

WASHINGTON STATE DEPARTMENT OF ECOLOGY
ENVIRONMENTAL INVESTIGATIONS AND LABORATORY SERVICES

December 11, 1989

TO: Mike Kuntz - HWICP

FROM: Laura Chern - EILS

Laura Chern

SUBJECT: Results for Monitoring Round 3

Introduction

The third round of quarterly ground water sampling at the Restover Truck Stop was completed by Ecology on July 24-26, 1989. Nine monitoring wells and two water supply wells were sampled for volatile organic compounds (VOC) and dissolved iron. In addition, a hydrocarbon identification analysis was done on monitoring well MW-12 to determine the source of a strong hydrocarbon odor. Figure 1 shows the locations of wells sampled.

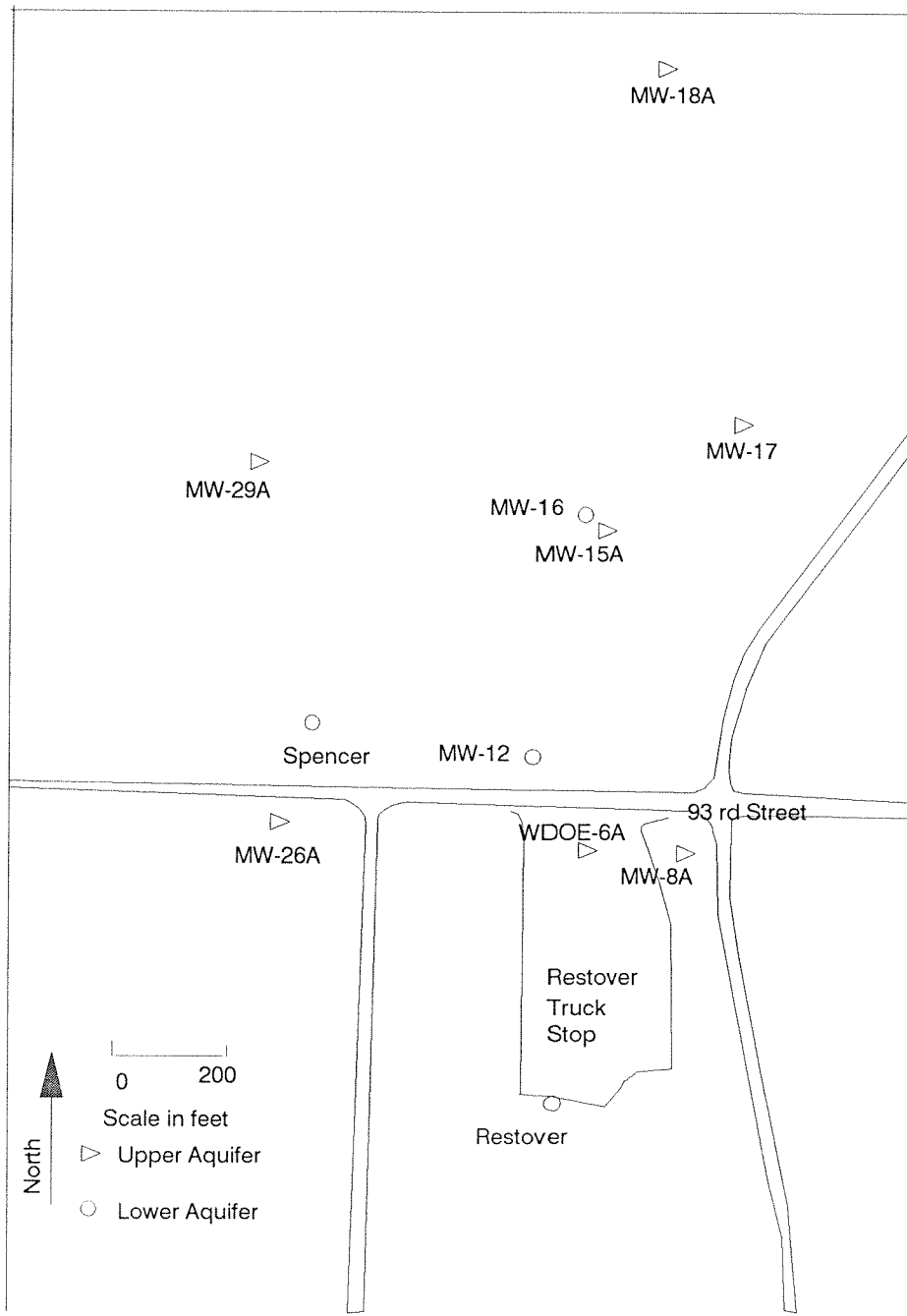
Methods

Prior to sample collection, static water level measurements were obtained from all monitoring wells sampled using an electric probe (see Table 1). Three or more well volumes were purged using either a centrifugal pump or decontaminated teflon bailer. Wells were purged until pH, temperature and conductivity measurements were stable. Samples were collected using a dedicated, bottom-emptying teflon bailer. Sampling equipment was decontaminated using a Liquinox wash, three tap rinses, and one deionized water rinse. Teflon bailers were rinsed with a 10% nitric acid/deionized water solution, methylene chloride, and acetone. Bailer decontamination in Round 3 included a final rinse with organic free water to ensure that methylene chloride and acetone were removed. The peristaltic pump, tubing, and filter bed used for iron filtration were rinsed between samples using 500 ml of a 10% nitric acid solution, followed by 500 ml of deionized water. Filters were changed between each sample.

Quality Assurance Samples

Five quality control samples were collected including a duplicate, matrix spike, and transfer, transport, and filter blanks. Duplicate samples were obtained from monitoring well MW-8A. Benzene, toluene, ethyl benzene, and xylene have been detected in MW-8A previously. Transfer blanks for VOCs and dissolved iron were obtained by pouring organic free water through the bailer and collecting rinsate in the sample containers. A separate filter blank for dissolved iron was obtained by pumping deionized water through the peristaltic pump and filter bed.

Figure 1: Restover Truck Stop
Monitoring Round 3
Well Locations
July 24-26, 1989



Field Observations

Figure 2 shows the potentiometric surface in the upper aquifer. Hydrocarbon odor and sheens were observed in purge water from WDOE-6A, MW-8A, and MW-12. Table 1 lists field observation data in the order wells were sampled.

Table 1. Field Sampling Results

Well ID	pH	Specific Conductance	Temperature Degrees (C)	Elevation Feet above (MSL)	Purge** Volume (gal)	Aquifer (Upper/Lower)
Restover	6.09	95	10.8	-*	70	L
Spencer	6.04	80	10.7	-*	80	L
MW-18A	5.54	40	10.3	175.52	45	U
MW-17	5.62	53	10.2	177.06	30	U
MW-26A	5.71	79	11.1	179.77	25	U
MW-29A	6.09	94	10.6	177.17	50	U
MW-12	5.94	139	11.9	178.55	52	L
MW-8A	6.29	189	11.7	177.01	9	U
WDOE-6A	6.30	221	15.5	180.28	10	U
MW-16	6.02	63	10.8	177.35	90	L
MW-15A	5.88	133	12.1	177.30	5	U

* Measurements were not obtained at these sites.

** At least three well volumes purged.

Sample Analytical Results

Analytical results for benzene, toluene, ethyl benzene, and total xylene (BTEX) are presented in Table 2; Appendix A lists the detection limits and matrix spike recoveries.

Table 2. Volatile Organic Compounds and Dissolved Iron Analytical Results (ug/L)

Well ID	Benzene	Toluene	Ethyl Benzene	Total Xylene	Dissolved Iron
Lower Aquifer					
Restover	ND	ND	ND	ND	7.9
Spencer	ND	ND	ND	ND	10
MW-12	ND	ND	1J	3J	905
MW-16	ND	ND	ND	ND	ND
Upper Aquifer					
MW-18A	ND	ND	ND	ND	ND
MW-17	ND	ND	ND	ND	ND
MW-29A	ND	ND	ND	ND	5.8
MW-26A	ND	ND	ND	ND	11
MW-15A	170	14	ND	34	12
MW-8A	ND	ND	ND	58	4440
WDOE-6A	1300	2200	590	3400	5890

J - Estimated concentration; compound present below detection limit.
 ND - Not present above detection limits.

Figure 2: Restover Truck Stop
 Potentiometric surface of the Upper Aquifer
 July 24-26, 1989

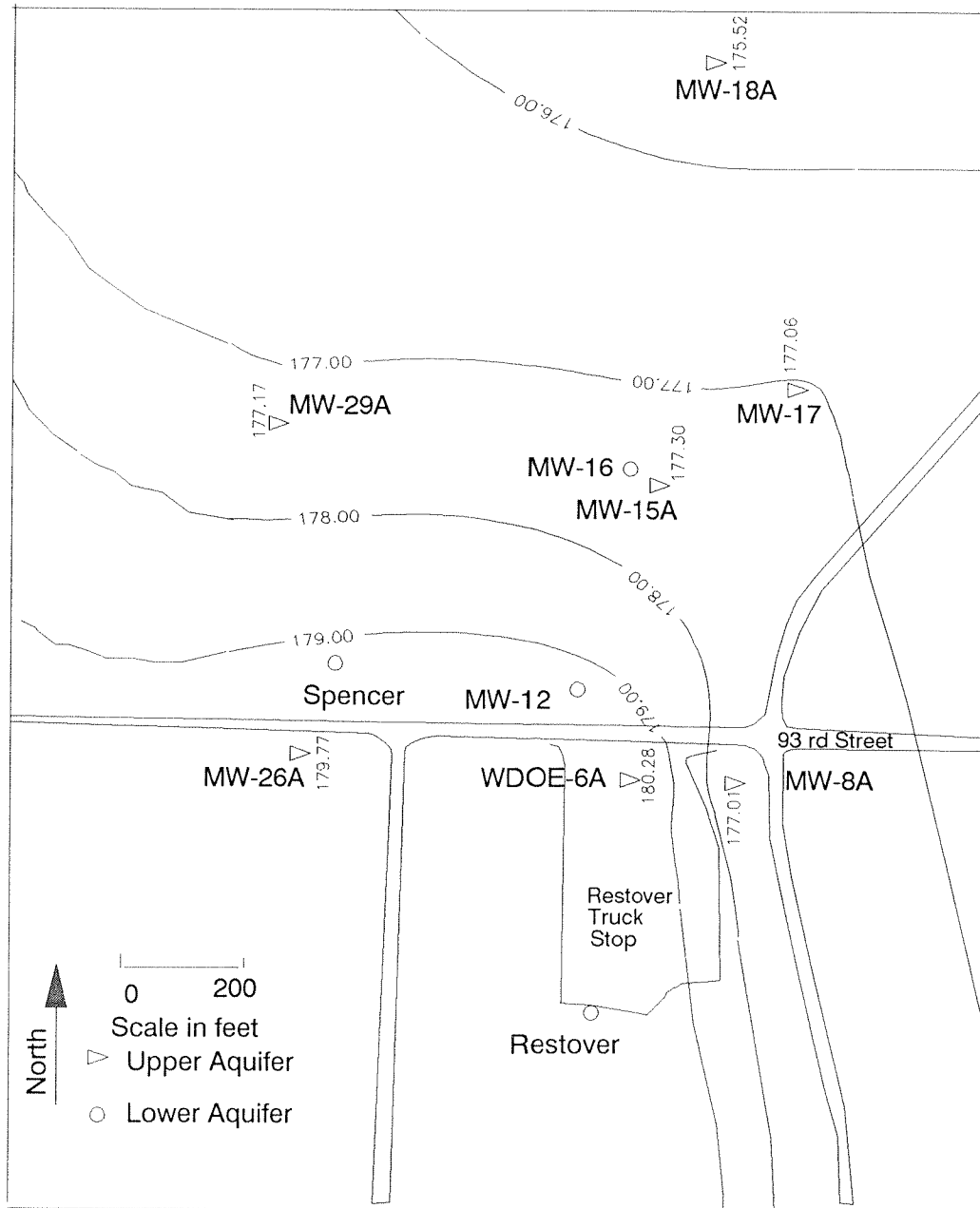


Table 3 shows the sum of benzene, toluene, ethly benzene, and total xylene (BTEX) concentrations for sampling events between May 1987 and July 1989.

Table 3. Restover Truck Stop BTEX Concentrations (ug/L)

Well ID	May 1987	September 1987	October 1988	January 1989	July 1989
Upper Aquifer					
WDOE-6A	6950	1180	5300	28000	7490
MW-8A	230	388	479	334	58
MW-17	ND	ND	ND	ND	ND
MW-18A	5	ND	ND	ND	ND
MW-26A	ND	ND	ND	ND	ND
MW-29A	ND	0.8	1.3	ND	ND
MW-15A	1433	NT	NT	ND	218
Lower Aquifer					
MW-12	53	5	7.7	ND	4
MW-16	ND	0.5	ND	0.9	ND
Restover	NT	NT	ND	ND	ND

NT - Not Tested

ND - Not present above detection limits.

Discussion

Contamination in the lower aquifer is still present in low concentrations. An estimated concentration of 4 ppb BTEX was detected in monitoring well MW-12, screened in the lower aquifer. MW-16, also screened in the lower aquifer, showed no BTEX contamination in sample round three. In the past, MW-12 and MW-16 have shown low concentrations of BTEX. One sample was collected from MW-12 for hydrocarbon identification analyses. Results of the analysis identified weathered gasoline as the source of hydrocarbon odor. The extent of contamination in the upper aquifer remains stable. Monitoring wells MW-17, MW-18A, MW-26A and MW-29A continue to show no detectable volatile organic compounds. Samples collected from MW-15A showed benzene (170 ppb), toluene (17 ppb), and total xylene (34 ppb) during sampling round three. No detectable contamination was found in MW-15A during sampling round two. Contamination maybe the result of seasonal changes in ground water flow.

Quality Assurance Analytical Results

Methylene chloride was detected in monitoring well MW-16 at 7 ppb. Methylene chloride and acetone were detected in transfer and transport blanks. Both compounds are common laboratory contaminants and were used for bailer decontamination. The relative percent difference between duplicate samples collected from MW-8A was 10 percent.

Conclusions

1. WDOE-6A continues to show high concentrations of BTEX. This may be attributed to a continuing source located near the gas pumps.
2. Contamination in monitoring well MW-12 consists of weathered gasoline. It may be necessary to do a semi-volatile organic compound analysis on samples from this well in order to determine the concentrations of contaminants present.

Recommendations

1. A semi-volatile organic compound analysis should be run on MW-12 samples to determine the concentrations of contaminants present in the lower aquifer.
2. Monitoring wells WDOE-6A, MW-8A, MW-12, MW-15A, MW-16, the Spencer domestic well, and the Restover supply well should continue to be sampled.
3. Samples should be collected and analyzed for benzene, toluene, ethyl benzene, and total xylene at detection limits of 5 ug/L or lower and dissolved iron at a detection limit of 10 ug/L. The BTEX analysis would replace method 624 for volatile organic compounds.
4. Sampling should be temporarily discontinued at monitoring wells MW-17, MW-18A, MW-26A, and MW-29A. These wells have shown no detectable levels of volatile organic compounds since May of 1987. Future sampling of these wells should be considered if increased contamination is indicated in wells sampled semi-annually.
5. All wells located on property owned by the Crystal Ice Company should be marked to ensure they are not damaged during impending construction at the site. Damaged monitoring wells could contribute to further contamination of the aquifer and increased future costs.

LC:sk

cc: Steve Hunter
Bill Yake

Appendix A

State of Washington Department of Ecology
 Manchester Environmental Laboratory
 P.O. Box 307 Manchester, WA. 98353

Data Review

September 6, 1989

Project : Restover

Samples : 308400 308401 308402 308403 308404
 308405 308406 308407 308408 308409
 308410 308411 308412 308413

Laboratory: Laucks Testing Laboratories 17705

By: Stuart Magoon *SM*

VQA Fraction (water)

Holding Times:

Sample	Date Collect	Date Man Rec'd	Date Lab Rec'd	Date Extd	Date Anlz	#Days From Collect
308400	7/24	7/26	7/26	NA	7/31	7 of 14
308401	7/24	7/26	7/26	NA	7/31	7 of 14
308402	7/24	7/26	7/26	NA	7/31	7 of 14
308403	7/26	7/27	7/27	NA	8/1	6 of 14
308404	7/26	7/27	7/27	NA	8/1	6 of 14
308405	7/24	7/26	7/26	NA	7/31	7 of 14
308406	7/24	7/26	7/26	NA	7/31	7 of 14
308407	7/24	7/26	7/26	NA	7/31	7 of 14
308408	7/24	7/26	7/26	NA	7/31	7 of 14
308409	7/25	7/26	7/26	NA	8/1	7 of 14
308410	7/25	7/26	7/26	NA	8/1	7 of 14
308411	7/25	7/26	7/26	NA	8/1	7 of 14
308412	7/25	7/26	7/26	NA	8/1	7 of 14
308413	7/25	7/26	7/26	NA	8/1	7 of 14

These samples have met all the CLP holding time requirements.

Surrogates: Surrogate recoveries for this sample, matrix spikes, and the method blanks are within the CLP recovery limits.

Matrix Spike & Matrix Spike Duplicate (MS/MSD): Matrix spike/spike duplicate recoveries and precision data are acceptable and within CLP limits.

Sample Data: This data is acceptable for use. Note that data which is flagged with data qualifiers will modify the usefulness of the individual values. The "E" flag is used to indicate the value was calculated from an amount that exceeded the calibration range. Use the values from the dilution analyses (DL suffix) for compounds that were flagged with an "E" on the undiluted run. The "D" flag is added to all positives that are

CASE NARRATIVE

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

Client: Washington Department of Ecology
Project: Restover
Lab No.: 17705
Date of this report: August 31, 1989

GENERAL REMARKS FOR THIS CASE:

The following samples were analyzed under the above lab numbers:

<u>Client</u> <u>Sample</u> <u>I.D.</u>	<u>LTL</u> <u>Sample</u> <u>Number</u>	<u>Analysis</u> <u>Request</u>
308400	17705-1	VOA
308401	17705-2	VOA
308402	17705-3	VOA
308405	17705-4	VOA
308406	17705-5	VOA
308407	17705-6	VOA
308408	17705-7	VOA
308409	17705-8	VOA
308410	17705-9	VOA
308411	17705-10	VOA
308412	17705-11	VOA
308413	17705-12	VOA
308403	17705-13	VOA
308404	17705-14	VOA

GC/MS fractions:

Compounds may be called out as hits on the computerized printout. However, if they are not reported on the OADS report form, we have manually searched the mass spectral data and have eliminated the compounds as hits based on this search.

Volatile fraction:

All volatile analyses were performed using a DB-624 megabore capillary. The elution order and retention times differ from those stated for packed column analysis in the contract. Listed below are the correct elution order and the internal standard with which each compound is associated.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

<u>Bromochloromethane(IS)</u>	<u>1,4-Difluorobenzene(IS)</u>	<u>d5-Chlorobenzene(IS)</u>
Chloromethane	Benzene	4-Methyl-2-Pentanone
Vinyl Chloride	Trichloroethylene	Toluene
Bromomethane	1,2-Dichloropropane	d8-Toluene(SURR)
Chloroethane	Bromodichloromethane	Trans-1,3-Dichloropropene
1,1-Dichloroethylene	Cis-1,3-Dichloropropene	1,1,2-Trichloroethane
Acetone		Tetrachloroethylene
Carbon Disulfide		2-Hexanone
Methylene Chloride		Dibromochloromethane
Trans-1,2-Dichloroethylene		Chlorobenzene
1,1-Dichloroethane		Ethylbenzene
Vinyl Acetate		Styrene
Cis-1,2-Dichloroethylene		M,P-Xylene
2-Butanone		O-xylene
Chloroform		Bromoform
1,1,1-Trichloroethane		1,1,2,2-Tetrachloroethane
Carbon Tetrachloride		Bromofluorobenzene(SURR)
1,2-Dichloroethane		
d4-1,2-Dichloroethane(SURR)		

The analytes listed above were assigned to their respective internal standards on the basis of relative retention time. For all compounds except cis-1,3-dichloropropene, the RRTs fall between 0.8 and 1.2. Cis-1,2-dichloropropene was the only compound to fall outside of this range, and was assigned to the internal standard closest to its retention time.

Separation of cis- and trans- dichloroethylene isomers is achievable on a DB-624 megabore capillary column. These compounds have been found to coelute on the packed column which is specified in the statement of work. When these isomers are found in a sample, they will be reported as total 1,2-dichloroethylene.

A holding blank was run in the same QC period with the samples from this case. The raw data was not submitted with the case. It will be held on file at Laucks should future review be necessary.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

REMARKS FOR THIS CASE:

All sample and shipment containers were received in good condition.

VOA Fraction:

No comments.

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: Laucks Testing Labs Contract: _____
 Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

	SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	VBLKJ1	96	97	93	_____	0
02	1	93	95	79	_____	0
03	2	99	100	92	_____	0
04	3	95	97	91	_____	0
05	4	93	92	87	_____	0
06	6	95	96	88	_____	0
07	5	99	99	92	_____	0
08	7	93	94	87	_____	0
09	8	99	96	99	_____	0
10	8DL	95	93	91	_____	0
11	_____	_____	_____	_____	_____	_____
12	_____	_____	_____	_____	_____	_____
13	_____	_____	_____	_____	_____	_____
14	_____	_____	_____	_____	_____	_____
15	_____	_____	_____	_____	_____	_____
16	_____	_____	_____	_____	_____	_____
17	_____	_____	_____	_____	_____	_____
18	_____	_____	_____	_____	_____	_____
19	_____	_____	_____	_____	_____	_____
20	_____	_____	_____	_____	_____	_____
21	_____	_____	_____	_____	_____	_____
22	_____	_____	_____	_____	_____	_____
23	_____	_____	_____	_____	_____	_____
24	_____	_____	_____	_____	_____	_____
25	_____	_____	_____	_____	_____	_____
26	_____	_____	_____	_____	_____	_____
27	_____	_____	_____	_____	_____	_____
28	_____	_____	_____	_____	_____	_____
29	_____	_____	_____	_____	_____	_____
30	_____	_____	_____	_____	_____	_____

QC LIMITS

S1 (TOL) = Toluene-d8 (88-110)
 S2 (BFB) = Bromofluorobenzene (86-115)
 S3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A
WATER VOLATILE SURROGATE RECOVERY

ab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

	SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	VBLKJ2	109	111	103	-----	0
02	9	109	112	91	-----	0
03	10	106	106	88	-----	0
04	11	106	107	91	-----	0
05	12	102	101	83	-----	0
06	13	103	106	97	-----	0
07	14	106	106	102	-----	0
08	13MS	103	103	100	-----	0
09	13MSD	101	99	97	-----	0
10	-----	-----	-----	-----	-----	-----
11	-----	-----	-----	-----	-----	-----
12	-----	-----	-----	-----	-----	-----
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29	-----	-----	-----	-----	-----	-----
30	-----	-----	-----	-----	-----	-----

QC LIMITS

S1 (TOL) = Toluene-d8 (88-110)
 S2 (BFB) = Bromofluorobenzene (86-115)
 S3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogates diluted out

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix Spike ----- Sample No.: 13

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.000	0.000	48.200	96	61-145
Trichloroethene	50.000	0.000	54.100	108	71-120
Benzene	50.000	0.000	46.900	94	76-127
Toluene	50.000	0.000	50.600	101	76-125
Chlorobenzene	50.000	0.000	50.700	101	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	50.000	48.100	96	0	14 61-145
Trichloroethene	50.000	53.600	107	1	14 71-120
Benzene	50.000	47.100	94	0	11 76-127
Toluene	50.000	50.500	101	0	13 76-125
Chlorobenzene	50.000	50.500	101	0	13 75-130

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

* Values outside of QC limits

RPD:0 out of 5 outside limits

Spike Recovery:0 out of 10 outside limits

Comments: _____

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Laucks Testing Labs Contract: _____
 Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1
 Lab File ID: B0731MVOWJ1 Lab Sample ID: B0731MVOWJ1
 Date Analyzed: 07/31/89 Time Analyzed: 15:31
 Matrix: (soil/water) WATER Level:(low/med) LOW
 Instrument ID: 1020J

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	1	17705-01	17705V01	16:22
02	2	17705-02	17705V02	17:01
03	3	17705-03	17705V03	17:40
04	4	17705-04	17705V04	18:30
05	6	17705-06	17705V06	19:11
06	5	17705-05	17705V05	19:52
07	7	17705-07	17705V07	20:31
08	8	17705-08	17705V08	21:10
09	8DL	17705-08DL	17705V08DL	21:53
10				
11				
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30				

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Laucks Testing Labs Contract: _____
 Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1
 Lab File ID: B0801MVOWJ1 Lab Sample ID: B0801MVOWJ1
 Date Analyzed: 08/01/89 Time Analyzed: 11:33
 Matrix: (soil/water) WATER Level: (low/med) LOW
 Instrument ID: 1020J

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	9	17705-09	17705V09	14:04
02	10	17705-10	17705V10	14:56
03	11	17705-11	17705V11	15:41
04	12	17705-12	17705V12	16:29
05	13	17705-13	17705V13	17:25
06	14	17705-14	17705V14	18:05
07	13MS	17705-13MS	17705V13MS	18:45
08	13MSD	17705-13MSD	17705V13MSD	20:15
09				
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COMMENTS: _____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1308400
Restored

Job Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No. _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-01

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V01

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

1 308400

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-01

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V01

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

2/308401
Spencer

Lab Name: Laucks Testing Labs

Contract: _____

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-02

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V02

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 1

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	U
67-64-1	-----Acetone	10	U
75-15-0	-----Carbon Disulfide	5	U
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-53-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----Trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	5	U
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

2 308401

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-02

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V02

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

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

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

3 / 308402

Lab Code: LAUCKS

Case No.: _____

SAS No. _____

SDG No.: 1

MW-12

Matrix: (soil/water)WATER

Lab Sample ID: 17705-03

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V03

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 1

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	3	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

3 / 308402

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-03

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V03

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 8

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.5618-62-2	HYDROXYLAMINE, O-(2-METHYLPR	3.52	19	J
2.79-29-8	BUTANE, 2,3-DIMETHYL-	6.27	17	J
3.96-14-0	PENTANE, 3-METHYL-	6.75	13	J
4.96-37-7	CYCLOPENTANE, METHYL-	8.37	28	J
5.763-29-1	1-PENTENE, 2-METHYL-	9.55	17	J
6.98-82-8	BENZENE, (1-METHYLETHYL)-	19.75	7	J
7.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	20.30	14	J
8.1074-55-1	BENZENE, 1-METHYL-4-PROPYL-	22.15	13	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

13/ 308403

Lab Name: Laucks Testing Labs

Contract: _____

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

RW-10

Matrix: (soil/water)WATER

Lab Sample ID: 17705-13

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V13

Level: (low/med) LOW

Date Received: 07/27/89

% Moisture: not dec. __

Date Analyzed: 08/01/89

Column: (pack/cap) CAP

Dilution Factor: 1

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

13/308403

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-13

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V13

Level: (low/med) LOW Date Received: 07/27/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

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

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

14/308404
HW-ISA

Lab Code: LAUCKS

Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-14

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V14

Level: (low/med) LOW

Date Received: 07/27/89

% Moisture: not dec. ___

Date Analyzed: 08/01/89

Column: (pack/cap) CAP

Dilution Factor: 1

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	170	
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	14	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	34	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

14/308404

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-14

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V14

Level: (low/med) LOW Date Received: 07/27/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.5618-62-6	HYDROXYLAMINE, O-(2-METHYL	3.50	66	J
2.107-84-6	BUTANE, 1-CHLORO-3-METHYL-	4.17	51	J
3.930-18-7	CYCLOPROPANE, 1,2-DIMETHYL,	4.52	34	J
4.513-35-9	2-BUTENE, 2-METHYL-	4.87	62	J
5.1191-96-4	CYCLOPROPANE, ETHYL-	6.20	88	J
6.96-37-7	CYCLOPENTANE, METHYL-	8.32	220	J
7.110-82-7	CYCLOHEXANE (DOT)	9.50	160	J
8.108-87-2	CYCLOHEXANE, METHYL-	11.60	59	J
9.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	19.65	71	J
10.98-82-8	BENZENE, (1-METHYLETHYL)-	20.22	60	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

4/308405
MW-18A

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No. _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-04

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V04

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

4/308405

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-04

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V04

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

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

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

5 / 308406 Jan
MW-17

Lab Code: LAUCKS

Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-05

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V05

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

5/308406

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-05

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V05

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 0

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

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

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MW-20A

Lab Code: LAUCKS

Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-06

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V06

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 1

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

6/308407 *su*

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-06

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V06

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 0

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

SAMPLE NO.

7/308408
MW-29A

Lab Name: Laucks Testing Labs Contract: _____
 Lab Code: LAUCKS Case No.: _____ SAS No. _____ SDG No.: 1
 Matrix: (soil/water)WATER Lab Sample ID: 17705-07
 Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V07
 Level: (low/med) LOW Date Received: 07/26/89
 % Moisture: not dec. __ Date Analyzed: 07/31/89
 Column: (pack/cap) CAP Dilution Factor: 1

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

CAS NO.	COMPOUND	Q
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
540-59-0	1,2-Dichloroethene (total)	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
75-25-2	Bromoform	5 U
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	5 U
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
1330-20-7	Xylene (total)	5 U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

7 / 308408

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-07

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V07

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 1.0

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

Number TICs found: 0

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

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

8/308409 *sh*
MW-0A

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-08

Sample wt/vol: 1.0 (g/ml)ML

Lab File ID: 17705V08

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 5

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	25	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
108-05-4	Vinyl Acetate	50	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	25	U
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	1300	E
10061-02-6	Trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	2200	E
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	590	
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	3400	E

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

308409

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-08

Sample wt/vol: 1.0 (g/ml)ML Lab File ID: 17705V08

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 5.0

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

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.5618-62-2	HYDROXYLAMINE, O-(2-METHYLPR	3.47	570	J
2.107-84-6	BUTANE, 1-CHLORO-3-METHYL-	4.12	460	J
3.1630-94-0	CYCLOPROPANE, 1,1-DIMETHYL-	4.85	440	J
4.79-29-8	BUTANE, 2,3-DIMETHYL-	6.20	380	J
5.96-37-7	CYCLOPENTANE, METHYL-	8.27	710	J
6.763-29-1	1-PENTENE, 2-METHYL	9.42	330	J
7.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	19.55	1300	J
8.526-73-8	BENZENE, 1,2,3-TRIMETHYL-	19.75	390	J
9.95-63-6	BENZENE, 1,2,4-TRIMETHYL-	20.52	1900	J
10.622-96-8	BENZENE, 1-ETHYL-4-METHYL-	21.37	340	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

8DL / 3084090L

82

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-08DL

Sample wt/vol: 0.2 (g/ml)ML

Lab File ID: 17705V08DL

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 07/31/89

Column: (pack/cap) CAP

Dilution Factor: 25

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
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74-87-3	Chloromethane	250	U
74-83-9	Bromomethane	250	U
75-01-4	Vinyl Chloride	250	U
75-00-3	Chloroethane	250	U
75-09-2	Methylene Chloride	130	U
67-64-1	Acetone	250	U
75-15-0	Carbon Disulfide	130	U
75-35-4	1,1-Dichloroethene	130	U
75-34-3	1,1-Dichloroethane	130	U
540-59-0	1,2-Dichloroethene (total)	130	U
67-66-3	Chloroform	130	U
107-06-2	1,2-Dichloroethane	130	U
78-93-3	2-Butanone	250	U
71-55-6	1,1,1-Trichloroethane	130	U
56-23-5	Carbon Tetrachloride	130	U
108-05-4	Vinyl Acetate	250	U
75-27-4	Bromodichloromethane	130	U
78-87-5	1,2-Dichloropropane	130	U
10061-01-5	cis-1,3-Dichloropropene	130	U
79-01-6	Trichloroethene	130	U
124-48-1	Dibromochloromethane	130	U
79-00-5	1,1,2-Trichloroethane	130	U
71-43-2	Benzene	1200	D
10061-02-6	Trans-1,3-Dichloropropene	130	U
75-25-2	Bromoform	130	U
108-10-1	4-Methyl-2-Pentanone	250	U
591-78-6	2-Hexanone	250	U
127-18-4	Tetrachloroethene	130	U
79-34-5	1,1,2,2-Tetrachloroethane	130	U
108-88-3	Toluene	2100	D
108-90-7	Chlorobenzene	130	U
100-41-4	Ethylbenzene	600	D
100-42-5	Styrene	130	U
1330-20-7	Xylene (total)	3100	D

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

BDL / 308409DL

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-08DL

Sample wt/vol: 0.2 (g/ml)ML Lab File ID: 17705V08DL

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 07/31/89

Column: (pack/cap) CAP Dilution Factor: 25.0

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.78-78-4	BUTANE, 2-METHYL-	3.47	570	J
2.109-66-0	PENTANE (ACN)(DOT)	4.12	460	J
3.930-18-7	CYCLOPROPANE, 1,2-DIMETHYL-	4.85	330	J
4.79-29-8	BUTANE, 2,3-DIMETHYL-	6.20	450	J
5.110-54-3	HEXANE (DOT)	7.27	180	J
6.96-37-7	CYCLOPENTANE, METHYL-	8.27	730	J
7.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	19.67	1400	J
8.526-73-8	BENZENE, 1,2,3-TRIMETHYL-	19.85	480	J
9.95-63-6	BENZENE, 1,2,4-TRIMETHYL-	20.62	1900	J
10.622-96-8	BENZENE, 1-ETHYL-4-METHYL-	21.50	420	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9/308410
MW-3A

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No. _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-09

Sample wt/vol: 1.0 (g/ml)ML Lab File ID: 17705V09

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	25	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
108-05-4	Vinyl Acetate	50	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	25	U
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	25	U
10061-02-6	Trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	58	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

3 / 308410

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-09

Sample wt/vol: 1.0 (g/ml)ML Lab File ID: 17705V09

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 5.0

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

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.75-28-5	PROPANE, 2-METHYL-	3.47	180	J
2.79-29-8	BUTANE, 2,3-DIMETHYL-	6.22	170	J
3.96-37-7	CYCLOPENTANE, METHYL-	8.32	260	J
4.108-87-2	CYCLOHEXANE, METHYL-	11.57	120	J
5.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	19.60	530	J
6.526-73-8	BENZENE, 1,2,3-TRIMETHYL-	19.80	150	J
7.98-82-8	BENZENE, (1-METHYLETHYL)-	20.17	110	J
8.95-63-6	BENZENE, 1,2,4-TRIMETHYL-	20.57	530	J
9.1074-55-1	BENZENE, 1-METHYL-4-PROPYL-	22.05	210	J
10.535-77-3	BENZENE, 1-METHYL-3-(1-METHY	22.22	200	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

10 30 8411

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

MW-8A

Matrix: (soil/water)WATER

Lab Sample ID: 17705-10

Sample wt/vol: 1.0 (g/ml)ML

Lab File ID: 17705V10

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 08/01/89

Column: (pack/cap) CAP

Dilution Factor: 5

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

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	25	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
108-05-4	Vinyl Acetate	50	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	25	U
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	25	U
10061-02-6	Trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	71	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

10/ 308411

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-10

Sample wt/vol: 1.0 (g/ml)ML Lab File ID: 17705V10

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 5.0

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

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.78-78-4	BUTANE, 2-METHYL-	3.45	130	J
2.79-29-8	BUTANE, 2,3-DIMETHYL-	6.22	170	J
3.96-37-7	CYCLOPENTANE, METHYL-	8.30	260	J
4.108-87-2	CYCLOHEXANE, METHYL-	11.57	150	J
5.98-82-8	BENZENE, (1-METHYLETHYL)-	19.57	590	J
6.526-73-8	BENZENE, 1,2,3-TRIMETHYL-	19.75	160	J
7.611-14-3	BENZENE, 1-ETHYL-2-METHYL-	20.12	130	J
8.95-63-6	BENZENE, 1,2,4-TRIMETHYL-	20.52	640	J
9.1074-55-1	BENZENE, 1-METHYL-4-PROPYL-	21.97	210	J
10.535-77-3	BENZENE, 1-METHYL-3-(1-METHY	22.15	210	J
11.				
12.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

11/ 308412
TRANSPORT

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No. _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-11

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V11

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. ___ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 1

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

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

11 / 308412

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-11

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V11

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: Laucks Testing Labs

Contract: _____

12 / 308413
TRANSFER

Lab Code: LAUCKS Case No.: _____

SAS No. _____

SDG No.: 1

Matrix: (soil/water)WATER

Lab Sample ID: 17705-12

Sample wt/vol: 5.0 (g/ml)ML

Lab File ID: 17705V12

Level: (low/med) LOW

Date Received: 07/26/89

% Moisture: not dec. __

Date Analyzed: 08/01/89

Column: (pack/cap) CAP

Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	29	
67-64-1	Acetone	110	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

12 / 308413

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: LAUCKS Case No.: _____ SAS No.: _____ SDG No.: 1

Matrix: (soil/water)WATER Lab Sample ID: 17705-12

Sample wt/vol: 5.0 (g/ml)ML Lab File ID: 17705V12

Level: (low/med) LOW Date Received: 07/26/89

% Moisture: not dec. __ Date Analyzed: 08/01/89

Column: (pack/cap) CAP Dilution Factor: 1.0


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

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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WASHINGTON STATE DEPARTMENT OF ECOLOGY
ENVIRONMENTAL INVESTIGATIONS AND LABORATORY SERVICES
MANCHESTER LABORATORY

M E M O R A N D U M

TO: Laura Chern
FROM: Bob Carrell, Chemist 
SUBJECT: Petroleum Hydrocarbon Identification on Restover Truck Stop
Water Sample (89308402)
DATE: July 31, 1989

One sample, collected on July 24, 1989, was received at the Manchester Environmental Laboratory on July 26, 1989 for hydrocarbon identification. This sample contained weathered gasoline.

BC:mb

Transaction #: 08311022 Seq #: 01 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308400 Alternate Keys:

~~RESTOVER~~
Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	7.9

Transaction #: 08311022 Seq #: 02 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308400 Alternate Keys:

Restover

Samp Matrix: (11) Water-Filtered Units: (94) % Recov %Slds: _____
QA Code: (LMX1) Lab Mtrx Spike #1 (% Rec Peaks Total: _____
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0 / 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	% Recov	102

Transaction #: 08311022 Seq #: 03 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308400 Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (94) % Recov %Slds: _____
QA Code: (LMX2) Lab Mtrx Spike #2 (% Rec Peaks Total: _____
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	% Recov	101

Transaction #: 08311022 Seq #: 04 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Blank ID : PB 34.79
Sample No.: 89 308400

Alternate Keys:

RESTOVER

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: (LBK1) Lab Blank Sample #1 Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

*** Lab Analysis Report ***

Transaction #: 08311022 Seq #: 05 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Blank ID : PB 34.80
Sample No.: 89 308400

Alternate Keys:

Samp Matrix: (11) ^{Restover} Water-Filtered Units: (11) ug/l %Slds:
QA Code: (LBK2) Lab Blank Sample #2 Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311022 Seq #: 06 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308401 Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	10.

Transaction #: 08311022 Seq #: 07 (38) Metals - ICP Scan
P j Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308402 Alternate Keys:

MW-12
Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	905

Transaction #: 08311022 Seq #: 08 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308403 Alternate Keys:

MW-14

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:

QA Code: () Unspecified Peaks Total:

Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 28

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311022 Seq #: 09 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308404 Alternate Keys:

MW-15A
Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 28

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	12.

Transaction #: 08311022 Seq #: 10 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308405 Alternate Keys:

MW-18A

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311022 Seq #: 11 (38) Metals - ICP Scan
Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308406 *NW-17* Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311022 Seq #: 12 (38) Metals - ICP Scan
 Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308407 Alternate Keys:

MW-20A

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
 QA Code: () Unspecified Peaks Total:
 Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	11.0

Transaction #: 08311022 Seq #: 13 (38) Metals - ICP Scan
 Proj Code : DOE-024K RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308408 Alternate Keys:

MW-29A

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
 QA Code: () Unspecified Peaks Total:
 Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 30

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.8

==> Transaction #: 08311035 Laboratory: (WE) Ecology, Manchester Lab

Work Group: (38) Metals - ICP Scan

Instrument: (ICP) ICP, Jarrell-Ash AtomComp 1100 (DOE)

Method: (EP1-200.7) Inductively Coupled Plasma Atomic Emissions Analysis

Chemist: (MMM) McIntosh, Myrna LAB Hours Worked:

Project: DOE-024M RESTOVER TRUCK STOP Prg Ele#: J5K01

Prj Off: Chern, Laura DOE Analysis Due: 890726 Revised Due:

*** Sample Records in Transaction ***

Seq#	Sample #	QA	Date/Time	Description	Alternate Keys
01	89308409		890725	WDOE-6A	
02	89308410		890725	MW-8A	
03	89308411		890725	MW-8	
04	89308411	LMX1	890725	MW-8	
05	89308411	LMX2	890725	MW-8	
06	89308411	LBK1	890725	MW-8	
07	89308411	LBK2	890725	MW-8	
08	89308412		890725	TRANSPOR	
	89308413		890725	TRANSFER	

Record Type: TRNIN3 Date Verified: By:

Transaction Status: New Transaction...First Printing...Unverified.

Processed: 31-AUG-89 10:43:17 Status: N Batch: (In CUR DB)

Transaction #: 08311035 Seq #: 01 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308409 Alternate Keys:

WDOE-GA

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:

QA Code: () Unspecified Peaks Total:

Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5890

Transaction #: 08311035 Seq #: 02 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308410 Alternate Keys:

MW-8A

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	4440

Transaction #: 08311035 Seq #: 03 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308411 Alternate Keys:

^{MW-8}
Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	4510

Transaction #: 08311035 Seq #: 04 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308411 Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (94) % Recov %Slds:
QA Code: (LMX1) Lab Mtrx Spike #1 (% Rec Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	% Recov	102

Transaction #: 08311035 Seq #: 05 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308411 Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (94) % Recov %Slds:
QA Code: (LMX2) Lab Mtrx Spike #2 (% Rec Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	% Recov	102

Transaction #: 08311035 Seq #: 06 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Blank ID : PB 34.79
Sample No.: 89 308411

Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: (LBK1) Lab Blank Sample #1 Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

31-AUG-89

Washington State Department of Ecology
*** Lab Analysis Report ***

Page 8

Transaction #: 08311035 Seq #: 07 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Blank ID : PB 34.80
Sample No.: 89 308411

Alternate Keys:

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: (LBK2) Lab Blank Sample #2 Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311035 Seq #: 08 (38) Metals - ICP Scan
P-oj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308412 Alternate Keys:

TRANSPORT

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U

Transaction #: 08311035 Seq #: 09 (38) Metals - ICP Scan
Proj Code : DOE-024M RESTOVER TRUCK STOP PE # : J5K01

Sample No.: 89 308413 Alternate Keys:

TRANSFER

Samp Matrix: (11) Water-Filtered Units: (11) ug/l %Slds:
QA Code: () Unspecified Peaks Total:
Date Extracted: Date Analyzed: 890823 # Days to Ext/Anal: 0/ 29

Line	Par #	Parameter Description	Units	Value
1	01046	Iron Fe-Diss ug/l	ug/l	5.0U