DISTRIBUTION SHEET

TO DISTRIBUTION	From ANALYTICAL SERVICES		Page 1 of 1	
			Date: 10/20/94	
	Project Title/Work Order WHC-SD-WM-DP-068, Rev. 0 Concrete Samples for Organic Samples			EDT NO.: EDT-140740
ECN NO.: N/A				
Name	MSIN	Text With all Attach	Addendum 1A Only	EDT/ECN Only

Westinghouse Hanford Company

J. G. Kristofzski	T6-06			X
A. L. Prignano	H6-23	X		
W. E. Strohben	H4-23	X		
Central Files	L8-04	2		
EDMC	H6-08	X		
LTIC	T6-06			X
OSTI	L8-07	2		
TFIC (Tank Farm Information Center)	R1-20			X

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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT

140740

2. To: (Receiving Organization) DISTRIBUTION		3. From: (Originating Organization) PROGRAM SUPPORT		4. Related EDT No.: N/A							
5. Proj./Prog./Dept./Div.: CONCRETE SAMPLES/WASTE MANAGEMENT/PS/AS		6. Cog. Engr.: RICHARD E. VOGEL		7. Purchase Order No.: N/A							
8. Originator Remarks: This document is in two parts - the first is the data package entitled "Concrete Samples for Organic Samples" and the second is entitled "Concrete Samples for Organic Samples - Addendum 1A" which is the 222-S Validation Summary Report.				9. Equip./Component No.: N/A							
				10. System/Bldg./Facility: 222-S/AS							
				12. Major Assm. Dwg. No.: N/A							
11. Receiver Remarks: For Release.				13. Permit/Permit Application No.: N/A							
				14. Required Response Date: 10/20/94							
15. DATA TRANSMITTED					(F)	(G)	(H)	(I)			
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition			
1	WHC-SD-WM-DP-068	N/A	0	Concrete Samples for Organic Samples	Q	2	1				
2	WHC-SD-WM-DP-068	N/A	0	Concrete Samples for Organic Samples - Addendum 1	Q	2	1				
16. KEY											
Approval Designator (F)		Reason for Transmittal (G)			Disposition (H) & (I)						
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval 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						
(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)							(G)	(H)	
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
2	1	Cog. Eng. R. E. Vogel	<i>RE</i>	10/19/94	TL-20						
2	1	Cog. Mgr. J. G. Kristofzski	<i>JK</i>	10/25/94	TL-06						
2	1	QA J. C. Langford	<i>JCL</i>	10/28/94	SI-52						
		Safety									
		Env.									
18.		19.		20.		21. DOE APPROVAL (if required) Ctrl. No.					
A. E. Young <i>A. E. Young</i> Signature of EDT Originator		Date 10/18/94		J. G. Kristofzski <i>JK</i> Cognizant Manager		Date 10/25/94		☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments			

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RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-DP-068, REV.0

Document Title: Concrete Samples for Organic Samples, Data Package and 222-S Validation Summary Report

Release Date: October 31, 1994

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

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz

October 31, 1994

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SUPPORTING DOCUMENT		1. Total Pages <u>586</u>
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VOLATILE ORGANICS SECTION TO INCLUDE INVENTORY SHEET

	PAGE	NOs
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1. <u>Inventory Sheet</u> (Do not number)	<u>-</u>	<u>-</u>
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Reconstructed total ion chromatograms (RIC) for each sample		
For each sample:		
Raw spectra and background-subtracted mass spectra of target compound identified		
Mass spectra of all reported TICs with three best library matches		
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**VOLATILE ORGANICS SECTION TO INCLUDE INVENTORY SHEET
(continued)**

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<u>Tare Weights</u>	<u>492</u>	<u>492</u>

This report consists of pages 1 through 492.

A-Not Applicable

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-068, REV. 0

222-S ANALYTICAL SERVICES LABORATORY

Project: CONCRETE SAMPLES

Date Printed: AUGUST 24, 1994

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

01

WHC-SD-WM-DP-068, REV. 0

P.O. Box 1970 Richland, WA 99352

SDG NARRATIVE - Concrete Samples July 27, 1994

VOLATILE ORGANICS

Lab Sample Number	Customer ID
R5185	BOBQQ1
R5186	BOBQQ2
R5187	BOBQQ4
R5188	BOBQQ5
R5189	BOBQQ6
R5190	BOBQQ7
R5191	BOBQQ8
R5192	BOBQQ9
R5193	BOBQR0
R5194	BOBQR1
R5195	BOBQR2
R5196	BOBQR3
R5197	BOBQQ3
R5198	BOBQR6
R5199	BOBQR7
R5200	BOBQR4
R5201	BOBQR5

The initial GC/MS calibration and continuing calibration met all protocols for RCRA analysis. All mass spectral tuning requirements were met for all standards, blanks and samples. The method blank met all applicable protocols and requirements. All internal standards and system monitoring compounds retention times and peak areas met all protocols except for area counts on samples R5200 Matrix Spike Duplicate and R5201 which were out low. All system monitoring compound recoveries were within the required limits. The sample holding time was not exceeded. The samples were run using procedure LA-523-435. Samples were extracted into water by sonication and had a pH of about 12.

All target compound concentrations were below the practical quantitation limit (PQL). Acetone was the only target compound detected, the highest concentration was 74 PPB with a PQL of 430 PPB. All concentrations reported on the forms are PPB of targets in concrete. Concentrations given in the GC/MS quant reports are in PPB of targets in water after extraction. Ethyl acetate and petroleum naphtha were treated as library search compounds and neither were detected in any sample.

K.B. WEHNER
Manager
Organic Chemistry

12

2A - RCRA
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

WHC-SD-WM-DP-068, REV. 0

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK06	104	100	94		0
02	R5185	101	99	90		0
03	R5186	105	102	94		0
04	R5187	104	100	95		0
05	R5188	98	96	88		0
06	R5189	101	97	92		0
07	R5190	104	98	92		0
08	R5191	104	99	93		0
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QC LIMITS

SMC1 (TOL) = Toluene-d8 (84-138)
 SMC2 (BFB) = Bromofluorobenzene (59-113)
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A - RCRA
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

WHC-SD-WM-DP-068, REV. 0

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK08	95	94	92		0
02	R5192	100	96	91		0
03	R5193	97	96	91		0
04	R5194	94	94	99		0
05	R5195	98	94	92		0
06	R5200	97	93	92		0
07	R5200MS	100	97	94		0
08	R5200MSD	106	88	84		0
09	R5196	96	95	91		0
10	R5197	97	94	91		0
11	R5198	97	96	91		0
12	R5199	97	96	90		0
13	R5201	110	91	83		0
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QC LIMITS

SMC1 (TOL) = Toluene-d8 (84-138)
 SMC2 (BFB) = Bromofluorobenzene (59-113)
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix Spike - EPA Sample No.: R5200

WHC-SD-WM-DP-068, REV. 0

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	42.10	0.00	31.83	76	59-172
Trichloroethene	42.10	0.00	34.67	82	62-137
Benzene	42.10	0.00	33.86	80	66-142
Toluene	42.10	0.00	32.83	78	59-139
Chlorobenzene	42.10	0.00	34.34	82	60-133

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	42.60	33.95	80	5	22	59-172
Trichloroethene	42.60	31.03	73	12	24	62-137
Benzene	42.60	39.40	92	14	21	66-142
Toluene	42.60	36.62	86	10	21	59-139
Chlorobenzene	42.60	33.74	79	4	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK06

1 Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Lab File ID: >AE06D

Lab Sample ID: VBLK06

Date Analyzed: 5/06/94

Time Analyzed: 9:54

GC Column: DB-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

Instrument ID: 70 2

WHC-SD-WM-DP-068, REV. 0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	R5185	R5185	>AE06E	11:03
02	R5186	R5186	>AE06F	11:39
03	R5187	R5187	>AE06G	12:14
04	R5188	R5188	>AE06J	14:44
05	R5189	R5189	>AE06K	16:05
06	R5190	R5190	>AE06L	16:43
07	R5191	R5191	>AE06M	17:20
08				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK08

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Lab File ID: >AE09D

Lab Sample ID: VBLK08

Date Analyzed: 5/09/94

Time Analyzed: 9:56

GC Column: DB-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

Instrument ID: 70 2

WHC-SD-WM-DP-068, REV. 0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	R5192	R5192	>AE09F	11:18
02	R5193	R5193	>AE09G	11:55
03	R5194	R5194	>AE09H	13:01
04	R5195	R5195	>AE09I	13:47
05	R5200	R5200	>AE09J	14:25
06	R5200MS	R5200MS	>AE09K	15:01
07	R5200MSD	R5200MSD	>AE09L	15:36
08	R5196	R5196	>AE09M	16:13
09	R5197	R5197	>AE09O	17:25
10	R5198	R5198	>AE09P	18:00
11	R5199	R5199	>AE09Q	19:03
12	R5201	R5201	>AE09S	19:38
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COMMENTS: _____

5A - RCRA
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

WHC-SD-WM-DP-068, REV. 0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Lab File ID: >AE06B

BFB Injection Date: 5/06/94

Instrument ID: 70 2

BFB Injection Time: 8:39

GC Column: DB-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	21.4
75	30.0 - 60.0% OF MASS 95	52.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50% of mass 95	79.2
175	5.0 - 9.0% of mass 174	5.8(7.3)1
176	95.0 - 101.0% of mass 174	79.2(100.0)1
177	5.0 - 9.0% of mass 176	5.7(7.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	>AE06C	5/06/94	9:09
02	VBLK06	VBLK06	>AE06D	5/06/94	9:54
03	R5185	R5185	>AE06E	5/06/94	11:03
04	R5186	R5186	>AE06F	5/06/94	11:39
05	R5187	R5187	>AE06G	5/06/94	12:14
06	R5188	R5188	>AE06J	5/06/94	14:44
07	R5189	R5189	>AE06K	5/06/94	16:05
08	R5190	R5190	>AE06L	5/06/94	16:43
09	R5191	R5191	>AE06M	5/06/94	17:20
10					
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14					
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17					
18					
19					
20					
21					
22					

r e 1 of 1

FORM V VOA

5A - RCRA
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Lab File ID: >AE09A

BFB Injection Date: 5/09/94

Instrument ID: 70 2

BFB Injection Time: 7:58

GC Column: DB-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	20.6
75	30.0 - 60.0% OF MASS 95	51.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50% of mass 95	80.9
175	5.0 - 9.0% of mass 174	6.0(7.4)1
176	95.0 - 101.0% of mass 174	80.9(99.9)1
177	5.0 - 9.0% of mass 176	5.6(6.9)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	>AE09B	5/09/94	8:27
02	VLK08	VLK08	>AE09D	5/09/94	9:56
03	R5192	R5192	>AE09F	5/09/94	11:18
04	R5193	R5193	>AE09G	5/09/94	11:55
05	R5194	R5194	>AE09H	5/09/94	13:01
06	R5195	R5195	>AE09I	5/09/94	13:47
07	R5200	R5200	>AE09J	5/09/94	14:25
08	R5200MS	R5200MS	>AE09K	5/09/94	15:01
09	R5200MSD	R5200MSD	>AE09L	5/09/94	15:36
10	R5196	R5196	>AE09M	5/09/94	16:13
11	R5197	R5197	>AE09O	5/09/94	17:25
12	R5198	R5198	>AE09P	5/09/94	18:00
13	R5199	R5199	>AE09Q	5/09/94	19:03
14	R5201	R5201	>AE09S	5/09/94	19:38
15					
16					
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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

WHC-SD-WM-DP-068, REV. 0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Lab File ID (Standard): >AE06C

Date Analyzed: 5/06/94

Instrument ID: 70 2

Time Analyzed: 9:09

GC Column: DB-624 ID: 0.53 (mm)

Heated Purge: (Y/N) N

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	132999.	6.08	520871.	8.27	413525.	13.91
UPPER LIMIT	265998.	6.58	1041742.	8.77	827050.	14.41
LOWER LIMIT	66500.	7.58	260435.	7.77	206763.	13.41
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLK06	123419.	6.05	475929.	8.26	388421.	13.89
02 R5185	128580.	6.07	492829.	8.28	397242.	13.91
03 R5186	122675.	6.10	475779.	8.29	390759.	13.91
04 R5187	124283.	6.11	481675.	8.31	396801.	13.93
05 R5188	120028.	6.10	459115.	8.30	381460.	13.91
06 R5189	124829.	6.07	497423.	8.28	410514.	13.93
07 R5190	124938.	6.12	487344.	8.30	392422.	13.93
08 R5191	117925.	6.09	470901.	8.27	387723.	13.91
09						
10						
11						
12						
13						
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15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: WHC PAL Contract: WHC-SD-WM-DP-068, REV. 0
Lab Code: Case No.: SAS No.: SDG No.: R5185
Lab File ID (Standard): >AE09B Date Analyzed: 5/09/94
Instrument ID: 70 2 Time Analyzed: 8:27
GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	115656.	6.08	452565.	8.29	367593.	13.91
UPPER LIMIT	231312.	6.58	905130.	8.79	735186.	14.41
LOWER LIMIT	57828.	5.58	226282.	7.79	183797.	13.41
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLK08	114052.	6.08	451662.	8.28	376156.	13.93
02 R5192	108482.	6.10	428986.	8.31	340013.	13.92
03 R5193	108734.	6.10	424536.	8.30	353012.	13.92
04 R5194	103938.	6.10	457618.	8.29	379579.	13.94
05 R5195	110429.	6.09	440295.	8.29	363543.	13.92
06 R5200	110635.	6.11	447820.	8.30	373429.	13.92
07 R5200MS	107994.	6.11	444395.	8.32	363422.	13.92
08 R5200MSD	53620.*	6.12	221795.*	8.32	171083.*	13.92
09 R5196	110498.	6.12	440957.	8.30	372561.	13.92
10 R5197	111109.	6.11	446799.	8.32	374263.	13.93
11 R5198	108299.	6.13	441832.	8.33	370123.	13.95
12 R5199	113468.	6.09	458079.	8.29	386329.	13.93
13 R5201	52837.*	6.02	218637.*	8.26	168627.*	13.93
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5185

WHC-SD-WM-DP-068, REV.0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5185

Sample wt/vol: 4.370 (g/mL) G

Lab File ID: >AE06E

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg Q

74-87-3-----	Chloromethane	11.	U
74-83-9-----	Bromomethane	11.	U
75-01-4-----	Vinyl Chloride	11.	U
75-00-3-----	Chloroethane	11.	U
75-09-2-----	Methylene Chloride	11.	U
67-64-1-----	Acetone	2.	JB
75-15-0-----	Carbon Disulfide	11.	U
75-35-4-----	1,1-Dichloroethene	11.	U
75-34-3-----	1,1-Dichloroethane	11.	U
540-59-0-----	1,2-Dichloroethene (total)	11.	U
67-66-3-----	Chloroform	11.	U
107-02-2-----	1,2-Dichloroethane	11.	U
78-93-3-----	2-Butanone	11.	U
71-55-6-----	1,1,1-Trichloroethane	11.	U
56-23-5-----	Carbon Tetrachloride	11.	U
75-27-4-----	Bromodichloromethane	11.	U
78-87-5-----	1,2-Dichloropropane	11.	U
10061-01-5-----	cis-1,3-Dichloropropene	11.	U
79-01-6-----	Trichloroethene	11.	U
124-48-1-----	Dibromochloromethane	11.	U
79-00-5-----	1,1,2-Trichloroethane	11.	U
71-43-2-----	Benzene	11.	U
10061-02-6-----	trans-1,3-Dichloropropene	11.	U
75-25-2-----	Bromoform	11.	U
108-10-1-----	4-Methyl-2-pentanone	11.	U
591-78-6-----	2-Hexanone	11.	U
127-18-4-----	Tetrachloroethene	11.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11.	U
108-88-3-----	Toluene	11.	U
108-90-7-----	Chlorobenzene	11.	U
100-41-4-----	Ethylbenzene	11.	U
100-42-5-----	Styrene	11.	U
133-02-7-----	Xylene (total)	11.	U

FORM I VOA

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5185

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5185

Sample wt/vol: 4.370 (g/mL) G

Lab File ID: >AE06E

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.13	8.	J
2.	Unknown	21.77	10.	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Jay delafosa - Chang*
Output File: ^AE06E::D2
Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 11:35
 Injected at: 940506 11:03
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.08	128.0	128580	50.00	UG/L	81
8)	ACETONE	2.58	43.0	445M	1.92	UG/L	89
14)	1,2-DICHLOROETHANE-d4	7.24	65.0	164561	44.84	UG/L	91
16)	*1,4-DIFLUOROBENZENE	8.28	114.0	492829	50.00	UG/L	88
20)	BENZENE <i>No Den 6-6-94</i>	7.27	78.0	263	.0393	UG/L	100
29)	*CHLOROBENZENE-d5	13.91	117.0	397242	50.00	UG/L	95
31)	TOLUENE-d8	11.04	98.0	420060	50.26	UG/L	95
39)	BROMOFLUOROBENZENE	16.48	95.0	313620	49.64	UG/L	95

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:00

Operator ID: JOY
Quant Time : 940506 11:35
Injected at: 940506 11:03

Page 1 of 5

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

File >AE06E 35.0-350.0 amu. R5185 FIELD BLANK 10UL OF ISTD & SMC
TIC

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 11:35
Injected at: 940506 11:03

Page 2 of 5

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 11:35
Injected at: 940506 11:03

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TOTAL ION CHROMATOGRAM

WHC-SD-WM-DP-068, REV. 0

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 11:35
Injected at: 940506 11:03

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WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 11:35
Injected at: 940506 11:03

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WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 406
Retention Time: 6.08 min.
Quant Ion : 128.0
Area : 128580
Concentration : 50.00 UG/L
q-value : 81

QEV
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 153
Retention Time: 2.58 min.
Quant Ion : 43.0
Area : 445M
Concentration : 1.92 UG/L
q-value : 89,

pen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 490
Retention Time: 7.24 min.
Quant Ion : 65.0
Area : 164561
Concentration : 44.84 UG/L
q-value : 91

DEU
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.28 min.
Quant Ion : 114.0
Area : 492829
Concentration : 50.00 UG/L
q-value : 88

REN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 20
Compound Name : BENZENE
Scan Number : 492
Retention Time: 7.27 min.
Quant Ion : 78.0
Area : 263
Concentration : .0393 UG/L
q-value : 100

No
Pen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 967
Retention Time: 13.91 min.
Quant Ion : 117.0
Area : 397242
Concentration : 50.00 UG/L
q-value : 95

REN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 760
Retention Time: 11.04 min.
Quant Ion : 98.0
Area : 420060
Concentration : 50.26 UG/L
q-value : 95

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06E::D5
Name: R5185 FIELD BLANK
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 11:35
Injected at: 940506 11:03
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06E::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1153
Retention Time: 16.48 min.
Quant Ion : 95.0
Area : 313620
Concentration : 49.64 UG/L
q-value : 95

Den
6-6-94

DE Nelson
6-9-94

MS data file header from : >AE06E::D5

ple: R5185 FIELD BLANK Operator: JOY SUPER GRP. 5/06/94 11:03
misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

>AE06E R5185 FIELD BLANK 10UL OF ISTD & SMC Instrument I

WHC-SD-WM-DP-068, REV. 0

35.0| 350.0 CLP TIC
Upslope: .2000 Area Reject: 83495. Max Peaks: 2 Bunch: -1 Valley >100 %
Dnslope: 0.0000 Results File IAE06E Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.13	1406	1416	1439	21791	195178	181429	81.19	44.809
2	21.77	1526	1535	1556	30668	254875	223467	100.00	55.191

Sum of corrected areas: 404896.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	834946.	6.08	1.00 - 7.18
2	50.0	1148079.	8.28	7.18 - 11.09
3	50.0	1251012.	13.91	11.09 - 31.02

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

11:08 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

File >AE06E 35.0-350.0 amu. R5185 FIELD BLANK 10UL OF ISTD & SMC
CLP ADC TIC
480 520 560 600 640 680 720 760

File >AE06E R5185 FIELD BLANK 10UL OF ISTD & SMC I Scan 1416
Bpk Ab 6137. SUB 20.13 min.

File NBS49K 1-Pentene, 4,4-dimethyl- Scan 1188
Bpk Ab 9999. 0.00 min.

File NBS49K 1-Octyn-3-ol, 4-ethyl- Scan 9232
Bpk Ab 9999. 0.00 min.

File NBS49K Heptane, 2-bromo- Scan 14108
Bpk Ab 9999. 0.00 min.

WHC-SD-WM-DP-068, REV. 0

Instrument ID: VOA-1 Analyzed on: 5/06/94 11:03
 Result 1 in PBM results file: LAE06E
 Retention Time: 20.13 Area: 181429 Tentative Conc: 7.00
 The unknown area is 14.50% of the nearest internal standard

1. 1-Pentene, 4,4-dimethyl-	98 C7H14
2. 1-Octyn-3-ol, 4-ethyl-	154 C10H18O
3. Heptane, 2-bromo-	178 C7H15Br
4. Heptane, 4-(1-methylethyl)-	142 C10H22
5. 5-Hepten-3-one, 5-methyl-	126 C8H14O
6. 1-Hexanol, 2-ethyl-	130 C8H18O

WHC-SD-WM-DP-068, REV. 0

Sample file: >AE06E Spectrum #: 1416
 Search speed: 3 Tilting option: S No. of ion ranges searched: 61

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	40*	762629	1234	NBS49K	41	35	1	0	76	31	16	23
2.	35	5877429	9523	NBS49K	37	49	2	0	100	26	14	12
3.	30	1974045	1287	NBS49K	38	46	2	0	70	34	12	13
4.	29	52896874	9510	NBS49K	36	47	2	0	78	32	12	12
5.	26	1190347	1255	NBS49K	34	35	1	0	94	40	10	12
6.	25	104767	3969	NBS49K	47	47	2	0	58	47	7	13

unknown

DEW
6-9-94

Dilution Factor 1.144

1.144 x 7.00 = 8.008

DEW
6-9-94

WHC-SD-WM-DP-068, REV. 0

Instrument ID: VOA-1 Analyzed on: 5/06/94 11:03
 Result 2 in PBM results file: LAE06E
 Retention Time: 21.77 Area: 223467 Tentative Conc: 9.00
 The unknown area is 17.86% of the nearest internal standard

1. Cycloheptane	98 C7H14
2. 1-Pentene, 3,4-dimethyl-	98 C7H14
3. Cyclobutanone, 2,2-dimethyl-	98 C6H10O
4. Cyclobutanone, 3-ethyl-	98 C6H10O
5. 1-Hexyn-3-ol	98 C6H10O
6. 2-Butene-1,4-diamine, N,N'-dimethyl-	114 C6H14N2

WHC-SD-WM-DP-068, REV. 0

Sample file: >AE06E Spectrum #: 1535
 Search speed: 3 Tilting option: S No. of ion ranges searched: 63

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	291645	9447	NBS49K	46	64	2	0	55	48	7	17
2.	15*	7385786	3854	NBS49K	44	60	0	0	55	62	3	49
3.	15*	1192149	3846	NBS49K	26	59	1	0	50	60	3	14
4.	15*	56335730	3842	NBS49K	26	64	2	0	74	57	3	14
5.	15*	105317	6138	NBS49K	27	66	3	0	253	56	3	13
6.	15*	111728	6166	NBS49K	27	66	2	0	43	60	3	14

Unknown
Don
 6-9-94

Dilution factor 1.144

$1.144 \times 9.00 = 10.296$
Don
 6-9-94

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5186

WHC-SD-WM-DP-068, REV. 0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5186

Sample wt/vol: 2.630 (g/mL) G

Lab File ID: >AE06F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	19.	U
74-83-9-----	Bromomethane	19.	U
75-01-4-----	Vinyl Chloride	19.	U
75-00-3-----	Chloroethane	19.	U
75-09-2-----	Methylene Chloride	19.	U
67-64-1-----	Acetone	5.	JB
75-15-0-----	Carbon Disulfide	19.	U
75-35-4-----	1,1-Dichloroethene	19.	U
75-34-3-----	1,1-Dichloroethane	19.	U
540-59-0-----	1,2-Dichloroethene (total)	19.	U
67-66-3-----	Chloroform	19.	U
107-02-2-----	1,2-Dichloroethane	19.	U
78-93-3-----	2-Butanone	19.	U
71-55-6-----	1,1,1-Trichloroethane	19.	U
56-23-5-----	Carbon Tetrachloride	19.	U
75-27-4-----	Bromodichloromethane	19.	U
78-87-5-----	1,2-Dichloropropane	19.	U
10061-01-5-----	cis-1,3-Dichloropropene	19.	U
79-01-6-----	Trichloroethene	19.	U
124-48-1-----	Dibromochloromethane	19.	U
79-00-5-----	1,1,2-Trichloroethane	19.	U
71-43-2-----	Benzene	.09	J
10061-02-6-----	trans-1,3-Dichloropropene	19.	U
75-25-2-----	Bromoform	19.	U
108-10-1-----	4-Methyl-2-pentanone	19.	U
591-78-6-----	2-Hexanone	19.	U
127-18-4-----	Tetrachloroethene	19.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	19.	U
108-88-3-----	Toluene	19.	U
108-90-7-----	Chlorobenzene	19.	U
100-41-4-----	Ethylbenzene	19.	U
100-42-5-----	Styrene	19.	U
133-02-7-----	Xylene (total)	19.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5186

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5186

Sample wt/vol: 2.630 (g/mL) G

Lab File ID: >AE06F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

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

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Helena-Craig*
Output File: ^AE06F::D2
Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 12:11
 Injected at: 940506 11:39
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.10	128.0	122675	50.00	UG/L	84
8)	ACETONE	2.50	43.0	617	2.78	UG/L	92
14)	1,2-DICHLOROETHANE-d4	7.25	65.0	164777	47.07	UG/L	97
16)	*1,4-DIFLUOROBENZENE	8.29	114.0	475779	50.00	UG/L	89
20)	BENZENE	7.28	78.0	302	.0467	UG/L	100
29)	*CHLOROBENZENE-d5	13.91	117.0	390759	50.00	UG/L	94
31)	TOLUENE-d8	11.04	98.0	431748	52.52	UG/L	94
39)	BROMOFLUOROBENZENE	16.48	95.0	316620	50.94	UG/L	94

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 00:00

Operator ID: JOY
Quant Time : 940506 12:11
Injected at: 940506 11:39

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:11
Injected at: 940506 11:39

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:11
Injected at: 940506 11:39

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:11
Injected at: 940506 11:39

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:11
Injected at: 940506 11:39

Page 5 of 5

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:11
Injected at: 940506 11:39
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 407
Retention Time: 6.10 min.
Quant Ion : 128.0
Area : 122675
Concentration : 50.00 UG/L
q-value : 84

QEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:11
Injected at: 940506 11:39
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 147
Retention Time: 2.50 min.
Quant Ion : 43.0
Area : 617
Concentration : 2.78 UG/L
q-value : 92

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:11
Injected at: 940506 11:39
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 490
Retention Time: 7.25 min.
Quant Ion : 65.0
Area : 164777
Concentration : 47.07 UG/L
q-value : 97

QEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5

Name: R5186

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 12:11

Injected at: 940506 11:39

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.29 min.
Quant Ion : 114.0
Area : 475779
Concentration : 50.00 UG/L
q-value : 89

pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:11
Injected at: 940506 11:39
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 20
Compound Name : BENZENE
Scan Number : 492
Retention Time: 7.28 min.
Quant Ion : 78.0
Area : 302
Concentration : .0467 UG/L
q-value : 100

DEW
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5

Name: R5186

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 12:11

Injected at: 940506 11:39

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 971
Retention Time: 13.91 min.
Quant Ion : 117.0
Area : 390759
Concentration : 50.00 UG/L
q-value : 94

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5
Name: R5186
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:11
Injected at: 940506 11:39
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 764
Retention Time: 11.04 min.
Quant Ion : 98.0
Area : 431748
Concentration : 52.52 UG/L
q-value : 94

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06F::D5

Name: R5186

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 12:11

Injected at: 940506 11:39

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39

Compound Name : BROMOFLUOROBENZENE

Scan Number : 1157

Retention Time: 16.48 min.

Quant Ion : 95.0

Area : 316620

Concentration : 50.94 UG/L

q-value : 94

DM
6-6-94

DE Nelson
6-9-94

MS data file header from : >AE06F::D5

File: R5186 Operator: JOY SUPER GRP. 5/06/94 11:39
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found. WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	811770.	6.10	.99 - 7.19
2	50.0	1108194.	8.29	7.19 - 11.10
3	50.0	1228615.	13.91	11.10 - 31.04

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

11:18 AM THU., 9 JUNE, 1994

. There were no unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5187

WHC-SD-WM-DP-068, REV. 0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5187

Sample wt/vol: 2.932 (g/mL) G

Lab File ID: >AE06G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	17.	U
74-83-9-----	Bromomethane	17.	U
75-01-4-----	Vinyl Chloride	17.	U
75-00-3-----	Chloroethane	17.	U
75-09-2-----	Methylene Chloride	17.	U
67-64-1-----	Acetone	17.	U
75-15-0-----	Carbon Disulfide	17.	U
75-35-4-----	1,1-Dichloroethene	17.	U
75-34-3-----	1,1-Dichloroethane	17.	U
540-59-0-----	1,2-Dichloroethene (total)	17.	U
67-66-3-----	Chloroform	17.	U
107-02-2-----	1,2-Dichloroethane	17.	U
78-93-3-----	2-Butanone	17.	U
71-55-6-----	1,1,1-Trichloroethane	17.	U
56-23-5-----	Carbon Tetrachloride	17.	U
75-27-4-----	Bromodichloromethane	17.	U
78-87-5-----	1,2-Dichloropropane	17.	U
10061-01-5-----	cis-1,3-Dichloropropene	17.	U
79-01-6-----	Trichloroethene	17.	U
124-48-1-----	Dibromochloromethane	17.	U
79-00-5-----	1,1,2-Trichloroethane	17.	U
71-43-2-----	Benzene	17.	U
10061-02-6-----	trans-1,3-Dichloropropene	17.	U
75-25-2-----	Bromoform	17.	U
108-10-1-----	4-Methyl-2-pentanone	17.	U
591-78-6-----	2-Hexanone	17.	U
127-18-4-----	Tetrachloroethene	17.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	17.	U
108-88-3-----	Toluene	17.	U
108-90-7-----	Chlorobenzene	17.	U
100-41-4-----	Ethylbenzene	17.	U
100-42-5-----	Styrene	17.	U
133-02-7-----	Xylene (total)	17.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5187

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5187

Sample wt/vol: 2.932 (g/mL) G

Lab File ID: >AE06G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	WHC-SD-WM-DP-068, REV. 0			
12.				
13.				
14.				
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16.				
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30.				

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Johannes - Cherry*
Output File: ^AE06G::D2
Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 12:46
 Injected at: 940506 12:14
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.11	128.0	124283	50.00	UG/L	84
8) ACETONE <i>No Den 6-6-94</i>	2.64	43.0	392	1.75	UG/L	31
14) 1,2-DICHLOROETHANE-d4	7.27	65.0	167995	47.36	UG/L	95
16) *1,4-DIFLUOROBENZENE	8.31	114.0	481675	50.00	UG/L	89
20) BENZENE <i>No Den 6-6-94</i>	7.33	78.0	441M <i>94/94</i>	1067.4	UG/L	100
29) *CHLOROBENZENE-d5	13.93	117.0	396801	50.00	UG/L	97
31) TOLUENE-d8	11.07	98.0	434653	52.06	UG/L	98
39) BROMOFLUOROBENZENE	16.49	95.0	317142	50.25	UG/L	95

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:46
Injected at: 940506 12:14

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:46
Injected at: 940506 12:14

TOTAL ION CHROMATOGRAM

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:46
Injected at: 940506 12:14

TOTAL ION CHROMATOGRAM

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:46
Injected at: 940506 12:14

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 12:46
Injected at: 940506 12:14

Page 5 of 5

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 401
Retention Time: 6.11 min.
Quant Ion : 128.0
Area : 124283
Concentration : 50.00 UG/L
q-value : 84

pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 150
Retention Time: 2.64 min.
Quant Ion : 43.0
Area : 392
Concentration : 1.75 UG/L
q-value : 81

No Peak
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5

Name: R5187

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 12:46

Injected at: 940506 12:14

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 485
Retention Time: 7.27 min.
Quant Ion : 65.0
Area : 167995
Concentration : 47.36 UG/L
q-value : 95

QEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 560
Retention Time: 8.31 min.
Quant Ion : 114.0
Area : 481675
Concentration : 50.00 UG/L
q-value : 89

REN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 20
Compound Name : BENZENE
Scan Number : 489
Retention Time: 7.33 min.
Quant Ion : 78.0
Area : 441M
Concentration : .0674 UG/L
q-value : 100

No ID
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 966
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 396801
Concentration : 50.00 UG/L
q-value : 97

pen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 759
Retention Time: 11.07 min.
Quant Ion : 98.0
Area : 434653
Concentration : 52.06 UG/L
q-value : 98

Handwritten:
DEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06G::D5
Name: R5187
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 12:46
Injected at: 940506 12:14
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1151
Retention Time: 16.49 min.
Quant Ion : 95.0
Area : 317142
Concentration : 50.25 UG/L
q-value : 95

REV
6-6-94

W E Nelson
6-9-94

MS data file header from : >AE06G::D5

Sample: R5187 Operator: JOY SUPER GRP. 5/06/94 12:14
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	836013.	6.11	1.00 - 7.21
2	50.0	1129456.	8.31	7.21 - 11.12
3	50.0	1238880.	13.93	11.12 - 31.06

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

11:23 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

. there were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5188

WHC-SD-WM-DP-068, REV. 0

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5188

Sample wt/vol: 3.447 (g/mL) G

Lab File ID: >AE06J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	14.	U
74-83-9-----	Bromomethane	14.	U
75-01-4-----	Vinyl Chloride	14.	U
75-00-3-----	Chloroethane	14.	U
75-09-2-----	Methylene Chloride	14.	U
67-64-1-----	Acetone	10.	JB
75-15-0-----	Carbon Disulfide	14.	U
75-35-4-----	1,1-Dichloroethene	14.	U
75-34-3-----	1,1-Dichloroethane	14.	U
540-59-0-----	1,2-Dichloroethene (total)	14.	U
67-66-3-----	Chloroform	14.	U
107-02-2-----	1,2-Dichloroethane	14.	U
78-93-3-----	2-Butanone	14.	U
71-55-6-----	1,1,1-Trichloroethane	14.	U
56-23-5-----	Carbon Tetrachloride	14.	U
75-27-4-----	Bromodichloromethane	14.	U
78-87-5-----	1,2-Dichloropropane	14.	U
10061-01-5-----	cis-1,3-Dichloropropene	14.	U
79-01-6-----	Trichloroethene	14.	U
124-48-1-----	Dibromochloromethane	14.	U
79-00-5-----	1,1,2-Trichloroethane	14.	U
71-43-2-----	Benzene	14.	U
10061-02-6-----	trans-1,3-Dichloropropene	14.	U
75-25-2-----	Bromoform	14.	U
108-10-1-----	4-Methyl-2-pentanone	14.	U
591-78-6-----	2-Hexanone	14.	U
127-18-4-----	Tetrachloroethene	14.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	14.	U
108-88-3-----	Toluene	14.	U
108-90-7-----	Chlorobenzene	14.	U
100-41-4-----	Ethylbenzene	14.	U
100-42-5-----	Styrene	14.	U
133-02-7-----	Xylene (total)	14.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5188

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5188

Sample wt/vol: 3.447 (g/mL) G

Lab File ID: >AE06J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

QUANT REPORT

Page 1

Operator ID: JOY *Johnston - King*
Output File: ^AE06J::D2
Data File: ^AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 15:16
 Injected at: 940506 14:44
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.10	128.0	120028	50.00	UG/L	79
8) ACETONE	2.56	43.0	1444M	6.66	UG/L	72
12) 2-BUTANONE <i>No Den 6-6-94</i>	5.90	43.0	458M	1.16	UG/L	100
14) 1,2-DICHLOROETHANE-d4	7.26	65.0	151387	44.19	UG/L	92
16) *1,4-DIFLUOROBENZENE	8.30	114.0	459115	50.00	UG/L	91
29) *CHLOROBENZENE-d5	13.91	117.0	381460	50.00	UG/L	91
31) TOLUENE-d8	11.06	98.0	393788	49.07	UG/L	96
34) 2-HEXANONE <i>No Den 6-6-94</i>	13.00	43.0	293M	.192	UG/L	68
39) BROMOFLUOROBENZENE	16.48	95.0	291230	48.00	UG/L	99

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 15:16
Injected at: 940506 14:44

TOTAL ION CHROMATOGRAM

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 15:16
Injected at: 940506 14:44

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 15:16
Injected at: 940506 14:44

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:00

Operator ID: JOY
Quant Time : 940506 15:16
Injected at: 940506 14:44

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06J::D5
 Name: R5188
 Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06J::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID_VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
 Quant Time : 940506 15:16
 Injected at: 940506 14:44

Page 5 of 5

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5

Name: R5188

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 15:16

Injected at: 940506 14:44

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 407
Retention Time: 6.10 min.
Quant Ion : 128.0
Area : 120028
Concentration : 50.00 UG/L
q-value : 79

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5

Name: R5188

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 15:16

Injected at: 940506 14:44

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 151
Retention Time: 2.56 min.
Quant Ion : 43.0
Area : 1444M
Concentration : 6.66 UG/L
q-value : 72

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 15:16
Injected at: 940506 14:44
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 393
Retention Time: 5.90 min.
Quant Ion : 43.0
Area : 458M
Concentration : 1.16 UG/L
q-value : 100

No
DEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 15:16
Injected at: 940506 14:44
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 491
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 151387
Concentration : 44.19 UG/L
q-value : 92

DEM
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5

Name: R5188

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 15:16

Injected at: 940506 14:44

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 566
Retention Time: 8.30 min.
Quant Ion : 114.0
Area : 459115
Concentration : 50.00 UG/L
q-value : 91

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 15:16
Injected at: 940506 14:44
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 971
Retention Time: 13.91 min.
Quant Ion : 117.0
Area : 381460
Concentration : 50.00 UG/L
q-value : 91

WEM
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 15:16
Injected at: 940506 14:44
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.06 min.
Quant Ion : 98.0
Area : 393788
Concentration : 49.07 UG/L
q-value : 96

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5
Name: R5188
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 15:16
Injected at: 940506 14:44
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 34
Compound Name : 2-HEXANONE
Scan Number : 905
Retention Time: 13.00 min.
Quant Ion : 43.0
Area : 293M
Concentration : .192 UG/L
q-value : 68

No
Don
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06J::D5

Name: R5188

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 15:16

Injected at: 940506 14:44

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1157
Retention Time: 16.48 min.
Quant Ion : 95.0
Area : 291230
Concentration : 48.00 UG/L
q-value : 99

DEW
6-6-94

W. E. Nelson
6-9-94

MS data file header from : >AE06J::D5

Sample: R5188 Operator: JOY SUPER GRP. 5/06/94 14:44
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	794609.	6.10	1.01 - 7.20
2	50.0	1077150.	8.30	7.20 - 11.11
3	50.0	1184689.	13.91	11.11 - 31.04

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

11:28 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

. There were no Unknowns

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5189

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5189

Sample wt/vol: 3.000 (g/mL) G

Lab File ID: >AE06K

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	17.	U
74-83-9-----	Bromomethane	17.	U
75-01-4-----	Vinyl Chloride	17.	U
75-00-3-----	Chloroethane	17.	U
75-09-2-----	Methylene Chloride	17.	U
67-64-1-----	Acetone	4.	JB
75-15-0-----	Carbon Disulfide	17.	U
75-35-4-----	1,1-Dichloroethene	17.	U
75-34-3-----	1,1-Dichloroethane	17.	U
540-59-0-----	1,2-Dichloroethene (total)	17.	U
67-66-3-----	Chloroform	17.	U
107-02-2-----	1,2-Dichloroethane	17.	U
78-93-3-----	2-Butanone	17.	U
71-55-6-----	1,1,1-Trichloroethane	17.	U
56-23-5-----	Carbon Tetrachloride	17.	U
75-27-4-----	Bromodichloromethane	17.	U
78-87-5-----	1,2-Dichloropropane	17.	U
10061-01-5-----	cis-1,3-Dichloropropene	17.	U
79-01-6-----	Trichloroethene	17.	U
124-48-1-----	Dibromochloromethane	17.	U
79-00-5-----	1,1,2-Trichloroethane	17.	U
71-43-2-----	Benzene	17.	U
10061-02-6-----	trans-1,3-Dichloropropene	17.	U
75-25-2-----	Bromoform	17.	U
108-10-1-----	4-Methyl-2-pentanone	17.	U
591-78-6-----	2-Hexanone	17.	U
127-18-4-----	Tetrachloroethene	17.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	17.	U
108-88-3-----	Toluene	17.	U
108-90-7-----	Chlorobenzene	17.	U
100-41-4-----	Ethylbenzene	17.	U
100-42-5-----	Styrene	17.	U
133-02-7-----	Xylene (total)	17.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5189

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5189

Sample wt/vol: 3.000 (g/mL) G

Lab File ID: >AE06K

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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7.				
8.				
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25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Jude Rosa - ang*
Output File: ^AE06K::D2
Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 16:37
 Injected at: 940506 16:05
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.08	128.0	124829	50.00	UG/L	84
8) ACETONE	2.51	43.0	503 <i>6/6/94</i>	2.23	UG/L	86
12) 2-BUTANONE <i>No Den 6-6-94</i>	5.90	43.0	903M <i>ja</i>	2.20	UG/L	100
14) 1,2-DICHLOROETHANE-d4	7.24	65.0	164130	46.07	UG/L	92
16) *1,4-DIFLUOROBENZENE	8.28	114.0	497423	50.00	UG/L	89
29) *CHLOROBENZENE-d5	13.93	117.0	410514	50.00	UG/L	90
31) TOLUENE-d8	11.06	98.0	437704	50.68	UG/L	97
32) TOLUENE <i>No Den 6-6-94</i>	11.19	91.0	380	.0446	UG/L	97
39) BROMOFLUOROBENZENE	16.49	95.0	315291	48.29	UG/L	94

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

File >AE06K 35.0-350.0 amu. R5189 10UL OF ISTD & SMC
TIC

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 16:37
Injected at: 940506 16:05

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:00

Operator ID: JOY
Quant Time : 940506 16:37
Injected at: 940506 16:05

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 16:37
Injected at: 940506 16:05

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 16:37
Injected at: 940506 16:05

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 16:37
Injected at: 940506 16:05

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5

Name: R5189

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 16:37

Injected at: 940506 16:05

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
 Compound Name : BROMOCHLOROMETHANE
 Scan Number : 405
 Retention Time: 6.08 min.
 Quant Ion : 128.0
 Area : 124829
 Concentration : 50.00 UG/L
 q-value : 84

DEM
 6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 16:37
Injected at: 940506 16:05
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 147
Retention Time: 2.51 min.
Quant Ion : 43.0
Area : 503
Concentration : 2.23 UG/L
q-value : 86

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 16:37
Injected at: 940506 16:05
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 392
Retention Time: 5.90 min.
Quant Ion : 43.0
Area : 903M
Concentration : 2.20 UG/L
q-value : 100

No
Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5

Name: R5189

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 16:37

Injected at: 940506 16:05

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 489
Retention Time: 7.24 min.
Quant Ion : 65.0
Area : 164130
Concentration : 46.07 UG/L
q-value : 92

DEW
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5

Name: R5189

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 16:37

Injected at: 940506 16:05

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 564
Retention Time: 8.28 min.
Quant Ion : 114.0
Area : 497423
Concentration : 50.00 UG/L
q-value : 89

DEW
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 16:37
Injected at: 940506 16:05
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 972
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 410514
Concentration : 50.00 UG/L
q-value : 90

REV
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 16:37
Injected at: 940506 16:05
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.06 min.
Quant Ion : 98.0
Area : 437704
Concentration : 50.68 UG/L
q-value : 97

DEW
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5
Name: R5189
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 16:37
Injected at: 940506 16:05
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 774
Retention Time: 11.19 min.
Quant Ion : 91.0
Area : 380
Concentration : .0446 UG/L
q-value : 97

No
Don
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06K::D5

Name: R5189

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 16:37

Injected at: 940506 16:05

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06K::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1157
Retention Time: 16.49 min.
Quant Ion : 95.0
Area : 315291
Concentration : 48.29 UG/L
q-value : 94

Den
6-6-94

D. E. Nelson
6-9-94

data file header from : >AE06K::D5

Sample: R5189 Operator: JOY SUPER GRP. 5/06/94 16:05
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

WHC-SD-WM-DP-068, REV. 0

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	812078.	6.08	1.00 - 7.18
2	50.0	1149598.	8.28	7.18 - 11.10
3	50.0	1262988.	13.93	11.10 - 31.05

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

11:32 AM THU., 9 JUNE, 1994

File >AE06K 35.0-350.0 amu. R5189 10UL OF ISTD & SMC
CLP ADC TIC 50 100 150 200 250 300 350 400 450 500

WHC-SD-WM-DP-068, REV. 0

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5190

I Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5190

Sample wt/vol: 3.457 (g/mL) G

Lab File ID: >AE06L

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	14.	U
74-83-9-----	Bromomethane	14.	U
75-01-4-----	Vinyl Chloride	14.	U
75-00-3-----	Chloroethane	14.	U
75-09-2-----	Methylene Chloride	14.	U
67-64-1-----	Acetone	14.	U
75-15-0-----	Carbon Disulfide	14.	U
75-35-4-----	1,1-Dichloroethene	14.	U
75-34-3-----	1,1-Dichloroethane	14.	U
540-59-0-----	1,2-Dichloroethene (total)	14.	U
67-66-3-----	Chloroform	14.	U
107-02-2-----	1,2-Dichloroethane	14.	U
78-93-3-----	2-Butanone	14.	U
71-55-6-----	1,1,1-Trichloroethane	14.	U
56-23-5-----	Carbon Tetrachloride	14.	U
75-27-4-----	Bromodichloromethane	14.	U
78-87-5-----	1,2-Dichloropropane	14.	U
10061-01-5-----	cis-1,3-Dichloropropene	14.	U
79-01-6-----	Trichloroethene	14.	U
124-48-1-----	Dibromochloromethane	14.	U
79-00-5-----	1,1,2-Trichloroethane	14.	U
71-43-2-----	Benzene	14.	U
10061-02-6-----	trans-1,3-Dichloropropene	14.	U
75-25-2-----	Bromoform	14.	U
108-10-1-----	4-Methyl-2-pentanone	14.	U
591-78-6-----	2-Hexanone	14.	U
127-18-4-----	Tetrachloroethene	14.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	14.	U
108-88-3-----	Toluene	14.	U
108-90-7-----	Chlorobenzene	14.	U
100-41-4-----	Ethylbenzene	14.	U
100-42-5-----	Styrene	14.	U
133-02-7-----	Xylene (total)	14.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5190

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5190

Sample wt/vol: 3.457 (g/mL) G

Lab File ID: >AE06L

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

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

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	WHC-SD-WM-DP-068, REV. 0			
12.				
13.				
14.				
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25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

erator ID: JOY *Hele Rose - Aug*
Output File: ^AE06L::D2
Data File: ^>AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 17:15
 Injected at: 940506 16:43
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.12	128.0	124938	50.00	UG/L	84
12) 2-BUTANONE <i>No Den 6-6-94</i>	5.95	43.0	204	.496	UG/I	100
14) 1,2-DICHLOROETHANE-d4	7.27	65.0	164640	46.17	UG/L	94
16) *1,4-DIFLUOROBENZENE	8.29	114.0	487344	50.00	UG/L	88
29) *CHLOROBENZENE-d5	13.93	117.0	392422	50.00	UG/I	92
31) TOLUENE-d8	11.07	98.0	427414	51.77	UG/L	96
39) BROMOFLUOROBENZENE	16.49	95.0	306020	49.03	UG/L	93

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:15
Injected at: 940506 16:43

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:15
Injected at: 940506 16:43

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:00

Operator ID: JOY
Quant Time : 940506 17:15
Injected at: 940506 16:43

Page 3. of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:15
Injected at: 940506 16:43

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 06:09

Operator ID: JOY
Quant Time : 940506 17:15
Injected at: 940506 16:43

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5

Name: R5190

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:15

Injected at: 940506 16:43

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 408
Retention Time: 6.12 min.
Quant Ion : 128.0
Area : 124938
Concentration : 50.00 UG/L
q-value : 84

QEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 17:15
Injected at: 940506 16:43
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 396
Retention Time: 5.95 min.
Quant Ion : 43.0
Area : 204
Concentration : .496 UG/L
q-value : 100

No
Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5

Name: R5190

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:15

Injected at: 940506 16:43

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 491
Retention Time: 7.27 min.
Quant Ion : 65.0
Area : 164640
Concentration : 46.17 UG/L
q-value : 94

DEM
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5

Name: R5190

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:15

Injected at: 940506 16:43

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.29 min.
Quant Ion : 114.0
Area : 487344
Concentration : 50.00 UG/L
q-value : 88

DEM
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5

Name: R5190

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:15

Injected at: 940506 16:43

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : ' 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 972
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 392422
Concentration : 50.00 UG/L
q-value : 92

pen
6-6-94

REFERENCE STANDARD SPECTRUM

WHC-SD-WM-DP-068, REV. 0

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 17:15
Injected at: 940506 16:43
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.07 min.
Quant Ion : 98.0
Area : 427414
Concentration : 51.77 UG/L
q-value : 96

QEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06L::D5
Name: R5190
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 17:15
Injected at: 940506 16:43
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06L::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1157
Retention Time: 16.49 min.
Quant Ion : 95.0
Area : 306020
Concentration : 49.03 UG/L
q-value : 93

Den
6-6-94

DE Nelson
6-9-94

MS data file header from : >AE06L::D5

Sample: R5190 Operator: JOY SUPER GRP. 5/06/94 16:43
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found. WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	821930.	6.12	1.00 - 7.21
2	50.0	1124882.	8.29	7.21 - 11.11
3	50.0	1221623.	13.93	11.11 - 31.05

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} * \text{Correction Factor}$

11:37 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

. there were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5191

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5191

Sample wt/vol: 3.216 (g/mL) G

Lab File ID: >AE06M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	16.	U
74-83-9-----	Bromomethane	16.	U
75-01-4-----	Vinyl Chloride	16.	U
75-00-3-----	Chloroethane	16.	U
75-09-2-----	Methylene Chloride	16.	U
67-64-1-----	Acetone	39.	B
75-15-0-----	Carbon Disulfide	16.	U
75-35-4-----	1,1-Dichloroethene	16.	U
75-34-3-----	1,1-Dichloroethane	16.	U
540-59-0-----	1,2-Dichloroethene (total)	16.	U
67-66-3-----	Chloroform	16.	U
107-02-2-----	1,2-Dichloroethane	16.	U
78-93-3-----	2-Butanone	16.	U
71-55-6-----	1,1,1-Trichloroethane	16.	U
56-23-5-----	Carbon Tetrachloride	16.	U
75-27-4-----	Bromodichloromethane	16.	U
78-87-5-----	1,2-Dichloropropane	16.	U
10061-01-5-----	cis-1,3-Dichloropropene	16.	U
79-01-6-----	Trichloroethene	16.	U
124-48-1-----	Dibromochloromethane	16.	U
79-00-5-----	1,1,2-Trichloroethane	16.	U
71-43-2-----	Benzene	16.	U
10061-02-6-----	trans-1,3-Dichloropropene	16.	U
75-25-2-----	Bromoform	16.	U
108-10-1-----	4-Methyl-2-pentanone	16.	U
591-78-6-----	2-Hexanone	16.	U
127-18-4-----	Tetrachloroethene	16.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	16.	U
108-88-3-----	Toluene	16.	U
108-90-7-----	Chlorobenzene	16.	U
100-41-4-----	Ethylbenzene	16.	U
100-42-5-----	Styrene	16.	U
133-02-7-----	Xylene (total)	16.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5191

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5191

Sample wt/vol: 3.216 (g/mL) G

Lab File ID: >AE06M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/06/94

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/Kg

WHC-SD-WM-DP-068, REV.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

6/7/94

QUANT REPORT

Page 1

Operator ID: JOY *John Rose - Aug*
Output File: ^AE06M::D2
Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 17:52
 Injected at: 940506 17:20
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0
Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.09	128.0	117925	50.00	UG/L	82
8)	ACETONE	2.51	43.0	5374	25.22	UG/L	89
14)	1,2-DICHLOROETHANE-d4	7.25	65.0	157037	46.66	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.28	114.0	470901	50.00	UG/L	90
29)	*CHLOROBENZENE-d5	13.91	117.0	387723	50.00	UG/L	94
31)	TOLUENE-d8	11.04	98.0	422154	51.75	UG/L	95
39)	BROMOFLUOROBENZENE	16.48	95.0	306478	49.70	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:52
Injected at: 940506 17:20

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:52
Injected at: 940506 17:20

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:52
Injected at: 940506 17:20

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 17:52
Injected at: 940506 17:20

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:00

Operator ID: JOY
Quant Time : 940506 17:52
Injected at: 940506 17:20

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5

Name: R5191

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:52

Injected at: 940506 17:20

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 407
Retention Time: 6.09 min.
Quant Ion : 128.0
Area : 117925
Concentration : 50.00 UG/L
q-value : 82

Den
6-7-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 17:52
Injected at: 940506 17:20
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 148
Retention Time: 2.51 min.
Quant Ion : 43.0
Area : 5374
Concentration : 25.22 UG/L
q-value : 89

DEM
6-7-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5

Name: R5191

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:52

Injected at: 940506 17:20

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 491
Retention Time: 7.25 min.
Quant Ion : 65.0
Area : 157037
Concentration : 46.66 UG/L
q-value : 94

DEW

6-7-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5

Name: R5191

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:52

Injected at: 940506 17:20

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.28 min.
Quant Ion : 114.0
Area : 470901
Concentration : 50.00 UG/L
q-value : 90

DEW

6-7-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5

Name: R5191

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:52

Injected at: 940506 17:20

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 972
Retention Time: 13.91 min.
Quant Ion : 117.0
Area : 387723
Concentration : 50.00 UG/L
q-value : 94

DEM

6-7-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5
Name: R5191
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 17:52
Injected at: 940506 17:20
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.04 min.
Quant Ion : 98.0
Area : 422154
Concentration : 51.75 UG/L
q-value : 95

DEM
6-7-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06M::D5

Name: R5191

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 17:52

Injected at: 940506 17:20

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1158
Retention Time: 16.48 min.
Quant Ion : 95.0
Area : 306478
Concentration : 49.70 UG/L
q-value : 94

QEN

6-7-94

De Nelson
6-9-94

MS data file header from : >AE06M::D5

Sample: R5191 Operator: JOY SUPER GRP. 5/06/94 17:20
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	780505.	6.09	1.00 - 7.18
2	50.0	1098084.	8.28	7.18 - 11.09
3	50.0	1207460.	13.91	11.09 - 31.03

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

11:42 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5192

I Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5192

Sample wt/vol: 3.897 (g/mL) G

Lab File ID: >AE09F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
74-87-3-----	Chloromethane	13.	U
74-83-9-----	Bromomethane	13.	U
75-01-4-----	Vinyl Chloride	13.	U
75-00-3-----	Chloroethane	13.	U
75-09-2-----	Methylene Chloride	13.	U
67-64-1-----	Acetone	37.	B
75-15-0-----	Carbon Disulfide	13.	U
75-35-4-----	1,1-Dichloroethene	13.	U
75-34-3-----	1,1-Dichloroethane	13.	U
540-59-0-----	1,2-Dichloroethene (total)	13.	U
67-66-3-----	Chloroform	13.	U
107-02-2-----	1,2-Dichloroethane	13.	U
78-93-3-----	2-Butanone	13.	U
71-55-6-----	1,1,1-Trichloroethane	13.	U
56-23-5-----	Carbon Tetrachloride	13.	U
75-27-4-----	Bromodichloromethane	13.	U
78-87-5-----	1,2-Dichloropropane	13.	U
10061-01-5-----	cis-1,3-Dichloropropene	13.	U
79-01-6-----	Trichloroethene	13.	U
124-48-1-----	Dibromochloromethane	13.	U
79-00-5-----	1,1,2-Trichloroethane	13.	U
71-43-2-----	Benzene	13.	U
10061-02-6-----	trans-1,3-Dichloropropene	13.	U
75-25-2-----	Bromoform	13.	U
108-10-1-----	4-Methyl-2-pentanone	13.	U
591-78-6-----	2-Hexanone	13.	U
127-18-4-----	Tetrachloroethene	13.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	13.	U
108-88-3-----	Toluene	.03	J
108-90-7-----	Chlorobenzene	13.	U
100-41-4-----	Ethylbenzene	13.	U
100-42-5-----	Styrene	13.	U
133-02-7-----	Xylene (total)	13.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5192

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5192

Sample wt/vol: 3.897 (g/mL) G

Lab File ID: >AE09F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

QUANT REPORT

Page 1

6/6/94

erator ID: JOY *Helium - Aug*
Output File: ^AE09F::D2
Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 11:50
 Injected at: 940509 11:18
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.10	128.0	108482	50.00	UG/L	80
8)	ACETONE	2.53	43.0	7666	29.18	UG/L	90
14)	1,2-DICHLOROETHANE-d4	7.27	65.0	150066	45.65	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.30	114.0	428986	50.00	UG/L	91
29)	*CHLOROBENZENE-d5	13.92	117.0	340013	50.00	UG/L	94
31)	TOLUENE-d8	11.07	98.0	376253	50.15	UG/L	98
32)	TOLUENE	11.18	91.0	224	6/6/94 .0273	UG/L	95
33)	TETRACHLOROETHENE <i>No Den 6-6-94</i>	12.22	164.0	270M <i>JK</i>	.0766	UG/L	86
39)	BROMOFLUOROBENZENE	16.50	95.0	271798	47.96	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 11:50
Injected at: 940509 11:18

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AEC9F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 03:27

Operator ID: JOY
Quant Time : 940509 11:50
Injected at: 940509 11:18

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09F::D5
 Name: R5192
 Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09F::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
 Quant Time : 940509 11:50
 Injected at: 940509 11:18

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 11:50
Injected at: 940509 11:18

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 11:50
Injected at: 940509 11:18

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5

Name: R5192

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 11:50

Injected at: 940509 11:18

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 408
Retention Time: 6.10 min.
Quant Ion : 128.0
Area : 108482
Concentration : 50.00 UG/L
q-value : 80

QEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 11:50
Injected at: 940509 11:18
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 150
Retention Time: 2.53 min.
Quant Ion : 43.0
Area : 7666
Concentration : 29.18 UG/L
q-value : 90

DEW
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5

Name: R5192

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 11:50

Injected at: 940509 11:18

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 492
Retention Time: 7.27 min.
Quant Ion : 65.0
Area : 150066
Concentration : 45.65 UG/L
q-value : 94

REV
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 11:50
Injected at: 940509 11:18
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 567
Retention Time: 8.30 min.
Quant Ion : 114.0
Area : 428986
Concentration : 50.00 UG/L
q-value : 91

Handwritten signature
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 11:50
Injected at: 940509 11:18
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 973
Retention Time: 13.92 min.
Quant Ion : 117.0
Area : 340013
Concentration : 50.00 UG/L
q-value : 94

QEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5

Name: R5192

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 11:50

Injected at: 940509 11:18

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 31

Compound Name : TOLUENE-d8

Scan Number : 767

Retention Time: 11.07 min.

Quant Ion : 98.0

Area : 376253

Concentration : 50.15 UG/L

q-value : 98

Handwritten signature
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 11:50
Injected at: 940509 11:18
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 775
Retention Time: 11.18 min.
Quant Ion : 91.0
Area : 224
Concentration : .0273 UG/L
q-value : 95

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5
Name: R5192
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 11:50
Injected at: 940509 11:18
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 33
Compound Name : TETRACHLOROETHENE
Scan Number : 850
Retention Time: 12.22 min.
Quant Ion : 164.0
Area : 270M
Concentration : .0766 UG/L
q-value : 86

No
Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09F::D5

Name: R5192

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 11:50

Injected at: 940509 11:18

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09F::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1159
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 271798
Concentration : 47.96 UG/L
q-value : 96

DEN
6-6-94

7/27/94

MS data file header from : >AE09F::D5

Jade Rose - Chang

Sample: R5192 Operator: JOY SUPER GRP. 5/09/94 11:18
 Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
 Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
 Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
 Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
 Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
 Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	712045.	6.10	1.00 - 7.20
2	50.0	1008203.	8.30	7.20 - 11.11
3	50.0	1063170.	13.92	11.11 - 31.03

Dilution Factor = 1.00 This sample was 3.89700 g or mL

Correction Factor = 1.28

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

8:38 AM WED., 27 JULY, 1994

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5193

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5193

Sample wt/vol: 3.249 (g/mL) G

Lab File ID: >AE09G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV.0

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

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	15.	U
74-83-9-----	Bromomethane	15.	U
75-01-4-----	Vinyl Chloride	15.	U
75-00-3-----	Chloroethane	15.	U
75-09-2-----	Methylene Chloride	15.	U
67-64-1-----	Acetone	43.	B
75-15-0-----	Carbon Disulfide	15.	U
75-35-4-----	1,1-Dichloroethene	15.	U
75-34-3-----	1,1-Dichloroethane	15.	U
540-59-0-----	1,2-Dichloroethene (total)	15.	U
67-66-3-----	Chloroform	15.	U
107-02-2-----	1,2-Dichloroethane	15.	U
78-93-3-----	2-Butanone	3.	J
71-55-6-----	1,1,1-Trichloroethane	15.	U
56-23-5-----	Carbon Tetrachloride	15.	U
75-27-4-----	Bromodichloromethane	15.	U
78-87-5-----	1,2-Dichloropropane	15.	U
10061-01-5-----	cis-1,3-Dichloropropene	15.	U
79-01-6-----	Trichloroethene	15.	U
124-48-1-----	Dibromochloromethane	15.	U
79-00-5-----	1,1,2-Trichloroethane	15.	U
71-43-2-----	Benzene	15.	U
10061-02-6-----	trans-1,3-Dichloropropene	15.	U
75-25-2-----	Bromoform	15.	U
108-10-1-----	4-Methyl-2-pentanone	15.	U
591-78-6-----	2-Hexanone	15.	U
127-18-4-----	Tetrachloroethene	15.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15.	U
108-88-3-----	Toluene	15.	U
108-90-7-----	Chlorobenzene	15.	U
100-41-4-----	Ethylbenzene	15.	U
100-42-5-----	Styrene	15.	U
133-02-7-----	Xylene (total)	15.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5193

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5193

Sample wt/vol: 3.249 (g/mL) G

Lab File ID: >AE09G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.	WHC-SD-WM-DP-068, REV. 0			
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Jhelosa-Gary*
Output File: ^AE09G::D2
Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 12:27
 Injected at: 940509 11:55
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.10	128.0	108734	50.00	UG/L	78
8)	ACETONE	2.52	43.0	7337M	27.87	UG/L	97
12)	2-BUTANONE	5.88	43.0	627M	1.73	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.26	65.0	149493	45.37	UG/L	97
16)	*1,4-DIFLUOROBENZENE	8.30	114.0	424536	50.00	UG/L	90
29)	*CHLOROBENZENE-d5	13.92	117.0	353012	50.00	UG/L	92
31)	TOLUENE-d8	11.06	98.0	379448	48.71	UG/L	96
32)	TOLUENE <i>No Den 6-6-94</i>	11.19	91.0	798	.0936	UG/L	87
39)	BROMOFLUOROBENZENE	16.48	95.0	283115	48.11	UG/L	92

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 03:27

Operator ID: JOY
Quant Time : 940509 12:27
Injected at: 940509 11:55

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 12:27
Injected at: 940509 11:55

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 12:27
Injected at: 940509 11:55

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 12:27
Injected at: 940509 11:55

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 12:27
Injected at: 940509 11:55

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 12:27
Injected at: 940509 11:55
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 407
Retention Time: 6.10 min.
Quant Ion : 128.0
Area : 108734
Concentration : 50.00 UG/L
q-value : 78

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 12:27
Injected at: 940509 11:55
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 148
Retention Time: 2.52 min.
Quant Ion : 43.0
Area : 7337M
Concentration : 27.87 UG/L
q-value : 97

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 12:27
Injected at: 940509 11:55
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 391
Retention Time: 5.88 min.
Quant Ion : 43.0
Area : 627M
Concentration : 1.73 UG/L
q-value : 100

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 12:27
Injected at: 940509 11:55
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 491
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 149493
Concentration : 45.37 UG/L
q-value : 97

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5

Name: R5193

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 12:27

Injected at: 940509 11:55

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 566
Retention Time: 8.30 min.
Quant Ion : 114.0
Area : 424536
Concentration : 50.00 UG/L
q-value : 90

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5

Name: R5193

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 12:27

Injected at: 940509 11:55

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 972
Retention Time: 13.92 min.
Quant Ion : 117.0
Area : 353012
Concentration : 50.00 UG/L
q-value : 92

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5
Name: R5193
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 12:27
Injected at: 940509 11:55
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.06 min.
Quant Ion : 98.0
Area : 379448
Concentration : 48.71 UG/L
q-value : 96

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5

Name: R5193

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 12:27

Injected at: 940509 11:55

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 775
Retention Time: 11.19 min.
Quant Ion : 91.0
Area : 798
Concentration : .0936 UG/L
q-value : 87

No
den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09G::D5

Name: R5193

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 12:27

Injected at: 940509 11:55

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09G::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1157
Retention Time: 16.48 min.
Quant Ion : 95.0
Area : 283115
Concentration : 48.11 UG/L
q-value : 92

Den
6-6-94

MS data file header from : >AE09G::D5

7/27/94
J. L. Ross - Chng
Sample: R5193 Operator: JOY SUPER GRP. 5/09/94 11:55
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	713315.	6.10	1.00 - 7.20
2	50.0	995568.	8.30	7.20 - 11.11
3	50.0	1098790.	13.92	11.11 - 31.04

Dilution Factor = 1.00 This sample was 3.24900 g or mL

Correction Factor = 1.54

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

8:44 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5194

1 Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5194

Sample wt/vol: 4.676 (g/mL) G

Lab File ID: >AE09H

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11.	U
74-83-9-----	Bromomethane	11.	U
75-01-4-----	Vinyl Chloride	11.	U
75-00-3-----	Chloroethane	11.	U
75-09-2-----	Methylene Chloride	11.	U
67-64-1-----	Acetone	74.	B
75-15-0-----	Carbon Disulfide	11.	U
75-35-4-----	1,1-Dichloroethene	11.	U
75-34-3-----	1,1-Dichloroethane	11.	U
540-59-0-----	1,2-Dichloroethene (total)	11.	U
67-66-3-----	Chloroform	11.	U
107-02-2-----	1,2-Dichloroethane	11.	U
78-93-3-----	2-Butanone	7.	J
71-55-6-----	1,1,1-Trichloroethane	11.	U
56-23-5-----	Carbon Tetrachloride	11.	U
75-27-4-----	Bromodichloromethane	11.	U
78-87-5-----	1,2-Dichloropropane	11.	U
10061-01-5-----	cis-1,3-Dichloropropene	11.	U
79-01-6-----	Trichloroethene	11.	U
124-48-1-----	Dibromochloromethane	11.	U
79-00-5-----	1,1,2-Trichloroethane	11.	U
71-43-2-----	Benzene	11.	U
10061-02-6-----	trans-1,3-Dichloropropene	11.	U
75-25-2-----	Bromoform	11.	U
108-10-1-----	4-Methyl-2-pentanone	11.	U
591-78-6-----	2-Hexanone	11.	U
127-18-4-----	Tetrachloroethene	.1	J
79-34-5-----	1,1,2,2-Tetrachloroethane	11.	U
108-88-3-----	Toluene	.6	J
108-90-7-----	Chlorobenzene	11.	U
100-41-4-----	Ethylbenzene	11.	U
100-42-5-----	Styrene	11.	U
133-02-7-----	Xylene (total)	.1	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5194

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5194

Sample wt/vol: 4.676 (g/mL) G

Lab File ID: >AE09H

Level: (low/med) LOW

Date Received: 05/02/94

Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.14	15.	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

FORM I VOA-TIC

3/90

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Helikman Aug*
Output File: ^AE09H::D2
Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 13:33
 Injected at: 940509 13:01
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.10	128.0	103938	6/6/94 50.00	UG/L	84
8)	ACETONE	2.56	43.0	17529M	Joc 69.65	UG/L	84
12)	2-BUTANONE	5.88	43.0	2106M	6/6/94 6.09	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.25	65.0	155915	Joc 49.50	UG/L	93
16)	*1,4-DIFLUOROBENZENE	8.29	114.0	457618	50.00	UG/L	89
29)	*CHLOROBENZENE-d5	13.94	117.0	379579	50.00	UG/L	93
31)	TOLUENE-d8	11.06	98.0	394077	47.05	UG/L	95
32)	TOLUENE	11.18	91.0	4763	6/6/94 .519	UG/L	96
33)	TETRACHLOROETHENE	12.19	164.0	483M	Joc .123	UG/L	83
37)	XYLENE (TOTAL)	14.62	106.0	510	.136	UG/L	73
39)	BROMOFLUOROBENZENE	16.50	95.0	295801	46.75	UG/L	90

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

File >AE09H 35.0-350.0 amu. R5194 10UL OF ISTD & SMC
TIC

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 09:27

Operator ID: JOY
Quant Time : 940509 13:33
Injected at: 940509 13:01

Page 1 of 5

TOTAL ION CHROMATOGRAM

File >AE09H 35.0-350.0 amu. R5194 10UL OF ISTD & SMC
TIC

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 13:33
Injected at: 940509 13:01

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 13:33
Injected at: 940509 13:01

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 13:33
Injected at: 940509 13:01

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 13:33
Injected at: 940509 13:01

Page 5 of 5

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 408
Retention Time: 6.10 min.
Quant Ion : 128.0
Area : 103938
Concentration : 50.00 UG/L
q-value : 84

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 13:33
Injected at: 940509 13:01
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 152
Retention Time: 2.56 min.
Quant Ion : 43.0
Area : 17529M
Concentration : 69.65 UG/L
q-value : 84

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 13:33
Injected at: 940509 13:01
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 392
Retention Time: 5.88 min.
Quant Ion : 43.0
Area : 2106M
Concentration : 6.09 UG/L
q-value : 100

REN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14

Compound Name : 1,2-DICHLOROETHANE-d4

Scan Number : 486

Retention Time: 7.25 min.

Quant Ion : 65.0

Area : 155915

Concentration : 49.50 UG/L

q-value : 93

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 561
Retention Time: 8.29 min.
Quant Ion : 114.0
Area : 457618
Concentration : 50.00 UG/L
q-value : 89

Ren
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 13:33
Injected at: 940509 13:01
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 969
Retention Time: 13.94 min.
Quant Ion : 117.0
Area : 379579
Concentration : 50.00 UG/L
q-value : 93

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 13:33
Injected at: 940509 13:01
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 761
Retention Time: 11.06 min.
Quant Ion : 98.0
Area : 394077
Concentration : 47.05 UG/L
q-value : 95

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5
Name: R5194
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 13:33
Injected at: 940509 13:01
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 770
Retention Time: 11.18 min.
Quant Ion : 91.0
Area : 4763
Concentration : .519 UG/L
q-value : 96

26m
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 33
Compound Name : TETRACHLOROETHENE
Scan Number : 843
Retention Time: 12.19 min.
Quant Ion : 164.0
Area : 483M
Concentration : .123 UG/L
q-value : 83

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 37
Compound Name : XYLENE (TOTAL)
Scan Number : 1018
Retention Time: 14.62 min.
Quant Ion : 106.0
Area : 510
Concentration : .136 UG/L
q-value : 73

Don
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09H::D5

Name: R5194

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 13:33

Injected at: 940509 13:01

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09H::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1154
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 295801
Concentration : 46.75 UG/L
q-value : 90

Pen
6-6-94

7/27/94

Julie Rose - Chang

MS data file header from : >AE09H::D5

Sample: R5194 Operator: JOY SUPER GRP. 5/09/94 13:01
 Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
 Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
 Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
 Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
 Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
 Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

>AE09H R5194 10UL OF ISTD & SMC Instrument I

35.0| 350.0 CLP TIC
 Upslope: .2000 Area Reject: 87712. Max Peaks: 1 Bunch: -1 Valley >100 %
 Dnslope: 0.0000 Results File IAE09H Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.14	1403	1417	1446	38781	325740	313127	100.00	100.000

Sum of corrected areas: 313127.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	877119.	6.10	1.00 - 7.20
2	50.0	1075213.	8.29	7.20 - 11.11
3	50.0	1167016.	13.94	11.11 - 31.03

Dilution Factor = 1.00 This sample was 4.67600 g or mL

Correction Factor = 1.07

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

8:51 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

File >AE09H R5194
Bpk Ab 10646.

10UL OF ISTD & SMC
SUB

I Scan 1417
20.14 min.

File NBS49K
Bpk Ab 9999.

1-Pentene, 4,4-dimethyl-

Scan 1188
0.00 min.

File NBS49K
Bpk Ab 9999.

Heptane, 1,1'-oxybis-

Scan 21341
0.00 min.

File NBS49K
Bpk Ab 9999.

1-Hexene, 5,5-dimethyl-

Scan 2367
0.00 min.

Instrument ID: VOA-1 Analyzed on: 5/09/94 13:01

Result 1 in PBM results file: LAE09H

Retention Time: 20.14 Area: 313127 Tentative Conc: 14.00

The unknown area is 26.83% of the nearest internal standard

1. 1-Pentene, 4,4-dimethyl-	98 C7H14
2. Heptane, 1,1'-oxybis-	214 C14H300
3. 1-Hexene, 5,5-dimethyl-	112 C8H16
4. Heptane, 4-(1-methylethyl)-	142 C10H22
5. Heptane, 3-bromo-	178 C7H15Br

WHC-SD-WM-DP-068, REV. 0

Sample file: >AE09H Spectrum #: 1417
Search speed: 3 Tilting option: S No. of ion ranges searched: 56

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	63*	762629	1234	NBS49K	39	37	0	0	69	34	22	48
2.	52	629641	4214	NBS49K	42	48	2	0	91	17	20	12
3.	42	7116861	9104	NBS49K	39	44	2	0	83	23	17	13
4.	29	52896874	9510	NBS49K	36	47	2	0	76	35	12	12
5.	28	1974056	9843	NBS49K	40	47	1	0	89	39	10	14

Unknown

Don

7-27-94

$\frac{5 \text{ ml}}{4.676} (14) = 14.97$
or 15.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5195

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5195

Sample wt/vol: 3.840 (g/mL) G

Lab File ID: >AE09I

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	13.	U
74-83-9-----	Bromomethane	13.	U
75-01-4-----	Vinyl Chloride	13.	U
75-00-3-----	Chloroethane	13.	U
75-09-2-----	Methylene Chloride	13.	U
67-64-1-----	Acetone	35.	B
75-15-0-----	Carbon Disulfide	13.	U
75-35-4-----	1,1-Dichloroethene	13.	U
75-34-3-----	1,1-Dichloroethane	13.	U
540-59-0-----	1,2-Dichloroethene (total)	13.	U
67-66-3-----	Chloroform	13.	U
107-02-2-----	1,2-Dichloroethane	13.	U
78-93-3-----	2-Butanone	4.	J
71-55-6-----	1,1,1-Trichloroethane	13.	U
56-23-5-----	Carbon Tetrachloride	13.	U
75-27-4-----	Bromodichloromethane	13.	U
78-87-5-----	1,2-Dichloropropane	13.	U
10061-01-5-----	cis-1,3-Dichloropropene	13.	U
79-01-6-----	Trichloroethene	13.	U
124-48-1-----	Dibromochloromethane	13.	U
79-00-5-----	1,1,2-Trichloroethane	13.	U
71-43-2-----	Benzene	13.	U
10061-02-6-----	trans-1,3-Dichloropropene	13.	U
75-25-2-----	Bromoform	13.	U
108-10-1-----	4-Methyl-2-pentanone	13.	U
591-78-6-----	2-Hexanone	13.	U
127-18-4-----	Tetrachloroethene	13.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	13.	U
108-88-3-----	Toluene	13.	U
108-90-7-----	Chlorobenzene	13.	U
100-41-4-----	Ethylbenzene	13.	U
100-42-5-----	Styrene	13.	U
133-02-7-----	Xylene (total)	13.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5195

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5195

Sample wt/vol: 3.840 (g/mL) G

Lab File ID: >AE09I

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

FORM I VOA-TIC

3/90

QUANT REPORT

Page 1

Operator ID: JOY *John Rose - Aug*
Output File: ^AE09I::D2
Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 14:19
 Injected at: 940509 13:47
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.09	128.0	110429	50.00	UG/L	79
8)	ACETONE	2.56	43.0	7110M	26.59	UG/L	87
12)	2-BUTANONE	5.93	43.0	1175M	3.20	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.25	65.0	153557	45.89	UG/L	91
16)	*1,4-DIFLUOROBENZENE	8.29	114.0	440295	50.00	UG/L	88
29)	*CHLOROBENZENE-d5	13.93	117.0	363543	50.00	UG/L	91
31)	TOLUENE-d8	11.06	98.0	394439	49.17	UG/L	95
39)	BROMOFLUOROBENZENE	16.50	95.0	285611	47.13	UG/L	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:19
Injected at: 940509 13:47

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:19
Injected at: 940509 13:47

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:19
Injected at: 940509 13:47

TOTAL ION CHROMATOGRAM

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:19
Injected at: 940509 13:47

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:19
Injected at: 940509 13:47

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5

Name: R5195

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:19

Injected at: 940509 13:47

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 406
Retention Time: 6.09 min.
Quant Ion : 128.0
Area : 110429
Concentration : 50.00 UG/L
q-value : 79

DEV
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 14:19
Injected at: 940509 13:47
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 151
Retention Time: 2.56 min.
Quant Ion : 43.0
Area : 7110M
Concentration : 26.59 UG/L
q-value : 87

Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 14:19
Injected at: 940509 13:47
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 394
Retention Time: 5.93 min.
Quant Ion : 43.0
Area : 1175M
Concentration : 3.20 UG/L
q-value : 100

RCM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5	Quant Output File: ^AE09I::D2
Name: R5195	Instrument ID: VOA-1
Misc: 10UL OF ISTD & SMC	Instrument ID: 70 2
Quant Time: 940509 14:19	Quant ID File: ID VOA::QT
Injected at: 940509 13:47	Last Calibration: 940330 15:10
Last Qcal Time: 940509 08:27	

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 490
Retention Time: 7.25 min.
Quant Ion : 65.0
Area : 153557
Concentration : 45.89 UG/L
q-value : 91

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5

Name: R5195

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:19

Injected at: 940509 13:47

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.29 min.
Quant Ion : 114.0
Area : 440295
Concentration : 50.00 UG/L
q-value : 88

REN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5

Name: R5195

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:19

Injected at: 940509 13:47

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 972
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 363543
Concentration : 50.00 UG/L
q-value : 91

Don
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5

Name: R5195

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:19

Injected at: 940509 13:47

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 31

Compound Name : TOLUENE-d8

Scan Number : 765

Retention Time: 11.06 min.

Quant Ion : 98.0

Area : 394439

Concentration : 49.17 UG/L

q-value : 95

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09I::D5
Name: R5195
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 14:19
Injected at: 940509 13:47
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09I::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1158
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 285611
Concentration : 47.13 UG/L
q-value : 92

Don
6-6-94

7/27/94

Julia Rosa-Chang

MS data file header from : >AE09I::D5

Sample: R5195 Operator: JOY SUPER GRP. 5/09/94 13:47
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	719361.	6.09	1.00 - 7.19
2	50.0	1033100.	8.29	7.19 - 11.11
3	50.0	1118670.	13.93	11.11 - 31.03

Dilution Factor = 1.00 This sample was 3.84000 g or mL

Correction Factor = 1.30

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

8:58 AM WED., 27 JULY, 1994

There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5196

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5196

Sample wt/vol: 3.996 (g/mL) G

Lab File ID: >AE09M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	13.	U
74-83-9-----	Bromomethane	13.	U
75-01-4-----	Vinyl Chloride	13.	U
75-00-3-----	Chloroethane	13.	U
75-09-2-----	Methylene Chloride	13.	U
67-64-1-----	Acetone	29.	B
75-15-0-----	Carbon Disulfide	13.	U
75-35-4-----	1,1-Dichloroethene	13.	U
75-34-3-----	1,1-Dichloroethane	13.	U
540-59-0-----	1,2-Dichloroethene (total)	13.	U
67-66-3-----	Chloroform	13.	U
107-02-2-----	1,2-Dichloroethane	13.	U
78-93-3-----	2-Butanone	13.	U
71-55-6-----	1,1,1-Trichloroethane	13.	U
56-23-5-----	Carbon Tetrachloride	13.	U
75-27-4-----	Bromodichloromethane	13.	U
78-87-5-----	1,2-Dichloropropane	13.	U
10061-01-5-----	cis-1,3-Dichloropropene	13.	U
79-01-6-----	Trichloroethene	13.	U
124-48-1-----	Dibromochloromethane	13.	U
79-00-5-----	1,1,2-Trichloroethane	13.	U
71-43-2-----	Benzene	13.	U
10061-02-6-----	trans-1,3-Dichloropropene	13.	U
75-25-2-----	Bromoform	13.	U
108-10-1-----	4-Methyl-2-pentanone	13.	U
591-78-6-----	2-Hexanone	13.	U
127-18-4-----	Tetrachloroethene	13.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	13.	U
108-88-3-----	Toluene	13.	U
108-90-7-----	Chlorobenzene	13.	U
100-41-4-----	Ethylbenzene	13.	U
100-42-5-----	Styrene	13.	U
133-02-7-----	Xylene (total)	13.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5196

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5196

Sample wt/vol: 3.996 (g/mL) G

Lab File ID: >AE09M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

WHC-SD-WM-DP-068, REV. 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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23.				
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25.				
26.				
27.				
28.				
29.				
30.				

QUANT REPORT

Page 1

6/6/94
Operator ID: JOY *Idela Rose Chang*
Output File: ^AE09M::D2
Data File: >AE09M::D5
Name: R5196
Misc: 1QUL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 16:45
 Injected at: 940509 16:13
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.12	128.0	110498	50.00	UG/L	85
8)	ACETONE	2.53	43.0	6297	23.54	UG/L	82
14)	1,2-DICHLOROETHANE-d4	7.26	65.0	152557	45.56	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.30	114.0	440957	50.00	UG/L	92
29)	*CHLOROBENZENE-d5	13.92	117.0	372561	50.00	UG/L	90
31)	TOLUENE-d8	11.07	98.0	393160	47.83	UG/L	96
39)	BROMOFLUOROBENZENE	16.50	95.0	295142	47.53	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09M::D5
 Name: R5196
 Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09M::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
 Quant Time : 940509 16:45
 Injected at: 940509 16:13

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:45
Injected at: 940509 16:13

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 03:27

Operator ID: JOY
Quant Time : 940509 16:45
Injected at: 940509 16:13

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:45
Injected at: 940509 16:13

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:45
Injected at: 940509 16:13

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 16:45
Injected at: 940509 16:13
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 409
Retention Time: 6.12 min.
Quant Ion : 128.0
Area : 110498
Concentration : 50.00 UG/L
q-value : 85

QEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 16:45
Injected at: 940509 16:13
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 150
Retention Time: 2.53 min.
Quant Ion : 43.0
Area : 6297
Concentration : 23.54 UG/L
q-value : 82

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5

Name: R5196

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 16:45

Injected at: 940509 16:13

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 492
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 152557
Concentration : 45.56 UG/L
q-value : 94

pen
6-6-94

WHC-SD-WM-DP-068. REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5

Name: R5196

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 16:45

Injected at: 940509 16:13

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 567
Retention Time: 8.30 min.
Quant Ion : 114.0
Area : 440957
Concentration : 50.00 UG/L
q-value : 92

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 16:45
Injected at: 940509 16:13
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 973
Retention Time: 13.92 min.
Quant Ion : 117.0
Area : 372561
Concentration : 50.00 UG/L
q-value : 90

QEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5
Name: R5196
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 16:45
Injected at: 940509 16:13
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 767
Retention Time: 11.07 min.
Quant Ion : 98.0
Area : 393160
Concentration : 47.83 UG/L
q-value : 96

REV
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09M::D5

Name: R5196

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 16:45

Injected at: 940509 16:13

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09M::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1159
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 295142
Concentration : 47.53 UG/L
q-value : 94

Pen
6-6-94

MS data file header from : >AE09M::D5

7/27/94

J. DelaRosa - Chang

Sample: R5196 Operator: JOY SUPER GRP. 5/09/94 16:13
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

WHC-SD-WM-DP-068, REV. 0

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	730854.	6.12	1.00 - 7.21
2	50.0	1034196.	8.30	7.21 - 11.11
3	50.0	1139648.	13.92	11.11 - 31.01

Dilution Factor = 1.00 This sample was 3.99600 g or mL

Correction Factor = 1.25

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

9:10 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5197

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5197

Sample wt/vol: 2.917 (g/mL) G

Lab File ID: >AE090

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg Q

74-87-3-----	Chloromethane	17.	U
74-83-9-----	Bromomethane	17.	U
75-01-4-----	Vinyl Chloride	17.	U
75-00-3-----	Chloroethane	17.	U
75-09-2-----	Methylene Chloride	17.	U
67-64-1-----	Acetone	21.	B
75-15-0-----	Carbon Disulfide	17.	U
75-35-4-----	1,1-Dichloroethene	17.	U
75-34-3-----	1,1-Dichloroethane	17.	U
540-59-0-----	1,2-Dichloroethene (total)	17.	U
67-66-3-----	Chloroform	17.	U
107-02-2-----	1,2-Dichloroethane	17.	U
78-93-3-----	2-Butanone	17.	U
71-55-6-----	1,1,1-Trichloroethane	17.	U
56-23-5-----	Carbon Tetrachloride	17.	U
75-27-4-----	Bromodichloromethane	17.	U
78-87-5-----	1,2-Dichloropropane	17.	U
10061-01-5-----	cis-1,3-Dichloropropene	17.	U
79-01-6-----	Trichloroethene	17.	U
124-48-1-----	Dibromochloromethane	17.	U
79-00-5-----	1,1,2-Trichloroethane	17.	U
71-43-2-----	Benzene	17.	U
10061-02-6-----	trans-1,3-Dichloropropene	17.	U
75-25-2-----	Bromoform	17.	U
108-10-1-----	4-Methyl-2-pentanone	17.	U
591-78-6-----	2-Hexanone	17.	U
127-18-4-----	Tetrachloroethene	17.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	17.	U
108-88-3-----	Toluene	17.	U
108-90-7-----	Chlorobenzene	17.	U
100-41-4-----	Ethylbenzene	17.	U
100-42-5-----	Styrene	17.	U
133-02-7-----	Xylene (total)	17.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5197

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5197

Sample wt/vol: 2.917 (g/mL) G

Lab File ID: >AE090

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Jade Rose - Chang*
Output File: ^AE090::D2
Data File: ^AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 17:57
 Injected at: 940509 17:25
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

WHC-SD-WM-DP-068, REV. 0

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.11	128.0	111109	50.00	UG/L	84
8) ACETONE	2.53	43.0	3312	12.31	UG/L	99
12) 2-BUTANONE <i>No DEN 6-6-94</i>	5.92	43.0	506M	1.37	UG/L	100
14) 1,2-DICHLOROETHANE-d4	7.26	65.0	153388	45.56	UG/L	95
16) *1,4-DIFLUOROBENZENE	8.32	114.0	446799	50.00	UG/L	90
29) *CHLOROBENZENE-d5	13.93	117.0	374263	50.00	UG/L	93
31) TOLUENE-d8	11.07	98.0	402180	48.70	UG/L	96
32) TOLUENE <i>No DEN 6-6-94</i>	11.17	91.0	489M	.0541	UG/L	87
39) BROMOFLUOROBENZENE	16.49	95.0	294625	47.23	UG/L	95

* Compound is ISTD

BEST AVAILABLE COPY

TOTAL ION CHROMATOGRAM

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 17:57
Injected at: 940509 17:25

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 17:57
Injected at: 940509 17:25

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 17:57
Injected at: 940509 17:25

TOTAL ION CHROMATOGRAM

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 17:57
Injected at: 940509 17:25

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 17:57
Injected at: 940509 17:25

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 409
Retention Time: 6.11 min.
Quant Ion : 128.0
Area : 111109
Concentration : 50.00 UG/L
q-value : 84

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 150
Retention Time: 2.53 min.
Quant Ion : 43.0
Area : 3312
Concentration : 12.31 UG/L
q-value : 99

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 17:57
Injected at: 940509 17:25
Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 395
Retention Time: 5.92 min.
Quant Ion : 43.0
Area : 506M
Concentration : 1.37 UG/L
q-value : 100

No
DEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 492
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 153388
Concentration : 45.56 UG/L
q-value : 95

RCM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 568
Retention Time: 8.32 min.
Quant Ion : 114.0
Area : 446799
Concentration : 50.00 UG/L
q-value : 90

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 974
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 374263
Concentration : 50.00 UG/L
q-value : 93

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 17:57
Injected at: 940509 17:25
Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 767
Retention Time: 11.07 min.
Quant Ion : 98.0
Area : 402180
Concentration : 48.70 UG/L
q-value : 96

pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5
Name: R5197
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 17:57
Injected at: 940509 17:25
Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 774
Retention Time: 11.17 min.
Quant Ion : 91.0
Area : 489M
Concentration : .0541 UG/L
q-value : 87

Do DEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE090::D5

Name: R5197

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 17:57

Injected at: 940509 17:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE090::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39

Compound Name : BROMOFLUOROBENZENE

Scan Number : 1159

Retention Time: 16.49 min.

Quant Ion : 95.0

Area : 294625

Concentration : 47.23 UG/L

q-value : 95

DEM
6-6-94

MS data file header from : >AE090::D5

Sample: R5197 Operator: JOY SUPER GRP. 5/09/94 17:25
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

WHC-SD-WM-DP-068 REV C

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	733585.	6.11	1.00 - 7.22
2	50.0	1047355.	8.32	7.22 - 11.12
3	50.0	1159789.	13.93	11.12 - 31.02

Dilution Factor = 1.00 This sample was 2.91700 g or mL

Correction Factor = 1.71

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} * \text{Correction Factor}$

9:16 AM WED., 27 JULY, 1994

. There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5198

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5198

Sample wt/vol: 4.454 (g/mL) G

Lab File ID: >AE09P

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11.	U
74-83-9-----	Bromomethane	11.	U
75-01-4-----	Vinyl Chloride	11.	U
75-00-3-----	Chloroethane	11.	U
75-09-2-----	Methylene Chloride	11.	U
67-64-1-----	Acetone	12.	B
75-15-0-----	Carbon Disulfide	11.	U
75-35-4-----	1,1-Dichloroethene	11.	U
75-34-3-----	1,1-Dichloroethane	11.	U
540-59-0-----	1,2-Dichloroethene (total)	11.	U
67-66-3-----	Chloroform	11.	U
107-02-2-----	1,2-Dichloroethane	11.	U
78-93-3-----	2-Butanone	11.	U
71-55-6-----	1,1,1-Trichloroethane	11.	U
56-23-5-----	Carbon Tetrachloride	11.	U
75-27-4-----	Bromodichloromethane	11.	U
78-87-5-----	1,2-Dichloropropane	11.	U
10061-01-5-----	cis-1,3-Dichloropropene	11.	U
79-01-6-----	Trichloroethene	11.	U
124-48-1-----	Dibromochloromethane	11.	U
79-00-5-----	1,1,2-Trichloroethane	11.	U
71-43-2-----	Benzene	11.	U
10061-02-6-----	trans-1,3-Dichloropropene	11.	U
75-25-2-----	Bromoform	11.	U
108-10-1-----	4-Methyl-2-pentanone	11.	U
591-78-6-----	2-Hexanone	11.	U
127-18-4-----	Tetrachloroethene	11.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11.	U
108-88-3-----	Toluene	11.	U
108-90-7-----	Chlorobenzene	11.	U
100-41-4-----	Ethylbenzene	11.	U
100-42-5-----	Styrene	11.	U
133-02-7-----	Xylene (total)	11.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5198

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5198

Sample wt/vol: 4.454 (g/mL) G

Lab File ID: >AE09P

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.15	11.	J
2.	Unknown	21.81	10.	J
3.				
4.				
5.				
6.				
7.				
8.				
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28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Heckhouse - Aug*
Output File: ^AE09P::D2
Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 18:32
 Injected at: 940509 18:00
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.13	128.0	108299	50.00	UG/L	80
8)	ACETONE	2.63	43.0	2868M	10.94	UG/L	87
14)	1,2-DICHLOROETHANE-d4	7.29	65.0	149437	45.53	UG/L	97
16)	*1,4-DIFLUOROBENZENE	8.33	114.0	441832	50.00	UG/L	90
29)	*CHLOROBENZENE-d5	13.95	117.0	370123	50.00	UG/L	94
31)	TOLUENE-d8	11.10	98.0	394807	48.34	UG/L	94
32)	TOLUENE <i>No Den 6-6-94</i>	11.21	91.0	521M	.0583	UG/L	72
39)	BROMOFLUOROBENZENE	16.51	95.0	295471	47.89	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 18:32
Injected at: 940509 18:00

Page 1 of 5

TOTAL ION CHROMATOGRAM

File >AE09P 35.0-350.0 amu. R5198 10UL OF ISTD & SMC
TIC

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 18:32
Injected at: 940509 18:00

TOTAL ION CHROMATOGRAM

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 18:32
Injected at: 940509 18:00

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 18:32
Injected at: 940509 18:00

TOTAL ION CHROMATOGRAM

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 18:32
Injected at: 940509 18:00

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 408
Retention Time: 6.13 min.
Quant Ion : 128.0
Area : 108299
Concentration : 50.00 UG/L
q-value : 80

DEM
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 18:32
Injected at: 940509 18:00
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 155
Retention Time: 2.63 min.
Quant Ion : 43.0
Area : 2868M
Concentration : 10.94 UG/L
q-value : 87

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 492
Retention Time: 7.29 min.
Quant Ion : 65.0
Area : 149437
Concentration : 45.53 UG/L
q-value : 97

Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 567
Retention Time: 8.33 min.
Quant Ion : 114.0
Area : 441832
Concentration : 50.00 UG/L
q-value : 90

Qen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 973
Retention Time: 13.95 min.
Quant Ion : 117.0
Area : 370123
Concentration : 50.00 UG/L
q-value : 94

Handwritten:
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5
Name: R5198
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 18:32
Injected at: 940509 18:00
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 767
Retention Time: 11.10 min.
Quant Ion : 98.0
Area : 394807
Concentration : 48.34 UG/L
q-value : 94

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 32
Compound Name : TOLUENE
Scan Number : 775
Retention Time: 11.21 min.
Quant Ion : 91.0
Area : 521M
Concentration : .0583 UG/L
q-value : 72

No
Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09P::D5

Name: R5198

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 18:32

Injected at: 940509 18:00

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09P::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1158
Retention Time: 16.51 min.
Quant Ion : 95.0
Area : 295471
Concentration : 47.89 UG/L
q-value : 95

Den
6-6-94

7/27/94

WHC-SD-WM-DP-068, REV. 0

MS data file header from : >AE09P::D5

Sample: R5198 Operator: JOY SUPER GRP. 5/09/94 18:00
 Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
 Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
 Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
 Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
 Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
 Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

>AE09P R5198 10UL OF ISTD & SMC Instrument I

35.0| 350.0 CLP TIC

Upslope: .2000 Area Reject: 71634. Max Peaks: 2 Bunch: -1 Valley >100 %
 Dnslope: 0.0000 Results File IAE09P Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.15	1407	1421	1444	26236	217715	203822	100.00	52.930
2	21.81	1531	1541	1555	26361	205033	181260	88.93	47.070

Sum of corrected areas: 385082.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	716336.	6.13	1.00 - 7.23
2	50.0	1031126.	8.33	7.23 - 11.14
3	50.0	1140931.	13.95	11.14 - 31.06

Dilution Factor = 1.00 This sample was 4.45400 g or mL

Correction Factor = 1.12

Unknown Concentration = $\left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$

9:21 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

WHC-SD-WM-DP-068, REV. 0

WHC-SD-WM-DP-068, REV. 0

Instrument ID: VOA-1 Analyzed on: 5/09/94 18:00
 result 1 in PBM results file: LAE09P
 Retention Time: 20.15 Area: 203822 Tentative Conc: 10.00
 The unknown area is 17.86% of the nearest internal standard

1. Octane, 3,5-dimethyl-	142 C10H22
2. Heptane, 1,1'-oxybis-	214 C14H300
3. Tridecane, 7-methyl-	198 C14H30
4. Heptane, 2,5-dimethyl-	128 C9H20
5. 3-Undecene, 6-methyl-, (E)-	168 C12H24
6. 1-Propanol, 2,2-dimethyl-, propanoate	144 C8H16O2

Sample file: >AE09P Spectrum #: 1421
 Search speed: 3 Tilting option: S No. of ion ranges searched: 81

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	52*	15869939	4025	NBS49K	33	60	3	0	100	19	20	13
2.	43	629641	4214	NBS49K	46	44	2	0	96	22	17	14
3.	42*	26730143	12201	NBS49K	37	74	3	0	100	25	17	13
4.	41*	2216300	9707	NBS49K	45	41	2	0	79	32	16	24
5.	40	74630527	9550	NBS49K	50	37	2	0	71	29	14	17
6.	37*	3581699	9758	NBS49K	24	54	2	0	100	30	14	14

Unknown
Don
7-27-94

5 ml sample with 7.45-77
D factor 112
 $1.12(10) = 11.2$
or 11

Instrument ID: VOA-1 Analyzed on: 5/09/94 18:00
 result 2 in.PBM results file: LAE09P
 Retention Time: 21.81 Area: 181260 Tentative Conc: 9.00
 The unknown area is 15.89% of the nearest internal standard

1. Cycloheptane	98 C7H14
2. 1-Pentene, 3,4-dimethyl-	98 C7H14
3. 2-Heptene, (E)-	98 C7H14
4. Cyclobutanone, 2,2-dimethyl-	98 C6H10O
5. Cyclopentane, 1,2-dimethyl-	98 C7H14
6. Furan, 3-butyltetrahydro-2-methyl-, trans-	142 C9H18O

Sample file: >AE09P Spectrum #: 1541
 Search speed: 3 Tilting option: S No. of ion ranges searched: 66

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	30*	291645	9447	NBS49K	52	58	2	0	56	47	10	27
2.	18*	7385786	3854	NBS49K	50	54	0	0	59	61	5	60
3.	18*	14686136	9453	NBS49K	52	57	0	0	54	65	5	63
4.	18*	1192149	3846	NBS49K	31	54	0	0	53	58	4	24
5.	18*	2452995	3847	NBS49K	29	67	0	0	59	58	4	21
6.	15	36712206	4021	NBS49K	41	47	2	0	46	60	3	13

$$\frac{5 \text{ ml}}{4.454} (9) = 10.1$$

0.10

unknown.

Don

7-27-94

WHC-SD-WM-DP-068, REV. 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5199

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5199

Sample wt/vol: 5.274 (g/mL) G

Lab File ID: >AE09Q

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	9.	U
74-83-9-----	Bromomethane	9.	U
75-01-4-----	Vinyl Chloride	9.	U
75-00-3-----	Chloroethane	9.	U
75-09-2-----	Methylene Chloride	9.	U
67-64-1-----	Acetone	8.	JB
75-15-0-----	Carbon Disulfide	9.	U
75-35-4-----	1,1-Dichloroethene	9.	U
75-34-3-----	1,1-Dichloroethane	9.	U
540-59-0-----	1,2-Dichloroethene (total)	9.	U
67-66-3-----	Chloroform	9.	U
107-02-2-----	1,2-Dichloroethane	9.	U
78-93-3-----	2-Butanone	9.	U
71-55-6-----	1,1,1-Trichloroethane	9.	U
56-23-5-----	Carbon Tetrachloride	9.	U
75-27-4-----	Bromodichloromethane	9.	U
78-87-5-----	1,2-Dichloropropane	9.	U
10061-01-5-----	cis-1,3-Dichloropropene	9.	U
79-01-6-----	Trichloroethene	9.	U
124-48-1-----	Dibromochloromethane	9.	U
79-00-5-----	1,1,2-Trichloroethane	9.	U
71-43-2-----	Benzene	9.	U
10061-02-6-----	trans-1,3-Dichloropropene	9.	U
75-25-2-----	Bromoform	9.	U
108-10-1-----	4-Methyl-2-pentanone	9.	U
591-78-6-----	2-Hexanone	9.	U
127-18-4-----	Tetrachloroethene	9.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	9.	U
108-88-3-----	Toluene	9.	U
108-90-7-----	Chlorobenzene	9.	U
100-41-4-----	Ethylbenzene	9.	U
100-42-5-----	Styrene	9.	U
133-02-7-----	Xylene (total)	9.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5199

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5199

Sample wt/vol: 5.274 (g/mL) G

Lab File ID: >AE09Q

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.13	11.	J
2.	Unknown	21.79	9.	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

QUANT REPORT

Page 1

6/6/94
Operator ID: JOY *John P. Chang*
Output File: ^AE09Q::D2
Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 19:35
 Injected at: 940509 19:03
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.09	128.0	113468	50.00	UG/L	80
8) ACETONE	2.63	43.0	2186M	7.96	UG/L	88
12) 2-BUTANONE <i>No DEN 6-6-94</i>	5.91	43.0	460	1.24	UG/L	100
14) 1,2-DICHLOROETHANE-d4	7.26	65.0	154416	44.91	UG/L	91
16) *1,4-DIFLUOROBENZENE	8.29	114.0	458079	50.00	UG/L	90
29) *CHLOROBENZENE-d5	13.93	117.0	386329	50.00	UG/L	90
30) 4-METHYL-2-PENTANONE <i>No DEN 6-6-94</i>	11.06	43.0	3136M	1.07	UG/L	96
31) TOLUENE-d8	11.06	98.0	412796	48.43	UG/L	96
39) BROMOFLUOROBENZENE	16.50	95.0	307606	47.77	UG/L	94

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 19:35
Injected at: 940509 19:03

Page 1 of 5

TOTAL ION CHROMATOGRAM

File >AE09Q 35.0-350.0 amu. R5199 10UL OF ISTD & SMC
TIC

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 19:35
Injected at: 940509 19:03

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 19:35
Injected at: 940509 19:03

TOTAL ION CHROMATOGRAM

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 19:35
Injected at: 940509 19:03

TOTAL ION CHROMATOGRAM

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 19:35
Injected at: 940509 19:03

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5

Name: R5199

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 19:35

Injected at: 940509 19:03

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 407
Retention Time: 6.09 min.
Quant Ion : 128.0
Area : 113468
Concentration : 50.00 UG/L
q-value : 80

Pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 19:35
Injected at: 940509 19:03
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 157
Retention Time: 2.63 min.
Quant Ion : 43.0
Area : 2186M
Concentration : 7.96 UG/L
q-value : 88

Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5

Name: R5199

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 19:35

Injected at: 940509 19:03

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 394
Retention Time: 5.91 min.
Quant Ion : 43.0
Area : 469
Concentration : 1.24 UG/L
q-value : 100

No
Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 19:35
Injected at: 940509 19:03
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 491
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 154416
Concentration : 44.91 UG/L
q-value : 91

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5	Quant Output File: ^AE09Q::D2
Name: R5199	Instrument ID: VOA-1
Misc: 10UL OF ISTD & SMC	Instrument ID: 70 2
Quant Time: 940509 19:35	Quant ID File: ID_VOA::QT
Injected at: 940509 19:03	Last Calibration: 940330 15:10
Last Qcal Time: 940509 08:27	

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 566
Retention Time: 8.29 min.
Quant Ion : 114.0
Area : 458079
Concentration : 50.00 UG/L
q-value : 90

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5

Name: R5199

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 19:35

Injected at: 940509 19:03

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 973
Retention Time: 13.93 min.
Quant Ion : 117.0'
Area : 386329
Concentration : 50.00 UG/L
q-value : 90

pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5

Name: R5199

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 19:35

Injected at: 940509 19:03

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 30
Compound Name : 4-METHYL-2-PENTANONE
Scan Number : 766
Retention Time: 11.06 min.
Quant Ion : 43.0
Area : 3136M
Concentration : 1.07 UG/L
q-value : 96

No Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5
Name: R5199
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 19:35
Injected at: 940509 19:03
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 766
Retention Time: 11.06 min.
Quant Ion : 98.0
Area : 412796
Concentration : 48.43 UG/L
q-value : 96

Handwritten: 6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09Q::D5

Name: R5199

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 19:35

Injected at: 940509 19:03

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09Q::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1159
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 307606
Concentration : 47.77 UG/L
q-value : 94

pen
6-6-94

MS data file header from : >AE09Q::D5

Sample: R5199 Operator: JOY SUPER GRP. 5/09/94 19:03
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0. WHC-SD-WM-DP-068, REV. 0
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

>AE09Q R5199 10UL OF ISTD & SMC Instrument I

35.0| 350.0 CLP TIC

Upslope: .2000 Area Reject: 74516. Max Peaks: 2 Bunch: -1 Valley >100 %
Dnslope: 0.0000 Results File IAE09Q Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.13	1409	1421	1446	38075	320470	308078	100.00	56.940
2	21.79	1532	1541	1554	33188	259031	232982	75.62	43.060

Sum of corrected areas: 541060.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	745165.	6.09	1.00 - 7.19
2	50.0	1073765.	8.29	7.19 - 11.11
3	50.0	1181237.	13.93	11.11 - 31.02

Dilution Factor = 1.00 This sample was 5.27400 g or mL

Correction Factor = .95

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

9:32 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

File >AE090 35.0-350.0 amu. R5199 10UL OF ISTD & SMC
CLP ADC TIC
800 1000 1200 1400 1600 1800 2000 2200

File >AE09Q R5199
Bpk Ab 10201.

10UL OF ISTD & SMC
SUB

I Scan 1421
20.13 min.

File NBS49K
Bpk Ab 9999.

1-Pentene, 4,4-dimethyl-

Scan 1188
0.00 min.

File NBS49K
Bpk Ab 9999.

Heptane, 1,1'-oxybis-

Scan 21341
0.00 min.

File NBS49K
Bpk Ab 9999.

1-Hexanol, 2-ethyl-

Scan 4748
0.00 min.

WHC-SD-WM-DP-068, REV. 0

Instrument ID: VOA-1 Analyzed on: 5/09/94 19:03
 Result 1 in PBM results file: LAE09Q
 Retention Time: 20.13 Area: 308078 Tentative Conc: 12.00
 The unknown area is 26.08% of the nearest internal standard

1. 1-Pentene, 4,4-dimethyl-	98 C7H14
2. Heptane, 1,1'-oxybis-	214 C14H30O
3. 1-Hexanol, 2-ethyl-	130 C8H18O
4. 1-Octyn-3-ol, 4-ethyl-	154 C10H18O
5. Heptane, 2-bromo-	178 C7H15Br
6. 2-Hexene, 3,5,5-trimethyl-	126 C9H18

WHC-SD-WM-DP-068, REV. 0

Sample file: >AE09Q Spectrum #: 1421
 Search speed: 3 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	57*	762629	1234	NBS49K	39	37	0	0	67	38	19	48
2.	43	629641	4214	NBS49K	45	45	2	0	90	22	17	14
3.	41	104767	3969	NBS49K	55	39	2	2	75	22	17	12
4.	35	5877429	9523	NBS49K	37	49	2	0	100	27	14	12
5.	25	1974045	1287	NBS49K	38	46	2	0	76	41	8	13
6.	25	26456768	3952	NBS49K	43	38	3	0	100	47	7	12

$\frac{5 \text{ mg}}{5.274} (12) = 11.38 \text{ or } 11 \mu\text{g/L}$

Unknown

WGC

7-27-94

File >AE09Q R5199
Bpk Ab 3755.

10UL OF ISTD & SMC
SUB

I Scan 1541
21.79 min.

File NBS49K
Bpk Ab 9999.

2-Heptene

WHC-SD-WM-DP-068, REV. 0 Scan 1203
0.00 min.

File NBS49K
Bpk Ab 9999.

Cycloheptane

Scan 1195
0.00 min.

File NBS49K
Bpk Ab 9999.

Cyclopentane, 1,2-dimethyl-, trans-

Scan 1225
0.00 min.

Instrument ID: VOA-1 Analyzed on: 5/09/94 19:03
 Result 2 in PBM results file: LAE09Q
 Retention Time: 21.79 Area: 232982 Tentative Conc: 9.00
 The unknown area is 19.72% of the nearest internal standard

1. 2-Heptene	98 C7H14
2. Cycloheptane	98 C7H14
3. Cyclopentane, 1,2-dimethyl-, trans-	98 C7H14
4. Cyclopentane, 1,2-dimethyl-	98 C7H14
5. 1-Hexyn-3-ol	98 C6H10O
6. 1-Pentene, 3,4-dimethyl-	98 C7H14

WHC-SD-WM-DP-068, REV. 0

Sample file: >AE09Q Spectrum #: 1541
 Search speed: 3 Tilting option: S No. of ion ranges searched: 64

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	28*	592778	1041	NBS49K	58	38	1	-1	74	51	8	35
2.	24*	291645	9447	NBS49K	52	58	2	0	58	51	7	27
3.	23*	822504	3857	NBS49K	42	57	0	0	63	58	6	44
4.	21*	2452995	3847	NBS49K	37	59	0	0	63	59	5	34
5.	20*	105317	6138	NBS49K	22	71	3	0	291	54	5	12
6.	18*	7385786	3854	NBS49K	50	54	0	0	63	64	5	60

$$\frac{5 \text{ ml}}{5.274} (9) = 8.53 \text{ or } 9.0 \mu\text{g/L}$$

Unknown
DEW
 7-27-94

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5200

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200

Sample wt/vol: 2.842 (g/mL) G

Lab File ID: >AE09J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	18.	U
74-83-9-----	Bromomethane	18.	U
75-01-4-----	Vinyl Chloride	18.	U
75-00-3-----	Chloroethane	18.	U
75-09-2-----	Methylene Chloride	18.	U
67-64-1-----	Acetone	31.	B
75-15-0-----	Carbon Disulfide	18.	U
75-35-4-----	1,1-Dichloroethene	18.	U
75-34-3-----	1,1-Dichloroethane	18.	U
540-59-0-----	1,2-Dichloroethene (total)	18.	U
67-66-3-----	Chloroform	18.	U
107-02-2-----	1,2-Dichloroethane	18.	U
78-93-3-----	2-Butanone	18.	U
71-55-6-----	1,1,1-Trichloroethane	18.	U
56-23-5-----	Carbon Tetrachloride	18.	U
75-27-4-----	Bromodichloromethane	18.	U
78-87-5-----	1,2-Dichloropropane	18.	U
10061-01-5-----	cis-1,3-Dichloropropene	18.	U
79-01-6-----	Trichloroethene	18.	U
124-48-1-----	Dibromochloromethane	18.	U
79-00-5-----	1,1,2-Trichloroethane	18.	U
71-43-2-----	Benzene	18.	U
10061-02-6-----	trans-1,3-Dichloropropene	18.	U
75-25-2-----	Bromoform	18.	U
108-10-1-----	4-Methyl-2-pentanone	18.	U
591-78-6-----	2-Hexanone	18.	U
127-18-4-----	Tetrachloroethene	18.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	18.	U
108-88-3-----	Toluene	18.	U
108-90-7-----	Chlorobenzene	18.	U
100-41-4-----	Ethylbenzene	18.	U
100-42-5-----	Styrene	18.	U
133-02-7-----	Xylene (total)	18.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5200

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200

Sample wt/vol: 2.842 (g/mL) G

Lab File ID: >AE09J

Level: (low/med) LOW

Date Received: 05/02/94

Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

erator ID: JOY *Melissa - Aug*
Output File: ^AE09J::D2
Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 14:57
 Injected at: 940509 14:25
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.12	128.0	110635	50.00	UG/L	80
8)	ACETONE	2.55	43.0	4703	17.56	UG/L	89
9)	METHYLENE CHLORIDE	3.14	84.0	216	.0839	UG/L	99
14)	1,2-DICHLOROETHANE-d4	7.26	65.0	154342	46.03	UG/L	93
16)	*1,4-DIFLUOROBENZENE	8.30	114.0	447820	50.00	UG/L	91
29)	*CHLOROBENZENE-d5	13.92	117.0	373429	50.00	UG/L	90
31)	TOLUENE-d8	11.07	98.0	399731	48.51	UG/L	95
39)	BROMOFLUOROBENZENE	16.50	95.0	289620	46.53	UG/L	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09J::D5
 Name: R5200
 Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09J::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
 Quant Time : 940509 14:57
 Injected at: 940509 14:25

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:57
Injected at: 940509 14:25

TOTAL ION CHROMATOGRAM

Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:57
Injected at: 940509 14:25

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09J::D5
 Name: R5200
 Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09J::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
 Quant Time : 940509 14:57
 Injected at: 940509 14:25

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09J::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 14:57
Injected at: 940509 14:25

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 409
Retention Time: 6.12 min.
Quant Ion : 128.0
Area : 110635
Concentration : 50.00 UG/L
q-value : 80

Qen
6-6-94

BEST AVAILABLE COPY

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 151
Retention Time: 2.55 min.
Quant Ion : 43.0
Area : 4703M
Concentration : 17.56 UG/L
q-value : 89

Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 9
Compound Name : METHYLENE CHLORIDE
Scan Number : 194
Retention Time: 3.14 min.
Quant Ion : 84.0
Area : 216
Concentration : .0839 UG/L
q-value : 99

No
Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 14:57
Injected at: 940509 14:25
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 492
Retention Time: 7.26 min.
Quant Ion : 65.0
Area : 154342
Concentration : 46.03 UG/L
q-value : 93

REV
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 567
Retention Time: 8.30 min.
Quant Ion : 114.0
Area : 447820
Concentration : 50.00 UG/L
q-value : 91

pen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 973
Retention Time: 13.92 min.
Quant Ion : 117.0
Area : 373429
Concentration : 50.00 UG/L
q-value : 90

Den
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5
Name: R5200
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 14:57
Injected at: 940509 14:25
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 767
Retention Time: 11.07 min.
Quant Ion : 98.0
Area : 399731
Concentration : 48.51 UG/L
q-value : 95

Pen
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09J::D5

Name: R5200

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 14:57

Injected at: 940509 14:25

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09J::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1159
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 289620
Concentration : 46.53 UG/L
q-value : 90

RCN
6-6-94

MC data file header from : >AE09J::D5

7/27/94

Sample: R5200 Operator: JOY *Jelakosa - Chang* SUPER GRP. 5/09/94 14:25
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV. 0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	737298.	6.12	1.00 - 7.21
2	50.0	1052710.	8.30	7.21 - 11.11
3	50.0	1153824.	13.92	11.11 - 31.05

Dilution Factor = 1.00 This sample was 2.84200 g or mL

Correction Factor = 1.76

$$\text{Unknown Concentration} = \left| \frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}} \right| * \text{Correction Factor}$$

9:04 AM WED., 27 JULY, 1994

WHC-SD-WM-DP-068, REV. 0

File >AE09J 35.0-350.0 amu. R5200 10UL OF ISTD & SMC
CLP ADC TIC
480 520 560 600 640 680 720 760 80

. There were no Unknowns.

MS data file header from : >AE09S::D5

2/27/94

File Ren Chng

Sample: R5201 Operator: JOY SUPER GRP. 5/09/94 19:38
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

WHC-SD-WM-DP-068, REV. 0

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	420561.	6.02	1.00 - 7.14
2	50.0	537395.	8.26	7.14 - 11.09
3	50.0	574820.	13.93	11.09 - 31.05

Dilution Factor = 1.00 This sample was 3.24500 g or mL

Correction Factor = 1.54

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

9:43 AM WED., 27 JULY, 1994

.There were no unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5201

I Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5201

Sample wt/vol: 3.255 (g/mL) G

Lab File ID: >AE09S

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	15.	U
74-83-9-----	Bromomethane	15.	U
75-01-4-----	Vinyl Chloride	15.	U
75-00-3-----	Chloroethane	15.	U
75-09-2-----	Methylene Chloride	15.	U
67-64-1-----	Acetone	54.	B
75-15-0-----	Carbon Disulfide	15.	U
75-35-4-----	1,1-Dichloroethene	15.	U
75-34-3-----	1,1-Dichloroethane	15.	U
540-59-0-----	1,2-Dichloroethene (total)	15.	U
67-66-3-----	Chloroform	15.	U
107-02-2-----	1,2-Dichloroethane	15.	U
78-93-3-----	2-Butanone	15.	U
71-55-6-----	1,1,1-Trichloroethane	15.	U
56-23-5-----	Carbon Tetrachloride	15.	U
75-27-4-----	Bromodichloromethane	15.	U
78-87-5-----	1,2-Dichloropropane	15.	U
10061-01-5-----	cis-1,3-Dichloropropene	15.	U
79-01-6-----	Trichloroethene	15.	U
124-48-1-----	Dibromochloromethane	15.	U
79-00-5-----	1,1,2-Trichloroethane	15.	U
71-43-2-----	Benzene	15.	U
10061-02-6-----	trans-1,3-Dichloropropene	15.	U
75-25-2-----	Bromoform	15.	U
108-10-1-----	4-Methyl-2-pentanone	15.	U
591-78-6-----	2-Hexanone	15.	U
127-18-4-----	Tetrachloroethene	15.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15.	U
108-88-3-----	Toluene	15.	U
108-90-7-----	Chlorobenzene	15.	U
100-41-4-----	Ethylbenzene	15.	U
100-42-5-----	Styrene	15.	U
133-02-7-----	Xylene (total)	15.	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R5201

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5201

Sample wt/vol: 3.255 (g/mL) G

Lab File ID: >AE09S

Level: (low/med) LOW

Date Received: 05/02/94

Moisture: not dec.

Date Analyzed: 5/09/94

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/Kg

WHC-SD-WM-DP-068, REV. 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

erator ID: JOY *Helen Chung*
Output File: ^AE09S::D2
Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940511 08:37
 Injected at: 940509 19:38
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.02	128.0	52837	50.00	UG/L	83
8)	ACETONE	2.44	43.0	4514M	35.28	UG/I	99
14)	1,2-DICHLOROETHANE-d4	7.19	65.0	66805	41.72	UG/L	90
16)	*1,4-DIFLUOROBENZENE	8.26	114.0	218637	50.00	UG/L	95
29)	*CHLOROBENZENE-d5	13.93	117.0	168627	50.00	UG/L	98
31)	TOLUENE-d8	11.05	98.0	205254	55.16	UG/L	98
39)	BROMOFLUOROBENZENE	16.50	95.0	127782	45.46	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940511 08:37
Injected at: 940509 19:38

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940511 08:37
Injected at: 940509 19:38

TOTAL ION CHROMATOGRAM

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940511 08:37
Injected at: 940509 19:38

TOTAL ION CHROMATOGRAM

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940511 08:37
Injected at: 940509 19:38

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940511 08:37
Injected at: 940509 19:38

Page 5 of 5

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Handwritten signature
8/25/94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC
Quant Time: 940511 08:37
Injected at: 940509 19:38
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 398
Retention Time: 6.02 min.
Quant Ion : 128.0
Area : 52837
Concentration : 50.00 UG/L
q-value : 83

Pen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5

Name: R5201

Misc: 10UL OF ISTD & SMC

Quant Time: 940511 08:37

Injected at: 940509 19:38

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 139
Retention Time: 2.44 min.
Quant Ion : 43.0
Area : 4514M
Concentration : 35.28 UG/L
q-value : 99

Don
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5	Quant Output File: ^AE09S::D2
Name: R5201	Instrument ID: VOA-1
Misc: 10UL OF ISTD & SMC	Instrument ID: 70 2
Quant Time: 940511 08:37	Quant ID File: ID VOA::QT
Injected at: 940509 19:38	Last Calibration: 940330 15:10
Last Qcal Time: 940509 08:27	

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 483
Retention Time: 7.19 min.
Quant Ion : 65.0
Area : 66805
Concentration : 41.72 UG/L
q-value : 90

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5

Name: R5201

Misc: 10UL OF ISTD & SMC

Quant Time: 940511 08:37

Injected at: 940509 19:38

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 560
Retention Time: 8.26 min.
Quant Ion : 114.0
Area : 218637
Concentration : 50.00 UG/L
q-value : 95

Wen
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5
Name: R5201
Misc: 10UL OF ISTD & SMC
Quant Time: 940511 08:37
Injected at: 940509 19:38
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 970
Retention Time: 13.93 min.
Quant Ion : 117.0
Area : 168627
Concentration : 50.00 UG/L
q-value : 98

Dem
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5

Name: R5201

Misc: 10UL OF ISTD & SMC

Quant Time: 940511 08:37

Injected at: 940509 19:38

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 31

Compound Name : TOLUENE-d8

Scan Number : 762

Retention Time: 11.05 min.

Quant Ion : 98.0

Area : 205254

Concentration : 55.16 UG/L

q-value : 98

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09S::D5

Name: R5201

Misc: 10UL OF ISTD & SMC

Quant Time: 940511 08:37

Injected at: 940509 19:38

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09S::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1156
Retention Time: 16.50 min.
Quant Ion : 95.0
Area : 127782
Concentration : 45.46 UG/L
q-value : 99

Den
6-6-94

6A - RCRA
VOLATILE ORGANICS INITIAL CALIBRATION DATA

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Instrument ID: 70 2 Calibration Date(s): 03/30/94 03/30/94

Heated Purge: (Y/N) N Calibration Times: 1005 1426

GC Column: DB-624 ID: 0.53 (mm)

LAB FILE ID:		RRF10 =>AC30C		RRF20 =>AC30D				
RRF50 =>AC30E		RRF100=>AC30F		RRF200=>AC30G				
COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane	#	.835	.789	.772	.696	.662	.751	9.4#
Bromomethane		1.315	1.296	1.258	1.180	1.094	1.229	7.4
Vinyl Chloride	*	.919	.912	.905	.844	.836	.883	4.5*
Chloroethane		.493	.475	.464	.457	.426	.463	5.4
Methylene Chloride		1.115	1.138	1.079	1.049	1.004	1.077	4.9
Acetone		.481	.510	.510	.470	.487	.492	3.6
Carbon Disulfide		2.766	2.906	2.875	2.882	2.809	2.848	2.0
1,1-Dichloroethene	*	1.078	1.054	1.032	1.018	.947	1.026	4.8*
1,1-Dichloroethane	#	1.851	1.857	1.898	1.866	1.843	1.863	1.2#
1,2-Dichloroethene (total)		1.178	1.139	1.131	1.144	1.126	1.144	1.8
Chloroform	*	2.338	2.437	2.404	2.403	2.373	2.391	1.6*
1,2-Dichloroethane		1.379	1.429	1.470	1.470	1.474	1.444	2.8
2-Butanone		.690	.723	.755	.735	.809	.742	5.9
1,1,1-Trichloroethane		.511	.538	.538	.558	.532	.535	3.2
Carbon Tetrachloride		.482	.511	.533	.559	.545	.526	5.7
Bromodichloromethane		.586	.637	.667	.699	.676	.653	6.7
1,2-Dichloropropane	*	.315	.336	.348	.339	.319	.332	4.2*
cis-1,3-Dichloropropene		.451	.476	.504	.533	.518	.497	6.6
Trichloroethene		.424	.409	.418	.424	.410	.417	1.7
Dibromochloromethane		.611	.671	.725	.770	.748	.705	9.1
1,1,2-Trichloroethane		.346	.354	.368	.370	.356	.359	2.9
Benzene		.707	.725	.724	.738	.697	.718	2.3
trans-1,3-Dichloropropene		.381	.425	.456	.486	.470	.444	9.4
Bromoform	#	.466	.537	.603	.639	.652	.579	13.3#
4-Methyl-2-pentanone		.363	.401	.426	.423	.442	.411	7.4
2-Hexanone		.373	.410	.439	.438	.470	.426	8.6
Tetrachloroethene		.495	.504	.491	.532	.505	.505	3.2
1,1,2,2-Tetrachloroethane	#	.686	.750	.752	.819	.816	.765	7.2#
Toluene	*	1.066	1.093	1.095	1.137	1.112	1.101	2.4*
Chlorobenzene	#	.925	.935	.975	1.002	.977	.963	3.3#
Ethylbenzene	*	.371	.375	.382	.401	.389	.384	3.1*
Styrene		.705	.756	.780	.813	.812	.773	5.8
Xylene (total)		.421	.451	.447	.479	.469	.453	5.0
Toluene-d8		1.019	1.055	1.022	1.097	1.085	1.056	3.4
Bromofluorobenzene		.735	.782	.758	.820	.796	.778	4.2
1,2-Dichloroethane-d4		1.281	1.237	1.266	1.283	1.259	1.265	1.5

* - CCC Compounds must meet a maximum %RSD of 30%

- SPCC compounds must meet a minimum RRF of 0.3 (Bromoform = 0.25)

FORM VI VOA

3/31/94

QUANT REPORT

Page 1

erator ID: JOY *Julia Rosa - Cheng*
 Output File: ^AC30C::D2
 Data File: >AC30C::D5
 Name: VSTD010 5PT CAL
 Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 13:38
 Injected at: 940330 10:05
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

ID File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.40	128.0	122451	50.00	UG/L	82
2)	CHLOROMETHANE	1.01	50.0	20472	10.82	UG/L	98
3)	VINYL CHLORIDE	1.15	62.0	22202	10.17	UG/L	99
4)	BROMOMETHANE	1.43	94.0	31815	10.45	UG/L	98
5)	CHLOROETHANE	1.54	64.0	12241	10.63	UG/L	96
6)	1,1-DICHLOROETHENE	2.48	96.0	26396	10.45	UG/L	73
7)	CARBON DISULFIDE	2.66	76.0	67745	9.62	UG/L	97
8)	ACETONE	2.70	43.0	11778	9.43	UG/L	84
9)	METHYLENE CHLORIDE	3.37	84.0	27294	10.33	UG/L	80
10)	1,2-DICHLOROETHENE (TOTAL)	5.96	96.0	57691M-JC	20.83	UG/L	69
11)	1,1-DICHLOROETHANE	4.72	63.0	45320	9.75	UG/L	98
12)	2-BUTANONE	6.18	43.0	16898	9.13	UG/L	100
13)	CHLOROFORM	6.73	83.0	57259	9.73	UG/L	95
14)	1,2-DICHLOROETHANE-d4	7.54	65.0	31362	10.12	UG/L	90
15)	1,2-DICHLOROETHANE	7.69	62.0	33775	9.38	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.56	114.0	442718	50.00	UG/L	88
17)	VINYL ACETATE	5.11	43.0	36239	8.60	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.83	97.0	45216	9.49	UG/L	99
19)	CARBON TETRACHLORIDE	7.15	117.0	42701	9.04	UG/L	96
20)	BENZENE	7.57	78.0	62583	9.76	UG/L	100
21)	TRICHLOROETHENE	8.91	130.0	37519	10.15	UG/L	98
22)	1,2-DICHLOROPROPANE	9.31	63.0	27916	9.05	UG/L	95
23)	BROMODICHLOROMETHANE	10.01	83.0	51912	8.79	UG/L	94
24)	CIS-1,3-DICHLOROPROPENE	10.89	75.0	39945	8.95	UG/L	98
25)	TRANS-1,3-DICHLOROPROPENE	12.08	75.0	33768	8.36	UG/L	94
26)	1,1,2-TRICHLOROETHANE	12.38	97.0	30601	9.40	UG/L	93
27)	DIBROMOCHLOROMETHANE	13.07	129.0	54084	8.42	UG/L	99
28)	BROMOFORM	15.95	173.0	41310	7.74	UG/L	99
29)	*CHLOROBENZENE-d5	14.16	117.0	358769	50.00	UG/L	87
30)	4-METHYL-2-PENTANONE	11.36	43.0	26063	8.53	UG/L	99
31)	TOLUENE-d8	11.32	98.0	73135	9.97	UG/L	95
32)	TOLUENE	11.43	91.0	76522	9.74	UG/L	97
33)	TETRACHLOROETHENE	12.46	164.0	35501	10.08	UG/L	99
34)	2-HEXANONE	13.08	43.0	26747	8.50	UG/L	86
35)	CHLOROBENZENE	14.22	112.0	66351	9.48	UG/L	96
36)	ETHYLBENZENE	14.57	106.0	26634	9.72	UG/L	96
37)	XYLENE (TOTAL)	14.84	106.0	90534M-JC	28.21	UG/L	97
38)	STYRENE	15.69	104.0	50605	9.04	UG/L	93
39)	BROMOFLUOROBENZENE	16.71	95.0	52727	9.69	UG/L	94
40)	1,1,2,2-TETRACHLOROETHANE	17.27	83.0	49218	9.12	UG/L	90

QUANT' REPORT

Page 2

Operator ID: JOY
Output File: ^AC30C::D2
Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 13:38
 Injected at: 940330 10:05
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	1,3-DICHLOROBENZENE	18.99	146.0	60396	9.23	UG/L	100
42)	1,4-DICHLOROBENZENE	19.21	146.0	63101	9.17	UG/L	100
43)	1,2-DICHLOROBENZENE	19.97	146.0	60260	9.37	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:38
Injected at: 940330 10:05

TOTAL ION CHROMATOGRAM

File >AC30C 35.0-350.0 amu. VSTD010 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:38
Injected at: 940330 10:05

TOTAL ION CHROMATOGRAM

File >AC30C 35.0-350.0 amu. VSTD010 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:38
Injected at: 940330 10:05

TOTAL ION CHROMATOGRAM

Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:38
Injected at: 940330 10:05

TOTAL ION CHROMATOGRAM

Data File: >AC30C::D5
Name: VSTD010 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:38
Injected at: 940330 10:05

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3/21/94

QUANT REPORT

Page 1

Operator ID: JOY *Jed Rose - Chr*
 Output File: ^AC30D::D2
 Data File: >AC30D::D5
 Name: VSTD020 5PT CAL
 Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 13:43
 Injected at: 940330 10:50
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

ID File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.36	128.0	115515	50.00	UG/L	82
2)	CHLOROMETHANE	1.01	50.0	36511	20.46	UG/L	96
3)	VINYL CHLORIDE	1.15	62.0	41523	20.16	UG/L	94
4)	BROMOMETHANE	1.41	94.0	59184	20.61	UG/L	99
5)	CHLOROETHANE	1.52	64.0	22255	20.49	UG/L	98
6)	1,1-DICHLOROETHENE	2.47	96.0	48707	20.43	UG/L	82
7)	CARBON DISULFIDE	2.63	76.0	134276	20.22	UG/L	99
8)	ACETONE	2.69	43.0	23574	20.02	UG/L	88
9)	METHYLENE CHLORIDE	3.34	84.0	52583 <i>3/21/94</i>	21.09	UG/L	79
10)	1,2-DICHLOROETHENE (TOTAL)	5.93	96.0	105258 <i>MJC</i>	40.29	UG/L	74
11)	1,1-DICHLOROETHANE	4.70	63.0	85825	19.57	UG/L	96
12)	2-BUTANONE	6.14	43.0	33399	19.13	UG/L	100
13)	CHLOROFORM	6.70	83.0	112621	20.28	UG/L	99
14)	1,2-DICHLOROETHANE-d4	7.51	65.0	57138	19.54	UG/L	88
15)	1,2-DICHLOROETHANE	7.66	62.0	66037	19.45	UG/L	9
16)	*1,4-DIFLUOROBENZENE	8.53	114.0	416179	50.00	UG/L	88
17)	VINYL ACETATE	5.08	43.0	73989	18.67	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.82	97.0	89512	19.99	UG/L	98
19)	CARBON TETRACHLORIDE	7.11	117.0	85101	19.17	UG/L	97
20)	BENZENE	7.52	78.0	120732	20.02	UG/L	100
21)	TRICHLOROETHENE	8.88	130.0	68144	19.61	UG/L	99
22)	1,2-DICHLOROPROPANE	9.28	63.0	55997	19.31	UG/L	99
23)	BROMODICHLOROMETHANE	9.98	83.0	106061	19.10	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	10.86	75.0	79262	18.89	UG/L	99
25)	TRANS-1,3-DICHLOROPROPENE	12.06	75.0	70712	18.62	UG/L	94
26)	1,1,2-TRICHLOROETHANE	12.36	97.0	58882	19.23	UG/L	91
27)	DIBROMOCHLOROMETHANE	13.04	129.0	111628	18.49	UG/L	99
28)	BROMOFORM	15.94	173.0	89355	17.81	UG/L	97
29)	*CHLOROBENZENE-d5	14.15	117.0	340464	50.00	UG/L	88
30)	4-METHYL-2-PENTANONE	11.35	43.0	54570	18.83	UG/L	98
31)	TOLUENE-d8	11.28	98.0	143637	20.64	UG/L	93
32)	TOLUENE	11.41	91.0	148796	19.95	UG/L	96
33)	TETRACHLOROETHENE	12.45	164.0	68656	20.53	UG/L	98
34)	2-HEXANONE	13.06	43.0	55887	18.71	UG/L	95
35)	CHLOROBENZENE	14.19	112.0	127298	19.17	UG/L	97
36)	ETHYLBENZENE	14.55	106.0	51097 <i>3/21/94</i>	19.65	UG/L	98
37)	XYLENE (TOTAL)	14.83	106.0	184046 <i>MJC</i>	60.42	UG/L	96
38)	STYRENE	15.67	104.0	102982	19.38	UG/L	90
39)	BROMOFLUOROBENZENE	16.70	95.0	106557	20.64	UG/L	97
40)	1,1,2,2-TETRACHLOROETHANE	17.25	83.0	102119	19.95	UG/L	94

QUANT REPORT

Page 2

Operator ID: JOY
Output File: ^AC30D::D2
Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 13:43
 Injected at: 940330 10:50
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	1,3-DICHLOROBENZENE	18.97	146.0	118873	19.14	UG/L	100
42)	1,4-DICHLOROBENZENE	19.21	146.0	124626	19.08	UG/L	100
43)	1,2-DICHLOROBENZENE	19.96	146.0	117225	19.21	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:43
Injected at: 940330 10:50

TOTAL ION CHROMATOGRAM

File >AC30D 35.0-350.0 amu. VSTD020 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:43
Injected at: 940330 10:50

Page 2 of 5

TOTAL ION CHROMATOGRAM

File >AC30D 35.0-350.0 amu. VSTD020 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:43
Injected at: 940330 10:50

TOTAL ION CHROMATOGRAM

Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:43
Injected at: 940330 10:50

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TOTAL ION CHROMATOGRAM

Data File: >AC30D::D5
Name: VSTD020 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS

Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 13:43
Injected at: 940330 10:50

3/31/94
Operator ID: JOY *Johannes - Aug*
Output File: ^AC30E::D2
Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

QUANT REPORT

Page 1

Quant Rev: 7 Quant Time: 940330 11:59
Injected at: 940330 11:28
Dilution Factor: 1.00000
Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940329 09:52

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.37	128.0	116726	50.00	UG/L	80
2)	CHLOROMETHANE	1.01	50.0	90163	74.76	UG/L	97
3)	VINYL CHLORIDE	1.16	62.0	104083	65.87	UG/L	98
4)	BROMOMETHANE	1.43	94.0	145084	58.23	UG/L	98
5)	CHLOROETHANE	1.54	64.0	54877	55.34	UG/L	99
6)	1,1-DICHLOROETHENE	2.50	96.0	120427	49.16	UG/L	86
7)	CARBON DISULFIDE	2.68	76.0	335578	52.25	UG/L	99
8)	ACETONE	2.72	43.0	59499	54.45	UG/L	84
9)	METHYLENE CHLORIDE	3.35	84.0	125944	49.15	UG/L	85
10)	1,2-DICHLOROETHENE (TOTAL)	5.95	96.0	263991MJC	96.58	UG/L	76
11)	1,1-DICHLOROETHANE	4.71	63.0	221588	50.19	UG/L	99
12)	2-BUTANONE	6.18	43.0	88188	52.02	UG/L	100
13)	CHLOROFORM	6.72	83.0	280548	48.68	UG/L	98
14)	1,2-DICHLOROETHANE-d4	7.53	65.0	147712	50.24	UG/L	93
15)	1,2-DICHLOROETHANE	7.68	62.0	171568	50.39	UG/L	99
16)	*1,4-DIFLUOROBENZENE	8.55	114.0	415616	50.00	UG/L	90
17)	VINYL ACETATE	5.10	43.0	197837	48.00	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.82	97.0	223577	49.36	UG/L	98
19)	CARBON TETRACHLORIDE	7.12	117.0	221611	50.28	UG/L	95
20)	BENZENE	7.54	78.0	301114	50.23	UG/L	100
21)	TRICHLOROETHENE	8.90	130.0	173499	49.25	UG/L	97
22)	1,2-DICHLOROPROPANE	9.29	63.0	144767	50.41	UG/L	96
23)	BROMODICHLOROMETHANE	9.98	83.0	277317	50.01	UG/L	96
24)	CIS-1,3-DICHLOROPROPENE	10.87	75.0	209548	49.64	UG/L	98
25)	TRANS-1,3-DICHLOROPROPENE	12.06	75.0	189637	50.80	UG/L	98
26)	1,1,2-TRICHLOROETHANE	12.37	97.0	152873	49.41	UG/L	99
27)	DIBROMOCHLOROMETHANE	13.05	129.0	301384	49.85	UG/L	98
28)	BROMOFORM	15.93	173.0	250481	51.27	UG/L	98
29)	*CHLOROBENZENE-d5	14.14	117.0	346564	50.00	UG/L	86
30)	4-METHYL-2-PENTANONE	11.35	43.0	147528	53.57	UG/L	90
31)	TOLUENE-d8	11.30	98.0	354220	49.10	UG/L	96
32)	TOLUENE	11.42	91.0	379628	49.11	UG/L	96
33)	TETRACHLOROETHENE	12.45	164.0	170167	48.05	UG/L	95
34)	2-HEXANONE	13.06	43.0	152030	51.26	UG/L	93
35)	CHLOROBENZENE	14.20	112.0	337916	50.76	UG/L	95
36)	ETHYLBENZENE	14.54	106.0	132344	49.34	UG/L	97
37)	XYLENE (TOTAL)	14.82	106.0	465072MJC	149.01	UG/L	98
38)	STYRENE	15.67	104.0	270426	47.71	UG/L	93
39)	BROMOFLUOROBENZENE	16.69	95.0	262749	48.60	UG/L	90
40)	1,1,2,2-TETRACHLOROETHANE	17.25	83.0	260516	48.12	UG/L	94

QUANT REPORT

Page 2

Operator ID: JOY
Output File: ^AC30E::D2
Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 11:59
 Injected at: 940330 11:28
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	1,3-DICHLOROBENZENE	18.98	146.0	316030	50.44	UG/L	100
42)	1,4-DICHLOROBENZENE	19.20	146.0	332393	51.27	UG/L	100
43)	1,2-DICHLOROBENZENE	19.95	146.0	310632	50.31	UG/L	100

* Compound is ISTD

WHC-SD-WM-DP-068, REV. 0

TOTAL ION CHROMATOGRAM

Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

Operator ID: JOY
Quant Time : 940330 11:59
Injected at: 940330 11:28

TOTAL ION CHROMATOGRAM

Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

Operator ID: JOY
Quant Time : 940330 11:59
Injected at: 940330 11:28

TOTAL ION CHROMATOGRAM

Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

Operator ID: JOY
Quant Time : 940330 11:59
Injected at: 940330 11:28

TOTAL ION CHROMATOGRAM

Data File: >AC30E::D5
 Name: VSTD050 5PT CAL
 Misc: 10 UL OF ISTD

Quant Output File: ^AC30E::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

Operator ID: JOY
 Quant Time : 940330 11:59
 Injected at: 940330 11:28

TOTAL ION CHROMATOGRAM

Data File: >AC30E::D5
Name: VSTD050 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30E::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940329 09:52

Operator ID: JOY
Quant Time : 940330 11:59
Injected at: 940330 11:28

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QUANT REPORT

Page 1

Operator ID: JOY *Jade Rose, Gary*
 Output File: ^AC30F::D2
 Data File: >AC30F::D5
 Name: VSTD100 5PT CAL
 Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 14:19
 Injected at: 940330 13:47
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

ID File: ID_VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.35	128.0	114962	50.00	UG/L	83
2)	CHLOROMETHANE	1.03	50.0	160138	90.17	UG/L	97
3)	VINYL CHLORIDE	1.17	62.0	191175	93.25	UG/L	94
4)	BROMOMETHANE	1.42	94.0	268000	93.78	UG/L	97
5)	CHLOROETHANE	1.53	64.0	106350	98.39	UG/L	99
6)	1,1-DICHLOROETHENE	2.47	96.0	234138	98.70	UG/L	82
7)	CARBON DISULFIDE	2.64	76.0	662667	100.25	UG/L	99
8)	ACETONE	2.71	43.0	108134	92.26	UG/L	90
9)	METHYLENE CHLORIDE	3.33	84.0	241115	97.19	UG/L	84
10)	1,2-DICHLOROETHENE (TOTAL)	5.91	96.0	525938	202.28	UG/L	68
11)	1,1-DICHLOROETHANE	4.68	63.0	429120	98.31	UG/L	98
12)	2-BUTANONE	6.16	43.0	169031	97.31	UG/L	100
13)	CHLOROFORM	6.70	83.0	552577	99.99	UG/L	96
14)	1,2-DICHLOROETHANE-d4	7.50	65.0	294900	101.35	UG/L	90
15)	1,2-DICHLOROETHANE	7.66	62.0	337940	100.00	UG/L	91
16)	*1,4-DIFLUOROBENZENE	8.53	114.0	405737	50.00	UG/L	90
17)	VINYL ACETATE	5.08	43.0	392272	101.55	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.80	97.0	452732	103.71	UG/L	98
19)	CARBON TETRACHLORIDE	7.10	117.0	453176	104.74	UG/L	97
20)	BENZENE	7.52	78.0	598913	101.87	UG/L	100
21)	TRICHLOROETHENE	8.88	130.0	343705	101.46	UG/L	95
22)	1,2-DICHLOROPROPANE	9.27	63.0	274891	97.25	UG/L	98
23)	BROMODICHLOROMETHANE	9.96	83.0	567450	104.80	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	10.86	75.0	432322	105.67	UG/L	98
25)	TRANS-1,3-DICHLOROPROPENE	12.05	75.0	394724	106.61	UG/L	99
26)	1,1,2-TRICHLOROETHANE	12.36	97.0	300603	100.71	UG/L	97
27)	DIBROMOCHLOROMETHANE	13.04	129.0	624993	106.21	UG/L	99
28)	BROMOFORM	15.93	173.0	518275	105.97	UG/L	98
29)	*CHLOROBENZENE-d5	14.14	117.0	328410	50.00	UG/L	89
30)	4-METHYL-2-PENTANONE	11.35	43.0	278077	99.46	UG/L	94
31)	TOLUENE-d8	11.28	98.0	720686	107.35	UG/L	95
32)	TOLUENE	11.40	91.0	746612	103.77	UG/L	97
33)	TETRACHLOROETHENE	12.44	164.0	349383	108.33	UG/L	99
34)	2-HEXANONE	13.05	43.0	287620	99.82	UG/L	89
35)	CHLOROBENZENE	14.19	112.0	658050	102.75	UG/L	97
36)	ETHYLBENZENE	14.55	106.0	263335	104.99	UG/L	99
37)	XYLENE (TOTAL)	14.82	106.0	944022	321.31	UG/L	92
38)	STYRENE	15.66	104.0	533718	104.14	UG/L	93
39)	BROMOFLUOROBENZENE	16.69	95.0	538552	108.15	UG/L	91
40)	1,1,2,2-TETRACHLOROETHANE	17.24	83.0	537927	108.95	UG/L	99

QUANT REPORT

Page 2

Operator ID: JOY
Output File: ^AC30F::D2
Data File: >AC30F::D5
Name: VSTD100 5PT CAL
Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 14:19
 Injected at: 940330 13:47
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	1,3-DICHLOROBENZENE	18.98	146.0	644317	107.57	UG/L	100
42)	1,4-DICHLOROBENZENE	19.20	146.0	660146	104.79	UG/L	100
43)	1,2-DICHLOROBENZENE	19.96	146.0	624488	106.08	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AC30F::D5
 Name: VSTD100 5PT CAL
 Misc: 10 UL OF ISTD

Quant Output File: ^AC30F::D2
 Instrument ID: VOA-1
 Instrument ID: 70 2

Id File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
 Quant Time : 940330 14:19
 Injected at: 940330 13:47

TOTAL ION CHROMATOGRAM

File >AC30F 35.0-350.0 amu. VSTD100 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30F::D5
Name: VSTD100 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:19
Injected at: 940330 13:47

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TOTAL ION CHROMATOGRAM

Data File: >AC30F::D5
Name: VSTD100 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:19
Injected at: 940330 13:47

TOTAL ION CHROMATOGRAM

Data File: >AC30F::D5
Name: VSTD100 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:19
Injected at: 940330 13:47

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AC30F::D5
Name: VSTD100 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30F::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:19
Injected at: 940330 13:47

3/31/94

QUANT REPORT

Page 1

Operator ID: JOY *JdeleRox - Chas*
 Output File: ^AC30G::D2
 Data File: >AC30G::D5
 Name: VSTD200 5PT CAL
 Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 14:58
 Injected at: 940330 14:26
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

ID File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.38	128.0	117680	50.00	UG/L	82
2)	CHLOROMETHANE	1.04	50.0	312084	171.66	UG/L	96
3)	VINYL CHLORIDE	1.18	62.0	387720	184.75	UG/L	98
4)	BROMOMETHANE	1.43	94.0	508983	173.99	UG/L	95
5)	CHLOROETHANE	1.54	64.0	203075	183.53	UG/L	98
6)	1,1-DICHLOROETHENE	2.48	96.0	445891	183.63	UG/L	86
7)	CARBON DISULFIDE	2.66	76.0	1322189	195.40	UG/L	98
8)	ACETONE	2.75	43.0	229336	191.16	UG/L	87
9)	METHYLENE CHLORIDE	3.36	84.0	472757	186.16	UG/L	90
10)	1,2-DICHLOROETHENE (TOTAL)	5.94	96.0	1060089	398.31	UG/L	78
11)	1,1-DICHLOROETHANE	4.70	63.0	867346	194.12	UG/L	99
12)	2-BUTANONE	6.20	43.0	380711	214.10	UG/L	100
13)	CHLOROFORM	6.71	83.0	1116866	197.44	UG/L	96
14)	1,2-DICHLOROETHANE-d4	7.53	65.0	592392	198.90	UG/L	93
15)	1,2-DICHLOROETHANE	7.67	62.0	693650	200.51	UG/L	99
16)	*1,4-DIFLUOROBENZENE	8.54	114.0	432107	50.00	UG/L	89
17)	VINYL ACETATE	5.10	43.0	832628	202.40	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.82	97.0	920100	197.92	UG/L	98
19)	CARBON TETRACHLORIDE	7.12	117.0	941796	204.38	UG/L	99
20)	BENZENE	7.55	78.0	1205301	192.50	UG/L	100
21)	TRICHLOROETHENE	8.89	130.0	707958	196.24	UG/L	98
22)	1,2-DICHLOROPROPANE	9.29	63.0	551782	183.30	UG/L	96
23)	BROMODICHLOROMETHANE	9.97	83.0	1168646	202.66	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	10.86	75.0	895540	205.53	UG/L	96
25)	TRANS-1,3-DICHLOROPROPENE	12.05	75.0	812064	205.94	UG/L	99
26)	1,1,2-TRICHLOROETHANE	12.36	97.0	614796	193.41	UG/L	98
27)	DIBROMOCHLOROMETHANE	13.04	129.0	1292934	206.31	UG/L	97
28)	BROMOFORM	15.93	173.0	1126780	216.34	UG/L	96
29)	*CHLOROBENZENE-d5	14.15	117.0	343537	50.00	UG/L	88
30)	4-METHYL-2-PENTANONE	11.36	43.0	606837	207.43	UG/L	94
31)	TOLUENE-d8	11.29	98.0	1490637	212.27	UG/L	94
32)	TOLUENE	11.40	91.0	1527856	203.00	UG/L	92
33)	TETRACHLOROETHENE	12.44	164.0	694100	205.74	UG/L	95
34)	2-HEXANONE	13.05	43.0	646455	214.48	UG/L	94
35)	CHLOROBENZENE	14.19	112.0	1343071	200.48	UG/L	97
36)	ETHYLBENZENE	14.55	106.0	534086	203.56	UG/L	85
37)	XYLENE (TOTAL)	14.83	106.0	1935175	629.65	UG/L	
38)	STYRENE	15.66	104.0	1115235	208.02	UG/L	92
39)	BROMOFLUOROBENZENE	16.69	95.0	1093315	209.89	UG/L	92
40)	1,1,2,2-TETRACHLOROETHANE	17.25	83.0	1121614	217.16	UG/L	99

QUANT REPORT

Page 2

Operator ID: JOY
Output File: ^AC30G::D2
Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Rev: 7 Quant Time: 940330 14:58
 . Injected at: 940330 14:26
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940330 11:28

	Compound	R.T.	Q ion	Area	Conc	Units	q
41)	1,3-DICHLOROBENZENE	18.98	146.0	1315763	210.00	UG/L	100
42)	1,4-DICHLOROBENZENE	19.21	146.0	1366877	207.42	UG/L	100
43)	1,2-DICHLOROBENZENE	19.96	146.0	1295132	210.30	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:58
Injected at: 940330 14:26

TOTAL ION CHROMATOGRAM

File >AC306 35.0-350.0 amu. VSTD200 5PT CAL 10 UL OF ISTD
TIC

Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:58
Injected at: 940330 14:26

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:58
Injected at: 940330 14:26

TOTAL ION CHROMATOGRAM

Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:58
Injected at: 940330 14:26

TOTAL ION CHROMATOGRAM

Data File: >AC30G::D5
Name: VSTD200 5PT CAL
Misc: 10 UL OF ISTD

Quant Output File: ^AC30G::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940324 07:46

Last Qcal Time: 940330 11:28

Operator ID: JOY
Quant Time : 940330 14:58
Injected at: 940330 14:26

7A - RCRA
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: WHC PAL Contract:
Lab Code: Case No.: SAS No.: SDG No.: R5185
Instrument ID: 70 2 Calibration Date: 5/06/94 Time: 9:09
Lab File ID: >AE06C Init. Calib. Date(s): 03/30/94 03/30/94
Heated Purge: (Y/N) N Init. Calib. Times: 1005 1426
GC Column: DB-624 ID: 0.53 (mm) WHC-SD-WM-DP-068, REV. 0

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	# .751	.688	0.300	8.3	
Bromomethane	1.229	1.115		9.3	
Vinyl Chloride	* .883	.834		5.5	25.0
Chloroethane	.463	.480		3.6	
Methylene Chloride	1.077	1.040		3.4	
Acetone	.492	.090		81.6	
Carbon Disulfide	2.848	2.810		1.3	
1,1-Dichloroethene	* 1.026	1.050		2.4	25.0
1,1-Dichloroethane	# 1.863	1.929	0.300	3.5	
1,2-Dichloroethene (total)	1.144	1.154		.9	
Chloroform	* 2.391	2.510		5.0	25.0
1,2-Dichloroethane	1.444	1.609		11.4	
2-Butanone	.742	.164		77.9	
1,1,1-Trichloroethane	.535	.549		2.6	
Carbon Tetrachloride	.526	.540		2.6	
Bromodichloromethane	.653	.638		2.3	
1,2-Dichloropropane	* .332	.303		8.6	25.0
cis-1,3-Dichloropropene	.497	.488		1.7	
Trichloroethene	.417	.379		9.0	
Dibromochloromethane	.705	.655		7.1	
1,1,2-Trichloroethane	.359	.338		5.7	
Benzene	.718	.679		5.5	
trans-1,3-Dichloropropene	.444	.452		1.9	
Bromoform	# .579	.533	0.250	8.0	
4-Methyl-2-pentanone	.411	.326		20.7	
2-Hexanone	.426	.200		53.0	
Tetrachloroethene	.505	.487		3.7	
1,1,2,2-Tetrachloroethane	# .765	.695	0.300	9.1	
Toluene	* 1.101	1.039		5.6	25.0
Chlorobenzene	# .963	.896	0.300	6.9	
Ethylbenzene	* .384	.388		1.1	25.0
Styrene	.773	.803		3.9	
Xylene (total)	.453	.453		.1	
Toluene-d8	1.056	1.052		.3	
Bromofluorobenzene	.778	.795		2.2	
1,2-Dichloroethane-d4	1.265	1.427		12.8	

* - CCC (Max %D = 25) # SPCC (Min RRF = 0.3 (Bromoform 0.25))

FORM VII VOA

QUANT REPORT

Page 1

6/6/94

erator ID: JOY *John Rose - Rang*
 Output File: ^AE06C::D2
 Data File: >AE06C::D5
 Name: VSTD050
 Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940506 09:41
 Injected at: 940506 09:09
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

WHC-SD-WM-DP-068, REV. 0

ID File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.08	128.0	132999	50.00	UG/L	83
2)	CHLOROMETHANE	.95	50.0	91531	52.10	UG/L	98
3)	VINYL CHLORIDE	1.07	62.0	110972	51.39	UG/L	99
4)	BROMOMETHANE	1.32	94.0	148268	47.08	UG/L	99
5)	CHLOROETHANE	1.43	64.0	63835	49.34	UG/L	99
6)	1,1-DICHLOROETHENE	2.31	96.0	139718	51.66	UG/L	90
7)	CARBON DISULFIDE	2.46	76.0	373775	51.46	UG/L	99
8)	ACETONE	2.51	43.0	12017	31.43	UG/L	86
9)	METHYLENE CHLORIDE	3.11	84.0	138334	49.97	UG/L	86
10)	1,2-DICHLOROETHENE (TOTAL)	3.55	96.0	306923	100.39	UG/L	82
11)	1,1-DICHLOROETHANE	4.40	63.0	256528	49.53	UG/L	96
12)	2-BUTANONE	5.87	43.0	21873	27.56	UG/L	100
13)	CHLOROFORM	6.41	83.0	333890	50.58	UG/L	99
4)	1,2-DICHLOROETHANE-d4	7.24	65.0	189784	50.60	UG/L	95
5)	1,2-DICHLOROETHANE	7.39	62.0	214047	50.57	UG/L	99
16)	*1,4-DIFLUOROBENZENE	8.27	114.0	520871	50.00	UG/L	88
17)	VINYL ACETATE	4.79	43.0	221551	49.60	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.52	97.0	286137	50.00	UG/L	96
19)	CARBON TETRACHLORIDE	6.83	117.0	281071	50.06	UG/L	99
20)	BENZENE	7.24	78.0	353633	50.32	UG/L	100
21)	TRICHLOROETHENE	8.62	130.0	197450	49.26	UG/L	95
22)	1,2-DICHLOROPROPANE	9.01	63.0	157797	50.27	UG/L	97
23)	BROMODICHLOROMETHANE	9.70	83.0	332306	50.38	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	10.60	75.0	254294	48.64	UG/L	98
25)	TRANS-1,3-DICHLOROPROPENE	11.81	75.0	235527	49.53	UG/L	98
26)	1,1,2-TRICHLOROETHANE	12.12	97.0	176132	48.85	UG/L	93
27)	DIBROMOCHLOROMETHANE	12.80	129.0	341126	47.30	UG/L	99
28)	BROMOFORM	15.69	173.0	277712	46.72	UG/L	96
29)	*CHLOROBENZENE-d5	13.91	117.0	413525	50.00	UG/L	95
30)	4-METHYL-2-PENTANONE	11.09	43.0	134769	49.15	UG/L	91
31)	TOLUENE-d8	11.03	98.0	435013	50.42	UG/L	98
32)	TOLUENE	11.16	91.0	429458	48.78	UG/L	97
33)	TETRACHLOROETHENE	12.19	164.0	201184	51.68	UG/L	99
34)	2-HEXANONE	12.82	43.0	82727	43.82	UG/L	91
35)	CHLOROBENZENE	13.95	112.0	370690	49.25	UG/L	97
36)	ETHYLBENZENE	14.31	106.0	160404	50.28	UG/L	99
37)	XYLENE (TOTAL)	14.59	106.0	561630	148.22	UG/L	98
38)	STYRENE	15.43	104.0	332229	51.06	UG/L	96
39)	BROMOFLUOROBENZENE	16.47	95.0	328871	50.28	UG/L	97
40)	1,1,2,2-TETRACHLOROETHANE	17.03	83.0	287281	49.83	UG/L	99

Compound is ISTD

408

TOTAL ION CHROMATOGRAM

Data File: >AE06C::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

Operator ID: JOY
Quant Time : 940506 09:41
Injected at: 940506 09:09

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06C::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

Operator ID: JOY
Quant Time : 940506 09:41
Injected at: 940506 09:09

TOTAL ION CHROMATOGRAM

Data File: >AE06C::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

Operator ID: JOY
Quant Time : 940506 09:41
Injected at: 940506 09:09

TOTAL ION CHROMATOGRAM

Data File: >AE06C::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

Operator ID: JOY
Quant Time : 940506 09:41
Injected at: 940506 09:09

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06C::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06C::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940505 15:58

Operator ID: JOY
Quant Time : 940506 09:41
Injected at: 940506 09:09

7A - RCRA
VOLATILE CONTINUING CALIBRATION CHECK

WHC-SD-WM-DP-068, REV. 0

L Name: WHC PAL

Contract:

Lab Code: Case No.: SAS No.: SDG No.: R5185

Instrument ID: 70 2 Calibration Date: 5/09/94 Time: 8:27

Lab File ID: >AE09B Init. Calib. Date(s): 03/30/94 03/30/94

Heated Purge: (Y/N) N Init. Calib. Times: 1005 1426

GC Column: DB-624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	# .751	.747	0.300	.6	
Bromomethane	1.229	1.289		4.9	
Vinyl Chloride	* .883	.909		2.9	25.0
Chloroethane	.463	.528		14.0	
Methylene_Chloride	1.077	1.164		8.1	
Acetone	.492	.121		75.4	
Carbon Disulfide	2.848	3.057		7.3	
1,1-Dichloroethene	* 1.026	1.134		10.6	25.0
1,1-Dichloroethane	# 1.863	2.192	0.300	17.6	
1,2-Dichloroethene_(total)	1.144	1.250		9.3	
Chloroform	* 2.391	2.732		14.3	25.0
1,2-Dichloroethane	1.444	1.759		21.8	
2-Butanone	.742	.166		77.6	
1,1,1-Trichloroethane	.535	.604		12.9	
Carbon Tetrachloride	.526	.589		12.0	
Bromodichloromethane	.653	.661		1.3	
1,2-Dichloropropane	* .332	.358		7.9	25.0
cis-1,3-Dichloropropene	.497	.542		9.2	
Trichloroethene	.417	.417		.1	
Dibromochloromethane	.705	.716		1.6	
1,1,2-Trichloroethane	.359	.365		1.8	
Benzene	.718	.746		3.9	
trans-1,3-Dichloropropene	.444	.492		10.8	
Bromoform	# .579	.571	0.250	1.4	
4-Methyl-2-pentanone	.411	.378		8.0	
2-Hexanone	.426	.217		49.0	
Tetrachloroethene	.505	.518		2.5	
1,1,2,2-Tetrachloroethane	# .765	.741	0.300	3.1	
Toluene	* 1.101	1.208		9.7	25.0
Chlorobenzene	# .963	.990	0.300	2.8	
Ethylbenzene	* .384	.419		9.2	25.0
Styrene	.773	.844		9.2	
Xylene_(total)	.453	.495		9.2	
Toluene-d8	1.056	1.103		4.5	
Bromofluorobenzene	.778	.833		7.1	
1,2-Dichloroethane-d4	1.265	1.515		19.8	

* - CCC (Max %D = 25) # SPCC (Min RRF = 0.3 (Bromoform 0.25))

FORM VII VOA

4-1

QUANT REPORT

Page 1

Operator ID: JOY *John Ross - Chevy*
 Output File: ^AE09B::D2
 Data File: >AE09B::D5
 Name: VSTD050
 Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 08:59
 Injected at: 940509 08:27
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
 Instrument ID: 70 2

ID File: ID VOA::QT
 Title: VOLATILE ANALYSIS
 Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV 0

Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.08	128.0	115656	50.00	UG/L	83
2)	CHLOROMETHANE	.95	50.0	86340	54.24	UG/L	95
3)	VINYL CHLORIDE	1.08	62.0	105090	54.45	UG/L	97
4)	BROMOMETHANE	1.33	94.0	149121	57.83	UG/L	98
5)	CHLOROETHANE	1.44	64.0	61040	54.98	UG/L	99
6)	1,1-DICHLOROETHENE	2.31	96.0	131172	53.98	UG/L	89
7)	CARBON DISULFIDE	2.47	76.0	353520	54.38	UG/L	99
8)	ACETONE	2.55	43.0	14002	67.00	UG/L	88
9)	METHYLENE CHLORIDE	3.12	84.0	134641	55.96	UG/L	88
10)	1,2-DICHLOROETHENE (TOTAL)	5.64	96.0	289021	108.29	UG/L	87
11)	1,1-DICHLOROETHANE	4.40	63.0	253472	56.81	UG/L	98
12)	2-BUTANONE	5.87	43.0	19253	50.61	UG/L	100
13)	CHLOROFORM	6.43	83.0	315964	54.41	UG/L	98
14)	1,2-DICHLOROETHANE-d4	7.25	65.0	175244	53.09	UG/L	94
15)	1,2-DICHLOROETHANE	7.40	62.0	203438	54.65	UG/L	99
16)	*1,4-DIFLUOROBENZENE	8.29	114.0	452565	50.00	UG/L	92
17)	VINYL ACETATE	4.79	43.0	216532	56.24	UG/L	100
18)	1,1,1-TRICHLOROETHANE	6.54	97.0	273510	55.01	UG/L	98
19)	CARBON TETRACHLORIDE	6.83	117.0	266678	54.60	UG/L	95
20)	BENZENE	7.26	78.0	337829	54.97	UG/L	100
21)	TRICHLOROETHENE	8.62	130.0	188679	54.99	UG/L	95
22)	1,2-DICHLOROPROPANE	9.02	63.0	161981	59.07	UG/L	96
23)	BROMODICHLOROMETHANE	9.73	83.0	299344	51.84	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	10.61	75.0	245449	55.54	UG/L	99
25)	TRANS-1,3-DICHLOROPROPENE	11.82	75.0	222481	54.36	UG/L	98
26)	1,1,2-TRICHLOROETHANE	12.12	97.0	165199	53.97	UG/L	96
27)	DIBROMOCHLOROMETHANE	12.82	129.0	324059	54.67	UG/L	99
28)	BROMOFORM	15.70	173.0	258527	53.57	UG/L	96
29)	*CHLOROBENZENE-d5	13.91	117.0	367593	50.00	UG/L	95
30)	4-METHYL-2-PENTANONE	11.11	43.0	138967	58.00	UG/L	98
31)	TOLUENE-d8	11.04	98.0	405549	52.44	UG/L	97
32)	TOLUENE	11.17	91.0	443990	58.15	UG/L	98
33)	TETRACHLOROETHENE	12.21	164.0	190495	53.26	UG/L	96
34)	2-HEXANONE	12.83	43.0	79858	54.30	UG/L	95
35)	CHLOROBENZENE	13.97	112.0	363786	55.20	UG/L	99
36)	ETHYLBENZENE	14.32	106.0	153993	54.00	UG/L	97
37)	XYLENE (TOTAL)	14.59	106.0	545807	163.99	UG/L	98
38)	STYRENE	15.44	104.0	310406	52.55	UG/L	97
39)	BROMOFLUOROBENZENE	16.48	95.0	306361	52.40	UG/L	95
40)	1,1,2,2-TETRACHLOROETHANE	17.05	83.0	272424	53.34	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09B::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09B::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940509 08:59
Injected at: 940509 08:27

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09B::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09B::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940509 08:59
Injected at: 940509 08:27

TOTAL ION CHROMATOGRAM

File >AE09B 35.0-350.0 amu. VSTD050 10UL OF ISTD & SMC
TIC

Data File: >AE09B::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09B::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940509 08:59
Injected at: 940509 08:27

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09B::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09B::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940509 08:59
Injected at: 940509 08:27

TOTAL ION CHROMATOGRAM

Data File: >AE09B::D5
Name: VSTD050
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09B::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940509 08:59
Injected at: 940509 08:27

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

RCRA PROTOCOL

WHC-SD-WM-DP-068, REV. 0

m/z	Ion Abundance Criteria	% Relative Abundance		Status
		Base Peak	Appropriate Peak	
50	15-40% of mass 95	21.38	21.38	Ok
75	30-60% of mass 95	52.05	52.05	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.07	7.07	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-100% of mass 95	79.25	79.25	Ok
175	5-9% of mass 174	5.82	7.34	Ok
176	95-101% of mass 174	79.23	99.98	Ok
177	5-9% of mass 176	5.68	7.17	Ok

Injection Date: 05/06/94

Injection Time: 08:39

Data File: >AE06B

Scan: 168

BEST AVAILABLE COPY

File >AE06B BFB TUNE
Bpk Ab 7942.

1UL OF BFB STD
SUB ADD DVC

I Scan 168
2.79 min.

File >AE06B 35.0-350.0 amu. BFB TUNE
TIC

1UL OF BFB STD

WHC-SD-WM-DP-068, REV. 0

File >AE06B BFB TUNE
Bpk Ab 7942.

1UL OF BFB STD
SUB ADD DVC

I Scan 168
2.79 min.

>AE06B BFB TUNE IUL OF BFB STD Instrument I

168 SUB ADD NRM DVC

WHC-SD-WM-DP-068, REV. 0

File: >AE06B Scan #: 168 Retn. time: 2.79

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	.411	63.70	.071	86.20	.055	114.00	.185	148.70	.097
36.95	6.040	65.10	.101	87.00	4.470	115.90	.273	148.90	.109
37.95	4.755	67.20	.395	88.00	4.331	115.90	.130	149.90	.050
38.95	.940	68.00	10.451	90.90	.449	117.00	.558	157.20	.063
43.95	1.146	69.00	11.257	91.90	2.455	117.90	.172	158.90	.046
44.95	.558	70.10	.856	93.00	3.928	119.00	.201	160.80	.076
46.05	.164	72.10	.646	94.00	11.618	122.90	.067	172.50	.248
46.95	1.184	73.00	4.096	95.10	100.000	127.70	.386	174.00	79.250
47.85	.487	74.00	16.092	96.10	7.072	127.90	.126	175.00	5.817
48.95	4.650	75.00	52.048	97.00	.235	128.80	.063	176.00	79.233
49.95	21.380	76.00	4.017	100.00	.168	129.30	.055	177.00	5.683
50.95	5.397	77.00	1.843	101.10	.063	130.00	.386	177.90	.206
52.05	.323	77.90	.080	103.90	.579	131.00	.499	178.30	.071
54.25	.092	78.00	.210	104.90	.218	134.90	.097	180.90	.076
54.75	.449	78.90	3.505	105.90	.445	137.00	.118	207.05	.210
54.95	1.679	80.00	1.125	106.10	.113	141.00	.441	211.25	.080
56.95	2.699	80.90	2.841	110.20	.055	141.90	.050	264.15	.319
60.05	.642	81.90	.395	110.90	.050	142.70	.680	268.65	.076
60.95	4.428	82.90	.097	111.90	.063	145.80	.113	268.95	.059
62.05	4.692	83.20	.097	112.90	.168	147.50	.143	281.15	.042
62.95	3.349	84.70	.294	113.70	.063	147.90	.134	281.85	.050

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

WHC-SD-WM-DP-068, REV. 0

RCRA PROTOCOL

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	20.62	20.62	Ok
75	30-60% of mass 95	51.03	51.03	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.72	7.72	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-100% of mass 95	80.95	80.95	Ok
175	5-9% of mass 174	5.97	7.37	Ok
176	95-101% of mass 174	80.87	99.90	Ok
177	5-9% of mass 176	5.60	6.93	Ok

Injection Date: 05/09/94

Injection Time: 07:58

Data File: >AE09A

Scan: 170

File >AE09A BFB TUNE
Bpk Ab 7760.

1UL OF BFB STD
SUB ADD DUC

I Scan 170
2.81 min.

File >AE09A 35.0-350.0 amu. BFB TUNE
TIC

1UL OF BFB STD

File >AE09A BFB TUNE
Bpk Ab 7760.

1UL OF BFB STD
SUB ADD DUC

I Scan 170
2.81 min.

>AE09A BFB TUNE IUL OF BFB STD Instrument I

170 SUB ADD NRM DVC

WHC-SD-WM-DP-068, REV. 0

File: >AE09A Scan #: 170 Retn. time: 2.81

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	.391	60.95	5.468	87.00	4.330	116.80	.258	157.20	.090
36.95	6.379	61.95	4.609	88.00	4.691	119.00	.941	160.80	.155
37.95	4.962	62.95	3.381	90.10	.043	124.10	.155	164.40	.052
38.95	2.225	63.90	.537	90.90	.473	126.00	.047	173.90	80.948
40.25	.112	64.70	.095	91.10	.129	128.50	.052	175.00	5.967
40.45	.137	66.80	.610	92.00	2.994	128.80	.137	175.90	80.871
40.85	.163	68.00	11.418	93.00	4.321	129.30	.069	177.00	5.602
41.05	.155	69.00	8.909	94.00	10.847	129.80	.584	178.00	.146
42.95	.679	69.90	.361	95.00	100.000	132.20	.206	178.30	.060
45.85	.348	71.70	.421	96.00	7.719	133.80	.150	182.40	.052
47.05	2.083	72.10	.232	96.90	.137	135.90	.073	184.90	.052
47.95	.713	73.00	4.614	99.40	.099	136.30	.077	190.15	.069
48.95	4.970	74.00	14.893	100.80	.103	139.70	.043	195.35	.047
49.95	20.615	75.00	51.033	104.00	.219	140.90	.700	211.85	.047
.95	6.336	76.00	4.815	105.20	.253	143.00	.339	213.45	.077
.95	.322	77.10	.627	105.90	.747	145.00	.056	214.75	.086
54.95	.301	77.90	.155	106.80	.073	147.70	.198	219.05	.198
55.95	1.508	78.90	3.630	111.90	.146	148.30	.133	254.55	.060
56.95	3.046	79.90	1.250	113.50	.103	149.90	.326	263.95	.434
57.95	.090	80.90	2.608	113.70	.099	150.90	.095	298.75	.099
58.75	.082	81.80	.851	115.00	.176	154.80	.120	324.10	.043
59.95	1.121	82.90	.099	116.00	.159	157.00	.090		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLBK06

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Lab Sample ID: VBLK06

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >AE06D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 5/06/94

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	1.	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	10.	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK06

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Lab Sample ID: VBLK06

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >AE06D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 5/06/94

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

WHC-SD-WM-DP-068, REV. 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Jade Rose - Chang* Quant Rev: 7 Quant Time: 940506 10:26
Output File: ^AE06D::D2 Injected at: 940506 09:54
Data File: >AE06D::D5 Dilution Factor: 1.00000
Name: VBLK06 Instrument ID: VOA-1
Misc: 10UL OF ISTD & SMC Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.05	128.0	123419	50.00	UG/L	84
8)	ACETONE	2.48	43.0	215	.964	UG/L	48
12)	2-BUTANONE <i>No Den 5-11-94</i>	5.87	43.0	325	.801	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.20	65.0	165740	47.05	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.26	114.0	475929	50.00	UG/L	90
20)	BENZENE <i>No Den 5-11-94</i>	7.23	78.0	302	.0467	UG/L	100
29)	*CHLOROBENZENE-d5	13.89	117.0	388421	50.00	UG/L	96
31)	TOLUENE-d8	11.03	98.0	424219	51.91	UG/L	96
39)	BROMOFLUOROBENZENE	16.47	95.0	308665	49.96	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 10:26
Injected at: 940506 09:54

Page 1 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 10:26
Injected at: 940506 09:54

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 10:26
Injected at: 940506 09:54

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 10:26
Injected at: 940506 09:54

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940506 09:09

Operator ID: JOY
Quant Time : 940506 10:26
Injected at: 940506 09:54

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5

Name: VBLK06

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 10:26

Injected at: 940506 09:54

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 404
Retention Time: 6.05 min.
Quant Ion : 128.0
Area : 123419
Concentration : 50.00 UG/L
q-value : 84

Don
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 10:26
Injected at: 940506 09:54
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 8
Compound Name : ACETONE
Scan Number : 146
Retention Time: 2.48 min.
Quant Ion : 43.0
Area : 215
Concentration : .964 UG/L
q-value : 48

Don
5-14-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5

Name: VBLK06

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 10:26

Injected at: 940506 09:54

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 12

Compound Name : 2-BUTANONE

Scan Number : 391

Retention Time: 5.87 min.

Quant Ion : 43.0

Area : 325

Concentration : .801 UG/L

q-value : 100

No

Don
5-11-94.

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 10:26
Injected at: 940506 09:54
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 487
Retention Time: 7.20 min.
Quant Ion : 65.0
Area : 165740
Concentration : 47.05 UG/L
q-value : 94

Don
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5

Name: VBLK06

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 10:26

Injected at: 940506 09:54

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 563
Retention Time: 8.26 min.
Quant Ion : 114.0
Area : 475929
Concentration : 50.00 UG/L
q-value : 90

Don
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 10:26
Injected at: 940506 09:54
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 20
Compound Name : BENZENE
Scan Number : 489
Retention Time: 7.23 min.
Quant Ion : 78.0
Area : 302
Concentration : .0467 UG/L
q-value : 100

No *Peak*
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5

Name: VBLK06

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 10:26

Injected at: 940506 09:54

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)
Compound Name : CHLOROBENZENE-d5
Scan Number : 970
Retention Time: 13.89 min.
Quant Ion : 117.0
Area : 388421
Concentration : 50.00 UG/L
q-value : 96

Don
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5
Name: VBLK06
Misc: 10UL OF ISTD & SMC
Quant Time: 940506 10:26
Injected at: 940506 09:54
Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 763
Retention Time: 11.03 min.
Quant Ion : 98.0
Area : 424219
Concentration : 51.91 UG/L
q-value : 96

Don
5-11-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE06D::D5

Name: VBLK06

Misc: 10UL OF ISTD & SMC

Quant Time: 940506 10:26

Injected at: 940506 09:54

Last Qcal Time: 940506 09:09

Quant Output File: ^AE06D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1156
Retention Time: 16.47 min.
Quant Ion : 95.0
Area : 308665
Concentration : 49.96 UG/L
q-value : 95

Don
5-11-94

MS data file header from : >AE06D::D5

7/27/94
Jagadeesan - Chang
6-9-94
mple: VBLK06 Operator: JOY SUPER GRP. 5/06/94 9:54
misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp.: 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

No peaks found.

WHC-SD-WM-DP-068, REV.0

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	818921.	6.05	1.00 - 7.16
2	50.0	1120016.	8.26	7.16 - 11.07
3	50.0	1216375.	13.89	11.07 - 31.04

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

10:35 AM THU., 9 JUNE, 1994

WHC-SD-WM-DP-068, REV. 0

.There were no Unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK08

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Lab Sample ID: VBLK08

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >AE09D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV.0

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.	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	10.	U
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

FORM I VOA

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK08

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Lab Sample ID: VBLK08

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >AE09D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 5/09/94

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.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

WHC-SD-WM-DP-068, REV. 0

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Johnson - Amy*
Output File: ^AE09D::D2
Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 10:28
 Injected at: 940509 09:56
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.08	128.0	114052	50.00	UG/L	83
8)	ACETONE	2.53	43.0	2718M	9.84	UG/L	85
12)	2-BUTANONE <i>No Den 6-6-94</i>	5.88	43.0	451M	1.19	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.24	65.0	158163	45.76	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.28	114.0	451662	50.00	UG/L	89
29)	*CHLOROBENZENE-d5	13.93	117.0	376156	50.00	UG/L	94
31)	TOLUENE-d8	11.05	98.0	394221	47.50	UG/L	95
32)	TOLUENE <i>No Den 6-6-94</i>	11.19	91.0	427	.0470	UG/L	92
39)	BROMOFLUOROBENZENE	16.49	95.0	295015	47.05	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 10:28
Injected at: 940509 09:56

Page 1 of 5

TOTAL ION CHROMATOGRAM

File >AE09D 35.0-350.0 amu. VBLK08 10UL OF ISTD & SMC
TIC

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 10:28
Injected at: 940509 09:56

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 10:28
Injected at: 940509 09:56

Page 3 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 03:27

Operator ID: JOY
Quant Time : 940509 10:28
Injected at: 940509 09:56

Page 4 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 10:28
Injected at: 940509 09:56

Page 5 of 5

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 10:28
Injected at: 940509 09:56
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 1 (ISTD)
Compound Name : BROMOCHLOROMETHANE
Scan Number : 406
Retention Time: 6.08 min.
Quant Ion : 128.0
Area : 114052
Concentration : 50.00 UG/L
q-value : 83

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5

Name: VBLK08

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 10:28

Injected at: 940509 09:56

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 8

Compound Name : ACETONE

Scan Number : 150

Retention Time: 2.53 min.

Quant Ion : 43.0

Area : 2718M

Concentration : 9.84 UG/L

q-value : 85

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 10:28
Injected at: 940509 09:56
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 12
Compound Name : 2-BUTANONE
Scan Number : 392
Retention Time: 5.88 min.
Quant Ion : 43.0
Area : 451M
Concentration : 1.19 UG/L
q-value : 100

No
DEM
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5

Name: VBLK08

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 10:28

Injected at: 940509 09:56

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 14
Compound Name : 1,2-DICHLOROETHANE-d4
Scan Number : 490
Retention Time: 7.24 min.
Quant Ion : 65.0
Area : 158163
Concentration : 45.76 UG/L
q-value : 94

Handwritten: DEN
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 10:28
Injected at: 940509 09:56
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 16 (ISTD)
Compound Name : 1,4-DIFLUOROBENZENE
Scan Number : 565
Retention Time: 8.28 min.
Quant Ion : 114.0
Area : 451662
Concentration : 50.00 UG/L
q-value : 89

DEW
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5

Name: VBLK08

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 10:28

Injected at: 940509 09:56

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID VOA::QT

Last Calibration: 940330 15:10

Compound No : 29 (ISTD)

Compound Name : CHLOROBENZENE-d5

Scan Number : 973

Retention Time: 13.93 min.

Quant Ion : 117.0

Area : 376156

Concentration : 50.00 UG/L

q-value : 94

REV
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC
Quant Time: 940509 10:28
Injected at: 940509 09:56
Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2
Instrument ID: VOA-1
Instrument ID: 70 2
Quant ID File: ID_VOA::QT
Last Calibration: 940330 15:10

Compound No : 31
Compound Name : TOLUENE-d8
Scan Number : 765
Retention Time: 11.05 min.
Quant Ion : 98.0
Area : 394221
Concentration : 47.50 UG/L
q-value : 95

Den
6-6-94

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5

Name: VBLK08

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 10:28

Injected at: 940509 09:56

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 32

Compound Name : TOLUENE

Scan Number : 775

Retention Time: 11.19 min.

Quant Ion : 91.0

Area : 427

Concentration : .0470 UG/L

q-value : 92

No
DEN
6-6-94

WHC-SD-WM-DP-068, REV. 0

REFERENCE STANDARD SPECTRUM

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

SAMPLE SPECTRUM (UNALTERED)

Data File: >AE09D::D5

Name: VBLK08

Misc: 10UL OF ISTD & SMC

Quant Time: 940509 10:28

Injected at: 940509 09:56

Last Qcal Time: 940509 08:27

Quant Output File: ^AE09D::D2

Instrument ID: VOA-1

Instrument ID: 70 2

Quant ID File: ID_VOA::QT

Last Calibration: 940330 15:10

Compound No : 39
Compound Name : BROMOFLUOROBENZENE
Scan Number : 1158
Retention Time: 16.49 min.
Quant Ion : 95.0
Area : 295015
Concentration : 47.05 UG/L
q-value : 97

Den
6-6-94

7/27/94

MS data file header from : >AE09D::D5

Sample: VBLK08 Operator: JOY SUPER GRP. 5/09/94 9:56
Misc : 10UL OF ISTD & SMC Instrument ID: 70 2
Sys. #: 2 MS model: 70 SW/HW rev.: LF ALS # : 0 Equip ID: VOA-1
Method file: VOMETH Tuning file: BF2TUN No. of extra records: 2
Source temp.: N/A Analyzer temp.: N/A Transfer line temp. : 0

Chromatographic temperatures : 10. 160. 0. 0. 0.
Chromatographic times, min. : 4.0 2.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 6.0 0.0 0.0 .5 0.0

WHC-SD-WM-DP-068, REV. 0

No peaks found.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	756252.	6.08	1.00 - 7.18
2	50.0	1066989.	8.28	7.18 - 11.10
3	50.0	1168044.	13.93	11.10 - 31.04

Dilution Factor = 1.00 This sample was 5.00000 g or mL

Correction Factor = 1.00

Unknown Concentration = $\frac{\text{Conc Int Std} * \text{Area Unknown}}{\text{Area Int Std}}$ * Correction Factor

4:03 PM TUE., 21 JUNE, 1994

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. There were no unknowns.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5200MS

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200MS

Sample wt/vol: 2.825 (g/mL) G

Lab File ID: >AE09K

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3-----	Chloromethane	18.	U
74-83-9-----	Bromomethane	18.	U
75-01-4-----	Vinyl Chloride	18.	U
75-00-3-----	Chloroethane	18.	U
75-09-2-----	Methylene Chloride	18.	U
67-64-1-----	Acetone	39.	B
75-15-0-----	Carbon Disulfide	18.	U
75-35-4-----	1,1-Dichloroethene	32.	
75-34-3-----	1,1-Dichloroethane	18.	U
540-59-0-----	1,2-Dichloroethene (total)	18.	U
67-66-3-----	Chloroform	18.	U
107-02-2-----	1,2-Dichloroethane	18.	U
78-93-3-----	2-Butanone	3.	J
71-55-6-----	1,1,1-Trichloroethane	18.	U
56-23-5-----	Carbon Tetrachloride	18.	U
75-27-4-----	Bromodichloromethane	18.	U
78-87-5-----	1,2-Dichloropropane	18.	U
10061-01-5-----	cis-1,3-Dichloropropene	18.	U
79-01-6-----	Trichloroethene	35.	
124-48-1-----	Dibromochloromethane	18.	U
79-00-5-----	1,1,2-Trichloroethane	18.	U
71-43-2-----	Benzene	34.	
10061-02-6-----	trans-1,3-Dichloropropene	18.	U
75-25-2-----	Bromoform	18.	U
108-10-1-----	4-Methyl-2-pentanone	1.	J
591-78-6-----	2-Hexanone	18.	U
127-18-4-----	Tetrachloroethene	18.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	18.	U
108-88-3-----	Toluene	33.	
108-90-7-----	Chlorobenzene	34.	
100-41-4-----	Ethylbenzene	18.	U
100-42-5-----	Styrene	18.	U
133-02-7-----	Xylene (total)	18.	U

471 Jan 8/2-1994

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Johanna - Chang*
Output File: ^AE09K::D2
Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 15:33
 Injected at: 940509 15:01
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.11	128.0	107994	50.00	UG/L	81
6)	1,1-DICHLOROETHENE	2.32	96.0	77978	31.83	UG/L	92
8)	ACETONE	2.53	43.0	5702	21.81	UG/L	90
12)	2-BUTANONE	5.89	43.0	540M	1.50	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.26	65.0	153200	46.81	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.32	114.0	444395	50.00	UG/L	91
20)	BENZENE	7.28	78.0	224641	33.86	UG/L	100
21)	TRICHLOROETHENE	8.65	130.0	128450	34.67	UG/L	99
29)	*CHLOROBENZENE-d5	13.92	117.0	363422	50.00	UG/L	91
30)	4-METHYL-2-PENTANONE	11.20	43.0	2109	.768	UG/L	51
31)	TOLUENE-d8	11.07	98.0	402551	50.20	UG/L	95
32)	TOLUENE	11.20	91.0	288204	32.83	UG/L	96
35)	CHLOROBENZENE	13.98	112.0	247029	34.34	UG/L	99
9)	BROMOFLUOROBENZENE	16.50	95.0	294880	48.68	UG/L	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 15:33
Injected at: 940509 15:01

Page 1 of 5

TOTAL ION CHROMATOGRAM

File >AE09K 35.0-350.0 amu. R5200 MS 10UL OF ISTD & SMC
TIC

Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 15:33
Injected at: 940509 15:01

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 15:33
Injected at: 940509 15:01

TOTAL ION CHROMATOGRAM

Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 15:33
Injected at: 940509 15:01

TOTAL ION CHROMATOGRAM

Data File: >AE09K::D5
Name: R5200 MS
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09K::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 15:33
Injected at: 940509 15:01

QUANT REPORT

Page 1

Operator ID: DON
Output File: ^AF22C::D2
Data File: >AF22C::D5
Name: VBLK11
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940622 11:10
 Injected at: 940622 10:38
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID 624::QT

WHC-SD-WM-DP-068.REV 0

Title: VOLATILE ANALYSIS - MODIFIED EPA 624 METHOD

Last Calibration: 940511 11:43

Last Qcal Date: 940622 10:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.13	408	148655	50.00	UG/L	100
8)	ACETONE	2.57	151	8347	15.20	UG/L	72
14)	1,2-DICHLOROETHANE-d4	7.28	491	186759	47.83	UG/L	91
16)	*1,4-DIFLUOROBENZENE	8.32	566	569335	50.00	UG/L	87
29)	*CHLOROBENZENE-d5	13.94	972	455987	50.00	UG/L	93
31)	TOLUENE-d8	11.09	766	506632	49.59	UG/L	97
32)	TOLUENE	11.20	774	237	.0233	UG/L	89
39)	BROMOFLUOROBENZENE	16.51	1158	360839	49.55	UG/L	91

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R5200MSD

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200MSD

Sample wt/vol: 2.960 (g/mL) G

Lab File ID: >AE09L

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

74-87-3-----	Chloromethane	17.	U
74-83-9-----	Bromomethane	17.	U
75-01-4-----	Vinyl Chloride	17.	U
75-00-3-----	Chloroethane	17.	U
75-09-2-----	Methylene Chloride	17.	U
67-64-1-----	Acetone	40.	B
75-15-0-----	Carbon Disulfide	17.	U
75-35-4-----	1,1-Dichloroethene	34.	
75-34-3-----	1,1-Dichloroethane	17.	U
540-59-0-----	1,2-Dichloroethene (total)	17.	U
67-66-3-----	Chloroform	17.	U
107-02-2-----	1,2-Dichloroethane	1.	J
78-93-3-----	2-Butanone	17.	U
71-55-6-----	1,1,1-Trichloroethane	17.	U
56-23-5-----	Carbon Tetrachloride	17.	U
75-27-4-----	Bromodichloromethane	17.	U
78-87-5-----	1,2-Dichloropropane	17.	U
10061-01-5-----	cis-1,3-Dichloropropene	17.	U
79-01-6-----	Trichloroethene	31.	
124-48-1-----	Dibromochloromethane	17.	U
79-00-5-----	1,1,2-Trichloroethane	17.	U
71-43-2-----	Benzene	39.	
10061-02-6-----	trans-1,3-Dichloropropene	17.	U
75-25-2-----	Bromoform	17.	U
108-10-1-----	4-Methyl-2-pentanone	5.	J
591-78-6-----	2-Hexanone	17.	U
127-18-4-----	Tetrachloroethene	17.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	17.	U
108-88-3-----	Toluene	37.	
108-90-7-----	Chlorobenzene	34.	
100-41-4-----	Ethylbenzene	17.	U
100-42-5-----	Styrene	17.	U
133-02-7-----	Xylene (total)	17.	U

QUANT REPORT

Page 1

erator ID: JOY *John - Hong*
Output File: ^AE09L::D2
Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 16:08
 Injected at: 940509 15:36
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.12	128.0	53620	50.00	UG/L	81
6)	1,1-DICHLOROETHENE	2.34	96.0	41298	33.95	UG/L	96
8)	ACETONE	2.55	43.0	3068	23.63	UG/L	97
14)	1,2-DICHLOROETHANE-d4	7.28	65.0	68036	41.87	UG/L	87
15)	1,2-DICHLOROETHANE	7.28	62.0	1137	.603	UG/L	78
16)	*1,4-DIFLUOROBENZENE	8.32	114.0	221795	50.00	UG/L	97
20)	BENZENE	7.28	78.0	130478	39.40	UG/L	100
21)	TRICHLOROETHENE	8.65	130.0	57383	31.03	UG/L	92
29)	*CHLOROBENZENE-d5	13.92	117.0	171083	50.00	UG/L	99
30)	4-METHYL-2-PENTANONE	11.18	43.0	3886M	3.00	UG/L	65
31)	TOLUENE-d8	11.07	98.0	200617	53.14	UG/L	98
32)	TOLUENE	11.20	91.0	151339	36.62	UG/L	96
35)	CHLOROBENZENE	13.98	112.0	114256	33.74	UG/L	99
9)	BROMOFLUOROBENZENE	16.50	95.0	124890	43.80	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:08
Injected at: 940509 15:36

TOTAL ION CHROMATOGRAM

File >AE09L 35.0-350.0 amu. R5200 MSD 10UL OF ISTD & SMC
TIC

Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:08
Injected at: 940509 15:36

Page 2 of 5

TOTAL ION CHROMATOGRAM

Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID_VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:08
Injected at: 940509 15:36

TOTAL ION CHROMATOGRAM

Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:08
Injected at: 940509 15:36

TOTAL ION CHROMATOGRAM

Data File: >AE09L::D5
Name: R5200 MSD
Misc: 10UL OF ISTD & SMC

Quant Output File: ^AE09L::D2
Instrument ID: VOA-1
Instrument ID: 70 2

Id File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

Last Qcal Time: 940509 08:27

Operator ID: JOY
Quant Time : 940509 16:08
Injected at: 940509 15:36

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COMPUTER FILENAME	ANALYST INITIAL	LAB OR CUSTOMER SAMPLE ID #	SAMPLE DESCRIPTION / COMMENTS WHC-SD-WM-DP-068, REV. 0	QAREA OR N/A	
>AD27C	REN	BFB	BFB TUNE	N/A	
>AD27D	REN	VSTD050	Daily Cal		10
>AD28A	JDC	BFB	BFB TUNE	N/A	
>AD28B	JDC	BFB	BFB TUNE - dir. injection	N/A	
>AD28C	JDC	BFB	BFB TUNE	N/A	
>AD28D	JDC	BFB	BFB TUNE	N/A	
>AD28E	JDC	BFB	BFB TUNE	N/A	
>AE024	REN	BFB	BFB TUNE	N/A	
>AE03A	JDC	BFB	BFB TUNE	N/A	
>AE03A	JDC	BFB	BFB TUNE	N/A	
>AE03B	JDC	BFB	BFB TUNE	N/A	
>AE03C	JDC	BFB	BFB TUNE WATER MGMT OFF	N/A	
>AE04A	REN	BFB	BFB TUNE - NEW PGT	N/A	
>AE04B	REN	BFB	BFB TUNE	N/A	
>AE05A	JDC	BFB	BFB TUNE	N/A	
>AE05B	JDC	BFB	BFB TUNE	N/A	
>AE05C	JDC	VSTD050	DAILY CAL		
>AE05D	JDC	VSTD050	DAILY CAL		
>AE05E	JDC	DRY PURGE	DRY PURGE RUN	N/A	
>AE05F	JDC	BFB	BFB TUNE w/ NEW PGT	N/A	
>AE05G	JDC	VSTD050	Daily Cal		
>AE06A	JDC	BFB	BFB TUNE - failed	N/A	
>AE06B	JDC	BFB	BFB TUNE	N/A	
>AE06C	JDC	VSTD050	DAILY CAL		135
>AE06D	JDC	VBLK06	Method BLANK		125
>AE06E	JDC	R5185	✓ R5185 - CONCRETE 300 AREA VIAL #1		125
>AE06F	JDC	R5186	✓ R5186 " VIAL #2		12
>AE06G	JDC	R5187	✓ R5187 " VIAL #3		12
>AE06H	JDC	R5188	R5188 " VIAL #4 (REUN, MISSING last 3 peaks)		12
>AE06I	JDC	R5189	R5189 " VIAL #5		12
>AE06J	JDC	R5188	✓ R5188 (REUN) " VIAL #4		125
>AE06K	JDC	R5189	✓ R5189 (REUN) " VIAL #5		125
>AE06L	JDC	R5190	✓ R5190 " VIAL #6		125

BEST AVAILABLE COPY

COMPUTER FILENAME	ANALYST INITIAL	LAB OR CUSTOMER SAMPLE ID #	SAMPLE DESCRIPTION / COMMENTS	QAREA OR N/A	IN
>AE06M	JDC	R5191	R5191 - CONCRETE 300 AREA VIAL #7		118
>AE09A	JDC	BFB	BFB TUNE	N/A	
>AE09B	JDC	VSTD050	DAILY CAL		115

7AE0GK	JDC	R5189	R5189 (REUN)	"	VIAL #5
7AE0GL	JDC	R5190	R5190	"	VIAL #6

WHC-SD-WM-DP-068, REV. 0

COMPUTER FILENAME	ANALYST INITIAL	LAB OR CUSTOMER SAMPLE ID #	SAMPLE DESCRIPTION / COMMENTS	AREA OR N/A
7AE0GM	JDC	R5191	R5191 - CONCRETE 300 AREA VIAL #7	N/A
7AE09A	JDC	BFB	BFB TUNE	
7AE09B	JDC	VSTD 0.50	DAILY CAL	
7AE09C	JDC	VBLK 07	Method BLANK	
7AE09D	JDC	VBLK 08	Method BLANK	N/A
7AE09E	JDC	R5192	R5192 VIAL #8 - CONCRETE (RT shifted)	
7AE09F	JDC	R5192	R5192 (REUN) VIAL #8 - CONCRETE	
7AE09G	JDC	R5193	R5193 VIAL #9 - CONCRETE	
7AE09H	JDC	R5194	R5194 VIAL #10 - CONCRETE	
7AE09I	JDC	R5195	R5195 VIAL #11 - CONCRETE	
7AE09J	JDC	R5200	R5200 VIAL - CONCRETE	
7AE09K	JDC	R5200 MS	R5200 MATRIX SPIKE - CONCRETE	
7AE09L	JDC	R5200 MSD	R5200 MATRIX SPIKE DUPLICATE	
7AE09M	JDC	R5196	R5196 VIAL #12 - CONCRETE	
7AE09N	JDC	MS CHECK	100 PPM MS STD CHECK 2µl → 5µl → 40 PPM	
7AE09O	JDC	R5197	R5197 VIAL #13 - CONCRETE	
7AE09P	JDC	R5198	R5198 VIAL #14 - CONCRETE	
7AE09Q	JDC	R5199	R5199 VIAL #15 - CONCRETE	
7AE09R	JDC	R5201	R5201 - CONCRETE	
7AE10A	JDC	BFB	BFB TUNE	N/A
7AE10B	JDC	PYRIDINE	PYRIDINE STD PPM	N/A
7AE10C	JDC	CAL BLANK	CALIBRATION BLANK	

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122 4/28/94

5/10/94 JOC

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BES AVAILABLE COPY									
VOLATILE TARGETS 5000ug/mL					FINAL		PREP BY	WITNESSED BY	DATE
POSTEK MIX VOLUME					VOL.				
MIX #1	MIX #2	MIX #3	MIX #4	MIX #5	1,3-DCB	1,4-DCB	5PA	5PA	
10 mL	25 mL	25 mL	25 mL	25 mL	50 mL	50 mL	50 mL	50 mL	1.0 mL
VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	MECH
ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	JDC 4/28/84

0.0000 FURCO BENZENE STD

VIAL LABEL	VOLUME OF 2000 ug/mL OFB used LOT # A001660	FINAL VOL	FINAL CONC.	SOLVENT	PREP BY	WITNESSED BY	DATE
BFB-5D	20 mL	1.0 mL	500 ug/mL	MeOH	DEEN	JOC	4/28/99

5/5/94 JOC

CUP VOLATILE TARGETS

MIX #1				MIX #2				MIX #3				MIX #4				MIX #5			
LOT # A002482				LOT # A002490				LOT # A002504				LOT # A002519				LOT # A002604			
10 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL	25 mL
VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL	VIAL LABEL
ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD	ISTD-SD

45/94 JOC

VOLATILE INTERNAL STD

VIAL	VOLUME OF 2000ug/mL	FINAL	FINAL	SOLVENT	PREP BY	WITNESSED	DATE
LABEL	NL ISTD USED LOT # A00295		VOL				
ISTD - 25	10mL	10mL	10mL	MeOH	DEW	JOC	5/5/94

VOLATILE SMC STD

VIAL	VOLUME OF 2000ug/mL SMC used	LOT # A00360	total vol	mmu conc	SOLVENT	PREP BY	WITNESSED	DATE
UNL			vol	conc				
SMC-SD	20 mL		1.0 mL	500ug/mL	meth	Ben	JDL	5/5/94

5/9/94 JOC

VOLATILE MATRIX SPIKE STD FOR CONCRETE ANALYSIS

VIAL LABEL	VOLUME OF MATRIX SPIKE MIX	2000 ug/mL LOT# A00228	FINAL VOL	FINAL CONC	SOLVENT	PREP BY	WITNESSED BY	DATE
MS-100	40uL		1.0mL	1000ug/mL	MeOH	JAC	J.L.	5/9/99

5/10/94

VIAL	MIX #!
LABEL	LOT# ASD 2482
VSTD-SD	10ul
VIAL	VOLUME
LABEL	ISTD USE
ISTD/SNC-25	
VIAL	
LABEL	MAT
MSTD-25	
5-17-94	
B. Brown	
VIAL	MIX #!
LABEL	LOT# ASD 2482
VSTD-SD	10ul
VIAL	VOLUME
LABEL	ISTD USE
ISTD/SNC	10
VIAL	
LABEL	ACCURATE
ACCURATE	CLIP-022
ACCURATE	LOT # K
ACCURATE	10
6-19-94	

WHC-SD-WM-DP-068, REV. 0

VOLATILE MATRIX SPIKE WORKING STD

VIAL LABEL	VOLUME OF 2500 µg/mL MATRIX SPIKE STD LOT # A000228	FINAL VOL	FINAL CONC	SOLVENT	PREP BY	WITNESS	DATE
MSD-25	10 µL	1.0 mL	250 µg/mL	MEOH	RENN	JOC	3/28/94

VIAL LABEL	VOLATILE TARGETS 50 µg/mL					FINAL VOL	PREP BY	WITNESS	DATE	
	VOLUME OF BUSTER MIX									
V88EV	MIX #1	MIX #2	MIX #3	MIX #4	MIX #5	1.2-PCB EPA 3/23/90	1-3 PCB EPA	1,4 PCB EPA	1.0 mL	3/29/94
	LOT # A002482	LOT # A002498	LOT # A002509	LOT # A002204	LOT # A002283	EPA	EPA	EPA		
V87D-SD	10 µL	25 µL	25 µL	25 µL	25 µL	50 µL	50 µL	50 µL	1.0 mL	3/29/94

VOLATILE INTERNAL STD

VIAL LABEL	VOLUME OF 2500 µg/mL LOT # A000295	FINAL VOL	FINAL CONC	SOLVENT	PREP BY	WITNESS	DATE
MSD-25	10 µL	1.0 mL	250 µg/mL	MEOH	RENN	JOC	3/29/94

VOLATILE SMC STD

VIAL LABEL	VOLUME OF 2500 µg/mL LOT # A000360	FINAL VOL	FINAL CONC	SOLVENT	PREP BY	WITNESS	DATE
SMC-SD	20 µL	1.0 mL	50 µg/mL	MEOH	RENN	JOC	3/29/94

4/5/94 JOC

VIAL	VOLATILE TARGETS 50 ug/mL					VOLUME OF BUSTER MIX		FINAL VOL	PREP BY	WITNESS	DATE
	MIX #1 LOT# A002482	MIX #2 LOT# A002498	MIX #3 LOT# A002509	MIX #4 LOT# A002204	MIX #5 LOT# A002283	1.2 DCB EPA	1.4-DCB EPA				
MSD-SD	10 mL	25 uL	25 uL	25 uL	25 uL	50 uL	50 uL	1.0 mL	MSH	JOC	4/5/94

VOLATILE INTERNAL E' SMC STD

VIAL LABEL	VOLUME OF 2500 µg/mL STD USED LOT # A000295	VOLUME OF 2500 µg/mL SMC USED LOT # A000360	FINAL VOL	FINAL CONC	SOLVENT	PREP BY	WITNESS	DATE
------------	---	---	-----------	------------	---------	---------	---------	------

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VIAL LABEL	MIX #1 LOT # A002482	10 µL
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4/14/94 JOC	COMPOUNDS
	TETRADECANE
	TRIDECANE
	1-BUTANOL
	TETRAHYDROFURAN
	2-PROPANOL
	TRIBUTYLPHOSPHATE
	2-BUTYLXY ETHER

4/21/94 JOC	MIX #1 LOT # A002482	10 µL
-------------	-------------------------	-------

VIAL LABEL	MIX #1 LOT # A002482	10 µL
------------	-------------------------	-------

VIAL LABEL	10 µL
------------	-------

VIAL LABEL	10 µL
------------	-------

C (concrete coring)
B (bottled)

TABLE II : TARE WEIGHTS

CONCRETE SAMPLES FOR VOLATILE ORGANICS ANALYSIS

BY LA-523-435 PROCEDURE

WHC-SD-WM-DP-068, REV. 0

VIAL NO.	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME
1	BOBQQ1	4-27-94	1025
2	BOBQQ2	Coring - 4-27-94 B - 4-29-94	0955-1022 1330
3	BOBQQ4	C - 4-27-94 B - 4-29-94	0955-1022 1340
4	BOBQQ5	C - 4-27-94 B - 4-29-94	0955-1022 1351
5	BOBQQ6	C - 4-27-94 B - 4-29-94	1245-1325 1358
6	BOBQQ7	C - 4-27-94 B - 4-29-94	1245-1325 1358
7	BOBQQ8	C - 4-28-94 B - 4-29-94	0842-1028 1415
8	BOBQQ9	C - 4-28-94 B - 4-29-94	0842-1028 1425
9	BOBQR0	C - 4-27-94 B - 4-29-94	1342-1450 1440
10	BOBQR1	C - 4-27-94 B - 4-29-94	1342-1450 1446
11	BOBQR2	C - 4-27-94 B - 4-29-94	1342-1450 1455
12	BOBQR3	C - 4-28-94 B - 4-29-94	1045-1125 1504
13	BOBQQ3	C - 4-28-94 B - 4-29-94	0955-1022 1330
14	BOBQR6	5-2-94	0840
15	BOBQR7	5-2-94	0856
16	—	—	—
17	—	—	—
18	—	—	—
19	—	—	—
20	—	—	—

SAMPLES SUBMITTED BY:

Jonathan G. Lucas
Jonathan G. Lucas
5-2-94

REQUEST FOR SPECIAL ANALYSIS (RSA)

RSA No.

1901

1. Sample Origin

306 Area
Solvents Evap.

2. Date Submitted

05-02-94

4. Requester Name

John Lucas

6. Charge Code/Work Package

K-345C

3. Submitted By

John Lucas

5. Requester Phone/MSIN

376-2789

7. Date Required

5-13-94

8. Customer ID

Collected

Date

Time

9. Laboratory ID

BOBQQ1

R5185

BOBQQ2

R5186

BOBQQ3

R5187

BOBQQ4

R5188

BOBQQ5

R5189

BOBQQ6

R5190

BOBQQ7

R5191

BOBQQ8

R5192

BOBQQ9

R5193

BOBQR0

R5194

BOBQR1

R5195

BOBQR2

R5196

BOBQR3

R5197

BOBQR4

R5198

BOBQR5

R5199

BOBQR6

R5200

BOBQR7

R5201

BOBQR8

R5202

BOBQR9

R5203

BOBQR0

R5204

BOBQR1

R5205

BOBQR2

R5206

BOBQR3

R5207

BOBQR4

R5208

BOBQR5

R5209

BOBQR6

R5210

BOBQR7

R5211

BOBQR8

R5212

BOBQR9

R5213

BOBQR0

R5214

BOBQR1

R5215

BOBQR2

R5216

BOBQR3

R5217

BOBQR4

R5218

BOBQR5

R5219

BOBQR6

R5220

BOBQR7

R5221

BOBQR8

R5222

BOBQR9

R5223

BOBQR0

R5224

BOBQR1

R5225

BOBQR2

R5226

BOBQR3

R5227

BOBQR4

R5228

BOBQR5

R5229

BOBQR6

R5230

BOBQR7

R5231

BOBQR8

R5232

BOBQR9

R5233

BOBQR0

R5234

BOBQR1

R5235

BOBQR2

R5236

BOBQR3

R5237

BOBQR4

R5238

BOBQR5

R5239

12. Number of Samples

17

13. Volume of Samples

N/A

14. Protocols

☐ None☒ RCRA☐ NQA-1☐ Other☐ CERCLA

15. Sample Type

☐ Solid☒ Soil☐ Slurry☐ Gas☐ Water☐ Waste☐ Solution☐ Sludge☐ Oil☐ Other (specify)

16. Storage Requirements

☐ None☒ Specify

4°C ± 2

17. Process Knowledge/Known Listed Wastes

☒ Unknown☐ Known (Please attach list)☐ Previously submitted for this Project

18. Survey

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Dose Rate

HPT Signature

19. Disposition of Waste

☐ Return to Client/Location☒ Dispose per 222-S Procedures☐ Other

20. Additional Information

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21. Chain of Custody

☐ No☐ Yes Number:

22. Assigned Custodial Group (select one)

☐ PCL☒ PDSU☐ ENV☐ Process

23. Sample Received By:

Shirley Cobb

Date: 05-02-94

Time: 1100

24. Laboratory Manager (if required)

Date:

TABLE II : TARE WEIGHTS

**CONCRETE SAMPLES FOR VOLATILE ORGANICS ANALYSIS
BY LA-523-435 PROCEDURE**

VIAL NUMBER	SAMPLE IDENTIFICATION	TARE WEIGHT			SAMPLE WEIGHT	H2O WEIGHT	SAMPLE WT 5mL H2O	ANALYST	DATE
		EMPTY VIAL	VIAL+SAMPLE	VIAL+SMPL+H2O					
1	R5185	26.99	55.57	88.27	28.58	32.70	4.370	JDC	5/6/94
2	R5186	27.18	45.88	81.43	18.70	35.55	2.630	JDC	5/6/94
3	R5187	26.95	47.50	82.54	20.55	35.04	2.932	JDC	5/6/94
4	R5188	26.73	49.95	83.63	23.22	33.68	3.447	JDC	5/6/94
5	R5189	27.32	48.07	82.65	20.75	34.58	3.000	JDC	5/6/94
6	R5190	26.94	50.45	84.45	23.51	34.00	3.457	JDC	5/6/94
7	R5191	26.99	48.97	83.14	21.98	34.17	3.216	JDC	5/6/94
8	R5192	26.88	52.42	85.19	25.54	32.77	3.897	JDC	5/6/94
9	R5193	27.00	49.22	83.41	22.22	34.19	3.249	JDC	5/6/94
10	R5194	27.42	57.00	88.63	29.58	31.63	4.676	JDC	5/6/94
11	R5195	27.35	52.85	86.05	25.50	33.20	3.840	JDC	5/6/94
12	R5196	27.21	53.55	86.51	26.34	32.96	3.996	JDC	5/6/94
13	R5197	27.47	48.09	83.43	20.62	35.34	2.917	JDC	5/6/94
14	R5198	26.80	55.65	88.04	28.85	32.39	4.454	JDC	5/6/94
15	R5199	26.84	59.39	90.25	32.55	30.86	5.274	JDC	5/6/94
16	R5200	26.00	46.63	82.93	20.63	36.30	2.842	JDC	5/6/94
17	R5200MS	25.74	45.85	81.44	20.11	35.59	2.825	JDC	5/6/94
18	R5200MSD	25.75	46.59	81.79	20.84	35.20	2.960	JDC	5/6/94
19	R5201	25.61	48.06	82.55	22.45	34.49	3.255	JDC	5/6/94

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

WHC-SD-WM-DP-068, ADDENDUM 1A,
REV. 0

222-S ANALYTICAL LABORATORY

Project: CONCRETE SAMPLES
FOR ORGANIC SAMPLES

Date Printed: OCTOBER 17, 1994

1A-i

ds
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Attachment 1 - Glossary of Data Reporting Qualifiers	1A-004
Attachment 2 - Summary of Data Qualifications	1A-006
Attachment 3 - Qualified Data Summary and Annotated Laboratory Reports	1A-008
Attachment 4 - Laboratory Narrative and Chain-of-Custody Documentation	1A-046
Attachment 5 - Data Validation Supporting Documentation	1A-049

This Report consists of pages 1A-001 through 1A-058 plus page 1A-048A.

MEMORANDUM

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

TO: 300 Area Solvent Evaporator Project QA Record

September 26, 1994

FR: Susan Manchester, Golder Associates Inc. *Added for J.M.*RE: VOLATILE ORGANICS DATA VALIDATION SUMMARY FOR DATA PACKAGE:
R5185-222-093 (943-1610.003, Filename R5185-V.300)

INTRODUCTION

This memo presents the results of data validation on data package R5185-222-093 prepared by the 222-S Analytical laboratory. A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

SAMPLE ID	SAMPLE DATE	MEDIA	ANALYSIS
R5185	04/27/94	Concrete	See Note 1
R5186	04/27/94	Concrete	
R5197	04/28/94	Concrete	
R5187	04/27/94	Concrete	
R5188	04/27/94	Concrete	
R5189	04/27/94	Concrete	
R5190	04/27/94	Concrete	
R5191	04/28/94	Concrete	
R5192	04/28/94	Concrete	
R5193	04/27/94	Concrete	
R5194	04/27/94	Concrete	
R5195	04/27/94	Concrete	
R5196	04/28/94	Concrete	
R5200	04/27/94	Concrete	
R5201	04/27/94	Concrete	
R5198	05/02/94	Concrete	
R5199	05/02/94	Concrete	

Note 1. All samples were analyzed for volatile organics using CLP protocol.

Data validation was conducted in accordance with the WHC statement of work (WHC 1994) and validation procedures (WHC 1993). Attachments 1 through 5 provide the following information as indicated below:

- Attachment 1. Glossary of Data Reporting Qualifiers
- Attachment 2. Summary of Data Qualifications
- Attachment 3. Qualified Data Summary and Annotated Laboratory Reports
- Attachment 4. Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

This section presents a summary of the data quality in terms of the referenced validation criteria.

Data Package ID: R5185-222-093

Analysis: Volatile Organics

Precision. Goals for precision were met.

Accuracy. Goals for accuracy were met.

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ADDENDUM 1A, REV. 0

Sample Result Verification. All sample results were supported in the raw data.

Detection Limits. Detection limit goals were met for all sample results as specified in the reference analytical method.

Completeness. The data package was complete for all requested analyses. A total of seventeen samples were validated in this data package with a total of 561 determinations reported, all of which were deemed valid. This results in a completeness of 100 percent, which meets normal work plan objectives of 90%.

MAJOR DEFICIENCIES

No major deficiencies were identified during data validation which required qualification of data as unusable.

MINOR DEFICIENCIES

The following minor deficiencies were identified during data validation which required qualification of data as estimated.

Laboratory Blanks

- Acetone, benzene, toluene and 2-butanone were detected in the laboratory blanks. Attachments 2 and 5 provide a summary of the samples affected, data qualifications applied and supporting documentation.

Internal Standards

- The areas of all three internal standards (bromochloromethane, 1,4-difluorobenzene and chlorobenzene-d5) associated with sample B0BQR5 were less than the associated lower control limit. Therefore, as summarized and supported in Attachments 2 and 5, all associated sample results have been qualified as estimated (UJ).

TENTATIVELY IDENTIFIED COMPOUNDS

Tentatively identified compounds (TICs) reported by the laboratory were evaluated during validation and qualified as follows:

- Tentatively identified compounds (TICs) were identified in the samples and determined to be valid, therefore TICs have been qualified as presumptive and valid (JN).

REFERENCES

**WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0**

WHC 1993, Data Validation Procedures for Chemical Analyses, WHC-SD-EN-SPP-002, Rev. 2, 1993. Westinghouse Hanford Company, Richland, Washington.

WHC 1994, Validation of 300 Area Solvent Evaporator Data, Statement of Work, Environmental and Waste Characterization Analytical Data Validation, Task Order MSH-SWV-315905, August 10, 1994, Westinghouse Hanford Company, Richland, Washington.

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ADDENDUM 1A, REV. 0

ATTACHMENT 1

GLOSSARY OF DATA REPORTING QUALIFIERS

1A-004

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

GLOSSARY OF ORGANIC DATA REPORTING QUALIFIERS

- B -** Indicates the constituent was analyzed for and detected in the associated laboratory blank. This qualifier is applied by the laboratory. During the process of data validation this qualifier may be replaced by other appropriate qualifiers as defined by the validation procedures. The associated data should be considered usable for decision making purposes.
- U -** Indicates the constituent was analyzed for and not detected. The concentration reported is the sample quantitation limit corrected for aliquot size, dilution and percent solids (in the case of solid matrices) by the laboratory. The associated data should be considered usable for decision making purposes.
- UJ -** Indicates the constituent was analyzed for and not detected. Due to a minor quality control deficiency identified during data validation the concentration reported may not accurately reflect the sample quantitation limit. The associated data should be considered usable for decision making purposes.
- J -** Indicates the constituent was analyzed for and detected. This qualifier may be applied by the laboratory to indicate a concentration which is less than the contract required quantitation limit (CRQL) but greater than the instrument detection limit (IDL). During data validation this qualifier may be applied to indicate a minor quality control deficiency. However in either case, the associated data should be considered usable for decision making purposes.
- NJ -** Indicates presumptive evidence of a constituent at an estimated value. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- N -** Indicates presumptive evidence of a constituent. This qualifier is normally applied to GC analysis data (such as organochlorine pesticide and PCB data). The associated data should be considered usable for decision making purposes.
- JN -** Indicates a tentatively identified compound (TIC) whose concentration and identification have been determined to be valid as a result of data validation. The associated data should be considered usable for decision making purposes.
- UJN -** Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.
- UR -** Indicates the constituent was analyzed for and not detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.
- R -** Indicates the constituent was analyzed for and detected. The concentration reported has been qualified as unusable due to a major quality control deficiency identified during data validation. The associated data should be considered unusable for decision making purposes.

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ADDENDUM 1A, REV. 0

ATTACHMENT 2
SUMMARY OF DATA QUALIFICATIONS

1A-006

ATTACHMENT 3
QUALIFIED DATA SUMMARY AND ANNOTATED LABORATORY REPORTS

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

1A-008

Parameter	Units	Result				
		Sample#	Date	Location	Depth	Type
CHLOROMETHANE	UG/KG	B08001	4-27-94	CONCRETE	---	FIELD BLANK
BROMOMETHANE	UG/KG	B08002	4-27-94	CONCRETE	---	CONCRETE
VINYL CHLORIDE	UG/KG	B08003	4-28-94	CONCRETE	---	CONCRETE
CHLOROETHANE	UG/KG	B08004	4-27-94	CONCRETE	---	CONCRETE
METHYLENE CHLORIDE	UG/KG	B08005	4-27-94	CONCRETE	---	CONCRETE
ACETONE	UG/KG	B08006	4-27-94	CONCRETE	---	CONCRETE
CARBON DISULFIDE	UG/KG					
1,1-DICHLOROETHENE	UG/KG					
1,1-DICHLOROETHANE	UG/KG					
1,2-DICHLOROETHANE (TOTAL)	UG/KG					
CHLOROFORM	UG/KG					
1,2-DICHLOROETHANE	UG/KG					
2-BUTANONE	UG/KG					
1,1,1-TRICHLOROETHANE	UG/KG					
CARBON TETRACHLORIDE	UG/KG					
BROMODICHLOROMETHANE	UG/KG					
1,2-DICHLOROPROPANE	UG/KG					
CIS-1,3-DICHLOROPROPENE	UG/KG					
TRICHLOROETHENE	UG/KG					
DIBROMOCHLOROMETHANE	UG/KG					
1,1,2-TRICHLOROETHANE	UG/KG					
BENZENE	UG/KG					
TRANS-1,3-DICHLOROPROPENE	UG/KG					
BROMOFORM	UG/KG					
4-METHYL-2-PENTANONE	UG/KG					
2-HEXANONE	UG/KG					
TETRACHLOROETHENE	UG/KG					
1,1,2,2-TETRACHLOROETHANE	UG/KG					
TOLUENE	UG/KG					
CHLOROBENZENE	UG/KG					
ETHYLBENZENE	UG/KG					
STYRENE	UG/KG					
XYLENES (TOTAL)	UG/KG					

Parameter	Samp# Date Location Depth Type Comments	B08qq7 4-27-94 --- CONCRETE ---		B08qq8 4-28-94 --- CONCRETE ---		B08qq9 4-28-94 --- CONCRETE ---		B08qR0 4-27-94 --- CONCRETE ---		B08qR1 4-27-94 --- CONCRETE ---		B08qR2 4-27-94 --- CONCRETE ---	
		Result	q	Result	q	Result	q	Result	q	Result	q	Result	q
CHLOROMETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
BROMOMETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
VINYL CHLORIDE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
CHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
METHYLENE CHLORIDE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
ACETONE	UG/KG	14.000	U	39.000	B	37.000	U	43.000	U	74.000	U	35.000	U
CARBON DISULFIDE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,1-DICHLOROETHENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,1-DICHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,2-DICHLOROETHENE (TOTAL)	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,2-DICHLOROETHANE (TOTAL)	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
CHLOROFORM	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,2-DICHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
2-BUTANONE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,1,1-TRICHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
CARBON TETRACHLORIDE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
BROMODICHLOROMETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,2-DICHLOROPROPANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
CIS-1,3-DICHLOROPROPENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
TRICHLOROETHENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
DIBROMOCHLOROMETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,1,2-TRICHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
BENZENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
TRANS-1,3-DICHLOROPROPENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
BROMOFORM	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
4-METHYL-2-PENTANONE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
2-HEXANONE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
TETRACHLOROETHENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
1,1,2,2-TETRACHLOROETHANE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
TOLUENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
CHLOROBENZENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
ETHYLBENZENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
STYRENE	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U
XYLENES (TOTAL)	UG/KG	14.000	U	16.000	U	13.000	U	15.000	U	11.000	U	13.000	U

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Validated Data Summary, Data Package: R5185-222-093

Parameter	Sampl#	BOBQR3	BOBQR4	BOBQR5	BOBQR6	BOBQR7	
	Date Location Depth Type Comments	4-28-94 --- --- CONCRETE ---	4-27-94 --- --- CONCRETE ---	4-27-94 --- --- CONCRETE ---	5-2-94 --- --- CONCRETE TRIP BLANK	5-2-94 --- --- CONCRETE EQUIP BLANK	
	Units	Result	q	Result	q	Result	q
CHLOROMETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
	UG/KG	13.000	U	18.000	U	15.000	UJ
BROMOMETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
VINYL CHLORIDE	UG/KG	13.000	U	18.000	U	15.000	UJ
CHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
METHYLENE CHLORIDE	UG/KG	13.000	U	18.000	U	15.000	UJ
ACETONE	UG/KG	29.000	U	31.000	U	54.000	UJ
CARBON DISULFIDE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,1-DICHLOROETHENE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,1-DICHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,2-DICHLOROETHENE (TOTAL)	UG/KG	13.000	U	18.000	U	15.000	UJ
CHLOROFORM	UG/KG	13.000	U	18.000	U	15.000	UJ
1,2-DICHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
2-BUTANONE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,1,1-TRICHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
CARBON TETRACHLORIDE	UG/KG	13.000	U	18.000	U	15.000	UJ
BROMODICHLOROMETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,2-DICHLOROPROPANE	UG/KG	13.000	U	18.000	U	15.000	UJ
CIS-1,3-DICHLOROPROPENE	UG/KG	13.000	U	18.000	U	15.000	UJ
TRICHLOROETHENE	UG/KG	13.000	U	18.000	U	15.000	UJ
DIBROMOCHLOROMETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,1,2-TRICHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
BENZENE	UG/KG	13.000	U	18.000	U	15.000	UJ
TRANS-1,3-DICHLOROPROPENE	UG/KG	13.000	U	18.000	U	15.000	UJ
BROMOFORM	UG/KG	13.000	U	18.000	U	15.000	UJ
4-METHYL-2-PENTANONE	UG/KG	13.000	U	18.000	U	15.000	UJ
2-HEXANONE	UG/KG	13.000	U	18.000	U	15.000	UJ
TETRACHLOROETHENE	UG/KG	13.000	U	18.000	U	15.000	UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	13.000	U	18.000	U	15.000	UJ
TOLUENE	UG/KG	13.000	U	18.000	U	15.000	UJ
CHLOROBENZENE	UG/KG	13.000	U	18.000	U	15.000	UJ
ETHYLBENZENE	UG/KG	13.000	U	18.000	U	15.000	UJ
STYRENE	UG/KG	13.000	U	18.000	U	15.000	UJ
XYLENES (TOTAL)	UG/KG	13.000	U	18.000	U	15.000	UJ

W. J. J. J.
4/12/94

1A-011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Bob 921

R5185

Field Blank

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5185

Sample wt/vol: 4.370 (g/mL) G

Lab File ID: >AE06E

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg Q

74-87-3-----	Chloromethane	11.	U
74-83-9-----	Bromomethane	11.	U
75-01-4-----	Vinyl Chloride	11.	U
75-00-3-----	Chloroethane	11.	U
75-09-2-----	Methylene Chloride	11.	U
67-64-1-----	Acetone	11.	U
75-15-0-----	Carbon Disulfide	11.	U
75-35-4-----	1,1-Dichloroethene	11.	U
75-34-3-----	1,1-Dichloroethane	11.	U
540-59-0-----	1,2-Dichloroethene (total)	11.	U
67-66-3-----	Chloroform	11.	U
107-02-2-----	1,2-Dichloroethane	11.	U
78-93-3-----	2-Butanone	11.	U
71-55-6-----	1,1,1-Trichloroethane	11.	U
56-23-5-----	Carbon Tetrachloride	11.	U
75-27-4-----	Bromodichloromethane	11.	U
78-87-5-----	1,2-Dichloropropane	11.	U
10061-01-5-----	cis-1,3-Dichloropropene	11.	U
79-01-6-----	Trichloroethene	11.	U
124-48-1-----	Dibromochloromethane	11.	U
79-00-5-----	1,1,2-Trichloroethane	11.	U
71-43-2-----	Benzene	11.	U
10061-02-6-----	trans-1,3-Dichloropropene	11.	U
75-25-2-----	Bromoform	11.	U
108-10-1-----	4-Methyl-2-pentanone	11.	U
591-78-6-----	2-Hexanone	11.	U
127-18-4-----	Tetrachloroethene	11.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11.	U
108-88-3-----	Toluene	11.	U
108-90-7-----	Chlorobenzene	11.	U
100-41-4-----	Ethylbenzene	11.	U
100-42-5-----	Styrene	11.	U
133-02-7-----	Xylene (total)	11.	U

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TA-012

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B08001
R5185

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5185

Sample wt/vol: 4.370 (g/mL) G

Lab File ID: >AE06E

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.13	8.	J
2.	Unknown	21.77	10.	J
3.				
4.				
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29.				
30.				

WHC-SD-WM-DP-068, REV. 0

FORM I VOA-TIC

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9/07/94

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

808002

R5186

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5186

Sample wt/vol: 2.630 (g/mL) G

Lab File ID: >AE06F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

Q

74-87-3-----	Chloromethane	19.	U
74-83-9-----	Bromomethane	19.	U
75-01-4-----	Vinyl Chloride	19.	U
75-00-3-----	Chloroethane	19.	U
75-09-2-----	Methylene Chloride	19.	U
67-64-1-----	Acetone	19.	U
75-15-0-----	Carbon Disulfide	19.	U
75-35-4-----	1,1-Dichloroethene	19.	U
75-34-3-----	1,1-Dichloroethane	19.	U
540-59-0-----	1,2-Dichloroethene (total)	19.	U
67-66-3-----	Chloroform	19.	U
107-02-2-----	1,2-Dichloroethane	19.	U
78-93-3-----	2-Butanone	19.	U
71-55-6-----	1,1,1-Trichloroethane	19.	U
56-23-5-----	Carbon Tetrachloride	19.	U
75-27-4-----	Bromodichloromethane	19.	U
78-87-5-----	1,2-Dichloropropane	19.	U
10061-01-5-----	cis-1,3-Dichloropropene	19.	U
79-01-6-----	Trichloroethene	19.	U
124-48-1-----	Dibromochloromethane	19.	U
79-00-5-----	1,1,2-Trichloroethane	19.	U
71-43-2-----	Benzene	19.	U
10061-02-6-----	trans-1,3-Dichloropropene	19.	U
75-25-2-----	Bromoform	19.	U
108-10-1-----	4-Methyl-2-pentanone	19.	U
591-78-6-----	2-Hexanone	19.	U
127-18-4-----	Tetrachloroethene	19.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	19.	U
108-88-3-----	Toluene	19.	U
108-90-7-----	Chlorobenzene	19.	U
100-41-4-----	Ethylbenzene	19.	U
100-42-5-----	Styrene	19.	U
133-02-7-----	Xylene (total)	19.	U

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1A-014

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B-8 Q Q Q

R5186

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5186

Sample wt/vol: 2.630 (g/mL) G

Lab File ID: >AE06F

Level: (low/med) LOW

WHC-SD-WM-DP-068

Date Received: 05/02/94

% Moisture: not dec.

ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.	WHC-SD-WM-DP-068, REV. 0			
11.				
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1A-015

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Field OLP of 808222

808223
R5197

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5197

Sample wt/vol: 2.917 (g/mL) G

Lab File ID: >AE090

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	Chloromethane	17.	U
74-83-9	Bromomethane	17.	U
75-01-4	Vinyl Chloride	17.	U
75-00-3	Chloroethane	17.	U
75-09-2	Methylene Chloride	17.	U
67-64-1	Acetone	21.	B
75-15-0	Carbon Disulfide	17.	U
75-35-4	1,1-Dichloroethene	17.	U
75-34-3	1,1-Dichloroethane	17.	U
540-59-0	1,2-Dichloroethene (total)	17.	U
67-66-3	Chloroform	17.	U
107-02-2	1,2-Dichloroethane	17.	U
78-93-3	2-Butanone	17.	U
71-55-6	1,1,1-Trichloroethane	17.	U
56-23-5	Carbon Tetrachloride	17.	U
75-27-4	Bromodichloromethane	17.	U
78-87-5	1,2-Dichloropropane	17.	U
10061-01-5	cis-1,3-Dichloropropene	17.	U
79-01-6	Trichloroethene	17.	U
124-48-1	Dibromochloromethane	17.	U
79-00-5	1,1,2-Trichloroethane	17.	U
71-43-2	Benzene	17.	U
10061-02-6	trans-1,3-Dichloropropene	17.	U
75-25-2	Bromoform	17.	U
108-10-1	4-Methyl-2-pentanone	17.	U
591-78-6	2-Hexanone	17.	U
127-18-4	Tetrachloroethene	17.	U
79-34-5	1,1,2,2-Tetrachloroethane	17.	U
108-88-3	Toluene	17.	U
108-90-7	Chlorobenzene	17.	U
100-41-4	Ethylbenzene	17.	U
100-42-5	Styrene	17.	U
133-02-7	Xylene (total)	17.	U

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TA-016

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
808223
R5197

WHC-SD-WM-DP-068, REV. 0

I Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5197

Sample wt/vol: 2.917 (g/mL) G

Lab File ID: >AE090

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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FORM I VOA-TIC

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1A-017

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

808224

R5187

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5187

Sample wt/vol: 2.932 (g/mL) G

Lab File ID: >AE06G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg Q

74-87-3	Chloromethane	17.	U
74-83-9	Bromomethane	17.	U
75-01-4	Vinyl Chloride	17.	U
75-00-3	Chloroethane	17.	U
75-09-2	Methylene Chloride	17.	U
67-64-1	Acetone	17.	U
75-15-0	Carbon Disulfide	17.	U
75-35-4	1,1-Dichloroethene	17.	U
75-34-3	1,1-Dichloroethane	17.	U
540-59-0	1,2-Dichloroethene (total)	17.	U
67-66-3	Chloroform	17.	U
107-02-2	1,2-Dichloroethane	17.	U
78-93-3	2-Butanone	17.	U
71-55-6	1,1,1-Trichloroethane	17.	U
56-23-5	Carbon Tetrachloride	17.	U
75-27-4	Bromodichloromethane	17.	U
78-87-5	1,2-Dichloropropane	17.	U
10061-01-5	cis-1,3-Dichloropropene	17.	U
79-01-6	Trichloroethene	17.	U
124-48-1	Dibromochloromethane	17.	U
79-00-5	1,1,2-Trichloroethane	17.	U
71-43-2	Benzene	17.	U
10061-02-6	trans-1,3-Dichloropropene	17.	U
75-25-2	Bromoform	17.	U
108-10-1	4-Methyl-2-pentanone	17.	U
591-78-6	2-Hexanone	17.	U
127-18-4	Tetrachloroethene	17.	U
79-34-5	1,1,2,2-Tetrachloroethane	17.	U
108-88-3	Toluene	17.	U
108-90-7	Chlorobenzene	17.	U
100-41-4	Ethylbenzene	17.	U
100-42-5	Styrene	17.	U
133-02-7	Xylene (total)	17.	U

FORM I VOA

VeriSeal

3/90

56

sgm 9/07/94

1A-018

WHC-SD-WM-DP-068, REV. 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B-8004
R5187

Name: WHC PAL

Contract:

Lab Code: Case No.: SAS No.: SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5187

Sample wt/vol: 2.932 (g/mL) G

Lab File ID: >AE06G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	WHC-SD-WM-DP-068, REV. 0			
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
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27.				
28.				
29.				
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FORM I VOA-TIC

57

Verified
sgm 9/07/94

3/90

1A-019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

808005

R5188

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5188

Sample wt/vol: 3.447 (g/mL) G

Lab File ID: >AE06J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

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

FORM I VOA

Verified
sgm 9/07/94

3/90

1A-020

76

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
808005
R5188

Name: WHC PAL

Contract:

Lab Code: Case No.: SAS No.: SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5188

Sample wt/vol: 3.447 (g/mL) G

Lab File ID: >AE06J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. **WHC-SD-WM-DP-068**
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	WHC SD WM DP 068, REV. 0			
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

Vesic Rich
sgm 9/07/94

3/90
1A-021

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08026
R5189

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5189

Sample wt/vol: 3.000 (g/mL) G

Lab File ID: >AE06K

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068 REV. 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q Q

74-87-3	Chloromethane	17.	U
74-83-9	Bromomethane	17.	U
75-01-4	Vinyl Chloride	17.	U
75-00-3	Chloroethane	17.	U
75-09-2	Methylene Chloride	17.	U
67-64-1	Acetone	17. 4.	JB
75-15-0	Carbon Disulfide	17.	U
75-35-4	1,1-Dichloroethene	17.	U
75-34-3	1,1-Dichloroethane	17.	U
540-59-0	1,2-Dichloroethene (total)	17.	U
67-66-3	Chloroform	17.	U
107-02-2	1,2-Dichloroethane	17.	U
78-93-3	2-Butanone	17.	U
71-55-6	1,1,1-Trichloroethane	17.	U
56-23-5	Carbon Tetrachloride	17.	U
75-27-4	Bromodichloromethane	17.	U
78-87-5	1,2-Dichloropropane	17.	U
10061-01-5	cis-1,3-Dichloropropene	17.	U
79-01-6	Trichloroethene	17.	U
124-48-1	Dibromochloromethane	17.	U
79-00-5	1,1,2-Trichloroethane	17.	U
71-43-2	Benzene	17.	U
10061-02-6	trans-1,3-Dichloropropene	17.	U
75-25-2	Bromoform	17.	U
108-10-1	4-Methyl-2-pentanone	17.	U
591-78-6	2-Hexanone	17.	U
127-18-4	Tetrachloroethene	17.	U
79-34-5	1,1,2,2-Tetrachloroethane	17.	U
108-88-3	Toluene	17.	U
108-90-7	Chlorobenzene	17.	U
100-41-4	Ethylbenzene	17.	U
100-42-5	Styrene	17.	U
133-02-7	Xylene (total)	17.	U

FORM I VOA

3/90

97

1A-022

Verified
9/07/94

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08226

R5189

b Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5189

Sample wt/vol: 3.000 (g/mL) G

Lab File ID: >AE06K

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

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3/90

1A-023

98

WHC-SD-WM-DP-068, REV. 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

808007

R5190

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5190

Sample wt/vol: 3.457 (g/mL) G

Lab File ID: >AE06L

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

GC Column: DB-624

ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV 0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	14.	U
74-83-9-----	Bromomethane	14.	U
75-01-4-----	Vinyl Chloride	14.	U
75-00-3-----	Chloroethane	14.	U
75-09-2-----	Methylene Chloride	14.	U
67-64-1-----	Acetone	14.	U
75-15-0-----	Carbon Disulfide	14.	U
75-35-4-----	1,1-Dichloroethane	14.	U
75-34-3-----	1,1-Dichloroethane	14.	U
540-59-0-----	1,2-Dichloroethene (total)	14.	U
67-66-3-----	Chloroform	14.	U
107-02-2-----	1,2-Dichloroethane	14.	U
78-93-3-----	2-Butanone	14.	U
71-55-6-----	1,1,1-Trichloroethane	14.	U
56-23-5-----	Carbon Tetrachloride	14.	U
75-27-4-----	Bromodichloromethane	14.	U
78-87-5-----	1,2-Dichloropropane	14.	U
10061-01-5-----	cis-1,3-Dichloropropene	14.	U
79-01-6-----	Trichloroethene	14.	U
124-48-1-----	Dibromochloromethane	14.	U
79-00-5-----	1,1,2-Trichloroethane	14.	U
71-43-2-----	Benzene	14.	U
10061-02-6-----	trans-1,3-Dichloropropene	14.	U
75-25-2-----	Bromoform	14.	U
108-10-1-----	4-Methyl-2-pentanone	14.	U
591-78-6-----	2-Hexanone	14.	U
127-18-4-----	Tetrachloroethene	14.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	14.	U
108-88-3-----	Toluene	14.	U
108-90-7-----	Chlorobenzene	14.	U
100-41-4-----	Ethylbenzene	14.	U
100-42-5-----	Styrene	14.	U
133-02-7-----	Xylene (total)	14.	U

FORM I VOA

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sgm 9/07/94

3/90

1A-024

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

808007

R5190

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5190

Sample wt/vol: 3.457 (g/mL) G

Lab File ID: >AE06L

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	WHC-SD-WM-DP-068, REV. 0			
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

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3/90

1A-025

419

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
808008

R5191

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5191

Sample wt/vol: 3.216 (g/mL) G

Lab File ID: >AE06M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

Q

Q

74-87-3-----	Chloromethane	16.	U
74-83-9-----	Bromomethane	16.	U
75-01-4-----	Vinyl Chloride	16.	U
75-00-3-----	Chloroethane	16.	U
75-09-2-----	Methylene Chloride	16.	U
67-64-1-----	Acetone	39.	B
75-15-0-----	Carbon Disulfide	16.	U
75-35-4-----	1,1-Dichloroethene	16.	U
75-34-3-----	1,1-Dichloroethane	16.	U
540-59-0-----	1,2-Dichloroethene (total)	16.	U
67-66-3-----	Chloroform	16.	U
107-02-2-----	1,2-Dichloroethane	16.	U
78-93-3-----	2-Butanone	16.	U
71-55-6-----	1,1,1-Trichloroethane	16.	U
56-23-5-----	Carbon Tetrachloride	16.	U
75-27-4-----	Bromodichloromethane	16.	U
78-87-5-----	1,2-Dichloropropane	16.	U
10061-01-5-----	cis-1,3-Dichloropropene	16.	U
79-01-6-----	Trichloroethene	16.	U
124-48-1-----	Dibromochloromethane	16.	U
79-00-5-----	1,1,2-Trichloroethane	16.	U
71-43-2-----	Benzene	16.	U
10061-02-6-----	trans-1,3-Dichloropropene	16.	U
75-25-2-----	Bromoform	16.	U
108-10-1-----	4-Methyl-2-pentanone	16.	U
591-78-6-----	2-Hexanone	16.	U
127-18-4-----	Tetrachloroethene	16.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	16.	U
108-88-3-----	Toluene	16.	U
108-90-7-----	Chlorobenzene	16.	U
100-41-4-----	Ethylbenzene	16.	U
100-42-5-----	Styrene	16.	U
133-02-7-----	Xylene (total)	16.	U

FORM I VOA

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sgm 9/07/94

3/90

1A-026

137

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

808008

R5191

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5191

Sample wt/vol: 3.216 (g/mL) G

Lab File ID: >AE06M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/06/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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22.				
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26.				
27.				
28.				
29.				
30.				

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FORM I VOA-TIC

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1A-027

WHC-SD-WM-DP-068, REV. 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
508229
R5192

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5192

Sample wt/vol: 3.897 (g/mL) G

Lab File ID: >AE09F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV.

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	Chloromethane	13.	U
74-83-9	Bromomethane	13.	U
75-01-4	Vinyl Chloride	13.	U
75-00-3	Chloroethane	13.	U
75-09-2	Methylene Chloride	13.	U
67-64-1	Acetone	37.	B
75-15-0	Carbon Disulfide	13.	U
75-35-4	1,1-Dichloroethene	13.	U
75-34-3	1,1-Dichloroethane	13.	U
540-59-0	1,2-Dichloroethene (total)	13.	U
67-66-3	Chloroform	13.	U
107-02-2	1,2-Dichloroethane	13.	U
78-93-3	2-Butanone	13.	U
71-55-6	1,1,1-Trichloroethane	13.	U
56-23-5	Carbon Tetrachloride	13.	U
75-27-4	Bromodichloromethane	13.	U
78-87-5	1,2-Dichloropropane	13.	U
10061-01-5	cis-1,3-Dichloropropene	13.	U
79-01-6	Trichloroethene	13.	U
124-48-1	Dibromochloromethane	13.	U
79-00-5	1,1,2-Trichloroethane	13.	U
71-43-2	Benzene	13.	U
10061-02-6	trans-1,3-Dichloropropene	13.	U
75-25-2	Bromoform	13.	U
108-10-1	4-Methyl-2-pentanone	13.	U
591-78-6	2-Hexanone	13.	U
127-18-4	Tetrachloroethene	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	13.	U
108-88-3	Toluene	13.	U
108-90-7	Chlorobenzene	13.	U
100-41-4	Ethylbenzene	13.	U
100-42-5	Styrene	13.	U
133-02-7	Xylene (total)	13.	U

FORM I VOA

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Verified
sgm 9/07/94

3/90

1A-028

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
808009
R5192

Name: WHC PAL

Contract:

Lab Code: Case No.: SAS No.: SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5192

Sample wt/vol: 3.897 (g/mL) G

Lab File ID: >AE09F

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.	WHC-SD-WM-DP-068, REV. 0			
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

Verified
157
8/25/94
Jgm 9/07/94
3190
1A-029

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B08QRO
R5193

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5193

Sample wt/vol: 3.249 (g/mL) G

Lab File ID: >AE09G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

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

FORM I VOA

177

Verified

sgm 9/07/94

3/90

1A-030

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
8082RO

R5193

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5193

Sample wt/vol: 3.249 (g/mL) G

Lab File ID: >AE09G

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.	WHC-SD-WM-DP-068, REV. 0			
9.				
10.				
11.				
12.				
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28.				
29.				
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FORM I VOA-TIC

Verified
sgm 9/07/94

3/90

1A-031

178

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B080R1
R5194

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5194

Sample wt/vol: 4.676 (g/mL) G

Lab File ID: >AE09H

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q Q

74-87-3-----	Chloromethane	11.	U
74-83-9-----	Bromomethane	11.	U
75-01-4-----	Vinyl Chloride	11.	U
75-00-3-----	Chloroethane	11.	U
75-09-2-----	Methylene Chloride	11.	U
67-64-1-----	Acetone	74.	B
75-15-0-----	Carbon Disulfide	11.	U
75-35-4-----	1,1-Dichloroethene	11.	U
75-34-3-----	1,1-Dichloroethane	11.	U
540-59-0-----	1,2-Dichloroethene (total)	11.	U
67-66-3-----	Chloroform	11.	U
107-02-2-----	1,2-Dichloroethane	11.	U
78-93-3-----	2-Butanone	11.	U
71-55-6-----	1,1,1-Trichloroethane	11.	U
56-23-5-----	Carbon Tetrachloride	11.	U
75-27-4-----	Bromodichloromethane	11.	U
78-87-5-----	1,2-Dichloropropane	11.	U
10061-01-5-----	cis-1,3-Dichloropropene	11.	U
79-01-6-----	Trichloroethene	11.	U
124-48-1-----	Dibromochloromethane	11.	U
79-00-5-----	1,1,2-Trichloroethane	11.	U
71-43-2-----	Benzene	11.	U
10061-02-6-----	trans-1,3-Dichloropropene	11.	U
75-25-2-----	Bromoform	11.	U
108-10-1-----	4-Methyl-2-pentanone	11.	U
591-78-6-----	2-Hexanone	11.	U
127-18-4-----	Tetrachloroethene	.1	J
79-34-5-----	1,1,2,2-Tetrachloroethane	11.	U
108-88-3-----	Toluene	.6	J
108-90-7-----	Chlorobenzene	11.	U
100-41-4-----	Ethylbenzene	11.	U
100-42-5-----	Styrene	11.	U
133-02-7-----	Xylene (total)	.1	J

FORM I VOA

198

Verified
sgm 9/27/94

3/90

1A-032

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BOBARI

R5194

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5194

Sample wt/vol: 4.676 (g/mL) G

Lab File ID: >AE09H

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.14	15.	+
2.				
3.				
4.				
5.				
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28.				
29.				
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WHC-SD-WM-DP-068, REV. 0

FORM I VOA-TIC

139

3/90

1A-033

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
8080R2
R5195

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5195

Sample wt/vol: 3.840 (g/mL) G

Lab File ID: >AE09I

Level: (low/med) LOW

Date Received: 05/02/94

WHC-SD-WM-DP-068
% Moisture: not dec. ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg	Q	<u>Q</u>
---------	----------	---	---	----------

74-87-3-----	Chloromethane	13.	U	
74-83-9-----	Bromomethane	13.	U	
75-01-4-----	Vinyl Chloride	13.	U	
75-00-3-----	Chloroethane	13.	U	
75-09-2-----	Methylene Chloride	13.	U	
67-64-1-----	Acetone	35.	B	u
75-15-0-----	Carbon Disulfide	13.	U	
75-35-4-----	1,1-Dichloroethene	13.	U	
75-34-3-----	1,1-Dichloroethane	13.	U	
540-59-0-----	1,2-Dichloroethene (total)	13.	U	
67-66-3-----	Chloroform	13.	U	
107-02-2-----	1,2-Dichloroethane	13.	U	
78-93-3-----	2-Butanone	13.	U	
71-55-6-----	1,1,1-Trichloroethane	13.	U	
56-23-5-----	Carbon Tetrachloride	13.	U	
75-27-4-----	Bromodichloromethane	13.	U	
78-87-5-----	1,2-Dichloropropane	13.	U	
10061-01-5-----	cis-1,3-Dichloropropene	13.	U	
79-01-6-----	Trichloroethene	13.	U	
124-48-1-----	Dibromochloromethane	13.	U	
79-00-5-----	1,1,2-Trichloroethane	13.	U	
71-43-2-----	Benzene	13.	U	
10061-02-6-----	trans-1,3-Dichloropropene	13.	U	
75-25-2-----	Bromoform	13.	U	
108-10-1-----	4-Methyl-2-pentanone	13.	U	
591-78-6-----	2-Hexanone	13.	U	
127-18-4-----	Tetrachloroethene	13.	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	13.	U	
108-88-3-----	Toluene	13.	U	
108-90-7-----	Chlorobenzene	13.	U	
100-41-4-----	Ethylbenzene	13.	U	
100-42-5-----	Styrene	13.	U	
133-02-7-----	Xylene (total)	13.	U	

FORM I VOA

WHC-SD-WM-DP-068, REV. 0

3/90

Verified
223 g/m 9/07/94

1A-034

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Bobara
R5195

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5195

Sample wt/vol: 3.840 (g/mL) G

Lab File ID: >AE09I

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
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WHC-SD-WM-DP-068, REV. 0

FORM I VOA-TIC

Verified

3/90

Agm 9/07/94

1A-035

~~224~~

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B080R3

R5196

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5196

Sample wt/vol: 3.996 (g/mL) G

Lab File ID: >AE09M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

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

CAS NO.

COMPOUND

Q

Q

74-87-3-----	Chloromethane	13.	U
74-83-9-----	Bromomethane	13.	U
75-01-4-----	Vinyl Chloride	13.	U
75-00-3-----	Chloroethane	13.	U
75-09-2-----	Methylene Chloride	13.	U
67-64-1-----	Acetone	29.	B
75-15-0-----	Carbon Disulfide	13.	U
75-35-4-----	1,1-Dichloroethene	13.	U
75-34-3-----	1,1-Dichloroethane	13.	U
540-59-0-----	1,2-Dichloroethene (total)	13.	U
67-66-3-----	Chloroform	13.	U
107-02-2-----	1,2-Dichloroethane	13.	U
78-93-3-----	2-Butanone	13.	U
71-55-6-----	1,1,1-Trichloroethane	13.	U
56-23-5-----	Carbon Tetrachloride	13.	U
75-27-4-----	Bromodichloromethane	13.	U
78-87-5-----	1,2-Dichloropropane	13.	U
10061-01-5-----	cis-1,3-Dichloropropene	13.	U
79-01-6-----	Trichloroethene	13.	U
124-48-1-----	Dibromochloromethane	13.	U
79-00-5-----	1,1,2-Trichloroethane	13.	U
71-43-2-----	Benzene	13.	U
10061-02-6-----	trans-1,3-Dichloropropene	13.	U
75-25-2-----	Bromoform	13.	U
108-10-1-----	4-Methyl-2-pentanone	13.	U
591-78-6-----	2-Hexanone	13.	U
127-18-4-----	Tetrachloroethene	13.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	13.	U
108-88-3-----	Toluene	13.	U
108-90-7-----	Chlorobenzene	13.	U
100-41-4-----	Ethylbenzene	13.	U
100-42-5-----	Styrene	13.	U
133-02-7-----	Xylene (total)	13.	U

FORM I VOA

Verified

3/90

~~243~~ sgm 9/07/94

1A-036

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

8082R3

R5196

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5196

Sample wt/vol: 3.996 (g/mL) G

Lab File ID: >AE09M

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. : WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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30.				

FORM I VOA-TIC

244

Verified

sgm 9/07/94

3/90

1A-037

WHC-SD-WM-DP-068, REV. 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B080R4
R5200

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200

Sample wt/vol: 2.842 (g/mL) G

Lab File ID: >AE09J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. **WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0**

Date Analyzed: 5/09/94

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/Kg Q

74-87-3	Chloromethane	18.	U
74-83-9	Bromomethane	18.	U
75-01-4	Vinyl Chloride	18.	U
75-00-3	Chloroethane	18.	U
75-09-2	Methylene Chloride	18.	U
67-64-1	Acetone	31.	B
75-15-0	Carbon Disulfide	18.	U
75-35-4	1,1-Dichloroethene	18.	U
75-34-3	1,1-Dichloroethane	18.	U
540-59-0	1,2-Dichloroethene (total)	18.	U
67-66-3	Chloroform	18.	U
107-02-2	1,2-Dichloroethane	18.	U
78-93-3	2-Butanone	18.	U
71-55-6	1,1,1-Trichloroethane	18.	U
56-23-5	Carbon Tetrachloride	18.	U
75-27-4	Bromodichloromethane	18.	U
78-87-5	1,2-Dichloropropane	18.	U
10061-01-5	cis-1,3-Dichloropropene	18.	U
79-01-6	Trichloroethene	18.	U
124-48-1	Dibromochloromethane	18.	U
79-00-5	1,1,2-Trichloroethane	18.	U
71-43-2	Benzene	18.	U
10061-02-6	trans-1,3-Dichloropropene	18.	U
75-25-2	Bromoform	18.	U
108-10-1	4-Methyl-2-pentanone	18.	U
591-78-6	2-Hexanone	18.	U
127-18-4	Tetrachloroethene	18.	U
79-34-5	1,1,2,2-Tetrachloroethane	18.	U
108-88-3	Toluene	18.	U
108-90-7	Chlorobenzene	18.	U
100-41-4	Ethylbenzene	18.	U
100-42-5	Styrene	18.	U
133-02-7	Xylene (total)	18.	U

FORM I VOA

332

Verified
sgm 9/07/94

3/90

1A-038

WHC-SD-WM-DP-068, REV. 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

808094

R5200

WHC-SD-WM-DP-068, REV. 0

1 Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5200

Sample wt/vol: 2.842 (g/mL) G

Lab File ID: >AE09J

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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FORM I VOA-TIC

333

Verified
sgm 9/07/94

3/90
1A-039

EPA SAMPLE NO.
R0R0RS

R5201

WHC-SD-WM-DP-068, REV. 0

Contract:

SDG No.: R5185

Lab Sample ID: R5201

Lab File ID: >AE09S

Date Received: 05/02/94

Date Analyzed: 5/09/94

Dilution Factor: 1

Soil Aliquot Volume: (uL)

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

C

74-87-3-----Chloromethane	15.	U
74-83-9-----Bromomethane	15.	U
75-01-4-----Vinyl Chloride	15.	U
75-00-3-----Chloroethane	15.	U
75-09-2-----Methylene Chloride	15.	U
67-64-1-----Acetone	54.	B
75-15-0-----Carbon Disulfide	15.	U
75-35-4-----1,1-Dichloroethene	15.	U
75-34-3-----1,1-Dichloroethane	15.	U
540-59-0-----1,2-Dichloroethene (total)	15.	U
67-66-3-----Chloroform	15.	U
107-02-2-----1,2-Dichloroethane	15.	U
78-93-3-----2-Butanone	15.	U
71-55-6-----1,1,1-Trichloroethane	15.	U
56-23-5-----Carbon Tetrachloride	15.	U
75-27-4-----Bromodichloromethane	15.	U
78-87-5-----1,2-Dichloropropane	15.	U
10061-01-5-----cis-1,3-Dichloropropene	15.	U
79-01-6-----Trichloroethene	15.	U
124-48-1-----Dibromochloromethane	15.	U
79-00-5-----1,1,2-Trichloroethane	15.	U
71-43-2-----Benzene	15.	U
10061-02-6-----trans-1,3-Dichloropropene	15.	U
75-25-2-----Bromoform	15.	U
108-10-1-----4-Methyl-2-pentanone	15.	U
591-78-6-----2-Hexanone	15.	U
127-18-4-----Tetrachloroethene	15.	U
79-34-5-----1,1,2,2-Tetrachloroethane	15.	U
108-88-3-----Toluene	15.	U
108-90-7-----Chlorobenzene	15.	U
100-41-4-----Ethylbenzene	15.	U
100-42-5-----Styrene	15.	U
133-02-7-----Xylene (total)	15.	U

FORM I VOA

Verified
sgm 9/07/94

3/90
1A-040

~~356~~

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Bobo RS

R5201

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5201

Sample wt/vol: 3.255 (g/mL) G

Lab File ID: >AE09S

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

Verified

sgm 9/07/94

3/90

1A-041

357

WHC-SD-WM-DP-068, REV. 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08086

R5198

Trip Blank

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5198

Sample wt/vol: 4.454 (g/mL) G

Lab File ID: >AE09P

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

WHC-SD-WM-DP-068, REV. 0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q 2

74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	11.	U
67-64-1	Acetone	12.	B
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-02-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
133-02-7	Xylene (total)	11.	U

FORM I VOA

Verified

3/90

283 sgm 9/07/94

1A-042

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOBQR6

R5198

Job Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5198

Sample wt/vol: 4.454 (g/mL) G

Lab File ID: >AE09P

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068, REV. 0

Date Analyzed: 5/09/94

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/Kg

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.15	11.	J
2.	Unknown	21.81	10.	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

284

Verified
sgm 9/07/94

3/90

1A-043

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BOBART
R5199
Equipment
Blank

WHC-SD-WM-DP-068, REV. 0

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5199

Sample wt/vol: 5.274 (g/mL) G

Lab File ID: >AE09Q

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec. WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg Q

74-87-3	Chloromethane	9.	U
74-83-9	Bromomethane	9.	U
75-01-4	Vinyl Chloride	9.	U
75-00-3	Chloroethane	9.	U
75-09-2	Methylene Chloride	9.	U
67-64-1	Acetone	8.	JB
75-15-0	Carbon Disulfide	9.	U
75-35-4	1,1-Dichloroethene	9.	U
75-34-3	1,1-Dichloroethane	9.	U
540-59-0	1,2-Dichloroethene (total)	9.	U
67-66-3	Chloroform	9.	U
107-02-2	1,2-Dichloroethane	9.	U
78-93-3	2-Butanone	9.	U
71-55-6	1,1,1-Trichloroethane	9.	U
56-23-5	Carbon Tetrachloride	9.	U
75-27-4	Bromodichloromethane	9.	U
78-87-5	1,2-Dichloropropane	9.	U
10061-01-5	cis-1,3-Dichloropropene	9.	U
79-01-6	Trichloroethene	9.	U
124-48-1	Dibromochloromethane	9.	U
79-00-5	1,1,2-Trichloroethane	9.	U
71-43-2	Benzene	9.	U
10061-02-6	trans-1,3-Dichloropropene	9.	U
75-25-2	Bromoform	9.	U
108-10-1	4-Methyl-2-pentanone	9.	U
591-78-6	2-Hexanone	9.	U
127-18-4	Tetrachloroethene	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	9.	U
108-88-3	Toluene	9.	U
108-90-7	Chlorobenzene	9.	U
100-41-4	Ethylbenzene	9.	U
100-42-5	Styrene	9.	U
133-02-7	Xylene (total)	9.	U

FORM I VOA

Verified

sgm 9/07/94

3/90

1A-044

307

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

80807

R5199

Lab Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) SOIL

Lab Sample ID: R5199

Sample wt/vol: 5.274 (g/mL) G

Lab File ID: >AE09Q

Level: (low/med) LOW

Date Received: 05/02/94

% Moisture: not dec.

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Date Analyzed: 5/09/94

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/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	20.13	11.	+
2.	Unknown	21.79	9.	+
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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21.				
22.				
23.				
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27.				
28.				
29.				
30.				

FORM I VOA-TIC

308

Verified

sgm 9/07/94

3/90

1A-045

WHC-SD-WM-DP-068, REV. 0

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

ATTACHMENT 4

LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION

P.O. Box 1970 Richland, WA 99352

SDG NARRATIVE - Concrete Samples
July 27, 1994

VOLATILE ORGANICS

Lab Sample Number	Customer ID
R5185	BOBQQ1
R5186	BOBQQ2
R5187	BOBQQ4
R5188	BOBQQ5
R5189	BOBQQ6
R5190	BOBQQ7
R5191	BOBQQ8
R5192	BOBQQ9
R5193	BOBQR0
R5194	BOBQR1
R5195	BOBQR2
R5196	BOBQR3
R5197	BOBQQ3
R5198	BOBQR6
R5199	BOBQR7
R5200	BOBQR4
R5201	BOBQR5

The initial GC/MS calibration and continuing calibration met all protocols for RCRA analysis. All mass spectral tuning requirements were met for all standards, blanks and samples. The method blank met all applicable protocols and requirements. All internal standards and system monitoring compounds retention times and peak areas met all protocols except for area counts on samples R5200 Matrix Spike Duplicate and R5201 which were out low. All system monitoring compound recoveries were within the required limits. The sample holding time was not exceeded. The samples were run using procedure LA-523-435. Samples were extracted into water by sonication and had a pH of about 12.

All target compound concentrations were below the practical quantitation limit (PQL). Acetone was the only target compound detected, the highest concentration was 74 PPB with a PQL of 430 PPB. All concentrations reported on the forms are PPB of targets in concrete. Concentrations given in the GC/MS quant reports are in PPB of targets in water after extraction. Ethyl acetate and petroleum naphtha were treated as library search compounds and neither were detected in any sample.

K.B. WEHNER
Manager
Organic Chemistry

C (concrete coring)
B (bottled)

TABLE II : TARE WEIGHTS

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

CONCRETE SAMPLES FOR VOLATILE ORGANICS ANALYSIS

BY LA-523-435 PROCEDURE

WHC-SD-WM-DP-068, REV. 0

VIAL NO.	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME
1	BOBQQ1	4-27-94	1025
2	BOBQQ2	CORING - 4-27-94 B - 4-29-94	0955-1022 1330
3	BOBQQ4	C - 4-27-94 B - 4-29-94	0955-1022 1340
4	BOBQQ5	C - 4-27-94 B - 4-29-94	0955-1022 1351
5	BOBQQ6	C - 4-27-94 B - 4-29-94	1245-1325 1358
6	BOBQQ7	C - 4-27-94 B - 4-29-94	1245-1325 1358
7	BOBQQ8	C - 4-28-94 B - 4-29-94	0842-1028 1415
8	BOBQQ9	C - 4-28-94 B - 4-29-94	0842-1028 1425
9	BOBQR0	C - 4-27-94 B - 4-29-94	1342-1450 1440
10	BOBQR1	C - 4-27-94 B - 4-29-94	1342-1450 1446
11	BOBQR2	C - 4-27-94 B - 4-29-94	1342-1450 1455
12	BOBQR3	C - 4-28-94 B - 4-29-94	1045-1125 1501
13	BOBQQ3	C - 4-28-94 B - 4-29-94	0955-1022 1330
14	BOBQR6	5-2-94	0840
15	BOBQR7	5-2-94	0856
16	—	—	—
17	—	—	—
18	—	—	—
19	—	—	—
20	—	—	—

BEST AVAILABLE COPY

SAMPLES SUBMITTED BY:

Jonathan G. Lucas
Jonathan G. Lucas
5-2-94 1A-048
10-18-94
AE Young

430

Westinghouse
Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator

Jon Lucas

Company Contact

Jon Lucas

Project Designation/Sampling Locations

300 Area Solvent
Evap. RCRA Closure

Ice Chest No.

RM 253

Bill of Lading/Airbill No.

520 302 440

Method of Shipment

Emerg Burlington 2L 5-13-94

Shipped to

TMA / NORCAL

Possible Sample Hazards/Remarks

Telephone 509-376-2789

Collection Date 4-27 & 28-94, 5-2-94

Field Logbook No. EFL-1095

Offsite Property No. W94-0-0573 -3

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

Sample Identification

BOBQR1

BOBQR2

BOBQR3

BOBQR4

BOBQR5

Each sample consists of one ziplock
bag of concrete rubble.

BOBQR6

BOBQR7

Each sample consists of (1) 250 ml P,
(1) 125 ml P, and (1) 60 ml glass.

☐ Field Transfer of Custody Chain of Possession (Sign and Print Names)

Relinquished by

Date

Time

Received by

Date

Time

Jon Lucas
5-13-94 1318

Final Sample Disposition

Disposal Method:

Disposed by:

Date/Time:

Comments:

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

ATTACHMENT 5

DATA VALIDATION SUPPORTING DOCUMENTATION

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	<u>D</u>	E
PROJECT: <u>300 Area Street Equipment</u>			DATA PACKAGE: <u>R5185-222-093</u>		
VALIDATOR: <u>sgm</u>		LAB: <u>222-S</u>		DATE: <u>9/07/94</u>	
CASE:			SDG: <u>R5185-222-093</u>		
ANALYSES PERFORMED					
☒ CLP Volatiles	☐ SW-846 8240 (cap column)	☐ SW-846 8260 (packed column)	☐ CLP Semivolatiles	☐ SW-846 8270 (cap column)	☐ SW-846 (packed column)
☐	☐	☐	☐	☐	☐
SAMPLES/MATRIX <u>Concrete</u>					
<u>B0BQ01 B0BQ07 B0BQ02 B0BQ04</u>					
<u>B0BQ02 B0BQ08 B0BQ03 B0BQ05</u>					
<u>B0BQ04 B0BQ09 B0BQ03</u>					
<u>B0BQ05 B0BQ00 B0BQ06</u>					
<u>B0BQ06 B0BQ01 B0BQ07</u>					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Is technical verification documentation present? . . . sgm 9/7/94 Yes No N/AIs a case narrative present? . . . Yes No N/AComments: No qual. is required for absence of
tech. verification documentation.

2. HOLDING TIMES

Are sample holding times acceptable? . . . Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

3. INSTRUMENT TUNING AND CALIBRATION

Is the GC/MS tuning/performance check acceptable? ☒ Yes No N/AAre initial calibrations acceptable? ☒ Yes No N/AAre continuing calibrations acceptable? ☒ Yes No N/A

Comments: _____

4. BLANKS

Were laboratory blanks analyzed? ☒ Yes No N/AAre laboratory blank results acceptable? Yes ☒ No N/AWere field/trip blanks analyzed? ☒ Yes No N/AAre field/trip blank results acceptable? *See lab page of chart* ☒ Yes ☒ No N/A *sgm 9/17/94*Comments: *Acetone was detected in the assoc. lab blanks.**Therefore, assoc. results $< 10 \times$ respective blank conc. have been qualified as ~~not~~ *sgm 9/17/94* undetected (11)**Benzene, toluene & 2-butanone were also detected in the ^{sample results} assoc. lab blanks & have been qual. according to the rule above*

5. ACCURACY

Were surrogates/System Monitoring Compounds analyzed? ☒ Yes No N/AAre surrogate/System Monitoring Compound recoveries acceptable? ☒ Yes No N/AWere MS/MSD samples analyzed? ☒ Yes No N/AAre MS/MSD results acceptable? ☒ Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

6. PRECISION

Are MS/MSD RPD values acceptable? ☒ Yes No N/AAre field duplicate RPD values acceptable? ☒ Yes No N/AAre field split RPD values acceptable? Yes No ☒ N/A

Comments: Sample B0B003 is identified as a field dup
of Sample B0B002. All TCL results are reported
and verified as nondetects in both samples therefore
RPDs could not be calculated. TICs were also not
present in either sample.

7. SYSTEM PERFORMANCE

Were internal standards analyzed? ☒ Yes No N/AAre internal standard areas acceptable? Yes ☒ No N/AAre internal standard retention times acceptable? ☒ Yes No N/A

Comments: All three IS areas were less than the
lower control limit for sample B0B0RS and
B0B0R4MSD. Therefore, all sample results for B0B0RS
have been qualified as estimated (UE). No qual. is
required for B0B0R4MSD since it is a lab QC sample only.

8. COMPOUND IDENTIFICATION AND QUANTITATION

Is compound identification acceptable? ☒ Yes No N/AIs compound quantitation acceptable? ☒ Yes No N/AComments: _____

9. REPORTED RESULTS AND QUANTITATION LIMITS

Are results reported for all requested analyses? ☒ Yes No N/AAre all results supported in the raw data? ☒ Yes No N/ADo results meet the CRQLs? ☒ Yes No N/AHas the laboratory properly identified and coded all TIC? . . . ☒ Yes No N/AComments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

Comments (attach additional sheets as necessary): _____

Field/Trip Blanks

Sample BOBQ01 is identified as a field blank. All TCL results and ~~TIC~~ are nondetects and no TICs were present.

Sample BOBQ06 is identified as a trip blank. All TCL results are ~~nondetects~~ ^{11/17/94} nondetects, however two TICs identified as unknowns were detected. No qualification is required for field/trip blanks.

Sample BOBQ07 is identified as an equipment blank, as is BOBQ06, all TCL results are nondetects, however two TICs identified as unknowns were detected. No qualification is required for field blanks.

Signature
9/07/94

Benzene was detected in VBLK06 and Toluene in VBLK08 ^{at concentrations} which were ~~not~~ below reporting levels. These results were used to qualify associated sample results with similar concentrations to the blank as undetected (u)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK06

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Assoc. with
B08001

Lab Sample ID: VBLK06

Sample wt/vol: 5

(g/mL) ML B08002

Lab File ID: >AE06D

Level: (low/med) LOW

B08004
B08005

Date Received:

% Moisture: not dec.

B08006

Date Analyzed: 5/06/94

GC Column: DB-624 ID: 0.53 (mm)

B08007
B08008

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume:

(uL)

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

CAS NO.

COMPOUND

Q

10
\$x
X

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	1.	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	10.	U
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	0.05 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

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

0.05

10

5 100.5

sgm
9/7/94

FORM I VOA

3/90

1A-054

429

WHC-SD-WM-DP-068, REV. 0

6/6/94

QUANT REPORT

Page 1

Operator ID: JOY *John Rose - Aug* Quant Rev: 7 Quant Time: 940506 10:26
Output File: ^AE06D::D2 Injected at: 940506 09:54
Data File: >AE06D::D5 Dilution Factor: 1.00000
Name: VBLK06 Instrument ID: VOA-1
Misc: 10UL OF ISTD & SMC Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940506 09:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	6.05	128.0	123419	50.00	UG/L	84
8)	ACETONE	2.48	43.0	215	.964	UG/L	48
12)	2-BUTANONE <i>No Den 5-11-94</i>	5.87	43.0	325	.801	UG/L	100
14)	1,2-DICHLOROETHANE-d4	7.20	65.0	165740	47.05	UG/L	94
16)	*1,4-DIFLUOROBENZENE	8.26	114.0	475929	50.00	UG/L	90
20)	<u>BENZENE</u> <i>No Den 5-11-94</i>	7.23	78.0	302	<u>.0467</u>	UG/L	100
29)	*CHLOROBENZENE-d5	13.89	117.0	388421	50.00	UG/L	96
31)	TOLUENE-d8	11.03	98.0	424219	51.91	UG/L	96
39)	BROMOFLUOROBENZENE	16.47	95.0	308665	49.96	UG/L	95

* Compound is ISTD

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

APM
9/7/94

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK08

Name: WHC PAL

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: R5185

Matrix: (soil/water) WATER

Assoc. w/

Lab Sample ID: VBLK08

Sample wt/vol: 5

(g/mL) ML 808090

Lab File ID: >AE09D

Level: (low/med) LOW

808091

Date Received:

808092

% Moisture: not dec.

808093

Date Analyzed: 5/09/94

GC Column: DB-624

ID: 0.53 (mm)

808093

Dilution Factor: 1

Soil Extract Volume:

(uL)

808096

Soil Aliquot Volume:

(uL)

808097

808094

808095

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

CAS NO.

COMPOUND

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	10.	U
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

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

NO = 100

NO = 10

NO = 0.5

FORM I VOA

sgm 9/07/94

3/90

1A-056

c/6/94

QUANT REPORT

Page 1

Operator ID: JOY *Johanna-Long*
Output File: ^AE09D::D2
Data File: >AE09D::D5
Name: VBLK08
Misc: 10UL OF ISTD & SMC

Quant Rev: 7 Quant Time: 940509 10:28
 Injected at: 940509 09:56
 Dilution Factor: 1.00000
 Instrument ID: VOA-1
Instrument ID: 70 2

ID File: ID VOA::QT
Title: VOLATILE ANALYSIS
Last Calibration: 940330 15:10

WHC-SD-WM-DP-068, REV. 0

Last Qcal Time: 940509 08:27

Compound	R.T.	Q ion	Area	Conc	Units	q
1) *BROMOCHLOROMETHANE	6.08	128.0	114052	50.00	UG/L	83
8) ACETONE	2.53	43.0	2718M	9.84	UG/L	85
12) 2-BUTANONE	5.88	43.0	451M	1.19	UG/L	100
14) 1,2-DICHLOROETHANE-d4	7.24	65.0	158163	45.76	UG/L	94
16) *1,4-DIFLUOROBENZENE	8.28	114.0	451662	50.00	UG/L	89
29) *CHLOROBENZENE-d5	13.93	117.0	376156	50.00	UG/L	94
31) TOLUENE-d8	11.05	98.0	394221	47.50	UG/L	95
32) TOLUENE	11.19	91.0	427	.0470	UG/L	92
39) BROMOFLUOROBENZENE	16.49	95.0	295015	47.05	UG/L	97

* Compound is ISTD

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

sgm
9/07/94

1A-057

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: WHC PAL Contract: WHC-SD-WM-DP-068, REV. 0
Lab Code: Case No.: SAS No.: SDG No.: R5185
Lab File ID (Standard): >AE09B Date Analyzed: 5/09/94
Instrument ID: 70 2 Time Analyzed: 8:27
GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

	IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	115656.✓	6.08	452565.✓	8.29 ✓	367593.✓	13.91 ✓
UPPER LIMIT	231312.	6.58	905130.	8.79	735186.	14.41
LOWER LIMIT	57828.	5.58	226282.	7.79	183797.	13.41
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 VBLK08	114052.	6.08✓	451662.	8.28	376156.	13.93
02 R5192	108482.	6.10	428986.	8.31	340013.	13.92
03 R5193	108734.	6.10	424536.	8.30	353012.	13.92
04 R5194	103938.	6.10	457618.	8.29	379579.	13.94
05 R5195	110429.	6.09	440295.	8.29	363543.	13.92
06 R5200	110635.	6.11	447820.	8.30	373429.	13.92
07 R5200MS	107994.	6.11	444395.	8.32	363422.	13.92
08 R5200MSD	53620.*	6.12	221795.*	8.32	171083.*	13.92
09 R5196	110498.	6.12	440957.	8.30	372561.	13.92
10 R5197	111109.	6.11	446799.	8.32	374263.	13.93
11 R5198	108299.	6.13	441832.	8.33	370123.	13.95
12 R5199	113468.	6.09	458079.	8.29	386329.	13.93
13 R5201 <i>808 ARF</i>	52837.*	6.02	218637.*	8.26	168627.*	13.93
14 <i>sgm 9/7/94</i>						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

WHC-SD-WM-DP-068
ADDENDUM 1A, REV. 0

sgm 9/67/94

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits