

GROUNDWATER REMEDIATION

1991 Summer Quarter Sampling Results
Cook Composites & Polymers Co.
(Formerly Freeman Chemical Corporation)
Saukville, Wisconsin

Prepared for:

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Madison, Wisconsin

Prepared by:

HATCHER-SAYRE, INC.
Richmond, Virginia

Job No. 0001-003

August, 1991



HATCHER-SAYRE, INC.

August 8, 1991

Ms. Jill Fermanich
Wisconsin Department of Natural Resources
Hazardous Waste Management Section
101 South Webster St., GEF II
P. O. Box 7921
Madison, Wisconsin 53707-7921

Re: Cook Composites and Polymers
Co. (Formerly Freeman Chemical
Corporation)
Saukville, Wisconsin
Groundwater Remediation
1991 Summer Quarter Sampling
Results
Job No. 0001-003

Dear Ms. Fermanich:

Attached are three (3) copies of the analytical data for the groundwater samples collected in July, 1991 from the above referenced facility. The samples were collected by Sigma Environmental Services (formerly CBC), Oakbrook, Wisconsin and analyzed by ERCO Laboratory (Enseco), Cambridge, Massachusetts. Reported herein are results for 28 of the 30 quarterly monitoring points plus analyses of the publicly owned treatment works (POTW) influent, effluent, and sludge. Samples were not collected by Sigma for Wells 44 and 45 because they were dry.

The relative change in concentrations at each monitoring point is listed in Table 1. Table 2 lists the laboratory analysis method, the volatile organic compounds (VOCs) found and the total VOC concentrations for each well sampled this quarter. No volatile organic compounds (VOCs) were detected in the three municipal wells MW-1, MW-2, and MW-3. All of the dolomite wells showed reduction in or non-detects of VOCs, except wells 21A, 38, and 40, which showed increases of 3.3 mg/l, 1.137 mg/l, and 0.011 mg/l, respectively, from the previous sampling quarter. Five out of the 11 glacial wells sampled showed increases in total VOC concentrations. These wells were 41, 42, 43, 46, and 48 with increases of 0.0695 mg/l, 3.1 mg/l, 63.6 mg/l, 0.3376 mg/l and 0.0123 mg/l, respectively. One of the three Ranney-type collectors (RC-2) showed an increase in total VOC concentrations of 58.126 mg/l. RC-1 showed a decrease of 42.009 mg/l and RC-3 showed a decrease of 14.9 mg/l from the Spring, 1991 sampling quarter.

Acetone was detected at a concentration of 0.043 mg/l in the field blank collected at the POTW. The field blank collected at RC-2 showed concentrations of 0.0014 mg/l of ethylbenzene and



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0.0074 mg/l of xylenes. The field blank collected at W-23 showed concentrations of 0.0066 mg/l of methylene chloride (lab contamination) and 0.0085 mg/l of xylenes. The field blank collected at W-40 showed a concentration of 0.16 mg/l of methylene chloride. No VOCs were detected in the field blank collected at W-3A. Methylene chloride was detected in each of the three trip blanks, and is attributable to lab contamination.

The duplicate samples collected at RC-2, W-23, W-40, and W-3A indicated similar concentrations as reported for these well locations in Table 2.

Methylene chloride, acetone, toluene, and xylenes were detected in the POTW influent at concentrations of 0.3 mg/l, 4.9 mg/l, 0.31 mg/l and 0.6 mg/l, respectively. Total phenolics concentration at the POTW influent was 0.056 mg/l. Methylene chloride, acetone, 2-butanone, and toluene were detected in the POTW sludge at 0.015 mg/l, 0.25 mg/l, 0.033 mg/l, and 0.011 mg/l, respectively. The total phenolics concentration was 0.29 mg/l for the POTW sludge. The POTW effluent showed a concentration of 0.0075 mg/l for methylene chloride and ND for total phenolics. Although methylene chloride was detected in the POTW influent, effluent, and sludge, this parameter is attributable to laboratory contamination. Additionally, the concentrations of 2-butanone and toluene detected in the POTW sludge are attributable to lab contamination.

If you have any questions concerning this quarterly report, please call.

Sincerely,

HATCHER-SAYRE, INC.

Robert D. Money
Robert D. Money, P.G.
Project Hydrogeologist

RDM/sdb
WDNR.rpt
Enclosures

cc: Mr. Craig Bostwick
Mr. Robert Smith (2 copies)
Mr. Franklin Shultz (2 copies)

TABLE 1
 Summary of Summer Quarter, 1991
 VOC Data vs. Previous Sampling Quarter

<u>Well No.</u>	<u>Increase</u>	<u>Decrease</u>	<u>Non-Detectable</u>	<u>Remarks</u>
Glacial Wells				
6A		X		3 mg/l < Spring, 1991
14B		X		0.0078 mg/l < Spring, 1991
20		X		0.0341 mg/l < Spring, 1991
27		X		0.0067 mg/l < Spring, 1991
37		X		3.9 mg/l < Spring, 1991
41	X			0.0695 mg/l > Spring, 1991
42	X			3.1 mg/l > Spring, 1991
43	X			63.6 mg/l > Spring, 1991
46	X			0.3376 > Spring, 1991
47		X		270 mg/l < Spring, 1991
48	X			0.0123 > Spring, 1991
Ranney-Type Collectors				
RC1		X		42.009 mg/l < Spring, 1991
RC2	X			58.126 mg/l > Spring, 1991
RC3		X		14.9 mg/l < Spring, 1991
Shallow Dolomite Wells				
3A			X	ND = Spring, 1991
7			X	ND = Spring, 1991
21A	X			3.3 mg/l > Spring, 1991
23			X	ND = Spring, 1991
24A				0.007 mg/l < Spring, 1991
28		X		2.3303 mg/l < Spring, 1991
29		X		0.48 mg/l < Spring, 1991
38	X			1.137 mg/l > Spring, 1991
40	X			0.011 > Spring, 1991
Deep Dolomite Wells				
MW1			X	ND = Spring, 1991
MW2			X	ND = Spring, 1991
MW3			X	ND = Spring, 1991
30		X		0.007 mg/l < Spring, 1991
PW8			X	ND = Spring, 1991

ND = None Detected

Note: Wells 1A, 3B, 4A, 8, 16A, 18A, 19A, 22, 25, 39, and MW4 are sampled annually only.
 Wells 44 and 45 were dry.

TABLE 2
Summary of Analytical Data
Summer Quarter, 1991

<u>Sample ID</u>	<u>Lab Method #</u>	<u>VOCs Detected</u>	<u>Total VOC Concentrations (mg/l)</u>
Glacial Wells			
6A	624	T,E,X	172
14B	624	ND	ND
20	624	*Methylene Chloride	0.0073
27	602	ND	ND
37	602	B,T,E,X	155.1
41	602	B,E,X	1.075
42	602	B,T,E,X	13.6
43	602	B,T,E,X	152
46	624	*Acetone,T,X	0.3376
47	602	T,E,X	305
48	602	E,X	0.0123
Raney-Type Collectors			
RC1	602	T,E,X	0.591
RC2	602	B,T,E,X	59.4
RC3	602	B,T,E,X	39.6
Shallow Dolomite Wells			
3A	624	ND	ND
7	624	ND	ND
21A	602	B,T,E,X	27.1
23	624	ND	ND
24A	602	ND	ND
28	602	B,T,E,X	0.1297
29	624	B,T,E,X	6.02
38	602	B,T,E,X	5.588
40	624	*Methylene Chloride,B	0.011
Deep Dolomite Wells			
MW1	624	*Methylene Chloride	ND
MW2	624	*Methylene Chloride	ND
MW3	624	ND	ND
30	624	*Methylene Chloride,B,X	0.0133
PW8	624	ND	ND

TABLE 2 (continued)
 Summary of Analytical Data
 Summer Quarter, 1991

<u>Sample ID</u>	<u>Lab Method #</u>	<u>VOCs Detected</u>	<u>Total VOC Concentrations (mg/l)</u>
POTW Samples			
Influent	624	*Methylene Chloride, Acetone, T,X	6.107
Effluent	624	*Methylene Chloride	ND
Stabilized Sludge	624	*Methylene Chloride, Acetone, *T,*2-Butanone	0.250

ND = None Detected

* = Laboratory Contamination (not included in total VOC concentration column)

Note: Wells 1A, 3B, 4A, 8, 16A, 18A, 19A, 22, 25, 39, and MW4 are sampled annually only.
 B = Benzene, T = Toluene, E = Ethylbenzene, X = Xylenes (total)

wdnr.tbl/sdb

FIELD DATA

JULY 1991

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(IN FIELD)

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7-12-91

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Date

PROJECT FREEMAN CHEMICAL

WELL ID	DATE	DEPTH TO H ₂ O	MEASURING PT.	WELL DEPTH	CASING
W-41	7-9-91	13.95'	2" PVC	20.80'	2" P
W-14B	7-9-91	6.92'	2" PVC	16.18'	2" P
W-6A	7-9-91	4.76'	2" PVC	17.28'	2" P
W-42	7-9-91	14.04'	2" SS	21.14'	2" C
W-47	7-9-91	10.32'	2" SS	15.87'	2" C
W-19A	7-9-91	8.10'	2" PVC	25.32'	2" P
PW-8	7-9-91	35.86'	6" ST.	500.0'	6" P
W-27	7-9-91	7.10'	2" PVC	23.68'	2" P
W-18A	7-9-91	4.42'	2" PVC	15.48'	2" P
W-22	7-9-91	13.09'	4" PVC	65.29'	4" P
W-39	7-9-91	23.00'	6" ST.	74.66'	6" S
W-1A	7-9-91	7.14'	2" PVC	17.50'	2" S
RC-1	7-9-91	—	—	—	—
RC-3	7-9-91	—	—	—	—
# RC-2	7-9-91	—	—	—	—
W-30	7/9-91	93.44'	—	500.0'	—
W-28	7/10/91	38.22'	Well cap	90.50'	6" S
W-46	7/10/91	8.93'	2" S.S	10.18'	2" S
W-21A	7/10/91	—	Well cap	80.00'	6" S
W-29	7/10/91	28.10'	Well cap	81.50'	6" S
W-45	7/10/91	DRY	2" PVC	13.80'	2" P
W-44	7/10/91	DRY	2" PVC	14.37'	2" S
W-24A	7/10/91	7.00'	Well cap	85.0	6" S
W-37	7/10/91	.10'	Well cap	18.50	6" S
# W-23	7/10/91	23.16	4" PVC	68.06'	4" P
W-7	7/10/91	14.16'	2" PVC	23.28'	2" P
MW-3	7/11/91	280.0'	—	500.0'	—
MW-1	7/11/91	205.0'	—	500.0'	—
MW-2	7/11/91	151.0	—	500.0'	—
MW-4	7/11/91	118.0'	—	500.0'	—
W-38	7/11/91	17.80'	6" ST	46.66'	6" S
W-43	7/11/91	11.20'	2" S.S	12.71'	—

Continued on Page 2

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Scott Kump
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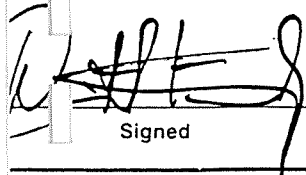
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Date

WELL ID	DATE	DEPTH TO WATER	MEASURING PT.	WELL DEPTH	CASING DIA.
W-48	7/11/91	12.0'	2" PVC	20.24'	2" PVC
W-20	7/11/91	34.86'	2" PVC	117.0'	2" PVC
W-40	7/11/91	25.95'	6" ST	46.76'	6" ST
W-25	7-12-91	16.23'	4" PVC	84.66'	4" PVC
W-3B	7-12-91	32.80'	2" PVC	69.04'	2" PVC
W-3A	7-12-91	32.28'	6" ST.	233.00'	6" ST.

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Date

DATE	PURGE CALCULATION (VOLUMES)	END PURGE	PURGED GALLONS	HMU	PURGE DISBURSAL
------	-----------------------------	-----------	----------------	-----	-----------------

7-9-91	$(1)^2 \times 3.14 \times (82.2)^2 / 231 \times 3 = 3.4$	9:45A	3 gal	41.0	POTW
7-9-91	$(1)^2 \times 3.14 \times (111.1)^2 / 231 \times 3 = 4.5$	9:35A	5 gal	41.0	POTW
7-9-91	$(1)^2 \times 3.14 \times (150.2)^2 / 231 \times 3 = 6.1$	10:15A	6.5 gal	250	POTW
7-9-91	$(1)^2 \times 3.14 \times (85.2)^2 / 231 \times 3 = 3.5$	10:55A	3.5 gal	250	POTW
7-9-91	$(1)^2 \times 3.14 \times (66.6)^2 / 231 \times 3 = 2.7$	11:00A	3 gal	400	POTW
7-9-91	$(1)^2 \times 3.14 \times (66.6)^2 / 231 \times 3 = 2.7$	12:00P	5 gal	< 1.0	POTW
7-9-91	$(1)^2 \times 3.14 \times (199)^2 / 231 \times 3 = 8.1$	12:00P	8.1 gal	41.0	POTW

7-9-91	Purged line - 50 gals.	2:10P	50 gals	41.0	POTW
7-9-91	Purged line - 50 gals.	2:15P	50 gals	< 1.0	POTW
7-9-91	Purged line - 50 gals.	2:20P	50 gals	< 1.0	POTW
7-9-91	Purged 5 gallons.	2:40P	5 gals	41.0	POTW
7-10-91	Pump runs continuously	9:35A	55 gals	41.0	POTW
7-10-91	$(1)^2 \times (3.14) (15)^2 \div 231 \times 3 = .60$	10:10AM	.25 (dry)	19.0	POTW
7-10-91	Pump runs continuously	10:20AM	55 gals	19.0	POTW
7-10-91	Pump runs continuously	11:00AM	55 gals	5.0	POTW
7-10-91	Pump runs continuously	11:50AM	55 gals	41.0	POTW
7-10-91	Pump runs continuously	12:10PM	55 gals	60.0	POTW
7-10-91	$(2)^2 \times (3.14) (538.8)^2 \div 231 \times 3 = 87.9 \text{ gal}$	2:30PM	90 gals	41.0	POTW
7-10-91	$(1)^2 \times (3.14) (109.4)^2 \div 231 \times 3 = 4.5 \text{ gals}$	2:20PM	3 gals	41.0	POTW

7-11-91	Pump ran for 30 mins prior to sampling	9:05AM	71.0	POTW	
7-11-91	Pump ran for 30 mins prior to sampling	9:15AM	41.0	POTW	
7-11-91	Pump ran for 30 mins prior to sampling	9:25AM	41.0	POTW	
7-11-91	$(3)^2 \times (3.14) (346.32)^2 \div 231 \times 3 = 127.0 \text{ gals}$	11:00AM	120 gals	41.0	POTW
7-11-91	$(1)^2 \times (3.14) (18.12)^2 \div 231 \times 3 = .06 \text{ gals}$	10:15AM	.50 gals	200 POTW	
7-11-91	$(1)^2 \times (3.14) (98.88)^2 \div 231 \times 3 = 4.0 \text{ gals}$	10:25AM	3.0 gals	POTW	
7-11-91	$(1)^2 \times (3.14) (985.68)^2 \div 231 \times 3 = 40.0 \text{ gals}$	2:00 PM	40 gal	41.0	POTW
7-11-91	$(3)^2 \times (3.14) (249.72)^2 \div 231 \times 3 = 92 \text{ gals}$	3:25PM	92 gal	41.0	POTW
7-12-91	$(3)^2 \times (3.14) \times (2408)^2 / 231 \times 3 = 883$	11:30A	240 gal	41.0	POTW

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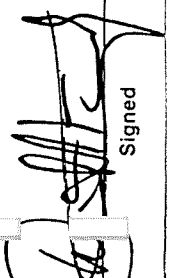
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	<u>BEFORE</u>		<u>SAMPLING</u>		<u>SAMPLE COLLECTION</u>		<u>INT.</u>
<u>WELL ID</u>	<u>PH</u>	<u>TEMP</u>	<u>CONDUCTIVITY (0-22.4 uM)</u>				
W-41	6.6	58°F	1187	3	NO VIALS	DAK	
W-14B	5.8	60°F	476	3	NO VIALS	DAK	
W-6A	6.3	62°F	1204	3	NO VIALS	DAK	
W-42	7.2	58°F	1235	3	NO VIALS	DAK	
W-47	6.4	59°F	2550	3	NO VIALS	DAK	
PW-8	9.1	57°F	139	3	NO VIALS	DAK	
W-27	7.0	60°F	833	3	NO VIALS	DAK	
RC-1	6.9	60°F	850	3	NO VIALS	SRK	
RC-3	6.6	60°F	1160	3	NO VIALS	SRK	
RC-2	6.5	60°F	1180	6	NO VIALS	SRK	
W-30	6.8	52°F	580	3	NO VIALS	SRK	
W-28	6.7	54°F	1100	3	NO VIALS	SRK	
W-16	6.4	54°F	990	3	NO VIALS	SRK	
W-21A	6.7	54°F	1160	3	NO VIALS	SRK	
W-29	6.8	54°F	1130	3	NO VIALS	SRK	
W-21A	6.9	54°F	800	3	NO VIALS	SRK	
W-37	6.6	54°F	1410	3	NO VIALS	SRK	
W-3	6.8	54°F	1030	6	NO VIALS	SRK	
W-7	6.7	56°F	1130	3	NO VIALS	SRK	
W-13	6.9	52°F	740	3	NO VIALS	SRK	
W-1	7.0	53°F	630	3	NO VIALS	SRK	
W-2	7.2	52°F	600	3	NO VIALS	SRK	
W-28	6.7	56°F	1350	3	NO VIALS	SRK	
W-15	UNABLE TO PERFORM	FIELD TESTS -		3	NO VIALS	SRK	
W-23	6.7	56°F	1940.0	3	NO VIALS	SRK	
W-20	6.9	57°F	575	3	NO VIALS	DAK	
W-14	6.9	56°F	940	6	NO VIALS	SRK	
W-3A	6.9	58°F	586	6	NO VIALS	DAK	

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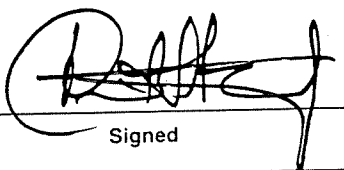
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PROJECT

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WELL ID	DATE	AFTER			SAMPLING		INT.
		PH	TEMP	CONDUCTIVITY	TIME SAMPLE COLLECTED		
W-41	7-9-91	6.7	59°F	1205	10:00 AM	DAK	
W-14B	7-9-91	6.0	60°F	481	9:45 AM	DAK	
N-6A	7-9-91	6.3	62°F	1296	10:20 AM	DAK	
N-42	7-9-91	7.1	59°F	1251	11:00 AM	DAK	
W-47	7-9-91	6.4	60°F	2550	11:05 AM	DAK	
PW-8	7-9-91	9.2	57°F	141	12:20 AM	DAK	
W-27	7-9-91	7.0	60°F	849	12:05 PM	DAK	
RC-1	7-9-91	6.9	60°F	840	2:10 PM	SRK	
RC-3	7-9-91	6.6	60°F	1150	2:15 PM	SRK	
RC-2	7-9-91	6.5	60°F	1180	2:20 PM	SRK	
W-30	7-9-91	6.8	52°F	580	2:45 PM	SRK	
W-28	7/10/91	6.7	54°F	1100	9:35 AM	SRK	
W-41	7/10/91	6.4	56°F	980	10:35 AM	SRK	
W-21A	7/10/91	6.7	56°F	1140	10:20 AM	SRK	
W-29	7/10/91	6.8	54°F	1130	11:00 AM	SRK	
W-24A	7/10/91	6.9	54°F	800	11:50 AM	SRK	
W-37	7/10/91	6.6	54°F	1390	12:20 PM	SRK	
W-23	7/10/91	6.8	54°F	1020	2:30 PM	SRK	
W-7	7/10/91	6.7	56°F	1150	2:20 PM	SRK	
W-3	7/11/91	6.9	52°F	740	9:05 AM	SRK	
W-1	7/11/91	7.0	53°F	620	9:15 AM	SRK	
MU 2	7/11/91	7.2	52°F	600	9:25 AM	SRK	
W-38	7/11/91	6.7	56°F	1350	11:40 AM	SRK	
W-43	7/11/91	Unable to perform field tests - Well DRY			11:45 AM	SRK	
W-48	7/11/91	6.7	56°F	1950.0	11:50 AM	SRK	
W-20	7/11/91	6.9	56°F	579	2:15 PM	DAK	
W-40	7-11-91	6.9	56°F	930	3:25 PM	SRK	
W-3A	7-12-91	7.0	58°F	582	11:45 AM	DAK	



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7-12-91

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Date

FREEMAN CHEMICALGENERALNOTESW-41

Weather: P. Cloudy, 70°F
 Purge Calc.: 3.4 Gallons
 Odor: Strong
 Turbidity: Moderate
 Well Hd. Cond.: Good
 Comments:
 Color: Light Gray
 Well went dry after
 3 Gal. Purged. waited
 ≈ 10 min. - then sampled.

W-14B

Weather: P. Cloudy, 70°F
 Purge Calc.: 4.5 Gallons
 Odor: NONE
 Color: Light Brown
 Turbidity: Moderate
 Well Hd. Cond.: Good
 Comments:
 Water level dropped ≈ 4 ft
 Well recharged nicely
 at that level

W-6A

Weather: P. Cloudy, 70°F
 Purge Calc.: 6.1 Gallons
 Odor: Strong
 Color: Light Gray
 Turbidity: Moderate
 Well Hd. Cond.: Good
 Comments:
 Water level dropped
 ≈ 3 ft - Well recharged
 nicely at that level.

W-42

Weather: Sunny, 75°F
 Purge Calc.: 3.5 Gallons
 Odor: Strong
 Color: Light Gray
 Turbidity: Moderate
 Well Hd. Cond.: Good
 Comments:
 Water level dropped
 ≈ 5 ft - Well re-
 charged nicely at
 that level.

Continued on Page 29

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Date

7-9-91

FREEMAN CHEMICAL

PROJECT

W-47

Weather: Sunny, 75°F
 Purge Calc.: 2.7 Gallons
 Odor: Strong
 Color: Light Brown
 Turbidity: Severe
 Well Hd. Cond.: Good

Comments:

Water Level dropped
 ≈ 3 ft - Well re-
 charged nicely at that
 Level.

W-19A

Water Level Measurement Only
 Depth to H₂O = 8.10'

W-27

Weather: P. Cloudy 75°F
 Purge Calc.: 8.1 Gallons
 Odor: NONE
 Color: Light Brown
 Turbidity: Severe
 Well Hd. Cond.: Good

Comments:

Water Level dropped
 ≈ 4 ft - Well
 recharged nicely at
 that Level. Field Blanks
 were poured at this
 location.

PW-8

Weather: P. Cloudy, 75°F
 Purge Calc.: 5 Gallons
 Odor: NONE
 Color: Light Brown
 Turbidity: Slight
 Well Hd. Cond.: Good

Comments:

Water Level remained
 constant.

W-RC-1

Weather: Sunny - 75°F
 Purge Calc.: 50 Gallons
 Odor: Slight
 Color: NONE
 Turbidity: NONE
 Well Hd. Cond.: Good

Comments: PURGED 50
 GALLONS THROUGH SAMPLE
 PORT BEFORE OBTAINING
 SAMPLE.

Continued on Page 30

Read and Understood By

Scott Kersay
 Signed

7/9/91
 Date

Signed

Date

1-18A

Water Level Measurement Only!

Depth to Water: 4.42'

W-39

Water Level Measurement Only!

Depth to Water: 23.0'

RC-3Weather: Sunny-75°F
Purge Calc: 50. GALS.

ODOR: Slight

Color: None

Turbidity: None

Well Hd Cond: Good

Comments: Purged

through sample port before
obtaining samples.2-30

Weather: Sunny-75°F

Purge Calc: Pump runs

continuously.

ODOR: Slight

Turbidity: None

W-22

Water Level Measurement Only!

Depth to H₂O: 13.09'W-1A

Water Level Measurement Only!

Depth to H₂O: 7.14'* RC-2Weather: Sunny-75°F
Purge Calc: 50 GALS.

ODOR: Slight

Color: Clear

Turbidity: Slight (very)

Well Hd Cond: Good

Comments: Purged 50 gallons
through sample port before
obtaining sample.

Duplicates taken on RC-2

Color: None

Well Hd Cond: Good

Comments: Well is continuously
pumped. Purged 5 gallons, then
obtained samples. In good
working order. (80ASTG)

Continued on Page

31

Read and Understood By

Seth Kersop

Signed

Date

7/9/91

Signed

Date

11-28

Weather: Cloudy - 70°F

Large calc: Runs continuously

odor: Slight

color: light gray

turbidity: very turbid

well he cond: Good

Comments: Manhole had to

be blown out so to

1.5 gal LEL (0.15) Oxygen

level was OK (20.7). Maintenance

on pump before this sampling

DIAPHRAGM replaced some parts

period. In good working order.

filled 5 gallons from sample

port before sampling.

11-29

Weather: Cloudy, 70°F

Large calc: $(11)(2)(3.14)(15) \div 231 \times 3 = 4.9$ gal

odor: none

color: light gray

turbidity: slight

well he cond: good

Comments: Went dry after

purging, 25 gallons wanted.

15 minutes to obtain

enough sample.

11-21A

Weather: Partly cloudy, 72°F

Large calc: Runs continuously

odor: strong

color: none

turbidity: none

well he cond: good

Comments: Manhole had to

be blown out. High level

(0.10). Oxygen was OK

(20.7). Unable to get head

level due to obstruction

at measuring point in the

type. System otherwise in

good working order. Maintenance

dept. fails to check out obstruction.

LEL = 0.03

02 = 20.6

11/10/91

Bob J. [Signature]

FREEMAN Chemical

W-24A

Weather: Sunny, 80°F
 Purge calc: RUNS CONTINUOUSLY
 ODOR: Slight
 color: CLEAR
 turbidity: NONE
 Well HD COND: GOOD

COMMENTS:

LEL AND O₂ levels were ~~AT~~ AT
 LEL levels. LEL = 003, O₂ = 20.6
 system in GOOD WORKING
 ORDER.

W-37

Weather: Sunny, 80°F
 Purge calc: RUNS CONTINUOUSLY
 ODOR: STRONG
 color: light Yellow
 turbidity: NONE
 Well HD COND: GOOD

COMMENTS: MANKOLE had to
 be bailed out DO TO
 EXCESS WATER (2 1/2 FT).
 Blower WAS ALSO USED DO
 TO low O₂ level (18.5)
 LEL level = 003

W-45

~~WATER level MEASUREMENT only.~~
 Depth to H₂O: DRY
 NO WATER TO SAMPLE

W-44

~~WATER level MEASUREMENT only.~~
 Depth to H₂O: DRY
 NO WATER TO SAMPLE

W-23

Weather: Sunny, 80°F
 Purge calc: 87.9 gals
 ODOR: NONE
 color: CLEAR
 turbidity: NONE

Well HD COND: GOOD

COMMENTS: Well RECHARGED
 Nicely. Duplicate SAMPLES
 FOR DAY 2 ~~LEL~~ (6 VO'S)
 were TAKEN ON this well.
 Well WAS PURGED USING well
 development pump.

Read and Understood By

S. H. Lusk
 Signed

7/10/91
 Date

Signed

Date

MW-4A

WATER level measurement ONLY!
Depth to H₂O: 14.48

W-7

Weather: Sunny, 80°F
Purge calc: 4.5 GALS.
ODOR: Very slight
Color: light GRAY
Turbidity: very turbid
Well Hd Cond: GOOD
Comments: Well went
dry after purging
3 gallons. Waited 15 minutes
to obtain enough sample.

MW-3

Weather: Sunny, 75°F
Purge calc: Purged line
ODOR: NONE
Color: CLEAR
Turbidity: NONE
Well Hd Cond: GOOD
Comments: Pump ran for
30 minutes prior to
sampling. Pump rate - 500 GPM

MW-1

Weather: Sunny, 75°F
Purge calc: Purged line
ODOR: NONE
Color: CLEAR
Turbidity: NONE
Well Hd Cond: GOOD
Comments: Pump ran for
2 minutes prior to
sampling. Pump rate: 285 GPM

MW-2

Weather: Sunny 75°F
Purge calc: Purged line
ODOR: NONE
Color: CLEAR
Turbidity: NONE
Well Hd Cond: GOOD
Comments: Pump ran for 90
minutes prior to sampling.
Pumping rate: 195 GPM

Read and Understood By

Signed Scott Kuroop Date 7/11/91

Signed

Date

PROJECT FREEMAN Chemical

W-4
 Water level measurement
 Pumping RATE ONLY:
 Depth to H₂O - 118.0'
 Pumping RATE: 1000 GPM
 Pump RUN FOR 120 mins.

W-38
 Weather: Sunny 80°F
 Purge calc: 127.0 gals
 Odor: STRONG
 Color: None
 Turbidity: None
 Well Hd Cond: Good
 Comments: Well WAS purged
 with PURGE MASTER pump.
 Well RECHARGED nicely.

W-43
 Weather: Sunny 80°F
 Purge calc: .06 gals
 Odor: STRONG
 Color: light BROWN
 Turbidity: Severe
 Well Hd Cond: Good
 Comments: Well went DRY
 AFTER purging .5 gals. Waited
 40 mins to get SUFFICIENT
 Sample.

W-48
 Weather: Sunny, 80°F
 Purge calc: 4.0 gals.
 Odor: None
 Color: None
 Turbidity: Slight
 Well Hd Cond: Good
 Comments: Well went
 DRY AFTER purging 3.0 gals.
 Waited 50 mins.

W-20
 Weather: Sunny, 80°F
 Purge calc: 40.0 gals
 Odor: NONE
 Color: Light Gray
 Turbidity: Slight
 Well Hd Cond: Good
 Comments:
 Water Level dropped
 30 ft - Well recharged
 nicely at that level.
 Used Well-Development
 Pump to Purge Water.

Read and Understood By

Scott Kinsop

7/11/91

Date

Signed

Date

PROJECT FREEMAN Chemical

Continued From Page 34

POTW - INFLUENT

- TOOK SAMPLES FROM WET WELL.
- 3 VO VIALS AND 1 AMBER LITER / PHENOLS GRAB.

POTW - STABILIZED SLUDGE

- TOOK SAMPLES FROM SPIGOT ON TANKER TRAILER.
- 3 VO VIALS AND 1 AMBER LITER / PHENOLS GRAB.

POTW EFFLUENT

TOOK SAMPLES FROM FINAL AERATION POINT.
3 VO VIALS AND 1 AMBER LITER / PHENOLS GRAB.

POURED FIELD BLANKS (3 VO VIALS) THROUGH A DECONNED SAMPLING DEVICE (GLASS QUART)

* DI H₂O USED FOR FIELD BLANKS WAS FROM CBC LAB BROUGHT TO SITE IN ~~ONE~~ AMBER BOTTLE.

NOTE: TREATMENT OPERATOR (GLEN) REQUESTED THAT BOB MONEY CONTACT HIM IN REGARDS TO SOME ADDITIONAL SAMPLING IN FUTURE SAMPLING PERIODS

1 VO VIAL WAS USED (PROVIDED BY ERCO LAB) FOR POTW - TRIP BLANK.

Continued on Page 36

Read and Understood By

Scott Kersh

Signed

7/11/91

Date

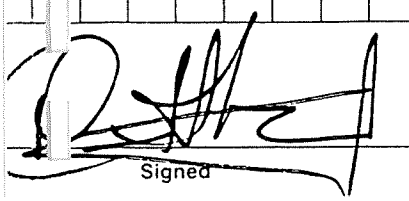
Signed

Date

Took WATER level MEASUREMENTS AT 8 ADDITIONAL AS REQUESTED by Bob Monecy OF Hatcher-Sayer.

<u>Well #</u>	<u>Depth to H₂O</u>
WP-1	11.94'
WP-2	9.90'
WP-3	10.20'
WP-4	12.20'
WP-5	12.14'
WP-6	13.44'
WP-7	12.64'
WP-8	12.76'

- All Measurements were obtained from Top of Well Casing.
- All wells are 1" stainless steel.
- Locks had to be removed with a Bolt Cutter / Cook Comp. Personnel will replace them.



Signed

8-11-91

Date

Read and Understood By

Signed

Date

* W-40

Weather: SUNNY, 80°F
 Purge Calc: 92.6A/3
 Odor: Slight
 Color: NONE
 Turbidity: NONE
 Well Hd Cond: GOOD

Comments: Well WAS PURGED
with PURGE MASTER pump.
Well Recharged nicely
Water Level dropped 10
ft - Well recharged nicely
+ that level.

W-25

Water Level Measurement Only.
 Depth to Water = 16.23'

W-3B

Water Level Measurement
 only!
 Depth to Water = 32.80'

* W-3A

Weather: Cloudy, 75°F
 Purge Calc.: 883 Gallons
 Odor: NONE
 Color: Light Brown
 Turbidity: Slight
 Well Hd Cond: Good

Comments:
Used Purge Master Pump
to purge water. Due to
time restraints were only
able to obtain 240 Gallons.
Field Blanks and Duplicates
were poured at this
location. Used DI water
from CISC Lab.

Read and Understood By


 Signed

7-12-91
 Date

Signed

Date

GENERAL NOTES AND OBSERVATIONS

All wells were purged and sampled with dedicated Bailers unless specified differently.

All wells were in Good Working Order unless stated otherwise.

* NOTE: W-21A (Manhole) has an obstruction in well Cap as a result a water level measurement was not obtained. Maintenance Personnel were made aware of problem.

Field Blanks were poured at every tenth sampling point. If ten wells were not sampled on a given day, Blanks were poured at the last sampling location that day. DI water was poured through a decontaminated Bailer and placed into appropriate Field Blank VOC Vial.

* Note: Erco Labs failed to provide sufficient amount of DI water, as a result DI water from CSC Lab had to be used at (2) Locations.

- 1) Field Blanks POTW
- 2) Field Blanks W-3A (Last Day)

All equipment was thoroughly decontaminated after each usage;

Decon Procedure:

- 1) Alconox / Tap water wash
- 2) Triple Tap water Rinse
- 3) Triple DI water Rinse.

Continued on Page 39


Read and Understood By

Signed

Date

Signed

Date


7-12-91

PROJECT

FREE MAN CHEMICAL

GENERAL NOTES AND OBSERVATIONS

- Duplicates were paired at every tenth sampling point or the last sampling location on a given day. Duplicates are designated with an asterick along side of WELL ID number in the Field Notes. (Yellow High-Lighter Pen was also used)
- Manholes were not entered until a safe LEL and O_2 reading was obtained. Manhole covers were opened, allowed to air out (2-5 min.) and then a Trifector (LEL, H_2S , O_2) was lowered to monitor ambient air. Field Tech entered each Manhole a Level C Safety Protection with a Trifector attached to Safety Harness continually monitoring Ambient Air. Air Blower provided by Cook Comp. + Polymers was used to air out the following Manholes:
W-28, W-21A, W-29, W-37
- RC-1, RC-2, and RC-3 needed to be placed on Manual during Sampling. Prior to Sampling (30 min.), All (3) Ranne Collectors were turned off. Sampled each Well, then placed all (3) back on Auto upon completion of Sampling.

Continued on Page

40

Read and Understood By



Signed

7-12-91

Date

Signed

Date

GENERAL NOTES AND OBSERVATIONS

The Shallow Dolomite wells ran on Auto Prior to Sampling. Well were turned off approximately (1) hour prior to Sampling. Each well ran on Manual. Using Meters, purged 50 Gallons - then purged an additional 5 Gallons through Sampling port to clear line before actual sample was obtained. Switches were returned to Auto Position upon completion of Sampling.

HAV Readings recorded as units above the following Backgrounds:

7-9 / 3.0 7/11 - 3.0
 7-10 / 4.0 7-12 / 0.0

Copies of HAV Calibrations are attached to Field Notes.

Following is a list of wells that were Dry: (U-44), (U-45) Date Dickman (7-9-91) and Dick Schreiner of CCP accompanied Sigurs Personnel during Sampling Period.

Read and Understood By _____

PROJECT

FREEMAN CHEMICAL

GENERAL NOTES AND OBSERVATIONS

- Jerry Dickman, City of Sawtoille Public Works, accompanied Sigma Personnel during the sampling of the Municipal Wells. Jerry provided water level measurements and Pumping Rates for each of these wells.

- All Samples were stored in coolers on ice immediately after they were obtained.

- Samples were sent to ERCO Laboratories via UPS in (2) Shipments:

- 1) 7-10-91
- 2) 7-12-91

- Sigma Field Personnel on Site:

- 1) DAVID KUHTZ (DAK) → 7/9 - 7/12
- 2) SCOTT KINSOP (SKK) → 7/9 - 7/11
- 3) MATT MOLOF (MLM) → 7/9 - 7/12

* All Classified as Environmental Technicians.

- Copies of all Field Notes were given to Craig Bostwick of CCP.

- The additional Water Level Measurements requested of WP-1, WP-2, WP-3, WP-4, WP-5, WP-6, WP-7, and WP-8 were recorded on Page 36 of Field Notes.

Continued on Page 1



Signed

7-12-91

Date

Read and Understood By

Signed

Date

OBJECT FREEMAN CHEMICAL

<u>DATE</u>	<u>SITE</u>	<u>PH METER NO.</u>	<u>4.0</u>	<u>7.0</u>	<u>10.0</u>	<u>INITIALS/COMMENTS</u>
7-9-91	FREE. CHEM.	# 1	✓	✓	✓	DAK Batt. ✓
"	"	"		✓		DAK -
"	"	"		✓		DAK -
"	"	"	✓	✓	✓	DAK -
"	"	"		✓		DAK -
"	"	"		✓		DAK -
"	"	"	✓	✓	✓	DAK -
"	"	"		✓		DAK Batt. ✓
"	"	"		✓		DAK -
"	"	"	✓	✓	✓	DAK -
7-9-91	FREE. CHEM.	# 1		✓		DAK -
7-10-91	Free. Chem.	# 1	✓	✓	✓	SRK Batt ✓
"	"	"		✓		SRK -
"	"	"		✓		SRK -
"	"	"		✓		SRK -
"	"	"	✓	✓	✓	SRK -
"	"	"		✓		SRK Batt ✓
"	"	"		✓		SRK -
"	"	"		✓		SRK -
7-11-91	FREEMAN Chem.	# 1	✓	✓	✓	SRK Batt ✓
"	"	"		✓		SRK CHANGED BUFFER
"	"	"		✓		SRK -
"	"	"		✓		SRK -
"	"	"	✓	✓	✓	SRK -
"	"	"		✓		SRK -
"	"	"		✓		SRK Batt ✓
"	"	"		✓		SRK -
7-12-91	Freeman Chem.	# 1	✓	✓	✓	DAK Batt ✓

Continued on Page _____


Signed

7-12-91
Date

Read and Understood By _____

Signed _____

Date _____

Laboratory Notebook I027 (pH)

Table of Contents

Page

Field Personnel

David G. Jackson (DGJ)
 Dale R. Palkowski (DRP)
 Craig A. Varland (CAV)
 Daniel J. Kitzrow (DJK)
 Mark H. Krueger (MHK)
~~Jeff M. Larkin (JML)~~
~~Scott R. Kirsop (SRK)~~
 Jeff M. Larkin (JML)
 Scott R. Kirsop (SRK)
 Bruce E. Benoit (BEB)
 Matt Kenneth Krueger (MKK)
 Chris Alan Haase (CAH)

David G. Jackson
 Dale R. Palkowski
 Craig A. Varland
 Daniel J. Kitzrow
 Mark H. Krueger
 J. Michael Holt
 David A. Kubit
 JEFF M LARKIN
 SCOTT R. KIRSOP
 BRUCE E. BENOIT
 Matt K. Krueger
 Chris Alan Haase

pH Meter Identification

- #1 Model No. 201 Serial No. 14898 Orion Research Inc.
- #2 Model No. 201 Serial No. 11066 Orion Research Inc.
- #3 Model No. 201 Serial No. 15805 Orion Research Inc.

PROJECT pH CALIBRATION

Continued From Page 16

DATE	PH METER	4.0	7.0	10.0	INITIALS	COMMENTS
12-14-90	#1	✓	✓	✓	DRP	
12-17-90	#1		✓		BEB	
12-18-90	#1	✓	✓	✓	SRK	
12-18-90	#1	✓	✓	✓	BEB	
12-20-90	#1	✓	✓	✓	DRP	
12-21-90	#1		✓		BEB	
12-26-90	#4	✓	✓	✓	SRK	CHANGED ALL BUFFERS
12-26-90	#1	✓	✓	✓	SRK	CHANGED ALL BUFFERS
12-28-90	#4	✓	✓	✓	DRP	
1-7-91	#1	✓	✓	✓	BEB	
1-8-91	#1	✓	✓	✓	DAK	
1-9-91	#1	✓	✓	✓	DAK	Batt. ✓
1-10-91	#1	✓	✓	✓	DAK	Batt. ✓
1-11-91	#1	✓	✓	✓	DAK	Batt. ✓
1-18-91	#1	✓	✓	✓	DAK	Batt. ✓
1-28-91	#1	✓	✓	✓	DAK	Batt. ✓
1-31-91	#1	✓	✓	✓	BEB	
2-5-91	#1	✓	✓	✓	BEB	
2-15-91	HYDAC	✓	✓		DRP	
4-8-91	#4	✓	✓	✓	DAK	Batt. ✓ Changed Buffers
4-9-91	#4	✓	✓	✓	DAK	Batt. ✓
4-10-91	#4	✓	✓	✓	BEB	Batt. ✓
4-11-91	#4	✓	✓	✓	DAK	Batt. ✓
5-31-91	#1	✓	✓	✓	DAK	Batt. ✓ Changed Buffers
6-5-91	#1	✓	✓	✓	CAH	Batt. ✓
7/8/91	#1	✓	✓	✓	SRK	Batt. ✓
7/9/91	#1	✓	✓	✓	SRK	CHANGED ALL BUFFERS
7/10/91	#1	✓	✓	✓	SRK	Batt. ✓
7/11/91	#1	✓	✓	✓	DAK	Batt. ✓
7/12/91	#1	✓	✓	✓	DAK	Batt. ✓ / Changed Buffers

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

PROJECT NNU Calibration Log

DATE	NNU#	Batt. Charged	Cleaned	Calibration GAS	Initials
10-8-90	#3	✓	✓	Isobutylene 57 ppm	DAK
10-9-90	#3	-	-	Isobutylene 57 ppm	DAK
10-10-90	#3	-	-	Isobutylene 57 ppm	DAK
10-11-90	#3	-	-	Isobutylene 57 ppm	DAK
11-5-90	#2	-	-	Isobutylene 63 ppm	SRK
11-6-90	#2	-	-	Isobutylene 63 ppm	SRK
11-7-90	#2	-	-	Isobutylene 63 ppm	DAK
11-8-90	#2	-	-	Isobutylene 63 ppm	DAK
1-7-91	#6	-	✓	Isobutylene 63 ppm	DAK
1-8-91	#6	-	✓	Isobutylene 63 ppm	DAK
1-9-91	#6	-	-	Isobutylene 63 ppm	DAK
1-10-91	#6	✓	✓	Isobutylene 63 ppm	DAK
1-11-91	#6	-	-	Isobutylene 63 ppm	DAK
4-8-91	#6	✓	✓	Isobutylene 63 ppm	DAK
4-9-91	#6	-	-	Isobutylene 63 ppm	DAK
4-10-91	#6	-	✓	Isobutylene 63 ppm	DAK
4-11-91	#6	-	✓	Isobutylene 63 ppm	DAK
6-7-91	#6	✓	✓	Isobutylene 64 ppm	SRK
7/9/91	#6	-	✓	Isobutylene 64 ppm	SRK
7/10/91	#6	✓	-	Isobutylene 64 ppm	SRK
7-11-91	#6	✓	✓	Isobutylene 64 ppm	DAK
7-12-91	#6	-	✓	Isobutylene 64 ppm	DAK

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

PROJECT YSI Model 3000 TLC Cal. Log

Continued From Page 2

DATE	CBC NO.	SAT CK.	COND. (mmhos/cm)			INSTR	COMMS
			X	1X	2X		
7/8/91	00180	✓	90.0	1450.0	10510.0	SRK	-
7/9/91	00180	✓	88.0	1389.0	10360.0	SRK	-
7/10/91	00180	✓	93.0	1420.0	11000.0	SRK	-
7/11/91	00180	✓	80.0	1460.0	11790.0	SRK	-
7/12/91	00180	✓	85.0	1454.0	11650.0	DAK	-

Continued on Page

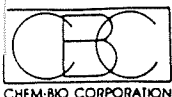
Read and Understood By

Signed

Date

Signed

Date



ENVIRONMENTAL SERVICES

140 E. RYAN RD.
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Composites + Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS FIRMLY WHEN WRITING

No. 42589

SAMPLER (Signature) DK/SK/mm	AFFILIATION Sigma	DATE 7-9-91	TIME
---------------------------------	----------------------	----------------	------

PURPOSE OF ANALYSIS
Quarterly Groundwater Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 50 Vials	W-41 (602) ✓					
2-1		W-14B (624) ✓					
3-1		W-6A (624) ✓					
4-1		W-42 (602) ✓					
5-1		W-47 (602) ✓					
6-1		W-27 (602) ✓					
7-1		2 50 Vials	Field Blanks (602) ✓				
8-1	3 50 Vials	PW-8 (624) ✓					
9-1	3 50 VIALS	RC-1 (602) ✓					
10-1		RC-3 (602) ✓					
11-1		RC-2 (602) ✓					
12-1		RC-2 (DUPLICATES) (602) ✓					
13-1		W-30 (624) ✓					
14-1		2 50 VIALS	TRIP BLANKS (624) ✓				

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-14	Scott Karsop	UPS	7/10/91	
2					
3					
5					

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD.
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Composites + Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS
FIRMLY
WHEN WRITING

No. 42709

SAMPLER (Signature)

SK/DK/mm

AFFILIATION

SIGMA

DATE

7/10/91

TIME

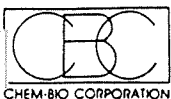
PURPOSE OF ANALYSIS

QUARTERLY GROUND WATER Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER					
			1	2	3	4	5	
1-1	<i>3 VO VIALS</i>	<i>W-28 (602)✓</i>						
2-1		<i>W-21A (602)✓</i>						
3-1		<i>W-46 (624)✓</i>						
4-1		<i>✓ W-29 (624)</i>						
5-1		<i>W-24A (602)✓</i>						
6-1		<i>W-37 (602)✓</i>						
7-1		<i>W-7 (624)✓</i>						
8-1		<i>W-23 (624)✓</i>						
9-1		<i>2 VO VIALS</i>	<i>W-23-Duplicates (624)✓</i>					
10-1			<i>FIELD BLANKS (624)✓</i>					
11-1	FIELD BLANKS							

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-10	<i>Scott Kersop</i>	<i>UPS</i>	<i>7/10/91</i>	
2					
3					
4					
5					

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD.
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Composites + Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS FIRMLY WHEN WRITING

No. 42711

SAMPLER (Signature) <i>Scott Kirsop / Dave Kutz / MATT McLOT</i>	AFFILIATION <i>SIGMA</i>	DATE <i>6/7/11/91</i>	TIME
---	-----------------------------	--------------------------	------

PURPOSE OF ANALYSIS
QUARTERLY GROUND WATER Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
12-1	3 VO. VIALS	W-20-(624)✓					
13-1		W-40 (624)✓					
13-2		W-40 Duplicate (624)✓					
14-1		FIELD BLANK (624)-(624)✓					
15-1	1-VO VIAL	Trip blank (624)✓					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	12-15	<i>[Signature]</i>	<i>UPS</i>	<i>7-12-91</i>	
2					
3					
4					

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD.
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT
<i>Cook Composites and Polymers</i>
PROJECT LOCATION
<i>Saukville</i>
QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS FIRMLY WHEN WRITING

No. 37018

SAMPLER (Signature)	AFFILIATION	DATE	TIME
<i>Scott Kriesop/Dave Kuhnert/Matt Molot</i>	<i>SIGMA</i>	<i>7/11/91</i>	

PURPOSE OF ANALYSIS
Quarterly Ground Water Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 vials	MW-1 (624)✓					
2-1		MW-2 (624)✓					
3-1		MW-3 (624)✓					
4-1		POTW - INFLUENT (624)✓					
4-2	1 - Amber liter	POTW - INFLUENT (624) (Phenols) ✓					
5-1	3 vials	POTW - EFFLUENT (624)✓					
5-2	1 Amber liter	POTW - EFFLUENT (624) - Phenols ✓					
6-1	3 vials	POTW - Stabilized sludge (624) ✓					
6-2	1 Amber liter	POTW - Stabilized Sludge (624) - Phenols ✓					
7-1	3 vials	POTW - Field Blank (624) 624 ✓					
8-1	1 vial	POTW - Trip Blank (624) ✓					
9-1	3 vials	W-38 (602) ✓					
10-1		W-43 (602) ✓					
11-1		W-48 (602) ✓					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-11	<i>[Signature]</i>	<i>UPS</i>	<i>7-12-91</i>	
2					
3					
4					

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD.
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT	Cook Comp. & Polymers
PROJECT LOCATION	Sawville
QUOTE NUMBER	

CHAIN OF CUSTODY

No. 37019

PLEASE PRESS FIRMLY WHEN WRITING

SAMPLER (Signature)	AFFILIATION	DATE	TIME
DK / mm	Sigma	7-12-91	

PURPOSE OF ANALYSIS
Quarterly Groundwater Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 VO Vials	W-3A (624)					
2-1	3 VO Vials	W-3A (Duplicates) (624)					
3-1	3 VO Vials	Field Blanks (624)					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-3		UAS	7-12-91	
2					
3					
4					
5					



July 24, 1991

Mr. Robert Money
Hatcher-Sayre, Inc.
905 South Lake Boulevard
Richmond, VA 23236

Dear Robert:

Enclosed are the results of the analyses for CCP Saukville Quarterly Sampling. This project was received at Enseco - Erco Laboratory on July 11, 1991, and was processed for a 21 day turnaround time.

This report is presented in three sections. The first section consists of the Sample Description Information page, Analytical Test Requests summary, and a Project Narrative which lists any deviations or anomalies associated with sample analyses. The second section contains the analytical results and method references. The third section briefly describes the elements of Enseco's quality assurance/quality control (QA/QC) program and contains the QA/QC results. This letter authorizes the release of the analytical results and should be considered an integral part of this report.

Please refer to this project by the Enseco project number 009349 to expedite any further discussions. I will be happy to address any questions or concerns that you may have.

Sincerely,

A handwritten signature in cursive script that reads "Jay Cudmore".

Jay Cudmore
Program Administrator

Encl.

SAMPLE DESCRIPTION INFORMATION
for
Hatcher-Sayre, Inc.

Lab ID	Client ID	Matrix	Sampled		Received
			Date	Time	
009349-0001-SA	W-41	AQUEOUS	09 JUL 91		11 JUL 91
009349-0002-SA	W-14B	AQUEOUS	09 JUL 91		11 JUL 91
009349-0003-SA	W-6A	AQUEOUS	09 JUL 91		11 JUL 91
009349-0004-SA	W-42	AQUEOUS	09 JUL 91		11 JUL 91
009349-0005-SA	W-47	AQUEOUS	09 JUL 91		11 JUL 91
009349-0006-SA	W-27	AQUEOUS	09 JUL 91		11 JUL 91
009349-0007-SA	Field Blank	AQUEOUS	09 JUL 91		11 JUL 91
009349-0008-SA	PW-8	AQUEOUS	09 JUL 91		11 JUL 91
009349-0009-SA	RC-1	AQUEOUS	09 JUL 91		11 JUL 91
009349-0010-SA	RC-3	AQUEOUS	09 JUL 91		11 JUL 91
009349-0011-SA	RC-2	AQUEOUS	09 JUL 91		11 JUL 91
009349-0012-SA	RC-2 Dup	AQUEOUS	09 JUL 91		11 JUL 91
009349-0013-SA	W-30	AQUEOUS	09 JUL 91		11 JUL 91
009349-0014-TB	Trip Blank	AQUEOUS	09 JUL 91		11 JUL 91
009349-0015-SA	W-28	AQUEOUS	10 JUL 91		11 JUL 91
009349-0016-SA	W-21A	AQUEOUS	10 JUL 91		11 JUL 91
009349-0017-SA	W-46	AQUEOUS	10 JUL 91		11 JUL 91
009349-0018-SA	W-29	AQUEOUS	10 JUL 91		11 JUL 91
009349-0019-SA	W-24A	AQUEOUS	10 JUL 91		11 JUL 91
009349-0020-SA	W-37	AQUEOUS	10 JUL 91		11 JUL 91
009349-0021-SA	W-7	AQUEOUS	10 JUL 91		11 JUL 91
009349-0022-SA	W-23	AQUEOUS	10 JUL 91		11 JUL 91
009349-0023-SA	W-23 Dup	AQUEOUS	10 JUL 91		11 JUL 91
009349-0024-FB	Field Blank	AQUEOUS	10 JUL 91		11 JUL 91

ANALYTICAL TEST REQUESTS
for
Hatcher-Sayre, Inc.

Lab ID: 009349	Group Code	Analysis Description	Custom Test?
0001 , 0004, 0005 - 0007, 0009 - 0012, 0015 - 0016, 0019 - 0020	A	AROMATIC VOLATILE ORGANICS	N
0002 - 0003, 0008 , 0013, 0014 , 0017, 0018 , 0021, 0022 - 0024	B	VOLATILE ORGANICS	N

ANALYTICAL RESULTS

The method number provided on each data report sheet refers to a publication originating from a regulatory or standard-setting organization. In general, the methods employed are those specified by the U.S. Environmental Protection Agency and other state and federal agencies. In cases where an approved regulatory method does not exist, a method developed by Enseco will be employed to meet the specific needs of the client. The methods commonly employed by Enseco are based on methods from the following references.

U.S. Environmental Protection Agency. 1983. Methods for chemical analysis of water and wastes. EPA-600/4-79-020. Cincinnati, OH, March.

U.S. Environmental Protection Agency. 1984. Test methods for evaluating solid waste, physical/chemical methods. (SW-846); Washington, D.C. April.

U.S. Environmental Protection Agency. 1986. Methods for determination of organic compounds in finished drinking water and raw source water. Cincinnati, OH, March.

"Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act," 40 CFR, Part 136; Federal Register, Vol. 49, No. 209.

American Public Health Association, American Water Works Association, Water Pollution Control Federation. 1985. Standard methods for the examination of water and wastewater, 16th edition. Washington, D.C., April.

Current EPA Contract Laboratory Program (CLP) protocols for the analysis of organic and inorganic hazardous substances including chlorinated dioxins and furans.



July 26, 1991

Mr. Robert Money
Hatcher-Sayre, Inc.
905 South Lake Boulevard
Richmond, VA 23236

Dear Robert:

Enclosed are the results of the analyses for CCP Saukville (QRTLY GRNDH20 07/15/91). This project was received at Enseco - Erco Laboratory on July 15, 1991, and was processed for a 21 day turnaround time.

This report is presented in three sections. The first section consists of the Sample Description Information page, Analytical Test Requests summary, and a Project Narrative which lists any deviations or anomalies associated with sample analyses. The second section contains the analytical results and method references. The third section briefly describes the elements of Enseco's quality assurance/quality control (QA/QC) program and contains the QA/QC results. This letter authorizes the release of the analytical results and should be considered an integral part of this report.

Please refer to this project by the Enseco project number 009432 to expedite any further discussions. I will be happy to address any questions or concerns that you may have.

Sincerely,

A handwritten signature in cursive script that reads "Jay Cudmore".

Jay Cudmore
Program Administrator

Encl.

SAMPLE DESCRIPTION INFORMATION
for
Hatcher-Sayre, Inc.

Lab ID	Client ID	Matrix	Sampled		Received Date
			Date	Time	
009432-0001-SA	MW-1	AQUEOUS	11 JUL 91		15 JUL 91
009432-0002-SA	MW-2	AQUEOUS	11 JUL 91		15 JUL 91
009432-0003-SA	MW-3	AQUEOUS	11 JUL 91		15 JUL 91
009432-0004-SA	POTW-INFLUENT	AQUEOUS	11 JUL 91		15 JUL 91
009432-0005-SA	POTW-EFFLUENT	AQUEOUS	11 JUL 91		15 JUL 91
009432-0006-SA	POTW-STABILIZED SLUDGE	AQUEOUS	11 JUL 91		15 JUL 91
009432-0007-SA	POTW-FIELD BLANK	AQUEOUS	11 JUL 91		15 JUL 91
009432-0008-SA	POTW-TRIP BLANK	AQUEOUS	11 JUL 91		15 JUL 91
009432-0009-SA	W-38	AQUEOUS	11 JUL 91		15 JUL 91
009432-0010-SA	W-43	AQUEOUS	11 JUL 91		15 JUL 91
009432-0011-SA	W-48	AQUEOUS	11 JUL 91		15 JUL 91
009432-0012-SA	W-20	AQUEOUS	11 JUL 91		15 JUL 91
009432-0013-SA	W-40	AQUEOUS	11 JUL 91		15 JUL 91
009432-0014-DU	W-40 DUPLICATE	AQUEOUS	11 JUL 91		15 JUL 91
009432-0015-SA	FIELD BLANK	AQUEOUS	11 JUL 91		15 JUL 91
009432-0016-SA	TRIP BLANK	AQUEOUS	11 JUL 91		15 JUL 91
009432-0017-SA	W-3A	AQUEOUS	12 JUL 91		15 JUL 91
009432-0018-DU	W-3A DUPLICATE	AQUEOUS	12 JUL 91		15 JUL 91
009432-0019-SA	FIELD BLANK (7/12)	AQUEOUS	12 JUL 91		15 JUL 91

ANALYTICAL TEST REQUESTS
for
Hatcher-Sayre, Inc.

Lab ID: 009432	Group Code	Analysis Description	Custom Test?
0001 - 0003, 0007 - 0008, 0012 - 0013, 0015 - 0017, 0019	A	VOLATILE ORGANICS	N
0004 - 0006	B	Phenolics Prep - Phenolics VOLATILE ORGANICS	N N N
0009 - 0011	C	AROMATIC VOLATILE ORGANICS	N

GLACIAL WELLS

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-6A
Lab ID: 009349-0003-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	5000
Bromomethane	ND	ug/L	5000
Vinyl chloride	ND	ug/L	5000
Chloroethane	ND	ug/L	5000
Methylene chloride	ND	ug/L	2500
Acetone	ND	ug/L	5000
Carbon disulfide	ND	ug/L	2500
1,1-Dichloroethene	ND	ug/L	2500
1,1-Dichloroethane	ND	ug/L	2500
1,2-Dichloroethene (total)	ND	ug/L	2500
Chloroform	ND	ug/L	2500
1,2-Dichloroethane	ND	ug/L	2500
2-Butanone	ND	ug/L	5000
1,1,1-Trichloroethane	ND	ug/L	2500
Carbon tetrachloride	ND	ug/L	2500
Vinyl acetate	ND	ug/L	5000
Bromodichloromethane	ND	ug/L	2500
1,2-Dichloropropane	ND	ug/L	2500
trans-1,3-Dichloropropene	ND	ug/L	2500
Trichloroethene	ND	ug/L	2500
Dibromochloromethane	ND	ug/L	2500
1,1,2-Trichloroethane	ND	ug/L	2500
Benzene	ND	ug/L	2500
cis-1,3-Dichloropropene	ND	ug/L	2500
Bromoform	ND	ug/L	2500
4-Methyl-2-pentanone	ND	ug/L	5000
2-Hexanone	ND	ug/L	5000
1,1,2,2-Tetrachloroethane	ND	ug/L	2500
Tetrachloroethene	ND	ug/L	2500
Toluene	61000	ug/L	2500
Chlorobenzene	ND	ug/L	2500
Ethylbenzene	21000	ug/L	2500
Styrene	ND	ug/L	2500
Xylenes (total)	90000	ug/L	2500
Surrogate	Recovery		
1,2-Dichloroethane-d4	102	%	--
Toluene-d8	105	%	--
4-Bromofluorobenzene	105	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-14B
Lab ID: 009349-0002-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate

Recovery

1,2-Dichloroethane-d4	104	%	--
Toluene-d8	105	%	--
4-Bromofluorobenzene	104	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-20
Lab ID: 009432-0012-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	7.3	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethane (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	104	%	--	
Toluene-d8	96	%	--	
4-Bromofluorobenzene	98	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: W-20

Lab ID: 009432-0012-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 22 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected

NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-27
 Lab ID: 009349-0006-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
Surrogate	Recovery		
a,a,a-Trifluorotoluene	134	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-37
 Lab ID: 009349-0020-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 10 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	6100	ug/L	1000
Toluene	58000	ug/L	1000
Ethylbenzene	14000	ug/L	1000
Chlorobenzene	ND	ug/L	1000
Xylenes (total)	77000	ug/L	1000
1,4-Dichlorobenzene	ND	ug/L	1000
1,3-Dichlorobenzene	ND	ug/L	1000
1,2-Dichlorobenzene	ND	ug/L	1000
Surrogate	Recovery		
a,a,a-Trifluorotoluene	98	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-41
 Lab ID: 009349-0001-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	15	ug/L	5.0
Toluene	ND	ug/L	5.0
Ethylbenzene	410	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Xylenes (total)	650	ug/L	5.0
1,4-Dichlorobenzene	ND	ug/L	5.0
1,3-Dichlorobenzene	ND	ug/L	5.0
1,2-Dichlorobenzene	ND	ug/L	5.0
Surrogate	Recovery		
a,a,a-Trifluorotoluene	94	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-42
 Lab ID: 009349-0004-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	1500	ug/L	50
Toluene	3400	ug/L	50
Ethylbenzene	2000	ug/L	50
Chlorobenzene	ND	ug/L	50
Xylenes (total)	6700	ug/L	50
1,4-Dichlorobenzene	ND	ug/L	50
1,3-Dichlorobenzene	ND	ug/L	50
1,2-Dichlorobenzene	ND	ug/L	50
Surrogate	Recovery		
a, a, a-Trifluorotoluene	97	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-43
 Lab ID: 009432-0010-SA
 Matrix: AQUEOUS
 Authorized: 15 JUL 91

Sampled: 11 JUL 91
 Prepared: NA

Received: 15 JUL 91
 Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit	
Benzene	8000	ug/L	500	
Toluene	14000	ug/L	500	
Ethylbenzene	40000	ug/L	500	
Chlorobenzene	ND	ug/L	500	
Xylenes (total)	90000	ug/L	2500	m1
1,4-Dichlorobenzene	ND	ug/L	500	
1,3-Dichlorobenzene	ND	ug/L	500	
1,2-Dichlorobenzene	ND	ug/L	500	
Surrogate	Recovery			
a, a, a-Trifluorotoluene	93	%	--	

Note m : Compound exceeded standard calibration range in the original analysis and was rerun with a dilution.

Note l : Analyte present at a concentration above the calibration range, therefore a dilution of the sample was required and reporting limits were increased.

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-46
Lab ID: 009349-0017-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	ND	ug/L	5.0	
Acetone	11	ug/L	10	#
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene				
(total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	6.6	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	32	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	102	%	--	
Toluene-d8	114	%	--	&
4-Bromofluorobenzene	106	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-46
Lab ID: 009349-0017-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

Note & : Surrogate recovery is outside of control limits.

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-47
 Lab ID: 009349-0005-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	1000
Toluene	22000	ug/L	1000
Ethylbenzene	43000	ug/L	1000
Chlorobenzene	ND	ug/L	1000
Xylenes (total)	240000	ug/L	1000
1,4-Dichlorobenzene	ND	ug/L	1000
1,3-Dichlorobenzene	ND	ug/L	1000
1,2-Dichlorobenzene	ND	ug/L	1000
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-48
 Lab ID: 009432-0011-SA
 Matrix: AQUEOUS
 Authorized: 15 JUL 91

Sampled: 11 JUL 91
 Prepared: NA

Received: 15 JUL 91
 Analyzed: 23 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	1.3	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	11	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
Surrogate	Recovery		
a,a,a-Trifluorotoluene	106	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Joyce Lombardo

RANNEY-TYPE COLLECTORS

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: RC-1
 Lab ID: 009349-0009-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	5.0
Toluene	67	ug/L	5.0
Ethylbenzene	64	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Xylenes (total)	460	ug/L	5.0
1,4-Dichlorobenzene	ND	ug/L	5.0
1,3-Dichlorobenzene	ND	ug/L	5.0
1,2-Dichlorobenzene	ND	ug/L	5.0
Surrogate	Recovery		
a, a, a-Trifluorotoluene	105	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: RC-2
 Lab ID: 009349-0011-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	400	ug/L	250
Toluene	13000	ug/L	250
Ethylbenzene	6000	ug/L	250
Chlorobenzene	ND	ug/L	250
Xylenes (total)	40000	ug/L	250
1,4-Dichlorobenzene	ND	ug/L	250
1,3-Dichlorobenzene	ND	ug/L	250
1,2-Dichlorobenzene	ND	ug/L	250
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: RC-3
 Lab ID: 009349-0010-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	300	ug/L	250
Toluene	5500	ug/L	250
Ethylbenzene	3800	ug/L	250
Chlorobenzene	ND	ug/L	250
Xylenes (total)	30000	ug/L	250
1,4-Dichlorobenzene	ND	ug/L	250
1,3-Dichlorobenzene	ND	ug/L	250
1,2-Dichlorobenzene	ND	ug/L	250
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

SHALLOW DOLOMITE WELLS

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-3A
Lab ID: 009432-0017-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 12 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 23 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
1,2-Dichloroethane-d4	98	%	--
Toluene-d8	100	%	--
4-Bromofluorobenzene	102	%	--

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-7
Lab ID: 009349-0021-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate	Recovery		
1,2-Dichloroethane-d4	103	%	--
Toluene-d8	110	%	--
4-Bromofluorobenzene	101	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-21A
 Lab ID: 009349-0016-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 10 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	1100	ug/L	100
Toluene	7600	ug/L	100
Ethylbenzene	5400	ug/L	100
Chlorobenzene	ND	ug/L	100
Xylenes (total)	13000	ug/L	100
1,4-Dichlorobenzene	ND	ug/L	100
1,3-Dichlorobenzene	ND	ug/L	100
1,2-Dichlorobenzene	ND	ug/L	100
Surrogate	Recovery		
a, a, a-Trifluorotoluene	101	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-23
Lab ID: 009349-0022-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate	Recovery		
1,2-Dichloroethane-d4	103	%	--
Toluene-d8	109	%	--
4-Bromofluorobenzene	100	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.

Client ID: W-24A

Lab ID: 009349-0019-SA

Matrix: AQUEOUS

Authorized: 11 JUL 91

Sampled: 10 JUL 91

Prepared: NA

Received: 11 JUL 91

Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
Surrogate	Recovery		
a,a,a-Trifluorotoluene	103	%	--

ND = Not detected
NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.

Client ID: W-28

Lab ID: 009349-0015-SA

Matrix: AQUEOUS

Authorized: 11 JUL 91

Sampled: 10 JUL 91

Prepared: NA

Received: 11 JUL 91

Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	27	ug/L	1.0
Toluene	8.7	ug/L	1.0
Ethylbenzene	15	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	79	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
Surrogate	Recovery		
a, a, a-Trifluorotoluene	99	%	--

ND = Not detected
NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-29
Lab ID: 009349-0018-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	250
Bromomethane	ND	ug/L	250
Vinyl chloride	ND	ug/L	250
Chloroethane	ND	ug/L	250
Methylene chloride	ND	ug/L	120
Acetone	ND	ug/L	250
Carbon disulfide	ND	ug/L	120
1,1-Dichloroethene	ND	ug/L	120
1,1-Dichloroethane	ND	ug/L	120
1,2-Dichloroethene	ND	ug/L	120
(total)	ND	ug/L	120
Chloroform	ND	ug/L	120
1,2-Dichloroethane	ND	ug/L	120
2-Butanone	ND	ug/L	250
1,1,1-Trichloroethane	ND	ug/L	120
Carbon tetrachloride	ND	ug/L	120
Vinyl acetate	ND	ug/L	250
Bromodichloromethane	ND	ug/L	120
1,2-Dichloropropane	ND	ug/L	120
trans-1,3-Dichloropropene	ND	ug/L	120
Trichloroethene	ND	ug/L	120
Dibromochloromethane	ND	ug/L	120
1,1,2-Trichloroethane	ND	ug/L	120
Benzene	1500	ug/L	120
cis-1,3-Dichloropropene	ND	ug/L	120
Bromoform	ND	ug/L	120
4-Methyl-2-pentanone	ND	ug/L	250
2-Hexanone	ND	ug/L	250
1,1,2,2-Tetrachloroethane	ND	ug/L	120
Tetrachloroethene	ND	ug/L	120
Toluene	220	ug/L	120
Chlorobenzene	ND	ug/L	120
Ethylbenzene	1700	ug/L	120
Styrene	ND	ug/L	120
Xylenes (total)	2600	ug/L	120

Surrogate

Recovery

1,2-Dichloroethane-d4	104	%	--
Toluene-d8	110	%	--
4-Bromofluorobenzene	104	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-38
 Lab ID: 009432-0009-SA
 Matrix: AQUEOUS
 Authorized: 15 JUL 91

Sampled: 11 JUL 91
 Prepared: NA

Received: 15 JUL 91
 Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	1800	ug/L	20
Toluene	88	ug/L	20
Ethylbenzene	1100	ug/L	20
Chlorobenzene	ND	ug/L	20
Xylenes (total)	2600	ug/L	20
1,4-Dichlorobenzene	ND	ug/L	20
1,3-Dichlorobenzene	ND	ug/L	20
1,2-Dichlorobenzene	ND	ug/L	20
Surrogate	Recovery		
a,a,a-Trifluorotoluene	106	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-40
Lab ID: 009432-0013-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	5.9	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	11	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	105	%	--	
Toluene-d8	91	%	--	
4-Bromofluorobenzene	96	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: W-40

Lab ID: 009432-0013-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 22 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected

NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

MUNICIPAL/DEEP DOLOMITE WELLS

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: MW-1
Lab ID: 009432-0001-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	11	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	108	%	--	
Toluene-d8	96	%	--	
4-Bromofluorobenzene	98	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: MW-1

Lab ID: 009432-0001-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 19 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: MW-2

Lab ID: 009432-0002-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	12	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	111	%	--	
Toluene-d8	93	%	--	
4-Bromofluorobenzene	97	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: MW-2

Lab ID: 009432-0002-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 19 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected

NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: MW-3

Lab ID: 009432-0003-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate

Recovery

1,2-Dichloroethane-d4	112	%	--
Toluene-d8	94	%	--
4-Bromofluorobenzene	98	%	--

ND = Not detected

NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-30
Lab ID: 009349-0013-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	9.0	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene				
(total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	7.1	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	6.2	ug/L	5.0	

Surrogate	Recovery		
1,2-Dichloroethane-d4	109	%	--
Toluene-d8	94	%	--
4-Bromofluorobenzene	99	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-30
Lab ID: 009349-0013-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 19 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: PW-8
Lab ID: 009349-0008-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate	Recovery		
1,2-Dichloroethane-d4	86	%	--
Toluene-d8	107	%	--
4-Bromofluorobenzene	105	%	--

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

POTW SAMPLES

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-INFLUENT
Lab ID: 009432-0004-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	330
Bromomethane	ND	ug/L	330
Vinyl chloride	ND	ug/L	330
Chloroethane	ND	ug/L	330
Methylene chloride	300	ug/L	170
Acetone	4900	ug/L	330
Carbon disulfide	ND	ug/L	170
1,1-Dichloroethene	ND	ug/L	170
1,1-Dichloroethane	ND	ug/L	170
1,2-Dichloroethene	ND	ug/L	170
(total)	ND	ug/L	170
Chloroform	ND	ug/L	170
1,2-Dichloroethane	ND	ug/L	170
2-Butanone	ND	ug/L	330
1,1,1-Trichloroethane	ND	ug/L	170
Carbon tetrachloride	ND	ug/L	170
Vinyl acetate	ND	ug/L	330
Bromodichloromethane	ND	ug/L	170
1,2-Dichloropropane	ND	ug/L	170
trans-1,3-Dichloropropene	ND	ug/L	170
Trichloroethene	ND	ug/L	170
Dibromochloromethane	ND	ug/L	170
1,1,2-Trichloroethane	ND	ug/L	170
Benzene	ND	ug/L	170
cis-1,3-Dichloropropene	ND	ug/L	170
Bromoform	ND	ug/L	170
4-Methyl-2-pentanone	ND	ug/L	330
2-Hexanone	ND	ug/L	330
1,1,2,2-Tetrachloroethane	ND	ug/L	170
Tetrachloroethene	ND	ug/L	170
Toluene	310	ug/L	170
Chlorobenzene	ND	ug/L	170
Ethylbenzene	ND	ug/L	170
Styrene	ND	ug/L	170
Xylenes (total)	600	ug/L	170
Surrogate	Recovery		
1,2-Dichloroethane-d4	105	%	--
Toluene-d8	109	%	--
4-Bromofluorobenzene	100	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-INFLUENT
Lab ID: 009432-0004-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

INORGANICS

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-INFLUENT
Lab ID: 009432-0004-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: See Below

Received: 15 JUL 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Phenolics, Total	0.056	mg/L	0.010	420.1	23 JUL 91	24 JUL 91

ND = Not detected
NA = Not applicable

Reported By: Ya-Ling King

Approved By: Deborah Roskos

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-EFFLUENT
Lab ID: 009432-0005-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	7.5	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene				
(total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	105	%	--	
Toluene-d8	104	%	--	
4-Bromofluorobenzene	102	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-EFFLUENT
Lab ID: 009432-0005-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

INORGANICS

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-EFFLUENT
Lab ID: 009432-0005-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: See Below

Received: 15 JUL 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Phenolics, Total	ND	mg/L	0.010	420.1	23 JUL 91	24 JUL 91

ND = Not detected
NA = Not applicable

Reported By: Ya-Ling King

Approved By: Deborah Roskos

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-STABILIZED SLUDGE
Lab ID: 009432-0006-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	17	
Bromomethane	ND	ug/L	17	
Vinyl chloride	ND	ug/L	17	
Chloroethane	ND	ug/L	17	
Methylene chloride	15	ug/L	8.3	#
Acetone	250	ug/L	17	
Carbon disulfide	ND	ug/L	8.3	
1,1-Dichloroethene	ND	ug/L	8.3	
1,1-Dichloroethane	ND	ug/L	8.3	
1,2-Dichloroethene (total)	ND	ug/L	8.3	
Chloroform	ND	ug/L	8.3	
1,2-Dichloroethane	ND	ug/L	8.3	
2-Butanone	33	ug/L	17	#
1,1,1-Trichloroethane	ND	ug/L	8.3	
Carbon tetrachloride	ND	ug/L	8.3	
Vinyl acetate	ND	ug/L	17	
Bromodichloromethane	ND	ug/L	8.3	
1,2-Dichloropropane	ND	ug/L	8.3	
trans-1,3-Dichloropropene	ND	ug/L	8.3	
Trichloroethene	ND	ug/L	8.3	
Dibromochloromethane	ND	ug/L	8.3	
1,1,2-Trichloroethane	ND	ug/L	8.3	
Benzene	ND	ug/L	8.3	
cis-1,3-Dichloropropene	ND	ug/L	8.3	
Bromoform	ND	ug/L	8.3	
4-Methyl-2-pentanone	ND	ug/L	17	
2-Hexanone	ND	ug/L	17	
1,1,2,2-Tetrachloroethane	ND	ug/L	8.3	
Tetrachloroethene	ND	ug/L	8.3	
Toluene	11	ug/L	8.3	#
Chlorobenzene	ND	ug/L	8.3	
Ethylbenzene	ND	ug/L	8.3	
Styrene	ND	ug/L	8.3	
Xylenes (total)	ND	ug/L	8.3	
Surrogate	Recovery			
1,2-Dichloroethane-d4	99	%	--	
Toluene-d8	107	%	--	
4-Bromofluorobenzene	102	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-STABILIZED SLUDGE
Lab ID: 009432-0006-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 22 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

INORGANICS

Client Name: Hatcher-Sayre, Inc.
 Client ID: POTW-STABILIZED SLUDGE
 Lab ID: 009432-0006-SA
 Matrix: AQUEOUS
 Authorized: 15 JUL 91

Sampled: 11 JUL 91
 Prepared: See Below

Received: 15 JUL 91
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Phenolics, Total	0.29	mg/L	0.010	420.1	23 JUL 91	24 JUL 91

ND = Not detected
 NA = Not applicable

Reported By: Ya-Ling King

Approved By: Deborah Roskos

FIELD AND TRIP BLANKS

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: RC-2 Dup
 Lab ID: 009349-0012-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	410	ug/L	250
Toluene	14000	ug/L	250
Ethylbenzene	6200	ug/L	250
Chlorobenzene	ND	ug/L	250
Xylenes (total)	41000	ug/L	250
1,4-Dichlorobenzene	ND	ug/L	250
1,3-Dichlorobenzene	ND	ug/L	250
1,2-Dichlorobenzene	ND	ug/L	250
Surrogate	Recovery		
a,a,a-Trifluorotoluene	98	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
 Client ID: W-3A DUPLICATE
 Lab ID: 009432-0018-DU
 Matrix: AQUEOUS
 Authorized: 15 JUL 91
 Sampled: 12 JUL 91
 Prepared: NA
 Received: 15 JUL 91
 Analyzed: 23 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate	Recovery		
1,2-Dichloroethane-d4	100	%	--
Toluene-d8	91	%	--
4-Bromofluorobenzene	96	%	--

ND = Not detected
 NA = Not applicable

Reported By: Tracy Jones
 Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-23 Dup
Lab ID: 009349-0023-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate

Recovery

1,2-Dichloroethane-d4	103	%	--
Toluene-d8	111	%	--
4-Bromofluorobenzene	100	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-23 Dup
Lab ID: 009349-0023-SA
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Note & : Surrogate recovery is outside of control limits.

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: W-40 DUPLICATE
Lab ID: 009432-0014-DU
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 23 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	9.7	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
1,2-Dichloroethane-d4	94	%	--
Toluene-d8	93	%	--
4-Bromofluorobenzene	98	%	--

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

AROMATIC VOLATILE ORGANICS

Method 602

Client Name: Hatcher-Sayre, Inc.
 Client ID: Field Blank
 Lab ID: 009349-0007-SA
 Matrix: AQUEOUS
 Authorized: 11 JUL 91

Sampled: 09 JUL 91
 Prepared: NA

Received: 11 JUL 91
 Analyzed: 15 JUL 91

Parameter	Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	1.4	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	7.4	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
Surrogate	Recovery		
a,a,a-Trifluorotoluene	100	%	--

ND = Not detected
 NA = Not applicable

Reported By: David Doty

Approved By: Maria Baca

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: Field Blank
Lab ID: 009349-0024-FB
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 10 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 16 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	6.6	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	8.5	ug/L	5.0	

Surrogate	Recovery		
1,2-Dichloroethane-d4	102	%	--
Toluene-d8	107	%	--
4-Bromofluorobenzene	102	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: Field Blank

Lab ID: 009349-0024-FB

Matrix: AQUEOUS

Authorized: 11 JUL 91

Sampled: 10 JUL 91

Prepared: NA

Received: 11 JUL 91

Analyzed: 16 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected

NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: FIELD BLANK
Lab ID: 009432-0015-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 24 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	160	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
1,2-Dichloroethane-d4	92	%	--
Toluene-d8	101	%	--
4-Bromofluorobenzene	98	%	--

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: FIELD BLANK (7/12)
Lab ID: 009432-0019-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 12 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 23 JUL 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Surrogate	Recovery		
1,2-Dichloroethane-d4	98	%	--
Toluene-d8	99	%	--
4-Bromofluorobenzene	101	%	--

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-FIELD BLANK
Lab ID: 009432-0007-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	ND	ug/L	5.0	
Acetone	43	ug/L	10	#
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate		Recovery		
1,2-Dichloroethane-d4	103	%	--	
Toluene-d8	102	%	--	
4-Bromofluorobenzene	103	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: POTW-FIELD BLANK

Lab ID: 009432-0007-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 19 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: Trip Blank
Lab ID: 009349-0014-TB
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	9.6	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	102	%	--	
Toluene-d8	104	%	--	
4-Bromofluorobenzene	102	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: Trip Blank
Lab ID: 009349-0014-TB
Matrix: AQUEOUS
Authorized: 11 JUL 91

Sampled: 09 JUL 91
Prepared: NA

Received: 11 JUL 91
Analyzed: 17 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Nora Reilly

Approved By: Dan Wielandt

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: TRIP BLANK
Lab ID: 009432-0016-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 24 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	12	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	94	%	--	
Toluene-d8	102	%	--	
4-Bromofluorobenzene	97	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.

Client ID: TRIP BLANK

Lab ID: 009432-0016-SA

Matrix: AQUEOUS

Authorized: 15 JUL 91

Sampled: 11 JUL 91

Prepared: NA

Received: 15 JUL 91

Analyzed: 24 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-TRIP BLANK
Lab ID: 009432-0008-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 19 JUL 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	10	
Bromomethane	ND	ug/L	10	
Vinyl chloride	ND	ug/L	10	
Chloroethane	ND	ug/L	10	
Methylene chloride	8.3	ug/L	5.0	#
Acetone	ND	ug/L	10	
Carbon disulfide	ND	ug/L	5.0	
1,1-Dichloroethene	ND	ug/L	5.0	
1,1-Dichloroethane	ND	ug/L	5.0	
1,2-Dichloroethene (total)	ND	ug/L	5.0	
Chloroform	ND	ug/L	5.0	
1,2-Dichloroethane	ND	ug/L	5.0	
2-Butanone	ND	ug/L	10	
1,1,1-Trichloroethane	ND	ug/L	5.0	
Carbon tetrachloride	ND	ug/L	5.0	
Vinyl acetate	ND	ug/L	10	
Bromodichloromethane	ND	ug/L	5.0	
1,2-Dichloropropane	ND	ug/L	5.0	
trans-1,3-Dichloropropene	ND	ug/L	5.0	
Trichloroethene	ND	ug/L	5.0	
Dibromochloromethane	ND	ug/L	5.0	
1,1,2-Trichloroethane	ND	ug/L	5.0	
Benzene	ND	ug/L	5.0	
cis-1,3-Dichloropropene	ND	ug/L	5.0	
Bromoform	ND	ug/L	5.0	
4-Methyl-2-pentanone	ND	ug/L	10	
2-Hexanone	ND	ug/L	10	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	
Tetrachloroethene	ND	ug/L	5.0	
Toluene	ND	ug/L	5.0	
Chlorobenzene	ND	ug/L	5.0	
Ethylbenzene	ND	ug/L	5.0	
Styrene	ND	ug/L	5.0	
Xylenes (total)	ND	ug/L	5.0	
Surrogate	Recovery			
1,2-Dichloroethane-d4	102	%	--	
Toluene-d8	99	%	--	
4-Bromofluorobenzene	102	%	--	

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

TARGET COMPOUND LIST (TCL)
VOLATILE ORGANICS
Method 624

Client Name: Hatcher-Sayre, Inc.
Client ID: POTW-TRIP BLANK
Lab ID: 009432-0008-SA
Matrix: AQUEOUS
Authorized: 15 JUL 91

Sampled: 11 JUL 91
Prepared: NA

Received: 15 JUL 91
Analyzed: 19 JUL 91

Note # : Analyte associated with sample processing and analysis in the lab environment. An acceptable blank must contain <5 times the reporting limit of this analyte for this method.

ND = Not detected
NA = Not applicable

Reported By: Tracy Jones

Approved By: Joyce Lombardo

QUALITY ASSURANCE/QUALITY CONTROL

- QUALITY ASSURANCE/QUALITY CONTROL -

QUALITY ASSURANCE/QUALITY CONTROL

As an indication of the overall quality of the data generated by Enseco - Erco Laboratory for this report, the following controls have been provided (when applicable).

Method blanks are analyzed to assess the level of contamination which exists in the analytical system. A method blank, analyzed with every batch of samples, consists of reagents specific to the method. This blank is carried through every aspect of the procedure, including preparation, cleanup, and analysis. Ideally, the concentration of an analyte in the blank is below the reporting limit for that analyte. However, some common laboratory solvents and metals are difficult to eliminate to the part-per-billion levels commonly reported in environmental analyses. Therefore, all method blank data is reported to the client. Data are not blank-corrected.

Duplicate control samples (DCS) are used to monitor the laboratory's day-to-day performance of routine analytical methods. A DCS consists of a standard, control matrix which is spiked with a group of target compounds representative of the method analytes. The DCS is analyzed with environmental samples to provide evidence that the laboratory is performing the method within accepted QC guidelines.

A DCS has been established for most routine analytical methods. Reagent water is used as the control matrix for the analysis of aqueous samples. The DCS compounds are spiked into reagent water and carried through the appropriate steps of the analysis. As stated in SW-846 (third edition), a universal blank matrix does not exist for solid samples and therefore no matrix is used. The DCS for solid samples consists of the DCS compounds spiked into a reagent blank and carried through the appropriate steps of the analysis. The data thus obtained are used to set the DCS control limits. As sufficient laboratory data become available, the control limits are redefined based upon the most recent six months of DCS data. Control limits for accuracy are based on the historical average recovery of the DCS plus or minus three standard deviation units, or alternatively on established control limits defined in the methodology.

Surrogates are organic compounds that are similar to the analytes of interest in chemical behavior but which are not normally found in environmental samples. Enseco routinely adds surrogates to samples requiring GC/MS and most GC analysis and reports these surrogate recoveries to the client. These surrogates are added to samples to monitor the effect of the matrix on the accuracy of the analysis. Results are reported in terms of percent recovery.

July 24, 1991

Project Narrative

Client: Hatcher-Sayre, Inc.
Project Name: CCP Saukville Quarterly Sampling
Erco Project No.: 009349

1. This project consists of the results for samples received at Enseco - Erco Laboratory on July 11, 1991. Please see the sample description information sheet for a list of samples.
2. Temperature of cooler upon receipt was 8.3c.
Bottles were not broken in transit.
Bottles were properly labeled.
Samples agree with chain-of-custody.
VOA vials were properly preserved.
VOA vials did contain headspace.

July 26, 1991

Project Narrative

Client: Hatcher-Sayre, Inc.
Project Name: QRTLY GRNDH20 07/15/91
Erco Project No.: 009432

1. This project consists of the results for samples received at Enseco - Erco Laboratory on July 15, 1991. Please see the sample description information sheet for a list of samples.
2. Temperature of cooler upon receipt was 10.3C.
Samples agree with chain-of-custody.
Samples were properly preserved.
VOA vials were properly preserved.
VOA vials did not contain headspace.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
009349-0002-SA	AQUEOUS	624-A	12 JUL 91-V5A	16 JUL 91-V5A
009349-0003-SA	AQUEOUS	624-A	12 JUL 91-V5A	16 JUL 91-V5A
009349-0008-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0013-SA	AQUEOUS	624-A	18 JUL 91-V1A	18 JUL 91-V1B
009349-0014-TB	AQUEOUS	624-A	12 JUL 91-V5A	16 JUL 91-V5A
009349-0017-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0018-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0021-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0022-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0023-SA	AQUEOUS	624-A	17 JUL 91-V5A	17 JUL 91-V5A
009349-0024-FB	AQUEOUS	624-A	12 JUL 91-V5A	16 JUL 91-V5A

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: 624-A									
Matrix: AQUEOUS									
QC Lot: 12 JUL 91-V5A									
Concentration Units: ug/L									
1,1-Dichloroethene	50	48.7	46.4	47.5	95	61-145	4.7	14	
Trichloroethene	50	45.7	45.9	45.8	92	71-120	0.4	14	
Chlorobenzene	50	48.8	47.2	48.0	96	75-130	3.2	13	
Toluene	50	47.9	48.1	48.0	96	76-125	0.5	13	
Benzene	50	49.2	48.7	49.0	98	76-127	1.0	11	

Category: 624-A
Matrix: AQUEOUS
QC Lot: 17 JUL 91-V5A
Concentration Units: ug/L

1,1-Dichloroethene	50	47.4	46.7	47.0	94	61-145	1.5	14
Trichloroethene	50	46.9	46.8	46.8	94	71-120	0.2	14
Chlorobenzene	50	48.0	50.5	49.2	99	75-130	5.1	13
Toluene	50	50.0	47.9	49.0	98	76-125	4.3	13
Benzene	50	48.1	50.6	49.4	99	76-127	5.1	11

Category: 624-A
Matrix: AQUEOUS
QC Lot: 18 JUL 91-V1A
Concentration Units: ug/L

1,1-Dichloroethene	50	68.7	68.6	68.7	137	61-145	0.1	14
Trichloroethene	50	40.1	40.5	40.3	81	71-120	1.0	14
Chlorobenzene	50	46.8	46.4	46.6	93	75-130	0.7	13
Toluene	50	47.6	47.0	47.3	95	76-125	1.2	13
Benzene	50	50.0	46.4	48.2	96	76-127	7.5	11

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
 Volatile Organics by GC/MS

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 624-A
 Matrix: AQUEOUS
 QC Lot: 12 JUL 91-V5A QC Run: 16 JUL 91-V5A
 Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	49.0	98	76-114
Toluene-d8	50.0	51.7	103	88-110
4-Bromofluorobenzene	50.0	51.4	103	86-115

Category: 624-A
 Matrix: AQUEOUS
 QC Lot: 17 JUL 91-V5A QC Run: 17 JUL 91-V5A
 Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	47.1	94	76-114
Toluene-d8	50.0	52.5	105	88-110
4-Bromofluorobenzene	50.0	49.0	98	86-115

Category: 624-A
 Matrix: AQUEOUS
 QC Lot: 18 JUL 91-V1A QC Run: 18 JUL 91-V1B
 Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	55.0	110	76-114
Toluene-d8	50.0	48.0	96	88-110
4-Bromofluorobenzene	50.0	51.7	103	86-115

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
 Volatile Organics by GC/MS

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 12 JUL 91-V5A QC Run: 16 JUL 91-V5A			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
 Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 17 JUL 91-V5A QC Run: 17 JUL 91-V5A			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	14	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	6.7	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
 Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 18 JUL 91-V1A QC Run: 18 JUL 91-V1B			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	18	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
009349-0001-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0004-SA	AQUEOUS	602-A	08 JUL 91-G28	19 JUL 91-G28
009349-0005-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0006-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0007-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0009-SA	AQUEOUS	602-A	08 JUL 91-G28	19 JUL 91-G28
009349-0010-SA	AQUEOUS	602-A	08 JUL 91-G28	19 JUL 91-G28
009349-0011-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0012-SA	AQUEOUS	602-A	08 JUL 91-G28	15 JUL 91-G28
009349-0015-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28
009349-0016-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28
009349-0019-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28
009349-0020-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Measured DCS2	AVG	Accuracy Average(%)		Precision (RPD)		
	Spiked	DCS1			DCS	Limits	DCS Limit		
Category: 602-A									
Matrix: AQUEOUS									
QC Lot: 08 JUL 91-G28									
Concentration Units: ug/L									
Benzene	5.0	4.41	4.53	4.47	89	60-140	2.9	30	
Toluene	5.0	4.50	4.52	4.51	90	60-140	0.4	30	
Ethylbenzene	5.0	5.83	5.84	5.84	117	60-140	0.2	30	
Xylenes (total)	5.0	3.87	3.88	3.88	78	60-140	0.1	30	
1,3-Dichlorobenzene	5.0	5.34	5.69	5.52	110	60-140	6.2	30	

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 15 JUL 91-G28
Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	29.8	99	60-140
------------------------	------	------	----	--------

Category: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 19 JUL 91-G28
Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	29.7	99	60-140
------------------------	------	------	----	--------

Category: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 22 JUL 91-G28
Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	29.7	99	60-140
------------------------	------	------	----	--------

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: 602-A			
Matrix: AQUEOUS			
QC Lot: 08 JUL 91-G28 QC Run: 15 JUL 91-G28			
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0

Test: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 19 JUL 91-G28

Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0

Test: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 22 JUL 91-G28

Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0

QUALITY ASSURANCE/QUALITY CONTROL

As an indication of the overall quality of the data generated by Enseco - Erco Laboratory for this report, the following controls have been provided (when applicable).

Method blanks are analyzed to assess the level of contamination which exists in the analytical system. A method blank, analyzed with every batch of samples, consists of reagents specific to the method. This blank is carried through every aspect of the procedure, including preparation, cleanup, and analysis. Ideally, the concentration of an analyte in the blank is below the reporting limit for that analyte. However, some common laboratory solvents and metals are difficult to eliminate to the part-per-billion levels commonly reported in environmental analyses. Therefore, all method blank data is reported to the client. Data are not blank-corrected.

Duplicate control samples (DCS) are used to monitor the laboratory's day-to-day performance of routine analytical methods. A DCS consists of a standard, control matrix which is spiked with a group of target compounds representative of the method analytes. The DCS is analyzed with environmental samples to provide evidence that the laboratory is performing the method within accepted QC guidelines.

A DCS has been established for most routine analytical methods. Reagent water is used as the control matrix for the analysis of aqueous samples. The DCS compounds are spiked into reagent water and carried through the appropriate steps of the analysis. As stated in SW-846 (third edition), a universal blank matrix does not exist for solid samples and therefore no matrix is used. The DCS for solid samples consists of the DCS compounds spiked into a reagent blank and carried through the appropriate steps of the analysis. The data thus obtained are used to set the DCS control limits. As sufficient laboratory data become available, the control limits are redefined based upon the most recent six months of DCS data. Control limits for accuracy are based on the historical average recovery of the DCS plus or minus three standard deviation units, or alternatively on established control limits defined in the methodology.

Surrogates are organic compounds that are similar to the analytes of interest in chemical behavior but which are not normally found in environmental samples. Enseco routinely adds surrogates to samples requiring GC/MS and most GC analysis and reports these surrogate recoveries to the client. These surrogates are added to samples to monitor the effect of the matrix on the accuracy of the analysis. Results are reported in terms of percent recovery.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
009432-0001-SA	AQUEOUS	624-A	18 JUL 91-V1A	18 JUL 91-V1B
009432-0002-SA	AQUEOUS	624-A	18 JUL 91-V1A	18 JUL 91-V1B
009432-0003-SA	AQUEOUS	624-A	18 JUL 91-V1A	18 JUL 91-V1B
009432-0004-SA	AQUEOUS	624-A	18 JUL 91-V5A	22 JUL 91-V5A
009432-0005-SA	AQUEOUS	624-A	18 JUL 91-V5A	22 JUL 91-V5A
009432-0006-SA	AQUEOUS	624-A	18 JUL 91-V5A	22 JUL 91-V5A
009432-0007-SA	AQUEOUS	624-A	18 JUL 91-V5A	19 JUL 91-V5A
009432-0008-SA	AQUEOUS	624-A	18 JUL 91-V5A	19 JUL 91-V5A
009432-0012-SA	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1A
009432-0013-SA	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1A
009432-0014-DU	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1B
009432-0015-SA	AQUEOUS	624-A	21 JUL 91-V1A	23 JUL 91-V1B
009432-0016-SA	AQUEOUS	624-A	21 JUL 91-V1A	23 JUL 91-V1B
009432-0017-SA	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1B
009432-0018-DU	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1B
009432-0019-SA	AQUEOUS	624-A	21 JUL 91-V1A	22 JUL 91-V1B

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Spiked	Concentration		AVG	Accuracy		Precision		
		DCS1	Measured DCS2		DCS	Average(%) Limits	(RPD) DCS Limit	DCS Limit	
Category: 624-A									
Matrix: AQUEOUS									
QC Lot: 18 JUL 91-V1A									
Concentration Units: ug/L									
1,1-Dichloroethene	50	68.7	68.6	68.7	137	61-145	0.1	14	
Trichloroethene	50	40.1	40.5	40.3	81	71-120	1.0	14	
Chlorobenzene	50	46.8	46.4	46.6	93	75-130	0.7	13	
Toluene	50	47.6	47.0	47.3	95	76-125	1.2	13	
Benzene	50	50.0	46.4	48.2	96	76-127	7.5	11	

Category: 624-A
Matrix: AQUEOUS
QC Lot: 18 JUL 91-V5A
Concentration Units: ug/L

1,1-Dichloroethene	50	52.5	52.6	52.5	105	61-145	0.1	14
Trichloroethene	50	48.8	49.9	49.3	99	71-120	2.3	14
Chlorobenzene	50	52.0	52.8	52.4	105	75-130	1.4	13
Toluene	50	44.8	46.2	45.5	91	76-125	3.0	13
Benzene	50	51.1	52.9	52.0	104	76-127	3.4	11

Category: 624-A
Matrix: AQUEOUS
QC Lot: 21 JUL 91-V1A
Concentration Units: ug/L

1,1-Dichloroethene	50	49.4	50.7	50.0	100	61-145	2.6	14
Trichloroethene	50	49.0	51.9	50.4	101	71-120	5.7	14
Chlorobenzene	50	48.6	51.3	50.0	100	75-130	5.4	13
Toluene	50	47.7	51.5	49.6	99	76-125	7.7	13
Benzene	50	48.6	52.7	50.6	101	76-127	8.1	11

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 624-A
Matrix: AQUEOUS
QC Lot: 18 JUL 91-V1A QC Run: 18 JUL 91-V1B
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	55.0	110	76-114
Toluene-d8	50.0	48.0	96	88-110
4-Bromofluorobenzene	50.0	51.7	103	86-115

Category: 624-A
Matrix: AQUEOUS
QC Lot: 18 JUL 91-V5A QC Run: 22 JUL 91-V5A
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	47.5	95	76-114
Toluene-d8	50.0	51.8	104	88-110
4-Bromofluorobenzene	50.0	49.3	99	86-115

Category: 624-A
Matrix: AQUEOUS
QC Lot: 18 JUL 91-V5A QC Run: 19 JUL 91-V5A
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	50.7	101	76-114
Toluene-d8	50.0	51.6	103	88-110
4-Bromofluorobenzene	50.0	51.7	103	86-115

Category: 624-A
Matrix: AQUEOUS
QC Lot: 21 JUL 91-V1A QC Run: 22 JUL 91-V1A
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	47.9	96	76-114
Toluene-d8	50.0	49.2	98	88-110
4-Bromofluorobenzene	50.0	49.3	99	86-115

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 624-A
Matrix: AQUEOUS
QC Lot: 21 JUL 91-V1A QC Run: 22 JUL 91-V1B
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	47.0	94	76-114
Toluene-d8	50.0	53.1	106	88-110
4-Bromofluorobenzene	50.0	49.8	100	86-115

Category: 624-A
Matrix: AQUEOUS
QC Lot: 21 JUL 91-V1A QC Run: 23 JUL 91-V1B
Concentration Units: ug/L

1,2-Dichloroethane-d4	50.0	48.0	96	76-114
Toluene-d8	50.0	51.3	103	88-110
4-Bromofluorobenzene	50.0	49.0	98	86-115

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC/MS

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 18 JUL 91-VIA QC Run: 18 JUL 91-V1B			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	18	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 18 JUL 91-V5A QC Run: 22 JUL 91-V5A			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene	ND	ug/L	5.0
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 18 JUL 91-V5A QC Run: 19 JUL 91-V5A			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
 Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 21 JUL 91-V1A QC Run: 22 JUL 91-V1A			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	13	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

J

J = Result is detected below the reporting limit or is an estimated concentration.

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 21 JUL 91-VIA QC Run: 22 JUL 91-V1B			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene			
(total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-TCL-A			
Matrix: AQUEOUS			
QC Lot: 21 JUL 91-VIA QC Run: 23 JUL 91-V1B			
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	1.5	ug/L	5.0 J
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	9.1	ug/L	10 J
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

J = Result is detected below the reporting limit or is an estimated concentration.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
009432-0009-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28
009432-0010-SA	AQUEOUS	602-A	08 JUL 91-G28	22 JUL 91-G28
009432-0011-SA	AQUEOUS	602-A	08 JUL 91-G28	23 JUL 91-G28

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: 602-A									
Matrix: AQUEOUS									
QC Lot: 08 JUL 91-G28									
Concentration Units: ug/L									
Benzene	5.0	4.41	4.53	4.47	89	60-140	2.9	30	
Toluene	5.0	4.50	4.52	4.51	90	60-140	0.4	30	
Ethylbenzene	5.0	5.83	5.84	5.84	117	60-140	0.2	30	
Xylenes (total)	5.0	3.87	3.88	3.88	78	60-140	0.1	30	
1,3-Dichlorobenzene	5.0	5.34	5.69	5.52	110	60-140	6.2	30	

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits

Category: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 22 JUL 91-G28
Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	29.7	99	60-140
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Category: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 23 JUL 91-G28
Concentration Units: ug/L

a,a,a-Trifluorotoluene	30.0	29.6	99	60-140
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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: 602-A			
Matrix: AQUEOUS			
QC Lot: 08 JUL 91-G28 QC Run: 22 JUL 91-G28			
Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0

Test: 602-A
Matrix: AQUEOUS
QC Lot: 08 JUL 91-G28 QC Run: 23 JUL 91-G28

Benzene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Xylenes (total)	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0

QC LOT ASSIGNMENT REPORT
Non-Metals

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
009432-0004-SA	AQUEOUS	PHEN	23 JUL 91-22	23 JUL 91-22
009432-0005-SA	AQUEOUS	PHEN	23 JUL 91-22	23 JUL 91-22
009432-0006-SA	AQUEOUS	PHEN	23 JUL 91-22	23 JUL 91-22

DUPLICATE CONTROL SAMPLE REPORT
Non-Metals

Analyte	Concentration			AVG	Accuracy		Precision	
	Spiked	DCS1	Measured DCS2		DCS	Average (%) Limits	(RPD) DCS	Limit
Category: PHEN Matrix: AQUEOUS QC Lot: 23 JUL 91-22 Concentration Units: mg/L								
Phenolics, Total	0.20	0.195	0.196	0.195	98	80-120	0.7	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Non-Metals

Analyte	Result	Units	Reporting Limit
Test: PHEN-A			
Matrix: AQUEOUS			
QC Lot: 23 JUL 91-22 QC Run: 23 JUL 91-22			
Phenolics, Total	ND	mg/L	0.010

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT Cook Composites + Polymers
PROJECT LOCATION Saukville
QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS FIRMLY WHEN WRITING

No. 42589

SAMPLER (Signature) DK/SK/mm	AFFILIATION Sigma	DATE 7-9-91	TIME
PURPOSE OF ANALYSIS Quarterly Groundwater Monitoring			

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 50 Vials	W-41 (602) ✓					
2-1		W-14B (624) ✓					
3-1		W-6A (624) ✓					
4-1		W-42 (602) ✓					
5-1		W-47 (602) ✓					
6-1		W-27 (602) ✓					
7-1	2 50 Vials	Field Blanks (602) ✓					
8-1	3 50 Vials	PW-8 (624) ✓					
9-1	3 50 VIALS	RC-1 (602) ✓					
10-1		RC-3 (602) ✓					
11-1		RC-2 (602) ✓					
12-1		RC-2 (DUPLICATES) (602) ✓					
13-1	2 50 VIALS	W-30 (624) ✓					
14-1		TRIP BLANKS (624) ✓					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-14	<i>Scott Kersop</i>	<i>UPS</i>	7/10/91	
2			<i>Michael Kowalski</i>	7/11/91	1030
3					
4					

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E RYAN RD
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Composites + Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS
FIRMLY
WHEN WRITING

No. 42709

SAMPLER (Signature)

SK/DK/mn

AFFILIATION

SIGMA

DATE

7/10/91

TIME

PURPOSE OF ANALYSIS

Quarterly Ground Water Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 VO VIALS	W-28 (602)✓					
2-1		W-21A (602)✓					
3-1		W-46 (624)✓					
4-1		✓ W-29 (624)					
5-1		W-24A (602)✓					
6-1		W-37 (602)✓					
7-1		W-7 (624)✓					
8-1		W-23 (624)✓					
9-1		W-23-Duplicates (624)✓					
10-1	2 VO VIALS	Field Blanks (624)✓					
11-1		Field Blanks					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-10	Scott Kersop	UPS	7/10/91	
2			Michael Krasinski	7/11/91	1038
3					
4					



ENVIRONMENTAL SERVICES

140 E RYAN RD
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Composites + Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS
FIRMLY
WHEN WRITING

Io. 42711

SAMPLER (Signature)

Scott Kirsop / Dave Kuchte / MATT McLOT

AFFILIATION

SIGMA

DATE

6/7/11/91

TIME

PURPOSE OF ANALYSIS

Quarterly Ground Water Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
2-1	3 VO. VIALS ↑ 1-VO VIAL	W-20-(624)✓					
3-1		W-40 (624)✓					
13-2		W-40 Duplicate (624)✓					
4-1		FIELD BLANK (624)✓					
5-1		TRIP BLANK (624)✓					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	12-15		UPS	7-12-91	
2			A. Hernandez	7/15/91	1030

PRESS HARD WHEN WRITING



ENVIRONMENTAL SERVICES

140 E. RYAN RD
 LAKE CREEK, WI 53154
 414-764-7005
 1-800-365-3940

CLIENT

Cook Composites and Polymers

PROJECT-LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS
 FIRMLY
 WHEN WRITING

No. 37018

SAMPLER (Signature) <i>Scott Kresop/Dave Kuhnert/Matt Molot</i>	AFFILIATION <i>SIGMA</i>	DATE <i>7/11/91</i>	TIME
PURPOSE OF ANALYSIS <i>Quarterly Ground Water Monitoring</i>			

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 vials	MW-1 (624) ✓					
2-1		MW-2 (624) ✓					
3-1		MW-3 (624) ✓					
4-1							
4-2	1 Amber liter	POTW - INFLUENT (624) ✓ POTW - INFLUENT (624) (Phenols) ✓					
5-1	3 vials	POTW - EFFLUENT (624) ✓					
5-2	1 Amber liter	POTW - EFFLUENT (624) - Phenols ✓					
6-1	3 vials	POTW - STABILIZED sludge (624) ✓					
6-2	1 Amber liter	POTW - STABILIZED Sludge (624) - Phenols ✓					
7-1	3 vials	POTW - FIELD BLANK (624) ✓					
8-1	1 vial	POTW - TRIP BLANK (624) ✓					
9-1	3 vials	W-38 (602) ✓					
10-1		W-43 (602) ✓					
11-1		W-48 (602) ✓					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-11	<i>[Signature]</i>	<i>URS</i>	7-2-91	
2			<i>Ademaing</i>	7/15/91	1030
3					
4					



ENVIRONMENTAL SERVICES

140 E. RYAN RD
OAK CREEK, WI 53154
(414) 764-7005
1-800-365-3840

CLIENT

Cook Comp. & Polymers

PROJECT LOCATION

Saukville

QUOTE NUMBER

CHAIN OF CUSTODY

PLEASE PRESS
FIRMLY
WHEN WRITING

No. 37019

SAMPLER (Signature)

DK / man

AFFILIATION

Sigma

DATE

7-12-91

TIME

PURPOSE OF ANALYSIS

Quarterly Groundwater Monitoring

ITEM NUMBER	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER				
			1	2	3	4	5
1-1	3 VO Vials	W-3A (624)					
1-1	3 VO Vials	W-3A (Duplicates) (624)					
1-1	3 VO Vials	Field Blanks (624)					

TRANSFER NUMBER	ITEM NUMBER	RELINQUISHED BY (Signature)	ACCEPTED BY (Signature)	DATE	TIME
1	1-3		UAS	7-12-91	
			A. Hernandez	7/15/91	10:30