A Department of Ecology Report

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Restover Truck Stop Ground Water Monitoring August and October 1995

Summary

This document is one in a series describing the results of ground water sampling at Restover Truck Stop. Ecology has conducted ground water sampling at the site from 1987 to the present. To remediate soil and ground water contamination a vapor extraction system (VES) was constructed in the summer of 1993. The VES has been operating since February 1994. To help determine the effectiveness of the cleanup, ground water monitoring was expanded from semiannual to quarterly sampling in the fall of 1993. This technical document describes the results of samples collected in August and October 1995.

In August, samples were collected from eight monitoring wells and the Restover water supply well. In October, three monitoring wells were sampled. Regularly sampled wells are listed in Table 1; locations of the wells sampled are shown in Figure 1. All collected samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPH-G).

Overall, BTEX concentrations in the upper aquifer have decreased substantially since 1989. Concentration decreases are probably due to a combination of plume spreading, dispersion, biodegradation and reduction of source loading. From August 1991 to November 1994, concentrations were relatively stable. Since November 1994, concentrations appear to have decreased. BTEX concentrations continue to be elevated in well WDOE-6A. BTEX has not been detected in MW-8A in the last four sample rounds. In August, Model Toxic Control Act (MTCA) cleanup levels were exceeded in MW-20A for benzene. In both August and October, cleanup levels were exceeded for benzene, ethylbenzene, and total xylene in WDOE-6A and for TPH in both WDOE-6A and MW-8A. Data review and laboratory reporting sheets are presented in Appendix A.

by Pamela B. Marti
March 1996

Waterbody No. WA-13-0030GW
(Segment No. 06-13-03GW)

Ecology Report #96-312

Results

Field Observations

Depth-to-water measurements, water level elevations, purge volume, pH, specific conductance, and temperature results for both sample events are listed in Table 1. In August, depth-to-water ranged from 11.80 to 15.36 feet, with a water-table elevation ranging from 186.03 to 186.82 feet mean sea level (msl). In October, depth-to-water ranged from 15.59 to 17.77 feet, with a water-table elevation ranging from 184.0 to 184.42 feet msl. Water levels were 2-3 feet higher than at the same time in the previous year.

In August, new well MW-31 was dry. MW-20A was not purged due to low water and small purge volume. This well purges dry under these conditions and is slow to recover. MW-9A was purged dry, but recovered sufficiently to collect the samples. The water level in new well MW-12A was also lowered during purging. MW-12A is screened in the lower aquifer. In October, MW-20A and MW-31 were dry.

Water purged from monitoring wells MW-8A and WDOE-6A continues to have a strong hydrocarbon odor and cloudy appearance, while MW-30 continues to have a slight hydrocarbon odor.

Analytical Results

Analytical results for BTEX and TPH-G, and MTCA ground water cleanup levels are shown in Table 2 for both sample events.

In August, samples were collected from eight monitoring wells: MW-8A, MW-9A, MW-15A, MW-20A, MW-30, WDOE-6A, MW-12A, and MW-16, and the Restover water supply well. All four BTEX compounds in well WDOE-6A were qualified as not detected at or above the reported estimated result. The total estimated BTEX concentration for WDOE-6A is 638 µg/L as qualified. Well WDOE-6A continues to show the highest volatile organics concentrations of the wells sampled. All four BTEX compounds were detected in MW-20A and MW-30 with total concentrations of 18 µg/L and 7 µg/L, respectively. Low concentrations of benzene were detected in MW-9A, MW-12A, and MW-15A near the detection limit. TPH-G concentrations in wells MW-8A and WDOE-6A were 2,200 µg/L and 16,000 µg/L, respectively.

In October, samples were collected from monitoring wells: MW-8A, MW-30, and WDOE-6A. Benzene, ethylbenzene, and xylene were detected in WDOE-6A with a total concentration of 646 µg/L. TPH-G concentrations in wells MW-8A and WDOE-6A were 4,500 µg/L and 16,000 µg/L, respectively.

BTEX concentrations for select monitoring wells from May 1987 to November 1994 are listed in Table 3 Figure 3 shows BTEX concentrations for wells WDOE-6A and MW-8A for the same time period BTEX concentrations in both wells decreased substantially from January 1989 to August 1991 From August 1991 to November 1994, concentrations were relatively stable Since November 1994, concentrations appear to be decreasing BTEX concentrations continue to be elevated in well WDOE-6A

Conclusions

1 Overall, concentrations appear to be decreasing BTEX concentrations for August and October are lower than all previous sampling results All four BTEX compounds have not been detected in well MW-8A in the last four sample rounds

2 MTCA cleanup levels were exceeded in WDOE-6A for benzene, ethylbenzene, and xylene and TPH during both sample events Cleanup levels for TPH were also exceeded in MW-8A during both sample events Benzene was exceeded in MW-20A in August

Recommendations

1. Routine monitoring should continue to determine the effectiveness of contaminant removal by vapor extraction Monitoring wells WDOE-6A, MW-8A, MW-9A, MW-20A, and MW-30 should continue to be sampled for BTEX The Restover supply wells should also continue to be sampled annually for BTEX

2. Wells MW-15A and MW-16 should continue to be sampled semi-annually for as long as property access is granted Wells MW-12A and MW-31, which were installed in April 1995, should be added to the monitoring network MW-12A was installed to replace MW-12, so that monitoring of the lower aquifer could continue

3. Continue to collect samples for total petroleum hydrocarbon as gasoline (TPH-G) analyses Elevated concentrations of TPH-G were detected in most of the wells sampled in August and October 1995

Methods

Ground Water Sampling

Ground water samples were collected from the upper and lower aquifers. The upper aquifer consists of recessional outwash. This unit is underlain by the Vashon Till, which is a regional aquitard, and advance outwash deposits which form a lower aquifer. In August, samples for benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons as gasoline (TPH-G) were collected from six upper aquifer and three lower aquifer wells. October samples were collected from three upper aquifer monitoring wells. See Table 1 for a list of the regularly sampled wells. The sampled wells were near the vapor extraction system to help determine the effectiveness of remediation.

Prior to sampling, static water level measurements were obtained from monitoring wells using an electronic water level indicator. The meter was rinsed with deionized water and wiped clean between measurements. Based on the purge volume, wells were purged with either a teflon bailer, submersible pump or a centrifugal pump. Wells were purged until pH, specific conductance and temperature readings stabilized, and a minimum of three well volumes had been removed. Purge water was discharged onto the ground near each well, except for well WDOE-6A. Purge water from this well was collected in a 55-gallon barrel and stored with other vapor extraction system (VES) waste in the enclosed tank area. This waste will be transported and disposed of in accordance with state of Washington regulations (Chapter 173-340-400 WAC).

Monitoring well samples were collected using decontaminated, bottom-emptying teflon bailers. Bailers were pre-cleaned with sequential washes of Liquinox7, hot tap water, 10% nitric acid, distilled-deionized water and pesticide-grade acetone. After cleaning, bailers were air-dried and wrapped in aluminum foil. The Restover supply well was sampled at the tap nearest the pump. Samples for BTEX and TPH-G analysis were collected free of headspace and preserved with 1:1 hydrochloric acid.

Chain-of-custody procedures were followed in accordance with Manchester Laboratory protocol (Ecology, 1994). All samples were analyzed by the Ecology/EPA Laboratory in Manchester.

Quality Assurance

In general the quality of the data is acceptable for use for both sample rounds. BTEX samples were analyzed using EPA SW-846 Method 8020 (U.S. EPA, 1986) and WTPH-G samples were analyzed using Washington State Method WTPH-G (Ecology, 1994). In August, all four BTEX compounds in well WDOE-6A were qualified as not detected at or

above the reported estimated result. The total estimated BTEX concentration for WDOE-6A is 638 µg/L as qualified

Quality control samples collected in the field consisted of a blind field duplicate. Duplicate samples for BTEX and TPH-G were obtained from monitoring well MW-8A. Duplicate samples collected at MW-8A provide an estimate of combined sampling and laboratory precision. The numeric comparison of duplicate results is expressed as the relative percent difference or RPD. RPDs are the ratio of the difference and the mean of the duplicate results expressed as a percentage. The RPDs of the duplicate samples for TPH-G in August was 150% and in October it was 9%.

In addition to field quality control samples, a matrix spike, a matrix spike duplicate and surrogate compound recoveries were performed in the laboratory. Matrix spike and surrogate recoveries for BTEX and TPH-G were within acceptable limits. Dickey Huntamer of the Manchester Laboratory conducted the quality assurance review, which has been included in Appendix A.

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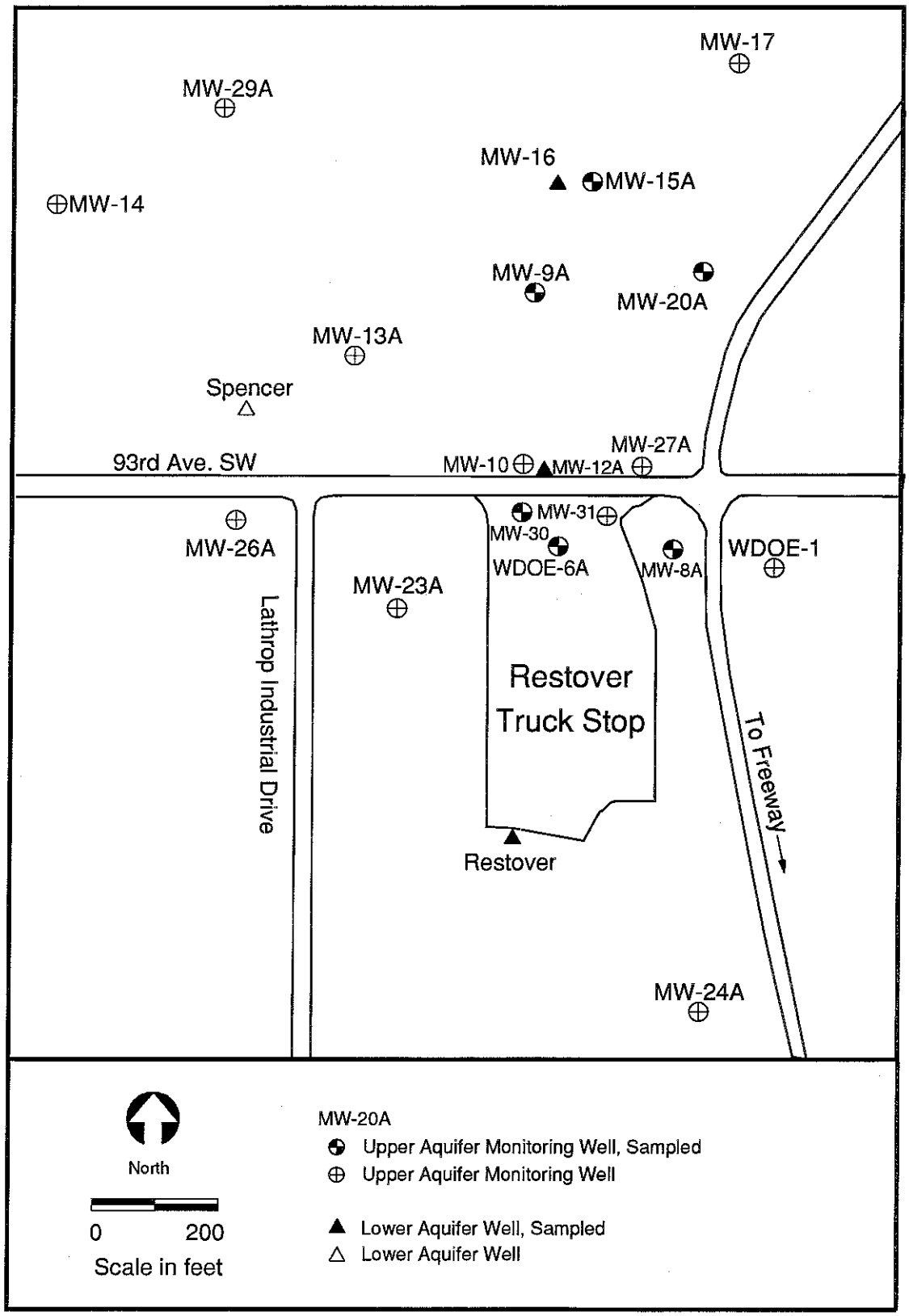


Figure 1: Well Locations, Restover Truck Stop

Table 1: Field Parameter Results for August and October, 1995

Monitoring Well	Total Depth (Feet)	Aquifer	Depth to Water (Feet)	Elevation (mean sea level)	pH (standard units)	Specific Conductance (umhos/cm)	Temperature (°C)	Purge Volume (gallons)
August 1995								
MW-8A	21.10	Upper	14.83	186.51	5.2	240	11.8	3
MW-9A	16.23	Upper	13.40	186.16	5.5	118	14.8	Purged Dry
MW-20A	13.95	Upper	11.83	186.24	NM	NM	NM	0
MW-30	16.78	Upper	13.19	186.82	6.2	365	16.2	10
MW-31	13.47	Upper	DRY					
WDOE-6A	21.68	Upper	15.36	186.45	6.1	231	13.9	3
MW-15A	15.80	Upper	11.80	186.03	5.9	126	13.0	3
Restover	60	Lower	++		6.3	97	12.3	100
MW-12A	50.43	Lower	13.01		6.5	186	13.3	15
MW-16	53.52	Lower	12.44	185.47	6.1	64	11.7	21
October 1995								
MW-8A	21.10	Upper	17.34	184.00	5.7	530	12.2	4
MW-20A	13.95	Upper	DRY					
MW-30	16.78	Upper	15.59	184.42	6.4	290	15.4	2.5
MW-31	13.47	Upper	DRY					
WDOE-6A	21.68	Upper	17.77	184.04	6.2	305	14.3	3

NM = Not Measured. Insufficient water to collect field parameters.

++ = No water level measurement collected.

Table 2: Analytical Results (ug/L) for August 1,2&4, 1995 and October 4, 1995

Well Number	Benzene	Toluene	Ethylbenzene	Total Xylene	Total BTEX	TPH-G
MTCA Cleanup Levels	5.0	40.0	30.0	20.0		(Total TPH) 1000.0
August 1995						
MW-8A	1.0 U	1.5 U	1.5 U	3.0 U	ND	2200
MW-8B(dup)*	1.0 U	1.0 U	1.0 U	3.0 U	ND	310
MW-9A	0.98	0.2 U	0.2 U	0.6 U	0.98	180
MW-20A	16	0.56	0.98	0.96	18.5	830
MW-30	4.2	0.48	1.9	0.76	7.34	390
WDOE-6A	32 UJ	20 UJ	96 UJ	490 UJ	638 UJ	16,000
MW-15A	2.2	0.2 U	0.2 U	0.6 U	2.2	180
MW-12A	0.44	0.2 U	0.2 U	0.6 U	0.44	60 U
MW-16	0.2 U	0.2 U	0.2 U	0.6 U	ND	60 U
Restover	0.2 U	0.2 U	0.2 U	0.6 U	ND	60 U
October 1995						
MW-8A	5.0 U	5.0 U	5.0 U	5.0 U	ND	4700
MW-8B(dup)*	5.0 U	5.0 U	5.0 U	5.0 U	ND	4300
MW-30	2.0 U	2.0 U	2.0 U	2.0 U	ND	580
WDOE-6A	52	20 U	94	500	646	16,000

U : Not detected at detection limit shown.
UJ: The analyte was not detected at or above the reported estimated result.
ND: Compounds Not Detected
* : MW-8B is a duplicate sample of MW-8A.

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

Well Number	May 1987	September 1987	October 1988	January 1989	July 1989	January 1990	August 1990	February 1991	August 1991	February 1992	July 1992	January 1993
Upper Aquifer												
WDOE-6A	6950	1180	5300	28000	7490	9870	5190	3460	2840	3830	2990	4784
MW-8A	230[1]	388[1]	479[1]	334[1]	64[2]	20[2]	178[2]	19[2]	20[2]	9[2]	53[2]	47[2]
MW-15A	1433	NT	NT	ND	218	NT	285	122	NT	NT	NT	NT
MW-17	ND	ND	ND	ND	ND	NT	NT	ND	ND	NT	2.7	ND
MW-20A	126	NT	NT	NT	NT	20	1400	5	293	11	452	NT(Dry)
Lower Aquifer												
Restover	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Spencer	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12	53	5	8	ND	4	ND	6	ND	NT	NT	NT	NT

Well Number	July 1993	November 1993	January 1994	April 1994	August 1994	November 1994	February 1995	April 1995	August 1995	October 1995
Upper Aquifer										
WDOE-6A	2620	3070	6360	5242	3214	4624	2120	1829	638	646
MW-8A	30[2]	41[2]	36[2]	4[2]	8[1]	32[2]	ND	ND	ND	ND
MW-15A	NT	NT	NT	NT	NT	NT	ND	NT	2	NT
MW-17	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-20A	162	NT(Dry)	ND	59	NT(Dry)	ND	ND	ND	18	NT(Dry)
MW-30	NT	NT(Dry)	NT(Dry)	2400	NT(Dry)	NT(Dry)	8	8	7	ND
MW-9A	NT	NT	NT(Dry)	366	NT	NT	ND	NT	1	NT
Lower Aquifer										
Restover	0.4	NT	ND	NT	NT	NT	NT	NT	ND	NT
Spencer	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-12	1.7	NT	NT	NT	NT	NT	1.1	NT	Well Abandoned	
MW-12A	-	-	-	-	-	-	-	-	0.5	NT

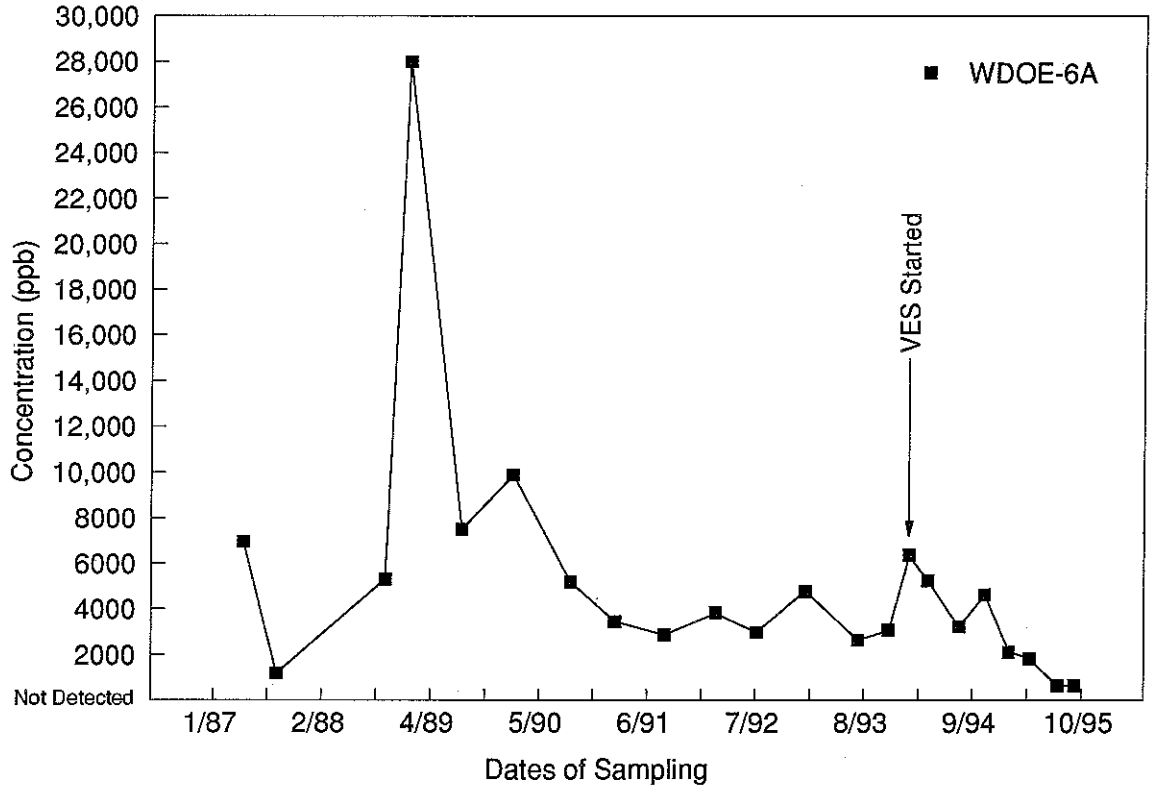
ND: Compound Not Detected
NT: Compound Not Tested

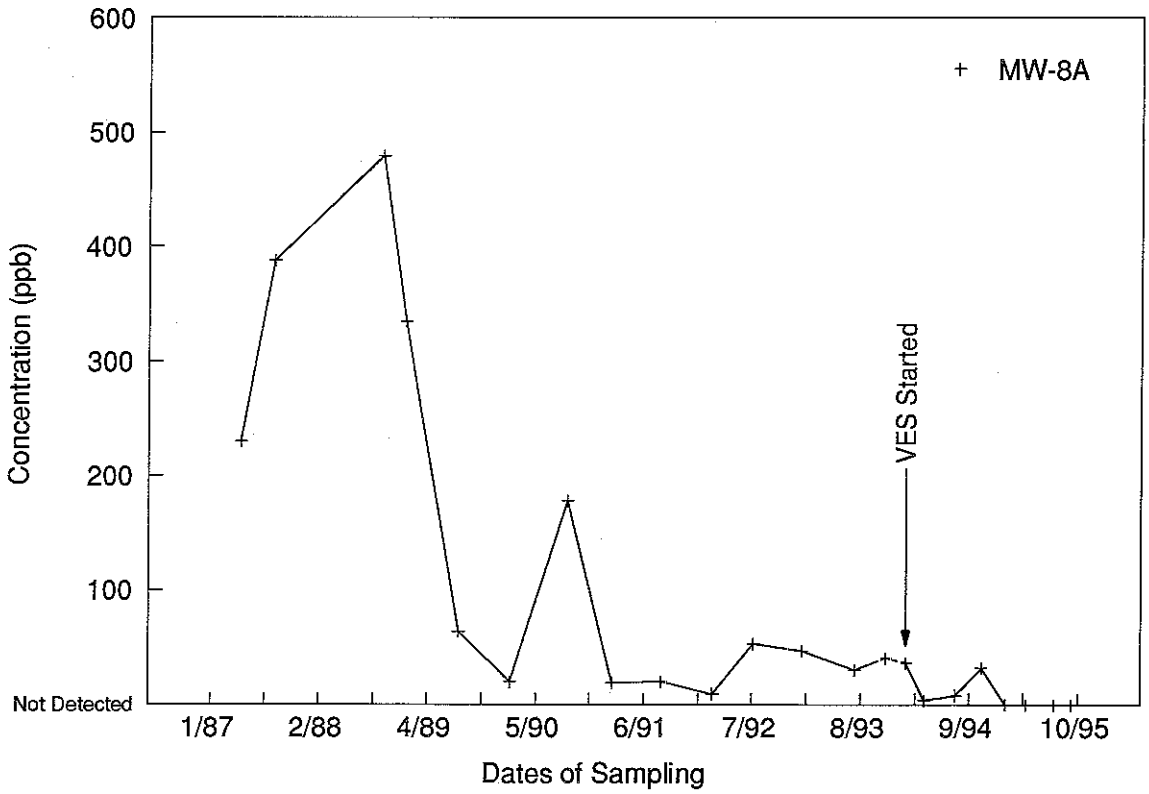
[1] : Value is based on one sample.
[2] : Value represents the mean of duplicate samples.

The upper and lower aquifers consist of recessional outwash and advance outwash, respectively. These units are separated by the Vashon Till which is a regional aquitard.

Figure 3

BTEX Concentrations in WDOE-6A and MW-8A from May 1987 to October 1995





APPENDIX A

Analytical Results
Restover Truck Stop
August 1,2&4, 1995 and October 4, 1995

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E , Port Orchard Washington 98366

CASE NARRATIVE

September 22, 1995

Subject: Restover Truck Stop

Samples: 95 - 318080 to -318090

Case No. 2077 - 95

Officer: Pam Marti

By: Dickey D. Huntamer
Organics Analysis Unit

BETX ANALYSIS

ANALYTICAL METHODS:

The samples were analyzed by EPA Method SW-846 - 8020. Normal laboratory QA/QC procedures were performed with the analyses.

HOLDING TIMES:

The samples were analyzed within the recommended holding times.

BLANKS:

No target compounds were detected in the laboratory blank.

SURROGATES:

Surrogate recoveries for 1,4-dichlorobenzene ranged from 85% to 132% and were within acceptable limits except for the lab blank BLN53125 and sample -318085 which had 65% and 63% respectively. The "J" qualifiers was added to the results for both the blank and sample -318085.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE:

A matrix spike and spike duplicate was analyzed with the sample. Recoveries ranged from 97% to 105%, precision data ranged from 0.0% to 1.0% and both were within acceptable limits. No qualifiers were added to the data.

ANALYTICAL COMMENTS:

No problems were encountered in the analysis of these samples. The data is acceptable to as qualified.

DATA QUALIFIER CODES:

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: BLN53125 **Method:** SW8020
Blank ID: BW5222 **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	0.20	UJ
Toluene	0.20	UJ
Ethylbenzene	0.20	UJ
Total Xylenes	0.60	UJ

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**65**	**%**

Authorized By: _____ Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318080 **Date Received:** 08/03/95 **Method:** SW8020
Field ID: MW-8A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	1.0	U
Toluene	1.5	U
Ethylbenzene	1.5	U
Total Xylenes	3.0	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**93**	**%**

Authorized By: _____ Release Date: 9/12/95

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318081
Field ID: MW-8B
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	1.0	U
Toluene	1.0	U
Ethylbenzene	1.0	U
Total Xylenes	3.0	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**85**	**%**

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Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318082
Field ID: MW-20A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	16	
Toluene	0.56	
Ethylbenzene	0.98	
Total Xylenes	0.96	

Surrogate Recoveries

Benzene, 1,4-Difluoro-	112	%

Authorized By: D. Hutton Release Date: 9/22/95 Page: 1

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Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318083 **Date Received:** 08/03/95 **Method:** SW8020
Field ID: MW-30 **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	4.2	
Toluene	0.48	
Ethylbenzene	1.9	
Total Xylenes	0.76	

Surrogate Recoveries

Benzene, 1,4-Difluoro-	132	%

Authorized By: D. Hinton Release Date: 9/22/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318084 **Date Received:** 08/03/95 **Method:** SW8020
Field ID: RESTOVER **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	0.20	U
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**85**	**%**

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Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318085
Field ID: WDOE ~~7A~~ 6A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	32	UJ
Toluene	20	UJ
Ethylbenzene	96	UJ
Total Xylenes	490	UJ

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**63**	**%**

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Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318086 **Date Received:** 08/03/95 **Method:** SW8020
Field ID: MW-12A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	**0.44**	
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**91**	**%**

Authorized By: D. Hostetler Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318087 **Date Received:** 08/07/95 **Method:** SW8020
Field ID: MW-16 **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	0.20	U
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**89**	**%**

Authorized By: D. Christensen Release Date: 9/22/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318088
Field ID: MW-15A
Project Officer: Pam Marti

Date Received: 08/07/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	**2.2**	
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**107**	**%**

Authorized By: D. Hunter Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318089
Field ID: MW-9A
Project Officer: Pam Marti

Date Received: 08/07/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	**0.98**	
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**101**	**%**

Authorized By: D. Kuntz Release Date: 9/22/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318090 **Date Received:** 08/03/95 **Method:** SW8020
Field ID: RINSATE **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	**0.64**	
Toluene	**4.4**	
Ethylbenzene	0.20	U
Total Xylenes	**0.74**	

Surrogate Recoveries

Benzene, 1,4-Difluoro-	**92**	**%**

Authorized By: D. Hunter Release Date: 9/22/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318086 (Matrix Spike - LMX1) **Date Received:** 08/03/95 **Method:** SW8020
Field ID: MW-12A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** % Recovery

Analyte	Result	Qualifier
Benzene	105	
Toluene	98	
Ethylbenzene	98	
Total Xylenes	98	

Surrogate Recoveries

Benzene, 1,4-Difluoro-	93	%

Authorized By: D. Hoot Release Date: 9/22/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318086 (Matrix Spike - LMX2) **Date Received:** 08/03/95 **Method:** SW8020
Field ID: MW-12A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** % Recovery

Analyte	Result	Qualifier
Benzene	105	
Toluene	97	
Ethylbenzene	98	
Total Xylenes	98	

Surrogate Recoveries

Benzene, 1,4-Difluoro-	94	%

Authorized By: D. Hunter Release Date: 9/12/95 Page: 3

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E , Port Orchard Washington 98366

CASE NARRATIVE

September 12, 1995

Subject: Restover Truck Stop

Samples: 95 - 318080 to -318090

Case No. 2077-95

Officer: Pam Marti

By: Dickey D. Huntamer
Organics Analysis Unit

WTPH-G

ANALYTICAL METHODS:

The samples were prepared and analyzed using method WTPH-G.

HOLDING TIMES:

All sample and extraction holding times were within the recommended limits.

BLANKS:

No target compounds were detected in the blank.

SURROGATES:

1,4-difluorobenzene was added to the samples as a surrogates compound prior to extraction. Surrogate recoveries ranged from 61% to 146% and were within acceptable QC limits.

DUPLICATE ANALYSIS:

Sample -318082 was analyzed in duplicate. The Relative Percent Difference (RPD) was 3.7%. No limits have been established for this method.

ANALYTICAL COMMENTS:

No analytical problems were encountered in the analysis. The data is acceptable for use as qualified.

DATA QUALIFIER CODES:

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: BLN53066 **Method:** WTPH-G
Blank ID: BW5222 **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	61	%

Authorized By: D. Hostetler Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318080
Field ID: MW-8A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	**2.2**	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	**91**	**%**

Authorized By: D. Hunter Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318081
Field ID: MW-8B
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.31	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	84	%

Authorized By: D. Hostetler Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318082
Field ID: MW-20A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	**0.83**	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	**111**	%

Authorized By: D. Hostetler Release Date: 9/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318082 (Duplicate - LDP1) **Date Received:** 08/03/95 **Method:** WTPH-G
Field ID: MW-20A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.80	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	110	%

Authorized By: _____ Release Date: 9/12/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318083
Field ID: MW-30
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	**0.39**	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	**146**	**%**

Authorized By: _____ Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318084
Field ID: RESTOVER
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	**84**	**%**

Authorized By: D. Hutton Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318085
Field ID: WDOE ~~7A~~ 6A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	16	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	68	%

Authorized By: D. K. [signature] Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318086
Field ID: MW-12A
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	**85**	**%**

Authorized By: D. Hostetler Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318087 **Date Received:** 08/07/95 **Method:** WTPH-G
Field ID: MW-16 **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	83	%

Authorized By: _____ Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318088 **Date Received:** 08/07/95 **Method:** WTPH-G
Field ID: MW-15A **Date Prepared:** 08/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 08/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.18	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	97	%

Authorized By: D. Hostetler Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318089
Field ID: MW-9A
Project Officer: Pam Marti

Date Received: 08/07/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.18	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	95	%

Authorized By: O. Hedberg Release Date: 9/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2077-95

Sample: 95318090
Field ID: RINSATE
Project Officer: Pam Marti

Date Received: 08/03/95
Date Prepared: 08/10/95
Date Analyzed: 08/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.12	
Surrogate Recoveries		
Benzene, 1,4-Difluoro-	83	%

Authorized By: D. Hanks Release Date: 9/12/95 Page: 1

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E , Port Orchard Washington 98366

CASE NARRATIVE

November 2, 1995

Subject: Restover Truckstop

Samples: 95 - 408050 to -408053

Case No. 2226 -95

Officer: Pam Marti

By: Dickey D. Huntamer
Organics Analysis Unit

WTPH-G

ANALYTICAL METHODS:

The samples were prepared and analyzed using method WTPH-G.

HOLDING TIMES:

All sample and extraction holding times were within the recommended limits.

BLANKS:

No target compounds were detected in the blank.

SURROGATES:

1,4-difluorobenzene was added to the samples as a surrogates compound prior to extraction. Surrogate recoveries ranged from 82% to 95% except for sample -408052 and its duplicate where interference prevented calculation of the surrogate recovery. The remaining surrogates recoveries were within acceptable QC limits.

DUPLICATE ANALYSIS:

Sample -408052 was analyzed in duplicate. The Relative Percent Difference (RPD) was 3 5%. No limits have been established for this method.

ANALYTICAL COMMENTS:

No analytical problems were encountered in the analysis. The data is acceptable for use as qualified.

BETX ANALYSIS

ANALYTICAL METHODS:

The samples were analyzed by EPA Method SW-846 - 8020. Normal laboratory QA/QC procedures were performed with the analyses.

HOLDING TIMES:

The samples were analyzed within the recommended holding times.

BLANKS:

No target compounds were detected in the laboratory blanks.

SURROGATES:

Surrogate recoveries for 1,4-dichlorobenzene ranged from 93% to 102% except for sample -408052 where matrix interference prevented calculation of a surrogate recovery. The remaining surrogate recoveries were within acceptable limits.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE:

A matrix spike and spike duplicate was analyzed with the sample. Recoveries ranged from 108% to 125%, precision data ranged from 7.6% to 11% and both were within acceptable limits. No qualifiers were added to the data.

ANALYTICAL COMMENTS:

No problems were encountered in the analysis of these samples. The data is acceptable to use without additional qualifiers.

DATA QUALIFIER CODES:

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
NAF	-	Not analyzed for
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: BLN53659 **Method:** SW8020
Blank ID: BW5283 **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	0.20	U
Toluene	0.20	U
Ethylbenzene	0.20	U
Total Xylenes	0.60	U

Surrogate Recoveries

1,4-Difluorobenzene	**96**	**%**

Authorized By: Dr Hartin Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408050 **Date Received:** 10/05/95 **Method:** SW8020
Field ID: MW-8A **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	5.0	U
Toluene	5.0	U
Ethylbenzene	5.0	U
Total Xylenes	5.0	U

Surrogate Recoveries

1,4-Difluorobenzene	**102**	**%**

Authorized By: D. Hunter Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408051 **Date Received:** 10/05/95 **Method:** SW8020
Field ID: MW-8B **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	5.0	U
Toluene	5.0	U
Ethylbenzene	5.0	U
Total Xylenes	5.0	U

Surrogate Recoveries

1,4-Difluorobenzene	**102**	**%**

Authorized By: D. Hanton Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408052 **Date Received:** 10/05/95 **Method:** SW8020
Field ID: MW-30 **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** ug/L

Analyte	Result	Qualifier
Benzene	2.0	U
Toluene	2.0	U
Ethylbenzene	2.0	U
Total Xylenes	2.0	U

Surrogate Recoveries

1,4-Difluorobenzene	NC

Authorized By: D. Hunts Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408053
Field ID: WDOE-6A
Project Officer: Pam Marti

Date Received: 10/05/95
Date Prepared: 10/10/95
Date Analyzed: 10/11/95

Method: SW8020
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier
Benzene	**52**	
Toluene	20	U
Ethylbenzene	**94**	
Total Xylenes	**500**	

Surrogate Recoveries

1,4-Difluorobenzene	**93**	%

Authorized By: D. Hunter Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408053 (Matrix Spike - LMX1) **Date Received:** 10/05/95 **Method:** SW8020
Field ID: WDOE-6A **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/11/95 **Units:** % Recovery

Analyte	Result	Qualifier
Benzene	108	
Toluene	110	
Ethylbenzene	112	
Total Xylenes	114	

Surrogate Recoveries

1,4-Difluorobenzene	98	%

Authorized By: D. R. Carter Release Date: 10/2/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Benzene, Ethylbenzene, Toluene, Xylenes

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408053 (Matrix Spike - LMX2) **Date Received:** 10/05/95 **Method:** SW8020
Field ID: WDOE-6A **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/11/95 **Units:** % Recovery

Analyte	Result	Qualifier
Benzene	120	
Toluene	123	
Ethylbenzene	125	
Total Xylenes	123	

Surrogate Recoveries

1,4-Difluorobenzene	95	%

Authorized By: _____ Release Date: 11/2/95

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: BLN53643 **Method:** WTPH-G
Blank ID: BW5283 **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
1,4-Difluorobenzene	83	%

Authorized By: D. Norton Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: BLN53644 **Method:** WTPH-G
Blank ID: BW5284 **Date Prepared:** 10/11/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/11/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.060	U
Surrogate Recoveries		
1,4-Difluorobenzene	84	%

Authorized By: D. Hostetler Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408051 **Date Received:** 10/05/95 **Method:** WTPH-G
Field ID: MW-8B **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	4.3	
Surrogate Recoveries		
1,4-Difluorobenzene	95	%

Authorized By: D. Hinton Release Date: 10/12/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408050
Field ID: MW-8A
Project Officer: Pam Marti

Date Received: 10/05/95
Date Prepared: 10/10/95
Date Analyzed: 10/10/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	4.7	
Surrogate Recoveries		
1,4-Difluorobenzene	95	%

Authorized By: _____ Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408052
Field ID: MW-30
Project Officer: Pam Marti

Date Received: 10/05/95
Date Prepared: 10/11/95
Date Analyzed: 10/11/95

Method: WTPH-G
Matrix: Water
Units: mg/L

Analyte	Result	Qualifier
Gasoline	0.58	
Surrogate Recoveries		
1,4-Difluorobenzene	NC	

Authorized By: D. Hues Release Date: 11/2/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408052 (Duplicate - LDP1) **Date Received:** 10/05/95 **Method:** WTPH-G
Field ID: MW-30 **Date Prepared:** 10/11/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/11/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	0.56	
Surrogate Recoveries		
1,4-Difluorobenzene	NC	

Authorized By: D. Hostetler Release Date: 11/2/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

TPH as Gasoline

Project Name: Restover Truckstop **LIMS Project ID:** 2226-95

Sample: 95408053 **Date Received:** 10/05/95 **Method:** WTPH-G
Field ID: WDOE-6A **Date Prepared:** 10/10/95 **Matrix:** Water
Project Officer: Pam Marti **Date Analyzed:** 10/10/95 **Units:** mg/L

Analyte	Result	Qualifier
Gasoline	**16**	
Surrogate Recoveries		
1,4-Difluorobenzene	82	%

Authorized By: D. Hunt Release Date: 10/10/95 Page: 1