
% R.S.D.	2.637	2.761	2.908	2.642	2.199	2.561	2.850	3.077

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	5.064	5.054	5.029	5.094	5.176	5.101	5.167	10.181
S.D.	0.136	0.113	0.133	0.120	0.130	0.135	0.135	0.339
% R.S.D.	2.687	2.229	2.649	2.348	2.504	2.654	2.616	3.326

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	4.939	4.867	4.997	4.672	4.843	5.033	4.970	5.116
S.D.	0.132	0.192	0.141	0.085	0.120	0.124	0.140	0.019
% R.S.D.	2.670	3.953	2.819	1.827	2.482	2.467	2.822	0.372

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	5.070	5.113	2.272	5.041	4.924	5.107	5.048	10.368
S.D.	0.136	0.114	0.116	0.159	0.131	0.128	0.146	6.056
% R.S.D.	2.676	2.236	5.100	3.155	2.656	2.497	2.902	58.412

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	5.077	4.824	5.076	5.226	4.891
S.D.	0.124	0.115	0.137	0.143	0.127
% R.S.D.	2.448	2.391	2.692	2.730	2.592

Identity 1: CCB_1 Identity 2: CCB_1 2:10 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.004	0.001	0.015	0.009	0.003	0.005	0.001	0.002
S.D.	0.001	0.000	0.008	0.001	0.001	0.001	0.000	0.000
% R.S.D.	24.831	3.840	53.841	14.533	27.515	24.843	55.224	9.807

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	0.011	0.006	0.004	0.004	0.002	0.002	0.021	0.173
S.D.	0.001	0.001	0.001	0.001	0.000	0.001	0.004	0.021
% R.S.D.	4.606	18.720	30.908	36.659	16.036	46.097	20.647	12.129

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.031	0.038	0.002	-0.012	0.004	0.002	0.017	0.061
S.D.	0.003	0.005	0.000	0.006	0.005	0.000	0.001	0.001
% R.S.D.	8.278	13.574	4.136	47.550	106.340	12.343	5.959	1.968

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.018	0.353	0.002	0.002	0.001	0.006	0.355
S.D.	0.001	0.019	0.056	0.009	0.000	0.000	0.001	0.031
% R.S.D.	52.764	104.011	15.872	461.056	3.818	14.416	12.312	8.861

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.000	0.005	0.004	0.001	0.079
S.D.	0.000	0.011	0.000	0.000	0.013
% R.S.D.	29.384	217.214	2.377	10.468	16.566

Identity 1: S94T000403_L Identity 2: .4823gin250-1-9-1-4 2:14 PM January 31, 1995
Task name : TWC93
·le Weight : 0.4823 Solution Volume : 12500.00
eak Integrations : 3 Off-Peak Integrations : 1

WHC-SD-WM-DP-082, REV. 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	179.144	140.978	411.508	792.356	27175.133	97.509	4.620	47.713
S.D.	77.712	51.474	295.019	76.905	588.293	60.177	70.601	53.241
% R.S.D.	43.380	36.512	71.692	9.706	2.165	61.714	1528.225	111.587

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-3775.622	22951.335	40.897	5390.987	8785.236	369.167	168.886	7514.446
S.D.	75.797	66.800	42.925	451.557	52.909	60.964	119.084	1402.985
% R.S.D.	2.008	0.291	104.959	8.376	0.602	16.514	70.511	18.671

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	618.584	833.733	69.019	37550.285	1617.793	196.465	183.886	128339.702
S.D.	253.899	328.039	56.468	2121.692	84.044	105.156	101.149	621.105
% R.S.D.	41.045	39.346	81.816	5.650	5.195	53.524	55.006	0.484

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	28.450	255.342	1978.083	157.487	72.120	8.112	228.958	5979859.172
S.D.	67.822	204.877	47.418	242.345	60.073	54.277	69.558	50184.676
% R.S.D.	238.393	80.236	2.397	153.883	83.296	669.058	30.380	0.839

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	107.963	620.312	85.823	30.652	1726.955
S.D.	64.598	502.117	64.960	53.222	498.284
% R.S.D.	59.833	80.946	75.691	173.637	28.853

Identity 1: S94T000403 Identity 2: .4823gin250-1-9 2:18 PM January 31, 1995 WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 0.4823 Solution Volume : 2500.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	73.794	113.439	93.247	562.117	27005.337	37.612	15.609	13.704
S.D.	2.995	1.374	40.390	2.181	831.438	6.984	4.057	2.557
% R.S.D.	4.059	1.211	43.314	0.388	3.079	18.568	25.991	18.658

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-733.359	22859.846	30.298	5026.623	8787.989	314.763	55.846	4220.231
S.D.	3.512	673.540	5.561	160.671	275.633	4.489	31.129	112.303
% R.S.D.	0.479	2.946	18.356	3.196	3.136	1.426	55.741	2.661

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	174.670	40.583	32.174	38703.473	2554.395	224.794	44.135	119898.623
S.D.	29.755	50.078	1.495	1856.969	136.508	5.365	33.500	4248.545
% R.S.D.	17.035	123.398	4.647	4.798	5.344	2.387	75.902	3.543

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	38.776	-109.789	1926.344	157.811	18.781	6.704	97.936	5481780.866
S.D.	4.745	70.418	58.057	15.410	1.334	0.628	4.725	193455.626
% R.S.D.	12.237	64.140	3.014	9.765	7.102	9.373	4.824	3.529

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	91.626	294.987	17.591	5.568	36.219
S.D.	1.198	54.298	4.651	1.644	97.528
% R.S.D.	1.308	18.407	26.442	29.528	269.271

Identity 1: S94T000403_A Identity 2: .4823gin250-1-9 post 2:21 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

ple Weight : 0.4823 Solution Volume : 2500.00

eak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	5361.560	5296.159	5286.677	5670.163	33222.461	5514.420	5316.171	4656.233
S.D.	21.951	31.464	19.661	9.868	173.601	34.852	29.825	29.594
% R.S.D.	0.409	0.594	0.372	0.174	0.523	0.632	0.561	0.636

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	4727.981	28788.156	5278.883	10536.872	14389.127	5774.302	5320.857	14943.389
S.D.	20.537	57.533	47.324	94.487	81.257	44.894	54.438	182.651
% R.S.D.	0.434	0.200	0.896	0.897	0.565	0.777	1.023	1.222

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	5366.995	5115.828	5181.351	41387.161	7632.130	5576.295	5252.450	128038.092
S.D.	16.609	28.741	32.670	761.662	37.369	16.870	48.546	785.860
% R.S.D.	0.309	0.562	0.631	1.840	0.490	0.303	0.924	0.614

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	5439.774	5245.000	4666.042	5507.288	5205.640	5383.354	5134.522	5593063.524
S.D.	24.324	98.886	12.983	32.288	21.604	15.882	12.944	31952.149
% R.S.D.	0.447	1.885	0.278	0.586	0.415	0.295	0.252	0.571

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	5469:256	4916.627	5403.905	5386.748	5163.902
S.D.	15.577	81.168	13.354	21.219	98.762
% R.S.D.	0.285	1.651	0.247	0.394	1.913

Identity 1: S94T000403_DL Identity 2: .4807gin250-1-9-1-4 2:26 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 0.4807 Solution Volume : 12500.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	145.360	154.198	313.668	1242.639	52956.854	138.943	56.286	73.752
S.D.	32.045	7.692	4.761	35.037	209.589	34.722	6.914	2.518
% R.S.D.	22.045	4.988	1.518	2.820	0.396	24.990	12.283	3.415

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-3785.661	17814.220	58.832	5945.411	8172.159	387.219	83.809	5408.952
S.D.	16.078	160.333	48.879	22.341	51.826	56.521	65.495	1824.505
% R.S.D.	0.425	0.900	83.082	0.376	0.634	14.597	78.147	33.731

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	674.018	494.544	86.205	31787.606	1090.652	229.457	134.388	120175.219
S.D.	390.752	445.028	5.970	705.602	60.849	16.898	93.153	1192.466
% R.S.D.	57.973	89.987	6.925	2.220	5.579	7.364	69.316	0.992

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	106.777	515.884	1325.524	330.138	93.815	59.606	169.299	5504982.586
S.D.	8.391	378.092	27.332	282.621	6.780	21.322	23.313	57444.615
% R.S.D.	7.859	73.290	2.062	85.607	7.227	35.771	13.771	1.044

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	136.710	695.880	77.508	52.408	889.423
S.D.	9.364	304.071	22.993	10.160	744.551
% R.S.D.	6.849	43.696	29.665	19.387	83.712

Identity 1: S94T000403_D Identity 2: .4807gin250-1-9 2:29 PM January 31, 1995 WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

le Weight : 0.4807 Solution Volume : 2500.00

.. Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	75.616	92.817	41.777	1093.132	51939.794	22.013	5.317	8.793
S.D.	14.643	0.545	55.532	22.123	432.370	6.940	4.597	2.808
% R.S.D.	19.365	0.587	132.926	2.024	0.832	31.524	86.459	31.930

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-747.590	17484.391	21.479	5788.659	8065.797	274.759	21.426	4773.670
S.D.	3.109	38.596	11.734	5.248	60.117	6.203	76.665	495.872
% R.S.D.	0.416	0.221	54.630	0.091	0.745	2.257	357.817	10.388

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	47.017	226.938	29.737	33576.807	2067.326	239.548	47.848	110981.960
S.D.	121.548	153.450	2.140	1656.838	67.392	0.770	1.373	1270.899
% R.S.D.	258.520	67.617	7.195	4.934	3.260	0.321	2.870	1.145

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	31.082	-6.530	1406.064	207.472	42.843	0.923	58.245	5080168.172
S.D.	7.352	57.227	22.242	0.877	5.101	2.470	5.819	53080.410
% R.S.D.	23.654	876.352	1.582	0.423	11.905	267.649	9.991	1.045

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	84.128	-30.718	20.968	2.632	264.088
S.D.	1.869	103.841	8.719	0.511	202.116
% R.S.D.	2.222	338.043	41.580	19.411	76.534

Identity 1: ICSA Identity 2: ICSA 2:33 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	-0.001	0.001	0.013	0.056	205.189	0.016	-0.008	0.001
S.D.	0.001	0.000	0.004	0.002	0.379	0.000	0.000	0.000
% R.S.D.	46.604	8.836	34.336	4.023	0.185	0.027	3.679	7.754

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	-0.151	0.012	0.015	154.971	19.284	0.004	0.009	0.048
S.D.	0.000	0.001	0.002	0.199	0.040	0.001	0.004	0.033
% R.S.D.	0.190	11.491	10.882	0.128	0.210	19.844	49.703	68.478

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.049	-0.006	0.000	0.054	0.129	20.066	0.010	195.681
S.D.	0.007	0.005	0.000	0.008	0.002	0.022	0.002	0.589
% R.S.D.	14.176	79.151	41.622	15.465	1.382	0.110	17.301	0.301

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.003	0.022	0.023	0.016	0.001	0.010	-0.036	2.254
S.D.	0.001	0.008	0.000	0.007	0.000	0.001	0.001	0.285
% R.S.D.	29.344	34.946	1.340	43.149	37.023	5.460	1.775	12.655

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.015	0.022	-0.002	0.003	-0.034
S.D.	0.000	0.017	0.000	0.000	0.010
% R.S.D.	1.474	77.241	9.172	6.455	30.296

Identity 1: ICSAB Identity 2: ICSAB 2:34 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

le Weight : 1.0000 Solution Volume : 1.00

eak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	-0.003	0.001	-0.001	0.047	202.352	0.535	0.510	0.964
S.D.	0.001	0.000	0.004	0.002	0.506	0.004	0.002	0.008
% R.S.D.	29.844	10.667	302.693	3.274	0.250	0.754	0.324	0.809

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	0.903	1.036	0.012	154.482	19.190	0.527	0.013	0.009
S.D.	0.002	0.003	0.002	0.318	0.044	0.001	0.005	0.041
% R.S.D.	0.168	0.262	18.125	0.206	0.228	0.095	40.535	480.678

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.046	-0.011	0.505	0.023	0.122	19.791	0.017	191.076
S.D.	0.009	0.009	0.002	0.003	0.005	0.057	0.003	1.454
% R.S.D.	20.366	81.365	0.327	11.744	4.092	0.288	19.089	0.761

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.007	0.052	0.063	1.046	0.001	1.050	-0.034	1.199
S.D.	0.001	0.014	0.000	0.010	0.000	0.001	0.000	0.104
% R.S.D.	16.700	26.184	0.353	0.930	63.432	0.131	0.991	8.644

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.538	-0.003	0.514	0.520	-0.042
S.D.	0.002	0.011	0.001	0.001	0.013
% R.S.D.	0.352	334.704	0.210	0.097	30.723

Identity 1: CCV_2 Identity 2: CCV_2 2:41 PM January 31, 1995

WHC-SD-WM-DP-082, REV. 1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	5.111	5.042	5.106	4.819	5.172	5.382	5.172	4.994
S.D.	0.006	0.002	0.024	0.008	0.023	0.004	0.005	0.030
% R.S.D.	0.119	0.045	0.467	0.172	0.446	0.075	0.091	0.601

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	5.294	5.229	5.105	5.292	5.239	5.291	5.183	10.323
S.D.	0.003	0.008	0.006	0.014	0.003	0.009	0.016	0.044
% R.S.D.	0.049	0.162	0.127	0.258	0.050	0.168	0.304	0.427

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	5.070	4.988	5.043	5.187	5.140	5.227	5.132	5.151
S.D.	0.005	0.004	0.003	0.205	0.082	0.006	0.017	0.023
% R.S.D.	0.089	0.088	0.051	3.943	1.586	0.109	0.327	0.455

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	5.250	5.252	3.290	5.222	5.036	5.282	5.165	5.627
S.D.	0.013	0.014	0.359	0.027	0.005	0.006	0.006	0.061
% R.S.D.	0.253	0.267	10.897	0.524	0.097	0.117	0.121	1.092

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	5.236	4.926	5.220	5.355	5.027
S.D.	0.010	0.031	0.005	0.004	0.015
% R.S.D.	0.191	0.636	0.089	0.083	0.303

Identity 1: CCB_2 Identity 2: CCB_2 2:45 PM January 31, 1995

WHC-SD-WM-DP-082, REV.1

Task name : TWC93

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	ZR (ppm)	SR (ppm)	BI (ppm)	SI (ppm)	AL (ppm)	CO (ppm)	CU (ppm)	LI (ppm)
Mean	0.003	0.001	-0.005	0.009	0.033	0.005	-0.000	0.001
S.D.	0.003	0.000	0.005	0.005	0.002	0.001	0.001	0.000
% R.S.D.	73.923	11.865	93.671	55.879	5.065	24.779	559.718	50.305

	ZN (ppm)	NI (ppm)	LA (ppm)	FE (ppm)	CA (ppm)	CR (ppm)	ND (ppm)	U (ppm)
Mean	0.015	0.003	0.005	0.021	0.004	0.002	0.006	0.144
S.D.	0.000	0.001	0.002	0.003	0.001	0.002	0.003	0.099
% R.S.D.	1.172	30.961	44.721	16.056	17.831	71.034	53.100	68.609

	CE (ppm)	SM (ppm)	BA (ppm)	P (ppm)	S (ppm)	MG (ppm)	AS (ppm)	NA (ppm)
Mean	0.003	0.032	0.001	0.001	-0.009	0.003	0.004	0.094
S.D.	0.020	0.025	0.000	0.005	0.004	0.000	0.002	0.001
% R.S.D.	596.927	77.309	31.414	329.811	48.668	12.843	54.046	1.274

	MO (ppm)	SE (ppm)	AG (ppm)	PB (ppm)	TI (ppm)	CD (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.003	0.176	0.007	0.002	-0.000	0.005	0.633
S.D.	0.001	0.003	0.041	0.008	0.001	0.001	0.000	0.082
% R.S.D.	97.093	105.081	23.063	122.545	44.649	901.999	8.058	12.995

	MN (ppm)	SB (ppm)	V (ppm)	BE (ppm)	TL (ppm)
Mean	0.000	-0.003	0.004	0.000	0.064
S.D.	0.000	0.008	0.001	0.000	0.041
% R.S.D.	62.192	307.370	31.254	19.223	64.211

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K 221, K 222	Customer ID: BLANK, C61S1
Analysis: TIC/TOC	Sample Prep: DIRECT

Instrument: WC 38153 , AL 11208	Procedure/ Rev: LA 342-100 A-0
Technologist: KR MONTEITH	Date: 08/07/94
Starting Time: 00:00	Temperature 25
Ending Time: 07:30	Chemist: ~~RW SCHRODER~~ RWS 8-8-94 RW SCHROEDER

Comments:

	Description	Lab ID
1	LMCS	K 220-5518
2	BLANK	K 221-5618
3	SAMPLE	K 222-5718
4	SAMPLE DUP	K 222-5818
5		
6		
7		
8		
9		
10		

	Description	Lab ID
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS TIC	15N12B / 1 ML			
LMCS TOC	10N12C / .300 ML			
		398		

QA

ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-342-100 **ANALYTE:** TIC/TOC **ANALYSIS START DATE** 8/07/94

PREPARED BY: Rob Schroeder **SUMMARY DATE:** 8/08/94

PROJECT C-108 **UNITS:** ug C/ g **SAMPLE PREP:** Direct Analysis

SPL ID	SERIAL NO	RESULT #1	RESULT #2	RPD%	% REC	DET LIM	DIG WT
TIC STD	K220-5518	4.99E-2M			99.8		
TOC STD	K220-5518	2.72E-0g/L			90.8		
TIC BLK	K221-5618	4.30ug C				5.0E-0	
TOC BLK	K221-5618	16.7ug C				1.25E+2	
TIC C61S1	K222-5718	1.20E+4	1.09E+4	9.61		4.00E+2	
TOC C61S1	K222-5718	3.55E+3	3.40E+3	4.32		4.00E+2	

RW Schroeder 8-8-94

[X] NO SPECIAL PROBLEMS / METHOD VARIATIONS IN THIS BATCH

NARRATIVE -- LIST SPECIFIC PROBLEMS / VARIATIONS FOR THIS BATCH
The TOC result for this sample is 3 times the blank value. There is insufficient sample to re-analyze, and there are no other observed disqualifiers. Robert W. Schroeder 8-8-94

TOTAL ORGANIC CARBON/TOTAL INORGANIC CARBON ANALYSIS

Batch 4114

Serial No	Sample Point	Date	Time Issued	Priority
K 220.-5518	C-108	6-15-94	13: 5	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
TIC/TOC	LA-342-100	% RECOVERY	N4C3G	0

Sample Size	Customer ID
?	STD

Remarks, Calculations, Results

R223 TIC
STD # 15N12B RESULT 4.99 E-2M
STD VAL 5.00E-2M %REC 99.8
R856 TOC
STD # 10N12C RESULT 2.724 E+0 g/L
STD VAL 3.00E+0 g/L %REC 90.8 WR# 3070

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr 8-8-94	
8-7-94		RW Schroeder	

54-6800-061 (R-10-83)

Serial No.	Sample Point	Date	Time Issued	Priority
K 221.-5618	C-108	6-15-94	13: 6	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
TIC/TOC	LA-342-100	uG C/ML	N4C3G	0

Sample Size	Customer ID
? /mL	BLANK

Remarks, Calculations, Results

TIC REAGENT BLANK 4.30 ug C

TOC REAGENT BLANK 16.7 ug C

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr 8-8-94	
8-7-94		RW Schroeder	

54-6800-061 (R-10-83)

TOTAL ORGANIC CARBON/TOTAL INORGANIC CARBON ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-5718	C-108	6-15-94	13: 8	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
TIC/TOC	LA-342-100	uG C/G	N4C3G	0

Sample Size	Customer ID
? .0110g	C61S1

Remarks, Calculations, Results

TIC VALUE 135.8-4.29 = 1.32 E+2/0.0110g = 1.20E+4 µg/g

TOC VALUE 3.91 E+1/0.0110 = 3.55 E+3 µg/g

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
8-7-94		8-8-94 RW Schroeder	Gary Hammitt

54-6800-061 (R-10-83)

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-5818	C-108	6-15-94	13: 8	21

Determination	Method/Standard	Result Units	Charge Code	Reruns
TIC/TOC	LA-342-100	uG C/G	N4C3G	0

Sample Size	Customer ID
? .0129g	C61S1

Remarks, Calculations, Results

TIC DUPLICATE VALUE 1.40 E+2/0.0129 = 1.09 E+4 µg/g

TOC DUPLICATE VALUE 4.38 E+1/0.0129 = 3.40 E+3 µg/g

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs

Date	Time Completed	Lab Unit Mgr	
8-7-94		8-8-94 RW Schroeder	Gary Hammitt

54-6800-061 (R-10-83)

 BEST AVAILABLE COPY

TOC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: LAN Date: 18/07/94 Time: 03:01:27

Sample size = [illegible] mL
[illegible]
Blank [illegible] =
Blank value = [illegible] ug/minute C

Scales: [illegible] Initial Time
In Range = 2
Max Ranges = [illegible]
% Difference = 10

Reading	analysis Time	Detector	% Difference
1	[illegible]	0.00	[illegible]
2	[illegible]	[illegible]	[illegible]
3	1.31	369.30	[illegible]
4	2.01	462.90	33.15
5	2.51	540.90	16.42
6	3.00	572.10	5.45
7	3.50	583.50	1.95
8	4.00	589.20	0.80
9	4.50	590.60	0.41
10	5.00	592.30	0.29
11	5.50	593.50	0.20
12	6.00	594.80	0.22
13	6.50	595.90	0.18
14	7.00	597.00	0.18
15	7.50	597.80	0.13
16	8.00	598.80	0.17
17	8.50	599.70	0.15
18	9.00	600.60	[illegible]
19	9.50	601.30	0.12
20	10.00	602.00	0.12
21	10.50	602.90	0.15
22	11.00	603.60	0.12

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 402 TO 409.

USER INPUT BLANK VALUE
BLANK VALUE = 4.289869 micrograms carbon
BLANK FACTOR = 4.289869 / 10.99966 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:
(603.6 - 4.290262)(1)/(100) = +5.99E-01 g/L Carbon
(603.6 - 4.290262)(1)/(100)(12) = +4.99E-02 Molar Carbon

Analyst Name: KR MONTEITH 8/07/94 CCCCC

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TOCTOC REV 2.0
[illegible] ANALYZER [illegible]

Sampler [illegible] Date [illegible] Time [illegible]

[illegible] = [illegible]
[illegible]
[illegible]
Blank Value = ~~[illegible]~~ 1.52 ug/min C

Calibration
[illegible] Factor = [illegible]
Max Deviation = [illegible]
% Difference = [illegible]

#	Sample Time	Response	% Difference
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]
6	3.00	795.10	0.13
7	3.50	814.20	2.22
8	4.00	820.90	0.82
9	4.50	824.00	0.38
10	5.00	825.90	0.23
11	5.50	827.20	0.16
12	6.00	828.10	0.11
13	6.50	828.80	0.08
14	7.00	829.40	0.10
15	7.50	830.30	0.08
16	8.00	831.00	0.08
17	8.50	831.50	0.06
18	9.00	832.10	0.07
19	9.50	832.80	0.08
20	10.00	832.90	0.05
21	10.50	833.40	0.06
22	11.00	833.80	0.05

~~KM 8-7-94~~
~~Blank Value = 833.8 mg Organic Carbon~~
~~Blank Factor = 833.8 / 10.99883 =~~

~~KM 8-7-94~~
~~[illegible] ug/min Carbon~~

~~[illegible] WARNING = BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!!!!~~

(833.8 - 16.7)(1)/(300) =

2.724E0 g/L CARBON

Sample Run By: [illegible]
KR MCM-[illegible] 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<< BLANK ANALYSIS >>

[illegible]

[illegible]

[illegible]	Analysis Time	Coulometer	% Difference
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	1.00	1.50	[illegible]
4	2.00	1.90	[illegible]
5	2.50	2.20	13.34
6	3.00	2.30	[illegible]
7	3.50	2.50	8.00
8	4.00	2.60	3.85
9	4.50	2.90	10.34
10	5.00	2.90	0.00
11	5.50	3.00	3.33
12	6.00	3.10	3.23
13	6.50	3.30	6.06
14	7.00	3.40	2.9[illegible]
15	7.50	3.40	0.00
16	8.00	3.60	5.56
17	[illegible]	3.70	2.70
18	9.00	3.80	[illegible]
19	[illegible]	[illegible]	[illegible]
20	10.00	4.10	2.44
21	10.50	4.10	0.00
22	11.00	4.30	4.65

BLANK VALUE = 4.3 micrograms carbon
BLANK FACTOR = 4.3 / 11.00249 = +3.9E-01 ug/min Carbon

Sample Run By: _____
KF MONTEITH 00000

BEST AVAILABLE COPY

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

[illegible] Date: 08/07/94 [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
3	1.50	[illegible]	[illegible]
4	2.00	[illegible]	[illegible]
5	2.50	7.80	[illegible]
6	[illegible]	[illegible]	[illegible]
7	3.50	9.50	[illegible]
8	4.00	10.00	5.00
9	4.50	10.60	5.66
10	5.00	10.90	2.75
11	5.50	11.30	3.54
12	6.00	11.70	3.42
13	6.50	12.10	3.31
14	7.00	12.60	3.77
15	7.50	13.00	3.08
16	8.00	13.40	2.99
17	8.50	14.00	4.29
18	9.00	14.90	[illegible]
19	9.50	15.50	[illegible]
20	10.00	16.00	3.13
21	10.50	16.40	2.44
22	11.00	16.70	1.80

BLANK VALUE = 16.7 micrograms carbon
BLANK FACTOR = 16.7 / 10.99966 = +1.52E+00 ug/min Carbon

<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>

Sample Run By: _____
KR MONTEITH 30000

BEST AVAILABLE COPY

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

[illegible] Date: [illegible] Time: [illegible]

[illegible] Analyst: KR MONFEETH
[illegible] Weight: [illegible] g
[illegible] Dilution: [illegible]
[illegible] Density: [illegible]
[illegible] Carbonate: [illegible]

Value	Analysis Time	Coulometer	% Difference
1	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	10.10	[illegible]
4	[illegible]	122.50	[illegible]
5	2.00	127.50	3.92
6	3.00	129.60	1.62
7	4.00	130.30	0.54
8	4.50	130.90	0.46
9	5.00	131.50	0.46
10	5.50	131.80	0.23
11	6.00	132.30	0.38
12	6.50	132.70	0.30
13	7.00	133.20	0.38
14	7.50	133.60	0.30
15	8.00	133.80	0.15
16	8.50	134.20	0.30
17	9.00	134.60	0.30
18	9.50	134.70	0.08
19	10.00	135.10	0.15
21	10.50	135.50	0.30
22	11.00	135.30	0.22

USER INPUT BLANK VALUE
BLANK VALUE = 4.289542 micrograms carbon
BLANK FACTOR = 4.289542 / 10.99083 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:
(135.8 - 4.28994)(1)/(1) = +1.315E+02 g/L Carbon
(135.8 - 4.28994)(1)/(1)(12) = +1.094E+01 Molar Carbon

Sample Run By: _____
KR MONFEETH 00:00

BEST AVAILABLE COPY

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

[illegible]

[illegible] = [illegible] [illegible] = [illegible]
[illegible] = [illegible] [illegible] = [illegible]
[illegible] = [illegible] [illegible] Readings = 22
Blank Value = 1.5[illegible] ug/minute C [illegible] Difference = [illegible]

Reading	Analysis Time	Coulometer	% Difference
	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	2.00	12.50	[illegible]
5	2.50	22.40	[illegible]
6	3.00	30.20	25.8[illegible]
7	3.50	33.80	15.64
8	4.00	39.60	9.60
9	4.50	42.20	6.16
10	5.00	44.30	4.7[illegible]
11	5.50	45.80	3.28
12	6.00	47.20	2.97
13	6.50	48.30	[illegible].28
14	7.00	49.30	2.03
15	7.50	50.30	1.99
16	8.00	51.20	1.76
17	8.50	5[illegible].10	1.[illegible]3
18	9.00	52.90	1.51
19	[illegible].50	[illegible]3.70	1.[illegible]
20	10.00	54.50	1.47
21	10.50	55.10	1.09
22	11.00	55.80	1.25

USER INPUT BLANK VALUE
BLANK VALUE = 16.71821 micrograms carbon
BLANK FACTOR = 16.71821 / 10.99883 = +1.5E+00 ug/min Carbon

SAMPLE RESULTS:
(55.8 - 16.71696)(1)/(1) = +3.91E+01 g/L Carbon
(55.8 - 16.71696)(1)/(1)(12) = +3.26E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon! !!!>>>>

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: [illegible] Date: 08/02/96 Time: 07:44:27

[illegible] Volume = [illegible] ml
[illegible] Dilution = [illegible]
[illegible] Gas Measurement = [illegible]
Blank value = .39 ug/minute C % Difference = 10

Reading	Analysis Time	Coulometer	Temperature
1	0.51	[illegible]	[illegible]
2	1.00	[illegible]	[illegible]
3	1.51	[illegible]	[illegible]
4	[illegible]	116.30	[illegible]
5	2.50	130.50	10.95
6	3.00	136.40	4.25
7	3.50	138.20	1.30
8	4.00	139.30	0.79
9	4.50	140.00	0.50
10	5.00	140.50	0.36
11	5.50	141.00	0.35
12	6.00	141.40	0.28
13	6.50	141.70	0.21
14	7.00	142.10	0.28
15	7.50	142.60	0.35
16	8.00	142.90	0.21
17	8.50	143.20	0.21
18	[illegible]	143.50	[illegible]
19	9.50	143.60	0.21
20	10.00	143.90	0.21
21	10.50	144.20	0.21
22	11.00	144.40	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 4.289542 micrograms carbon
BLANK FACTOR = 4.289542 / 10.99583 = +3.9E-01 ug/min Carbon

SAMPLE RESULTS:
(144.4 - 4.289542)(1)/(1) = +1.401E+02 g/L Carbon
(144.4 - 4.289542)(1)/(1)(12) = +1.168E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 0000

 BEST AVAILABLE COPY

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	Max Measure = [illegible]
[illegible] Value = [illegible] mg/minute	% Difference = 10

[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	34.10	[illegible]
5	[illegible]	40.80	[illegible]
6	3.00	44.30	7.90
7	3.50	46.70	5.14
8	4.00	48.50	3.71
9	4.50	49.70	2.41
10	5.00	51.00	2.55
11	5.50	52.20	2.30
12	6.00	53.10	1.69
13	6.50	53.90	1.48
14	7.00	54.80	1.64
15	7.50	55.60	1.44
16	8.00	56.40	1.42
17	8.50	56.90	0.88
18	9.00	57.60	1.22
19	9.50	58.30	1.24
20	10.00	59.00	0.85
21	10.50	59.80	1.34
22	11.00	60.50	[illegible].16

USER INPUT BLANK VALUE
BLANK VALUE = 16.71521 micrograms carbon
BLANK FACTOR = 16.71821 / 10.99883 = +1.5E+00 ug/min Carbon

SAMPLE RESULTS:
(60.5 - 16.72107)(1)/(1) = +4.52E+01 g/L Carbon
(60.5 - 16.72107)(1)/(1)(12. = +3.65E+00 Molar Carbon
<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!!>>>

Sample Run By: _____
KR MONTEITH 00000

WHC-SD-WM-DP-082, REV. 1 C 108 DA

LABCORE Data Entry Template for Worklist# 306

Analyst: KRM **Instrument:** TOC01 **Method:** LA-342-100 Rev. A-0

Worklist Comment: @TICTOC for C-108 45-day report

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK				@TICTOC1 TIC-02	SOLID	~~2.3~~ 1	2.3	N/A	ug/g
1	BLNK				@TICTOC1 TOC-02	SOLID	~~37.2~~ 1	37.2	N/A	ug/g
2	STD	15N12E			@TICTOC1 TIC-02	SOLID	6.00E+2	6.01E+2	N/A	ug/g
2	STD	10N12F			@TICTOC1 TOC-02	SOLID	3.00E+3	2.98E+3	N/A	ug/g
3	SAMPLE	S94T000331	0		@TICTOC1 TIC-02	SOLID	N/A	7.86E+2		ug/g
3	SAMPLE	S94T000331	0		@TICTOC1 TOC-02	SOLID	N/A	1.88E+2		ug/g
4	DUP	S94T000331	0		@TICTOC1 TIC-02	SOLID	7.86E+2	1.00E+3	N/A	ug/g
4	DUP	S94T000331	0		@TICTOC1 TOC-02	SOLID	1.88E+2	3.79E+2	N/A	ug/g
5	SAMPLE	S94T000332	0		@TICTOC1 TIC-02	SOLID	N/A	2.90E+3		ug/g
5	SAMPLE	S94T000332	0		@TICTOC1 TOC-02	SOLID	N/A	~~1.58~~ 1.54E+3		ug/g
6	DUP	S94T000332	0		@TICTOC1 TIC-02	SOLID	2.90E+3	3.08E+3	N/A	ug/g
6	DUP	S94T000332	0		@TICTOC1 TOC-02	SOLID	1.54E+3	1.84E+3	N/A	ug/g
7	SAMPLE	S94T000334	0		@TICTOC1 TIC-02	SOLID	N/A	2.64E+3		ug/g
7	SAMPLE	S94T000334	0		@TICTOC1 TOC-02	SOLID	N/A	1.46E+3		ug/g
8	DUP	S94T000334	0		@TICTOC1 TIC-02	SOLID	2.64E+3	~~2.10~~ 2.08E+3	N/A	ug/g
8	DUP	S94T000334	0		@TICTOC1 TOC-02	SOLID	1.46E+3	1.77E+3	N/A	ug/g

Final page for worklist # 306

Analyst Signature 12-27-94 **Date**

12-28-94

Data Entry Comments: S94T000331 - L. BROWN WITH D. BROWN FLAKES - NON HOMOGENOUS

S94T000332 - L. BROWN SLUDGE

S94T000334 - L. BROWN SLUDGE - SOME SOLIDS ie. ROCKS

Units shown for QC (SPK) may not reflect the actual units. Data entry reviewed 1/3/95 *Page:* 1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 12/27/94 Time: 01:53:21

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.10	100.00
3	1.51	0.30	66.67
4	2.01	0.50	40.00
5	2.50	0.70	28.57
6	3.00	0.90	22.22
7	3.50	1.00	10.00
8	4.00	1.20	16.67
9	4.50	1.20	0.00
10	5.00	1.30	7.69
11	5.50	1.40	7.14
12	6.00	1.50	6.67
13	6.50	1.60	6.25
14	7.00	1.70	5.88
15	7.50	1.80	5.56
16	8.00	1.80	0.00
17	8.50	1.90	5.26
18	9.00	2.00	5.00
19	9.50	2.10	4.76
20	10.00	2.20	4.55
21	10.50	2.20	0.00
22	11.00	2.30	4.35

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 411 TO 426.

BLANK VALUE = 2.3 micrograms carbon
BLANK FACTOR = 2.3 / 11.00067 = +2.1E-01 ug/min Carbon

Sample Run By: KR MONTEITH 12-27-94 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 12/27/94 Time: 02:09:37

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	2.20	100.00
3	1.50	8.90	75.28
4	2.00	18.00	50.56
5	2.50	24.60	26.83
6	3.00	28.80	14.58
7	3.50	30.60	5.88
8	4.00	31.70	3.47
9	4.50	32.50	2.46
10	5.00	33.10	1.81
11	5.50	33.60	1.49
12	6.00	34.40	2.33
13	6.50	35.30	2.55
14	7.00	35.90	1.67
15	7.50	36.40	1.37
16	8.00	36.90	1.36
17	8.50	37.20	0.81
18	9.00	37.20	0.00
19	9.50	37.20	0.00
20	10.00	37.20	0.00
21	10.50	37.20	0.00
22	11.00	37.20	0.00

BLANK VALUE = 37.2 micrograms carbon
BLANK FACTOR = 37.2 / 10.99966 = +3.38E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 12/27/94 Time: 03:37:42

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.30	0.00
2	1.00	32.40	95.99
3	1.50	211.40	84.67
4	2.00	400.30	47.19
5	2.50	515.60	22.36
6	3.00	569.50	9.46
7	3.50	589.10	3.33
8	4.00	595.20	1.02
9	4.50	597.60	0.40
10	5.00	598.50	0.15
11	5.50	599.30	0.13
12	6.00	600.00	0.12
13	6.50	600.50	0.08
14	7.00	600.90	0.07
15	7.50	601.20	0.05
16	8.00	601.60	0.07
17	8.50	602.00	0.07
18	9.00	602.30	0.05
19	9.50	602.60	0.05
20	10.00	602.90	0.05
21	10.50	603.20	0.05
22	11.00	603.50	0.05

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(603.5 - 2.309926)(1)/(1000) = +6.012E-01 g/L Carbon
(603.5 - 2.309926)(1)/(1000)(12) = +5.010E-02 Molar Carbon

Sample Run By: KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 12/27/94 Time: 03:50:17

Sample Size = 300 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.50	0.00
2	1.01	147.90	98.99
3	1.51	598.70	75.30
4	2.01	840.10	28.73
5	2.51	896.90	6.33
6	3.01	913.00	1.76
7	3.51	918.10	0.56
8	4.00	920.70	0.28
9	4.50	922.40	0.18
10	5.00	923.40	0.11
11	5.50	924.40	0.11
12	6.00	925.30	0.10
13	6.50	926.00	0.08
14	7.00	926.70	0.08
15	7.50	927.30	0.06
16	8.00	928.00	0.08
17	8.50	928.60	0.06
18	9.00	929.20	0.06
19	9.50	929.70	0.05
20	10.00	930.10	0.04
21	10.50	930.70	0.06
22	11.00	930.90	0.02

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(930.9 - 37.18846)(1)/(300) = +2.979E+00 g/L Carbon
(930.9 - 37.18846)(1)/(300)(12) = +2.483E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 331 Date: 12/27/94 Time: 04:26:04

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	10.90	98.17
3	1.50	63.50	82.83
4	2.00	124.60	49.04
5	2.50	163.80	23.93
6	3.00	184.20	11.07
7	3.50	195.10	5.59
8	4.00	200.10	2.50
9	4.50	203.60	1.72
10	5.00	206.50	1.40
11	5.50	208.90	1.15
12	6.00	210.80	0.90
13	6.50	212.70	0.89
14	7.00	214.10	0.65
15	7.50	215.70	0.74
16	8.00	217.00	0.60
17	8.50	218.00	0.46
18	9.00	219.10	0.50
19	9.50	220.20	0.50
20	10.00	221.00	0.36
21	10.50	221.90	0.41
22	11.00	222.70	0.36

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(222.7 - 2.309753)(1)/(1) = +2.204E+02 g/L Carbon
(222.7 - 2.309753)(1)/(1)(12) = +1.837E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

0.28042

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 331 Date: 12/27/94 Time: 04:38:28

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.90	0.00
2	1.01	26.00	92.69
3	1.51	49.10	47.05
4	2.01	60.80	19.24
5	2.51	67.00	9.25
6	3.01	71.60	6.42
7	3.51	75.10	4.66
8	4.01	77.80	3.47
9	4.50	80.00	2.75
10	5.00	81.50	1.84
11	5.50	82.60	1.33
12	6.00	83.70	1.31
13	6.50	84.40	0.83
14	7.00	85.30	1.06
15	7.50	86.00	0.81
16	8.00	86.60	0.69
17	8.50	87.20	0.69
18	9.00	87.80	0.68
19	9.50	88.40	0.68
20	10.00	88.90	0.56
21	10.50	89.40	0.56
22	11.00	89.90	0.56

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(89.9 - 37.18227)(1)/(1) = +5.27E+01 g/L Carbon
(89.9 - 37.18227)(1)/(1)(12) = +4.39E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

0.280 g/L

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: ~~311~~ 331 Date: 12/27/94 Time: 04:50:20

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.50	0.00
2	1.01	17.00	97.06
3	1.50	93.20	81.76
4	2.00	178.30	47.73
5	2.50	234.00	23.80
6	3.00	263.60	11.23
7	3.50	279.10	5.55
8	4.00	288.30	3.19
9	4.50	294.70	2.17
10	5.00	299.50	1.60
11	5.50	303.80	1.42
12	6.00	307.40	1.17
13	6.50	310.30	0.93
14	7.00	313.10	0.89
15	7.50	315.30	0.70
16	8.00	317.30	0.63
17	8.50	319.10	0.56
18	9.00	320.70	0.50
19	9.50	322.20	0.47
20	10.00	323.70	0.46
21	10.50	325.00	0.40
22	11.00	326.10	0.34

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(326.1 - 2.310134)(1)/(1) = +3.238E+02 g/L Carbon
(326.1 - 2.310134)(1)/(1)(12) = +2.698E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

0.3224g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: ~~311~~ 331 KRM/3-21-94 Date: 12/27/94 Time: 06:01:55

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.00	0.00
2	1.01	27.20	92.65
3	1.51	71.10	61.74
4	2.00	99.70	28.69
5	2.50	115.60	13.75
6	3.00	125.50	7.89
7	3.50	131.90	4.85
8	4.00	137.00	3.72
9	4.50	141.20	2.97
10	5.00	144.40	2.22
11	5.50	147.00	1.77
12	6.00	148.90	1.28
13	6.50	150.40	1.00
14	7.00	151.90	0.99
15	7.50	153.10	0.78
16	8.00	154.20	0.71
17	8.50	155.20	0.64
18	9.00	156.30	0.70
19	9.50	157.00	0.45
20	10.00	157.80	0.51
21	10.50	158.60	0.50
22	11.00	159.40	0.50

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(159.4 - 37.17598)(1)/(1) = +1.222E+02 g/L Carbon
(159.4 - 37.17598)(1)/(1)(12) = +1.019E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

0.3224g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 332 Date: 12/27/94 Time: 06:16:35

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.90	0.00
2	1.01	18.70	95.19
3	1.50	88.40	78.85
4	2.00	188.70	53.15
5	2.50	275.70	31.56
6	3.00	333.50	17.33
7	3.50	365.50	8.76
8	4.00	382.10	4.34
9	4.50	392.10	2.55
10	5.00	398.20	1.53
11	5.50	403.40	1.29
12	6.00	407.20	0.93
13	6.50	410.50	0.80
14	7.00	413.10	0.63
15	7.50	415.30	0.53
16	8.00	417.40	0.50
17	8.50	418.90	0.36
18	9.00	420.60	0.40
19	9.50	421.80	0.28
20	10.00	423.00	0.28
21	10.50	424.00	0.24
22	11.00	425.00	0.24

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(425 - 2.309583)(1)/(1) = +4.227E+02 g/L Carbon
(425 - 2.309583)(1)/(1)(12) = +3.522E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

0.1458 g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 332 Date: 12/27/94 Time: 06:28:36

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.50	0.00
2	1.01	30.80	91.88
3	1.51	73.00	57.81
4	2.00	102.50	28.78
5	2.50	125.30	18.20
6	3.00	152.20	17.67
7	3.50	181.80	16.28
8	4.00	205.00	11.32
9	4.50	221.60	7.49
10	5.00	232.60	4.73
11	5.50	240.10	3.12
12	6.00	245.30	2.12
13	6.50	249.00	1.49
14	7.00	251.70	1.07
15	7.50	253.70	0.79
16	8.00	255.40	0.67
17	8.50	256.80	0.55
18	9.00	258.10	0.50
19	9.50	259.10	0.39
20	10.00	260.00	0.35
21	10.50	260.80	0.31
22	11.00	261.50	0.27

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(261.5 - 37.17949)(1)/(1) = +2.243E+02 g/L Carbon
(261.5 - 37.17949)(1)/(1)(12) = +1.869E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

0.1458g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 332 Date: 12/27/94 Time: 06:40:51

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.20	0.00
2	1.01	30.10	96.01
3	1.50	168.60	82.15
4	2.00	359.80	53.14
5	2.50	512.30	29.77
6	3.00	611.20	16.18
7	3.50	668.70	8.60
8	4.00	702.00	4.74
9	4.50	720.60	2.58
10	5.00	733.20	1.72
11	5.50	742.70	1.28
12	6.00	749.70	0.93
13	6.50	755.00	0.70
14	7.00	759.80	0.63
15	7.50	763.80	0.52
16	8.00	766.90	0.40
17	8.50	769.70	0.36
18	9.00	772.10	0.31
19	9.50	774.40	0.30
20	10.00	776.30	0.24
21	10.50	778.10	0.23
22	11.00	779.60	0.19

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(779.6 - 2.309962)(1)/(1) = +7.773E+02 g/L Carbon
(779.6 - 2.309962)(1)/(1)(12) = +6.477E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

0.2521g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 332 Date: 12/27/94 Time: 06:52:52

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.00	0.00
2	1.00	47.60	93.70
3	1.50	137.50	65.38
4	2.00	205.90	33.22
5	2.50	253.10	18.65
6	3.00	303.80	16.69
7	3.50	355.70	14.59
8	4.00	397.20	10.45
9	4.50	426.80	6.94
10	5.00	446.60	4.43
11	5.50	460.30	2.98
12	6.00	470.30	2.13
13	6.50	477.50	1.51
14	7.00	482.50	1.04
15	7.50	486.80	0.88
16	8.00	490.10	0.67
17	8.50	492.70	0.53
18	9.00	494.80	0.42
19	9.50	496.80	0.40
20	10.00	498.20	0.28
21	10.50	499.70	0.30
22	11.00	500.70	0.20

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(500.7 - 37.17887)(1)/(1) = +4.635E+02 g/L Carbon
(500.7 - 37.17887)(1)/(1)(12) = +3.863E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

0.252 l g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 334 Date: 12/27/94 Time: 07:04:56

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.70	0.00
2	1.01	19.30	96.37
3	1.51	121.70	84.14
4	2.01	283.40	57.06
5	2.50	412.80	31.35
6	3.00	492.20	16.13
7	3.50	534.80	7.97
8	4.00	556.70	3.93
9	4.50	569.50	2.25
10	5.00	578.50	1.56
11	5.50	585.10	1.13
12	6.00	590.30	0.88
13	6.50	594.70	0.74
14	7.00	598.20	0.59
15	7.50	601.20	0.50
16	8.00	603.90	0.45
17	8.50	606.30	0.40
18	9.00	608.20	0.31
19	9.50	610.10	0.31
20	10.00	611.90	0.29
21	10.50	613.20	0.21
22	11.00	614.60	0.23

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(614.6 - 2.310147)(1)/(1) = +6.123E+02 g/L Carbon
(614.6 - 2.310147)(1)/(1)(12) = +5.102E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

0.2315g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 334 Date: 12/27/94 Time: 07:17:03

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.00	0.00
2	1.01	60.40	93.38
3	1.51	123.10	50.93
4	2.00	169.90	27.55
5	2.50	207.40	18.08
6	3.00	250.30	17.14
7	3.50	287.90	13.06
8	4.01	314.50	8.46
9	4.50	332.00	5.27
10	5.00	343.00	3.21
11	5.50	350.50	2.14
12	6.00	356.00	1.54
13	6.50	359.60	1.00
14	7.00	362.60	0.83
15	7.50	364.90	0.63
16	8.00	367.10	0.60
17	8.50	368.80	0.46
18	9.00	370.10	0.35
19	9.50	371.30	0.32
20	10.00	372.40	0.30
21	10.50	373.40	0.27
22	11.00	374.20	0.21

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(374.2 - 37.17608)(1)/(1) = +3.370E+02 g/L Carbon
(374.2 - 37.17608)(1)/(1)(12) = +2.809E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

0.2315 g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 334 Date: 12/27/94 Time: 07:28:59

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .21 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	3.30	84.85
3	1.51	45.90	92.81
4	2.00	174.20	73.65
5	2.50	330.00	47.21
6	3.00	444.60	25.78
7	3.50	513.00	13.33
8	4.00	547.70	6.34
9	4.50	565.00	3.06
10	5.00	575.30	1.79
11	5.50	583.40	1.39
12	6.00	590.00	1.12
13	6.50	595.00	0.84
14	7.00	599.20	0.70
15	7.50	603.20	0.66
16	8.00	606.30	0.51
17	8.50	609.00	0.44
18	9.00	611.30	0.38
19	9.50	613.50	0.36
20	10.00	615.40	0.31
21	10.50	617.20	0.29
22	11.00	618.80	0.26

USER INPUT BLANK VALUE
BLANK VALUE = 2.309929 micrograms carbon
BLANK FACTOR = 2.309929 / 10.99966 = +2.1E-01 ug/min Carbon

SAMPLE RESULTS:
(618.8 - 2.310141)(1)/(1) = +6.165E+02 g/L Carbon
(618.8 - 2.310141)(1)/(1)(12) = +5.137E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

0.2958

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 334 Date: 12/27/94 Time: 07:40:49

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.70	0.00
2	1.01	71.10	96.20
3	1.50	165.00	56.91
4	2.00	232.50	29.03
5	2.50	282.80	17.79
6	3.00	336.50	15.96
7	3.50	395.80	14.98
8	4.00	442.90	10.63
9	4.50	477.30	7.21
10	5.00	499.90	4.52
11	5.50	515.80	3.08
12	6.00	526.30	2.00
13	6.50	534.00	1.44
14	7.00	539.80	1.07
15	7.50	544.20	0.81
16	8.00	547.70	0.64
17	8.50	550.80	0.56
18	9.00	553.00	0.40
19	9.50	555.00	0.36
20	10.00	556.80	0.32
21	10.50	558.20	0.25
22	11.00	559.50	0.23

USER INPUT BLANK VALUE
BLANK VALUE = 37.17887 micrograms carbon
BLANK FACTOR = 37.17887 / 10.99966 = +3.4E+00 ug/min Carbon

SAMPLE RESULTS:
(559.5 - 37.17887)(1)/(1) = +5.223E+02 g/L Carbon
(559.5 - 37.17887)(1)/(1)(12) = +4.353E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

0.2958 g

 C108

LABCORE Data Entry Template for Worklist# 438

Analyst: KRM **Instrument:** TOC01 **Method:** LA-342-100 / A-0

Worklist Comment:

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK				@TICTOC1 TIC-02	SOLID	1	3.1	N/A	ug/g
1	BLNK				@TICTOC1 TOC-02	SOLID	1	26.2	N/A	ug/g
2	STD	15N12E			@TICTOC1 TIC-02	SOLID	6.00E+2	5.83E+2	N/A	ug/g
2	STD	10N12F			@TICTOC1 TOC-02	SOLID	3.00E+3	2.90E+3	N/A	ug/g
3	SAMPLE	S94T000384	0		@TICTOC1 TIC-02	SOLID	N/A	2.12E+3	5.00E+0	ug/g
3	SAMPLE	S94T000384	0		@TICTOC1 TOC-02 .2224g	SOLID	N/A	8.05E+2	8.00E+1	ug/g
4	DUP	S94T000384	0		@TICTOC1 TIC-02	SOLID	2.12E+3	2.78E+3	N/A	ug/g
4	DUP	S94T000384	0		@TICTOC1 TOC-02 .2579	SOLID	8.05E+2	1.13E+3	N/A	ug/g

Final page for worklist # 438

Analyst Signature **Date** 1-24-95

Data Entry Comments: SAMPLE S94T000384 - RUST COLORED PASTE - WITH CRYSTALS - NON HOMOGENEOUS

Data entered 1/25/95

Worklist approved 1/25/95

Units shown for QC (SPK) may not reflect the actual units.

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/24/95 Time: 02:44:39

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.50	100.00
3	1.50	1.50	66.67
4	2.00	1.90	21.05
5	2.50	2.00	5.00
6	3.00	2.20	9.09
7	3.50	2.20	0.00
8	4.00	2.30	4.35
9	4.50	2.40	4.17
10	5.00	2.40	0.00
11	5.50	2.50	4.00
12	6.00	2.60	3.85
13	6.50	2.60	0.00
14	7.00	2.70	3.70
15	7.50	2.70	0.00
16	8.00	2.80	3.57
17	8.50	2.80	0.00
18	9.00	2.90	3.45
19	9.50	2.90	0.00
20	10.00	3.00	3.33
21	10.50	3.10	3.23
22	11.00	3.10	0.00

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 428 TO 435.

BLANK VALUE = 3.1 micrograms carbon
BLANK FACTOR = 3.1 / 10.99982 = +2.8E-01 ug/min Carbon

Sample Run By: KR MONTEITH 1-24-95 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/24/95 Time: 02:56:41

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	6.40	100.00
3	1.51	14.80	56.76
4	2.00	18.80	21.28
5	2.50	20.90	10.05
6	3.00	22.20	5.86
7	3.50	23.10	3.90
8	4.00	23.70	2.53
9	4.50	24.10	1.66
10	5.00	24.40	1.23
11	5.50	24.70	1.21
12	6.00	24.90	0.80
13	6.50	25.00	0.40
14	7.00	25.20	0.79
15	7.50	25.40	0.79
16	8.00	25.50	0.39
17	8.50	25.60	0.39
18	9.00	25.80	0.78
19	9.50	25.90	0.39
20	10.00	26.00	0.38
21	10.50	26.10	0.38
22	11.00	26.20	0.38

BLANK VALUE = 26.2 micrograms carbon
BLANK FACTOR = 26.2 / 10.99886 = +2.38E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/24/95 Time: 03:09:02

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	17.10	100.00
3	1.50	158.20	89.19
4	2.00	338.30	53.24
5	2.50	468.60	27.81
6	3.00	532.30	11.97
7	3.50	562.20	5.32
8	4.00	574.40	2.12
9	4.50	579.00	0.79
10	5.00	581.30	0.40
11	5.50	582.30	0.17
12	6.00	583.10	0.14
13	6.50	583.70	0.10
14	7.00	584.20	0.09
15	7.50	584.70	0.09
16	8.00	585.00	0.05
17	8.50	585.30	0.05
18	9.00	585.60	0.05
19	9.50	585.80	0.03
20	10.00	586.10	0.05
21	10.50	586.30	0.03
22	11.00	586.50	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(586.5 - 3.079398)(1)/(1000) = +5.834E-01 g/L Carbon
(586.5 - 3.079398)(1)/(1000)(12) = +4.862E-02 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/24/95 Time: 03:26:22

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.10	0.00
2	1.00	128.10	99.14
3	1.50	492.20	73.97
4	2.00	759.80	35.22
5	2.50	844.00	9.98
6	3.00	870.70	3.07
7	3.50	880.00	1.06
8	4.00	884.00	0.45
9	4.50	886.10	0.24
10	5.00	887.50	0.16
11	5.50	888.60	0.12
12	6.00	889.60	0.11
13	6.50	890.40	0.09
14	7.00	891.10	0.08
15	7.50	891.80	0.08
16	8.00	892.40	0.07
17	8.50	893.00	0.07
18	9.00	893.40	0.04
19	9.50	893.80	0.04
20	10.00	894.20	0.04
21	10.50	894.50	0.03
22	11.00	894.70	0.02

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(894.7 - 26.1792)(1)/(~~1~~ 300) KRM 1-24-95 = ~~+8.685E+01~~ 2.8952E0 KRM 1-24-95 g/L Carbon
(894.7 - 26.1792)(1)/(1)(12) = +7.238E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 384 Date: 01/24/95 Time: 03:38:17

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	8.20	100.00
3	1.51	90.10	90.90
4	2.00	206.10	56.28
5	2.50	310.70	33.67
6	3.00	375.80	17.32
7	3.50	416.40	9.75
8	4.00	439.80	5.32
9	4.50	452.20	2.74
10	5.00	458.70	1.42
11	5.50	462.50	0.82
12	6.00	465.30	0.60
13	6.50	467.10	0.39
14	7.00	468.70	0.34
15	7.50	469.80	0.23
16	8.00	471.00	0.25
17	8.50	471.80	0.17
18	9.00	472.70	0.19
19	9.50	473.30	0.13
20	10.00	473.90	0.13
21	10.50	474.50	0.13
22	11.00	475.00	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(475 - 3.079675)(1)/(1) = +4.719E+02 g/L Carbon
(475 - 3.079675)(1)/(1)(12) = +3.933E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.2224 g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 384 Date: 01/24/95 Time: 03:51:13

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.80	0.00
2	1.01	22.30	96.41
3	1.50	77.90	71.37
4	2.00	123.30	36.82
5	2.50	149.90	17.75
6	3.00	164.10	8.65
7	3.50	172.20	4.70
8	4.00	178.60	3.58
9	4.50	183.00	2.40
10	5.00	187.80	2.56
11	5.50	191.50	1.93
12	6.00	194.70	1.64
13	6.50	197.10	1.22
14	7.00	199.00	0.95
15	7.50	200.40	0.70
16	8.00	201.50	0.55
17	8.50	202.30	0.40
18	9.00	203.10	0.39
19	9.50	203.70	0.29
20	10.00	204.40	0.34
21	10.50	204.80	0.20
22	11.00	205.20	0.19

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(205.2 - 26.1792)(1)/(1) = +1.790E+02 g/L Carbon
(205.2 - 26.1792)(1)/(1)(12) = +1.492E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

.2224g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 384 Date: 01/24/95 Time: 04:03:16

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	14.70	97.28
3	1.50	130.20	88.71
4	2.00	309.40	57.92
5	2.50	461.30	32.93
6	3.00	558.90	17.46
7	3.50	622.30	10.19
8	4.00	659.70	5.67
9	4.50	679.20	2.87
10	5.00	690.30	1.61
11	5.50	697.20	0.99
12	6.00	702.40	0.74
13	6.50	705.80	0.48
14	7.00	708.50	0.38
15	7.50	710.70	0.31
16	8.00	712.80	0.29
17	8.50	714.40	0.22
18	9.00	715.90	0.21
19	9.50	717.00	0.15
20	10.00	718.00	0.14
21	10.50	719.00	0.14
22	11.00	719.90	0.13

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(719.9 - 3.08047)(1)/(1) = +7.168E+02 g/L Carbon
(719.9 - 3.08047)(1)/(1)(12) = +5.973E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

-2579 2 1-26-95 434

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 384 Date: 01/24/95 Time: 05:20:13

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.80	0.00
2	1.01	35.20	94.89
3	1.51	116.50	69.79
4	2.00	184.10	36.72
5	2.50	227.50	19.08
6	3.00	252.10	9.76
7	3.50	265.80	5.15
8	4.00	275.30	3.45
9	4.50	282.40	2.51
10	5.00	288.80	2.22
11	5.50	294.00	1.77
12	6.00	299.20	1.74
13	6.50	303.30	1.35
14	7.00	306.90	1.17
15	7.50	309.30	0.78
16	8.00	311.20	0.61
17	8.50	313.00	0.58
18	9.00	314.20	0.38
19	9.50	315.40	0.38
20	10.00	316.40	0.32
21	10.50	317.40	0.32
22	11.00	318.10	0.22

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(318.1 - 26.17964)(1)/(1) = +2.919E+02 g/L Carbon
(318.1 - 26.17964)(1)/(1)(12) = +2.433E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

2579 [illegible]

LABCORE Data Entry Template for Worklist# 441

Analyst: KRM **Instrument:** TOC01 **Method:** LA-342-100 / A-0

Worklist Comment:

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK				@TICTOC1 TIC-02	SOLID		3.1	N/A	ug/g
1	BLNK				@TICTOC1 TOC-02	SOLID		26.2	N/A	ug/g
2	STD	15N12E			@TICTOC1 TIC-02	SOLID	6.00E+2	5.83E+2	N/A	ug/g
2	STD	10N12F			@TICTOC1 TOC-02	SOLID	3.00E+3	2.90E+3	N/A	ug/g
3	SAMPLE	S94T000385	0		@TICTOC1 TIC-02	SOLID	N/A	2.18E+3	5.00E+0	ug/g
3	SAMPLE	S94T000385	0		@TICTOC1 TOC-02 .3024g	SOLID	N/A	9.23E+2	8.00E+1	ug/g
4	DUP	S94T000385	0		@TICTOC1 TIC-02	SOLID	2.18E+3	1.90E+3	N/A	ug/g
4	DUP	S94T000385	0		@TICTOC1 TOC-02 .3071g	SOLID	9.23E+2	7.58E+2	N/A	ug/g

Final page for worklist # 441

Analyst Signature RE Wright

Date 1-24-95

Data Entry Comments: SAMPLE S94T000385 - RUST COLORED PASTE WITH CRYSTALS NON HOMOGENEOUS

Worklist approved 1/26/95

Units shown for QC (SPK) may not reflect the actual units.

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/24/95 Time: 02:44:39

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	0.50	100.00
3	1.50	1.50	66.67
4	2.00	1.90	21.05
5	2.50	2.00	5.00
6	3.00	2.20	9.09
7	3.50	2.20	0.00
8	4.00	2.30	4.35
9	4.50	2.40	4.17
10	5.00	2.40	0.00
11	5.50	2.50	4.00
12	6.00	2.60	3.85
13	6.50	2.60	0.00
14	7.00	2.70	3.70
15	7.50	2.70	0.00
16	8.00	2.80	3.57
17	8.50	2.80	0.00
18	9.00	2.90	3.45
19	9.50	2.90	0.00
20	10.00	3.00	3.33
21	10.50	3.10	3.23
22	11.00	3.10	0.00

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 437 TO 444.

BLANK VALUE = 3.1 micrograms carbon
BLANK FACTOR = 3.1 / 10.99982 = +2.8E-01 ug/min Carbon

Sample Run By: KR MONTEITH 00000 1-24-95

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/24/95 Time: 02:56:41

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	6.40	100.00
3	1.51	14.80	56.76
4	2.00	18.80	21.28
5	2.50	20.90	10.05
6	3.00	22.20	5.86
7	3.50	23.10	3.90
8	4.00	23.70	2.53
9	4.50	24.10	1.66
10	5.00	24.40	1.23
11	5.50	24.70	1.21
12	6.00	24.90	0.80
13	6.50	25.00	0.40
14	7.00	25.20	0.79
15	7.50	25.40	0.79
16	8.00	25.50	0.39
17	8.50	25.60	0.39
18	9.00	25.80	0.78
19	9.50	25.90	0.39
20	10.00	26.00	0.38
21	10.50	26.10	0.38
22	11.00	26.20	0.38

BLANK VALUE = 26.2 micrograms carbon
BLANK FACTOR = 26.2 / 10.99886 = +2.38E+00 ug/min Carbon

~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~ JWB 1/26/95

Sample Run By: KR MONTEITH 00000

P

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/24/95 Time: 03:08:53

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	17.10	100.00
3	1.50	158.20	89.19
4	2.00	338.30	53.24
5	2.50	468.60	27.81
6	3.00	532.30	11.97
7	3.50	562.20	5.32
8	4.00	574.40	2.12
9	4.50	579.00	0.79
10	5.00	581.30	0.40
11	5.50	582.30	0.17
12	6.00	583.10	0.14
13	6.50	583.70	0.10
14	7.00	584.20	0.09
15	7.50	584.70	0.09
16	8.00	585.00	0.05
17	8.50	585.30	0.05
18	9.00	585.60	0.05
19	9.50	585.80	0.03
20	10.00	586.10	0.05
21	10.50	586.30	0.03
22	11.00	586.50	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(586.5 - 3.079398)(1)/(1000) = +5.834E-01 g/L Carbon
(586.5 - 3.079398)(1)/(1000)(12) = +4.862E-02 Molar Carbon

Sample Run By: KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/24/95 Time: 03:26:12

Sample Size = ~~1 uL~~ 300 uL JWB 1/26/95
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.10	0.00
2	1.00	128.10	99.14
3	1.50	492.20	73.97
4	2.00	759.80	35.22
5	2.50	844.00	9.98
6	3.00	870.70	3.07
7	3.50	880.00	1.06
8	4.00	884.00	0.45
9	4.50	886.10	0.24
10	5.00	887.50	0.16
11	5.50	888.60	0.12
12	6.00	889.60	0.11
13	6.50	890.40	0.09
14	7.00	891.10	0.08
15	7.50	891.80	0.08
16	8.00	892.40	0.07
17	8.50	893.00	0.07
18	9.00	893.40	0.04
19	9.50	893.80	0.04
20	10.00	894.20	0.04
21	10.50	894.50	0.03
22	11.00	894.70	0.02

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(894.7 - 26.1792)(1)/~~(1)~~ 300 1-24-95 = ~~+8.685E+02~~ 2.895E0 JWB 1-24-95 g/L Carbon
(894.7 - 26.1792)(1)/(1)(12) = +7.238E+01 Molar Carbon
~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~ JWB 1/26/95

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 385 Date: 01/24/95 Time: 05:45:22

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.70	0.00
2	1.01	21.00	87.14
3	1.51	147.20	85.73
4	2.00	310.40	52.58
5	2.50	433.70	28.43
6	3.00	517.60	16.21
7	3.50	570.90	9.34
8	4.00	602.50	5.24
9	4.50	620.10	2.84
10	5.00	630.40	1.63
11	5.50	637.40	1.10
12	6.00	642.10	0.73
13	6.50	645.70	0.56
14	7.00	649.20	0.54
15	7.50	652.00	0.43
16	8.00	654.30	0.35
17	8.50	656.20	0.29
18	9.00	658.00	0.27
19	9.50	659.40	0.21
20	10.00	660.70	0.20
21	10.50	661.90	0.18
22	11.00	663.00	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(663 - 3.079154)(1)/(1) = +6.599E+02 g/L Carbon
(663 - 3.079154)(1)/(1)(12) = +5.499E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.30292 JLM 1-26-95

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 385 Date: 01/24/95 Time: 05:58:15

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.80	0.00
2	1.01	49.70	92.35
3	1.51	126.50	60.71
4	2.01	184.30	31.36
5	2.51	221.90	16.94
6	3.01	245.10	9.47
7	3.51	257.10	4.67
8	4.00	265.40	3.13
9	4.50	272.40	2.57
10	5.00	278.20	2.08
11	5.50	284.30	2.15
12	6.00	289.00	1.63
13	6.50	292.10	1.06
14	7.00	294.50	0.81
15	7.50	296.50	0.67
16	8.00	298.50	0.67
17	8.50	300.00	0.50
18	9.00	301.50	0.50
19	9.50	302.80	0.43
20	10.00	304.00	0.39
21	10.50	304.90	0.30
22	11.00	305.80	0.29

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(305.8 - 26.17913)(1)/(1) = +2.796E+02 g/L Carbon
(305.8 - 26.17913)(1)/(1)(12) = +2.330E+01 Molar Carbon
~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~ JWB 1/26/95

Sample Run By: _____
KR MONTEITH 00000

.30292 JHM 1-26-95 442

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 385 Date: 01/24/95 Time: 06:15:04

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .28 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.00	0.00
2	1.01	15.70	100.00
3	1.51	108.60	85.54
4	2.01	250.30	56.61
5	2.50	367.90	31.97
6	3.00	447.00	17.70
7	3.50	497.30	10.11
8	4.00	524.80	5.24
9	4.50	540.80	2.96
10	5.00	550.20	1.71
11	5.50	557.10	1.24
12	6.00	562.80	1.01
13	6.50	566.90	0.72
14	7.00	571.00	0.72
15	7.50	574.30	0.57
16	8.00	576.60	0.40
17	8.50	579.00	0.41
18	9.00	580.90	0.33
19	9.50	582.70	0.31
20	10.00	584.20	0.26
21	10.50	585.80	0.27
22	11.00	586.90	0.19

USER INPUT BLANK VALUE
BLANK VALUE = 3.079679 micrograms carbon
BLANK FACTOR = 3.079679 / 10.99886 = +2.8E-01 ug/min Carbon

SAMPLE RESULTS:
(586.9 - 3.079675)(1)/(1) = +5.838E+02 g/L Carbon
(586.9 - 3.079675)(1)/(1)(12) = +4.865E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.3071g JLM 1-26-95

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 385 Date: 01/24/95 Time: 06:29:01

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.38 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.20	0.00
2	1.01	34.20	93.57
3	1.50	96.40	64.52
4	2.00	147.90	34.82
5	2.50	183.00	19.18
6	3.00	203.00	9.85
7	3.50	214.20	5.23
8	4.00	221.80	3.43
9	4.50	227.90	2.68
10	5.00	233.50	2.40
11	5.50	238.80	2.22
12	6.00	242.70	1.61
13	6.50	245.80	1.26
14	7.00	248.30	1.01
15	7.50	250.50	0.88
16	8.00	252.20	0.67
17	8.50	253.80	0.63
18	9.00	255.00	0.47
19	9.50	256.10	0.43
20	10.00	257.10	0.39
21	10.50	258.10	0.39
22	11.00	259.00	0.35

USER INPUT BLANK VALUE
BLANK VALUE = 26.17728 micrograms carbon
BLANK FACTOR = 26.17728 / 10.99886 = +2.4E+00 ug/min Carbon

SAMPLE RESULTS:
(259 - 26.17492)(1)/(1) = +2.328E+02 g/L Carbon
(259 - 26.17492)(1)/(1)(12) = +1.940E+01 Molar Carbon
~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~ JWB 1/26/95

Sample Run By: _____
KR MONTEITH 00000

.3071 g JM 1-26-95

WHC-SD-WM-DP-082, REV.1 C108

LABCORE Data Entry Template for Worklist# 440

Analyst: KRM **Instrument:** TOC01 **Method:** LA-342-100 1A-0

Worklist Comment:

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK				@TICTOC1 TIC-02	SOLID	1	5.3	N/A	ug/g
1	BLNK				@TICTOC1 TOC-02	SOLID	1	28.0	N/A	ug/g
2	STD	15N 12E			@TICTOC1 TIC-02	SOLID	6.00E+2	5.88E+2	N/A	ug/g
2	STD	10N 12F			@TICTOC1 TOC-02	SOLID	3.00E+3	2.92E+3	N/A	ug/g
3	SAMPLE	S94T000387	0		@TICTOC1 TIC-02 .2162g	SOLID	N/A	3.39E+3	5.00E+0	ug/g
3	SAMPLE	S94T000387	0		@TICTOC1 TOC-02 .2162g	SOLID	N/A	1.27E+3	8.00E+1	ug/g
4	DUP	S94T000387	0		@TICTOC1 TIC-02 .2297g	SOLID	3.39E+3	1.41E+3	N/A	ug/g
4	DUP	S94T000387	0		@TICTOC1 TOC-02	SOLID	1.27E+3	4.93E+2	N/A	ug/g

Final page for worklist # 440

Analyst Signature

1-23-95
Date
1-24-95

Data Entry Comments: S94T000387 - RUST COLORED PASTE WITH RED & GREEN CHUNKS

High RPDs due to non-homogenous samples.

Worklist approved 1/25/95

Units shown for QC (SPK) may not reflect the actual units.

Page: 1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/23/95 Time: 03:22:35

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	1.60	93.75
3	1.51	2.70	40.74
4	2.00	3.10	12.90
5	2.50	3.40	8.82
6	3.00	3.50	2.86
7	3.50	3.70	5.41
8	4.00	3.80	2.63
9	4.50	3.90	2.56
10	5.00	4.10	4.88
11	5.50	4.10	0.00
12	6.00	4.30	4.65
13	6.50	4.30	0.00
14	7.00	4.50	4.44
15	7.50	4.60	2.17
16	8.00	4.70	2.13
17	8.50	4.80	2.08
18	9.00	4.90	2.04
19	9.50	5.00	2.00
20	10.00	5.10	1.96
21	10.50	5.10	0.00
22	11.00	5.30	3.77

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 446 TO 453.

BLANK VALUE = 5.3 micrograms carbon
BLANK FACTOR = 5.3 / 11.0015 = +4.8E-01 ug/min Carbon

Sample Run By: KR MONTEITH 1-23-95 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 01/23/95 Time: 03:43:06

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BLK
Blank Value = N/A

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	5.20	100.00
3	1.51	13.50	61.48
4	2.00	19.10	29.32
5	2.50	21.20	9.91
6	3.00	22.60	6.19
7	3.50	23.40	3.42
8	4.00	24.10	2.90
9	4.50	24.70	2.43
10	5.00	25.20	1.98
11	5.50	25.50	1.18
12	6.00	25.90	1.54
13	6.50	26.10	0.77
14	7.00	26.40	1.14
15	7.50	26.60	0.75
16	8.00	26.80	0.75
17	8.50	27.00	0.74
18	9.00	27.20	0.74
19	9.50	27.40	0.73
20	10.00	27.50	0.36
21	10.50	27.70	0.72
22	11.00	28.00	1.07

BLANK VALUE = 28 micrograms carbon
BLANK FACTOR = 28 / 11.00066 = +2.55E+00 ug/min Carbon

~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~ GJB 1/25/95

Sample Run By: KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/23/95 Time: 03:56:40

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .48 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	26.90	100.00
3	1.51	171.90	84.35
4	2.00	344.30	50.07
5	2.50	461.30	25.36
6	3.00	532.30	13.34
7	3.50	566.50	6.04
8	4.00	580.40	2.39
9	4.50	585.50	0.87
10	5.00	587.90	0.41
11	5.50	589.20	0.22
12	6.00	589.90	0.12
13	6.50	590.50	0.10
14	7.00	591.00	0.08
15	7.50	591.40	0.07
16	8.00	591.70	0.05
17	8.50	592.00	0.05
18	9.00	592.30	0.05
19	9.50	592.60	0.05
20	10.00	592.80	0.03
21	10.50	593.00	0.03
22	11.00	593.20	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 5.280315 micrograms carbon
BLANK FACTOR = 5.280315 / 11.00066 = +4.8E-01 ug/min Carbon

SAMPLE RESULTS:
(593.2 - 5.280718)(1)/(1000) = +5.879E-01 g/L Carbon
(593.2 - 5.280718)(1)/(1000)(12) = +4.899E-02 Molar Carbon

Sample Run By: KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 01/23/95 Time: 05:05:47

Sample Size = 300 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.55 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.70	0.00
2	1.01	88.50	99.21
3	1.50	430.40	79.44
4	2.00	752.00	42.77
5	2.50	847.40	11.26
6	3.00	879.40	3.64
7	3.50	889.10	1.09
8	4.00	893.20	0.46
9	4.50	895.20	0.22
10	5.00	897.00	0.20
11	5.50	898.20	0.13
12	6.00	899.20	0.11
13	6.50	900.00	0.09
14	7.00	900.70	0.08
15	7.50	901.30	0.07
16	8.00	901.90	0.07
17	8.50	902.40	0.06
18	9.00	902.80	0.04
19	9.50	903.20	0.04
20	10.00	903.60	0.04
21	10.50	903.90	0.03
22	11.00	904.20	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 28.05167 micrograms carbon
BLANK FACTOR = 28.05167 / 11.00066 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(904.2 - 28.04914)(1)/(300) = +2.921E+00 g/L Carbon
(904.2 - 28.04914)(1)/(300)(12) = +2.434E-01 Molar Carbon
~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~

JAB 1/25/95

Sample Run By: _____
KR MONTEITH 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: ~~384~~ 387 from 1-23-95 Date: 01/23/95 Time: 05:59:43

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .48 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	12.50	100.00
3	1.50	118.40	89.44
4	2.01	301.90	60.78
5	2.51	468.70	35.59
6	3.00	582.30	19.51
7	3.50	651.30	10.59
8	4.00	687.10	5.21
9	4.50	704.80	2.51
10	5.00	713.70	1.25
11	5.50	719.30	0.78
12	6.00	723.70	0.61
13	6.50	726.70	0.41
14	7.00	729.10	0.33
15	7.50	731.20	0.29
16	8.00	732.80	0.22
17	8.50	734.20	0.19
18	9.00	735.30	0.15
19	9.50	736.40	0.15
20	10.00	737.30	0.12
21	10.50	738.00	0.09
22	11.00	738.60	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 5.280315 micrograms carbon
BLANK FACTOR = 5.280315 / 11.00066 = +4.8E-01 ug/min Carbon

SAMPLE RESULTS:
(738.6 - 5.280718)(1)/(1) = +7.333E+02 g/L Carbon
(738.6 - 5.280718)(1)/(1)(12) = +6.111E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

-2162 2 1-26-95

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: ~~384~~ 389 Date: 01/23/95 Time: 06:14:06

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.55 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	28.70	98.61
3	1.51	103.50	72.27
4	2.00	175.50	41.03
5	2.50	218.50	19.68
6	3.00	242.00	9.71
7	3.50	254.70	4.99
8	4.00	264.30	3.63
9	4.50	271.50	2.65
10	5.00	278.00	2.34
11	5.50	283.20	1.84
12	6.00	287.70	1.56
13	6.50	290.90	1.10
14	7.00	293.40	0.85
15	7.50	295.40	0.68
16	8.00	297.00	0.54
17	8.50	298.50	0.50
18	9.00	299.80	0.43
19	9.50	300.90	0.37
20	10.00	301.80	0.30
21	10.50	302.60	0.26
22	11.00	303.30	0.23

USER INPUT BLANK VALUE
BLANK VALUE = 28.05167 micrograms carbon
BLANK FACTOR = 28.05167 / 11.00066 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(303.3 - 28.05171)(1)/(1) = +2.752E+02 g/L Carbon
(303.3 - 28.05171)(1)/(1)(12) = +2.294E+01 Molar Carbon
~~<<<< WARNING --- BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!!>>>>~~

JB 1/25/95

Sample Run By: KR MONTEITH 00000

.2162g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: ~~384~~ 387 Date: 01/23/95 Time: 06:25:55

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .48 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	4.60	0.00
2	1.01	17.70	74.01
3	1.51	85.30	79.25
4	2.00	169.00	49.53
5	2.50	229.60	26.39
6	3.00	270.50	15.12
7	3.50	291.70	7.27
8	4.00	302.60	3.60
9	4.50	309.00	2.07
10	5.00	313.70	1.50
11	5.50	316.30	0.82
12	6.00	318.70	0.75
13	6.50	320.70	0.62
14	7.00	322.20	0.47
15	7.50	323.50	0.40
16	8.00	324.70	0.37
17	8.50	325.60	0.28
18	9.00	326.60	0.31
19	9.50	327.30	0.21
20	10.00	328.00	0.21
21	10.50	328.60	0.18
22	11.00	329.10	0.15

USER INPUT BLANK VALUE
BLANK VALUE = 5.280315 micrograms carbon
BLANK FACTOR = 5.280315 / 11.00066 = +4.8E-01 ug/min Carbon

SAMPLE RESULTS:
(329.1 - 5.279912)(1)/(1) = +3.238E+02 g/L Carbon
(329.1 - 5.279912)(1)/(1)(12) = +2.699E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

0.2297g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 387 Date: 01/23/95 Time: 06:41:26

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.55 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	16.00	96.88
3	1.51	54.60	70.70
4	2.01	86.10	36.59
5	2.51	103.90	17.13
6	3.01	113.50	8.46
7	3.51	118.90	4.54
8	4.00	123.30	3.57
9	4.50	126.70	2.68
10	5.00	130.10	2.61
11	5.50	132.20	1.59
12	6.00	134.10	1.42
13	6.50	135.50	1.03
14	7.00	136.50	0.73
15	7.50	137.40	0.66
16	8.00	138.20	0.58
17	8.50	138.80	0.43
18	9.00	139.40	0.43
19	9.50	139.90	0.36
20	10.00	140.30	0.29
21	10.50	140.80	0.36
22	11.00	141.20	0.28

USER INPUT BLANK VALUE
BLANK VALUE = 28.05167 micrograms carbon
BLANK FACTOR = 28.05167 / 11.00066 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(141.2 - 28.04907)(1)/(1) = +1.132E+02 g/L Carbon
(141.2 - 28.04907)(1)/(1)(12) = +9.429E+00 Molar Carbon
~~<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>~~

GAB 1/25/95

Sample Run By: KR MONTEITH 00000

0.2297 g

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RADIOCHEMICAL ANALYSES

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Lab Segment Serial No. K220-222	Customer ID: C-108
Analysis: AT	Sample Prep: FUSION

Instrument: WA57277	Procedure/ Rev: LA-508-101 D-0
Technologist: JM VAN SANT	Date: 06/27/94
Starting Time: 0800	Temperature 25 C
Ending Time: 1230	Chemist: S FITZGERALD

Comments: BATCHES ~~370~~ 3704
LAD 7-15-95

	Description	Lab ID
1	LMCS STD	K220--5525
2	BLANK	K221-6625
3	SAMPLE	K222-6725
4	SAMPLE DUP	K222-6825
5	SAMPLE SPIKE	K222-6925
6	LMCS STD	~~K5586-5520-5~~ 6-27-94
7		
8		
9		
10		

	Description	Lab ID
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS STD	21B52	10ML		
LMCS SPIKE	21B52	10ML		
		455		

ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-508-101

DATE START: June 27, 1994

PREPARED BY: L. L. Fritts L L Fritts 7-6-94

DATE COMPLETE: July 6, 1994

	UNITS:	uCi/mL							
SPL NAME	SPL ID	ANALYTE	RESULT #1	RESULT #2	AVERAGE	RPD%	%REC	DET LIM	% CT ER
STD 21B52	K220	AT	8.84E-3				90.7	2.55E-7	5.5
BLANK	K221	AT	<5.14E-5					1.29E-4	120.8
C-108	K222	AT	<1.38E0	<9.25E-1	N/A	N/A		2.59E0	285.4
								2.32E0	211.7
SPIKE	K222	AT	86.5						

NARRATIVE: [X] NO SPECIAL PROBLEMS/METHOD VARIATIONS IN THIS BATCH

LIST SPECIFIC PROBLEMS/VARIATIONS FOR THIS BATCH:

The results for the standard are in uCi/L.

The result for the spike is in percent recovery.

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE WHC-SD-WM-DP- 082 , REV. 1

Batch 3704

Serial No.	Sample Point	Date	Time Issued	Priority
K 220.-5525	C-108	6-15-94	13: 4	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
AT	LA-508-101	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? 10mL	STD

Remarks, Calculations, Results

S510 EV-CRB

STD# 21852 RESULT 8.84E-03

STD VAL 9.7497-3 %REC 90.7

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr		
6-27-94				

54-5800-061 (R-10-83)

AT: LA-508-101 (D-0) LIQUIDS

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STANDARD	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	1505	1346
3704	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.8	0.8
AT	SAMPLE SIZE in mL (SS)	10.000	10
Test Code	DILUTION FACTOR (DF)	1	1
	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
LIQUID	Ic, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	49.367	44.067
Sample #	SAMPLE CONCENTRATION in µCi/L	9.34E-03	8.34E-03
K220-5525	AVG. µCi/L in SAMPLE and REPLICATE =		8.8418E-03
Instrument Code			
	Rs (Sample Count Rate) = (TC / CT) - BKG		
Analyst	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)		
VAN SANT	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L		
Date	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
06/27/94	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Time			

v RESULTS v

ALPHA TOTAL	in µCi/L	(AVERAGE)	=	8.84E-03
ALPHA TOTAL	in µCi/mL	(AVERAGE)	=	8.84E-06
RELATIVE COUNTING ERROR			=	5.5%

DETECTION LEVEL 2.55E-07 µCi/mL

Data Entry by:		Date:	06-Jul-94
Approved by:		Date:	6 Jul 94

Form L1 Rev. 2.1

TOTAL ALPHA ANALYSIS

15/2 6-27-94 MS K220-5525 56 (Alpha)

Alpha Calculation (CRPC_CAL 2.0)
By: KM BARELA, 62820, on 06-27-1994 at 19:24:00
Det #15 2 -inch mount Alpha eff. : .238
Sample size : 10 mL Dilution : 1

1505 / 30

Sample # K-220 Mount # 1

$$\frac{1505}{30} - 0.8 = 9.3434E\text{-}03 \text{ uCi/L alpha}$$

1346 / 30

Sample # K-220 Mount # 2 = 8.84-3

$$\frac{1346}{30} - 0.8 = 8.3403E\text{-}03 \text{ uCi/L alpha}$$

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-082, REV. 1

Serial No.	Sample Point	Date	Time Issued	Priority
K 221.-6625	C-108	6-15-94	13: 5	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
AT	LA-508-101	uCi/G Rec	N4C3G	0

Sample Size	Customer ID
? ~~.05 - 10~~ VS 6-27-94 ~~.100 mL~~ 10mL	BLANK

Remarks, Calculations, Results

COUNT AS uCI/L
USE 13,14,15 OR 16

< 5.14E-05 uCi/g

VANSANT

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
	[signature]	[signature]		
Hrs	Hrs	Hrs	Hrs	Hrs
		Rebecca		

Date	Time Completed	Lab Unit Mgr	
6-27-94		[signature]	[signature]

54-6800-061 (R-10-83)

AT: LA-508-101 (D-0) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		15	15
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	12	14
3704	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.8	0.8
AT	SAMPLE SIZE in mL	(SS)	10.000	10.000
Test Code	DILUTION FACTOR	(DF)	1	1
	DIGEST GRAMS of SOLIDS/LITER	(D g/L)	1.984	1.984
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax or Rs (Sample Rate) as Appropriate		0.539	0.539
Sample #	CONCENTRATION in µCi/g		5.14E-05	5.14E-05
K221-6625	AVG. µCi/L in DIGEST SOLUTION =		<	1.0199E-04

Instrument Code

Analyst: J. VANSANT

Date: 06/27/94

Time: 12:30

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

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF * / (EFF * SS * D g/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 RESULT v

ALPHA TOTAL	in µCi/g	(AVERAGE) =	< 5.14E-05	DETECTION LEVEL
LESS Than Value was Determined from Lc.				1.29E-04 µCi/g
RELATIVE COUNTING ERROR	=		120.8%	

Data Entry by: [signature] Date: 28-Jun-94

Approved by: [signature] Date: 6 Jul 94

Form L2 Rev. 2.1

Page 1 of 1

TOTAL ALPHA ANALYSIS

15/2 6-27-94 MB K221-6625 7-8 (Alpha)

Alpha Calculation (CRPC_CAL 2.0)
By: KM BARELA, 62820, on 06-27-1994 at 19:24:36
Det #15 2 -inch mount Alpha eff. : .238
12 Sample size : 10 µL Dilution : 1
30 Sample # K-221 Mount # 1

12
---------- - 0.8 < 7.2013E-05 uCi/L alpha
30

14 -
30 Sample # K-221 Mount # 2

14
---------- - 0.8 < 7.2013E-05 uCi/L alpha
30

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

WHC-SD-WM-DP-082, REV. 1

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6725	C-108	6-15-94	13: 6	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
AT	LA-508-101	uCi/G Rec	N4C3G	0

Sample Size	Customer ID
? .05-10-.100mL	C61S1

Remarks, Calculations, Results

COUNT AS uCI/L
USE 13,14,15 OR 16

<1.38E00 uci/g

VANSANT

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr.		
6-27-94				

54-6800-061 (R-10-83)

AT: LA-508-101 (D-0) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	14	29
3704	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.8	0.8
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	201	201
	DIGEST GRAMS of SOLIDS/LITER (D g/L)	1.984	1.984
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs (Sample Rate) as Appropriate	0.539	0.719
Sample #	CONCENTRATION in µCi/g	1.03E+00	1.38E+00
K222-6725	AVG. µCi/L in DIGEST SOLUTION =	<	2.3934E+00
Instrument Code			
	Rs (Sample Count Rate) = (TC / CT) - BKG		
Analyst	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF * / (EFF * SS * D g/L * 2220000dpm/µCi)		
J. VANSANT	Relative Counting Error = ((The Square Root of TC + BKG * CT) / (TC - BKG * CT)) * 1.96 * 100		
Date	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
06/27/94			
Time			
12:30	v RESULT v		

ALPHA TOTAL	in µCi/g	(AVERAGE) =	< 1.38E+00	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				2.59E+00 µCi/g
RELATIVE COUNTING ERROR	=		285.4%	

Data Entry by: R. C. Jones Date: 28-Jun-94

Approved by: [signature] Date: 6 Jul 94

Form L2 Rev. 2.1

Page 1 of 1

TOTAL ALPHA ANALYSIS

15/~ 6-27-94 K222-6725 9-10 (alpha)

Alpha Calculation (CRPC_CAL 2.0)
By: KM BARKLA, 62820 on 06-27-1994 at 19:22:37
~~Det. #15~~ 2-inch mount Alpha eff. : .238
Sample size : 1 mL Dilution : 2010

14/30

Sample # K-222 Mount # 1

29/30 = 0.8 < 1.4475E+00 uCi/L alpha

Sample # K-222 Mount # 2

29/30 = 0.8 < 2.1573E+00 uCi/L alpha

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

Serial No	Sample Point	Date	Time Issued	Priority
K 222.-6825	C-108	6-15-94	13: 6	20

Determination	Method/Standard	Result Units	Charge Code	Reruns
AT	LA-508-101	uCi/G Rec	N4C3G	0

Sample Size	Customer ID
? .050-10-.100 mL	C61S1

Remarks, Calculations, Results

COUNT AS uCI/L
USE 13,14,15 OR 16

< 9.25E-01 uci/g

VANSANT

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr		
6-27-94				

54-6800-061 (R-10-83)

AT: LA-508-101 (D-0) SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
DUPLICATE	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	14	18
3704	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.8	0.8
AT	SAMPLE SIZE in mL (SS)	0.100	0.100
Test Code	DILUTION FACTOR (DF)	201	201
	DIGEST GRAMS of SOLIDS/LITER (D g/L)	2.2172	2.2172
Matrix	EFFICIENCY FACTOR (EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs (Sample Rate) as Appropriate	0.539	0.539
Sample #	CONCENTRATION in µCi/g	9.25E-01	9.25E-01
K222-6825	AVG. µCi/L in DIGEST SOLUTION =	<	2.0500E+00
Instrument Code			
	Rs (Sample Count Rate) = (TC / CT) - BKG		
Analyst	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF * / (EFF * SS * D g/L * 2220000dpm/µCi)		
J. VANSANT	Relative Counting Error = ((The Square Root of TC + BKG * CT) / (TC - BKG * CT)) * 1.96 * 100		
Date	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
06/27/94			
Time			
12:30	v RESULT v		

ALPHA TOTAL	in µCi/g (AVERAGE) =	< 9.25E-01	DETECTION LEVEL
	LESS Than Value was Determined from Lc.		2.32E+00 µCi/g
RELATIVE COUNTING ERROR	=	211.7%	

Data Entry by: Date: 28-Jun-94

Approved by: Date: 6 Jul 94

Form L2 Rev. 2.1

Page 1 of 1

TOTAL ALPHA ANALYSIS

15/2 6-27-94 → K222-6825 11-12 (Alpha)

Alpha Calculation (CRPC_CAL 2.0)
By: KM BARKLA, 62820, on 06-27-1994 at 19:22:13
Det #15 2 -inch mount Alpha eff. : .238
Sample size : 1 mL Dilution : 2010

14/30 Sample # K-222 Mount # 1

$\frac{14}{30}$ - 0.8 < 1.4475E+00 uCi/L alpha

18/30 Sample # K-222 Mount # 2

$\frac{18}{30}$ - 0.8 < 1.4475E+00 uCi/L alpha

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

Serial No.	Sample Point	Date	Time Issued	Priority
K 222.-6925	C-108	6-15-94	13: 6	20

Determination	Method-Standard	Result Units	Charge Code	Reruns
AT	LA-508-101	% RECOVERY	N4C3G	0

Sample Size	Customer ID
? .050-10-.100mL	C61S1

Remarks, Calculations, Results

SAMPLE SPIKED ID
SPIKE ID 2B52
SPIKE VOLUME 10mL 86.5%

VANSANT

Analyst - 1	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
	EmBaker			
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr		
6-27-94				

54-6800-061 (R-10-83)

AT: LA-508-101 (D-0) SPIKED SAMPLE

Type			SPIKE	REPLICATE
SPIKE	DETECTOR NUMBER		15	15
Work List	DISH SIZE 1, 2, or 5	(MS)	2	2
3704	TOTAL COUNTS	(TC)	1304	1418
AT or TB ?	COUNT TIME in MINUTES	(CT)	30	30
AT	BACKGROUND in cpm	(BKG)	0.8	0.8
Test Code	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.100	0.100
	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	201	201
Matrix	SPIKE VOLUME in mL	(SVol)	10.000	10.000
	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	0.0097497	0.0097497
K222-6925	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.238	0.238
Instrument Code	SAMPLE + SPIKE µCi/L	(S+S)	1.62E+02	1.77E+02
	AVG. SAMPLE or DIGEST µCi/L from FORM #1		<2.3934E00	

Analyst: J. VANSANT

Date: 06/27/94

Time: 12:30

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

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

AVG. PERCENT SPIKE RECOVERY = (((((S+S µCi/L (Spike) + S+S µCi/L (Replicate))/2)-Sample µCi/L)*((SDF/Svol)/(DF/SS)))

NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for percent recovery calculation.

RESULT **AVG. PERCENT SPIKE RECOVERY = 86.5%**

Data Entry by:		Date:	28-Jun-94
Approved by:		Date:	6 Jul 94

Form L3 Rev. 2.1

TOTAL ALPHA ANALYSIS

15/2 [illegible] K2226925 13-14 (Alpha)

Alpha Calculation (CRPC_CAL 2.0)
By: EM BARKLA, 62820, on 06-27-1994 at 19:23:16
Det #15 2 -inch mount Alpha eff. : .238
Sample size : 1 mL Dilution : 2010

1304/30 .8

Sample # K-222 Mount # 1

$$\frac{1304}{30} \cdot 0.8 = 1.6231E+02 \text{ uCi/L alpha}$$

1418/30

Sample # K-222 Mount # 2

$$\frac{1418}{30} \cdot 0.8 = 1.7677E+02 \text{ uCi/L alpha}$$

WHC-SD-WM-DP-082, REV. 1 C105 QA

LABCORE Data Entry Template for Worklist# 209

Analyst: AKL **Instrument:** AB00 15 **Method:** LA-508-101 D-2

Worklist Comment: Determine AT S.S. using Ludlum detector. Use .1 mL Alpha SPK

	Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
1,2	1	BLNK-PREP				@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	1	BLNK-PREP				@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
3,4	2	STD				@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	2	STD				@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
5,6	3	SAMPLE	S94T000289	0		@ALPHA01	ALPHA01	SOLID	N/A			uCi/g
	3	SAMPLE	S94T000289	0		@ALPHA01	ALPHA01E	SOLID	N/A			% Ct.
7,8	4	DUP	S94T000289	0		@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	4	DUP	S94T000289	0		@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
9,10	5	SPK	S94T000289	0		@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
11,12	6	SAMPLE	S94T000296	0		@ALPHA01	ALPHA01	SOLID	N/A			uCi/g
	6	SAMPLE	S94T000296	0		@ALPHA01	ALPHA01E	SOLID	N/A			%
13,14	7	DUP	S94T000296	0		@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	7	DUP	S94T000296	0		@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
15,16	8	SPK	S94T000296	0		@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
17,18	9	BLNK-PREP				@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	9	BLNK-PREP				@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
	10	STD				@ALPHA01	ALPHA01	SOLID			N/A	uCi/g
	10	STD				@ALPHA01	ALPHA01E	SOLID			N/A	% Ct.
19,20	11	SAMPLE	S94T000297	0		@ALPHA01	ALPHA01	SOLID	N/A			uCi/g
	11	SAMPLE	S94T000297	0		@ALPHA01	ALPHA01E	SOLID	N/A			% Ct.

Data Entry Comments: Did not need STD #10 on Worklist.

12-12-94

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 209

'nalyst: AKL **Instrument:** AB00 _____ **Method:** LA-508-101

Worklist Comment: Determine AT S.S. using Ludlum detector. Use .1 mL Alpha SPK

Seg	Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit
12	DUP	S94T000297	0	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
12	DUP	S94T000297	0	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct.
13	SAMPLE	S94T000298	0	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
13	SAMPLE	S94T000298	0	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct.
14	DUP	S94T000298	0	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
14	DUP	S94T000298	0	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct.

Final page for worklist # 209

Alita Lewis
Analyst Signature

12-7-94
Date
12/8/94

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) LIQUIDS

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		15	15
STANDARD	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	1377	1360
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
AT	SAMPLE SIZE in mL	(SS)	10.000	10.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		45.400	44.833
Sample #	Sample Concentration in µCi/L		8.59E-03	BOOK#
S94T289,296,297,298	Replicate Concentration in µCi/L		8.49E-03	71B52
Instrument Code				
WB26872	Average Concentration in µCi/L		8.5390E-03	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
12/07/94	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			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	8.54E-06	DETECTION LEVEL
				1.31E-07 µCi/mL
RELATIVE COUNTING ERROR		=	5.4%	

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/08/94

WHC-SD-WM-DP-082, REV. 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) SOLIDS

				BLANK	REPLICATE
Type	DETECTOR NUMBER			15	15
BLANK	DISH SIZE 1, 2, or 5	(MS)		2	2
Work List	TOTAL COUNTS	(TC)		5	4
209	COUNT TIME in MINUTES	(CT)		30	30
AT or TB ?	BACKGROUND in cpm	(BKG)		0.5	0.5
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)		1.9992	1.9992
Matrix	EFFICIENCY FACTOR	(EFF)		0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			0.301	0.301
Sample #	Sample Concentration in µCi/g		<	2.88E-02	BOOK#
S94T289,296	Replicate Concentration in µCi/g		<	2.88E-02	
Instrument Code					
WB26872	Maximum Concentration in µCi/g		<	2.8804E-02	
Analyst					
AKL					
Date					
12/07/94					
Time					
11:00 AM					

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)	=	< 2.88E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.					6.63E-02 µCi/g
RELATIVE COUNTING ERROR			=	87.7%	

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

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		15	15
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	20	13
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.9992	1.9992
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.492	0.301
Sample #	Sample Concentration in µCi/g	<	4.70E-02	BOOK#
LAD 12-22-94 ~~S94T289~~ S94T000289	Replicate Concentration in µCi/g	<	2.88E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	4.7048E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 4.70E-02	DETECTION LEVEL
	LESS THAN Value was Determined from Rmax.			
RELATIVE COUNTING ERROR		=	500.0%	6.63E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

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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		15	15
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	21	17
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	2.0216	2.0216
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.530	0.378
Sample #	Sample Concentration in µCi/g	<	5.01E-02	BOOK#
9947280 [illegible]	Replicate Concentration in µCi/g	<	3.57E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	5.0116E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

NAD 12-22-94

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 5.01E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				6.55E-02 µCi/g
RELATIVE COUNTING ERROR		=	500.0%	

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		15	15
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	48358	45122
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.9992	1.9992
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	36.393	36.393
LAD 12-8-94 ~~S94T205~~ ~~S94T205-259~~	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.238	0.238
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	1.54E+02	1.44E+02
WB26872	AVERAGE or MAXIMUM µCi/g from FORM C		<4.7048E-2	
Analyst	BOOK#		94B43	
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)			
12/07/94	PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100			
Time				
11:00 AM				

RESULT: AVG. PERCENT SPIKE RECOVERY = 81.0%

Data Entry by:	[signature]	Date:	08-Dec-94
Approved by:	[signature]	Date:	12/8/94

Form 508101_X Rev. 1.3

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		15	15
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	24	20
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	2.0936	2.0936
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.643	0.492
Sample #	Sample Concentration in µCi/g	<	5.88E-02	BOOK#
S94T296	Replicate Concentration in µCi/g	<	4.49E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	5.8753E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

LAD 12-22-94

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 5.88E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				
RELATIVE COUNTING ERROR		=	231.9%	6.33E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

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		15	15
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	62	39
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	2.096	2.096
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.567	0.800
Sample #	Sample Concentration in µCi/g		1.43E-01	BOOK#
LAD 12-22-94 ~~S94T206-S4/T2005/~~	Replicate Concentration in µCi/g		7.30E-02	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.0792E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	1.08E-01	
RELATIVE COUNTING ERROR		=	60.0%	6.32E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		15	15
SPIKE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	50612	52030
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	2.0936	2.0936
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	36.393	36.393
~~S94T296~~ S94T000296	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.238	0.238
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	1.54E+02	1.58E+02
WB26872	AVERAGE or MAXIMUM µCi/g from FORM C		<5.8753E-2	
Analyst	BOOK#		94B43	
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)			
12/07/94	PERCENT SPIKE RECOVERY = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/SVol)/(DF/SS/Dg/L)))/SVal)*100			
Time				
11:00 AM				

RESULT AVG. PERCENT SPIKE RECOVERY = 88.9%

Data Entry by:	[signature]	Date:	08-Dec-94
Approved by:	[signature]	Date:	12/8/94

Form 508101_X Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) SOLIDS

			BLANK	REPLICATE
Type	DETECTOR NUMBER		15	15
BLANK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	13	11
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.8164	1.8164
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.301	0.301
Sample #	Sample Concentration in µCi/g	<	3.17E-02	BOOK#
S94T297,298	Replicate Concentration in µCi/g	<	3.17E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	3.1703E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.17E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				7.29E-02 µCi/g
RELATIVE COUNTING ERROR		=	500.0%	

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

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		15	15
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	10	8
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.8164	1.8164
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.301	0.301
Sample #	Sample Concentration in µCi/g	<	3.17E-02	BOOK#
LAD 12-2094 S94T297 S94T000292	Replicate Concentration in µCi/g	<	3.17E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	3.1703E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.17E-02	DETECTION LEVEL
	LESS Than Value was Determined from Lc.			
RELATIVE COUNTING ERROR		=	196.0%	7.29E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

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		15	15
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	14	12
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.8164	1.8164
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.301	0.301
Sample #	Sample Concentration in µCi/g	<	3.17E-02	BOOK#
594T297-[illegible]	Replicate Concentration in µCi/g	<	3.17E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	3.1703E-02	
Analyst				
AKL				
Date				
12/07/94				
Time				
11:00 AM				

MD 12/20/94

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) =	< 3.17E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				7.29E-02 µCi/g
RELATIVE COUNTING ERROR		=	500.0%	

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

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		15	15
SAMPLE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	29	29
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.8528	1.8528
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.467	0.467
Sample #	Sample Concentration in µCi/g		4.81E-02	BOOK#
9947299 [illegible]	Replicate Concentration in µCi/g		4.81E-02	
Instrument Code				
WB26872	Average Concentration in µCi/g		4.8147E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

LAD 12/20/94

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	4.81E-02	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	92.9%	7.15E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3

WHC-SD-WM-DP-082, REV. 1

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		15	15
DUPLICATE	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	18	26
209	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.5	0.5
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)	1.87	1.87
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.416	0.367
Sample #	Sample Concentration in µCi/g	<	4.25E-02	BOOK#
S94T208	Replicate Concentration in µCi/g		3.75E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	4.2520E-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)			
12/07/94				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
11:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 4.25E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rs.				
RELATIVE COUNTING ERROR		=	500.0%	7.09E-02 µCi/g

Data Entry by:	[signature]	Date:	12/08/94
Approved by:	[signature]	Date:	12/8/94

Form 508101_C Rev. 1.3