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

Document number: SD-WM-DP-055

Section 1 **of** 2

Title: 222-S Laboratory Clean Core Samples

Date: 11-16-93 **Revision:** A000

Originator: K.L. Kocher
Co: WHC

Recipient:
Co:

References: EDT-140220

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NOV 16 1993
55 Sta. 6

ENGINEERING DATA TRANSMITTAL

1. EDT 140720

2. To: (Receiving Organization) DISTRIBUTION	3. From: (Originating Organization) LABORATORY DATA MANAGEMENT	4. Related EDT No.: NA
5. Proj./Prog./Dept./Div.: CLEAN CORE SAMPLES/WASTE MANAGEMENT/LDM/PAL	6. Cog. Engr.: K. L. KOCHER	7. Purchase Order No.: NA
8. Originator Remarks: For Release		9. Equip./Component No.: NA
		10. System/Bldg./Facility: 222-S LAB./PAL
11. Receiver Remarks:		12. Major Assm. Dwg. No.: NA
		13. Permit/Permit Application No.: NA
		14. Required Response Date: 11/15/93

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Impact Level	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-WM-DP-055	NA	0	222-S LABORATORY CLEAN CORE SAMPLES	3Q	2	4	11/16/93

16. KEY

Impact Level (F)	Reason for Transmittal (G)	Disposition (H) & (I)
1, 2, 3, or 4 (see MRP 5.43)	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Impact Level for required signatures)

(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.
2	1	Cog.Eng. K. L. Kocher		11/16/93		TU-06					
2	1	Cog. Mgr. J. Kristofzski		11/16/93		TU-06					
2	1	QA J. C. Langford		11/12/93		S-52					
		Safety									
		Env.									

18.	19.	20.	21. DOE APPROVAL (if required)
L. R. Webb 11/12/93 Signature of EDT Originator / Date	Authorized Representative for Receiving Organization / Date	J. Kristofzski 11/16/93 Cognizant/Project Engineer's Manager / Date	Ltr. No. [] Approved [] Approved w/comments [] Disapproved w/comments

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Date Received: NOV 16 1993

INFORMATION RELEASE REQUEST

Reference: WHC-CM-3-4

Complete for all Types of Release

Purpose

[] Speech or Presentation
- [] Full Paper
- [] Summary
- [] Abstract
- [] Visual Aid

(Check only one suffix)

[] Speakers Bureau
[] Poster Session
[] Videotape

[] Reference
[X] Technical Report
[] Thesis or Dissertation
[] Manual
[] Brochure/Flier
[] Software/Database
[] Controlled Document
[] Other

ID Number (include revision, volume, etc.): WHC-SD-WM-DP-055, REV. 0

List attachments.: EDT-140720

Date Release Required: 11/15/93

Title: 222-S LABORATORY CLEAN CORE SAMPLES

Unclassified Category: UC-

Impact Level: 3Q

New or novel (patentable) subject matter? [X] No [] Yes
If "Yes", has disclosure been submitted by WHC or other company?
[] No [] Yes Disclosure No(s).

Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions?
[X] No [] Yes (Identify)

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If "Yes", has written permission been granted?
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[X] No [] Yes (Identify)

Complete for Speech or Presentation

Title of Conference or Meeting: NA

Group or Society Sponsoring: NA

Date(s) of Conference or Meeting: NA

City/State: NA

Will proceedings be published? [] Yes [X] No
Will material be handed out? [] Yes [X] No

Title of Journal: NA

CHECKLIST FOR SIGNATORIES

Review Required per WHC-CM-3-4	Yes	No	Reviewer - Signature Indicates Approval: Name (printed) / Signature / Date
Classification/Unclassified Controlled Nuclear Information	[]	[X]	
Patent - General Counsel	[]	[X]	
Legal - General Counsel	[]	[X]	
Applied Technology/Export Controlled Information or International Program	[]	[X]	
WHC Program/Project	[]	[X]	
Communications	[]	[X]	
RL Program/Project	[X]	[]	per Paula Clark not Required, LA Webb 11/16/93
Publication Services	[]	[X]	
Other Program/Project	[]	[X]	

Information conforms to all applicable requirements. The above information is certified to be correct.

	Yes	No
References Available to Intended Audience	[X]	[]
Transmit to DOE-HQ/Office of Scientific and Technical Information	[]	[X]

Author/Requestor (Printed/Signature) Date
K. K. Giamberardini 11-16-93

Intended Audience
[X] Internal [] Sponsor [] External

Responsible Manager (Printed/Signature) Date
K. K. Giamberardini 11-16-93

INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP

Stamp is required before release. Release is contingent upon resolution of mandatory comments.

Date Cancelled | Date Disapproved

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SUPPORTING DOCUMENT

1. Total Pages 267

2. Title	3. Number	4. Rev No.
222-S LABORATORY CLEAN CORE SAMPLES	WHC-SD-WM-DP-055	0

5. Key Words

CLEAN CORE SAMPLES, 222-S LAB.

6. Author

Name: K. L. Kocher

Signature 11/16/93

Organization/Charge Code 12610/ J120H

7. Abstract

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9. Impact Level 3Q

10. RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE NOV 16 1993
55 Sta. 6

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE

222-S LABORATORY

CLEAN CORE SAMPLE RESULTS

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This report consists of pages 1 through 263.

Employee payroll numbers have been eliminated from this data package to protect the privacy of WHC employees. The elimination of these numbers in no way compromises the integrity of the raw data or information contained herein.

K. K. Giamberardini 10-13-93

K. K. Giamberardini, Manager
Laboratory Data Management

Date

NARRATIVE

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CLEAN CORE NARRATIVE

VOLATILE ORGANICS - SDG NARRATIVE

Sample Numbers: D-90, D-91, D-92, D-93, D-94, D-95, D-96, D-97

The initial GC/MS calibration and continuing calibration met all protocols. All mass spectral tuning requirements were met for all standards, blanks, matrix spikes, matrix spike duplicates and samples. All method blanks met all applicable protocols and requirements. All internal standards retention times and peak areas met all protocols. All system monitoring compound recoveries were within the required limits.

Samples D-90 and D-92 were analyzed on September 16, 1993. Matrix spike and matrix spike duplicate analysis were performed on sample D-92. All applicable criteria were met. However, sample D-92 was slightly contaminated (approximately 6 PPB) with matrix spike compounds (1,1-dichloroethene, trichloroethane, benzene, toluene and chlorobenzene). The cause of the contamination was the use of the same microsyringe to prepare a new matrix spike solution prior to preparing the sample with the same microsyringe. It should be note however that the level of contamination was below the CRQL and contamination criteria for blanks. No unidentified compounds were found.

Samples D-91, D-93, D-94 and D-95 were analyzed on September 23, 1993. The samples showed low levels of two compounds identified by library search. The compounds were hexamethylcyclotrisiloxane and octamethylcyclotetrasiloxane.

Samples D-96 and D-97 were analyzed on September 28, 1993. Sample D-96 was run twice due to a pipetting error.

S. G. Metcalf 11/2/93
S. G. Metcalf
Principal Scientist
Organic Chemistry

SEMI-VOLATILE ORGANICS - SDG NARRATIVE

Sample Numbers: D-98, D-99, D-100, D-101, D-102, D-103, D-104, D-105. These correspond to Customer ID: 10 DUP, 20 DUP, 30 DUP, 40 DUP, 50 DUP, 60 DUP, 70 DUP, AND 80 DUP.

The samples were extracted and analyzed using procedures based on the Contract Laboratory Program (CLP) Statement of Work (SOW), revision OLM01.9. The procedures are LA-523-423 and LA-523-402.

The initial GC/MS calibration and continuing calibration met all protocols. All mass spectral tuning requirements were met for all standards, blanks, matrix spikes, matrix spike duplicates and samples. All method blanks met all applicable protocols and requirements, with the following exceptions: only one method blank was extracted for the sample batch, even though the eight samples were extracted on three separate days. This was due to lack of bench-top extractors. A separate method blank was extracted with the matrix spike and duplicate samples.

Both blanks were free from target analyte contaminants. The second blank (SBLK02), however, contained hexadecane as a contaminant at an estimated concentration of 6 ug/uL. This value is very low (< 10 ug/uL) and was not large enough to re-extract. The source of the hexadecane is not known. Hexadecane was also found in one of the samples (60 DUP), also at a very low level. Since it was not found in any of the other samples or blank, it is probable the hexadecane is a laboratory contaminant.

All internal standards retention times and peak areas met all protocols, with the exception of 10 DUP and 20 DUP. Re-analysis of these two samples, however, gave acceptable results. Therefore only the re-analyzed results were reported. All surrogate recoveries were within the required limits. The matrix spike (MS) and matrix spike duplicate (MSD) came from laboratory sample D-81, as there was insufficient sample to perform the analyses on the samples provided. The MS and MSD were compared to sample 10 DUP, but the choice was arbitrary, as none of the samples contained any of the matrix spike compounds. The MS and MSD met the applicable criteria. Only one component was out (high), but the relative percent difference was very low (1%). Both the MS and MSD, but not the blank, contained diethylphthalate. This was attributed to the poly bottle that the D-81 sample was stored in.

Samples D-98 and D-99 were extracted on August 16, 1993. Samples D-100, D-101, and D102 were extracted on August 17, 1993, and samples D-103, D-104, and D-105 were extracted on August 18, 1993. Matrix spike and matrix spike duplicate extractions were performed on August 23, 1993. All analyses were performed on Sept. 3, 1993 and the re-analysis of 10 DUP and 20 DUP was performed on Sept. 13, 1993.

Sample sizes were around 40 - 50 mL for the sample group. Due to the small sample size, quantitation limits were higher than the standard procedure's, which assumes a sample size of 1000 mL. The quantitation limit reported was calculated from the original limit multiplied by the dilution factor the smaller sample size caused.

No target analytes were identified in any of the samples or blanks. Several of the samples and one blank did contain non-target components. 60 DUP and SBLK02 contained hexadecane at low amounts. No other contaminants fell within 10% of the nearest internal standard area, however, the largest of the peaks were quantified and the library was searched for a potential indentification. 50 DUP contained three unknowns at low levels, two of which were given tentative identifications. 60 DUP also contained 3 comtaminants; hexadecane and the same two found in 50 DUP. 80 DUP contained two peaks that the library was unable to identify, as well as a series of smaller peaks that appeared to be a homologous series. Library searches of these very low level compounds, however, did not find any common functional groups.

DRHansen 10/26/93

Daniel Hansen
Sr. Scientist
Organic Chemistry

CORRESPONDENCE

Westinghouse Hanford Company — **Internal Memo**

From: Analytical Evaluation and Reporting — 7E120-93-054
Phone: 373-4925 R2-12
Date: July 26, 1993
Subject: LETTER OF INSTRUCTION FOR CLEANLINESS DETERMINATION IN CORE SAMPLERS

To: J. G. Kristofzski T6-06

cc:	K. E. Bell	R2-12		H. S. Rich	H4-23
	A. B. Cockrell	R2-14		L. M. Sasaki	R2-12
	S. P. Frenzel	R2-12		C. D. Suydam	S1-57
	[redacted]			T. E. Whelan	S1-57
	A. F. Noonan	R2-12		W. F. Zuroff	R2-14
	KLS File/LB				

This letter of instruction (LOI) provides direction to the 222-S laboratory for analyses to determine the state of current core sampler cleanliness. This instruction has been provided in response to a recent assessment questioning possible core sampler contamination and may provide a basis for future implementation of a standard core sampler cleaning procedure.

The 222-S laboratory is requested to test seven separate core samplers provided by tank farm operations. These samplers are to be selected individually from multiple production lots. Each sampler is to be filled with laboratory deionized water and allowed to remain in that state for seven days. A container of the original water used to fill the samplers should be retained. After the seven day period, each sampler's water content, as well as the original water, is to be tested in duplicate by the following methods:

* ICP - Direct, Acid Digest*
* IC - Direct
* Semi-VOA
* VOA

*Also perform duplicate analysis on digest

Each analytical batch shall have as a minimum a calibration standard(s) and method blank. In addition, at least one matrix spike shall be analyzed for each methodology during the experiment.

The deliverables of this operation include an informal report containing all test results as soon as possible after analysis and a formal letter report. Each report shall include at minimum the following information: sampler identification number, results, and duplicate results. In addition, analytical documentation must be available to determine the precision and accuracy associated with the reported data.

Hanford Operations and Engineering Contractor for the US Department of Energy

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The following charge codes should be utilized for the work covered in this LOI.

124J0	Project Management	N45R1
124E0	Inorganic Chemistry	N45R2
124F0	Organic Chemistry	N45R3
12720	Laboratory Operations	N45R5
12730	Standards and Automation	N45R6

A cost and schedule estimate is requested to establish a work package for this work scope.

This work has been determined to be impact level 3Q.

If you have any questions, please contact me at 373-4925.

K.L. Silvers, Scientist
Analytical Evaluation
and Reporting

pkc

From: Organic Chemistry
Phone: 373-2872 T6-50
Date: October 27, 1993
Subject: CLEAN CORE SAMPLE RESULTS

124F0-OC93-031

To: Kurt L. Kocher T6-06

cc: KBW:DH File/LB

The following table contains those compounds, both target and tenatively identified (TIC), found in the clean core samples. For a more complete description, please refer to the narrative provided or the data package. Please note that the following qualifiers were used in the table: J - compound was positively identified, but the quantity was below the calibration range. B - the compound was also quantitated in the blank. N - the compound was tentatively identified by the library. MQL - the minimum quantitation limit, defined as the lowest standard multiplied by any dilution factors. Unknowns and TIC's by definition do not have an MQL, and are marked with with an "N/A".

Laboratory ID	Compound	Conc. ug/L	MQL ug/L
VBLK01	2-Butanone	16	10
VBLK02	2-Butanone	14	10
	Toluene	0.1J	10
VBLK04	Acetone	8J	10
	2-Butanone	14	10
	Tetrachloroethene	0.09J	10
SBLK01	None detected		10
SBLK02	Hexadecane	6N	N/A
D-90	Methylene chloride	3J	10
	Acetone	10J	10
	2-Butanone	13B	10
	Toluene	0.3J	10
D-91	Methylene chloride	0.4J	10
	Acetone	5J	10
	Carbon disulfide	0.5J	10
	2-Butanone	10B	10
	Toluene	0.4JB	10
	Styrene	0.07J	10
	Cyclotrisiloxane,hexamethyl	83JN	N/A
	Cyclotetrasiloxane,octameth	36JN	N/A

D-92	Methylene chloride	2J		10
	Acetone	8J		10
	1,1-Dichloroethene	6J		10
	2-Butanone	13B		10
	Trichloroethene	6J		10
	Benzene	6J		10
	Toluene	6J		10
	Chlorobenzene	6J		10
D-93	Methylene chloride	2J		10
	Acetone	1J		10
	2-Butanone	15B		10
	Toluene	0.07JB		10
	Cyclotrisiloxane,hexamethyl	110JN		N/A
	Cyclotetrasiloxane,octamethyl	39JN		N/A
D-94	Acetone	12		10
	Carbon disulfide	0.07J		10
	2-Butanone	7JB		10
	Trichloroethene	0.06J		10
	Toluene	0.2JB		10
	Cyclotrisiloxane,hexamethyl	41JN		N/A
	Cyclotetrasiloxane,octamethyl	19JN		N/A
D-95	Methylene chloride	2J		10
	Acetone	8J		10
	Carbon disulfide	0.02J		10
	2-Butanone	18B		10
	Toluene	0.1JB		10
	Cyclotrisiloxane,hexamethyl	17JN		10
	Cyclotetrasiloxane,octamethyl	8JN		10
D-96	Methylene chloride	2J		10
	Acetone	8JB		10
	2-Butanone	13B		10
	Toluene	0.1J		10
D-97	Methylene chloride	2J		10
	2-Butanone	12B		10
D-98	None detected			210(530)
D-99	None detected			230(570)
D-100	None detected			230(570)
D-101	None detected			230(570)
D-102	No targets detected			220(560)
	Unknown organic acid	38NJ		N/A
	Benzene,1,4-bis(1-methylethenyl)	26JN		N/A
	Ethanone,1-[4-(1-methylethenyl)phenyl]		20NJ	N/A
D-103	No targets detected			230(570)
	Benzene,1,4-bis(1-methylethenyl)	30JN		N/A
	Ethanone,1-[4-(1-methylethenyl)phenyl]		34NJ	N/A
	Hexadecane	110NJ		N/A

D-104	No targets detected		220(560)
D-105	No targets detected		230(580)
	Unknown hydrocarbon	57J	N/A
	Unknown hydrocarbon	39J	N/A

K. B. Wehner
Acting Manager

mmc

10/27/93

REQUEST FOR SPECIAL ANALYSES

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WHC-SD-WM-DP-055
REV. 0

REQUEST FOR SPECIAL ANALYSIS (RSA)

1. Sample Origin	2. Date Submitted	4. Requester Name	6. Charge Code/Work Package
Clean Core samples	7/23/93	Kurt L. Kocher	N45R3
	3. Date Required: 8/14/93	5. Requester Phone/MSIN: 373-1242 T6-06	

Sample Customer ID	dup	8. Laboratory ID
10	10	
20	20	
30	30	
40	40	
50	50	
60	60	
70	70	
80	80	

11. Number of Samples: 16

12. Volume of Samples: 40ml each

13. Protocols
- ___ None
- ___ NQA-1
- ___ CERCLA
- ___ RCRA
- X Other SST

14. Sample Type
- ___ Solid
- ___ Soil
- ___ Slurry
- ___ Gas
- X Water
- ___ Waste
- ___ Solution
- ___ Sludge
- ___ Other (specify) DI Water

15. Storage Requirements
- ___ None
- X Specify Fridgidar

9. Determination	10. Expected Range
Semi-VOA	
VOA	

16. Process Knowledge/Known Listed Wastes
- ___ Unknown
- X Known (Please attach list) DI Water
- ___ Previously submitted for this Project

17. Survey
- HPT: BP
- Reading (Contact/Uncorrected): <D mRem/hr

18. Disposition of Waste
- X Return to Client
- ___ Dispose per 222-S Procedures
- ___ Other
- Date Disposed:

19. Additional Information
run CIP type procedure For I, or blank, standard, sample duplicate and spike?

20. Chain of Custody
- X No
- ___ Yes Number:

21. Assigned Custodial Group (circle one): PCL PDSU ENV Process

22. Sample Received By: [signature]
Date: 7/23/93 Time: 10:57

23. Laboratory Manager (if required)
Date:

BC-6700-181 (03/92)

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REQUEST FOR SPECIAL ANALYSIS (RSA)

1. Sample Origin: Clean Core Samplers	2. Date Submitted: 7/23/93	4. Requester Name: Kurt L. Kochu	6. Charge Code/Work Package: N45R2
	3. Date Required: 8/14/93	5. Requester Phone/MSIN: 373-1242 T6-06	

7. Customer ID	8. Laboratory ID
1 For Acid digest	
2	
3	
4	
5	WHC-SD-WM-DP-055 REV 0
6	
7	
8	

11. Number of Samples: 8

12. Volume of Samples: 30ml each 7/23/93 KK

13. Protocols
- ___ None
- ___ NQA-1
- ___ CERCLA
- ___ RCRA
- X Other SST

14. Sample Type
- ___ Solid
- ___ Soil
- ___ Slurry
- ___ Gas
- X Water
- ___ Waste
- ___ Solution
- ___ Sludge
- ___ Other (specify) ___

9. Determination	10. Expected Range
Acid Digest	
ICP on all 8 samples	

15. Storage Requirements
- X None
- ___ Specify ___

16. Process Knowledge/Known Listed Wastes
- ___ Unknown
- X Known (Please attach list) DI Water
- ___ Previously submitted for this Project

17. Survey

	Reading (Contact/Uncorrected)
HPT	ZD mRem/hr

18. Disposition of Waste
- X Return to Client
- ___ Dispose per 222-S Procedures
- ___ Other ___

Date Disposed:

19. Additional Information
run Blank, standard, sample, duplicate and spike.

20. Chain of Custody
- X No
- ___ Yes Number: ___

21. Assigned Custodial Group (circle one)
PCL (PDSU) ENV Process

22. Sample Received by: [redacted]
Date: 7/23/93 Time: 10:43

23. Laboratory Manager (if required)
Date: ___

BC-6700-181 (03/92)

REQUEST FOR SPECIAL ANALYSIS (RSA)

1. Sample Origin: Clean Core Samplers

2. Date Submitted: 7/23/93

3. Date Required: 8/14/93

4. Requester Name: Kurt L. Kocher

5. Requester Phone/MSIN: 373-1242 T6-06

6. Charge Code/Work Package: N45R2

7. Customer ID	8. Laboratory ID
11	
21	
31	
41	
51	WHC-SD-WM-DP-055 REV 0
61	
71	
81	

9. Determination	10. Expected Range
Direct	
ICP-direct	
IC-direct	

11. Number of Samples: 8

12. Volume of Samples:

13. Protocols
- ___ None
- ___ NQA-1
- ___ CERCLA
- ___ RCRA
- X Other SST

14. Sample Type
- ___ Solid
- ___ Soil
- ___ Slurry
- ___ Gas
- X Water
- ___ Waste
- ___ Solution
- ___ Sludge
- ___ Other (specify) DI Water

15. Storage Requirements
- X None
- ___ Specify

16. Process Knowledge/Known Listed Wastes
- ___ Unknown
- X Known (Please attach list) DI water
- ___ Previously submitted for this Project

17. Survey
- HPT: BP
- Reading (Contact/Uncorrected): <1B mRem/hr

18. Disposition of Waste
- X Return to Client
- ___ Dispose per 222-S Procedures
- ___ Other
- Date Disposed:

19. Additional Information
run blank, standard, sample, duplicate and spike.

20. Chain of Custody
- X No
- ___ Yes Number:

21. Assigned Custodial Group (circle one): PCL PDSU ENV Process

22. Sample Received By: [redacted]
Date: 7/23/93 Time: 11:03

23. Laboratory Manager (if required)
Date:

BC-6700-181 (03/92)

SAMPLE DATA SUMMARY

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CLEAN CORES

	Analyte	Std	Prep Blk	Result #1	Result #2	Average	RPD	Spk Rec	Det Lim
		% Rec	ug/ml	ug/ml	ug/ml	ug/ml	%	%	ug/ml
IC									
DIRECT		D-66-5571	D-67-5671	D-68-5771	D-68-5871	NA	NA	D-68-5971	1.00E-01
	F	95.89	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	106.10	2.00E-01
	CL	96.27	<2.00E-01	<2.00E-01	<2.00E-01	NA	NA	111.60	1.00E+00
	NO2	95.82	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	94.05	1.00E+00
	NO3	92.06	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.60	1.00E+00
	PO4	100.40	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.50	1.00E+00
	SO4	98.51	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	101.60	1.00E+00
IC		D-66-5571	D-67-5671	D-69-5771	D-69-5871			D-68-5971	
DIRECT	F	95.89	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	106.10	1.00E-01
	CL	96.27	<2.00E-01	2.59E-01	2.62E-01	2.61E-01	1.15	111.60	2.00E-01
	NO2	95.82	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	94.05	1.00E+00
	NO3	92.06	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.60	1.00E+00
	PO4	100.40	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.50	1.00E+00
	SO4	98.51	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	101.60	1.00E+00

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CLEAN CORES

	Analyte	Std	Prep Blk	Result #1	Result #2	Average	RPD	Spk Rec	Det Lim
		% Rec	ug/ml	ug/ml	ug/ml	ug/ml	%	%	ug/ml
IC		D-70-5771	D-71-5671	D-72-5771	D-72-5871			D-72-5971	
DIRECT	F	96.07	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	104.10	1.00E-01
	CL	98.53	<2.00E-01	3.40E-01	3.61E-01	3.51E-01	5.99	104.10	2.00E-01
	NO2	91.83	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	92.13	1.00E+00
	NO3	91.02	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.28	1.00E+00
	PO4	99.03	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	98.27	1.00E+00
	SO4	98.18	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.80	1.00E+00
IC		D-70-5771	D-71-5671	D-73-5771	D-73-5871			D-72-5971	
DIRECT	F	96.07	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	104.10	1.00E-01
	CL	98.53	<2.00E-01	<2.00E-01	<2.00E-01	NA	NA	104.10	2.00E-01
	NO2	91.83	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	92.13	1.00E+00
	NO3	91.02	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.28	1.00E+00
	PO4	99.03	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	98.27	1.00E+00
	SO4	98.18	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.80	1.00E+00

CLEAN CORES

	Analyte	Std	Prep Blk	Result #1	Result #2	Average	RPD	Spk Rec	Det Lim
		% Rec	ug/ml	ug/ml	ug/ml	ug/ml	%	%	ug/ml
		D-74-5571	D-75-5671	D-76-5771	D-76-5871			D76-5971	
IC	F	96.25	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	113.80	1.00E-01
DIRECT	CL	94.00	<2.00E-01	2.44E-01	2.51E-01	2.48E-01	2.83	104.40	2.00E-01
	NO2	93.16	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	96.26	1.00E+00
	NO3	92.75	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.44	1.00E+00
	SO4	99.23	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	99.55	1.00E+00
	PO4	98.84	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.70	1.00E+00
IC		D-74-5571	D-75-5671	D-77-5771	D-77-5871			D76-5971	
DIRECT	F	96.25	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	113.80	1.00E-01
	CL	94.00	<2.00E-01	<2.00E-01	<2.00E-01	NA	NA	104.40	2.00E-01
	NO2	93.16	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	96.26	1.00E+00
	NO3	92.75	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	91.44	1.00E+00
	SO4	99.23	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	99.55	1.00E+00
	PO4	98.84	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	100.70	1.00E+00

CLEAN CORES

	Analyte	Std	Prep Blk	Result #1	Result #2	Average	RPD	Spk Rec	Det Lim
		% Rec	ug/ml	ug/ml	ug/ml	ug/ml	%	%	ug/ml
IC		D-78-5571	D-79-5671	D-80-5771	D-80-5871			D-80-5971	
DIRECT	F	95.89	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	99.74	1.00E-01
	CL	93.20	<2.00E-01	<2.00E-01	<2.00E-01	NA	NA	94.36	2.00E-01
	NO2	92.40	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	92.94	1.00E+00
	NO3	92.23	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	90.48	1.00E+00
	SO4	100.00	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	97.68	1.00E+00
	PO4	98.67	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	99.34	1.00E+00
IC		D-78-5571	D-79-5671	D-81-5771	D-81-5871			D-80-5971	
DIRECT	F	95.89	<1.00E-01	<1.00E-01	<1.00E-01	NA	NA	99.74	1.00E-01
	CL	93.20	<2.00E-01	<2.00E-01	<2.00E-01	NA	NA	94.36	2.00E-01
	NO2	92.40	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	92.94	1.00E+00
	NO3	92.23	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	90.48	1.00E+00
	SO4	100.00	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	97.68	1.00E+00
	PO4	98.67	<1.00E+00	<1.00E+00	<1.00E+00	NA	NA	99.34	1.00E+00

Clean Cores (μg/L)

Sample #	Ca	Cu	Fe	K	Mg	Mo	Mn	Na	Zn
D52	133				11.5		5.78	60	13.8
D52 dup	22.2				–		–	–	–
D55	210	–	–		18.3		36.2	157	44.5
D55 dup	251	5.17	12.9		28.6		36.9	172	45.6
D56	187	18.7			18.4		18.2	159	45.3
D56 dup	215	–			18.1		19.9	226	81.2
D57	175	27		125	19	–	17.9	126	31.7
D57 dup	179	27		–	17.9	11.1	17.5	135	26
D60	347	–			30.6		24.2	–	118
D60 dup	467	17.3			31.4		21.2	128	100
D61	394	21.2			30.3		21.6	124	107
D61 dup	21.6	–			–		–	–	–
D64	18.1								
D64 dup	26.9								
D65	121	17.4			11.5		11	93.8	15.9
D65 dup	188	–			16.2		13.9	144	55.8
D68	202			–	17.9		22.5	164	40.9
D68 dup	201			156	18.3		21.7	149	39.7
D69	167	5.89	–		18		36.6	176	46.4
D69 dup	168	3.79	13.9		17.8		36	166	46.1
D72	227		14.8	–	20.2		20.9	289	87.1
D72 dup	227		–	167	19.6		20.6	284	86.2
D73	159				18.4		19.5	–	27.8
D73 dup	157				17.7		18.2	115	24.4
D76	303	41.2			30.6		21	134	153
D76 dup	320	43.6			31.4		21.9	149	157
D77	280				21.1		19.9	80.7	46.7
D77 dup	279				21.3		19.1	69.9	46.3
D80	170	–	38.6		16.1		13.7	76.9	52.1
D80 dup	180	3.99	39.1		16.2		14.2	89.2	54.8
D81	–								
D81 dup	–								
Det. Limit	8	3	11	97	3	6	3	19	3

ACID DIGESTION ANALYSES

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BATCH #1419

WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
ANALYTICAL BATCH

Clean Cores

Lab Segment Serial No. D S2, D S5	Customer ID: 1 & 2
Analysis: Acid Digest	Sample Prep: Direct

Instrument: SRIFO449S	Procedure/ Rev: LA-505-158, A-2
Technologist: [signature]	Date: 8-9-93
Starting Time: 0800	Temperature -95°C
Ending Time: 1500	Chemist: B. Griffin II

Comments:

	Description	Lab ID		Description	Lab ID
1	~~SAM~~ 8-9-93 STD	D S0 - 8905	11		
2	BLK	D S1 - 8605 8-9-93	12		
3	SAM	D-S2 8705	13		
4	DUP	D S2 8805	14		
5	SPIKE	D S2 8905	15		
6	SAM	D S5 8705	16		
7	DUP	D S5 8805	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	20RU10-A (.25ml)	21RU10-A (.25ml)		25ml
SPIKE	20RU10-A (.25ml)	21RU10-A (.25ml)		25ml

A-6000-881 (03/92)

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ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-505-158

DATE START: 8-8-93

PREPARED BY: R.K. FULLER

DATE COMPLETE: 8-9-93

SPL NAME	SPL ID	DIGESTION	DF RESULT #1	DF RESULT #2	REMARKS
STANDARD	D50-8505	Acid	100		20N10-A / 21N10A
BLANK	D51-8605	Acid	1		25 mL TOTAL VOLUME
SAMPLE	D52-8705	Acid	2.5		"
SAMPLE DUP	D52-8805	Acid	2.5		"
SAMPLE SPK	D52-8905	Acid	2.5	SPK (100 X)	"
SAMPLE	D55-8705	Acid	2.5		"
SAMPLE DUP	D55-8805	Acid	2.5		"

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

CLEAN CORES - 2.5 X dilution on samples.
100 X dilution on standards

Keith Fuller
8-10-93

ACID DIGESTION ANALYSIS

#1419

Serial No	Sample Point	Date	Time Issued	Priority
D 50.-8505	CLEAN CORES	7-27-93	12:42	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	% RECOVERY	N45R2	0

Sample Size	Customer ID
? .25ml in 25ml	STD

Remarks Calculations Results

LMCS CHECK SAMPLE
LMCS ID 20HIC-A, 21JU10A DF= 25ml / .25ml (100)

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller 8/13

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

Serial No	Sample Point	Date	Time Issued	Priority
D 51.-8605	CLEAN CORES	7-27-93	12:43	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	uG/ML	N45R2	0

Sample Size	Customer ID
? 25ml total volume	BLK

Remarks Calculations Results

REAGENT BLANK
VOLUME ON
COMPLETION 25ml

Complete

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller 8/13

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 52.-8705	CLEAN CORES	7-27-93	12:44	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml in 25ml	1

Remarks Calculations Results

DF = 25ml / 10ml = 2.5

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

Serial No	Sample Point	Date	Time Issued	Priority
D 52.-8805	CLEAN CORES	7-27-93	12:44	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml in 25ml	1

Remarks Calculations Results
DUPLICATE SAMPLE

D.F. 25ml / 10ml = 2.5

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 52.-8905	CLEAN CORES	7-27-93	12:44	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size: ? 10ml in 25ml

Customer ID: 1

Remarks Calculations Results

SAMPLE SPIKED ID
SPIKE ID (20-U10-A, 20-U10-A)
SPIKE VOLUME .25 ml

$D.F. = \frac{25ml}{10ml} = 2.5$

$DF = \frac{25ml}{.25ml} = 100$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

Serial No	Sample Point	Date	Time Issued	Priority
D 55.-8705	CLEAN CORES	7-27-93	12:48	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size: ? 10ml in 25ml

Customer ID: 2

Remarks Calculations Results

$DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 55.-8805	CLEAN CORES	7-27-93	12:48	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10 ml to 25 ml	2

Remarks, Calculations, Results

DUPLICATE SAMPLE

$DF = \frac{25\ ml}{10\ ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr	
8-6-93	1500	Keith Fulks	

54-6800-051 (9-10-83)

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BATCH # 1417

WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY

ANALYTICAL BATCH

Clean Core

Lab Segment Serial No. D-56, D-57	Customer ID: 3, 4
Analysis: Acid Digest	Sample Prep: Acid Digest

Instrument: 8-25-93 Mettler Bal. NA SN. F04495	Procedure/ Rev: LA-505-158-A-2
Technologist: Bill Sytt / Will Sytt	Date: 8-6-93
Starting Time: 0800	Temperature 95°C
Ending Time: 1500	Chemist: Burt Griffin II

Comments:

	Description	Lab ID		Description	Lab ID
1	LMCS	D-53-8505	11		
2	BLANK	D-54-8605	12		
3	SAM	D-56-8705	13		
4	DUP	D-56-8805	14		
5	SPIKE	D-56-8905	15		
6	SAM	D-57-8805	16		
7	DUP	D-57-8805	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	20N10-A/1.250ml	21N10-A/1.250ml		2.5 ml

A-6000-881 (03/92)

ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-505-158

DATE START: 8-6-93

PREPARED BY: R.K. FULLER

DATE COMPLETE: 8-7-93

SPL NAME	SPL ID	DIGESTION	DF RESULT #1	DF RESULT #2	REMARKS
Standard	D53-8505	Acid	100		20N 10A / 21N 10A
Blank	D54-8605	Acid	1		25 mL total Volume
Sample	D56-8705	Acid	2.5		"
Sample Dup	D56-8805	Acid	2.5		"
Sample Spk	D56-8905	Acid	2.5	Spk (100X)	"
Sample	D57-8705	Acid	2.5		"
Sample	D57-8805	Acid	2.5		"

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

Clean Core samples - 2.5X dilution for samples
100X dilution for std
and spike (ICP).

11/9/93

ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 53.-8505	CLEAN CORES	7-27-93	12:46	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	% RECOVERY	N45R2	0

Sample Size	Customer ID
? .250 ml/EACH into 25 ml	STD

Remarks, Calculations, Results

LMCS CHECK SAMPLE
LMCS ID

20N10-A } .250 ml
21N10-A }

DF = 25 ml / .250 ml = 100

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller 8/13

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

Serial No.	Sample Point	Date	Time Issued	Priority
D 54.-8605	CLEAN CORES	7-27-93	12:47	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	uG/ML	N45R2	0

Sample Size	Customer ID
? 25 ml Total Volume	BLK

Remarks, Calculations, Results

REAGENT BLANK
VOLUME ON
COMPLETION 25 ml

complete

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller 8/13

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

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Serial No	Sample Point	Date	Time Issued	Priority
D 56.-8705	CLEAN CORES	7-27-93	12:52	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml into 25ml	3

Remarks. Calculations. Results

$DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

5G-5600-061 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 56.-8805	CLEAN CORES	7-27-93	12:52	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml into 25ml	3

Remarks. Calculations. Results

DUPLICATE SAMPLE $DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

5G-5600-061 (R-10-83)

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 56.-8905	CLEAN CORES	7-27-93	12:52	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml into 25ml	3

Remarks, Calculations, Results

DF = 25ml / 10ml = 2.5

SAMPLE SPIKED ID
SPIKE ID
SPIKE VOLUME
20N10-A
21N10-A } 1250ml EACH

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6600-061 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 57.-8705	CLEAN CORES	7-27-93	12:53	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml into 25ml	4

Remarks, Calculations, Results

DF = 25ml / 10ml = 2.5
mgH 8-25-93

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6600-061 (R-10-83)

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Serial No	Sample Point	Date	Time Issued	Priority
D 57.-8805	CLEAN CORES	7-27-93	12:53	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml int 25ml	4

Remarks, Calculations, Results

DUPLICATE SAMPLE

$DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Tullo

54-6800-06 (R 10-83)

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BATCH # 1414

WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

ANALYTICAL BATCH

Clean Cones

Lab Segment Serial No. D 60, ~~D~~ 61 DJH 8-16-93	Customer ID: JH 8-16-93 ~~245B2~~ 5 & 6
Analysis: Acid Digest	Sample Prep: Direct

Instrument: SRUFC4495	Procedure/ Rev: LA-505-158 (A.2)
Technologist: L.K. Stand Oy	Date: 6 KK 11/9/93 8-9-93
Starting Time: 0800	Temperature 95°C
Ending Time: 1500	Chemist: B. Griffin II

Comments:

	Description	Lab ID		Description	Lab ID
1	STD	D 58 - 8505	11		
2	BLK	D 59 - 8605	12		
3	SAM	D 60 - 8705	13		
4	DUP	D 60 - 8805	14		
5	SPIKE	D 60 - 8905	15		
6	SAM	D 61 - 8705	16		
7	DUP	D 61 - 8805	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	20RIO-A (.25ml)	~~210 IO-A (.25ml)~~	~~(100 x)~~	~~2.5 ml~~ DJH 8-16-93
SPIKE	20RIO-A (.25ml)	~~210 IO-A (.25ml)~~	~~(100 x)~~ DJH 8-16-93	

A-6000-881 (03/92)

ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-505-158

DATE START: 8-8-93

PREPARED BY: R.K. FULLER

DATE COMPLETE: 8-9-93

SPL NAME	SPL ID	DIGESTION	DF RESULT #1	DF RESULT #2	REMARKS
STD	D58-8505	Acid	100		Std's 20N10-A/5N10-A
BLANK	D59-8605	Acid	1		25mL PREPPED
SAMPLE	D60-8705	Acid	2.5		25mL TOTAL VOLUME
SAMPLE DUP	D60-8805	Acid	2.5		"
SAMPLE SPK	D60-8905	Acid	2.5		SPIKE DF = 100
SAMPLE	D61-8705	Acid	2.5		25mL TOTAL VOLUME
SAMPLE	D61-8805	Acid	2.5		"

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

CLEAN CORE SAMPLES - performed a 2.5x dilution for ICP analysis.

- Std's WERE prepared at 100x dilution.

Keith Fuller
8-10-93

ACID DIGESTION ANALYSIS

#1414

Serial No	Sample Point	Date	Time Issued	Priority
D 58.-8505	CLEAN CORES	7-27-93	12:54	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	% RECOVERY	N45R2	0

Sample Size	Customer ID
? .25ml in 25ml	STD

Remarks Calculations Results
LMCS CHECK SAMPLE
LMCS ID 200110-A, 210110-A D.F. = 25ml / .25ml = 100

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6806-061 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 59.-8605	CLEAN CORES	7-27-93	12:55	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	uG/ML	N45R2	0

Sample Size	Customer ID
? 25ml tot. vol.	BLK

Remarks Calculations Results
REAGENT BLANK
VOLUME ON COMPLETION 25ml
COMPLETE

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6806-061 (R-10-83)

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 60.-8705	CLEAN CORES	7-27-93	12:58	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml in 25ml	5

Remarks, Calculations, Results

$DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6800-06 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 60.-8805	CLEAN CORES	7-27-93	12:58	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10ml in 25ml	5

Remarks, Calculations, Results

DUPLICATE SAMPLE

$DF = \frac{25ml}{10ml} = 2.5$

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

54-6800-06 (R-10-83)

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Serial No	Sample Point	Date	Time Issued	Priority
D 60.-8905	CLEAN CORES	7-27-93	12:58	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10 ml in 25 ml	5

Remarks Calculations Results

SAMPLE SPIKED ID
SPIKE ID 20N10 A, 21N10-A
SPIKE VOLUME .25 ml

D.F. = 25 ml / 10 ml = 2.5

SPIKE:
25 ml / .25 ml = 100

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

Serial No.	Sample Point	Date	Time Issued	Priority
D 61.-8705	CLEAN CORES	7-27-93	12:58	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10 ml in 25 ml	6

Remarks Calculations Results

DF = 25 ml / 10 ml = 2.5

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1500	Keith Fuller

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 61.-8805	CLEAN CORES	7-27-93	12:58	26

Determination	Method Standard	Result Units	Charge Code	Returns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 10 mℓ in 25 mℓ	6

Remarks, Calculations, Results

DUPLICATE SAMPLE

$DF = \frac{25\ m\ell}{10\ m\ell} = 2.5$

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

Date	Time Completed	Lab Unit Mgr	
8-6-93	1500	Faith Fuller	

54-6500 (R-10-83)

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Clean Core BATCH # 1412

WESTINGHOUSE HANFORD COMPANY

222-S LABORATORY

WHC-SD-WM-DP-055
REV 0

ANALYTICAL BATCH

Lab Segment Serial No. D-64, D-65	Customer ID: 8, 7
Analysis: Acid Digest	Sample Prep: Acid Digest

Instrument: NA	Procedure/ Rev: LA-505-158-A-2
Technologist: BILLSYTIRWINKLE	Date: 8/6/93
Starting Time: 0800	Temperature 95°C
Ending Time: 1500	Chemist: Burt Griffith

Comments:

	Description	Lab ID		Description	Lab ID
1	CTD	D-62-8505	11		
2	BLANK	D-63-8605	12		
3	SAM	D-64-8705	13		
4	DUP	D-64-8805	14		
5	SPIKE	D-64-8905	15		
6	SAM	D-65-8705	16		
7	DUP	D-65-8805	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	20N10-A/250ml	21N10-A/250ml		25ml

A-6000-881 (03/92)

ANALYTICAL BATCH SUMMARY SHEET

METHOD: LA-505-158

DATE START: 8-6-93

PREPARED BY: R.K. FULLER

DATE COMPLETE: 8-7-93

SPL NAME	SPL ID	DIGESTION	DF RESULT #1	DF RESULT #2	REMARKS
STANDARD	D62-8505	Acid	100		20 N10 A / 21 N10-A
BLANK	D63-8605	Acid	1		25 mL TOTAL VOLUME
SAMPLE	D64-8705	Acid	1.67		"
SAMPLE DUP	D64-8805	Acid	1.67		"
SAMPLE SPK	D64-8905	Acid	1.67	SPK (100 x)	"
SAMPLE	D65-8705	Acid	1.67		"
SAMPLE DUP	D65-8805	Acid	1.67		"

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

Clean Core samples - did 1.67 X dilution for samples. (ICP analysis)
- 100 X dilution for stds and spikes.

Keith Fuller
8-10-93

ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 62.-8505	CLEAN CORES	7-27-93	13: 1	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	% RECOVERY	N45R2	0

Sample Size	Customer ID
? .250 ml each into 25 ml	STD

Remarks, Calculations, Results

LMCS CHECK SAMPLE
LMCS ID

20N10-B } .250 ml each,
21N10-A }

DF = 25 ml / .250 ml = 100

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammitt

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

Serial No	Sample Point	Date	Time Issued	Priority
D 63.-8605	CLEAN CORES	7-27-93	13: 3	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	uG/ML	N45R2	0

Sample Size	Customer ID
? 25 ml Total Volume	BLRJ

Remarks, Calculations, Results

REAGENT BLANK
VOLUME ON
COMPLETION 25 ml

DF = 25 ml / 1 ml

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammitt

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 64.-8705	CLEAN CORES	7-27-93	13: 4	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 15 ml into 25 ml	7

Remarks, Calculations, Results

$DF = \frac{25 ml}{15 ml} = 1.67$

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammond

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

Serial No	Sample Point	Date	Time Issued	Priority
D 64.-8805	CLEAN CORES	7-27-93	13: 4	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 15 ml into 25 ml	7

Remarks, Calculations, Results

DUPLICATE SAMPLE

$DF = \frac{25 ml}{15 ml} = 1.67$

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammond

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 64.-8905	CLEAN CORES	7-27-93	13: 4	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 15 ml into 25 ml	7

Remarks Calculations Results

SAMPLE SPIKED ID
SPIKE ID
SPIKE VOLUME
20N10-A } 250 ml Each
21N10-A }

DF = 25 ml / 15 ml = 1.67

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammitt

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

Serial No	Sample Point	Date	Time Issued	Priority
D 65.-8705	CLEAN CORES	7-27-93	13: 5	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 15 ml into 25 ml	8

Remarks, Calculations, Results

DF = 25 ml / 15 ml = 1.67

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hammitt

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

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ACID DIGESTION ANALYSIS

Serial No	Sample Point	Date	Time Issued	Priority
D 65.-8805	CLEAN CORES	7-27-93	13: 5	26

Determination	Method Standard	Result Units	Charge Code	Reruns
ACD DGST	LA-505-158	NONE	N45R2	0

Sample Size	Customer ID
? 15 ml into 25 ml	8

Remarks, Calculations, Results

DUPLICATE SAMPLE $DF = \frac{25\,ml}{15\,ml} = 1.67$

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

Date	Time Completed	Lab Unit Mgr	
8/6/93	1500	Keith Fuller	Gary Hamm

54-5800-061 (R-10-83)

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VOLATILE ORGANIC ANALYSES

REV 0

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16D

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/16/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	16.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E REV 0

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16D

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/16/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK02

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23C

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	14.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.1	JB
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK02

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK02

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23C

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK04

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK04

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28C

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	8.	JB
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	14.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	.09	JB
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK04

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: VBLK04

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28C

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

D-90

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-90

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16E

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/16/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	3.	J
67-64-1	Acetone	10.	J
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	13.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.3	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-90

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-90

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16E

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/16/93

WHC-SD-WM-DP-055
REV 0

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-91

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-91

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23D

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. WHC-SD-WM-DP-055 REV 0 Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	.4	J
67-64-1	Acetone	5.	J
75-15-0	Carbon Disulfide	.5	J
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.4	JB
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	.07	J
133-02-7	Xylene (total)	10.	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-91

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-91

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23D

Level: (low/med) LOW Date Received: 7/28/93

WHC-SD-WM-DP-055
REV 0

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	541059	Cyclotrisiloxane, hexamethyl	13.05	83.	JN
2.	556672	Cyclotetrasiloxane, octameth	18.19	36.	JN
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-92

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-92

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16F

Level: (low/med) LOW Date Received: 7/28/93

WHC-SD-WM-DP-055
REV 0

% Moisture: not dec. Date Analyzed: 9/16/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
67-64-1	Acetone	8.	J
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	6.	J
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	13.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	6.	J
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	6.	J
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	6.	J
108-90-7	Chlorobenzene	6.	J
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-92

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-92

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI16F

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/16/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-93

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-93

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23E

Level: (low/med) LOW Date Received: 7/28/93

WHC-SD-WM-DP-055
REV 0

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
67-64-1	Acetone	1.	J
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	15.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.07	JB
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-93

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-93

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23E

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. WHC-SD-WM-DP-055 REV 0 Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	541059	Cyclotrisiloxane, hexamethyl	13.05	110.	JN
2.	556672	Cyclotetrasiloxane, octameth	18.19	39.	JN
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-94

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-94

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23F

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	12.	
75-15-0	Carbon Disulfide	.07	J
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	7.	JB
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	.06	J
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.2	JB
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-94

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-94

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23F

Level: (low/med) LOW Date Received: 7/28/93

WHC-SD-WM-DP-055
REV 0

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	541059	Cyclotrisiloxane, hexamethyl	13.05	41.	JN
2.	556672	Cyclotetrasiloxane, octameth	18.18	19.	JN
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-95

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-95

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23G

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
67-64-1	Acetone	8.	J
75-15-0	Carbon Disulfide	.02	J
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	18.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.1	JB
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-95

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-95

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI23G

Level: (low/med) LOW Date Received: 7/28/93

% Moisture: not dec. WHC-SD-WM-DP-055 REV 0 Date Analyzed: 9/23/93

GC Column: DB-624 ID: 0.53 (mm) Dilution-Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	541059	Cyclotrisiloxane, hexamethyl	13.05	17.	JN
2.	556672	Cyclotetrasiloxane, octameth	18.20	8.	JN
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-96

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-96

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28E

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
67-64-1	Acetone	8.	JB
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	13.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.1	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-96

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-96

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28E

Level: (low/med) LOW Date Received: 7/28/93

WHC-SD-WM-DP-055
REV 0

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D-97

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-97

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28F

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	12.	B
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
133-02-7	Xylene (total)	10.	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D-97

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: Clean Core

Matrix: (soil/water) WATER Lab Sample ID: D-97

Sample wt/vol: 5 (g/mL) ML Lab File ID: >AI28F

Level: (low/med) LOW WHC-SD-WM-DP-055 REV 0 Date Received: 7/28/93

% Moisture: not dec. Date Analyzed: 9/28/93

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMI-VOLATILE ORGANIC ANALYSES

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

10DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98

Sample wt/vol: 47 (g/mL) ML Lab File ID: 10DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	210	U
111-44-4	bis(-2-Chloroethyl)Ether	210	U
95-57-8	2-Chlorophenol	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethyphenol	210	U
111-91-1	bis(-2-Chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
120-82-1	1,2,4-Trichlorobenzene	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
59-50-7	4-Chloro-3-Methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorphenol	530	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	210	U
208-96-8	Acenaphthylene	210	U
606-20-2	2,6-Dinitrotoluene	210	U
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	210	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

10DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98

Sample wt/vol: 47 (g/mL) ML Lab File ID: 10DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	530	U
100-02-7	4-Nitrophenol	530	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	U
100-01-6	4-Nitroaniline	530	U
534-52-1	4,6-Dinitro-2-methylphenol	530	U
86-30-6	N-nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
87-86-5	Pentachlorophenol	530	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-81-7	bis(2-Ethylhexyl)phthalate	210	U
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
65-85-0	Benzoic acid	210	U
100-51-6	Benzyl alcohol	210	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

10DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98

Sample wt/vol: 47 (g/mL) ML Lab File ID: 10DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

20DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D99

Sample wt/vol: 44 (g/mL) ML Lab File ID: 20DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	230	U
111-44-4	bis(-2-Chloroethyl)Ether	230	U
95-57-8	2-Chlorophenol	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethyphenol	230	U
111-91-1	bis(-2-Chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
120-82-1	1,2,4-Trichlorobenzene	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
59-50-7	4-Chloro-3-Methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorphenol	570	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	230	U
208-96-8	Acenaphthylene	230	U
606-20-2	2,6-Dinitrotoluene	230	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	230	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

20DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D99

Sample wt/vol: 44 (g/mL) ML Lab File ID: 20DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
65-85-0	Benzoic acid	230	U
100-51-6	Benzyl alcohol	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

20DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D99

Sample wt/vol: 44 (g/mL) ML Lab File ID: 20DUP#2.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

30DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D100

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0401004.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	230	U
111-44-4	bis(-2-Chloroethyl)Ether	230	U
95-57-8	2-Chlorophenol	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethyphenol	230	U
111-91-1	bis(-2-Chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
120-82-1	1,2,4-Trichlorobenzene	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
59-50-7	4-Chloro-3-Methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorphenol	570	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	230	U
208-96-8	Acenaphthylene	230	U
606-20-2	2,6-Dinitrotoluene	230	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	230	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

30DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D100

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0401004.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
65-85-0	Benzoic acid	230	U
100-51-6	Benzyl alcohol	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

30DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D100

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0401004.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

40DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D101

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0501005.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	230	U
111-44-4	bis(-2-Chloroethyl)Ether	230	U
95-57-8	2-Chlorophenol	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethyphenol	230	U
111-91-1	bis(-2-Chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
120-82-1	1,2,4-Trichlorobenzene	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
59-50-7	4-Chloro-3-Methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorphenol	570	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	230	U
208-96-8	Acenaphthylene	230	U
606-20-2	2,6-Dinitrotoluene	230	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	230	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

40DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D101

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0501005.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
65-85-0	Benzoic acid	230	U
100-51-6	Benzyl alcohol	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

WHC-SD-WM-DP-055
REV 0

EPA SAMPLE NO.

40DUP

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D101

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0501005.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

50DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D102

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0601006.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	220	U
111-44-4	bis(-2-Chloroethyl)Ether	220	U
95-57-8	2-Chlorophenol	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethyphenol	220	U
111-91-1	bis(-2-Chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
120-82-1	1,2,4-Trichlorobenzene	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
59-50-7	4-Chloro-3-Methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorphenol	560	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	560	U
131-11-3	Dimethylphthalate	220	U
208-96-8	Acenaphthylene	220	U
606-20-2	2,6-Dinitrotoluene	220	U
99-09-2	3-Nitroaniline	560	U
83-32-9	Acenaphthene	220	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

50DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D102

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0601006.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	560	U
100-02-7	4-Nitrophenol	560	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	560	U
534-52-1	4,6-Dinitro-2-methylphenol	560	U
86-30-6	N-nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
87-86-5	Pentachlorophenol	560	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-81-7	bis(2-Ethylhexyl)phthalate	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
65-85-0	Benzoic acid	220	U
100-51-6	Benzyl alcohol	220	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

WHC-SD-WM-DP-055
REV 0

EPA SAMPLE NO.

50DUP

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D102

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0601006.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/17/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown organic acid	6.616	38	NJ
2. 1605-18-1	Benzene, 1,4-bis(1-methyleth	6.812	26	NJ
3. 5359-04-6	Ethanone, 1-[4-(1-methylethe	7.834	20	NJ
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(ethenyl)
5359-04-6
ethenyl)phenyl]

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

60DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D103

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0701007.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	230	U
111-44-4	bis(-2-Chloroethyl)Ether	230	U
95-57-8	2-Chlorophenol	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethyphenol	230	U
111-91-1	bis(-2-Chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
120-82-1	1,2,4-Trichlorobenzene	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
59-50-7	4-Chloro-3-Methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorphenol	570	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	230	U
208-96-8	Acenaphthylene	230	U
606-20-2	2,6-Dinitrotoluene	230	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

WHC-SD-WM-DP-055
REV 0

EPA SAMPLE NO.

60DUP

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D103

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0701007.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
65-85-0	Benzoic acid	230	U
100-51-6	Benzyl alcohol	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

60DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D103

Sample wt/vol: 44 (g/mL) ML Lab File ID: 0701007.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 3

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1605-18-1	Benzene, 1,4-bis(1-methyleth	6.812	30	NJ
2. 5359-04-6	Ethanone, 1-[4-(1-methylethe	7.833	34	NJ
3. 544-76-3	Hexadecane	9.482	110	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

70DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D104

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0801008.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	220	U
111-44-4	bis(-2-Chloroethyl)Ether	220	U
95-57-8	2-Chlorophenol	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	bis(-2-Chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
120-82-1	1,2,4-Trichlorobenzene	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
59-50-7	4-Chloro-3-Methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorphenol	560	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	560	U
131-11-3	Dimethylphthalate	220	U
208-96-8	Acenaphthylene	220	U
606-20-2	2,6-Dinitrotoluene	220	U
99-09-2	3-Nitroaniline	560	U
83-32-9	Acenaphthene	220	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

70DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D104

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0801008.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	560	U
100-02-7	4-Nitrophenol	560	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	560	U
534-52-1	4,6-Dinitro-2-methylphenol	560	U
86-30-6	N-nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
87-86-5	Pentachlorophenol	560	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-81-7	bis(2-Ethylhexyl)phthalate	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
65-85-0	Benzoic acid	220	U
100-51-6	Benzyl alcohol	220	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

WHC-SD-WM-DP-055
REV 0

EPA SAMPLE NO.

70DUP

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D104

Sample wt/vol: 45 (g/mL) ML Lab File ID: 0801008.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

80DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D105

Sample wt/vol: 43 (g/mL) ML Lab File ID: 0901009.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	230	U
111-44-4	bis(-2-Chloroethyl)Ether	230	U
95-57-8	2-Chlorophenol	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethyphenol	230	U
111-91-1	bis(-2-Chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
120-82-1	1,2,4-Trichlorobenzene	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
59-50-7	4-Chloro-3-Methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorphenol	580	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	230	U
208-96-8	Acenaphthylene	230	U
606-20-2	2,6-Dinitrotoluene	230	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

80DUP

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D105

Sample wt/vol: 43 (g/mL) ML Lab File ID: 0901009.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	bis(2-Ethylhexyl)phthalate	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
65-85-0	Benzoic acid	230	U
100-51-6	Benzyl alcohol	230	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

80DUP

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D105

Sample wt/vol: 43 (g/mL) ML Lab File ID: 0901009.D

Level: (low/med) LOW Date Received: 07/23/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/18/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	9.991	5	NJ
2.	unknown	14.240	57	NJ
3.	unknown hydrocarbon	14.329	7	NJ
4.	unknown hydrocarbon	15.036	10	NJ
5.	unknown	15.644	39	NJ
6.	unknown	15.723	17	NJ
7.	unknown	15.801	6	NJ
8.	unknown	15.997	5	NJ
9.	unknown hydrocarbon	16.380	17	NJ
10.	unknown hydrocarbon	17.008	16	NJ
11.	unknown hydrocarbon	17.617	14	NJ
12.	unknown hydrocarbon	18.206	15	NJ
13.	unknown hydrocarbon	18.775	10	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

WHC-SD-WM-DP-055 REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101001.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethyphenol	10	U
111-91-1	bis(-2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorphenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101001.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U
65-85-0	Benzoic acid	10	U
100-51-6	Benzyl alcohol	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name: WHC PAL WHC-SD-WM-DP-055 REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0101001.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/16/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK02

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1001010.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethyphenol	10	U
111-91-1	bis(-2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorphenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK02

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1001010.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U
65-85-0	Benzoic acid	10	U
100-51-6	Benzyl alcohol	10	U

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
WHC-SD-WM-DP-055

EPA SAMPLE NO.

SBLK02

Lab Name: WHC PAL REV 0 Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: SBLK02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1001010.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 544-76-3	Hexadecane	9.481	6	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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30.				

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

WHC-SD-WM-DF-055

REV 0

EPA SAMPLE NO.

D81MS

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98MS

Sample wt/vol: 40 (g/mL) ML Lab File ID: 1101011.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	58	
111-44-4	bis(-2-Chloroethyl)Ether	250	U
95-57-8	2-Chlorophenol	58	
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	37	
95-50-1	1,2-Dichlorobenzene	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	34	
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethyphenol	250	U
111-91-1	bis(-2-Chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
120-82-1	1,2,4-Trichlorobenzene	39	
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
59-50-7	4-Chloro-3-Methylphenol	62	
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorphenol	620	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	250	U
208-96-8	Acenaphthylene	250	U
606-20-2	2,6-Dinitrotoluene	250	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	40	

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D81MS

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98MS

Sample wt/vol: 40 (g/mL) ML Lab File ID: 1101011.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	60	
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	41	
84-66-2	Diethylphthalate	290	
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
87-86-5	Pentachlorophenol	65	
85-01-8	Phenanthrene	250	U
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	U
129-00-0	Pyrene	45	
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	250	U
117-81-7	bis(2-Ethylhexyl)phthalate	250	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U
65-85-0	Benzoic acid	250	U
100-51-6	Benzyl alcohol	250	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D81MSD

WHC-SD-WM-DP-055
REV 0

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98MSD

Sample wt/vol: 40 (g/mL) ML Lab File ID: 1201012.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	62	
111-44-4	bis(-2-Chloroethyl)Ether	250	U
95-57-8	2-Chlorophenol	63	
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	38	
95-50-1	1,2-Dichlorobenzene	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	36	
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethyphenol	250	U
111-91-1	bis(-2-Chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
120-82-1	1,2,4-Trichlorobenzene	43	
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
59-50-7	4-Chloro-3-Methylphenol	69	
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorphenol	620	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	250	U
208-96-8	Acenaphthylene	250	U
606-20-2	2,6-Dinitrotoluene	250	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	43	

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

WHC-SD-WM-DP-055
REV 0

EPA SAMPLE NO.

D81MSD

Lab Name: WHC PAL Contract:

Lab Code: Case No.: SAS No.: SDG No.: CLEAN

Matrix: (soil/water) WATER Lab Sample ID: D98MSD

Sample wt/vol: 40 (g/mL) ML Lab File ID: 1201012.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/23/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 09/03/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	61	
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	43	
84-66-2	Diethylphthalate	290	
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
87-86-5	Pentachlorophenol	71	
85-01-8	Phenanthrene	250	U
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	U
129-00-0	Pyrene	50	
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	250	U
117-81-7	bis(2-Ethylhexyl)phthalate	250	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U
65-85-0	Benzoic acid	250	U
100-51-6	Benzyl alcohol	250	U

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ION-CHROMATOGRAPHIC ANALYSES

WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
ANALYTICAL BATCH

Batch 1568
Clean Cores

Lab Segment Serial No. D68,69	Customer ID: 11,21
Analysis: IC	Sample Prep: DIRECT

Instrument: WB54428	Procedure/ Rev: LA533-105/C-0
Technologist: R. WENDLAND	Date: 8-6-93
Starting Time: 1017	Temperature 23°C
Ending Time: 1105	Chemist: S. BOLLING

Comments:

	Description	Lab ID		Description	Lab ID
1	LMCS	D66-5571	11		
2	BLANK	D67-5671	12		
3	SAMPLE	D68-5771	13		
4	DUPLICATE	D68-5871	14		
5	SPIKE	D68-5971	15		
6	SAMPLE	D69-5771	16		
7	DUPLICATE	D69-5871	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	22N95	(.100 mL)		
		105		

Robby Wendland
8-6-93

A-6000-881 (03/92)

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ANALYTICAL BATCH SUMMARY SHEET

METHOD:	DATE START:	WHC-SD-WM-OP-055
LA-533-105/C-0	8/6/93	REV 0
PREPARED BY:	**DATE COMPLETE:**	
S.D. Bolling	8/6/93	

	UNITS:		ug/ml	ug/ml				ug/ml	
SPL NAME	SPL ID	ANALYTE	RESULT #1	RESULT #2	AVERAGE	RPD%	%REC	DET LIM	% CT ER
STD	D66	F	53.7				95.57	.1	
22N9B		Cl	72.2				96.27	.2	
~~BLANK~~ SPK		NO_2	504				95.82	1	
8/9/93		NO_3	533				92.06	1	
		PO_4	519				100.4	1	
		SO_4	594				98.51	1	
blank	D67	F	<.1						
		Cl	<.2						
		NO_2	<1						
		NO_3	<1						
		PO_4	<1						
		SO_4	<1				SPK		
	D68	F	<.1	<.1			106.1		
		Cl	<.2	<.2			111.6		
		NO_2	<1	<1			94.05		
		NO_3	<1	<1			91.60		
		PO_4	<1	<1			100.5		
		SO_4	<1	<1			101.6		
	D69	F	<.1						
		Cl	.259	.262	.2605	1.15			
		NO_2	<1						
		NO_3	<1						
		PO_4	<1						
		SO_4	<1						

NARRATIVE: [ ] NO SPECIAL PROBLEMS/METHOD VARIATIONS IN THIS BATCH

LIST SPECIFIC PROBLEMS/VARATIONS FOR THIS BATCH:

Cl⁻ for D68 is just below the lowest point on the calibration curve, & as a result must be reported as a less than value. ~~D69, on the other hand, is within reportable limits.~~ SDB 8/9/93 ~~has Cl⁻ concentrations which are~~ Cl⁻ values for D69 are reported because the peak areas are within the calibration limits.

Stacey Bolling 8/9/93

ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 66.-5571	CLEAN CORES	7-27-93	13:10	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	% RECOVERY	N45R2	0

Sample Size	Customer ID
? 0100-1D 2ZN9B	STD

Remarks, Calculations, Results

	µg/ml	% Rec
EDP 974 F	53.7	95.89
EDP 972 CL	72.2	96.27
EDP 968 NO2	.504	95.82
EDP 978 NO3	533	92.06
EDP 976 PO4	519	100.4
EDP 970 SO4	594	98.51

Bobby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacy Bollin

54-6800-061 (R 10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 67.-5671	CLEAN CORES	7-27-93	13:11	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	BLK

Remarks, Calculations, Results

REAGENT BLANK

	µg/ml
F	<.1
Cl	<.2
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

Bobby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacy Bollin

54-6800-061 (R 10-83)

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ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 68.-5771	CLEAN CORES	7-27-93	13:15	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	11

Remarks, Calculations, Results

	ug/ml
F	<.1
Cl	<.2
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacey Collins 8/11

54-6800-06 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 68.-5871	CLEAN CORES	7-27-93	13:15	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	11

Remarks, Calculations, Results

DUPLICATE SAMPLE

	ug/ml
F	<.1
Cl	<.2
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacey Collins 8/11

54-6800-06 (R-10-83)

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ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 68.-5971	CLEAN CORES	7-27-93	13:15	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	% RECOVERY	N45R2	0

Sample Size	Customer ID
? direct	11

Remarks, Calculations, Results

SAMPLE SPIKED ID
SPIKE ID 22N9B
SPIKE VOLUME 25 λ

	ug/ml	% Rec
F	.588 (SKM3)	106.1%
Cl	.829	111.6%
NO_2	4.898	94.05%
NO_3	5.251	91.60%
PO_4	5.143	100.5%
SO_4	6.060	101.0%

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacey Bollin

54-6800-06 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 69.-5771	CLEAN CORES	7-27-93	13:16	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	21

Remarks, Calculations, Results

	ug/ml
F	<.1
Cl	.259
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacey Bollin

54-6800-06 (R-10-83)

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ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 69.-5871	CLEAN CORES	7-27-93	13:16	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	21

Remarks, Calculations, Results

DUPLICATE SAMPLE

	ug/ml	RPD
F	<.1	
Cl	.262	1.15%
NO_2	<1	
NO_3	<1	
PO_4	<1	
SO_4	<1	

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1105	Stacey Billing 8/11

54-6800-06 (R-10-83)

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 111 TO 117.

WHC-SD-WM-DP-055
REV 0

ROBBY WENDLAND 8-6-93

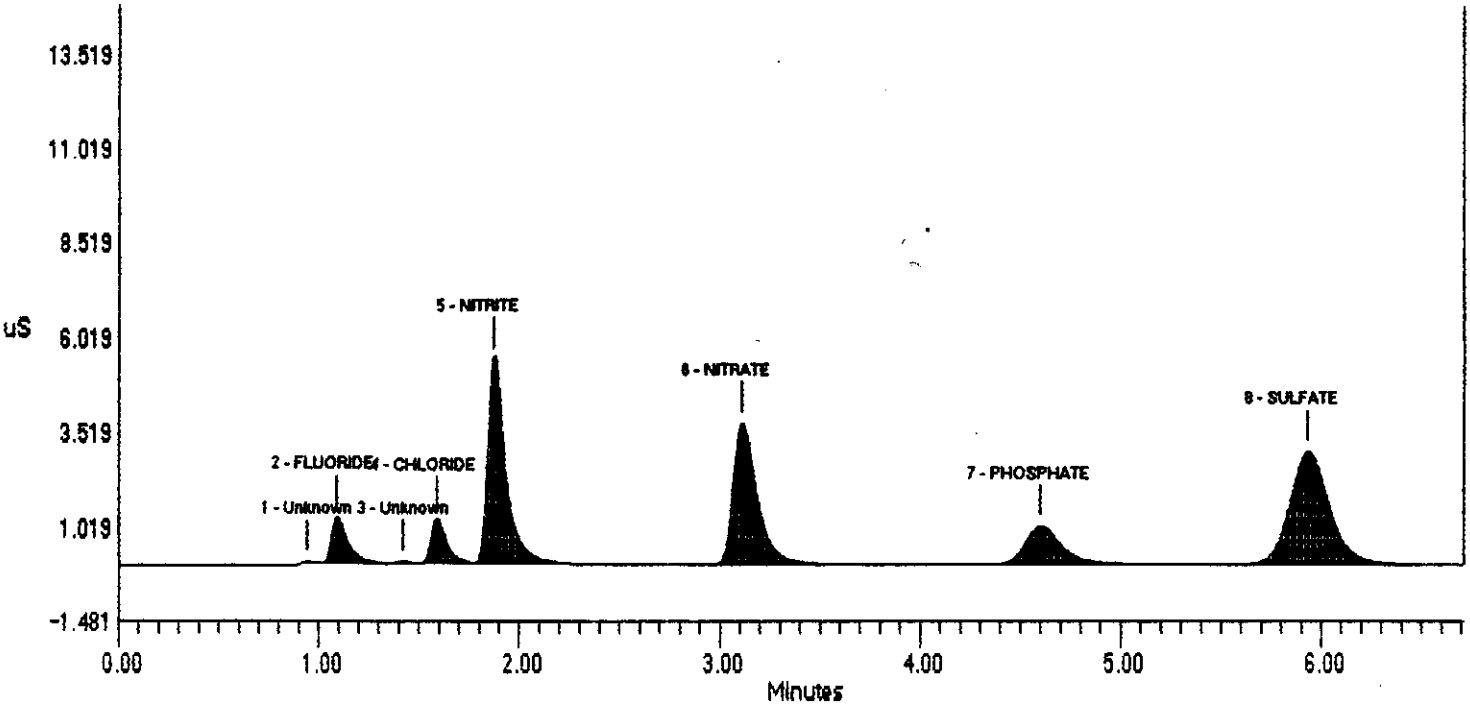
SDO 8/9/93

% Sample Name: LMCS / 066 Date: Fri Aug 06 10:17:13 1993%
% Data File : C:%DX%DATA%93080611.D02 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject#: 2 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	101	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.09	FLUORIDE	53.678	1224	6909	2	0.00
4	1.59	CHLORIDE	72.248	1186	6147	2	-3.90
5	1.87	NITRITE	503.840	5372	32948	2	1.13
6	3.11	NITRATE	532.539	3730	30647	1	1.45
7	4.60	PHOSPHATE	518.949	1011	12887	1	-4.51
8	5.93	SULFATE	594.386	3005	41131	1	1.05

File: C:\DX\DATA\93080611.D02 Sample: LMCS



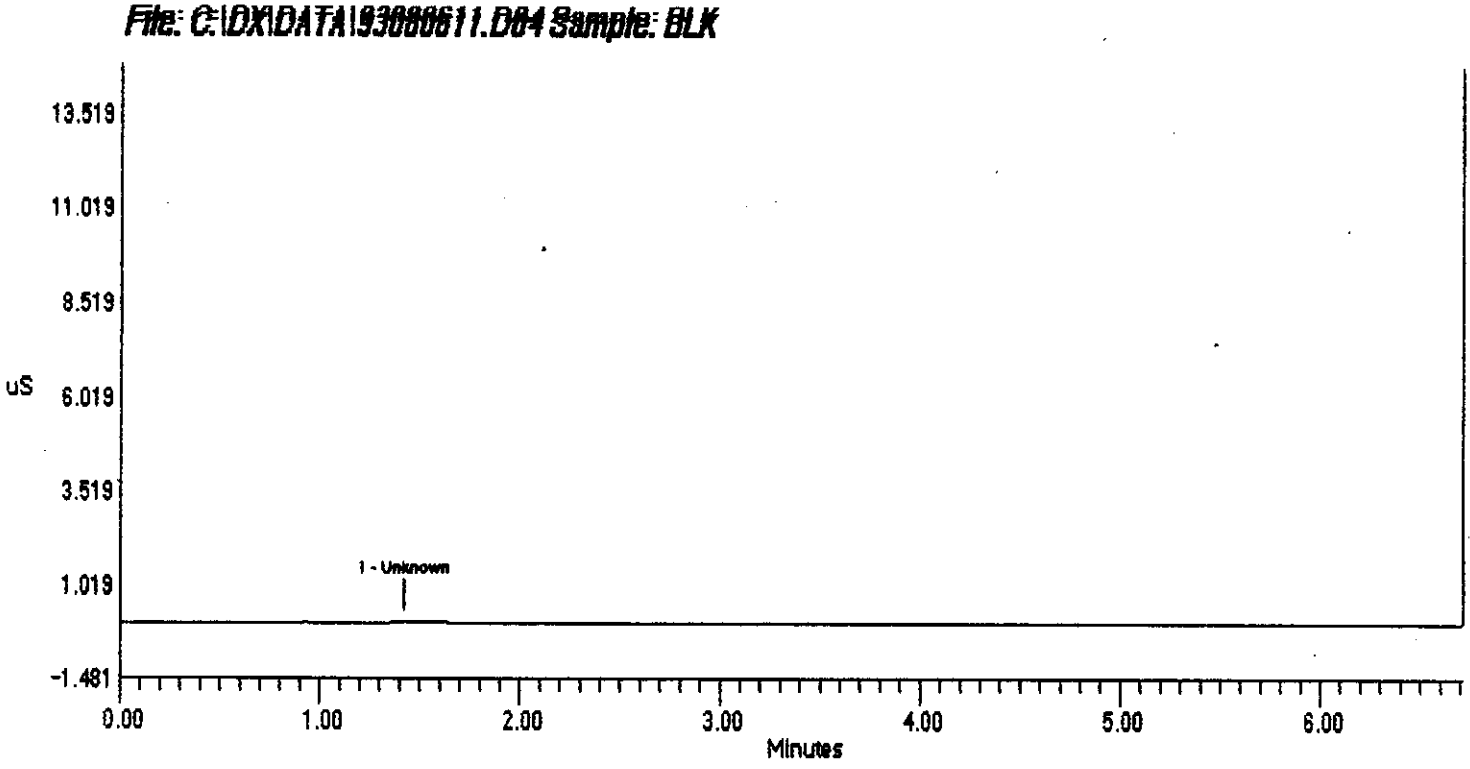
BEST AVAILABLE COPY

SLW 8/9/93

```
% Sample Name: BLK /067                          Date: Fri Aug 06 10:33:33 1993%
% Data File   : C:%DX%DATA%93080611.D04                                        %
% Method      : C:%DX%METHOD%MEL.MET                                           %
% ACI Address: 1        System : 1        Inject%:    4  Detector: CDM-1      %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta

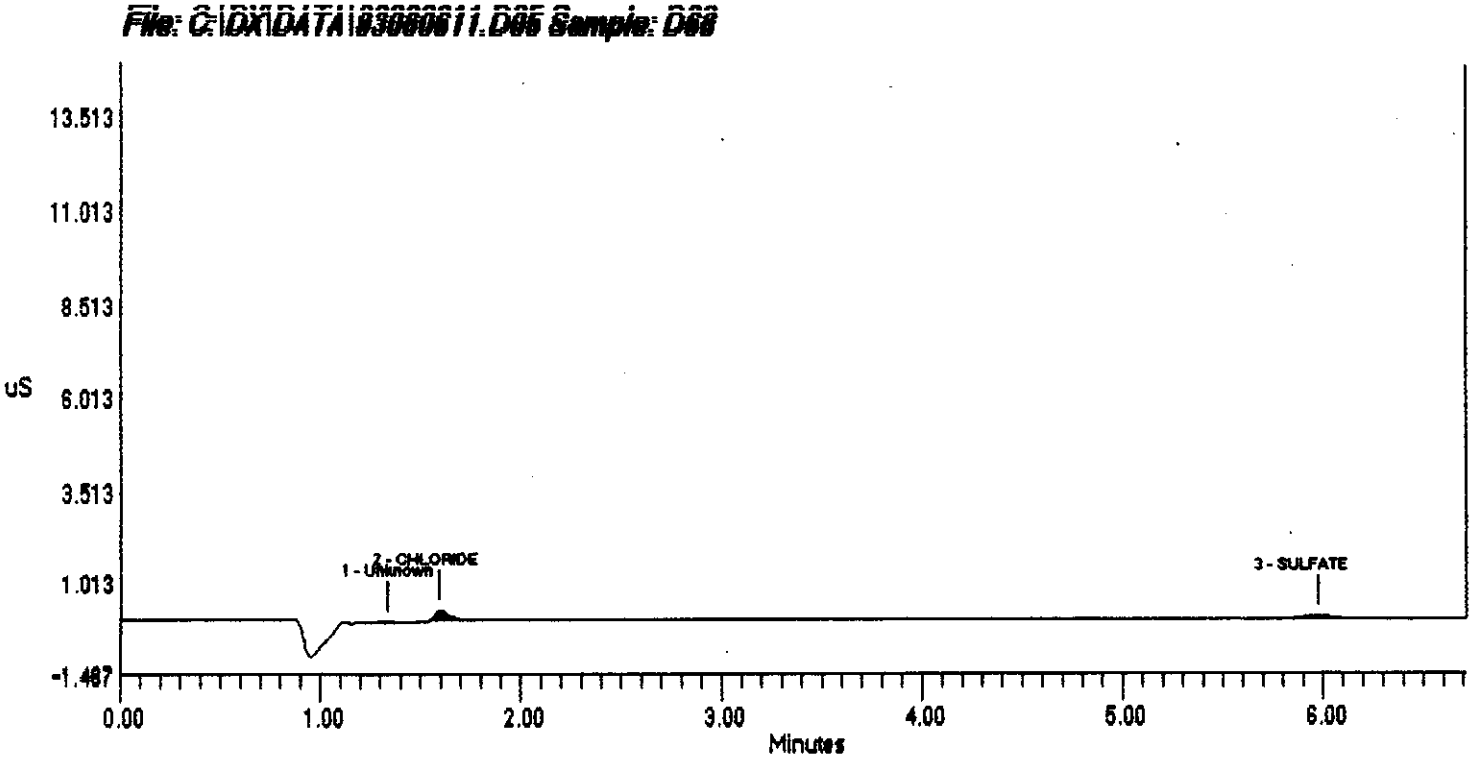


BEST AVAILABLE COPY

```
% Sample Name: D68                                   Date: Fri Aug 06 10:41:32 1993%
% Data File   : C:%DX%DATA%93080611.D05                                            %
% Method      : C:%DX%METHOD%MEL.MET                                               %
% ACI Address: 1        System : 1        Inject%:    5  Detector: CDM-1          %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
1	1.33		246.200	35	246	1	
2	1.59	CHLORIDE	0.210	254	1246	1	-6.47
3	5.97	SULFATE	1.364	79	949	1	-1.00



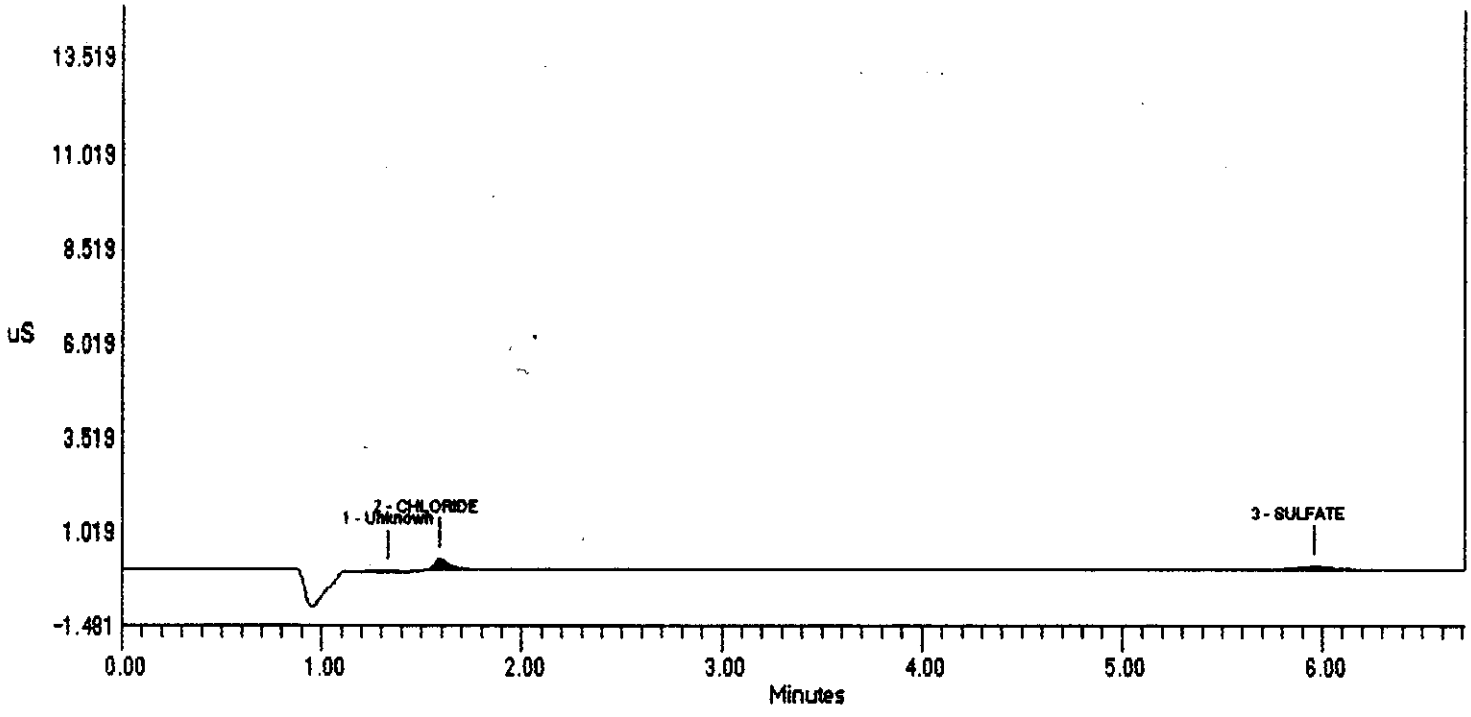
BEST AVAILABLE COPY

```
% Sample Name: D68 DUP                                  Date: Fri Aug 06 10:49:30 1993%
% Data File   : C:%DX%DATA%93080611.D06                                              %
% Method      : C:%DX%METHOD%MEL.MET                                                 %
% ACI Address: 1        System : 1        Inject%:    6   Detector: CDM-1           %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
1	1.33		236.200	33	236	1	
2	1.59	CHLORIDE	0.225	275	1390	1	-6.47
3	5.96	SULFATE	1.370	81	999	1	-1.16

File: C:\DX\DATA\93080611.D06 Sample: D68 DUP



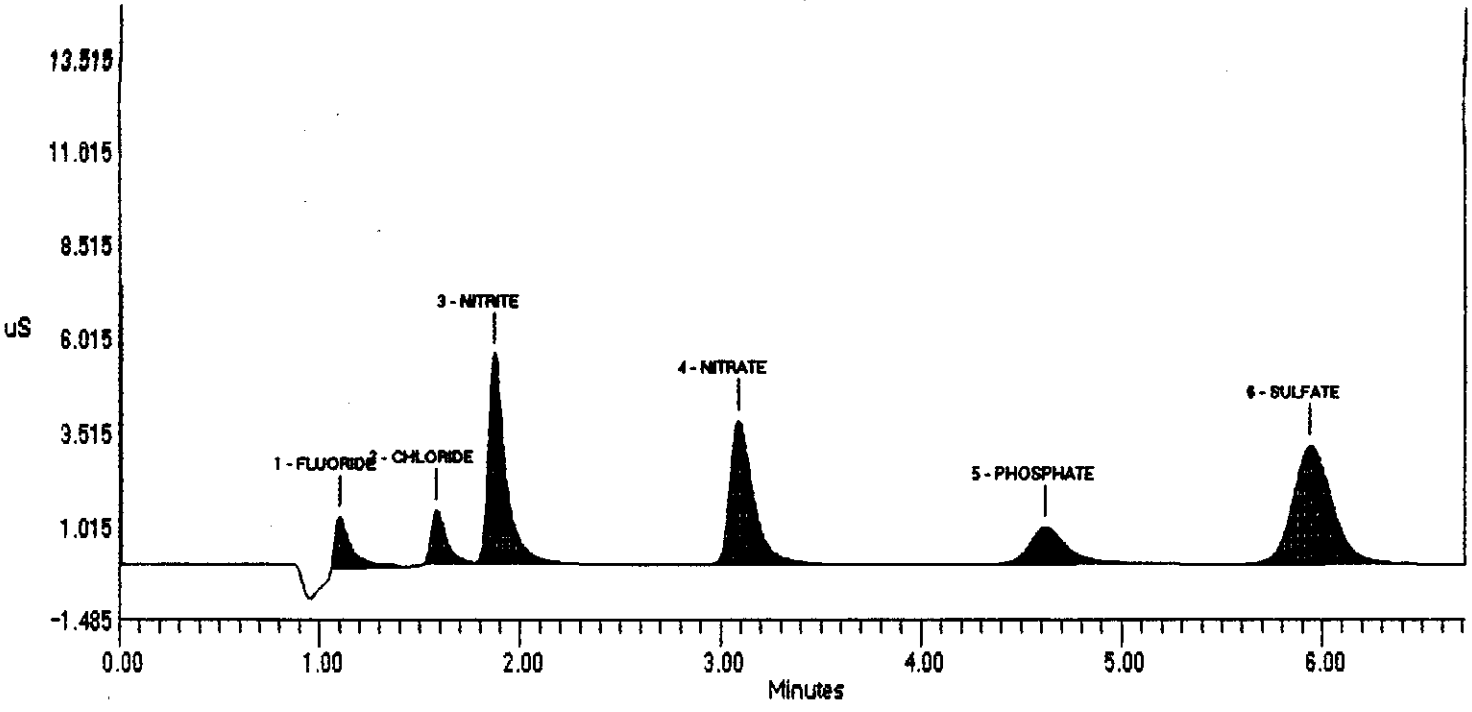
BEST AVAILABLE COPY

```
% Sample Name: D68 SPK                                  Date: Fri Aug 06 13:11:01 1993%
% Data File   : C:%DX%DATA%93080621.D02                                              %
% Method      : C:%DX%METHOD%MEL.MET                                                 %
% ACI Address: 1        System : 1        Inject#:    2  Detector: CDM-1             %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
1	1.10	FLUORIDE	0.588	1378	7749	1	0.00
2	1.58	CHLORIDE	0.829	1395	7251	2	-5.37
3	1.87	NITRITE	4.898	5538	32285	2	0.21
4	3.09	NITRATE	5.251	3806	30498	1	-0.12
5	4.62	PHOSPHATE	5.143	1003	12904	1	-4.97
6	5.94	SULFATE	6.066	3136	42743	1	0.30

File: C:\DX\DATA\93080621.D02 Sample: D68 SPK



BEST AVAILABLE COPY

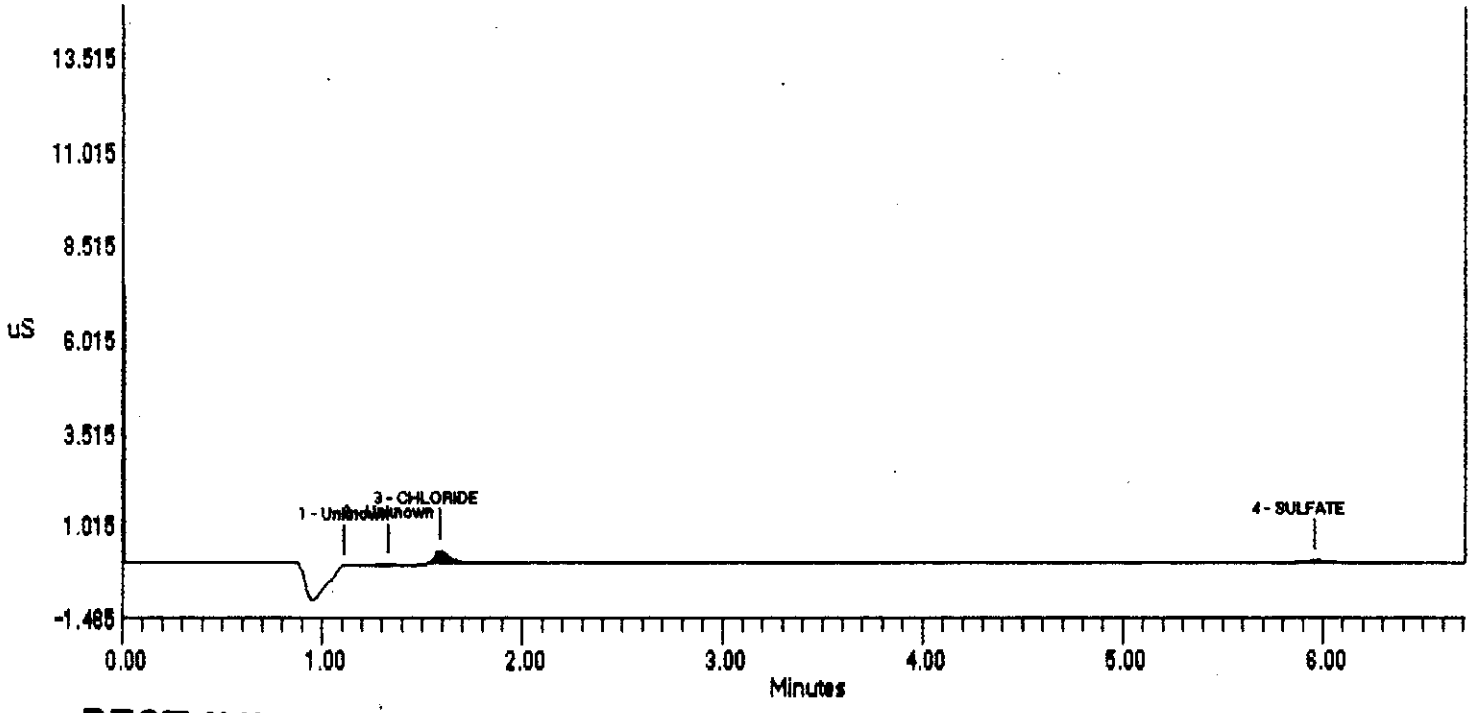
D69 RW 8/9/93

% Sample Name: ~~D68 SPK~~ Date: Fri Aug 06 10:57:30 1993%
% Data File : C:\DX\DATA\93080601.D07 %
% Method : C:\DX\METHOD\MEL.MET %
% ACI Address: 1 System : 1 Inject#: 7 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.33		253.575	37	254	2	
3	1.59	CHLORIDE	0.259	346	1723	1	-6.47
4	5.96	SULFATE	1.335	61	689	1	-1.16

File: C:\DX\DATA\93080601.D07 Sample: D68 SPK



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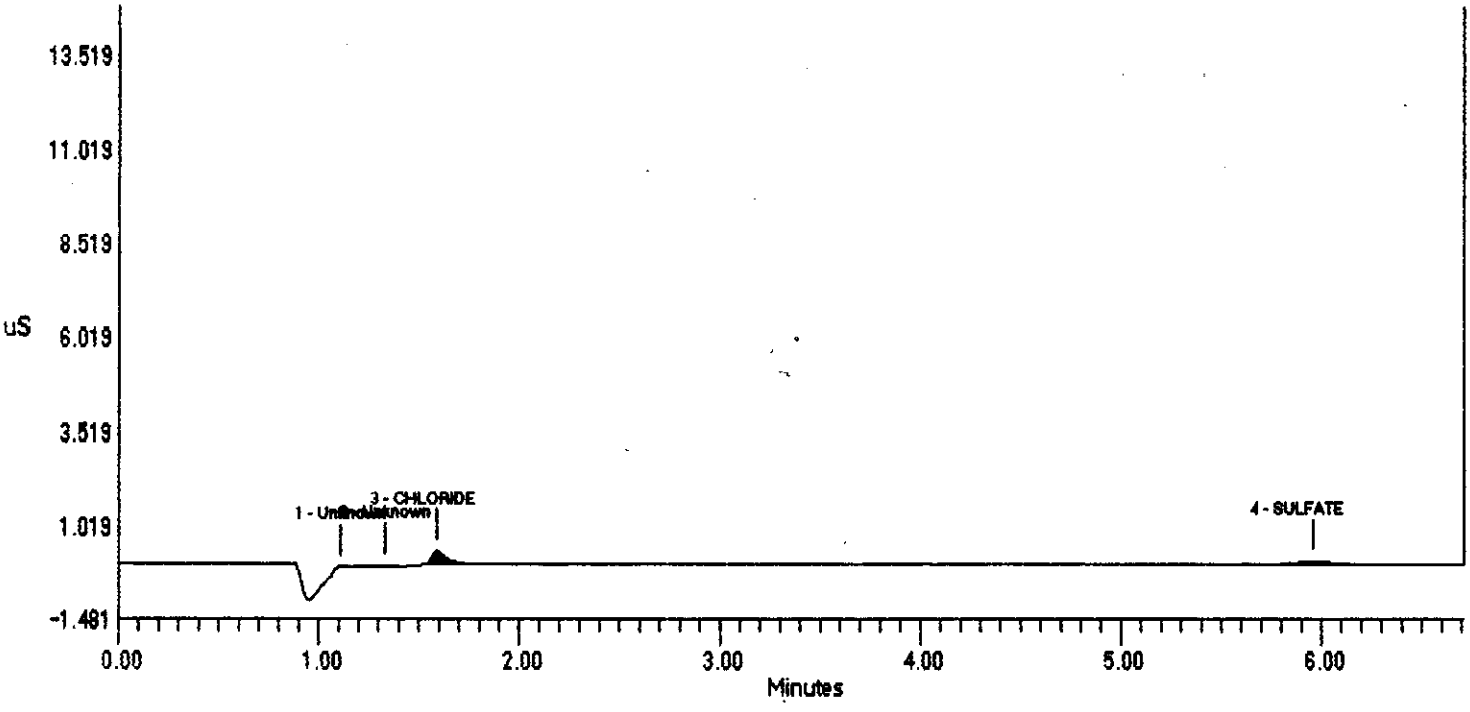
DUP 8/9/93

% Sample Name: D69 DUP Date: Fri Aug 06 11:05:34 1993%
% Data File : C:%DX%DATA%93080601.D08 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject%: 8 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.33		240.252	34	240	2	
3	1.59	CHLORIDE	0.262	345	1748	1	-6.47
4	5.96	SULFATE	1.344	65	771	1	-1.16

File: C:\DX\DATA\93080601.D08 Sample: D69



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WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
ANALYTICAL BATCH

Batch 1567
Clean Core

Lab Segment Serial No. D72,73	Customer ID: 31, A1
Analysis: IC	Sample Prep: DIRECT

Instrument: WB54428	Procedure/ Rev: LA533-105 / C-0
Technologist: R. WENDLAND	Date: 8-6-93
Starting Time: 1121	Temperature 23°C
Ending Time: 1210	Chemist: S. BOLLING

Comments:

	Description	Lab ID		Description	Lab ID
1	LMCS	D70-5571	11		
2	BLANK	D71-5671	12		
3	SAMPLE	D72-5771	13	OUT FOR RERUN	CL only
4	DUPLICATE	D72-5871	14		
5	SPIKE	D72-5971	15		
6	SAMPLE	D73-5771	16		
7	DUPLICATE	D73-5871	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	22N9B	(100 mL)		

118

Robby Wendland
8-6-93

A-6000-881 (03/92

ANALYTICAL BATCH SUMMARY SHEET

METHOD:	DATE START:	WHC-SD-WM-DP-055 REV 0
LA-533-105/C-0	8/6/93	
PREPARED BY:	**DATE COMPLETE:**	
S.D. Bolling	8/6/93	

	UNITS:		µg/ml	µg/ml				µg/ml	
SPL NAME	SPL ID	ANALYTE	RESULT #1	RESULT #2	AVERAGE	RPD%	%REC	DET LIM	% CT ER
STD	D70	F	53.4				96.07	.01	
22N9B		Cl	109.3				92.40	.2	
~~BLANK~~ SDB		NO_2	483				91.83	1	
8/9/93		NO_3	527				91.02	1	
		PO_4	512				99.03	1	
		SO_4	592				98.18	1	
	D71	F	<.1						
		Cl	<.2						
		NO_2	<1						
		NO_3	<1						
		PO_4	<1						
		SO_4	<1				SPK		
	D72	F	<.1	<.1			104.1		
		Cl	.341	.331	.336	2.48	77.84		
		NO_2	<1	<1			92.13		
		NO_3	<1	<1			91.28		
		PO_4	<1	<1			98.27		
		SO_4	<1	<1			100.8		
	D73	F	<.1	<.1					
		Cl	<.2	<.2					
		NO_2	<1	<1					
		NO_3	<1	<1					
		PO_4	<1	<1					
		SO_4	<1	<1					

NARRATIVE: [ ] NO SPECIAL PROBLEMS/METHOD VARIATIONS IN THIS BATCH

LIST SPECIFIC PROBLEMS/VARATIONS FOR THIS BATCH:

Cl^- was detected in sample D72. For sample D73, Cl^- was barely below the instrument detection limit of .2 ppm. There appears to be a Cl^- interference, which is why the Cl^- spike recovery is out of limit. However, this ~~sample~~ batch will be rerun once more to ensure that there is a matrix interference present.

SDB 8/9/93

Stacey Bolling 8/9/93

ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 70.-5571	CLEAN CORES	7-27-93	13:25	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	% RECOVERY	N45R2	0

Sample Size	Customer ID
? 0100-10 22N95	STD

Remarks Calculations Results

		µg/ml	% Rec
EDP 974	F	53.8	96.07
EDP 972	CL	69.3	92.40
EDP 968	NO2	483	91.83
EDP 978	NO3	527	91.02
EDP 976	PO4	512	99.03
EDP 970	SO4	592	98.18

OUT FOR RERUN
CL only

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Bolling

SK-6800-06 (R-10-83)

Serial No	Sample Point	Date	Time Issued	Priority
D 71.-5671	CLEAN CORES	7-27-93	13:25	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? Direct	BLK

Remarks Calculations. Results

		µg/ml
REAGENT BLANK	F	2.1
	Cl	<.2
	NO_2	<1
	NO_3	<1
	PO_4	<1
	SO_4	<1

OUT FOR RERUN
CL only

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Bolling

SK-6800-06 (R-10-83)

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ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 72.-5771	CLEAN CORES	7-27-93	13:26	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	31

Remarks, Calculations, Results

	ug/ml
F	<.1
Cl	.341
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

OUT FOR RERUN
Cl only

Bobby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Bollin

8/12

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

Serial No	Sample Point	Date	Time Issued	Priority
D 72.-5871	CLEAN CORES	7-27-93	13:26	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	31

Remarks, Calculations, Results

DUPLICATE SAMPLE

	ug/ml	RPD
F	<.1	
Cl	.331	2.98%
NO_2	<1	
NO_3	<1	
PO_4	<1	
SO_4	<1	

OUT FOR RERUN
Cl only

Bobby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Bollin

8/11

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

BEST AVAILABLE COPY

ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No	Sample Point	Date	Time Issued	Priority
D 72.-5971	CLEAN CORES	7-27-93	13:26	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	% RECOVERY	N45R2	0

Sample Size	Customer ID
? direct	31

Remarks, Calculations, Results

SAMPLE SPIKED ID
SPIKE ID 22N96
SPIKE VOLUME 25λ

	µg/ml	% R
F	.577	104.1%
Cl	.919	77.84%
NO_2	4.798	92.13%
NO_3	5.233	91.28%
PO_4	5.030	98.27%
SO_4	6.020	100.8%

OUT FOR RERUN

Robby Wendland

Cl only

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Bellenger

54-660-001 (R-10-83)

F $\frac{.577-0}{\left(\frac{(.025)(54)(1)}{2.525}\right)} \times 100 = 104.1\%$

Cl $\frac{.919-.341}{\left(\frac{(.025)(75)(1)}{2.525}\right)} \times 100 = 77.84\%$

NO_2 $\frac{4.798-0}{\left(\frac{(.025)(526)(1)}{2.525}\right)} \times 100 = 92.13\%$

NO_3 $\frac{5.233-0}{\left(\frac{(.025)(579)(1)}{2.525}\right)} \times 100 = 91.28\%$

PO_4 $\frac{5.030-0}{\left(\frac{(.025)(517)(1)}{2.525}\right)} \times 100 = 98.27\%$

SO_4 $\frac{6.020-0}{\left(\frac{(.025)(603)(1)}{2.525}\right)} \times 100 = 100.8\%$

BEST AVAILABLE COPY

ION CHROMATOGRAPHIC ANALYSIS - UNDIGESTED SAMPLE

Serial No.	Sample Point	Date	Time Issued	Priority
D 73.-5771	CLEAN CORES	7-27-93	13:27	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	41

Remarks, Calculations, Results

	ug/ml
F	<.1
Cl	<.2
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

OUT FOR RERUN
Cl only

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Collins

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

Serial No.	Sample Point	Date	Time Issued	Priority
D 73.-5871	CLEAN CORES	7-27-93	13:27	26

Determination	Method Standard	Result Units	Charge Code	Reruns
IC	LA-533-105	uG/ML	N45R2	0

Sample Size	Customer ID
? direct	41

Remarks, Calculations, Results

DUPLICATE SAMPLE

	ug/ml
F	<.1
Cl	<.2
NO_2	<1
NO_3	<1
PO_4	<1
SO_4	<1

OUT FOR RERUN
Cl only

Robby Wendland

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

Date	Time Completed	Lab Unit Mgr
8-6-93	1210	Stacey Collins

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

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 124 TO 130.

WHC-SD-WM-DP-055
REV 0

Robby Wendland
8-6-93

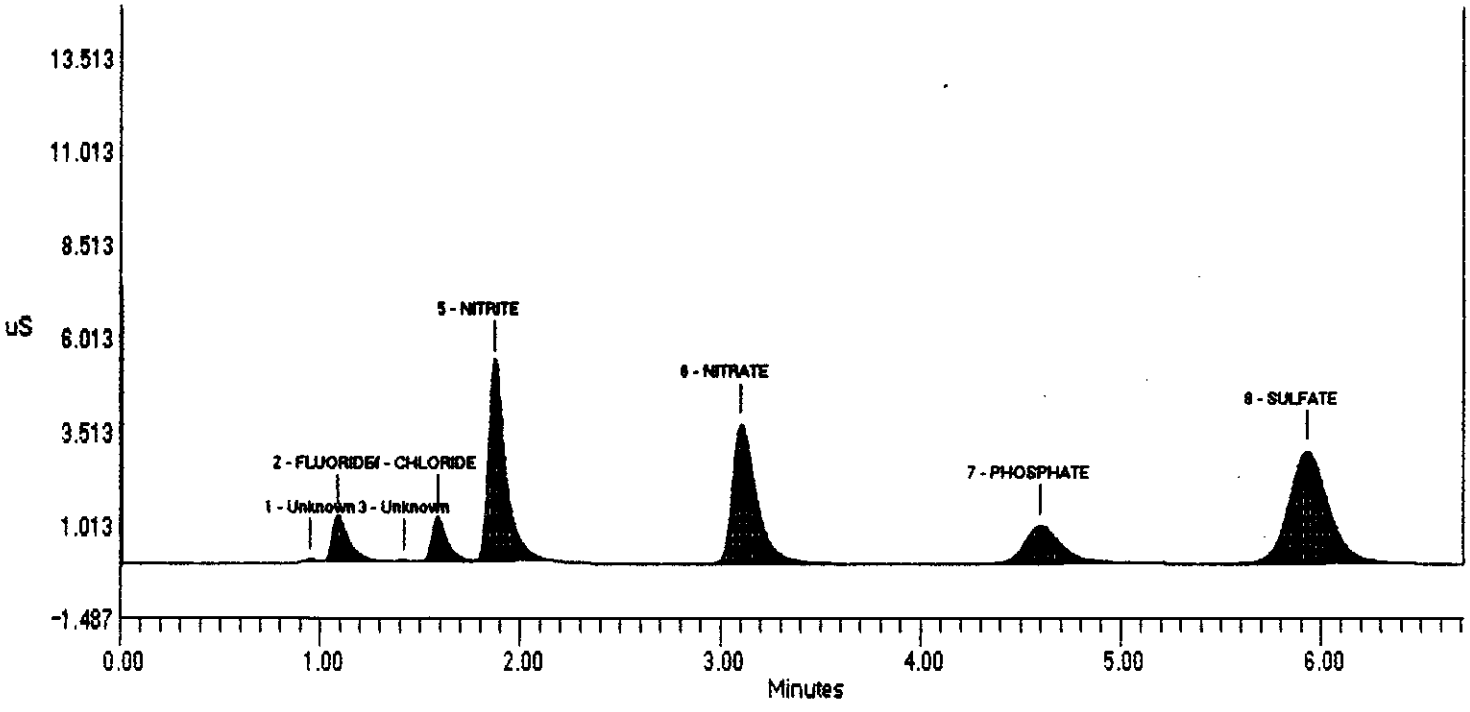
SDB 8/9/93

Sample Name: LMCS/070 Date: Fri Aug 06 11:21:46 1993
Data File : C:\DX\DATA\93080601.D10
Method : C:\DX\METHOD\MEL.MET
ACI Address: 1 System : 1 Inject#: 10 Detector: CDM-1

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	101	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.09	FLUORIDE	53.822	1231	6931	2	0.00
4	1.59	CHLORIDE	69.277	1176	5861	2	-3.90
5	1.87	NITRITE	482.524	5298	31400	2	1.13
6	3.10	NITRATE	526.741	3689	30251	1	1.12
7	4.60	PHOSPHATE	511.526	999	12647	1	-4.51
8	5.93	SULFATE	591.561	2993	40883	1	1.05

File: C:\DX\DATA\93080601.D10 Sample: LMCS



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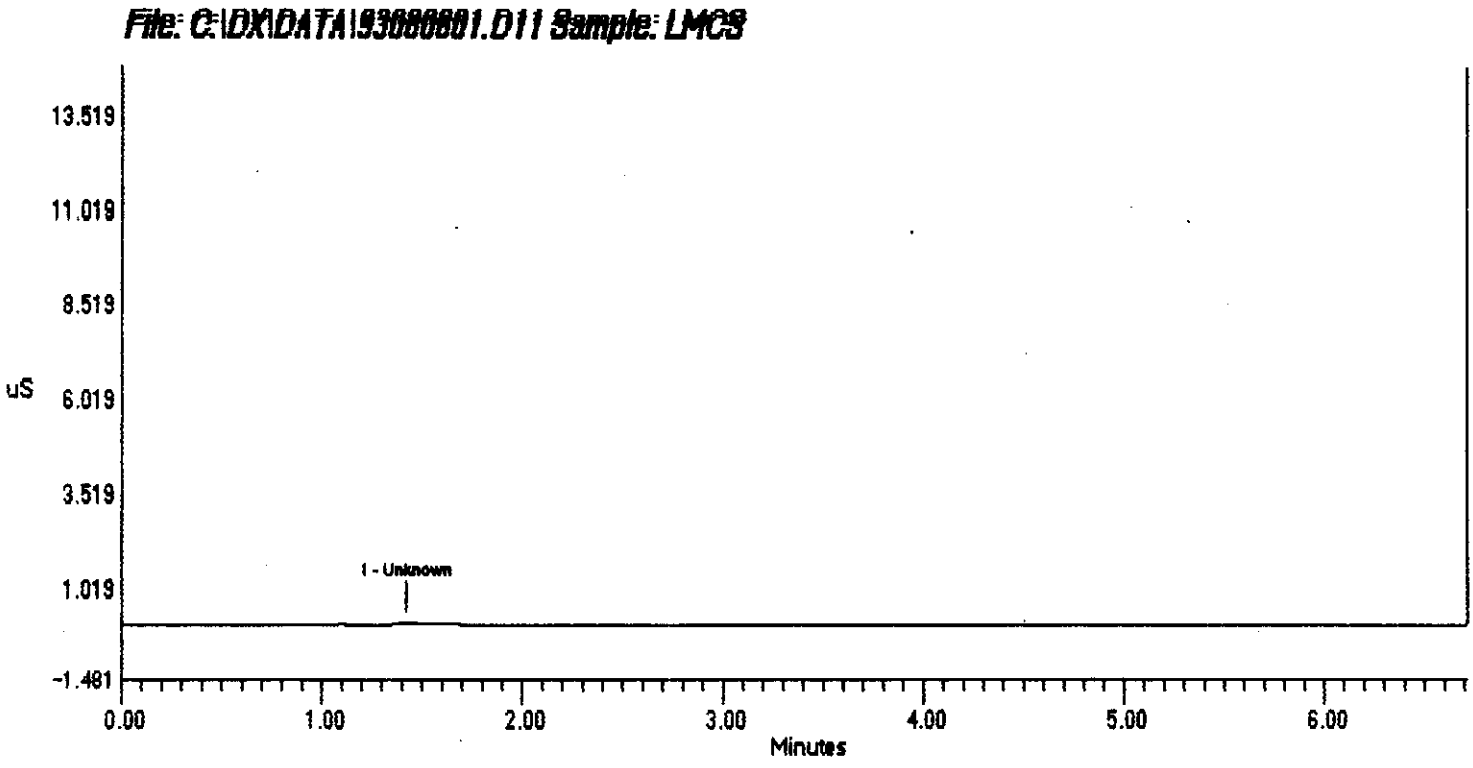
SDB 8/9/93
BLK/071

```
% Sample Name: LMCS                                   Date: Fri Aug 06 11:29:58 1993%
% Data File   : C:%DX%DATA%93080601.D11                                            %
% Method      : C:%DX%METHOD%MEL.MET                                               %
% ACI Address: 1        System : 1        InjectN: 11   Detector: CDM-1           %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	~~101~~ 1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta



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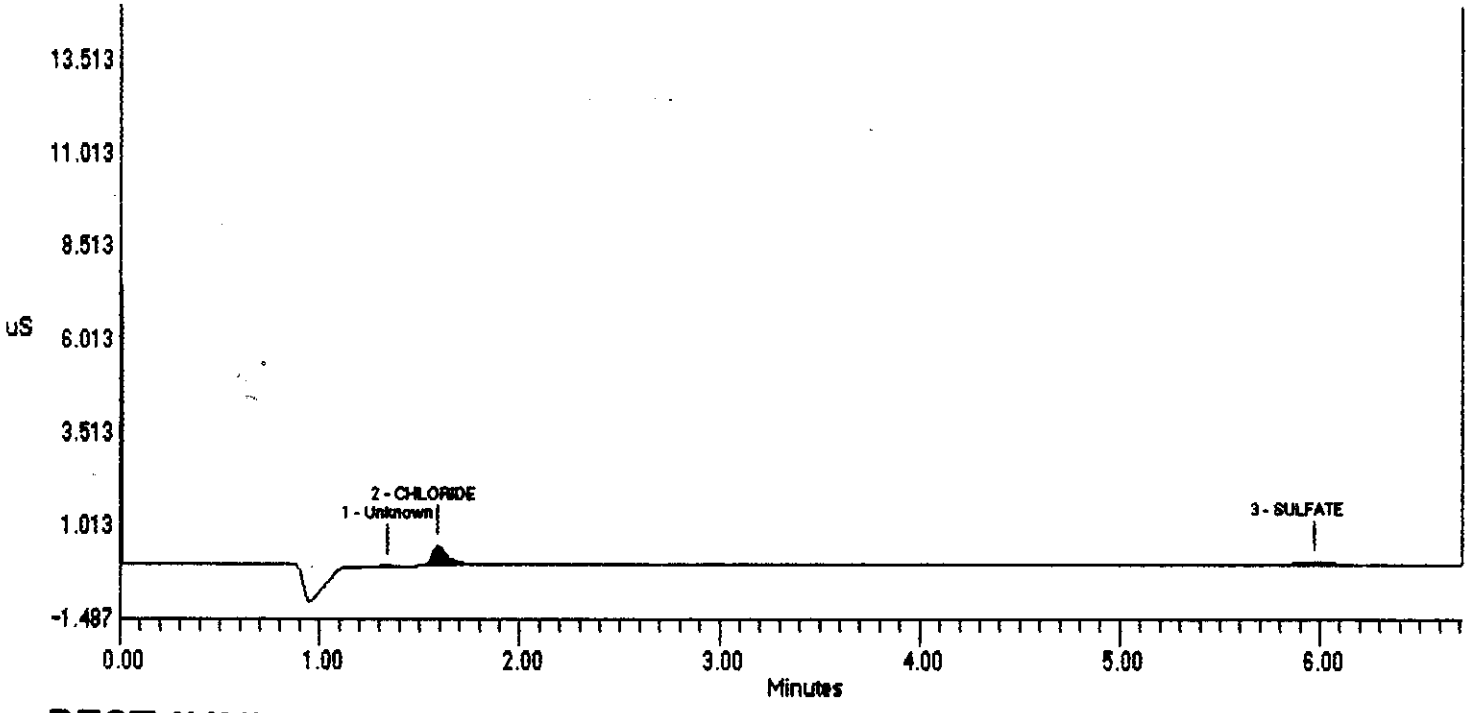
D72 8/4/93

% Sample Name: ~~BLK~~ 8/4/93 Date: Fri Aug 06 11:37:55 1993%
% Data File : C:%DX%DATA%93080601.D12 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject#: 12 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.59	CHLORIDE	0.341	481	2519	1	-6.47
3	5.97	SULFATE	1.360	72	915	1	-1.00

File: C:\DX\DATA\93080601.D12 Sample: BLK



BEST AVAILABLE COPY

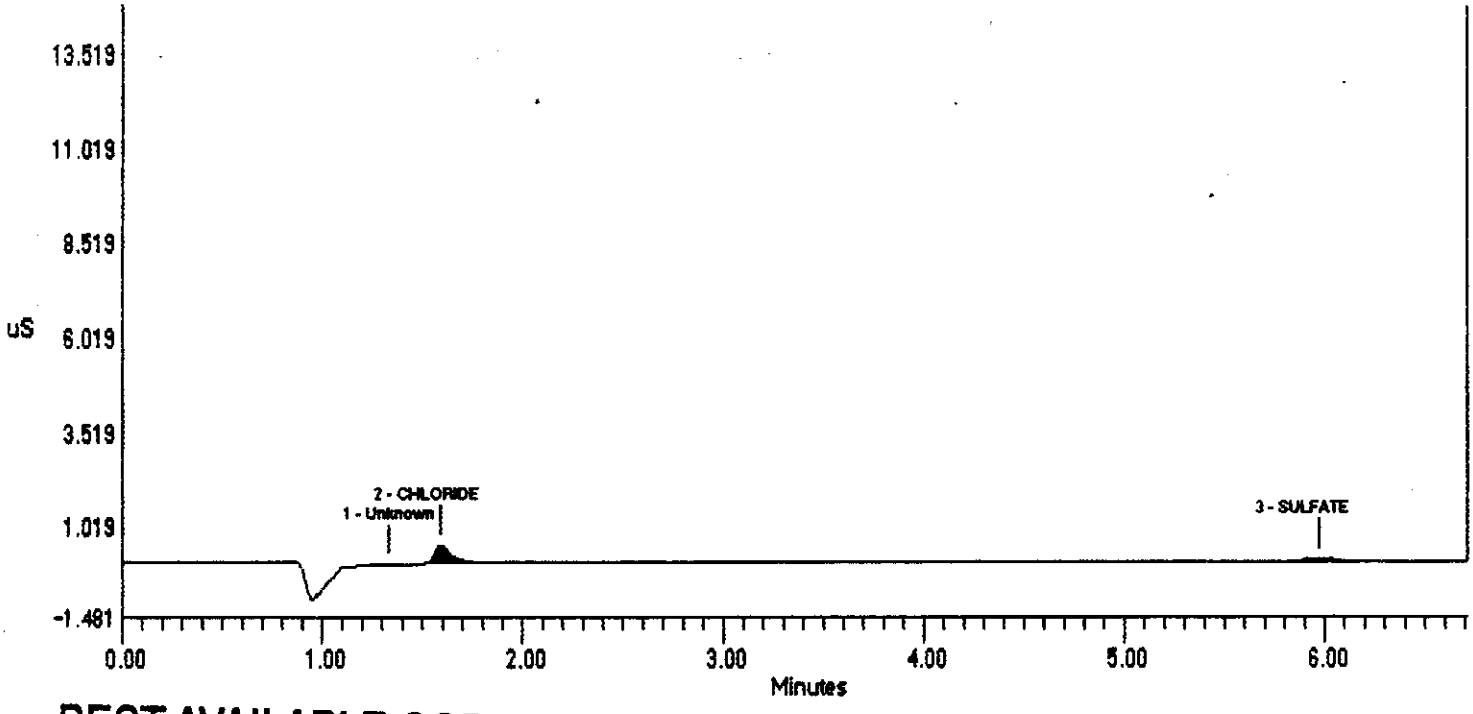
BDO 8/9/93

% Sample Name: D72 DUP Date: Fri Aug 06 11:45:57 1993%
% Data File : C:%DX%DATA%93080601.D13 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject#: 13 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.59	CHLORIDE	0.331	465	2416	1	-6.47
3	5.97	SULFATE	1.343	67	758	1	-1.00

File: C:\DX\DATA\93080601.D13 Sample: D72



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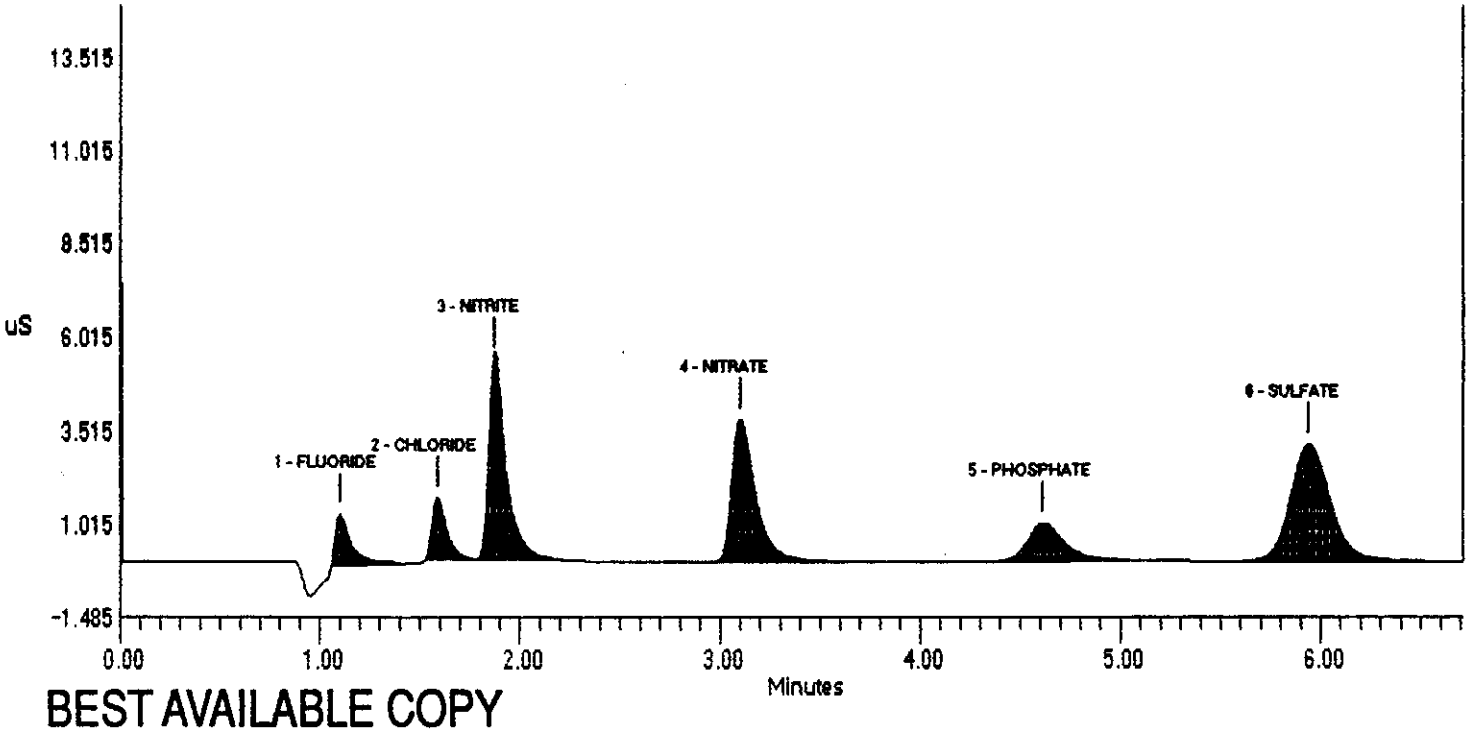
SPK SDB 8/9/93

% Sample Name: D72 ~~DUP~~ Date: Fri Aug 06 11:53:56 1993%
% Data File : C:%DX%DATA%93080601.D14 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject#: 14 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
1	1.10	FLUORIDE	0.577	1345	7582	1	0.00
2	1.59	CHLORIDE	0.919	1626	8123	1	-4.77
3	1.87	NITRITE	4.798	5343	31551	1	0.21
4	3.10	NITRATE	5.233	3753	30376	1	0.20
5	4.61	PHOSPHATE	5.030	989	12534	1	-5.18
6	5.94	SULFATE	6.020	3102	42332	1	0.30

File: C:\DX\DATA\93080601.D14 Sample: D72 DUP



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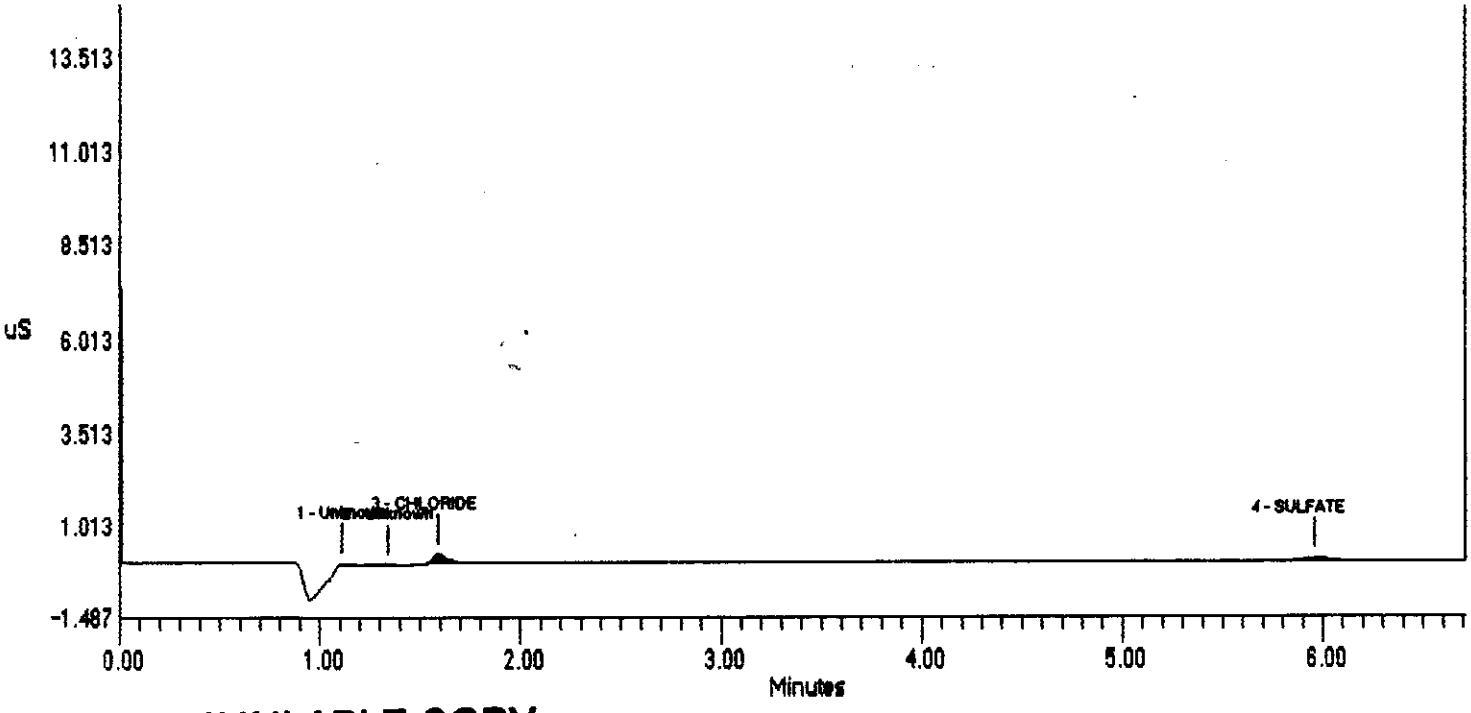
D73 8/9/93

```
% Sample Name: D72 SPK                          Date: Fri Aug 06 12:02:05 1993%
% Data File   : C:MDXMDATAM93080601.D15                                       %
% Method      : C:MDXMMETHODMMEL.MET                                          %
% ACI Address: 1        System : 1        InjectN: 15  Detector: CDM-1        %
```

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
3	1.59	CHLORIDE	0.201	242	1158	1	-6.47
4	5.96	SULFATE	1.366	76	962	1	-1.16

File: C:\DX\DATA\93080601.D15 Sample: D72 SPK



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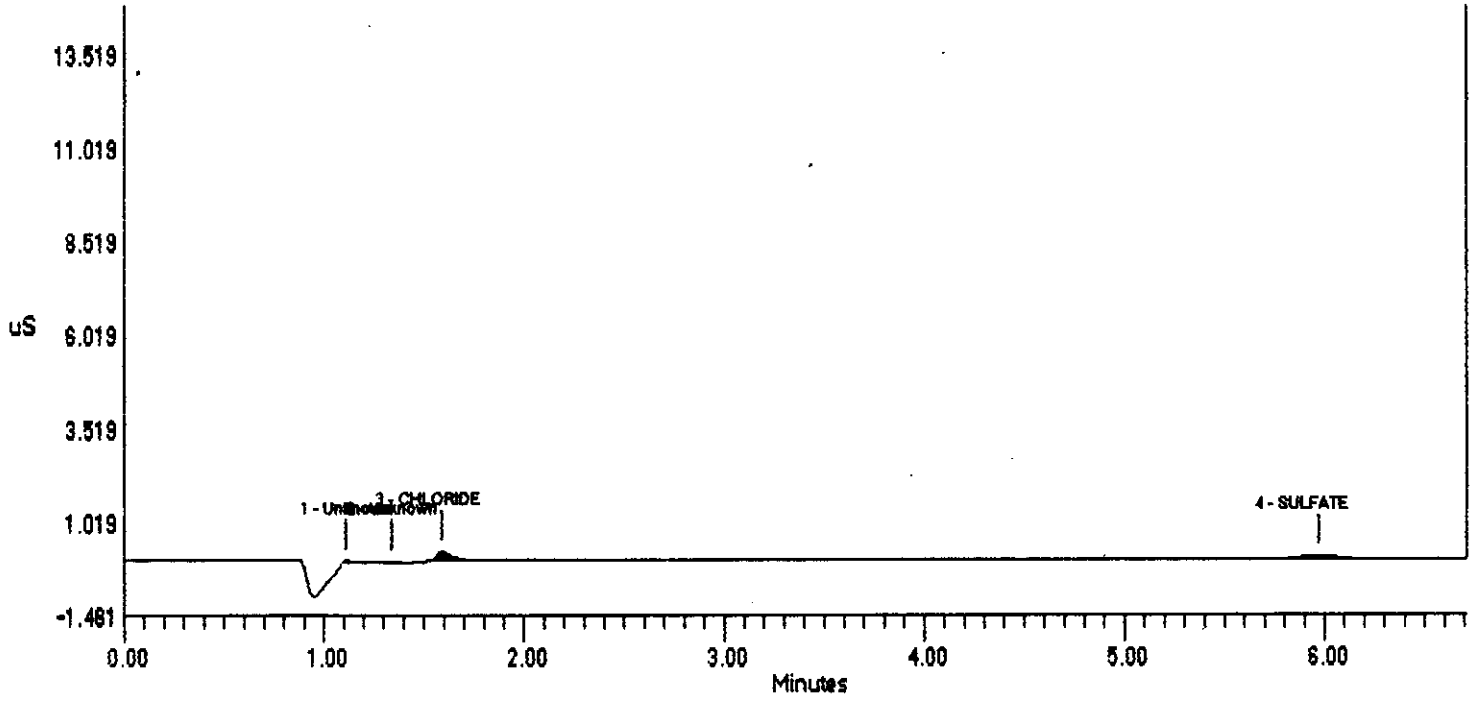
SDB 8/9/93

% Sample Name: D73 DUP Date: Fri Aug 06 12:10:08 1993%
% Data File : C:%DX%DATA%93080601.D16 %
% Method : C:%DX%METHOD%MEL.MET %
% ACI Address: 1 System : 1 Inject#: 16 Detector: CDM-1 %

REPORT	VOLUME	DILUTION	POINTS	RATE	START	STOP	AREA REJ
External	1	1	2015	5Hz	0.00	6.72	200

Pk. Num	Ret Time	Component Name	Concentration	Height	Area	Bl. Code	%Delta
2	1.34		232.200	34	232	1	
3	1.59	CHLORIDE	0.206	242	1208	1	-6.47
4	5.97	SULFATE	1.358	75	894	1	-1.00

File: C:\DX\DATA\93080601.D16 Sample: D73



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WHC-SD-WM-DP-055
REV 0

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY

Batch 1578

ANALYTICAL BATCH Clean Cores

Lab Segment Serial No. D72,73	Customer ID: 31,41
Analysis: IC	Sample Prep: DIRECT

Instrument: WB5A428	Procedure/ Rev: LA533-105/C-0
Technologist: R. WENDLAND	Date: 8-11-93
Starting Time: 1219	Temperature 23 °C
Ending Time: 1317	Chemist: S. BOLLING

Comments:

	Description	Lab ID		Description	Lab ID
1	LMCS	D70-5571	11		
2	BLANK	D71-5671	12		
3	SAMPLE	D72-5771	13		
4	DUPLICATE	D72-5871	14		
5	SPIKE	D72-5971	15		
6	SAMPLE	D73-5771	16		
7	DUPLICATE	D73-5871	17		
8			18		
9			19		
10			20		

Standard Type	Primary Book No. and Aliquot Vol.	Second Book No. and Aliquot Vol.	Third Book No. and Aliquot Vol.	Final Vol. of Standard
LMCS	22N9B	(.100mL)		

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ROBBY WENDLAND

A-6000-881 (03/92)