

WASHINGTON STATE DEPARTMENT OF ECOLOGY
ENVIRONMENTAL INVESTIGATIONS AND LABORATORY SERVICES

WA-13-0030 GW

M E M O R A N D U M

TO: Mike Kuntz - HWICP

FROM: Laura Chern - EILS *Laura Chern*

SUBJECT: Laboratory Analysis Results of Restover Truck Stop
Samples

DATE: April 10, 1989

This memo summarizes sample analyses results for the first round of ground water sampling at the Restover Truck Stop site. Samples, obtained by Ecology on October 18-19, 1988, were analyzed for volatile organic compounds (VOCs), nitrate+nitrite, chloride, and iron. Table 1 is a summary of the analytical results. Water level measurements and sampling procedures were described previously in a memo dated December 27, 1989. Figure 1 shows the locations of wells sampled. Chloride and nitrate+nitrite concentrations are elevated in some samples but are well below the drinking water standards. The highest concentrations of each are centered around MW-8A located adjacent to Restover's septic system. Dissolved iron concentrations are highest in monitoring wells MW-8A and WDOE-6A; these wells show concentrations of 9.6 mg/L and 7.1 mg/L respectively. In both wells, dissolved iron concentration is well above the secondary water supply standard of 0.3 mg/L. MW-12, located in the lower aquifer, showed a dissolved iron concentration of 0.75 mg/L. High concentrations of dissolved iron can occur where contamination of soil or ground water by petroleum products has created an anaerobic (reducing) environment (Longmire, 1986).

Table 2 shows the distribution of the sum of benzene, toluene, ethly benzene, and total xylene (BTEX) in the upper aquifer from May and September of 1987 and October 1988. High concentrations of BTEX are centered near the truck bays in monitoring wells WDOE-6A and MW-8A. It appears from the data that concentrations of BTEX have stabilized in the upper aquifer. MW-12, MW-16 and the Restover supply well are located in the lower aquifer. MW-12 has shown detectable concentrations of BTEX in previous sampling rounds and as Table 2 shows, low levels of BTEX are still present. MW-16 and the Restover supply well continue to show no BTEX contamination.

Mike Kuntz
April 10, 1989
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Methylene chloride and acetone were detected in several monitoring wells. Methylene chloride was detected in method and transfer blanks. Acetone was found in transfer blanks only. Both are common laboratory contaminants and were used for bailer decontamination. Appendix A lists the matrix spike recoveries and limits for VOCs tested. Matrix spike recoveries were within acceptable limits. VOC data was reviewed by Stuart Magoon of the Manchester Laboratory and was found to be within quality assurance/quality control limits as specified for the EPA contract laboratory program. Iron was detected in one laboratory method blank at a concentration of 0.04 ppm.

Conclusions:

1. Chloride concentrations in the area near the Restover Truck Stop's septic system and the main truck bay area are elevated but well below the drinking water standard of 250 ppm.
2. Nitrate + nitrite analysis also show areas of slightly elevated concentrations near the septic system. The drinking water standard of 10 ppm nitrate is not exceeded.
3. Dissolved iron concentrations are elevated where BTEX concentrations are highest. This probably reflects the reducing environment created by dissolved petroleum product contamination.
4. The extent of the BTEX plume in the upper aquifer appears to be similar to that documented in May of 1987 (see Figure 2). Further investigation of the lower aquifer near MW-12 during round two of ground water monitoring will help define the extent of the BTEX plume.

LC:sk
Attachments

cc: Mike Gallager-HWICP
Nancy Darling-WQP

Table 1. Laboratory Analysis Results for Restover Truck Stop
Round 1 October 18-19, 1989

Site Name	NO2+NO3 ppm	Chloride ppm	Toluene ppb	Xylene ppb	Benzene ppb	Ethyl benzene ppb	BTEX ppb	Iron ppm
Upper Aquifer								
WDOE-6A	0.245	12	1400	2200	1700	ND	5300	7.1
MW-8A	0.637	15	29	400	27	23	479	9.6
MW-17	0.769	3.2	ND	ND	ND	ND	ND	0.01
MW-18A	0.460	2.4	ND	ND	ND	ND	ND	ND
MW-26A	0.861	2.3	ND	ND	ND	ND	ND	ND
MW-29A	0.107	4.2	ND	ND	1.3	ND	1.3	ND
Lower Aquifer								
MW-12	0.269	5.3	ND	0.9	6.8	ND	7.700	0.75
MW-16	1.065	2.9	ND	ND	ND	ND	ND	0.03
Restover	1.300	3.8	ND	ND	ND	ND	ND	ND

Table 2. Restover Truck Stop BTEX Concentrations:
1987* and 1988

Well ID	May 1987	September 1987	October 1988
Upper Aquifer			
WDOE-6A	6950	1180	5300
MW-8A	230	388	479
MW-17	ND	ND	ND
MW-18A	5	ND	ND
MW-26A	ND	ND	ND
MW-29A	ND	0.8	1.3
Lower Aquifer			
<u>Well ID</u>			
MW-12	53	5	7.7
MW-16	ND	0.5	ND
Restover	NT	NT	ND

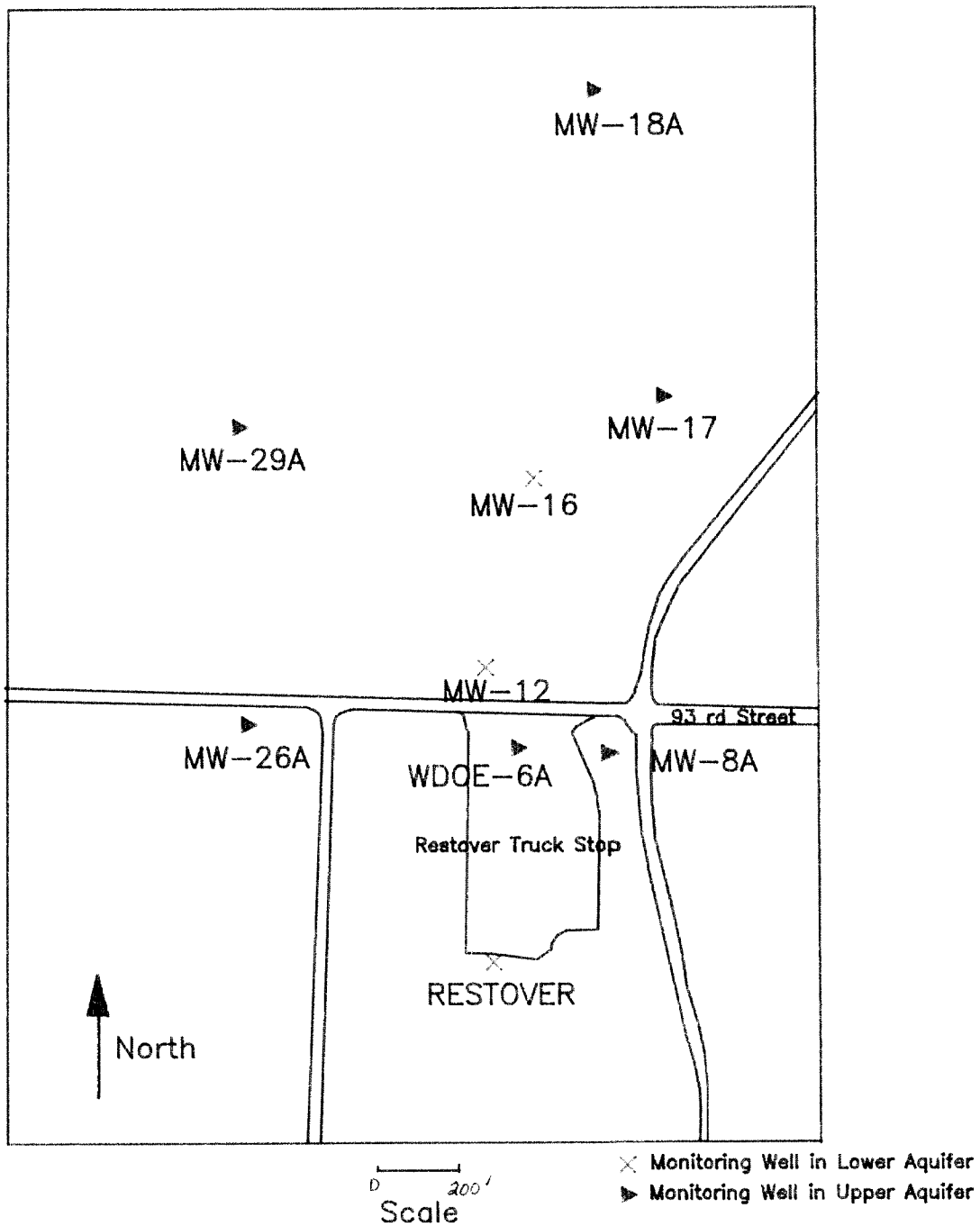
*(Data from Golder and Associates, 1987)

Bibliography

Golder and Associates, 1987, Remedial Investigation for the Restover Truck Stop Site.

Longmire, Patrick, 1986, Iron Dissolution from Petroleum - Product Contamination in Soil and Ground Water. 1. Thermodynamic Considerations In: Proceedings of Petroleum Hydrocarbons and Organic Chemicals in Ground Water: Prevention, Detection, and Restoration, NWWA and API, Houston, TX.

Figure 1
Restover Truck Stop
Wells Sampled First Sampling Round
October 1988



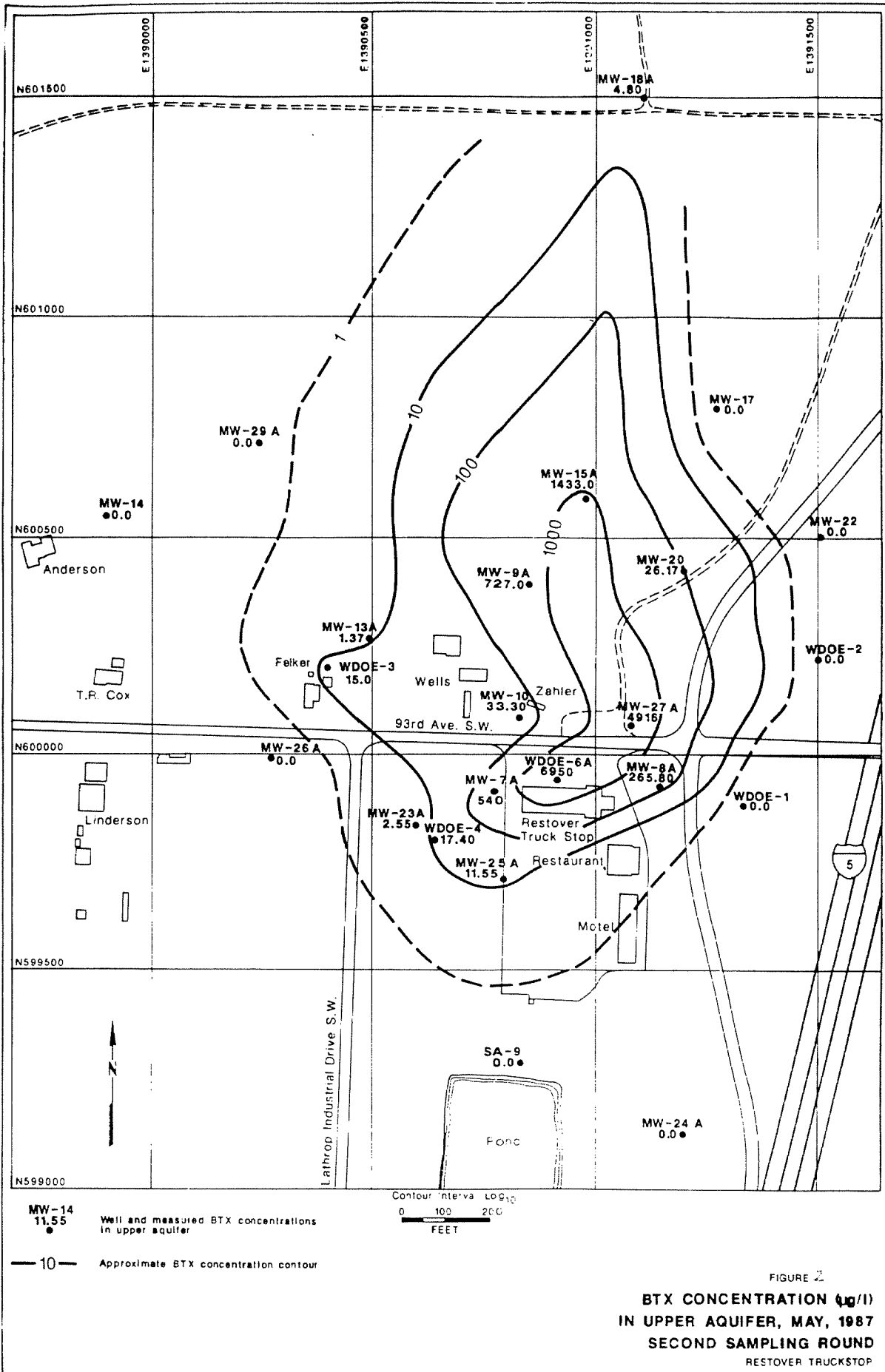


FIGURE 2
**BTX CONCENTRATION (µg/l)
 IN UPPER AQUIFER, MAY, 1987
 SECOND SAMPLING ROUND**
 RESTOVER TRUCKSTOP

APPENDIX A

LIST OF QUALIFIERS FOR NUMERIC RESULTS

REMARK CODE	DEFINITION
B	Analyte is found in the blank as well as the sample, indicated possible/probable blank contamination.
J	Estimated value; not accurate.
M	Presence of material verified but not quantified
U or K	Compound was analyzed for but not detected. The associated numerical values is the sample quantitation detection limit.
UJ	Compound was analyzed for but not detected. The number is the estimated minimum detection limit.
C	The value is one of, or the sum of both, Benzo (b) Fluoranthene and Benzo (k) Fluoranthene.
X	Many background organisms.
S	Spreader
H	Over holding time. Analysis run.
G	Improper container
L	Total plate count greater than 200.
Z	Sample low due to interfering substance.
D	Sample high due to interfering substance.
IS	Interfering substance.
P	Greater than (>)
A	Less than (<)

Data Qualifier definitions

For the purpose of this document the following code letters and associated definitions are provided.

- R - The data are unusable (compound may or may not be present). Resampling and reanalysis is necessary for verification.
- N - Presumptive evidence of presence of material.
- NJ - Presumptive evidence of the presence of the material at an estimated quantity.
- UJ - The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

The reviewer may determine that qualifiers other than those used in this document are necessary to describe or qualify the data. In these instances, it is the responsibility of each Region to thoroughly document/explain the qualifiers used.

AQUATIC RESEARCH LABORATORY

WSDOE

SAMPLE ID	NH3	NO3+NO2	TOTAL P
438081		1.300	
438082		1.065	
438083		0.269	
438084		0.768	
438087		0.460	
438089		0.459	
438095		1.311	
438085		0.861	
438086		0.107	
438088		0.804	
438091		0.937	
438093		0.245	

DATA REVIEW
December 20, 1988

Project: Restover Truck Stop
Sample No.: 438081 - 438095
Laboratory: Aquatic Research
Seattle, Washington
By: *[Signature]* Craig Smith, Chemist
Through: Roy Araki *[Signature]*
Parameters: Nitrate/Nitrite

Nitrate/Nitrite

HOLDING TIME: Time summary for this analysis:

Sample #	Collected	To Manche	To Contr	Data Received	Digested/ Analyzed	Days Since Collected
438081	10/18	10/19	10/20	12/07	11/12	25
through						
438084	10/18	10/19	10/20	12/07	11/12	25
438087	10/18	10/19	10/20	12/07	11/12	25
438089	10/18	10/19	10/20	12/07	11/12	25
438095	10/18	10/19	10/20	12/07	11/12	25
438085	10/19	10/20	10/20	12/07	11/12	24
438086	10/19	10/20	10/20	12/07	11/12	24
438088	10/19	10/20	10/20	12/07	11/12	24
438091	10/19	10/20	10/20	12/07	11/12	24
438093	10/19	10/20	10/20	12/07	11/12	24

These times are within the U.S. EPA limits of 28 days for analysis from the date of collection.

SPIKES: Recoveries for NO₂/NO₃ were 115% and 121%. These values do fall within the acceptable range of values. The acceptable range is 70 - 130%.

DUPLICATES: The sample duplicates (3) for NO₂/NO₃ gave an average percent of 0.6%. These values are well within the acceptable limits. The acceptable limits are (+/-5%).

CHECK STANDARDS: The lab standards for this set gave an average percent error of 2.2%. This is within the acceptable range of +/-5% or a standard deviation of -2 to +2.

SAMPLE DATA: The QC data is acceptable.
The data is acceptable for use without qualifications.

Transaction #: 10311134 Seq #: 01

(80) Ion Chromatography
(WE) Ecology, Manchester Lab
(DOE-024G) 277-02 LZC
(Par# 940 S)

Prj: RESTOVER TRUCK STOP
Par: Chloride mg/l

Instrument: IC-2020I Dionex #IC-2020 Ion Chromatograph
Method: EP1-325.4 Chloride, Ion Chromatograph
Chemist: (DTS) Strong, Despina DOE Hours Worked:
Lab Prep:() Unspecified Date Preprd:

Partial

Date Anlyzd: 881024

Matrix: (10) Water-Total Units: (10) mg/l

Line	Sample #	Result	Sample Location/Description	#Days to Anl
1	88 438081	3.8	RESTOVER	881018 (6)
2	88 438082	2.9	MW-16	881018 (6)
3	88 438083	5.3	MW-12	881018 (6)
4	88 438084	3.2	MW-17	881018 (6)
5	88 438087	2.4	MW-18A	881018 (6)
6	88 438089	2.3	MW-18C	881018 (6)

Record Type: TRNIN2 Date Verified: 88/10/31 By: LY
Transaction Status: New Transaction...First Printing...Unverified.
Processed: 31-OCT-88 12:31:28 Status: N Batch: (In CUR DB)

*** Lab Analysis Report ***

Transaction #: 10311135 Seq #: 01

(80) Ion Chromatography
(WE) Ecology, Manchester Lab

Prj: RESTOVER TRUCK STOP

(DOE-024G) 277-02 LZC

Par: Chloride mg/l

(Par# 940 S)

Instrument: IC-2020I Dionex #IC-2020 Ion Chromatograph

Method: EP1-325.4 Chloride, Ion Chromatograph

Chemist: (DTS) Strong, Despina DOE Hours Worked:

Lab Prep:() Unspecified

Date Preprd:

Date Anlyzd: 881025

Matrix: (10) Water-Total

Units: (10) mg/l

Line	Sample #	Result	Sample Location/Description	#Days to Anl
1	88 438085	2.3	MW-26A	881019 (6)
2	88 438086	4.2	MW-29A	881019 (6)
3	88 438088	2.8	MW-18B	881019 (6)
4	88 438091	15	MW-8A	881019 (6)
5	88 438093	12	WDOE-6A	881019 (6)

Record Type: TRNIN2 Date Verified: 88/10/31 By: Jensen, Nancy DOE
Transaction Status: Verified Transaction...Ready to release.
*** Verified and Transferred to VERTRANS ***
Processed: 28-NOV-88 11:41:27 Status: V Batch: A (In VER DB)

Data Review

December 7, 1998

Project: Pestover
 Samples: 438131-41 & 438143-45
 Laboratory: Analytical Resources INC.
 By: Stuart Magoun
 Through: Roy Arak *SM*

VDA Fraction (waters)

Holding Times:

Sample	Date Collect	Date Man Rec'd	Date Cntr Lab Rec'd	Date Evt'd	Date Anlz	#Days From Collect
438131	10/19	10/19	10/21	NA	10/21	3 of 14
438132	10/19	10/19	10/21	NA	10/21	3 of 14
438133	10/19	10/19	10/21	NA	10/21	3 of 14
438134	10/19	10/19	10/21	NA	10/21	3 of 14
438134A	10/19	10/19	10/21	NA	10/24	6 of 14
438135	10/19	10/20	10/21	NA	10/21	3 of 14
438136	10/19	10/20	10/21	NA	10/21	3 of 14
438137	10/19	10/17	10/21	NA	10/24	6 of 14
438138	10/19	10/20	10/21	NA	10/24	6 of 14
438139	10/18	10/19	10/21	NA	10/24	6 of 14
438140	10/18	10/19	10/21	NA	10/24	6 of 14
438141	10/19	10/20	10/21	NA	10/25	7 of 14
438143	10/18	10/19	10/21	NA	10/25	7 of 14
438144	10/18	10/19	10/21	NA	10/24	6 of 14
438145	10/18	10/19	10/21	NA	10/25	7 of 14
438146	10/19	10/20	10/21	NA	10/25	7 of 14

These samples have met all the CLP holding time requirements.

Surrogate: Surrogate recoveries for this sample, matrix spikes, and the method blank are within the CLP recovery limits, with the exception of d4-1,2-Dichloroethane for samples 438135 and 438136. The recovery values for these surrogates were only slightly above the 70% limit, no action required.

Matrix Spike & Matrix Spike Duplicates: Matrix spike/spike duplicate recoveries and precision data are acceptable and within CLP limits.

Sample Data: There are two reports included in this packet for sample 438134. A dilution was run on this sample in order to quantitate methylene chloride within the calibration curve. Use the diluted sample run for the methylene chloride value, and the undiluted sample run for the other compounds. This data is acceptable for use without the need for additional qualifiers.



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Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206)621-6490

04 November 1988

Roy Araki
Washington Dept. of Ecology
Manchester Laboratory
7411 Beach Drive East
Port Orchard, WA 98366

RE: WDOE Project Reference: 27A20 Restover as part of ARI Job #02126.

Dear Roy:

Please find enclosed the data report sheets containing VOA results of the samples from the project referenced above.

If you have any questions or need additional information, please feel free to call any time.

Sincerely yours,

ANALYTICAL RESOURCES, INC.

David R Mitchell

David R. Mitchell
Project Manager

DRM/ml

enclosures

cc: file #02126

*Rec'd 11-9-88
Raja*

Samples	collected	Man LAB	rec'd ARI	VOA ANAL
438131	10/18	10/19	10/21	10/21
32	↓	↓		
33	↓	↓		
34	↓	↓		
35	10/19	10/20		
36	↓	↓		
37	10/18	10/19		
38	10/19	10/20		
39	10/18	10/19		
40	↓	↓		
41	10/19	10/20		
43	↓	↓	10/24	
44	↓	↓	10/25	
45	10/18	10/19		10/24
46	10/19			10/25



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: Method Blank

Lab Sample ID: MB1021
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Brian N. Gibson*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml's
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	1.7
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	109%
d4-1,2-Dichloroethane	110%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8131

Restover Supply Well

Analytical
Chemists &
Consultants

Lab Sample ID: 2126A
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *Ann P. Gabe*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	0.7 JB
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	102%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	107%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8132

MW-10

Lab Sample ID: 2126B

Sample Matrix: Waters

QC Report No: 2126-WDOE

Project No: 27A20 Restover

Date Received: 10/21/88

Data Release Authorized: *Robert M. Cohen*

Instrument: FINN III

Date Analyzed: 10/21/88

Amount Analyzed: 5 ml

Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	2.5 B
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	109%
d4-1,2-Dichloroethane	111%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 2126C
Sample Matrix: Waters

Sample No: **43-8133**
MW-12
QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

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333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *Barbara N. Baker*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	1.0 B
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.5 M
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	6.8
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0
100-42-5	Styrene	0.5 U
	Total Xylenes	0.9 J

Surrogate Recoveries

d8-Toluene	104%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	110%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8134 Dilution
MW-17

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Lab Sample ID: 2126D2
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *Brian N. Seber*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 2 mls
Conc/Dil: 2 to 5

CAS Number		µg/L
74-87-3	Chloromethane	7.3 U
74-83-9	Bromomethane	2.3 U
75-01-4	Vinyl Chloride	2.8 U
75-00-3	Chloroethane	2.3 U
75-09-2	Methylene Chloride	400 B
67-64-1	Acetone	190
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	3.3 U
75-34-3	1,1-Dichloroethane	2.8 U
540-59-0	1,2-Dichloroethene (total)	3.3 U
67-66-3	Chloroform	2.3 U
107-06-2	1,2-Dichloroethane	1.5 U
78-93-3	2-Butanone	2.5 U
71-55-6	1,1,1-Trichloroethane	2.5 U
56-23-5	Carbon Tetrachloride	1.3 U
108-05-4	Vinyl Acetate	4.3 U
75-27-4	Bromodichloromethane	0.5 U
75-69-4	Trichlorofluoromethane	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		5.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	1.5 U
10061-02-6	Trans-1,3-Dichloropropene	1.3 U
79-01-6	Trichloroethene	2.0 U
124-48-1	Dibromochloromethane	2.3 U
79-00-5	1,1,2-Trichloroethane	0.8 U
71-43-2	Benzene	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.5 U
110-75-8	2-Chloroethylvinylether	3.8 U
75-25-2	Bromoform	0.8 U
108-10-1	4-Methyl-2-Pentanone	4.5 U
591-78-6	2-Hexanone	3.3 U
127-18-4	Tetrachloroethene	1.5 U
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U
108-88-3	Toluene	1.5 U
108-90-7	Chlorobenzene	1.5 U
100-41-4	Ethylbenzene	2.5 U
100-42-5	Styrene	1.3 U
	Total Xylenes	3.8 U

Surrogate Recoveries

d8-Toluene	102%
Bromofluorobenzene	99.5%
d4-1,2-Dichloroethane	107%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8134

Lab Sample ID: 2126D
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Robert N. Cohen*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	380 KB
67-64-1	Acetone	210
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	104%
d4-1,2-Dichloroethane	112%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: **43-8135**
MW-210A

Lab Sample ID: 2126E
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Gregory N. Bibe*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	4.1 B
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-	1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	100%
d4-1,2-Dichloroethane	115%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 2126F
Sample Matrix: Waters

Sample No: **43-8136**
MW-29A
QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Kevin J. Lopez*

Instrument: FINN III
Date Analyzed: 10/21/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	1.7 B
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	2.4
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	1.3
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	99.5%
Bromofluorobenzene	101%
d4-1,2-Dichloroethane	116%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: Method Blank

Lab Sample ID: MB1024
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Don N. Z...*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	1.1
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	101%
Bromofluorobenzene	99.7%
d4-1,2-Dichloroethane	99.4%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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Chemists &
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Seattle, Wa 98109-5187
(206) 621-6490**ORGANICS ANALYSIS DATA SHEET - METHOD 624****Sample No:** 43-8137
MW-18ALab Sample ID: 2126G
Sample Matrix: WatersQC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88Data Release Authorized: Alan N. BakerInstrument: FINN III
Date Analyzed: 10/24/88Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	23 B
67-64-1	Acetone	65
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	97.9%
d4-1,2-Dichloroethane	102%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8138

MW-18A Replicate

Lab Sample ID: 2126H

Sample Matrix: Waters

QC Report No: 2126-WDOE

Project No: 27A20 Restover

Date Received: 10/21/88

Data Release Authorized: *Patricia H. Baker*

Instrument: FINN III

Date Analyzed: 10/24/88

Amount Analyzed: 5 ml

Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	0.9 JB
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	102%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	106%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8139

MW-18A Duplicate

Analytical
Chemists &
Consultants

Lab Sample ID: 21261

Sample Matrix: Waters

QC Report No: 2126-WDOE

Project No: 27A20 Restover

Date Received: 10/21/88

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *William A. Baker*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	23 B
67-64-1	Acetone	87
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	99.3%
d4-1,2-Dichloroethane	104%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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INCORPORATED**

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 2126J
Sample Matrix: Waters

Sample No: **43-8140**
Matrix Spike MW17
QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *Baron D. Baker*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	250 B
67-64-1	Acetone	110
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	106%	/
Bromofluorobenzene	98.2%	/
d4-1,2-Dichloroethane	107%	/

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ARI Job No.: 2126 Client: WDOE Project: 27A20 Restover

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS*	
									RPD	RECOVERY
YOA SMO SAMPLE NO. 43-8140	1,1-Dichloroethene	50.0	0.0	52.1	104	51.4	103	1.4	14	61 - 145
	Trichloroethene	50.0	0.0	49.5	99.0	48.3	96.5	2.5	14	71 - 120
	Chlorobenzene	50.0	0.0	43.5	87.0	43.3	86.6	0.5	13	75 - 130
	Toluene	50.0	0.0	53.3	107	54.5	109	-2.3	13	76 - 125
	Benzene	50.0	0.0	48.5	97.0	47.0	94.1	3.1	11	76 - 127
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								28	39 - 98
	Acenaphthene								31	46 - 118
	2,4-Dinitrotoluene								38	24 - 96
	Pyrene								31	26 - 127
	N-Nitroso-Di-n-Propylamine								38	41 - 116
	1,4-Dichlorobenzene								28	36 - 97
	Pentachlorophenol								50	9 - 103
	Phenol								42	12 - 89
	2-Chlorophenol								40	27 - 123
	4-Chloro-3-Methylphenol								42	23 - 97
PEST SMO SAMPLE NO.	4-Nitrophenol								50	10 - 80
	Lindane								15	56 - 123
	Heptachlor								20	40 - 131
	Aldrin								22	40 - 120
	Dieldrin								18	52 - 126
	Endrin								21	56 - 121
	4,4'-DDT								27	38 - 127



* ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: YOA 0 out of 5; outside QC limits
 B/N 0 out of 6; outside QC limits
 ACID 0 out of 5; outside QC limits
 PEST 0 out of 6; outside QC limits

RECOVERY: YOA 0 out of 10; outside QC limits
 B/N 0 out of 12; outside QC limits
 ACID 0 out of 10; outside QC limits
 PEST 0 out of 12; outside QC limits

Comments:



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333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8140 Matrix Spike

Lab Sample ID: 2126JMS
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Arthur N. Cohen*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	250 B
67-64-1	Acetone	100
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	-
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	2.3 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	-
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	-
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	-
108-90-7	Chlorobenzene	-
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	98.9%
Bromofluorobenzene	96.3%
d4-1,2-Dichloroethane	108%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8140 Spike Duplicate

Analytical
Chemists &
Consultants

Lab Sample ID: 2126JMSD
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: Bryan M. Baker

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 ml's
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	240 B
67-64-1	Acetone	110
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	-
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	2.3 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	-
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	-
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	-
108-90-7	Chlorobenzene	-
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	101%
Bromofluorobenzene	96.1%
d4-1,2-Dichloroethane	110%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: Method Blank

Lab Sample ID: MB1025
Sample Matrix: Waters

QC Report No: 2126-WDOE
Project No: 27A20-Restover
Date Received: 10/21/88

Data Release Authorized: *Blair M. O'Neil*

Instrument: FINN III
Date Analyzed: 10/25/88

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1

CAS Number		ug/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	1.0 J
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		ug/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	97.7%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	98.6%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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Analytical
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333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8141 Dilution

Lab Sample ID: 2126K2
Sample Matrix: Waters

MW-8A
QC Report No: 2126-WDOE
Project No: 27A20-Restover
Date Received: 10/21/88

Data Release Authorized: Bryan N. Becker

Instrument: FINN III
Date Analyzed: 10/25/88

Amount Analyzed: 1 ml
Conc/Dil: 1 to 5

CAS Number		µg/L
74-87-3	Chloromethane	15 U
74-83-9	Bromomethane	4.5 U
75-01-4	Vinyl Chloride	5.5 U
75-00-3	Chloroethane	4.5 U
75-09-2	Methylene Chloride	370 B
67-64-1	Acetone	1000
75-15-0	Carbon Disulfide	10 U
75-35-4	1,1-Dichloroethene	6.5 U
75-34-3	1,1-Dichloroethane	5.5 U
540-59-0	1,2-Dichloroethene (total)	6.5 U
67-66-3	Chloroform	4.5 U
107-06-2	1,2-Dichloroethane	3.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	2.5 U
108-05-4	Vinyl Acetate	8.5 U
75-27-4	Bromodichloromethane	1.0 U
75-69-4	Trichlorofluoromethane	10 U
1,1,2-Trichloro-	1,2,2-trifluoroethane	10 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	3.0 U
10061-02-6	Trans-1,3-Dichloropropene	2.5 U
79-01-6	Trichloroethene	4.0 U
124-48-1	Dibromochloromethane	4.5 U
79-00-5	1,1,2-Trichloroethane	1.5 U
71-43-2	Benzene	27
10061-01-5	cis-1,3-Dichloropropene	3.0 U
110-75-8	2-Chloroethylvinylether	7.5 U
75-25-2	Bromoform	1.5 U
108-10-1	4-Methyl-2-Pentanone	9.0 U
591-78-6	2-Hexanone	6.5 U
127-18-4	Tetrachloroethene	3.0 U
79-34-5	1,1,2,2-Tetrachloroethane	3.0 U
108-88-3	Toluene	29
108-90-7	Chlorobenzene	3.0 U
100-41-4	Ethylbenzene	23
100-42-5	Styrene	2.5 U
	Total Xylenes	400

Surrogate Recoveries

d8-Toluene	104%
Bromofluorobenzene	105%
d4-1,2-Dichloroethane	99.6%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 2126L
Sample Matrix: Waters

Sample No: **43-8143**
WDOE-6A
QC Report No: 2126-WDOE
Project No: 27A20-Restover
Date Received: 10/21/88

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Data Release Authorized: *Brian N. Baker*

Instrument: FINN III
Date Analyzed: 10/25/88

Amount Analyzed: 50 µl
Conc/Dil: 1 to 100

CAS Number		µg/L
74-87-3	Chloromethane	290 U
74-83-9	Bromomethane	90 U
75-01-4	Vinyl Chloride	110 U
75-00-3	Chloroethane	90 U
75-09-2	Methylene Chloride	560 B
67-64-1	Acetone	60 U
75-15-0	Carbon Disulfide	200 U
75-35-4	1,1-Dichloroethene	130 U
75-34-3	1,1-Dichloroethane	110 U
540-59-0	1,2-Dichloroethene (total)	130 U
67-66-3	Chloroform	90 U
107-06-2	1,2-Dichloroethane	60 U
78-93-3	2-Butanone	100 U
71-55-6	1,1,1-Trichloroethane	100 U
56-23-5	Carbon Tetrachloride	50 U
108-05-4	Vinyl Acetate	170 U
75-27-4	Bromodichloromethane	20 U
75-69-4	Trichlorofluoromethane	200 U
1,1,2-Trichloro-1,2,2-trifluoroethane		200 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	60 U
10061-02-6	Trans-1,3-Dichloropropene	50 U
79-01-6	Trichloroethene	80 U
124-48-1	Dibromochloromethane	90 U
79-00-5	1,1,2-Trichloroethane	30 U
71-43-2	Benzene	1700
10061-01-5	cis-1,3-Dichloropropene	60 U
110-75-8	2-Chloroethylvinylether	150 U
75-25-2	Bromoform	30 U
108-10-1	4-Methyl-2-Pentanone	180 U
591-78-6	2-Hexanone	130 U
127-18-4	Tetrachloroethene	60 U
79-34-5	1,1,2,2-Tetrachloroethane	60 U
108-88-3	Toluene	1400
108-90-7	Chlorobenzene	60 U
100-41-4	Ethylbenzene	100 U
100-42-5	Styrene	50 U
	Total Xylenes	2200

Surrogate Recoveries

d8-Toluene	105%
Bromofluorobenzene	101%
d4-1,2-Dichloroethane	106%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 2126M
Sample Matrix: Waters

Sample No: 43-8144
Transport Blank

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *[Signature]*

Instrument: FINN III
Date Analyzed: 10/24/88

Amount Analyzed: 5 ml
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	0.5 JB
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichloroethane	101%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



**ANALYTICAL
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ORGANICS ANALYSIS DATA SHEET - METHOD 624

Sample No: 43-8145

CREPO Domestic Well

QC Report No: 2126-WDOE

Project No: 27A20 Restover

Date Received: 10/21/88

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

Lab Sample ID: 2126N

Sample Matrix: Waters

Data Release Authorized: *Bryan A. Schen*

Instrument: FINN III
Date Analyzed: 10/25/88

Amount Analyzed: 5 ml's
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	0.7 JB
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-	1,2,2-trifluoroethane	2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	100%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	99.8%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.



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Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 624

Lab Sample ID: 21260
Sample Matrix: Waters

Sample No: **43-8146**

Transfer Blank

QC Report No: 2126-WDOE
Project No: 27A20 Restover
Date Received: 10/21/88

Data Release Authorized: *Alan V. Seber*

Instrument: FINN III
Date Analyzed: 10/25/88

Amount Analyzed: 5 mls
Conc/Dil: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.9 U
74-83-9	Bromomethane	0.9 U
75-01-4	Vinyl Chloride	1.1 U
75-00-3	Chloroethane	0.9 U
75-09-2	Methylene Chloride	44 B
67-64-1	Acetone	0.6 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	1.3 U
75-34-3	1,1-Dichloroethane	1.1 U
540-59-0	1,2-Dichloroethene (total)	1.3 U
67-66-3	Chloroform	0.9 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	0.5 U
108-05-4	Vinyl Acetate	1.7 U
75-27-4	Bromodichloromethane	0.2 U
75-69-4	Trichlorofluoromethane	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U

CAS Number		µg/L
78-87-5	1,2-Dichloropropane	0.6 U
10061-02-6	Trans-1,3-Dichloropropene	0.5 U
79-01-6	Trichloroethene	0.8 U
124-48-1	Dibromochloromethane	0.9 U
79-00-5	1,1,2-Trichloroethane	0.3 U
71-43-2	Benzene	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	0.3 U
108-10-1	4-Methyl-2-Pentanone	1.8 U
591-78-6	2-Hexanone	1.3 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	0.5 U
	Total Xylenes	1.5 U

Surrogate Recoveries

d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichloroethane	107%

Report prepared 10/31/88 - MAC:B

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

==> Transaction #: 03241714 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: (SAT) Twiss, Steve DOE Hours Worked: _____

Project: DOE-024G RESTOVER TRUCK STOP Prg Ele#: 277-02

Prj Off: Chern, Laura DOE Analysis Due: 881019 Revised Due:

*** Sample Records in Transaction ***

Parameter Form File: ICP381101 Title: ICP Scan, Water Dissolved

Seq#	Sample #	QA	Date/Time	Description	Alternate Keys
01	88438081		881018	RESTOVER	
02	88438082		881018	MW-16	
03	88438083		881018	MW-12	
04	88438084		881018	MW-17	
05	88438085		881019	MW-26A	
06	88438086		881019	MW-29A	
07	88438086	LMX1	881019	MW-29A	
08	88438086	LMX2	881019	MW-29A	
09	88438087		881018	MW-18A	
10	88438088		881019	MW-18B	
11	88438089		881018	MW-18C	
12	88438091		881019	MW-8A	
13	88438093		881019	WDOE-61	
14	88438094		881019	MW-TOT	
15	88438095		881019	MW-TFR	
16	88438095	LBK1	881019	MW-TFR	
17	88438095	LBK2	881019	MW-TFR	

Record Type: TRNIN1

Date Verified: 5/8/89

By: [Signature]

Transaction Status: Edited Transaction...First Printing...Unverified.

Processed: 24-MAR-89 17:21:26 Status: E Batch: (In CUR DB)

Transaction #: 03241714 (38) Metals - ICP Scan
Proj Code : DOE-024G RESTOVER TRUCK STOP PE # : 277-02

Sample Number:	88438081	88438082	88438083	88438084	88438085
Sample Description:	RESTOVER	MW-16	MW-12	MW-17	MW-26A
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	ug/l	ug/l	ug/l	ug/l
% Slds:					
QA Code:					
Date Extract:	890308				
Date Analyzd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss ug/l					
2 Antimony Sb-Diss ug/l					
3 Arsenic As-Diss ug/l					
4 Barium Ba-Diss ug/l					
5 Beryllium Be-Diss ug/l					
6 Boron B -Diss ug/l					
7 Cadmium Cd-Diss ug/l					
8 Calcium Ca-Diss mg/l					
9 Chromium Cr-Diss ug/l					
10 HexChrom Cr6Diss ug/l					
11 Cobalt Co-Diss ug/l					
12 Copper Cu-Diss ug/l					
13 Iron Fe-Diss ug/l	10U	30	752	15	10U
14 Lead Pb-Diss ug/l					
15 Mgnsium Mg-Diss mg/l					
16 Mangnese Mn-Diss ug/l					
17 Molybdnm Mo-Diss ug/l					
18 Nickel Ni-Diss ug/l					
19 Potssium K -Diss mg/l					
20 Selenium Se-Diss ug/l					
21 Silicon Si-Diss ug/l					
22 Silver Ag-Diss ug/l					
23 Sodium Na-Diss mg/l					
24 Strntium Sr-Diss ug/l					
25 Thallium Tl-Diss ug/l					
26 Tin Sn-Diss ug/l					
27 Titanium Ti-Diss ug/l					
28 Tungsten W -Diss ug/l					
29 Vanadium V -Diss ug/l					
30 Zinc Zn-Diss ug/l					

Transaction #: 03241714 (38) Metals - ICP Scan
 Proj Code : DOE-024G RESTOVER TRUCK STOP PE # : 277-02

Sample Number:	88438086	88438086	88438086	88438087	88438088
Sample Description:	MW-29A	MW-29A	MW-29A	MW-18A	MW-18B
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	% Recov	% Recov	ug/l	ug/l
% Slds:					
QA Code:		LMX1	LMX2		
Date Extract:					
Date Analyzd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss	ug/l				
2 Antimony Sb-Diss	ug/l				
3 Arsenic As-Diss	ug/l				
4 Barium Ba-Diss	ug/l				
5 Beryllium Be-Diss	ug/l				
6 Boron B -Diss	ug/l				
7 Cadmium Cd-Diss	ug/l				
8 Calcium Ca-Diss	mg/l				
9 Chromium Cr-Diss	ug/l				
10 HexChrom Cr6Diss	ug/l				
11 Cobalt Co-Diss	ug/l				
12 Copper Cu-Diss	ug/l				
13 Iron Fe-Diss	ug/l	10U	106	107	10U
14 Lead Pb-Diss	ug/l				11
15 Mgnsium Mg-Diss	mg/l				
16 Mangnese Mn-Diss	ug/l				
17 Molybdnm Mo-Diss	ug/l				
18 Nickel Ni-Diss	ug/l				
19 Potssium K -Diss	mg/l				
20 Selenium Se-Diss	ug/l				
21 Silicon Si-Diss	ug/l				
22 Silver Ag-Diss	ug/l				
23 Sodium Na-Diss	mg/l				
24 Strntium Sr-Diss	ug/l				
25 Thallium Tl-Diss	ug/l				
26 Tin Sn-Diss	ug/l				
27 Titanium Ti-Diss	ug/l				
28 Tungsten W -Diss	ug/l				
29 Vanadium V -Diss	ug/l				
30 Zinc Zn-Diss	ug/l				

Transaction #: 03241714 (38) Metals - ICP Scan
 Proj Code : DOE-024G RESTOVER TRUCK STOP PE # : 277-02

Sample Number:	88438089	88438091	88438093	88438094	88438095
Sample Description:	MW-18C	MW-8A	WDOE-61	MW-TOT	MW-TFR
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	ug/l	ug/l	ug/l	ug/l
% Slds:					
QA Code:					
Date Extract:					
Date Analyzsd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss	ug/l				
2 Antimony Sb-Diss	ug/l				
3 Arsenic As-Diss	ug/l				
4 Barium Ba-Diss	ug/l				
5 Beryllium Be-Diss	ug/l				
6 Boron B -Diss	ug/l				
7 Cadmium Cd-Diss	ug/l				
8 Calcium Ca-Diss	mg/l				
9 Chromium Cr-Diss	ug/l				
10 HexChrom Cr6Diss	ug/l				
11 Cobalt Co-Diss	ug/l				
12 Copper Cu-Diss	ug/l				
13 Iron Fe-Diss	ug/l	10U	9,620	7,160	10U
14 Lead Pb-Diss	ug/l				10U
15 Mgnsium Mg-Diss	mg/l				
16 Manganese Mn-Diss	ug/l				
17 Molybdnm Mo-Diss	ug/l				
18 Nickel Ni-Diss	ug/l				
19 Potssium K -Diss	mg/l				
20 Selenium Se-Diss	ug/l				
21 Silicon Si-Diss	ug/l				
22 Silver Ag-Diss	ug/l				
23 Sodium Na-Diss	mg/l				
24 Strntium Sr-Diss	ug/l				
25 Thallium Tl-Diss	ug/l				
26 Tin Sn-Diss	ug/l				
27 Titanium Ti-Diss	ug/l				
28 Tungsten W -Diss	ug/l				
29 Vanadium V -Diss	ug/l				
30 Zinc Zn-Diss	ug/l				

Transaction #: 03241714

(38) Metals -- ICP Scan

Proj Code : DOE-024G RESTOVER TRUCK STOP

PE # : 277-02

Blank ID:	PB 10.91	PB 10.92
Sample Number:	88438095	88438095
Sample Description:	MW-TFR	MW-TFR
Matrix:	Water-Fil	Water-Fil
Units:	ug/l	ug/l
% Slds:		
QA Code:	LBK1	LBK2
Date Extract:		
Date Analyzd:	890309	890309
1 Aluminum Al-Diss	ug/l	
2 Antimony Sb-Diss	ug/l	
3 Arsenic As-Diss	ug/l	
4 Barium Ba-Diss	ug/l	
5 Beryllium Be-Diss	ug/l	
6 Boron B -Diss	ug/l	
7 Cadmium Cd-Diss	ug/l	
8 Calcium Ca-Diss	mg/l	
9 Chromium Cr-Diss	ug/l	
10 HexChrom Cr6Diss	ug/l	
11 Cobalt Co-Diss	ug/l	
12 Copper Cu-Diss	ug/l	
13 Iron Fe-Diss	ug/l	
14 Lead Pb-Diss	ug/l	
15 Mgnsium Mg-Diss	mg/l	
16 Mangnese Mn-Diss	ug/l	
17 Molybdnm Mo-Diss	ug/l	
18 Nickel Ni-Diss	ug/l	
19 Potssium K -Diss	mg/l	
20 Selenium Se-Diss	ug/l	
21 Silicon Si-Diss	ug/l	
22 Silver Ag-Diss	ug/l	
23 Sodium Na-Diss	mg/l	
24 Strntium Sr-Diss	ug/l	
25 Thallium Tl-Diss	ug/l	
26 Tin Sn-Diss	ug/l	
27 Titanium Ti-Diss	ug/l	
28 Tungsten W -Diss	ug/l	
29 Vanadium V -Diss	ug/l	
30 Zinc Zn-Diss	ug/l	

10U

38

==> Transaction #: 03241714 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: (SAT) Twiss, Steve DOE Hours Worked: _____

Project: DOE-024G RESTOVER TRUCK STOP

Prg Ele#: 277-02

Prj Off: Chern, Laura DOE Analysis Due: 881019 Revised Due:

*** Sample Records in Transaction ***

Parameter Form File: ICP381101 Title: ICP Scan, Water Dissolved

Seq#	Sample #	QA	Date/Time	Description	Alternate Keys
01	88438081		881018	RESTOVER	
02	88438082		881018	MW-16	
03	88438083		881018	MW-12	
04	88438084		881018	MW-17	
05	88438085		881019	MW-26A	
06	88438086		881019	MW-29A	
07	88438086	LMX1	881019	MW-29A	
08	88438086	LMX2	881019	MW-29A	
09	88438087		881018	MW-18A	
10	88438088		881019	MW-18B	
11	88438089		881018	MW-18C	
12	88438091		881019	MW-8A	
13	88438093		881019	WDOE-61	
14	88438094		881019	MW-TOT	
15	88438095		881019	MW-TFR	
16	88438095	LBK1	881019	MW-TFR	
17	88438095	LBK2	881019	MW-TFR	

Record Type: TRNIN1

Date Verified: 5/28/89 By: ATW

Transaction Status: Edited Transaction... First Printing... Unverified.

Processed: 24-MAR-89 17:21:26 Status: E Batch: (In CUR DB)

Transaction #: 03241714

(38) Metals - ICP Scan

Proj Code : DOE-024G RESTOVER TRUCK STOP

PE # : 277-02

Sample Number:	88438081	88438082	88438083	88438084	88438085
Sample Description:	RESTOVER	MW-16	MW-12	MW-17	MW-26A
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	ug/l	ug/l	ug/l	ug/l
% Slds:					
QA Code:					
Date Extract:	890308				
Date Analyzsd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss	ug/l				
2 Antimony Sb-Diss	ug/l				
3 Arsenic As-Diss	ug/l				
4 Barium Ba-Diss	ug/l				
5 Beryllium Be-Diss	ug/l				
6 Boron B -Diss	ug/l				
7 Cadmium Cd-Diss	ug/l				
8 Calcium Ca-Diss	mg/l				
9 Chromium Cr-Diss	ug/l				
10 HexChrom Cr6Diss	ug/l				
11 Cobalt Co-Diss	ug/l				
12 Copper Cu-Diss	ug/l				
13 Iron Fe-Diss	ug/l	10U	30	752	15
14 Lead Pb-Diss	ug/l				10U
15 Mgnsium Mg-Diss	mg/l				
16 Mangnese Mn-Diss	ug/l				
17 Molybdnm Mo-Diss	ug/l				
18 Nickel Ni-Diss	ug/l				
19 Potssium K -Diss	mg/l				
20 Selenium Se-Diss	ug/l				
21 Silicon Si-Diss	ug/l				
22 Silver Ag-Diss	ug/l				
23 Sodium Na-Diss	mg/l				
24 Strntium Sr-Diss	ug/l				
25 Thallium Tl-Diss	ug/l				
26 Tin Sn-Diss	ug/l				
27 Titanium Ti-Diss	ug/l				
28 Tungsten W -Diss	ug/l				
29 Vanadium V -Diss	ug/l				
30 Zinc Zn-Diss	ug/l				

Transaction #: 03241714 (38) Metals - ICP Scan
 Proj Code : DOE-024G RESTOVER TRUCK STOP PE # : 277-02

Sample Number:	88438086	88438086	88438086	88438087	88438088
Sample Description:	MW-29A	MW-29A	MW-29A	MW-18A	MW-18B
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	% Recov	% Recov	ug/l	ug/l
% Slds:					
QA Code:		LMX1	LMX2		
Date Extract:					
Date Analyzsd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss	ug/l				
2 Antimony Sb-Diss	ug/l				
3 Arsenic As-Diss	ug/l				
4 Barium Ba-Diss	ug/l				
5 Beryllium Be-Diss	ug/l				
6 Boron B -Diss	ug/l				
7 Cadmium Cd-Diss	ug/l				
8 Calcium Ca-Diss	mg/l				
9 Chromium Cr-Diss	ug/l				
10 HexChrom Cr6Diss	ug/l				
11 Cobalt Co-Diss	ug/l				
12 Copper Cu-Diss	ug/l				
13 Iron Fe-Diss	ug/l	10U	106	107	10U
14 Lead Pb-Diss	ug/l				11
15 Mgnsium Mg-Diss	mg/l				
16 Mangnese Mn-Diss	ug/l				
17 Molybdnm Mo-Diss	ug/l				
18 Nickel Ni-Diss	ug/l				
19 Potssium K -Diss	mg/l				
20 Selenium Se-Diss	ug/l				
21 Silicon Si-Diss	ug/l				
22 Silver Ag-Diss	ug/l				
23 Sodium Na-Diss	mg/l				
24 Strntium Sr-Diss	ug/l				
25 Thallium Tl-Diss	ug/l				
26 Tin Sn-Diss	ug/l				
27 Titanium Ti-Diss	ug/l				
28 Tungsten W -Diss	ug/l				
29 Vanadium V -Diss	ug/l				
30 Zinc Zn-Diss	ug/l				

Transaction #: 03241714

(38) Metals - ICP Scan

Proj Code : DOE-024G RESTOVER TRUCK STOP

PE # : 277-02

Sample Number:	88438089	88438091	88438093	88438094	88438095
Sample Description:	MW-18C	MW-8A	WDOE-61	MW-TOT	MW-TFR
Matrix:	Water-Fil	Water-Fil	Water-Fil	Water-Fil	Water-Fil
Units:	ug/l	ug/l	ug/l	ug/l	ug/l
% Slds:					
QA Code:					
Date Extract:					
Date Analyzcd:	890309	890309	890309	890309	890309
1 Aluminum Al-Diss	ug/l				
2 Antimony Sb-Diss	ug/l				
3 Arsenic As-Diss	ug/l				
4 Barium Ba-Diss	ug/l				
5 Beryllium Be-Diss	ug/l				
6 Boron B -Diss	ug/l				
7 Cadmium Cd-Diss	ug/l				
8 Calcium Ca-Diss	mg/l				
9 Chromium Cr-Diss	ug/l				
10 HexChrom Cr6Diss	ug/l				
11 Cobalt Co-Diss	ug/l				
12 Copper Cu-Diss	ug/l				
13 Iron Fe-Diss	ug/l	10U	9,620	7,160	10U
14 Lead Pb-Diss	ug/l				
15 Mgnsium Mg-Diss	mg/l				
16 Mangnese Mn-Diss	ug/l				
17 Molybdnm Mo-Diss	ug/l				
18 Nickel Ni-Diss	ug/l				
19 Potssium K -Diss	mg/l				
20 Selenium Se-Diss	ug/l				
21 Silicon Si-Diss	ug/l				
22 Silver Ag-Diss	ug/l				
23 Sodium Na-Diss	mg/l				
24 Strntium Sr-Diss	ug/l				
25 Thallium Tl-Diss	ug/l				
26 Tin Sn-Diss	ug/l				
27 Titanium Ti-Diss	ug/l				
28 Tungsten W -Diss	ug/l				
29 Vanadium V -Diss	ug/l				
30 Zinc Zn-Diss	ug/l				

Transaction #: 03241714

(38) Metals - ICP Scan

Proj Code : DOE-024G RESTOVER TRUCK STOP

PE # : 277-02

Blank ID:	PB 10.91	PB 10.92
Sample Number:	88438095	88438095
Sample Description:	MW-TFR	MW-TFR
Matrix:	Water-Fil	Water-Fil
Units:	ug/l	ug/l
% Slds:		
QA Code:	LBK1	LBK2
Date Extract:		
Date Analyzd:	890309	890309

1	Aluminum	Al-Diss	ug/l		
2	Antimony	Sb-Diss	ug/l		
3	Arsenic	As-Diss	ug/l		
4	Barium	Ba-Diss	ug/l		
5	Beryllium	Be-Diss	ug/l		
6	Boron	B -Diss	ug/l		
7	Cadmium	Cd-Diss	ug/l		
8	Calcium	Ca-Diss	mg/l		
9	Chromium	Cr-Diss	ug/l		
10	HexChrom	Cr6Diss	ug/l		
11	Cobalt	Co-Diss	ug/l		
12	Copper	Cu-Diss	ug/l		
13	Iron	Fe-Diss	ug/l	10U	38
14	Lead	Pb-Diss	ug/l		
15	Mgnsium	Mg-Diss	mg/l		
16	Mangnese	Mn-Diss	ug/l		
17	Molybdnm	Mo-Diss	ug/l		
18	Nickel	Ni-Diss	ug/l		
19	Potssium	K -Diss	mg/l		
20	Selenium	Se-Diss	ug/l		
21	Silicon	Si-Diss	ug/l		
22	Silver	Ag-Diss	ug/l		
23	Sodium	Na-Diss	mg/l		
24	Strntium	Sr-Diss	ug/l		
25	Thallium	Tl-Diss	ug/l		
26	Tin	Sn-Diss	ug/l		
27	Titanium	Ti-Diss	ug/l		
28	Tungsten	W -Diss	ug/l		
29	Vanadium	V -Diss	ug/l		
30	Zinc	Zn-Diss	ug/l		