START

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 613664

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 []	A.D. Rice, Characterization Plans and Reports, T6-06, 373-5878	[] Yes [X] No	05/15/95
	5. Project Title/No./Work Order No. Tank 241-AX-102, Auger Samples 95-AUG-006 and 95-AUG-007	6. Bldg./Sys./Fac. No. N/A	7. Approval Designator Q
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-DP-100, Rev. 0	9. Related ECN No(s). N/A	10. Related PO No. 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.

MAY 1995 RECEIVED EDMC

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

RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE MAY 17 1995
55 Sta 5

A-7900-013-2 (11/94) GEF095

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): ECN-613664

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.	A.D. Rice	5-15-95	PE		
Cog. Mgr.	J.G. Kristofzski	5-15-95	QA		
QA	E. W. Miller	5-16-95	Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

9516.2785

SUPPORTING DOCUMENT

1. Total Pages 146

2. Title	3. Number	4. Rev No.
90-Day Final Report for Tank 241-AX-102, Auger Samples 95-AUG-006 and 95-AUG-007	WHC-SD-WM-DP-100	0-A

5. Key Words

90-Day, 90-Day Report, Tank 241-AX-102, Tank AX-102, AX-102, Auger Samples, 95-AUG-006, 95-AUG-007

6. Author

Name: Andrew D. Rice

Signature

Organization/Charge Code 75310/MDR21

7. Abstract

N/A

8. RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE MAY 17 1995
55 Sta. 5

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RECORD OF REVISION	(1) Document Number WHC-SD-WM-DP-100	Page A

(2) Title
90-Final Report for Tank 241-AX-102, Auger Samples 95-AUG-006 and 95-AUG-007

CHANGE CONTROL RECORD

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release (5) Cog. Engr.	(6) Cog. Mgr. Date
0	(7) Initially released 04/17/95 on EDT-610412.	A.D. Rice	J.G. Kristofzski
0-A RS	Incorporate per ECN-613644.	A.D. Rice	J.G. Kristofzski 5-15-95

A-7320-005 (08/91) WEF168

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-100, REV. OA

ANALYTICAL SERVICES

90-DAY FINAL REPORT FOR TANK 241-AX-102, AUGERS 95-AUG-006 AND 95-AUG-007.

Date Printed: MAY 15, 1995

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Total Organic/Total Inorganic Worklist # 881 50

Hydroxide Worklist # 1272 67

Cyanide Worklist # 1361 73

Ion Chromatograph Worklist # 1191 82

Total Apha/Total Beta Worklist # 672 95
Total Apha/Total Beta Worklist # 693 105
Total Apha/Total Beta Worklist # 745 115

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NARRATIVE

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90-DAY FINAL REPORT FOR TANK 241-AX-102, AUGERS 95-AUG-006 AND 95-AUG-007.

Summary

This is the final report for tank AX-102, augers 95-AUG-006 and 95-AUG-007. It contains the primary results called for in the organic DQO, and the required secondary analyses for auger 95-AUG-007. There was insufficient sample to perform secondary analyses on Auger 95-AUG-006, which contained only 2 grams of sample at extrusion. Samples from both augers (S95T000203/206) exceeded the notification limit for Total Organic Carbon (TOC). Notification was made on 3/31/95. DSC and TGA results, which were previously reported in reference (2) below, have been included in the attached analytical summary tables to assist in data interpretation.

As the final report, the following is also included: the extrusion logbook, chains of custody, sample preparation data, and the raw data for all analyses other than DSC and TGA, which has been provided in reference (2) below.

Sample Receipt and Extrusion

A narrative which details sample receipt and extrusion is contained in reference (2) below.

Analytical Results

Total Organic Carbon (TOC)

The TOC analysis was performed using procedure LA-342-100 Rev A-0. The coulometer solution turned foggy on the first run and spike recoveries were high, apparently due to method byproduct interferences. A rerun was performed with modifications intended to remove the interferences. The reanalysis did not solve the problem, however, as indicated by further high spike recoveries. The TCP precision criteria of 10% RPD was not met by either sample, quite possibly due to the interferences mentioned above. The TCP accuracy criteria was met. Results for the 95-AUG-006 sample (S95T000203) averaged 5.73 E+04 ug/g, and the 95-AUG-007 sample (S95T000206) averaged 5.58 E+04 ug/g. Both exceeded the notification limit of 3.00 E+04 ug/g, for which notification was made on 3/31/95. These results are higher than the TOC values determined in 1988, although assumptions about density could account for much of this difference.

Hydroxide (OH)

Hydroxide analysis was required because the energy equivalent of the TOC assay for sample S95T000206 was greater than 125% of the DSC value. The OH analysis was performed using procedure LA-211-102 Rev B-1. No analytical problems were noted. No free hydroxide above the detection limit was observed in the 95-AUG-007 sample (S95T000593). All TCP quality control criteria were met.

Ion Chromatography (IC)

Ion Chromatography for nitrate and nitrite was required because the energy equivalent of the TOC assay for sample S95T000206 was greater than 125% of the DSC value. The IC analysis for nitrite and nitrate was performed using LA-533-105 Rev C-2. The TCP precision and accuracy criteria were met. The spike recovery for nitrate was low due to high concentration of nitrate in the sample. Additional dilution would correct this problem, but the precision of the nitrite value would suffer. The 95-AUG-007 sample (S95T000593) averaged 4.07 E+04 ug/g nitrite, and 1.72 E+05 ug/g nitrate.

Cyanide (CN)

Cyanide analysis was required because DSC results for this sample exceeded the notification limit. Analysis was performed using LA-695-102 Rev C-0. No analytical problems were noted. The TCP accuracy criteria was exceeded, but all other criteria were met. No analytical problems were noted. The 95-AUG-007 sample (S95T000206) averaged 26.2 ug/g CN.

References:

(1) WHC-SD-WM-TP-227, Rev. 1, "Tank 241-AX-102 Tank Characterization Plan", dated January 24, 1995, Westinghouse Hanford Company, Richland, WA 99352

(2) WHC-SD-WM-DP-100, Rev. 0, "45-Day Safety Screen Results for Tank 241-AX-102, Augers 95-AUG-006 and 95-AUG-007", dated April 17, 1995, Westinghouse Hanford Company, Richland, WA 99352

WHC-SD-WM-DP-100, REV. 0A

SAMPLE DATA SUMMARY

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90 DAY REPORT FOR AUGERS 95-AUG-006 AND 95-AUG-007
AX-102

CORE NUMBER: n/a
SEGMENT #: 95-AUG-006

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000203			% Water by TGA using Mettler	%	17.000	101.000	97.26	n/a	29.57	28.01	28.79	5.42	n/a	n/a	n/a
S95T000203			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.000	n/a	n/a	494.0	488	491.0	1.22	n/a	n/a	n/a
S95T000203			DSC Exotherm using Mettler	Joules/g	None	None	98.42	n/a	352.1	347.8	350.0	1.23	n/a	n/a	n/a
S95T000203			TOC by Persulfate/Coulometry	ug/g	-1.000	30000.00	90.33	31.80	6.12e+04	5.34e4	5.73e+04	13.6	196.0	80.00	n/a

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90 DAY REPORT FOR AUGERS 95-AUG-006 AND 95-AUG-007
AX-102

CORE NUMBER: n/a
SEGMENT #: 95-AUG-007

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits Lower	Action Limits Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000206			% Water by TGA using Mettler	%	17.000	101.000	97.26	n/a	31.12	33.30	32.21	6.77	n/a	n/a	n/a
S95T000206			DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	481.000	n/a	n/a	416.0	487	451.5	15.7	n/a	n/a	n/a
S95T000206			DSC Exotherm using Mettler	Joules/g	None	None	98.42	n/a	282.3	330.3	306.3	15.7	n/a	n/a	n/a
S95T000206			Cyanide by Microdist. & Spec.	ug/g	-1.000	39000.00	121.3	1.200	26.80	25.7	26.25	4.19	103.0	3.100	n/a
S95T000206			TOC by Persulfate/Coulometry	ug/g	-1.000	30000.00	90.33	31.80	6.35e+04	4.81e4	5.58e+04	27.6	n/a	80.00	n/a
S95T000593		W	OH- by Pot. Titration	ug/g	None	None	100.2	n/a	< 1.66e3	<1.66e3	n/a	n/a	n/a	1.66e+03	n/a
S95T000593		W	Nitrite by IC - Dionex 4000i	ug/g	None	None	99.62	<3050.0	4.01e+04	4.13e4	4.07e+04	2.95	87.80	3.05e+03	n/a
S95T000593		W	Nitrate by IC - Dionex 4000i	ug/g	None	None	100.9	<3810.0	1.72e+05	1.72e5	1.72e+05	0.00	48.40	3.81e+03	n/a

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CHAIN OF CUSTODY FORMS

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COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number ~~95-AUG-6~~ B2-13-95 (2) Sample Number 95-AUG-6 (3) Supervisor Jim Sickels

(4) Tank AX-102 (5) Riser 3A (6) Cask Serial Number SN-25-G

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<.5 mR/hr @ C	<0.5 mR/hr
Side Dose Rate	7 mR/hr @ C	7 mR/hr
Bottom Dose Rate	2 mR/hr @ C	2 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<20 α, ~~<4000 dpm~~ (Alpha)
	<1k dpm/100 cm² (Beta-Gamma)	<1000 dpm/100 cm² (Beta-Gamma)
RCT*	[signature] (Signature)	[signature] (Signature)

(8) Shipment Description

A. Work Package Number	ES-94-701/0
B. Cask Seal Number	3755
C. Date and Time Sample Removed from Tank	2/10/95 1300 hrs
D. Expected Liquid Content	10%
E. Expected Solid Content	90%
F. Dose Rate Through Drill String	200 mR/HR
G. Expected Sample Length	10%

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

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AP-102	2225 Labs	James Sickels	2/13/95 11:00 AM	

(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
[signature] James Sickels 2-13-95	[signature]	2-13-95 11:32	

(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
[signature] CEA BYRD	[signature] N. LAPIERS	2-13-95 1210	

(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)

WHC-SD-WM-DP-100, REV. 0-A

COPY

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number _____ (2) Sample Number 95-AUG-7 (3) Supervisor Jim Sickels

(4) Tank 241-AX-102 (5) Riser 9E (6) Cask Serial Number C1054

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/hr	<0.5 mR/HR
Side Dose Rate	14 mR/hr	10 mR/hr
Bottom Dose Rate	<0.5 mR/hr	0.5 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<20 dpm (Alpha)
	<1K dpm/100 cm² (Beta-Gamma)	<1K dpm/100 (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description	
A. Work Package Number	ES-94-00701
B. Cask Seal Number	1070
C. Date and Time Sample Removed from Tank	2-14-95 12:15 pm
D. Expected Liquid Content	10%
E. Expected Solid Content	90%
F. Dose Rate Through Drill String	1 R/hr
G. Expected Sample Length	10"

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

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AX-102	222S Lab	JAMES SICKELS	2-15-95	
(17) Relinquished By (Sign and PRINT)		(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
JAMES SICKELS		BYRD	2-15-95 1205	
(21) Relinquished By (Sign and PRINT)		(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
			02-15-95 1110	
(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

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)

WHC-SD-WM-DP-100, REV. 0-A

WHC-SD-WM-DP-100, REV. 0A

LOGBOOK

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NOTEBOOK/LOGBOOK UNCLASSIFIED COVERSHEET

SECTION I

RECORD COPY
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DOCUMENT CONT

Notebook No. WHC-N-1064 1

Date of Issue 10-7-94 Copy #1

Title 241-AX-102

Author Richard K Fuller

If continued from another notebook give the notebook number

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

Responsible Custodian	Payroll No.	MSIN	Date Assigned
R.K. Fuller	67528	T6-31	10-7-94

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

Abstract: (Give brief description of notebook contents)

Period Covered: (Inclusive dates - Month/Day/Year)

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

Custodian's Signature and Date

Retention Schedule:	Specialist Concurrence Name	Custodian's Manager's Name

BD-6001-256 (10/93)

1-5
6-9
10-13

CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

B2-13-95

(1) Shipment Number 95-AUG-6 (2) Sample Number 95-AUG-6 (3) Supervisor Jim Sickels

(4) Tank AX-102 (5) Riser 5A (6) Cask Serial Number SN-25-6

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<.5 mR/hr @ C	<0.5 mR/hr
Side Dose Rate	7 mR/hr @ C	7 mR/hr
Bottom Dose Rate	2 mR/hr @ C	2 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<20 dpm/100 cm² (Alpha)
	<1K dpm/100 cm² (Beta-Gamma)	<1000 dpm/100 cm² (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	E2-94-761
B. Cask Seal Number	3755
C. Date and Time Sample Removed from Tank	2/10/95 1300 hrs
D. Expected Liquid Content	10%
E. Expected Solid Content	90%
F. Dose Rate Through Drill String	200 mR/HR
G. Expected Sample Length	10%

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

COPY

12

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AP 102	222S Labs	James Sickels	2/13/95 11:00 AM	
(17) Relinquished By (Sign and PRINT)		**(18) Received By (Sign and PRINT)**	**(19) Date/Time**	**(20) Receiver Comments**
James Sickels	2-13-95	Charles E. Byrd	2-13-95 11:32	
(21) Relinquished By (Sign and PRINT)		**(22) Received By (Sign and PRINT)**	**(23) Date/Time**	**(24) Receiver Comments**
Charles E. Byrd CE Byrd		N. Napiers	2-13-95 1210	
(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

WHC-SD-WM-DF-100, REV. 0

March 01, 1995

TCP#: WHC-SD-WM-TP-227
Sample #: 95-AUG-6
Logbook #: WHC-N-1064

Work list #619

Video Tape #4 Title AX-Farm
Hasselblad Camera also was used Photo used = 8# Frame Number
Balance check 20gm = 19.99g 500gm = 499.98gm
Hot Cell Temperature 78.8° Humidity 20%

* There were NO Liner liquid present.
* description of solids: Dark Brown, very thin coating, like a film covering.
* Sub sample description:

Vial # 6496
Size: 20mL
final wt: 29.677 g.
Initial wt: 27.70
Net wt: 1.977

Collected material Dark Brown, thin layer Sludge, was taking From flute 2-9.

word perfect directory = (C:\WP Data\WK Plans\~~AX102\AX102 AUG INF~~ ~~AX\102~~ Farm ARB
word perfect file = AX-102 AUG INF.
Lab Core Number = 595T000158

* Sampler Efficiency: Auger

~~Volume of~~ ARB 03/01/95

* Estimated Auger percent recovery ≅ 25%

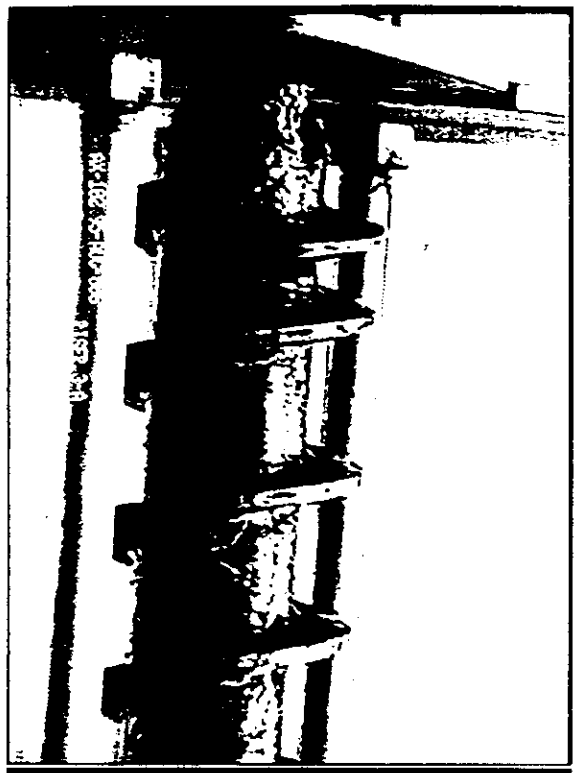
MARCH 6, 95

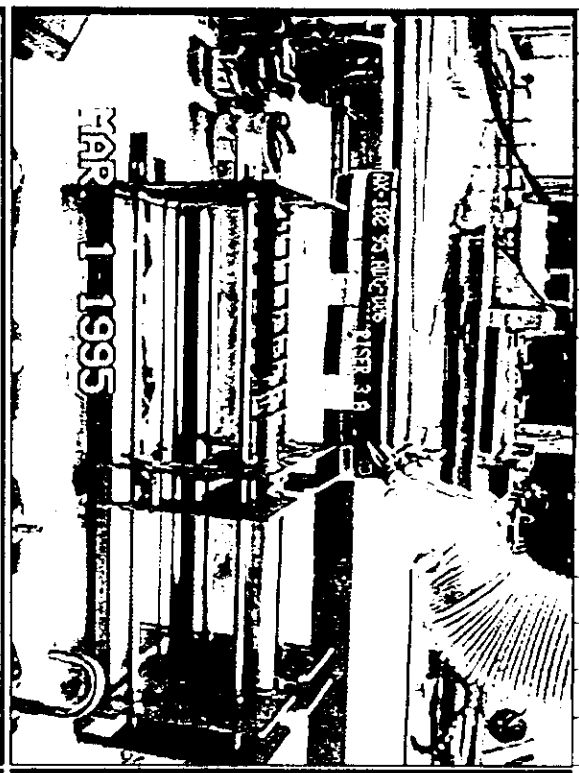
RECAP: SAMPLE / JAC INFORMATION

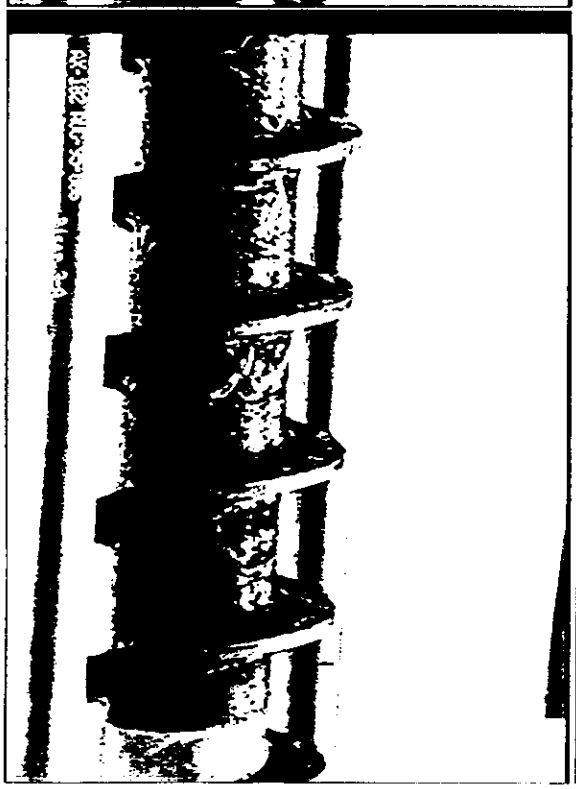
JAN #/VIAL #	MATERIAL (Liquid/Solid)	MASS (GRAMS)
C496 (2 cm/size)	Solid	1.97 GRAMS

AX102 95 AUG-006 RISER 3A
PHOTOGRAPH

MARCH 8, 95







CHAIN-OF-CUSTODY RECORD FOR AUGER SAMPLING

(1) Shipment Number _____ (2) Sample Number 95-AUG-7 (3) Supervisor Jim Sickels

(4) Tank 241-AX-102 (5) Riser 9E (6) Cask Serial Number C1054

Radiation Survey Data:	(7) FIELD	(31) LABORATORY
Over Top Dose Rate	<0.5 mR/hr	<0.5 mR/Hr
Side Dose Rate	14 mR/hr	10 mR/hr
Bottom Dose Rate	<0.5 mR/hr	0.5 mR/hr
Smearable Contamination	<20 dpm/100 cm² (Alpha)	<2 dpm α (Alpha)
	<1K dpm/100 cm² (Beta-Gamma)	<1K dpm/100 (Beta-Gamma)
RCT*	(Signature)	RCT* (Signature)

(8) Shipment Description

A. Work Package Number	ES-94 [illegible]
B. Cask Seal Number	1070
C. Date and Time Sample Removed from Tank	2-10-95
D. Expected Liquid Content	10%
E. Expected Solid Content	90%
F. Dose Rate Through Drill String	1 R/hr
G. Expected Sample Length	10"

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

(10) Field Comments

(32) Laboratory Comments

(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time	(15) Sender Comments
241-AX-102	222S Lab	JAMES SICKELS	2-15-95	

(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Date/Time	(20) Receiver Comments
JAMES SICKELS	CHARLES E BYRD	2-15-95 1205	

(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Date/Time	(24) Receiver Comments
CHARLES E BYRD	Sandra Cobb	02-15-95 1110	

(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

March 21, 1995

SERIAL NUMBER
LOGBOOK NUMBER
CHECKLIST NUMBER: 120
VIDEO TAPE: #1 / MAX FARM
HASSELBLAD CAMERA: FRAME #1
BALANCE CHECK 20 grams = 19.99 grams 500 grams = 499.98 grams
HOT CELL Temp: 79°F % Humidity: 20%
LABCORE SAMPLE NUMBER: S95T000173

EXTRUSION INFORMATION:

* DRAINABLE LIQUIDS

JAR NUMBER: 6407# (40 ml vial size)
Final wt 27.153 grams
Initial wt 25.050 grams
Net wt 2.07 grams

Liquid ~~was~~ Aqs is Dark brown in color, turbid, collected approximately 2 mls; No organic Layer present.

* Solids:

JAR NUMBER: 6559 (125 ml JAR size)
Final wt 162.37 grams
Initial wt 127.92 grams
Net wt 34.45 grams

- Solid material was medium brown in color, moist resembled sludge.
- collected material from Flutes 2 thru 9.

RECOVERY:

* Estimated Auger percent recovery is 10%, based on a 10 inch expected sample length.

[illegible]

March 21, 95

[illegible]

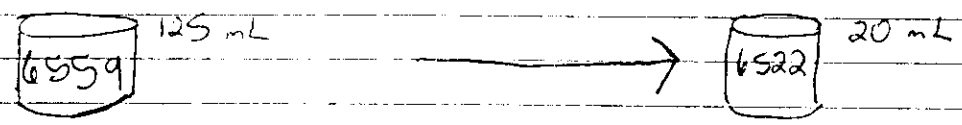
[illegible] (2nd) mass (grams)

[illegible] (2nd) 2.87 grams

[illegible] 34.45 grams

NOTE: Difficult time removing the sleeve from ~~the~~ the Auger. Coiled spring on the AUGER STEM made it difficult to remove the sleeve.

3-3-95 AX-102 95-AVG-007 Riser 9E

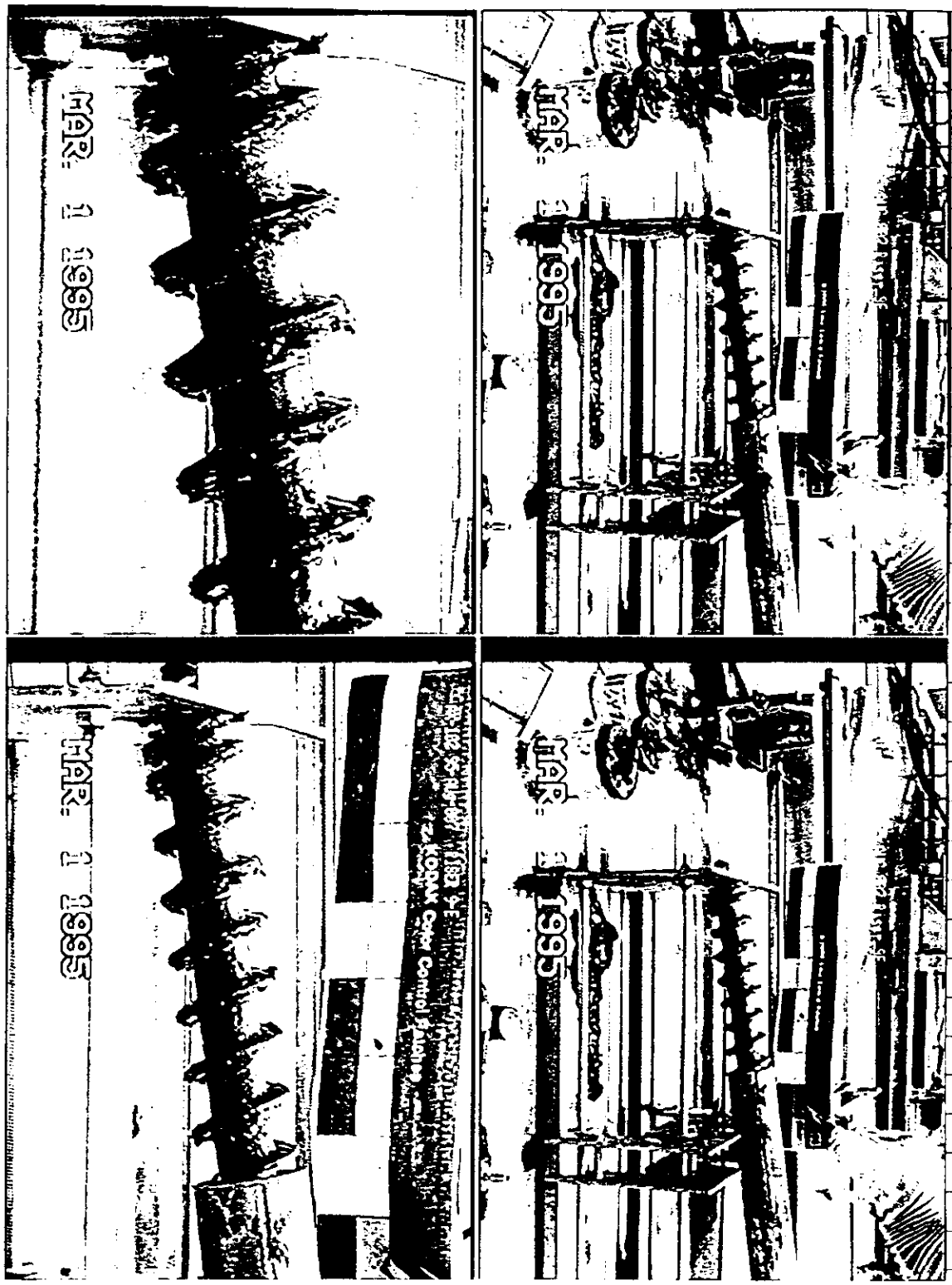


Initial wt.:	162.24 g	Initial wt.:	26.99
Final wt.:	153.64 g	Final wt.:	33.97
Net wt.:	8.60 g	Net wt.:	6.98

Vial # 6522 transferred to lab for TIC/TOC, DSC/TGA an fusion.

AX102 95AUG-007 RISER 9E
PHOTOGRAPH

March 8/95



9513.2801

SAMPLE ANALYSES RESULTS

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LABCORE Data Entry Template for Worklist# 619

Analyst: EC Instrument: BA000 Method: LO-160-103 A-7

Worklist Comment: AX-102 95-AUG-6 Riser 3A Extrusion

Seg	Type	Sample#		Rep	AlTest	Matrix	Actual	Found	DL	Uni
1	INSTCHK01				EXTRUD01	SOLID	20.00	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500.00	499.98	N/A	
3	SAMPLE	S95T000158	0		DLIQVOL1	SOLID	N/A	0		mL
4	SAMPLE	S95T000158	0		DLIQWT01	SOLID	N/A	0		g
5	SAMPLE	S95T000158	0		EST.G/ML	SOLID	N/A	0		g/mL
6	SAMPLE	S95T000158	0		EXTRUD01	SOLID	N/A	Complete		
7	SAMPLE	S95T000158	0		LLIQWT01	SOLID	N/A	0		g
8	SAMPLE	S95T000158	0		NOTEBOOK	SOLID	N/A	WHC-N-1064		
9	SAMPLE	S95T000158	0		SLDVOL01	SOLID	N/A	1.3 ~~0~~ ABB	4-3-95 LND	mL
10	SAMPLE	S95T000158	0		SLDWT-01	SOLID	N/A	1.97		g
11	SAMPLE	S95T000158	0		ORGVOL01	SOLID	N/A	0		mL

Final page for worklist # 619

R.H.
Analyst Signature

3-1-95
Date

E.C.
Reviewed by: [signature]

3-2-95
3-3-95

Data Entry Comments:

22

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

Page: 1

LABCORE Data Entry Template for Worklist# 620

Analyst: SC **Instrument:** BA000 **Method:** LO-160-103 A-7

Worklist Comment: AX-102 95-AUG-7 Riser 9E Extrusion

Seg	Type	Sample#		Rep	AlTest	Matrix	Actual	Found	DL	Uni
1	INSTCHK01				EXTRUD01	SOLID	20.00	19.99	N/A	
2	INSTCHK02				EXTRUD01	SOLID	500.00	499.98	N/A	
3	SAMPLE	S95T000173		0	DLIQVOL1	SOLID	N/A	<5		mL
4	SAMPLE	S95T000173		0	DLIQWT01	SOLID	N/A	2.1		g
5	SAMPLE	S95T000173		0	EST.G/ML	SOLID	N/A	1.1		g/mL
6	SAMPLE	S95T000173		0	EXTRUD01	SOLID	N/A	complete		
7	SAMPLE	S95T000173		0	LLIQWT01	SOLID	N/A	0		g
8	SAMPLE	S95T000173		0	NOTEBOOK	SOLID	N/A	WHC-N-1064		
9	SAMPLE	S95T000173		0	SLDVOL01	SOLID	N/A	~~34~~ 31.0		mL
10	SAMPLE	S95T000173		0	SLDWT-01	SOLID	N/A	34.45		g
11	SAMPLE	S95T000173		0	ORGVOL01	SOLID	N/A	0		mL

Final page for worklist # 620

Analyst Signature **Date** 3-2-95

Reviewed by [signature] 3-3-95

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units. *Page:* 1

worklistrpt Version 2.0 02/21/95
03/02/95 08:45

LABCORE Data Entry Template for Worklist# 639

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

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

Worklist Comment: AX-102 Auger #6 and #7 Homogenization

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	INSTCHK01				EXTRUD01	SOLID	20	20.00	N/A	
		2	INSTCHK02				EXTRUD01	SOLID	500	499.99	N/A	
95000014	AX-102	3	SAMPLE	S95T000203	0		HOMGNZ01	SOLID	N/A	1.97		
95000015	AX-102	4	SAMPLE	S95T000205	0		HOMGNZ01	SOLID	N/A	6.98		

Final page for worklist # 639

EAC 3-3-95
Analyst Signature **Date**

Analyst Signature **Date**

S95T000203 - AX-102 95-AUG-006 SAMPLE V6496

S95T000205 - AX-102 95-AUG-007 SAMPLE V6559 → 6522

Reviewed by [signature] March 3, 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# 648

Analyst: MCJ **Instrument:** FUS01 AL11066 **Book #** _____

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

Worklist Comment: AX-102 FUSION DIGEST - 203--->204, 206--->208

50 mrad/hr on sample
W Brown 3-6-95

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				FUSION01	SOLID	250	250	N/A	g/L
95000014	AX-102	2	SAMPLE	S95T000204	0	F	FUSION01	SOLID	N/A	0.4280		g/L
95000014	AX-102	3	DUP	S95T000204	0	F	FUSION01	SOLID	0.4280	0.4560	N/A	g/L
95000015	AX-102	4	SAMPLE	S95T000208	0	F	FUSION01	SOLID	N/A	0.4720		g/L
95000015	AX-102	5	DUP	S95T000208	0	F	FUSION01	SOLID	0.4720	0.4880	N/A	g/L

Final page for worklist # 648

Mike Jones 3-6-95
Analyst Signature **Date**

Bertrand Griffin II 3-7-95
Analyst Signature **Date**

20ml HCl

204 Smp $\frac{.107g}{.250L} = .428\ g/L$

20ml HCl

204 Dup $\frac{.114g}{.250L} = .456\ g/L$

20ml HCl

208 Smp $\frac{.118g}{.250L} = .472\ g/L$

20ml HCl

208 Dup $\frac{.122g}{.250L} = .488\ g/L$

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# 1131

Analyst: LMH2 **Instrument:** H2O01 AL11066 **Book #** N/A

Method: LA-504-101 Rev/Mod ~~A3~~ ~~A-4~~ C-0 LMH 04/19/95

Worklist Comment: AX-102 WATER - 206- >593

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				H2ODIG01	SOLID	50mL	50mL	N/A	g/L
50 mL Tot. Vol.												
95000015	AX-102	2	SAMPLE	S95T000593	0	W	H2ODIG01	SOLID	N/A	10.7640g/L		g/L
0.5382 → 50mL												
95000015	AX-102	3	DUP	S95T000593	0	W	H2ODIG01	SOLID	10.7640g/L	10.7020g/L	N/A	g/L
0.5351 → 50mL												

Final page for worklist # 1131

[signature] 04/19/95
Analyst Signature **Date**

[signature] 4/20/95
Analyst Signature **Date**

Data Entry Comments: Samples Dose Rated at 2mR/hr by Sig Landoe <LMH 04/19/95>
Bertrand Griffin II 4-20-95

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.

LMH 5/15/96

LABCORE Data Entry Template for Worklist# 764

Analyst: KRM **Instrument:** TIC01 **Book #** 15N12E 10N12F

Method: LA-342-100 Rev/Mod A-0

Worklist Comment: TICTOC KRM AX-102

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				@TICTOC1 TIC-02	SOLID	1	6.2	N/A	~~ug/g~~ ug gwB 3/29/9
		1	BLNK				@TICTOC1 TOC-02	SOLID	1	36.7	N/A	~~ug/g~~ ug gwB 3/29/
		2	STD				@TICTOC1 TIC-02	SOLID	6.00E2	5.75E2	N/A	ug/g
		2	STD				@TICTOC1 TOC-02	SOLID	3.00E3	2.76E3	N/A	ug/g
95000014	AX-102	3	SAMPLE	S95T000203	0		@TICTOC1 TIC-02	SOLID	N/A	1.93E4	5.0e0	ug/g
95000014	AX-102	3	SAMPLE	S95T000203	0		@TICTOC1 TOC-02	SOLID	N/A	4.94E4	8.0e1	ug/g
95000014	AX-102	4	DUP	S95T000203	0		@TICTOC1 TIC-02	SOLID	1.93E4	1.58E4	N/A	ug/g
95000014	AX-102	4	DUP	S95T000203	0		@TICTOC1 TOC-02	SOLID	4.94E4	4.93E4	N/A	ug/g
95000014	AX-102	5	SPK	S95T000203	0		@TICTOC1 TIC-02	SOLID	100	129	N/A	~~ug/g~~ % gwB 3/29/9
95000014	AX-102	5	SPK	S95T000203	0		@TICTOC1 TOC-02	SOLID	100	161	N/A	~~ug/g~~ % gwB 3/29/95
95000015	AX-102	6	SAMPLE	S95T000206	0		@TICTOC1 TIC-02	SOLID	N/A	1.57E4	5.0e0	ug/g
95000015	AX-102	6	SAMPLE	S95T000206	0		@TICTOC1 TOC-02	SOLID	N/A	5.75E4	8.0e1	ug/g
95000015	AX-102	7	DUP	S95T000206	0		@TICTOC1 TIC-02	SOLID	1.57E4	1.44E4	N/A	ug/g
95000015	AX-102	7	DUP	S95T000206	0		@TICTOC1 TOC-02	SOLID	5.75E4	5.93E4	N/A	ug/g

Final page for worklist # 764

3-22-95
Analyst Signature **Date**

3-29-95
Analyst Signature **Date**

3/29/95 worklist approved

Data Entry Comments: COULOMETER SOL'N TURNED FOGGY, INDICATING A SAMPLE INCOMPATABILITY WITH THIS METHOD. REANALYSIS WILL BE PERFORMED WITH ADDITIONAL SCRUBBERS SUPPLIED. KR 3-31-95

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.

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 03/22/95 Time: 00:29:41

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	0.20	0.00
2	1.01	0.50	60.00
3	1.51	0.80	37.50
4	2.00	1.30	38.46
5	2.50	1.60	18.75
6	3.00	1.80	11.11
7	3.50	2.10	14.29
8	4.00	2.40	12.50
9	4.50	2.60	7.69
10	5.00	3.00	13.33
11	5.50	3.20	6.25
12	6.00	3.40	5.88
13	6.50	3.70	8.11
14	7.00	4.00	7.50
15	7.50	4.30	6.98
16	8.00	4.50	4.44
17	8.50	4.80	6.25
18	9.00	5.10	5.88
19	9.50	5.40	5.56
20	10.00	5.70	5.26
21	10.50	5.90	3.39
22	11.00	6.20	4.84

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 28 TO 49.

BLANK VALUE = 6.2 micrograms carbon
BLANK FACTOR = 6.2 / 10.99883 = +5.6E-01 ug/min Carbon

Sample Run By: [signature] 3-22-95
KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 03/22/95 Time: 00:41:41

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	1.10	0.00
2	1.01	7.60	85.53
3	1.50	16.50	53.94
4	2.00	21.00	21.43
5	2.50	23.20	9.48
6	3.00	24.50	5.31
7	3.50	25.70	4.67
8	4.00	26.80	4.10
9	4.50	28.10	4.63
10	5.00	29.30	4.10
11	5.50	30.00	2.33
12	6.00	31.80	5.66
13	6.50	31.80	0.00
14	7.00	32.50	2.15
15	7.50	33.00	1.52
16	8.00	33.60	1.79
17	8.50	34.20	1.75
18	9.00	34.70	1.44
19	9.50	35.20	1.42
20	10.00	35.70	1.40
21	10.50	36.30	1.65
22	11.00	36.70	1.09

BLANK VALUE = 36.7 micrograms carbon
BLANK FACTOR = 36.7 / 10.997 = +3.34E+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: 03/22/95 Time: 00:53:40

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.01	88.00	98.07
3	1.50	253.00	65.22
4	2.00	403.10	37.24
5	2.50	495.30	18.61
6	3.00	541.00	8.45
7	3.50	558.80	3.19
8	4.00	565.50	1.18
9	4.50	568.50	0.53
10	5.00	570.10	0.28
11	5.50	571.30	0.21
12	6.00	572.40	0.19
13	6.50	574.40	0.35
14	7.00	575.80	0.24
15	7.50	576.90	0.19
16	8.00	577.70	0.14
17	8.50	578.40	0.12
18	9.00	579.10	0.12
19	9.50	579.70	0.10
20	10.00	580.20	0.09
21	10.50	580.60	0.07
22	11.00	581.20	0.10

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(581.2 - 6.159906)(1)/(~~1~~ 1000) = ~~+5.750E+02~~ 5.75 E-2 g/L Carbon
(581.2 - 6.159906)(1)/(1)(12) = +4.792E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

1 mL - 15N12E

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 03/22/95 Time: 01:58:51

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	13.00	0.00
2	1.01	214.20	93.93
3	1.51	534.10	59.90
4	2.01	664.60	19.64
5	2.51	697.60	4.73
6	3.01	707.70	1.43
7	3.50	711.80	0.58
8	4.00	713.90	0.29
9	4.50	715.90	0.28
10	5.00	717.50	0.22
11	5.50	718.90	0.19
12	6.00	720.00	0.15
13	6.50	721.00	0.14
14	7.00	721.90	0.12
15	7.50	722.90	0.14
16	8.00	723.60	0.10
17	8.50	724.50	0.12
18	9.00	725.20	0.10
19	9.50	725.80	0.08
20	10.00	726.40	0.08
21	10.50	727.10	0.10
22	11.00	727.70	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(727.7 - 36.74224)(1)/~~(1)~~ (250) = ~~+6.910E+02~~ 2.76 x 0 g/L Carbon
(727.7 - 36.74224)(1)/(1)(12) = +5.758E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

3-22-95

Sample Run By: KR MONTEITH 00000

.250 mL - 10N 12F

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 02:24:13

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.40	0.00
2	1.01	54.50	93.76
3	1.50	286.70	80.99
4	2.00	492.40	41.77
5	2.50	628.90	21.70
6	3.00	697.70	9.86
7	3.50	729.80	4.40
8	4.00	743.00	1.78
9	4.50	748.50	0.73
10	5.00	751.70	0.43
11	5.50	753.70	0.27
12	6.00	755.20	0.20
13	6.50	756.90	0.22
14	7.00	757.70	0.11
15	7.50	758.70	0.13
16	8.00	759.60	0.12
17	8.50	760.60	0.13
18	9.00	761.10	0.07
19	9.50	761.80	0.09
20	10.00	762.50	0.09
21	10.50	763.10	0.08
22	11.00	763.60	0.07

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(763.6 - 6.160376)(1)/(1) = +7.574E+02 g/L Carbon
(763.6 - 6.160376)(1)/(1)(12) = +6.312E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.0572g

INFO

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 02:36:35

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	8.30	0.00
2	1.01	252.60	96.71
3	1.51	702.10	64.02
4	2.00	1433.40	51.02
5	2.50	2180.00	34.25
6	3.00	2431.40	10.34
7	3.50	2521.50	3.57
8	4.00	2574.50	2.06
9	4.50	2606.70	1.24
10	5.00	2629.00	0.85
11	5.50	2645.60	0.63
12	6.00	2658.30	0.48
13	6.50	2669.50	0.42
14	7.00	2678.40	0.33
15	7.50	2685.40	0.26
16	8.00	2692.00	0.25
17	8.50	2697.30	0.20
18	9.00	2701.70	0.16
19	9.50	2705.40	0.14
20	10.00	2708.90	0.13
21	10.50	2711.30	0.09
22	11.00	2713.50	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(2713.5 - 36.73944)(1)/(1) = +2.6768E+03 g/L Carbon
(2713.5 - 36.73944)(1)/(1)(12) = +2.2306E+02 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

.0572

INFO

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 02:48:31

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.01	25.40	93.31
3	1.51	99.90	74.57
4	2.00	164.20	39.16
5	2.50	205.60	20.14
6	3.00	225.20	8.70
7	3.50	235.00	4.17
8	4.00	240.50	2.29
9	4.50	244.20	1.52
10	5.00	247.70	1.41
11	5.50	253.50	2.29
12	6.00	261.20	2.95
13	6.50	269.20	2.97
14	7.00	276.60	2.68
15	7.50	283.00	2.26
16	8.00	289.00	2.08
17	8.50	293.60	1.57
18	9.00	297.70	1.38
19	9.50	301.20	1.16
20	10.00	304.40	1.05
21	10.50	307.20	0.91
22	11.00	309.80	0.84

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(309.8 - 6.160376)(1)/(1) = +3.036E+02 g/L Carbon
(309.8 - 6.160376)(1)/(1)(12) = +2.530E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.01579

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 03:00:39

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 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	54.10	95.38
3	1.50	114.80	52.87
4	2.00	162.10	29.18
5	2.50	205.40	21.08
6	3.00	237.60	13.55
7	3.50	254.20	6.53
8	4.00	410.70	38.11
9	4.50	612.50	32.95
10	5.00	696.60	12.07
11	5.50	737.90	5.60
12	6.00	758.00	2.65
13	6.50	771.00	1.69
14	7.00	779.90	1.14
15	7.50	787.10	0.91
16	8.00	792.80	0.72
17	8.50	797.70	0.61
18	9.00	801.80	0.51
19	9.50	804.90	0.39
20	10.00	807.70	0.35
21	10.50	810.10	0.30
22	11.00	812.10	0.25

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(812.1 - 36.73613)(1)/(1) = +7.754E+02 g/L Carbon
(812.1 - 36.73613)(1)/(1)(12) = +6.461E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

.0157 2

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 03:19:38

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 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	14.50	97.24
3	1.51	66.70	78.26
4	2.00	119.40	44.14
5	2.50	155.20	23.07
6	3.00	173.70	10.65
7	3.50	181.30	4.19
8	4.00	184.70	1.84
9	4.50	186.30	0.86
10	5.00	187.60	0.69
11	5.50	189.30	0.90
12	6.00	191.50	1.15
13	6.50	194.80	1.69
14	7.00	197.80	1.52
15	7.50	201.20	1.69
16	8.00	203.70	1.23
17	8.50	206.20	1.21
18	9.00	208.30	1.01
19	9.50	210.20	0.90
20	10.00	211.90	0.80
21	10.50	213.40	0.70
22	11.00	214.60	0.56

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(214.6 - 6.158787)(1)/(1) = +2.084E+02 g/L Carbon
(214.6 - 6.158787)(1)/(1)(12) = +1.737E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.0132g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/22/95 Time: 03:31:41

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 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	56.90	99.12
3	1.51	149.60	61.97
4	2.00	363.10	58.80
5	2.50	525.30	30.88
6	3.00	590.80	11.09
7	3.50	620.40	4.77
8	4.00	636.10	2.47
9	4.50	646.20	1.56
10	5.00	653.30	1.09
11	5.50	659.20	0.90
12	6.00	664.10	0.74
13	6.50	668.20	0.61
14	7.00	671.80	0.54
15	7.50	674.50	0.40
16	8.00	677.50	0.44
17	8.50	679.80	0.34
18	9.00	682.10	0.34
19	9.50	684.00	0.28
20	10.00	685.30	0.19
21	10.50	686.60	0.19
22	11.00	687.80	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(687.8 - 36.74224)(1)/(1) = +6.511E+02 g/L Carbon
(687.8 - 36.74224)(1)/(1)(12) = +5.425E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

37

.0132g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/22/95 Time: 03:44:34

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 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	23.20	96.55
3	1.51	126.30	81.63
4	2.01	225.30	43.94
5	2.51	292.20	22.90
6	3.01	327.90	10.89
7	3.51	343.20	4.46
8	4.01	349.80	1.89
9	4.50	353.20	0.96
10	5.00	355.50	0.65
11	5.50	357.70	0.62
12	6.00	359.40	0.47
13	6.50	361.30	0.53
14	7.00	363.10	0.50
15	7.50	364.90	0.49
16	8.00	366.70	0.49
17	8.50	368.60	0.52
18	9.00	371.10	0.67
19	9.50	373.50	0.64
20	10.00	376.00	0.66
21	10.50	378.60	0.69
22	11.50	383.30	1.23

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(383.3 - 6.440752)(1)/(1) = +3.769E+02 g/L Carbon
(383.3 - 6.440752)(1)/(1)(12) = +3.140E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

$\frac{383.3 - (19300 \times .0095) - 6.2}{500 \times .250} \times 100\% = 129\%$

.0095 + .250 15N 12 E

INFO-ONLY 3-22-95

WHC-SD-WM-DP-100, REV. 0-A

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/22/95 Time: 04:54:20

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 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	1.00	72.00	96.94
3	1.50	182.00	60.44
4	2.00	281.90	35.44
5	2.50	374.60	24.75
6	3.00	433.90	13.67
7	3.50	501.30	13.45
8	4.00	734.30	31.73
9	4.50	855.00	14.12
10	5.00	906.90	5.72
11	5.50	932.40	2.73
12	6.00	946.30	1.47
13	6.50	955.50	0.96
14	7.00	963.00	0.78
15	7.50	968.60	0.58
16	8.00	973.30	0.48
17	8.50	977.30	0.41
18	9.00	980.60	0.34
19	9.50	983.70	0.32
20	10.00	986.20	0.25
21	10.50	988.40	0.22
22	11.00	990.10	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(990.1 - 36.74224)(1)/(1) = +9.534E+02 g/L Carbon
(990.1 - 36.74224)(1)/(1)(12) = +7.945E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

.0095 + .100 10 N 12 F

$\frac{990 - (49{,}400 \times .0095) - 36.7}{3000 \times 0.100} \times 10$

= 161%

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/22/95 Time: 05:07:55

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.00	24.10	98.76
3	1.50	119.40	79.82
4	2.00	213.80	44.15
5	2.50	281.90	24.16
6	3.00	323.60	12.89
7	3.50	344.90	6.18
8	4.00	354.30	2.65
9	4.50	357.90	1.01
10	5.00	360.00	0.58
11	5.50	361.10	0.30
12	6.00	362.10	0.28
13	6.50	362.90	0.22
14	7.00	363.50	0.17
15	7.50	364.00	0.14
16	8.00	364.50	0.14
17	8.50	365.10	0.16
18	9.00	365.50	0.11
19	9.50	365.80	0.08
20	10.00	366.20	0.11
21	10.50	366.60	0.11
22	11.00	367.00	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(367 - 6.160359)(1)/(1) = +3.608E+02 g/L Carbon
(367 - 6.160359)(1)/(1)(12) = +3.007E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.0089g + .250mL 15N12F

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/22/95 Time: 05:20:01

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.40	0.00
2	1.01	84.40	98.34
3	1.50	191.40	55.90
4	2.00	304.30	37.10
5	2.50	380.70	20.07
6	3.00	547.00	30.40
7	3.50	817.60	33.10
8	4.00	933.00	12.37
9	4.50	984.40	5.22
10	5.00	1010.00	2.53
11	5.50	1024.10	1.38
12	6.00	1033.60	0.92
13	6.50	1041.00	0.71
14	7.00	1046.70	0.54
15	7.50	1051.50	0.46
16	8.00	1055.90	0.42
17	8.50	1059.50	0.34
18	9.00	1062.90	0.32
19	9.50	1065.80	0.27
20	10.00	1068.20	0.22
21	10.50	1070.40	0.21
22	11.00	1072.50	0.20

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(1072.5 - 36.73939)(1)/(1) = +1.0358E+03 g/L Carbon
(1072.5 - 36.73939)(1)/(1)(12) = +8.6313E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

.0089g + .100 mL 10N 12F

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 05:31:56

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.00	74.60	97.72
3	1.50	248.90	70.03
4	2.00	370.00	32.73
5	2.50	445.50	16.95
6	3.00	485.80	8.30
7	3.50	502.60	3.34
8	4.00	508.80	1.22
9	4.50	511.90	0.61
10	5.00	514.20	0.45
11	5.50	516.10	0.37
12	6.00	517.70	0.31
13	6.50	519.20	0.29
14	7.00	520.50	0.25
15	7.50	521.70	0.23
16	8.00	522.90	0.23
17	8.50	524.00	0.21
18	9.00	525.10	0.21
19	9.50	526.40	0.25
20	10.00	527.40	0.19
21	10.50	528.40	0.19
22	11.00	529.20	0.15

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(529.2 - 6.160359)(1)/(1) = +5.230E+02 g/L Carbon
(529.2 - 6.160359)(1)/(1)(12) = +4.359E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.03632

INFO

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 05:44:05

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 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	142.40	99.37
3	1.51	325.00	56.18
4	2.00	451.70	28.05
5	2.50	541.60	16.60
6	3.00	624.00	13.21
7	3.50	1071.40	41.76
8	4.00	1380.90	22.41
9	4.50	1497.20	7.77
10	5.00	1556.10	3.79
11	5.50	1590.60	2.17
12	6.00	1611.30	1.28
13	6.50	1626.00	0.90
14	7.00	1637.50	0.70
15	7.50	1646.80	0.56
16	8.00	1655.00	0.50
17	8.50	1661.70	0.40
18	9.00	1667.60	0.35
19	9.50	1672.70	0.30
20	10.00	1677.00	0.26
21	10.50	1680.70	0.22
22	11.00	1684.00	0.20

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(1684 - 36.73949)(1)/(1) = +1.6473E+03 g/L Carbon
(1684 - 36.73949)(1)/(1)(12) = +1.3727E+02 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: KR MONTEITH 00000

.0363g INFO

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 05:56:41

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.40	0.00
2	1.01	45.80	94.76
3	1.51	145.30	68.48
4	2.00	214.70	32.32
5	2.50	257.50	16.62
6	3.00	279.80	7.97
7	3.50	289.50	3.35
8	4.00	293.80	1.46
9	4.50	296.00	0.74
10	5.00	297.80	0.60
11	5.50	299.10	0.43
12	6.00	300.10	0.33
13	6.50	301.30	0.40
14	7.00	302.20	0.30
15	7.50	303.20	0.33
16	8.00	304.00	0.26
17	8.50	304.90	0.30
18	9.00	305.60	0.23
19	9.50	306.30	0.23
20	10.00	307.00	0.23
21	10.50	307.70	0.23
22	11.00	308.40	0.23

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(308.4 - 6.15935)(1)/(1) = +3.022E+02 g/L Carbon
(308.4 - 6.15935)(1)/(1)(12) = +2.519E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

0192g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 06:08:37

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.00	0.00
2	1.01	78.90	98.73
3	1.51	168.90	53.29
4	2.01	231.60	27.07
5	2.50	286.00	19.02
6	3.00	334.60	14.52
7	3.50	381.90	12.39
8	4.00	439.20	13.05
9	4.50	475.70	7.67
10	5.00	518.00	8.17
11	5.50	745.40	30.51
12	6.00	928.60	19.73
13	6.50	1010.60	8.11
14	7.00	1054.90	4.20
15	7.50	1080.70	2.39
16	8.00	1096.50	1.44
17	8.50	1108.00	1.04
18	9.00	1117.00	0.81
19	9.50	1124.80	0.69
20	10.00	1130.80	0.53
21	10.50	1136.00	0.46
22	11.00	1140.10	0.36

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(1140.1 - 36.73613)(1)/(1) = +1.1034E+03 g/L Carbon
(1140.1 - 36.73613)(1)/(1)(12) = +9.1947E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

-0192g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 06:20:42

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.80	0.00
2	1.01	36.70	92.37
3	1.50	120.00	69.42
4	2.00	183.30	34.53
5	2.50	221.90	17.40
6	3.00	241.90	8.27
7	3.50	251.60	3.86
8	4.00	257.40	2.25
9	4.50	262.20	1.83
10	5.00	267.70	2.05
11	5.50	272.80	1.87
12	6.00	276.40	1.30
13	6.50	279.70	1.18
14	7.00	283.70	1.41
15	7.50	288.00	1.49
16	8.00	291.10	1.06
17	8.50	294.30	1.09
18	9.00	296.50	0.74
19	9.50	297.90	0.47
20	10.00	299.40	0.50
21	10.50	300.70	0.43
22	11.00	302.10	0.46

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(302.1 - 6.159829)(1)/(1) = +2.959E+02 g/L Carbon
(302.1 - 6.159829)(1)/(1)(12) = +2.466E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.01803

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/22/95 Time: 06:32:34

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.10	0.00
2	1.01	93.70	97.76
3	1.50	188.70	50.34
4	2.00	260.30	27.51
5	2.50	321.70	19.09
6	3.00	386.90	16.85
7	3.50	455.60	15.08
8	4.00	499.90	8.86
9	4.50	686.70	27.20
10	5.00	879.40	21.91
11	5.50	962.90	8.67
12	6.00	1008.70	4.54
13	6.50	1034.80	2.52
14	7.00	1051.70	1.61
15	7.50	1063.90	1.15
16	8.00	1073.30	0.88
17	8.50	1080.90	0.70
18	9.00	1087.40	0.60
19	9.50	1092.70	0.49
20	10.00	1097.00	0.39
21	10.50	1101.10	0.37
22	11.00	1104.40	0.30

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(1104.4 - 36.72991)(1)/(1) = +1.0677E+03 g/L Carbon
(1104.4 - 36.72991)(1)/(1)(12) = +8.8973E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

.0180g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: R BLK Date: 03/22/95 Time: 07:15:06

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .56 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.40	0.00
2	1.01	2.80	50.00
3	1.51	4.10	31.71
4	2.00	5.30	22.64
5	2.50	6.40	17.19
6	3.00	7.70	16.88
7	3.50	8.70	11.49
8	4.00	9.90	12.12
9	4.50	11.00	10.00
10	5.00	12.20	9.84
11	5.50	13.20	7.58
12	6.00	14.20	7.04
13	6.50	15.30	7.19
14	7.00	16.30	6.13
15	7.50	17.40	6.32
16	8.00	18.50	5.95
17	8.50	19.60	5.61
18	9.00	20.50	4.39
19	9.50	21.50	4.65
20	10.00	22.40	4.02
21	10.50	23.50	4.68
22	11.00	24.40	3.69

USER INPUT BLANK VALUE
BLANK VALUE = 6.158321 micrograms carbon
BLANK FACTOR = 6.158321 / 10.997 = +5.6E-01 ug/min Carbon

SAMPLE RESULTS:
(24.4 - 6.160393)(1)/(1) = +1.82E+01 g/L Carbon
(24.4 - 6.160393)(1)/(1)(12) = +1.52E+00 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.07772

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: R BLK Date: 03/22/95 Time: 11:27:10

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.34 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.00	0.00
2	1.01	6.40	84.38
3	1.50	18.00	64.44
4	2.00	27.00	33.33
5	2.51	35.50	23.94
6	3.01	43.10	17.63
7	3.51	49.70	13.28
8	4.00	55.90	11.09
9	4.50	60.50	7.60
10	5.00	64.60	6.35
11	5.50	67.70	4.58
12	6.00	70.40	3.84
13	6.50	72.70	3.16
14	7.00	74.70	2.68
15	7.50	76.70	2.61
16	8.00	78.20	1.92
17	8.50	79.50	1.64
18	9.00	80.90	1.73
19	9.50	82.10	1.46
20	10.00	83.20	1.32
21	10.50	84.20	1.19
22	11.00	85.10	1.06

USER INPUT BLANK VALUE
BLANK VALUE = 36.72998 micrograms carbon
BLANK FACTOR = 36.72998 / 10.997 = +3.3E+00 ug/min Carbon

SAMPLE RESULTS:
(85.1 - 36.74826)(1)/(1) = +4.84E+01 g/L Carbon
(85.1 - 36.74826)(1)/(1)(12) = +4.03E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

LABCORE Data Entry Template for Worklist# 881

Analyst: KRM **Instrument:** TOC01 **Book #** 15N12E TIC
gwB 3/29/95 ~~10N12G~~ TOC
10N12G

Method: LA-342-100 Rev/Mod A-0

Worklist Comment: AX-102 TICTOC -- RERUN

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				@TICTOC1 TIC-02	SOLID	1	~~5.7~~ 4.4 gwB 3/29/95	N/A	~~ug/g~~ ug gwB 3/29/9
		1	BLNK				@TICTOC1 TOC-02	SOLID	1	~~20.2~~ 31.8 gwB 3/29/95	N/A	~~ug/g~~ ug gwB 3/29/9
		2	STD				@TICTOC1 TIC-02	SOLID	6.00e2	5.73e2	N/A	ug/g
		2	STD				@TICTOC1 TOC-02	SOLID	3.00e3	2.71e3	N/A	ug/g
95000014	AX-102	3	SAMPLE	S95T000203	0		@TICTOC1 TIC-02	SOLID	N/A	1.68e4	5.0e0	ug/g
95000014	AX-102	3	SAMPLE	S95T000203	0		@TICTOC1 TOC-02	SOLID	N/A	6.12e4	8.0e1	ug/g
95000014	AX-102	4	DUP	S95T000203	0		@TICTOC1 TIC-02	SOLID	1.68e4	1.63e4	N/A	ug/g
95000014	AX-102	4	DUP	S95T000203	0		@TICTOC1 TOC-02	SOLID	6.12e4	5.34e4	N/A	ug/g
95000014	AX-102	5	SPK	S95T000203	0		@TICTOC1 TIC-02	SOLID	100	164	N/A	~~ug/g~~ % gwB 3/29/9
95000014	AX-102	5	SPK	S95T000203	0		@TICTOC1 TOC-02	SOLID	100	196	N/A	~~ug/g~~ % gwB 3/29/
95000015	AX-102	6	SAMPLE	S95T000206	0		@TICTOC1 TIC-02	SOLID	N/A	1.87e4	5.0e0	ug/g
95000015	AX-102	6	SAMPLE	S95T000206	0		@TICTOC1 TOC-02	SOLID	N/A	6.35e4	8.0e1	ug/g
95000015	AX-102	7	DUP	S95T000206	0		@TICTOC1 TIC-02	SOLID	1.87e4	1.53e4	N/A	ug/g
95000015	AX-102	7	DUP	S95T000206	0		@TICTOC1 TOC-02	SOLID	6.35e4	4.81e4	N/A	ug/g

Final page for worklist # 881

3-30-95
Analyst Signature **Date** **Analyst Signature** **Date**

3-30-95
Reviewed Ro Schroeder 3/30/95

Data Entry Comments:
rerun of above batch. Ammended procedure to scrub for suspected method byproduct interferences. spikes indicate inability to eliminate interference (method incompatability

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.

Ro Schroeder 3/30/95

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 03/24/95 Time: 00:26:18

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	0.20	0.00
2	1.01	0.50	60.00
3	1.51	0.70	28.57
4	2.01	1.00	30.00
5	2.51	1.20	16.67
6	3.01	1.50	20.00
7	3.51	1.70	11.76
8	4.00	1.90	10.53
9	4.50	2.10	9.52
10	5.00	2.30	8.70
11	5.50	2.50	8.00
12	6.00	2.70	7.41
13	6.50	2.80	3.57
14	7.00	3.00	6.67
15	7.50	3.20	6.25
16	8.00	3.30	3.03
17	8.50	3.50	5.71
18	9.00	3.70	5.41
19	9.50	3.90	5.13
20	10.00	4.00	2.50
21	10.50	4.20	4.76
22	11.00	4.40	4.55

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 61 TO 66.

BLANK VALUE = 4.4 micrograms carbon
BLANK FACTOR = 4.4 / 11.0015 = +4.0E-01 ug/min Carbon

Sample Run By: 3-24-95
KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BLK Date: 03/24/95 Time: 01:56:08

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	0.80	100.00
3	1.50	4.60	82.61
4	2.00	8.20	43.90
5	2.50	13.00	36.92
6	3.00	15.50	16.13
7	3.50	17.60	11.93
8	4.00	18.70	5.88
9	4.50	20.60	9.22
10	5.00	22.10	6.79
11	5.50	23.90	7.53
12	6.00	25.30	5.53
13	6.50	26.10	3.07
14	7.00	27.10	3.69
15	7.50	27.90	2.87
16	8.00	28.80	3.12
17	8.50	29.40	2.04
18	9.00	29.90	1.67
19	9.50	30.40	1.64
20	10.00	30.90	1.62
21	10.50	31.40	1.59
22	11.00	31.80	1.26

BLANK VALUE = 31.8 micrograms carbon
BLANK FACTOR = 31.8 / 11.00066 = +2.89E+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: 03/24/95 Time: 02:17:20

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	52.30	0.00
2	1.01	219.30	76.15
3	1.51	370.20	40.76
4	2.01	465.70	20.51
5	2.50	520.10	10.46
6	3.00	547.70	5.04
7	3.50	561.20	2.41
8	4.00	566.40	0.92
9	4.50	568.40	0.35
10	5.00	569.90	0.26
11	5.50	570.60	0.12
12	6.00	571.40	0.14
13	6.50	571.90	0.09
14	7.00	573.10	0.21
15	7.50	574.30	0.21
16	8.00	575.10	0.14
17	8.50	575.50	0.07
18	9.00	576.00	0.09
19	9.50	576.30	0.05
20	10.00	576.60	0.05
21	10.50	576.80	0.03
22	11.00	577.10	0.05

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(577.1 - 4.399533)(1)/(1000) = +5.727E-01 g/L Carbon
(577.1 - 4.399533)(1)/(1000)(12) = +4.773E-02 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

1 mL - 15N12F

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD Date: 03/24/95 Time: 02:31:51

Sample Size = 300 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.89 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	10.90	100.00
3	1.50	178.60	93.90
4	2.00	563.60	68.31
5	2.50	756.90	25.54
6	3.00	807.80	6.30
7	3.50	824.30	2.00
8	4.00	830.00	0.69
9	4.50	832.80	0.34
10	5.00	834.80	0.24
11	5.50	836.30	0.18
12	6.00	837.70	0.17
13	6.50	838.70	0.12
14	7.00	839.70	0.12
15	7.50	840.50	0.10
16	8.00	841.20	0.08
17	8.50	842.00	0.10
18	9.00	842.50	0.06
19	9.50	843.00	0.06
20	10.00	843.50	0.06
21	10.50	843.90	0.05
22	11.00	844.40	0.06

USER INPUT BLANK VALUE
BLANK VALUE = 31.79191 micrograms carbon
BLANK FACTOR = 31.79191 / 11.00066 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(844.4 - 31.78661)(1)/(300) = +2.709E+00 g/L Carbon
(844.4 - 31.78661)(1)/(300)(12) = +2.257E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

300mL 10N12 G

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/24/95 Time: 02:54:21

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 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	3.30	93.94
3	1.50	51.80	93.63
4	2.00	120.00	56.83
5	2.50	173.70	30.92
6	3.00	208.10	16.53
7	3.50	225.30	7.63
8	4.00	233.00	3.30
9	4.50	237.10	1.73
10	5.00	239.80	1.13
11	5.50	241.10	0.54
12	6.00	242.10	0.41
13	6.50	242.90	0.33
14	7.00	243.70	0.33
15	7.50	244.30	0.25
16	8.00	244.90	0.24
17	8.50	245.40	0.20
18	9.00	246.00	0.24
19	9.50	246.50	0.20
20	10.00	247.30	0.32
21	10.50	248.50	0.48
22	11.00	249.70	0.48

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(249.7 - 4.400604)(1)/(1) = +2.453E+02 g/L Carbon
(249.7 - 4.400604)(1)/(1)(12) = +2.044E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.0146 g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/24/95 Time: 03:07:01

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.10	0.00
2	1.01	28.30	92.58
3	1.50	121.10	76.63
4	2.00	219.90	44.93
5	2.50	468.80	53.09
6	3.00	680.20	31.08
7	3.50	777.50	12.51
8	4.00	824.30	5.68
9	4.50	849.10	2.92
10	5.00	865.40	1.88
11	5.50	876.80	1.30
12	6.00	885.90	1.03
13	6.50	893.60	0.86
14	7.00	900.20	0.73
15	7.50	905.40	0.57
16	8.00	910.20	0.53
17	8.50	913.20	0.33
18	9.00	916.90	0.40
19	9.50	920.00	0.34
20	10.00	922.60	0.28
21	10.50	924.40	0.19
22	11.00	927.00	0.28

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(927 - 32.78196)(1)/(1) = +8.942E+02 g/L Carbon
(927 - 32.78196)(1)/(1)(12) = +7.452E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

.0146g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/24/95 Time: 03:19:17

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.60	0.00
2	1.01	6.20	74.19
3	1.50	56.40	89.01
4	2.00	121.90	53.73
5	2.50	171.40	28.88
6	3.00	201.60	14.98
7	3.50	215.80	6.58
8	4.00	221.90	2.75
9	4.50	225.00	1.38
10	5.00	226.50	0.66
11	5.50	228.20	0.74
12	6.00	229.00	0.35
13	6.50	230.10	0.48
14	7.00	230.80	0.30
15	7.50	231.60	0.35
16	8.00	232.30	0.30
17	8.50	233.00	0.30
18	9.00	233.50	0.21
19	9.50	234.00	0.21
20	10.00	234.50	0.21
21	10.50	235.20	0.26
22	11.00	235.50	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(235.5 - 4.399194)(1)/(1) = +2.311E+02 g/L Carbon
(235.5 - 4.399194)(1)/(1)(12) = +1.926E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 Date: 03/24/95 Time: 03:31:48

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 ug/minute C

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	21.10	99.53
3	1.50	136.10	84.50
4	2.00	368.70	63.09
5	2.50	567.90	35.08
6	3.00	655.90	13.42
7	3.50	698.10	6.04
8	4.00	720.30	3.08
9	4.50	734.70	1.96
10	5.00	744.80	1.36
11	5.50	752.00	0.96
12	6.00	758.60	0.87
13	6.50	764.30	0.75
14	7.00	769.30	0.65
15	7.50	773.60	0.56
16	8.00	776.90	0.42
17	8.50	780.10	0.41
18	9.00	782.80	0.34
19	9.50	785.50	0.34
20	10.00	787.20	0.22
21	10.50	789.40	0.28
22	11.00	791.10	0.21

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(791.1 - 32.782)(1)/(1) = +7.583E+02 g/L Carbon
(791.1 - 32.782)(1)/(1)(12) = +6.319E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

.0142g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/24/95 Time: 03:43:58

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 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	10.20	88.24
3	1.51	86.50	88.21
4	2.01	179.80	51.89
5	2.51	264.90	32.13
6	3.01	330.30	19.80
7	3.51	374.20	11.73
8	4.01	400.80	6.64
9	4.50	414.60	3.33
10	5.00	421.80	1.71
11	5.50	426.20	1.03
12	6.00	428.60	0.56
13	6.50	430.30	0.40
14	7.00	431.60	0.30
15	7.50	432.60	0.23
16	8.00	433.60	0.23
17	8.50	434.60	0.23
18	9.00	435.20	0.14
19	9.50	435.90	0.16
20	10.00	436.60	0.16
21	10.50	437.20	0.14
22	11.00	437.90	0.16

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(437.9 - 4.401001)(1)/(1) = +4.335E+02 g/L Carbon
(437.9 - 4.401001)(1)/(1)(12) = +3.612E+01 Molar Carbon

Sample Run By: KR MONTEITH 00000

$\frac{437.9 - (16800 \times .0112) - 4.4}{600 \times .258} \times 100\%$

= 164%

.0112g + .250mc 15N12E

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 203 + SPK Date: 03/24/95 Time: 03:56:19

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 ug/minute C

Analyst : KR MONTEITH
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	24.10	98.76
3	1.51	213.80	88.73
4	2.01	628.20	65.97
5	2.51	949.40	33.83
6	3.01	1096.50	13.42
7	3.51	1162.10	5.64
8	4.01	1199.00	3.08
9	4.50	1221.00	1.80
10	5.00	1235.40	1.17
11	5.50	1247.80	0.99
12	6.00	1257.40	0.76
13	6.50	1265.30	0.62
14	7.00	1271.70	0.50
15	7.50	1277.80	0.48
16	8.00	1283.70	0.46
17	8.50	1288.10	0.34
18	9.00	1292.30	0.33
19	9.50	1296.40	0.32
20	10.00	1299.80	0.26
21	10.50	1303.10	0.25
22	11.00	1306.00	0.22

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(1306 - 32.785)(1)/(1) = +1.2732E+03 g/L Carbon
(1306 - 32.785)(1)/(1)(12) = +1.0610E+02 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

60

$\frac{1306-(61{,}200 \times 0.0112)-31.8}{3{,}000 \times 0.100} \times 100\% = 196\%$

.0112g + ~~.0112g~~ + .100 mL 10N12G
gwb 3/29/95

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/24/95 Time: 05:47:08

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 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	0.00	0.00
3	1.50	48.20	100.00
4	2.00	122.00	60.49
5	2.50	175.90	30.64
6	3.00	212.40	17.18
7	3.50	233.30	8.96
8	4.00	243.90	4.35
9	4.50	248.40	1.81
10	5.00	251.70	1.31
11	5.50	253.20	0.59
12	6.00	254.10	0.35
13	6.50	255.00	0.35
14	7.00	255.70	0.27
15	7.50	256.30	0.23
16	8.00	256.90	0.23
17	8.50	257.40	0.19
18	9.00	257.80	0.16
19	9.50	258.20	0.15
20	10.00	258.60	0.15
21	10.50	259.00	0.15
22	11.00	259.30	0.12

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(259.3 - 4.398804)(1)/(1) = +2.549E+02 g/L Carbon
(259.3 - 4.398804)(1)/(1)(12) = +2.124E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

. 0136

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/24/95 Time: 05:59:15

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 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	60.90	100.00
3	1.51	287.50	78.82
4	2.01	529.40	45.69
5	2.51	675.70	21.65
6	3.01	747.40	9.59
7	3.51	789.80	5.37
8	4.00	812.80	2.83
9	4.50	827.50	1.78
10	5.00	838.00	1.25
11	5.50	845.60	0.90
12	6.00	851.60	0.70
13	6.50	856.70	0.60
14	7.00	860.80	0.48
15	7.50	864.90	0.47
16	8.00	869.00	0.47
17	8.50	873.20	0.48
18	9.00	877.40	0.48
19	9.50	881.80	0.50
20	10.00	886.80	0.56
21	10.50	891.80	0.56
22	11.00	896.70	0.55

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(896.7 - 32.78446)(1)/(1) = +8.639E+02 g/L Carbon
(896.7 - 32.78446)(1)/(1)(12) = +7.199E+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: 206 Date: 03/24/95 Time: 06:12:01

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 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	36.50	87.40
3	1.51	101.20	63.93
4	2.00	140.10	27.77
5	2.50	161.00	12.98
6	3.00	171.20	5.96
7	3.50	174.70	2.00
8	4.00	176.90	1.24
9	4.50	178.30	0.79
10	5.00	179.30	0.56
11	5.50	179.90	0.33
12	6.00	180.60	0.39
13	6.50	181.20	0.33
14	7.00	181.60	0.22
15	7.50	182.10	0.27
16	8.00	182.50	0.22
17	8.50	182.90	0.22
18	9.00	183.40	0.27
19	9.50	183.70	0.16
20	10.00	184.00	0.16
21	10.50	184.50	0.27
22	11.00	184.70	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(184.7 - 4.400659)(1)/(1) = +1.803E+02 g/L Carbon
(184.7 - 4.400659)(1)/(1)(12) = +1.502E+01 Molar Carbon

Sample Run By: _____
KR MONTEITH 00000

.01189

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 206 Date: 03/24/95 Time: 06:30:42

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 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	92.60	98.06
3	1.50	247.80	62.63
4	2.00	368.60	32.77
5	2.50	430.80	14.44
6	3.00	470.50	8.44
7	3.50	497.50	5.43
8	4.00	516.90	3.75
9	4.50	531.10	2.67
10	5.00	541.90	1.99
11	5.50	550.30	1.53
12	6.00	557.10	1.22
13	6.50	563.40	1.12
14	7.00	568.10	0.83
15	7.50	572.20	0.72
16	8.00	576.80	0.80
17	8.50	582.00	0.89
18	9.00	590.90	1.51
19	9.50	594.50	0.61
20	10.00	596.50	0.34
21	10.50	598.40	0.32
22	11.00	599.90	0.25

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(599.9 - 32.782)(1)/(1) = +5.671E+02 g/L Carbon
(599.9 - 32.782)(1)/(1)(12) = +4.726E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

.0118g

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: R BLK Date: 03/24/95 Time: 05:20:28

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .4 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	2.70	33.33
3	1.50	3.10	12.90
4	2.00	3.50	11.43
5	2.50	3.80	7.89
6	3.00	4.10	7.32
7	3.51	4.20	2.38
8	4.00	4.40	4.55
9	4.50	4.50	2.22
10	5.00	4.60	2.17
11	5.50	4.70	2.13
12	6.00	4.90	4.08
13	6.50	4.90	0.00
14	7.00	5.00	2.00
15	7.50	5.10	1.96
16	8.00	5.20	1.92
17	8.50	5.30	1.89
18	9.00	5.40	1.85
19	9.50	5.50	1.82
20	10.00	5.60	1.79
21	10.50	5.70	1.75
22	11.00	5.70	0.00

USER INPUT BLANK VALUE
BLANK VALUE = 4.400264 micrograms carbon
BLANK FACTOR = 4.400264 / 11.00066 = +4.0E-01 ug/min Carbon

SAMPLE RESULTS:
(5.7 - 4.400257)(1)/(1) = +1.3E+00 g/L Carbon
(5.7 - 4.400257)(1)/(1)(12) = +1.1E-01 Molar Carbon

Sample Run By: KR MONTEITH 00000

.0733g

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: R BLK Date: 03/24/95 Time: 05:34:14

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.98 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	0.00	0.00
3	1.50	2.50	100.00
4	2.00	6.60	62.12
5	2.50	10.90	39.45
6	3.00	13.30	18.05
7	3.50	14.80	10.14
8	4.00	16.00	7.50
9	4.50	16.60	3.61
10	5.00	17.10	2.92
11	5.50	17.60	2.84
12	6.00	18.00	2.22
13	6.50	18.30	1.64
14	7.00	18.60	1.61
15	7.50	18.90	1.59
16	8.00	19.10	1.05
17	8.50	19.30	1.04
18	9.00	19.50	1.03
19	9.50	19.80	1.52
20	10.00	19.90	0.50
21	10.50	20.00	0.50
22	11.00	20.20	0.99

USER INPUT BLANK VALUE
BLANK VALUE = 32.78197 micrograms carbon
BLANK FACTOR = 32.78197 / 11.00066 = +3.0E+00 ug/min Carbon

SAMPLE RESULTS:
(20.2 - 32.77354)(1)/(1) = < 5.00 E-3 g/L Carbon
(20.2 - 32.77354)(1)/(1)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
KR MONTEITH 00000

LABCORE Data Entry Template for Worklist# 1272

Analyst: CAW **Instrument:** PH01 WC **Book #** 21N8-B

Method: LA-211-102 Rev/Mod B-1

Worklist Comment: AX-102 OH-

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				OH-01	SOLID	1	<42	N/A	~~ug/g~~ Mg/mL RWS 5-3-95
		2	STD				OH-01	SOLID	9.39e-1	9.41e-1	N/A	~~ug/g~~ M RWS 5-3-95
95000015	AX-102	3	SAMPLE	S95T000206 S95T000593	0	W	OH-01	SOLID	N/A	<1.66e3	1.66e3	ug/g
95000015	AX-102	4	DUP	S95T000206 S95T000593	0	W	OH-01	SOLID	<1.66e3	<1.66e3	N/A	ug/g
		5	STD				OH-01	SOLID	9.39e-1	8.97e-1	N/A	ug/g

Final page for worklist # 1272

Robert Nendland 5-1-95
Analyst Signature **Date**

[signature] 5-3-95
Analyst Signature **Date**

[signature] 5/3/95

Data Entry Comments:

This sample was prepared using 0.5022g to 20mL H_2O. There is no free hydroxide observed. The sample is suspected to be buffered and the results are < detection limit. RWS 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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

```
date 95-05-01 time 10:19
GET pH          12  #  154
Id.#1            2
Id.#2        .1994
pH(init)      5.64
stop volt.reached
        ========
```

```
date 95-04-28 time 10:52
GET pH          12  #  151
Id.#1        525-3
Id.#2        .1994
pH(init)      7.69
              V/ml        pH
EP1          .035      5.96
stop volt.reached
        ========
```

```
date 95-05-01 time 10:19
GET pH          12  #  154
.10ml/div        pH=1/div
start V    .020 ml

5
```

```
date 95-04-28 time 10:55
GET pH          12  #  151
.10ml/div        pH=1/div
start V    .020 ml

3                        8
```

OH (AUTO) : LA-211-102 (B-1)

		BLK
Type	Sample Size (mL) SS	3.000
BLK	Concentration of HNO3 (Molarity)	0.1994
Work List	HNO3 Titrant at OH end-point in mL	0.000
1272	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
Solid		
Sample #	Detection Limit = 125µg / SS * DF	
Blank		
Instrument Code	Detection Limit (µg/mL)	4.17E+01
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA Wendland		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/01/95		
Time		BLK
12:00 PM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in µg/mL (PPM)	<42

The Result is < Detection Limit

Data Entry by:	RW Schroeder	Date:	05/03/95
Approved by:	[signature]	Date:	5/3/95

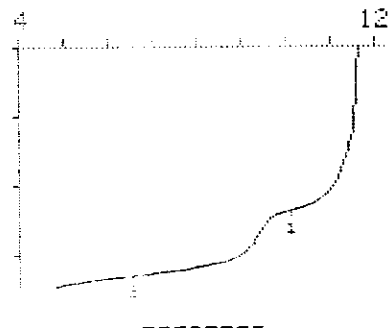
Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

```
calibration data
date      95-05-01
pH(S) 1      7.00
pH(S) 2     10.00
t.cal.       19.0 °C
slope(rel)   .992
U(as)       -10.5 mV
electr. input
        ========
```

```
date 95-05-01 time 10:16
GET pH          12  #  153
Id.#1
Id.#2        .1994
pH(init)     11.59
             V/ml        pH
EP1          .236      10.10
EP2          .329       6.55
stop volt. reached
        ========
```

```
date 95-05-01 time 10:16
GET pH          12  #  153
.10ml/div        dpH=1/div
start        000 ml
```



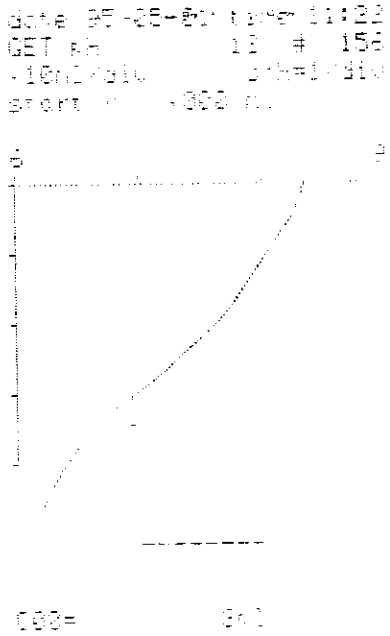
OH (AUTO) : LA-211-102 (B-1)

		Standard
Type	Sample Size (mL) SS	0.050
Standard	Concentration of HNO3 (Molarity)	0.1994
Work List	HNO3 Titrant at OH end-point in mL	0.236
1272	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	9.41E-01
OH	OH in Sample in µg/mL (PPM)	1.60E+04
Matrix		
Solid		
Sample #		
Standard		
Instrument Code		
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA Wendland		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/01/95		
Time		Standard
12:00 PM	Concentration of OH in Sample (Molarity)	9.41E-01
	OH in Sample in µg/mL (PPM)	1.60E+04

Data Entry by:	RW Schroeder	Date:	05/03/95
Approved by:	[signature]	Date:	5/3/95

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER



--------- END ----------
05/01/95 11:58:50
ID 2201
0.5022 g
to 20mL H_2O

date 95-05-01 time 11:21
GET pH 13 # 156
Id.#1 593
Id.#2 .1994
pH(init) 8.31
V/ml pH
EP1 .000 6.93
manual stop

OH (AUTO) : LA-211-102 (B-1)

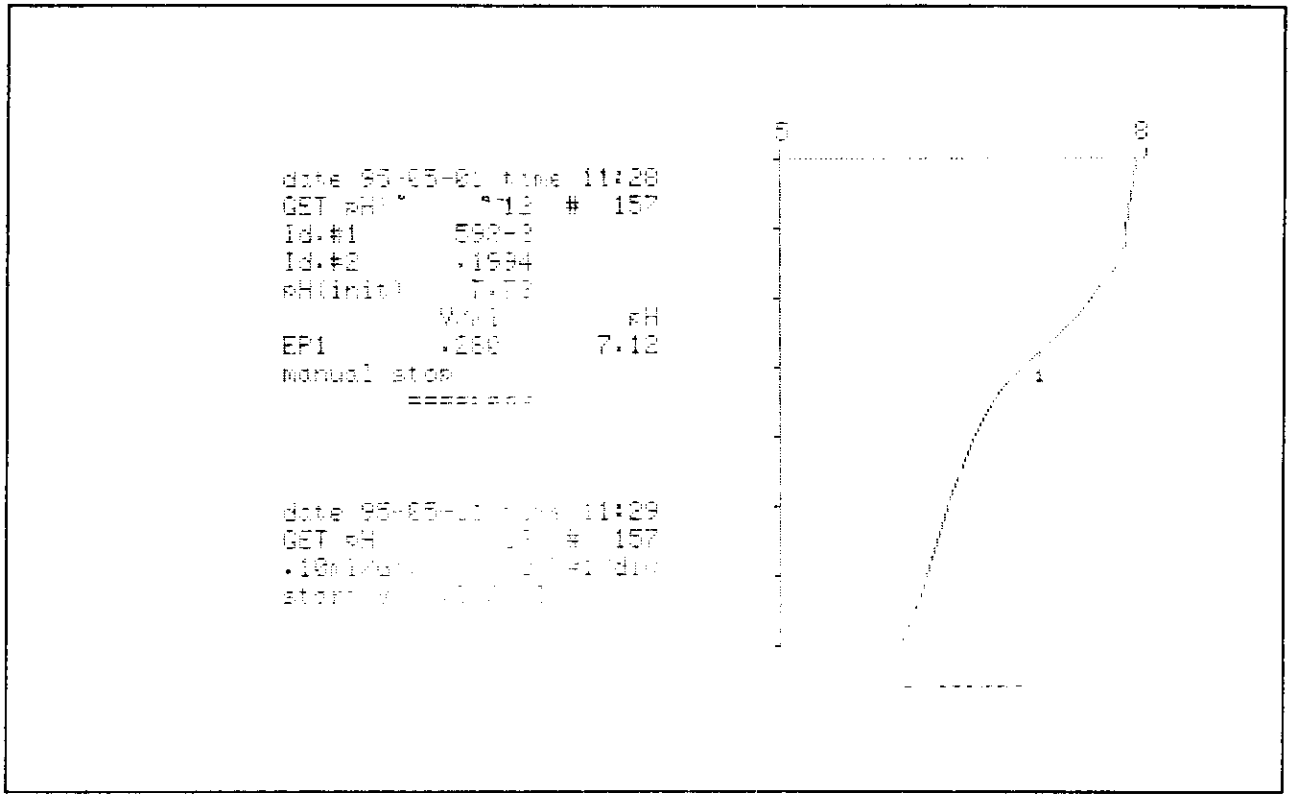
		Sample
Type	Sample Size (mL) SS	3.000
Sample	Concentration of HNO3 (Molarity)	0.1994
Work List	HNO3 Titrant at OH end-point in mL	0.000
1272	Dilution Factor DF	39.8
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
Solid		
Sample #	Detection Limit = 125µg / SS * DF	
S95T000206		
Instrument Code	Detection Limit (µg/mL)	1.66E+03
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA Wendland		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/01/95		
Time		Sample
12:00 PM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in ~~µg/mL~~ µg/g (PPM) JWB 5/3/95	<1658

The Result is < Detection Limit

Data Entry by:	RW Schroeder	Date:	05/03/95
Approved by:	[signature]	Date:	5/3/95

Form 211102_1 Rev. 1/3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER



OH (AUTO) : LA-211-102 (B-1)

		Duplicate
Type	Sample Size (mL) SS	3.000
Duplicate	Concentration of HNO3 (Molarity)	0.1994
Work List	HNO3 Titrant at OH end-point in mL	0.000
1272	Dilution Factor DF	39.8
Test Code	Concentration of OH in Sample (Molarity)	0.00E+00
OH	OH in Sample in µg/mL (PPM)	0.00E+00
Matrix		
Solid		
Sample #	Detection Limit = 125µg / SS * DF	
S95T000206		
Instrument Code	Detection Limit (µg/mL)	1.66E+03
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA Wendland		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/01/95		
Time		Duplicate
12:00 PM	Concentration of OH in Sample (Molarity)	0.00E+00
	OH in Sample in ~~µg/mL~~ µg/g (PPM) JWB 5/3/95	<1658

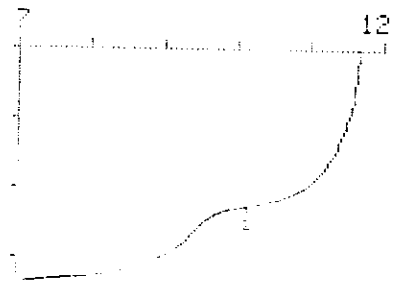
The Result is < Detection Limit

Data Entry by:	Ryn Schroeder	Date:	05/03/95
Approved by:	JWB	Date:	5/3/95

Form 211102_1 Rev. 1.3

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

```
date 95-05-01 time 11:34
GET pH          12  #  158
Id.#1            1
Id.#2        .1994
pH(init)     11.64
            V/ml        pH
EP1         .225     10.13
manual stop
         ========
```




```
date 95-05-01 time 11:34
GET pH          12  #  158
.10ml/div        ...=1/div
start ...   .000
```

OH (AUTO) : LA-211-102 (B-1)

		STD
Type	Sample Size (mL) SS	0.050
STD	Concentration of HNO3 (Molarity)	0.1994
Work List	HNO3 Titrant at OH end-point in mL	0.225
1272	Dilution Factor DF	1
Test Code	Concentration of OH in Sample (Molarity)	8.97E-01
OH	OH in Sample in µg/mL (PPM)	1.53E+04
Matrix		
Solid		
Sample #	Detection Limit = 125µg / SS * DF	
Standard		
Instrument Code	Detection Limit (µg/mL)	2.50E+03
Analyst	OH Molarity =((mL HNO3)*(M HNO3))/Sample Size in mL*Dilution Factor	
RA Wendland		
Date	OH in µg/mL = (OH MOLARITY)*(17.0g/mole)*((1000000µg/g)/(1000mL/L))	
05/01/95		
Time		STD
12:00 PM	Concentration of OH in Sample (Molarity)	8.97E-01
	OH in Sample in µg/mL (PPM)	1.53E+04

Data Entry by:	RW Schroeder	Date:	05/03/95
Approved by:	[signature]	Date:	5/3/95

Form 211102_1 Rev. 1.3

LABCORE Data Entry Template for Worklist# 1361

Analyst: [signature] **Instrument:** SP01 WA93252 **Book #** 54N8C

Method: LA-695-102 Rev/Mod GO

Worklist Comment: AX-102 Cyanide

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				CN-01	SOLID	1	~~<3.1~~ 0.6 RWS 5-12-95	N/A	ug/g
		2	STD				CN-01	SOLID	915	~~1124~~ 1109 JWB 5/12/95	N/A	~~ug/g~~ ug/ml JWB 5/12/95
95000015	AX-102	3	SAMPLE	S95T000206	0		CN-01	SOLID	N/A	26.8	3.1	ug/g
95000015	AX-102	4	DUP	S95T000206	0		CN-01	SOLID	26.8	25.7	N/A	ug/g
95000015	AX-102	5	SPK	S95T000206	0		CN-01	SOLID	100	103	N/A	~~ug/g~~ % JWB 5/12/95
		6	BLNK				CN-01	SOLID	1	~~<3.1~~ 1.2 RWS 5-12-95	N/A	ug/g
		7	STD				CN-01	SOLID	915	1110	N/A	~~ug/g~~ ug/ml JWB 5/12/95

Final page for worklist # 1361

[signature] 5.12.95

Analyst Signature **Date** **Analyst Signature** **Date**

S95T000206 = .4859g into 5ml EDTA/en Solution
.250ml of sample Dilution Used
Std Dil = .250ml at 54N8C to Volume 25ml
Std amount = .500ml of Std Dil
Spike amount = .250ml of Std Dil

[signature] 5/12/95
Reviewed RW Schroeder 5-12-95

.049 Blank
.861 Std
.157 Sample.
.153 Duplicate
.497 Spiked
.082 Blank
.862 Std

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.

Cyanide Calibration with EDTA/en and Ammonium Sulfamate

Date: April 18, 1995
Calibraton Standard: 44N8C
Instrument ID: WA93252
Working Standard Concentration: 1026 ppm / 100 d.f. = 10.26 ppm

Sample	Vol. Working Std. (ml)	ug CN-	Net Abs.
1	0	0	0
2	0.05	0.513	0.054
3	0.2	2.05	0.358
4	0.4	4.1	0.605
5	0.6	6.16	0.909
6	1	10.26	1.5
7	1.2	12.31	1.767

Regression Output:

Constant	0.014205
Std Err of Y Est	0.029141
R Squared	0.998507
No. of Observations	7
Degrees of Freedom	5

X Coefficient(s)	0.143914
Std Err of Coef.	0.002489

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Solid	Sample Weight in grams (SS)	0.48590
Work List	Dissolution Volume (EDTA/en + sample) (DV	5.00000
1361	Aliquot Analyzed from Dissolution (A)	4.00000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.000
Matrix	Absorbance of Sample	0.049
Blank	Y-Intercept Value	0.014205
Sample #	Slope Value	0.143914
	µg of Cyanide	0.242
Instrument Code	µg CN- /g	6.22E-01
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
J.T. Knight	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g))	
Date		
05/12/95	Detection Limit = 1.5µg Cyanide / SS * DF	
Time	v RESULTS v	

	Cyanide Concentration (µg/g)	<1.5 µg Cyanide	Detection Limit µg CN- / g
Calibration Date			
04/18/95			3.09E+00

Data Entry by: [signature] Date: 05/12/95

Approved by: Ru Schroeder Date: 5-12-95

Form 695102C1 Rev. 1.5

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

		NA	STANDARD
Type			
Standard	Standard Aliquot in mL		0.250
Work List	Diluent + Standard Volume		25.00
1361	Diluted Standard in mL to be Analyzed		0.500
Test Code	True Value CN- Concentration (µg/mL)		915
CN-01	Absorbance of Blank		0.049
Matrix	Absorbance of Standard		0.861
liquid	Y-Intercept Value		0.014205
Sample #	Slope Value		0.143914
54N8C	µg of CN in Standard	ERR	5.544
Instrument Code			
WA93252			
Analyst		gwp 5/12/95 ~~0.6520~~	
J.T. Knight			
Date	µg of CN-/mL in Standard	ERR	1109
05/12/95			
Time	Standard % Recovery		121.2%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
04/18/95	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:		Date:	05/12/95
Approved by:	RW Schroeder	Date:	5-12-95

Form X2 Rev. 1.0

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

Type		SAMPLE
Solid	Sample Weight in grams (SS)	0.48590
Work List	Dissolution Volume (EDTA/en + sample) (DV	5.00000
1361	Aliquot Analyzed from Dissolution (A)	0.25000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.049
Matrix	Absorbance of Sample	0.157
Solid	Y-Intercept Value	0.014205
Sample #	Slope Value	0.143914
S95T000206	µg of Cyanide	0.652
Instrument Code	µg CN- /g	2.68E+01
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
J.T. Knight	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g))	
Date		
05/12/95	Detection Limit = 1.5µg Cyanide / SS * DF	
Time	v RESULTS v	

	Cyanide Concentration (µg/g)	<1.5 µg Cyanide	Detection Limit µg CN- / g
Calibration Date			
04/18/95			3.09E+00

Data Entry by: [signature] Date: 05/12/95

Approved by: Bill Schroeder Date: 5-12-95

Form 695102C Rev. 1.5

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
Solid	Sample Weight in grams (SS)	0.48590
Work List	Dissolution Volume (EDTA/en + sample) (DV	5.00000
1361	Aliquot Analyzed from Dissolution (A)	0.25000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.049
Matrix	Absorbance of Sample	0.153
Solid	Y-Intercept Value	0.014205
Sample #	Slope Value	0.143914
S95T000206dup	µg of Cyanide	0.624
Instrument Code	µg CN- /g	2.57E+01
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
J.T. Knight	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g))	
Date		
05/12/95	Detection Limit = 1.5µg Cyanide / SS * DF	
Time	v RESULTS v	

	Cyanide Concentration (µg/g)	<1.5 µg Cyanide	Detection Limit µg CN- / g
Calibration Date			
04/18/95			3.09E+00

Data Entry by: [signature] Date: 05/12/95

Approved by: R.W. Schroeder Date: 5-12-95

Form 695102C1 Rev. 1.5 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	25.00	
1361	Diluted Spike Standard in mL	0.250	
Test Code	True Value CN- Concentration (µg/mL)	915	
CN-01	Absorbance of Blank	0.049	
Matrix	Absorbance of Sample+Spike	0.497	
liquid	Y-Intercept Value	0.014205	
Sample #	Slope Value	0.143914	
54N8C	µg of CN- in Sample+Spike	3.014	ERR
Instrument Code			
WA93252			
Analyst	Known µg of CN- in Original Sample	0.6520	
J.T. Knight			
Date	µg of CN- in Spike	2.2875	
05/12/95			
Time	Spike % Recovery	103.3%	
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
04/18/95	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:		Date:	05/12/95
Approved by:	Ru Schroeder	Date:	5-12-95

Form X2 Rev. 1.0

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

CN- DETERMINATION : LA-695-102 (C-0) BLANK, LIQUID, SOLID

		SAMPLE
Type		
Solid	Sample Weight in grams (SS)	0.48590
Work List	Dissolution Volume (EDTA/en + sample) (DV	5.00000
1361	Aliquot Analyzed from Dissolution (A)	4.00000
Test Code	Dilution Factor (DF)	1.000
CN-01	Absorbance of Blank	0.000
Matrix	Absorbance of Sample	0.082
Blank	Y-Intercept Value	0.014205
Sample #	Slope Value	0.143914
	µg of Cyanide	0.471
Instrument Code	µg CN- /g	1.21E+00
WA93252		
Analyst	µg of Cyanide = [(Absorb. of Sample - Absorb. of Blank) - (Y-Intercept)] / Slope Value	
J.T. Knight	µg/g of Cyanide = (µg Cyanide / A) * (DV / SS (g))	
Date		
05/12/95	Detection Limit = 1.5µg Cyanide / SS * DF	
Time	v RESULTS v	

	Cyanide Concentration (µg/g)	<1.5 µg Cyanide	Detection Limit µg CN- / g
Calibration Date			
04/18/95			3.09E+00

Data Entry by:		Date:	05/12/95
Approved by:		Date:	5-12-95

Form 695102C1 Rev. 1.5

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW-DO NOT WRITE IN SPACE

CN- DETERMINATION : LA-695-102 (C-0) SPIKE, STANDARD

		NA	STANDARD
Type			
Standard	Standard Aliquot in mL		0.250
Work List	Diluent + Standard Volume		25.00
1361	Diluted Standard in mL to be Analyzed		0.500
Test Code	True Value CN- Concentration (µg/mL)		915
CN-01	Absorbance of Blank		0.049
Matrix	Absorbance of Standard		0.882
liquid	Y-intercept Value		0.014205
Sample #	Slope Value		0.143914
54N8C	µg of CN in Standard	ERR	5.551
Instrument Code			
WA93252			
Analyst		[illegible] ~~0.0520~~	
J.T. Knight			
Date	µg of CN-/mL in Standard	ERR	1110
05/12/95			
Time	Standard % Recovery		121.3%
Calibration Date	Slope and Y-Intercept calculated from working curve calibration		
04/18/95	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:		Date:	05/12/95
Approved by:		Date:	5-12-95

Form X2 Rev. 1.0

LABCORE Data Entry Template for Worklist# 1191

Analyst: EC **Instrument:** IC01 **Book #** 82N9-17

Method: LA-533-105 Rev/Mod C-2

Worklist Comment: H2O Digest AX-102 IC. JMF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP				@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
		1 BLNK-PREP				@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
		1 BLNK-PREP				@IC-01	NO2-02	SOLID		<3047	N/A	ug/g
		1 BLNK-PREP				@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
		1 BLNK-PREP				@IC-01	NO3-02	SOLID		<3808	N/A	ug/g
		1 BLNK-PREP				@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
		1 BLNK-PREP				@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
		1 BLNK-PREP				@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	NO2-02	SOLID	528	526	N/A	ug/g
		2 STD				@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	NO3-02	SOLID	578	583	N/A	ug/g
		2 STD				@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
		2 STD				@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	3 SAMPLE	S95T000593	0	W	@IC-01	NO2-02	SOLID	N/A	4.01E4	3.05E3	ug/g
95000015	AX-102	3 SAMPLE	S95T000593	0	W	@IC-01	NO3-02	SOLID	N/A	1.72E5	3.81E3	ug/g

S95T000593 10.7640 g/L Dup 10.7020 g/L

Data Entry Comments:

STD 82N9-A .100mL - 10mL
SPIKE 82N9A .100mL

Spike puts NO_3 value very near top of curve, which may explain poor spike recovery JMF 5/1/95

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

LABCORE Data Entry Template for Worklist# 1191

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	NO2-02	SOLID	4.01E4	4.13E4	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	NO3-02	SOLID	1.72E5	1.72E5	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	4 DUP	S95T000593	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	NO2-02	SOLID	100	87.8	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	NO3-02	SOLID	100	48.4	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000015	AX-102	5 SPK	S95T000593	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g

Final page for worklist # 1191

G.N. Cohen 4-25-94
Analyst Signature **Date**

5-2-95
Verified Jane M. Fuge 5/2/95

Analyst Signature **Date**

Data Entry Comments:

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

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T000593		
TEST CODE:	@IC-01	ANALYST:	Ed Colvin
INSTRUMENT:	Dionex 4000i	ANALYSIS DATE:	04/25/95
WORK LIST #:	1191	SAMPLE POINT:	AX-102
BATCH ID:		SAMPLE PREP:	water digest

	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
82N9A	93.9%	105.2%	99.6%	100.9%	96.1%	103.2%	100.9%	96.9%
S95T000593	<0.00	<0.00	4.01E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
S95T000593	<0.00	<0.00	4.13E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 RPD	N/A	N/A	3.1%	0.1%	N/A	N/A	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
S95T000593			87.8%	48.4%				

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Jann M Fryer	Date:	5/1/95
Chemist Approval:	Jann Fryer	Date:	5/2/95

LAB LEADER INFO	
Method:	LA-533-105 C-2
Matrix:	solid
Test Code:	@IC-01
Work List #:	1191
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	82N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	05/01/95
Chemist:	Jann Frye
Analyst:	Ed Colvin
Analysis Date:	04/25/95
Time Complete:	
Instrument Code:	Dionex 4000i
Rerun:	0
Sample Prep:	water digest
Sample Point:	AX-102
Sample Type	
STANDARD	82N9A
SAMPLE 1	S95T000593
DUPLICATE 1	S95T000593
SAMPLE 2	
DUPLICATE 2	
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T000593
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<0.06	<0.1	<.8	<1	<.6	<.8	<.8	<.5
Standard Data (µg/mL)	52.6	78.9	526	583	496	618	577	498
Sample 1 Data (µg/mL)			4.32E+02	1.85E+03				
Sample 1 Dilution Factor			41	41				
Sample 1 Prep DF	10.764	10.764	10.764	10.764	10.764	10.764	10.764	10.764
Duplicate 1 Data (µg/mL)			4.42E+02	1.84E+03				
Duplicate 1 Dilution Factor			41	41				
Duplicate 1 Prep DF	10.702	10.702	10.702	10.702	10.702	10.702	10.702	10.702
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)			6.17E+02	1.96E+03				
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)			1.00E-01	1.00E-01				
Total Volume (mL)			10.25	10.25				
Std. Conc. (µg/mL)	58	75	628	578	518	599	572	514
Detection Limit	0.100	0.200	1.000	1.000	1.000	1.000	1.000	1.000

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	93.9%	105.2%	99.6%	100.9%	96.1%	103.2%	100.9%	96.9%
Sample 1 in µg/g	<0.00	<0.00	4.01E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 in µg/g	<0.00	<0.00	4.13E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 RPD	N/A	N/A	3.1%	0.1%	N/A	N/A	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			87.8%	48.4%				

Data Entry by: Jann M. Frye — Date: 05/01/95
Approved by: Jann Frye — Date: 5/1/95

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T000593		
TEST CODE:	@IC-01	ANALYST:	Ed Colvin
INSTRUMENT:	Dionex 4000i	ANALYSIS DATE:	04/25/95
WORK LIST #:	1191	SAMPLE POINT:	AX-102
BATCH ID:		SAMPLE PREP:	water digest

	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
82N9A	93.9%	105.2%	99.6%	100.9%	96.1%	103.2%	100.9%	96.9%
S95T000593	<0.00	<0.00	4.01E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
S95T000593	<0.00	<0.00	4.13E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 RPD	N/A	N/A	3.1%	0.1%	N/A	N/A	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
S95T000593			84.8%	41.1%				

NARRATIVE: Analyst Comments:

Chemist Comments:

Form Completed By:	Janno M. Fuyr	Date:	5/1/95
Chemist Approval:	Janno Fuyr	Date:	5/3/95

LAB LEADER INFO	
Method:	LA-533-105 C-2
Matrix:	solid
Test Code:	@IC-01
Work List #:	1191
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	82N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	05/01/95
Chemist:	Jann Frye
Analyst:	Ed Colvin
Analysis Date:	04/26/95
Time Complete:	
Instrument Code:	Dionex 4000i
Rerun:	0
Sample Prep:	water digest
Sample Point:	AX-102
Sample Type	
STANDARD	82N9A
SAMPLE 1	S95T000593
DUPLICATE 1	S95T000593
SAMPLE 2	
DUPLICATE 2	
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T000593
SPIKE DUPLICATE	

PRINT

TECH INFO

	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<0.06	<0.1	<.8	<1	<.6	<.8	<.8	<.5
Standard Data (µg/mL)	52.6	78.9	526	583	496	618	577	499
Sample 1 Data (µg/mL)			4.32E+02	1.86E+03				
Sample 1 Dilution Factor			41	41				
Sample 1 Prep DF	10.764	10.764	10.764	10.764	10.764	10.764	10.764	10.764
Duplicate 1 Data (µg/mL)			4.42E+02	1.84E+03				
Duplicate 1 Dilution Factor			41	41				
Duplicate 1 Prep DF	10.702	10.702	10.702	10.702	10.702	10.702	10.702	10.702
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)			8.11E+02	1.95E+03				
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)			1.00E-01	1.00E-01				
Total Volume (mL)			10.25	10.25				
Std. Conc. (µg/mL)	56	75	528	578	516	599	572	514
Detection Limit	0.100	0.200	1.000	1.000	1.000	1.000	1.000	1.000

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	93.9%	105.2%	99.6%	100.9%	96.1%	103.2%	100.9%	96.9%
Sample 1 in µg/g	<0.00	<0.00	4.01E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 in µg/g	<0.00	<0.00	4.13E+04	1.72E+05	<0.00	<0.00	<0.00	<0.00
Duplicate 1 RPD	N/A	N/A	3.1%	0.1%	N/A	N/A	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			84.9%	41.1%				

Data Entry by: Jann M. Frye — Date: 05/01/95

Approved by: Jann Frye — Date: 5/3/95

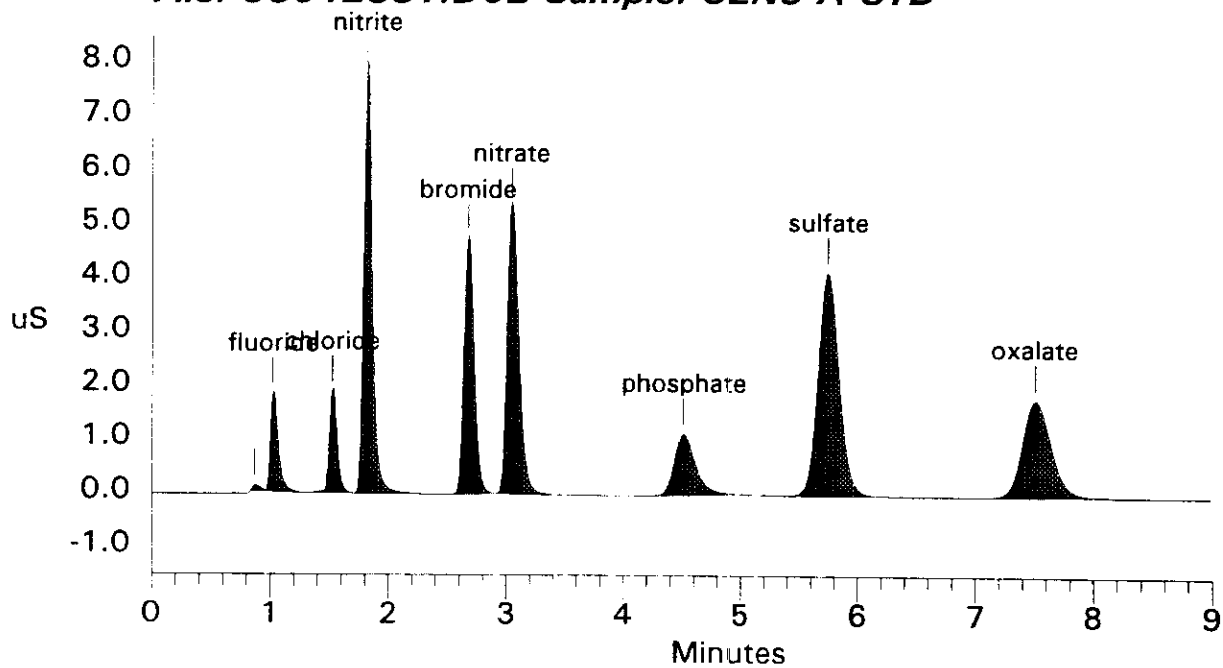
Sample Name: 82N9-A STD Date: 04/25/1995 07:01:56
Data File : C:\DX\DATA\95042531.D02
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2 Detector:CDM-1
Analyst : [illegible] Column: 4-25-95

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	2700	5Hz	0.00	9.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	85	368	2	
2	1.02	fluoride	52.623	1793	8276	2	2.00
3	1.52	chloride	78.952	1857	8522	1	0.00
4	1.81	nitrite	525.532	7775	39794	1	-1.09
5	2.67	bromide	577.349	4708	28105	1	-1.48
6	3.04	nitrate	583.150	5372	36650	1	-1.62
7	4.51	phosphate	496.258	1111	13870	1	-0.66
8	5.74	sulfate	617.982	4107	50238	1	-0.35
9	7.50	oxalate	498.009	1775	29327	1	-0.27
		Totals	3429.855	28582	215150		

File: 95042531.D02 Sample: 82N9-A STD



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 88 TO 94.

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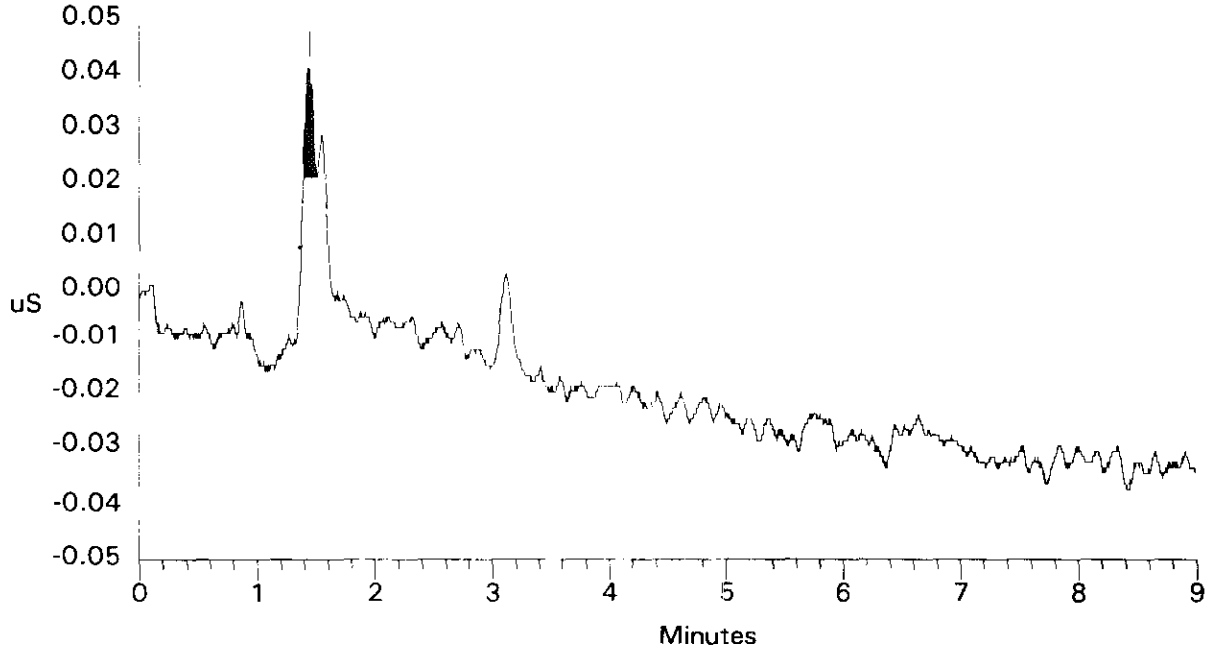
==============================================================================
| Sample Name: INSTR BLANK                      Date: 04/25/1995 06:37:38      |
| Data File  : C:\DX\DATA\95042531.D01                                         |
| Method     : C:\DX\METHOD\KIT.MET                                            |
| ACI Address: 1  System: 1  Inject#: 1                   Detector:CDM-1       |
| Analyst    :                Column:                                         |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	2700	5Hz	0.00	9.00		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: 95042531.D01 Sample: INSTR BLANK



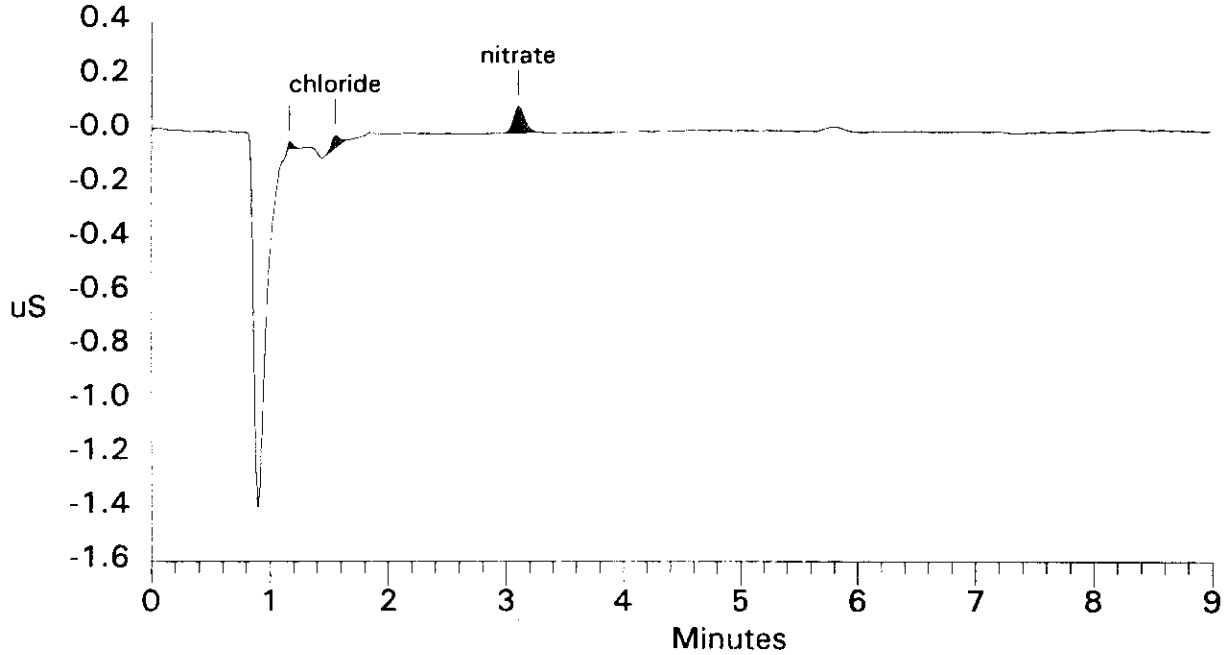
Sample Name: SAMPLE BLK	Date: 04/25/1995 07:15:25
Data File : C:\DX\DATA\95042531.D03	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 3	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	2700	5Hz	0.00	9.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	1.55	chloride	0.016	46	218	1	1.97
3	3.10	nitrate	0.424	97	612	1	0.32
		Totals	0.440	143	830		

File: 95042531.D03 Sample: SAMPLE BLK



Data Reprocessed On 04/25/1995 08:38:06

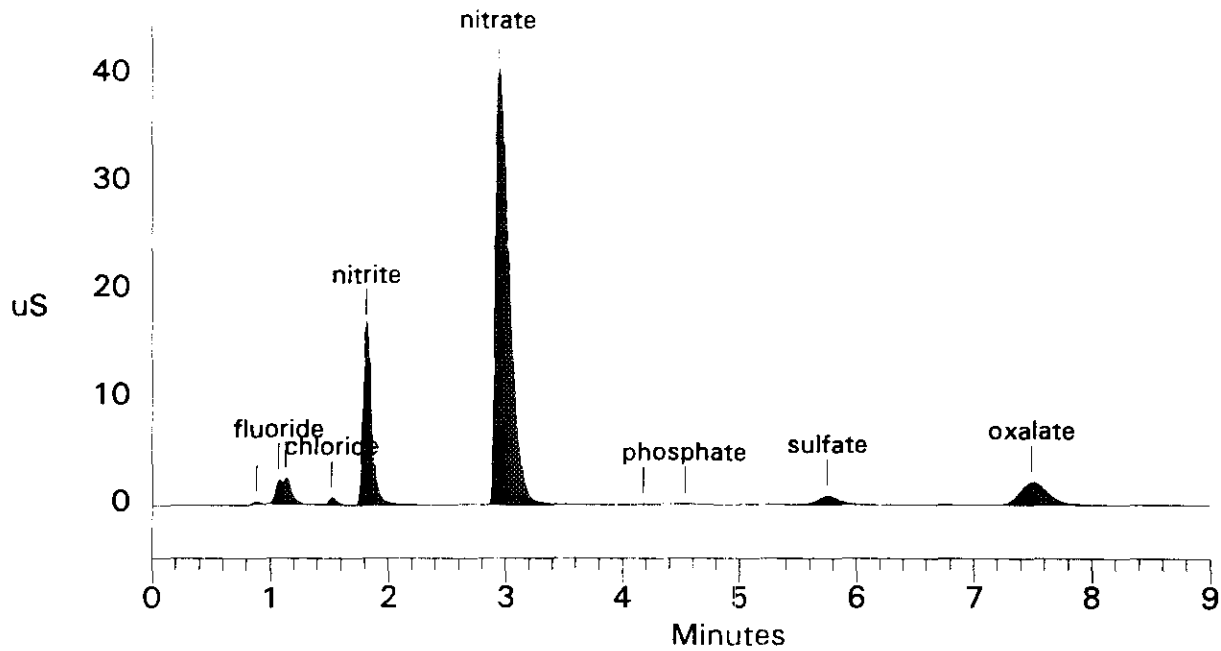
Sample Name: S95T000593	Date: 04/25/1995 07:49:18
Data File : C:\DX\DATA\95042531.D06	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 6	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	2700	5Hz	0.00	9.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	239	1119	2	
2	1.07	fluoride	19.069	2257	7353	2	4.90
3	1.13		0.000	2406	12139	2	
4	1.52	chloride	10.803	659	2882	1	0.00
5	1.81	nitrite	431.580	16647	83423	1	-1.09
6	2.94	nitrate	1852.401	40258	333172	1	-4.85
7	4.17		0.000	47	490	1	
8	4.53	phosphate	15.435	78	828	1	-0.22
9	5.75	sulfate	51.927	788	9745	1	-0.17
10	7.49	oxalate	235.622	2109	34339	1	-0.40
		Totals	2616.836	65489	485490		

File: 95042531.D06 Sample: S95T000593



Data Reprocessed On 04/25/1995 08:44:42

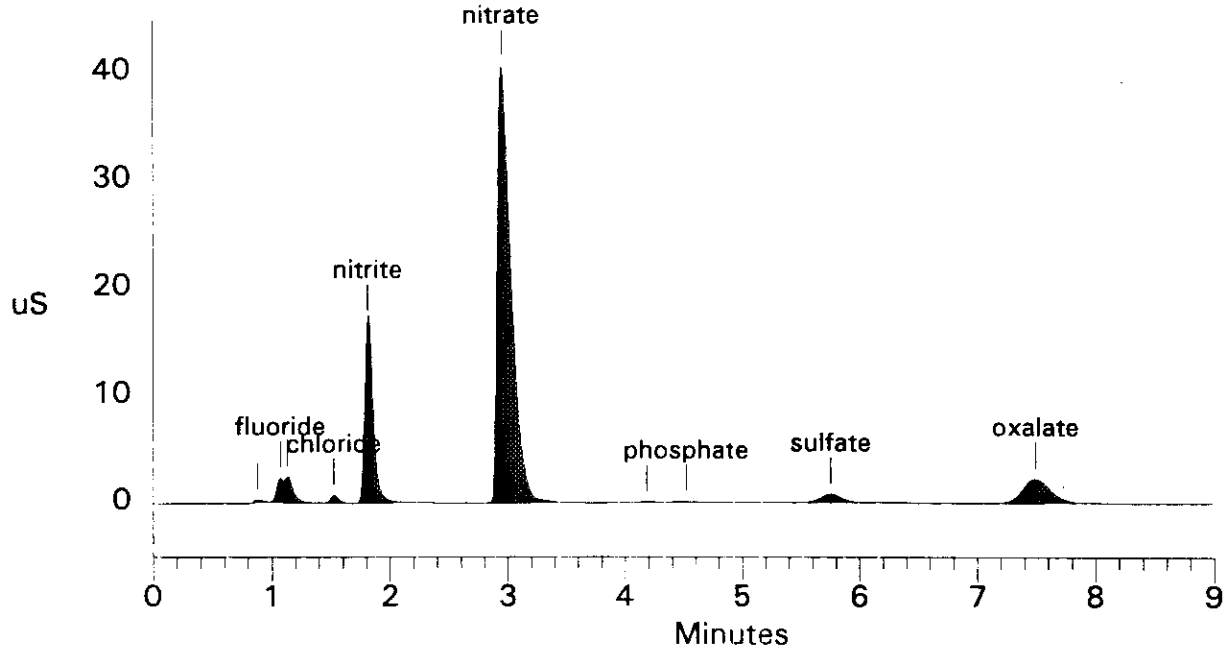
Sample Name: S95T000593 DUP Date: 04/25/1995 08:07:56
Data File : C:\DX\DATA\95042531.D07
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 7 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	2700	5Hz	0.00	9.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	227	1028	2	
2	1.07	fluoride	19.936	2329	7701	2	4.90
3	1.13		0.000	2460	12634	2	
4	1.52	chloride	12.579	763	3351	1	0.00
5	1.81	nitrite	442.499	16924	85601	1	-1.09
6	2.95	nitrate	1843.990	40550	331450	1	-4.53
7	4.18		0.000	42	396	1	
8	4.52	phosphate	16.430	83	896	1	-0.44
9	5.75	sulfate	53.210	813	10002	1	-0.17
10	7.49	oxalate	250.528	2270	36576	1	-0.40
		Totals	2639.172	66459	489637		

File: 95042531.D07 Sample: S95T000593 DUP



Data Reprocessed On 04/25/1995 08:47:52

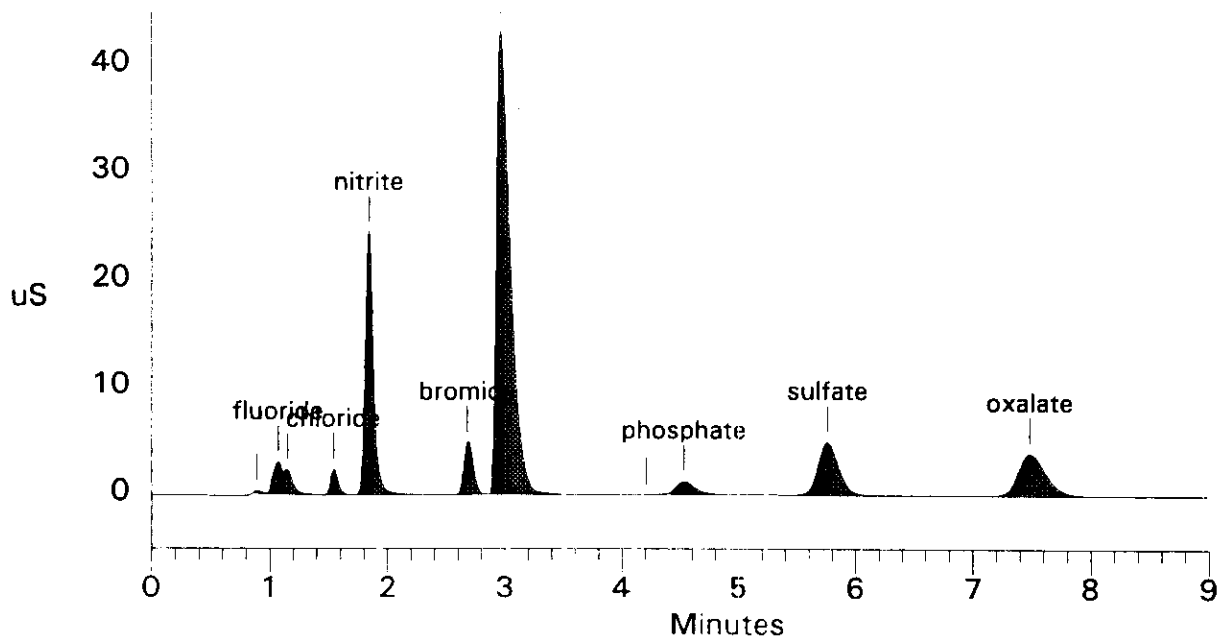
Sample Name: S95T000593 + SPIKE Date: 04/25/1995 08:32:24
Data File : C:\DX\DATA\95042531.D09
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 9 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	41	2700	5Hz	0.00	9.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	258	1128	2	
2	1.07	fluoride	38.197	2967	15123	2	4.90
3	1.15		0.000	2291	11483	2	
4	1.54	chloride	39.268	2364	10454	1	1.32
5	1.84	nitrite	616.983	24400	120336	1	0.55
6	2.68	bromide	227.890	4856	27283	1	-1.11
7	2.96	nitrate	1964.429	43098	356339	1	-4.21
8	4.21		0.000	29	285	1	
9	4.53	phosphate	205.917	1199	14188	1	-0.22
10	5.76	sulfate	294.706	4885	59319	1	0.00
11	7.48	oxalate	426.462	3883	63197	1	-0.53
		Totals	3813.853	90231	679134		

File: 95042531.D09 Sample: S95T000593 + SPIKE



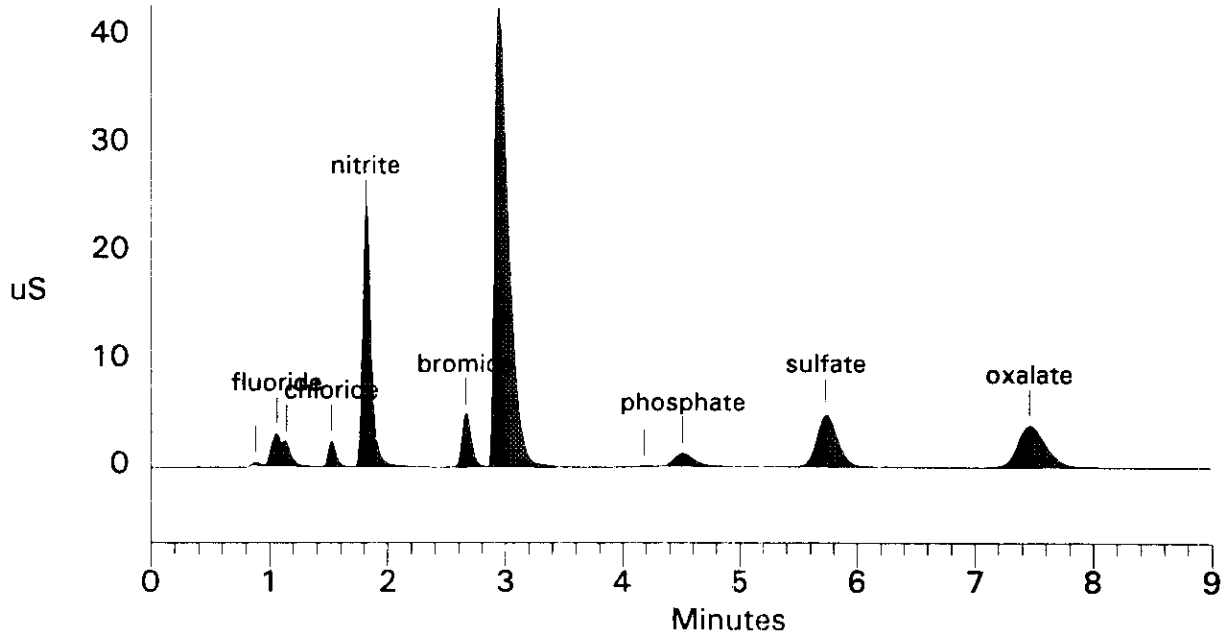
```
==================================================================================
| Sample Name: S95T000593  + SPIKE            Date: 04/25/1995 08:20:14          |
| Data File  : C:\DX\DATA\95042531.D08                                           |
| Method     : C:\DX\METHOD\KIT.MET                                              |
| ACI Address: 1  System: 1  Inject#: 8                    Detector:CDM-1        |
| Analyst    :                Column:                                            |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	2700	5Hz	0.00	9.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	251	995	2	
2	1.06	fluoride	39.305	2952	15578	2	6.00
3	1.14		0.000	2201	10211	2	
4	1.52	chloride	38.842	2351	10339	1	0.00
5	1.81	nitrite	610.573	23311	119062	1	-1.09
6	2.66	bromide	222.571	4826	26609	1	-1.85
7	2.94	nitrate	1947.209	42659	352750	1	-4.85
8	4.18		0.000	30	274	1	
9	4.51	phosphate	203.926	1189	14046	1	-0.66
10	5.73	sulfate	290.444	4822	58434	1	-0.52
11	7.46	oxalate	421.347	3840	62417	1	-0.80
		Totals	3774.218	88433	670716		

File: 95042531.D08 Sample: S95T000593 + SPIKE



LABCORE Data Entry Template for Worklist# 672

Analyst: HKL **Instrument:** AB00 15 **Book #** 91B52

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

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

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1 STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2 BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2 BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3 BLNK/BKG				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	4 SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000014	AX-102	4 SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000014	AX-102	5 DUP	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	5 DUP	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000014	AX-102	6 SPK	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	7 SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000015	AX-102	7 SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000015	AX-102	8 DUP	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	8 DUP	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000015	AX-102	9 SPK	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 672

A Lewis 3-8-95 [signature] 3-9-95

Data Entry Comments: SPK recoveries are out of controll limit - Batch will be reran. [signature] 3-9-95

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.

worklistrpt Version 2.0 02/21/95
03/07/95 12:00

LABCORE Data Entry Template for Worklist# 672

GROUP	PROJECT	S TYPE	SAMPLE#	R A -------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
Analyst Signature		Date			Analyst Signature			Date	

[signature] 3-9-95

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.

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)	3532	4294
672	COUNT TIME in MINUTES	(CT)	30	30
AT or YB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	10.000	10.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		117.033	142.433
Sample #	Sample Concentration in µCi/L		2.22E-02	BOOK#
WORKLIST#672	Replicate Concentration in µCi/L		2.70E-02	91B52
Instrument Code				
WB26872	Average Concentration in µCi/L		2.4554E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
03/08/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
01:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	2.46E-05	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	3.3%	1.52E-07 µCi/mL

Data Entry by: [signature] Date: 03/09/95

Approved by: [signature] Date: 3/9/95

Form 508101_C Rev. 1.3

Page 1 of 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)	13	15
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.428	0.428
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.356	0.356
Sample #	Sample Concentration in µCi/g	<	3.15E-02	BOOK#
S95T204	Replicate Concentration in µCi/g	<	3.15E-02	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	3.1524E-02	
Analyst				
AKL				
Date				
03/08/95				
Time				
01:00 PM				

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

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

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

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

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 3.15E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.				7.11E-02 µCi/g
RELATIVE COUNTING ERROR		=	196.0%	

Data Entry by:		Date:	03/09/95
Approved by:		Date:	3/9/95

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)	480	375
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.428	0.428
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		15.300	11.800
Sample #	Sample Concentration in µCi/g		1.35E+00	BOOK#
S95T204	Replicate Concentration in µCi/g		1.04E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.1984E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/08/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
01:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.20E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	11.0%	7.11E-02 µCi/g

Data Entry by: Date: 03/09/95

Approved by: Date: 3/9/95

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)	554	464
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.456	0.456
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		17.767	14.767
Sample #	Sample Concentration in µCi/g		1.47E+00	BOOK#
S95T204	Replicate Concentration in µCi/g		1.23E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.3503E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/08/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
01:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

				DETECTION LEVEL
ALPHA TOTAL	in µCi/g	(Average) =	1.35E+00	
RELATIVE COUNTING ERROR		=	9.7%	6.67E-02 µCi/g

Data Entry by: [signature] Date: 03/09/95

Approved by: [signature] Date: 3/9/95

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)	46157	37934
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.050	0.050
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.428	0.428
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Sample #	SPIKE VALUE in µCi/L	(SVal)	36.378	36.378
S95T204	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.238	0.238
Instrument Code	SAMPLE + SPIKE µCi/g	(S+S)	1.36E+02	1.12E+02
WB26872	AVERAGE or MAXIMUM µCi/g from FORM C		1.1984E+00	
Analyst	BOOK#		94B43	
AKL				
Date				
03/08/95				
Time				
01:00 PM				

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

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

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

RESULT AVG. PERCENT SPIKE RECOVERY = 72.2%

Data Entry by: Date: 09-Mar-95

Approved by: Date: 3/9/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	508	485
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.472	0.472
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		16.233	15.467
Sample #	Sample Concentration in µCi/g		1.30E+00	BOOK#
S95T208	Replicate Concentration in µCi/g		1.24E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.2711E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/08/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
01:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.27E+00	DETECTION LEVEL
				6.44E-02 µCi/g
RELATIVE COUNTING ERROR		=	9.5%	

Data Entry by:		Date:	03/09/95
Approved by:		Date:	3/9/95

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)	451	479
672	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.7	0.7
AT	SAMPLE SIZE in mL	(SS)	0.050	0.050
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.488	0.488
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		14.333	15.267
Sample #	Sample Concentration in µCi/g		1.11E+00	BOOK#
S95T208	Replicate Concentration in µCi/g		1.18E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.1480E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/08/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
01:00 PM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.15E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	9.9%	6.23E-02 µCi/g

Data Entry by: [signature] Date: 03/09/95

Approved by: [signature] Date: 3/9/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

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

LA-548-101 (A-3) SOLIDS

			SPIKE	REPLICATE
DETECTOR NUMBER			15	15
DISH SIZE 1 , 2 , or 5		(MS)	2	2
TOTAL COUNTS		(TC)	40463	37761
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.7	0.7
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.050	0.050
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	1	1
DIGEST GRAMS of SOLIDS/L		(Dg/L)	0.472	0.472
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	36.378	36.378
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	0.238
SAMPLE + SPIKE µCi/g		(S+S)	1.08E+02	1.01E+02
AVERAGE or MAXIMUM µCi/g from FORM C			1.2711E+00	
BOOK#			94B43	

Type	Work List	AT or TB ?	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SPIKE	672	AT	@ALPHA-01	SOLID	S95T208	WB26872	AKL	03/08/95	01:00 PM

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

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

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

RESULT: AVG. PERCENT SPIKE RECOVERY = 67.0%

Data Entry by: [signature] Date: 09-Mar-95

Approved by: [signature] Date: 3/9/95

Form 508101_X Rev. 1.3

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worklistrpt Version 2.0 02/21/95
03/09/95 14:13

Page: 1

LABCORE Data Entry Template for Worklist# 693

Analyst: AKL **Instrument:** AB00 15 **Book #** 94B52

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

Worklist Comment: AT-Mount .100-10-~~100 mL~~ 1 mL. Use .100 mL A-SPK. Rerun 1. SLF

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1 STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2 BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2 BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3 BLNK/BKG				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	4 SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000014	AX-102	4 SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000014	AX-102	5 DUP	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	5 DUP	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000014	AX-102	6 SPK	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	7 SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000015	AX-102	7 SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000015	AX-102	8 DUP	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	8 DUP	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000015	AX-102	9 SPK	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 693

Alita Lewis

3-13-95

Data Entry Comments:
The high sample RPD values are due to the low α activity on the mount. The low SPK recoveries are due to dissolved solids on dish. Due to its having a higher count rate (a result of sample size) the original worklist (# 672) data will be reported

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# 693

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
Analyst Signature		Date				Analyst Signature			Date	
						M Bierman			3/13/95	

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.

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)	3836	3576
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	10.000	10.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA-01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		127.467	118.800
Sample #	Sample Concentration in µCi/L		2.41E-02	BOOK#
WORKLIST#693	Replicate Concentration in µCi/L		2.25E-02	98B52
Instrument Code				
WB26872	Average Concentration in µCi/L		2.3305E-02	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
03/10/95	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
10:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/mL	(Average) =	2.33E-05	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	3.3%	1.19E-07 µCi/mL

Data Entry by:	[signature]	Date:	03/13/95
Approved by:	[signature]	Date:	3/13/95

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

			BLANK	REPLICATE
Type	DETECTOR NUMBER		15	15
BLANK	DISH SIZE 1, 2, or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	19	6
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.428	0.428
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.540	0.269
Sample #	Sample Concentration in µCi/g	<	2.41E-01	BOOK#
S95T204	Replicate Concentration in µCi/g	<	1.20E-01	
Instrument Code				
WB26872	Maximum Concentration in µCi/g	<	2.4098E-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)			
03/10/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
10:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Maximum) =	< 2.41E-01	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				2.81E-01 µCi/g
RELATIVE COUNTING ERROR		=	155.9%	

Data Entry by:		Date:	03/13/95
Approved by:		Date:	3/13/95

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)	105	114
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TS ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.428	0.428
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		3.100	3.400
Sample #	Sample Concentration in µCi/g		1.38E+00	BOOK#
S95T204	Replicate Concentration in µCi/g		1.52E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.4515E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/10/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
10:00 AM	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			

v RESULTS v

ALPHA TOTAL	in µCi/g	(Average) =	1.45E+00	DETECTION LEVEL
				2.81E-01 µCi/g
RELATIVE COUNTING ERROR		=	22.8%	

Data Entry by:	[signature]	Date:	03/13/95
Approved by:	[signature]	Date:	3/13/95

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)	133	139
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TS ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.456	0.456
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		4.033	4.233
Sample #	Sample Concentration in µCi/g		1.69E+00	BOOK#
S95T204	Replicate Concentration in µCi/g		1.77E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.7327E+00	
Analyst				
AKL	Rs (Sample Count Rate) = (TC / CT) - BKG			
Date	ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)			
03/10/95				
Time	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
10:00 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)	=	1.73E+00	2.64E-01 µCi/g
RELATIVE COUNTING ERROR	=	19.5%	

Data Entry by:	[signature]	Date:	03/13/95
Approved by:	[signature]	Date:	3/13/95

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

			SPIKE	REPLICATE
DETECTOR NUMBER			15	15
DISH SIZE 1 , 2 , or 5		(MS)	2	2
TOTAL COUNTS		(TC)	56273	41599
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.4	0.4
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	1.000	1.000
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	101	101
DIGEST GRAMS of SOLIDS/L		(Dg/L)	0.428	0.428
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	36.378	36.378
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	0.238
SAMPLE + SPIKE µCi/g		(S+S)	8.38E+02	6.19E+02
AVERAGE or MAXIMUM µCi/g from FORM C			1.4515E+00	
BOOK#			94B43	

Type	Work List	AT or TB ?	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SPIKE	693	AT	@ALPHA-01	SOLID	S95T204	WB26872	AKL	03/10/95	10:00 AM

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

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

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

RESULT AVG. PERCENT SPIKE RECOVERY = 84.7%

Data Entry by: [signature] Date: 13-Mar-95

Approved by: [signature] Date: 13-Mar-95

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)	114	116
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.472	0.472
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		3.400	3.467
Sample #	Sample Concentration in µCi/g		1.38E+00	BOOK#
S95T208	Replicate Concentration in µCi/g		1.40E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.3905E+00	
Analyst				
AKL				
Date				
03/10/95				
Time				
10:00 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	(Average) =	1.39E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	21.6%	2.55E-01 µCi/g

Data Entry by: [signature] Date: 03/13/95

Approved by: [signature] Date: 3/13/95

Form 508101_C Rev. 1.3

Page 1 of 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)	98	99
693	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.4	0.4
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA-01	DIGEST GRAMS of SOLIDS/L	(Dg/L)	0.488	0.488
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		2.867	2.900
Sample #	Sample Concentration in µCi/g		1.12E+00	BOOK#
S95T208	Replicate Concentration in µCi/g		1.14E+00	
Instrument Code				
WB26872	Average Concentration in µCi/g		1.1294E+00	
Analyst				
AKL				
Date				
03/10/95				
Time				
10:00 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	(Average) =	1.13E+00	DETECTION LEVEL
RELATIVE COUNTING ERROR		=	23.9%	2.47E-01 µCi/g

Data Entry by:	[signature]	Date:	03/13/95
Approved by:	[signature]	Date:	3/13/95

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
DETECTOR NUMBER			15	15
DISH SIZE 1 , 2 , or 5		(MS)	2	2
TOTAL COUNTS		(TC)	44522	41618
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.4	0.4
SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	1.000	1.000
SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	101	101
DIGEST GRAMS of SOLIDS/L		(Dg/L)	0.472	0.472
SPIKE VOLUME in mL		(SVol)	0.100	0.100
SPIKE DILUTION FACTOR		(SDF)	1	1
SPIKE VALUE in µCi/L		(SVal)	36.378	36.378
INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	0.238
SAMPLE + SPIKE µCi/g		(S+S)	6.01E+02	5.62E+02
AVERAGE or MAXIMUM µCi/g from FORM C			1.3905E+00	
BOOK#			94B43	

Type	SPIKE
Work List	693
AT or TB ?	AT
Test Code	@ALPHA-01
Matrix	SOLID
Sample #	S95T208
Instrument Code	WB26872
Analyst	AKL
Date	03/10/95
Time	10:00 AM

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

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

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

RESULT **AVG. PERCENT SPIKE RECOVERY = 74.5%**

Data Entry by:		Date:	13-Mar-95
Approved by:		Date:	3/13/95

Form 508101_X Rev. 1.3

worklistrpt Version 2.0 02/21/95
03/20/95 14:15

LABCORE Data Entry Template for Worklist# 745

Analyst: AKL **Instrument:** AB00 15 **Book #** 91852

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

Worklist Comment: Data re-entry from worklist 672. SLF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		1	STD				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
		3	BLNK/BKG				@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	4	SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000014	AX-102	4	SAMPLE	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000014	AX-102	5	DUP	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000014	AX-102	5	DUP	S95T000204	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000014	AX-102	6	SPK	S95T000204	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	7	SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID	N/A			uCi/g
95000015	AX-102	7	SAMPLE	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID	N/A			% Ct. Error
95000015	AX-102	8	DUP	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g
95000015	AX-102	8	DUP	S95T000208	0	F	@ALPHA01 ALPHA01E	SOLID			N/A	% Ct. Error
95000015	AX-102	9	SPK	S95T000208	0	F	@ALPHA01 ALPHA01	SOLID			N/A	uCi/g

Final page for worklist # 745

[signature] 3-20-95 Fitzgerald

Data Entry Comments: Data re-entry from worklist 672 (Per Project coordinators instructions). [signature] 3-20-95

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# 745

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
Analyst Signature		Date				Analyst Signature			Date	

Data Entry Comments:

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

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DISTRIBUTION SHEET

To Distribution	From Characterization Plans and Reports	Page 1 of 2
		Date: 05/15/95
Project Title/Work Order WHC-SD-WM-DP-100, Rev. 0-A, "90-Day Final Report for Tank 241-AX-102, Auger Samples 95-AUG-006 and 95-AUG-007"		EDT NO.: EDT-610412
		ECN NO.: ECN-613644

Name	MSIN	Text With all Attach	EDT/ECN ONLY
Pacific Northwest Laboratory			
J. R. Gormsen	K7-28		X
S. J. Harris	K7-22	X	
K. L. Silvers	P7-27		X
U.S. Department of Energy, RL			
C. A. Babel	S7-54	X	
Westinghouse Hanford Company			
J. N. Appel	G3-21		X
H. Babad	S7-30	X	
R. J. Cash	S7-15	X	
J. L. Deichman	H4-19		X
G. D. Forehand	S7-31		X
C. E. Golberg	H5-49		X
V. W. Hall	H4-21		X
D. C. Hetzer	S6-31		X
L. Jensen	T6-07	X	
G. D. Johnson	S7-15	X	
N. W. Kirch	R2-11	X	
J. G. Kristofzski	T6-06	X	
M. J. Kupfer	H5-49	X	
E. J. Lipke	S7-14		X
N. G. McDuffie	S7-15	X	
J. E. Meacham	S7-15	X	
P. M. Morant	H4-25	X	
A. D. Rice	T6-06	X	
B. C. Simpson	R2-12		X
D. A. Turner	S7-15	X	
J. A. Voogd	R4-01		X
Central Files	L8-04	2	
EDMC	H6-08	X	
LTIC	T6-03		X
OSTI	L8-07	2	
TFIC (Tank Farm Information Center)	R1-20		X
TCRC	R2-12	2	

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DISTRIBUTION SHEET

To Distribution	From Characterization Plans and Reports	Page 2 of 2
		Date: 05/15/96
Project Title/Work Order WHC-SD-WM-DP-100, Rev. 0-A, "90-Day Final Report for Tank 241-AX-102, Auger Samples 95-AUG-006 and 95-AUG-007"		EDT NO.: EDT-610412
		ECN NO.: ECN-613644

Name	MSIN	Text With all Attach	EDT/ECN ONLY	
Washington State Department of Ecology Single-Shell Tank Unit Manager S. E. McKinney P.O. Box 47600 Olympia, Washington 98504-7600		X		
Environmental Protection Agency Single-Shell Tank Unit Manager D. R. Einan 712 Swift Boulevard, Suite 5 Richland, Washington 99352		X		
U. S. Department of Energy Jim Poppiti 12800 Middlebrook Rd. Trevion II, EM-36 Germantown, MD 20874			X	
Los Alamos Technical Associates A. T. DiCenso 750 Swift Boulevard Suite # 4 Richland, WA 99352		X		

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