



ENVIRONMENTAL MANAGEMENT, INC.

Release 3431
Hexaw Maple Valley
Maple Valley

June 5, 2003
KHM Project A81-21641 Maple Valley

Mr. John Weitfield
Washington State Department of Ecology
Northwest Regional Office
Toxics Cleanup Program, UST Division
3190 160th Ave SE
Bellevue, Washington 98008-5452

Re: SHELL GRASP MONITORING REPORT
Shell Service Station
21641 Maple Valley Highway
Maple Valley, Washington

Dear Mr. Weitfield:

KHM Environmental Management, Inc. (KHM), on behalf of Equilon Enterprises LLC dba Shell Oil Products US (SHELL), has prepared this Shell GRASP Monitoring Report for the above referenced site.


GRASP (GROundwater ASsessment Program) is a voluntary initiative by SHELL to install groundwater monitoring wells at numerous retail service stations nationwide that do not have any active release cases but have been identified to be in close proximity to one or more public water supply wells. The purpose of this program is to proactively monitor the groundwater beneath these sites and, in the event of a subsurface release, to respond quickly to protect public wells from this impact.


If you have any questions regarding this site, please contact Mr. Brian Pletcher (KHM) at (503) 639-8098 or Mr. Tony Palagyi (SHELL) at (425) 377-8530.

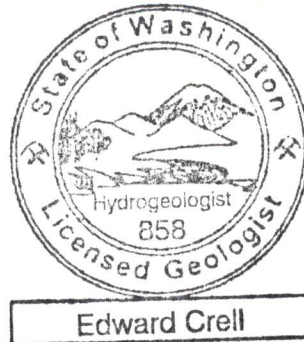
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cm 6-12-03

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Sincerely,
KHM Environmental Management, Inc.


Tena Seeds, E.I.T.
Project Engineer


Ward Crell, R.G.
Senior Geologist



Attachments: Shell GRASP Monitoring Report

cc: Mr. Tony Palagyi, Shell Oil Products US, Seattle, Washington

June 5, 2003

SHELL GRASP MONITORING REPORT

Station Address.: 21641 Maple Valley Highway
Maple Valley, Washington
SHELL GRASP Incident No. 97420022
KHM Project No. A81-21641 Maple Valley
SHELL Environmental Engin./Phone No.: Tony Palagyi/(425) 377-8530
KHM Project Manager/Phone No.: Brian Pletcher/(503) 639-8098

Current Phase of Project: GRASP Groundwater Monitoring
Frequency of Sampling: Quarterly
Frequency of Monitoring: Quarterly
Is Separate Phase Hydrocarbon Present On-site (Well #'s): Yes No
Cumulative SPH Recovered to Date : None
SPH Recovered This Quarter : None
Sensitive Receptor(s) Information: Nearest production well is a municipal supply well, approximately 845 ft east of the site
Approximate Depth to Groundwater: 11.51 to 12.90 feet
Groundwater Gradient SW @ approximately 0.006 ft/ft
Summary of Unusual Activity: None

Brian Pletcher
Project Manager (KHM)

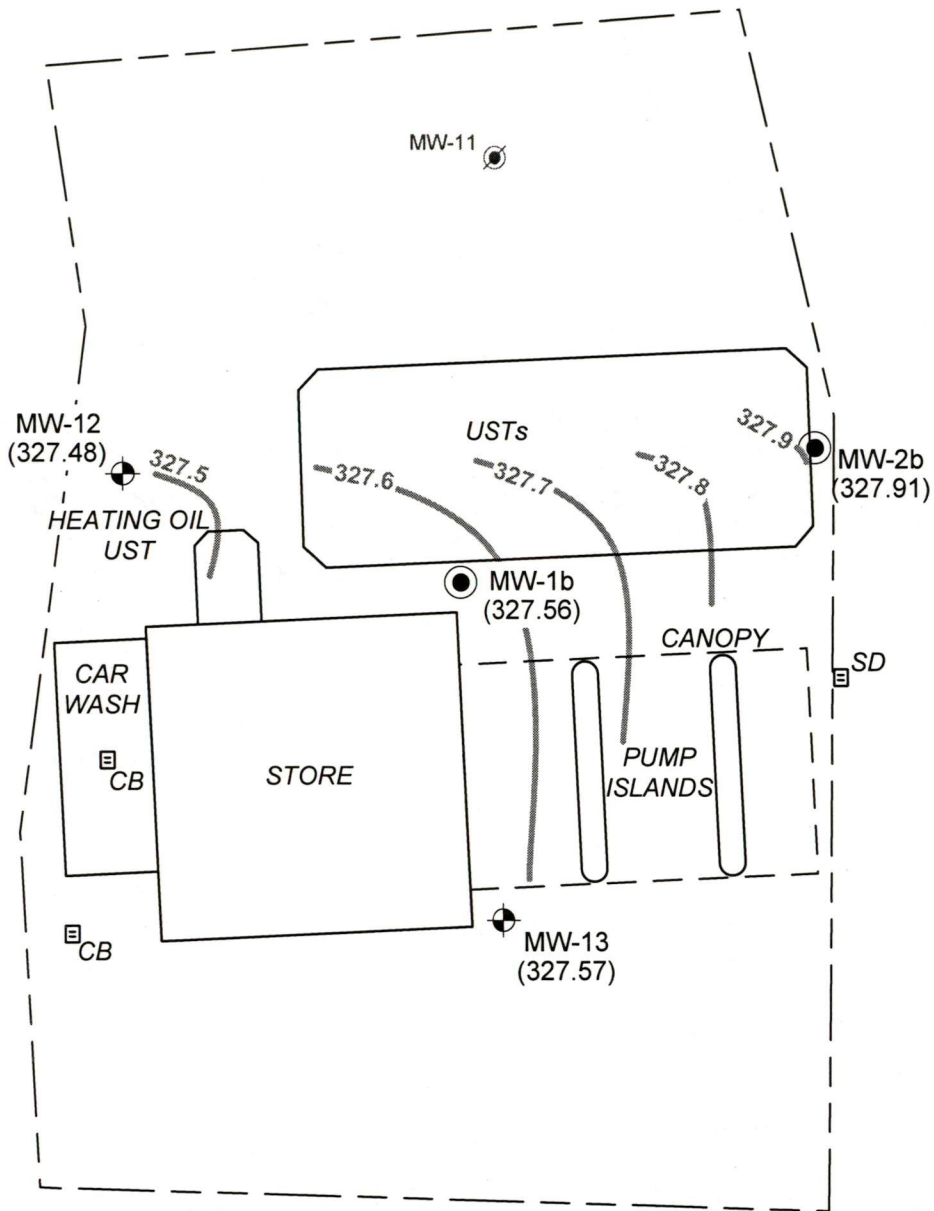
ATTACHED:

- Table 1 – Groundwater Gauging and Analytical Results
- Figure 1 – Site Location Map
- Figure 2 – Groundwater Elevation Contour Map
- Figure 3 – Hydrocarbon Distribution in Groundwater Map
- Appendix A – Field Data Sheets
- Appendix B – Field Procedures
- Appendix C – Laboratory Report and Chain-of-Custody Documents

TABLE 1
GROUNDWATER GAUGING AND ANALYTICAL DATA
21641 Maple Valley Highway
Maple Valley, Washington

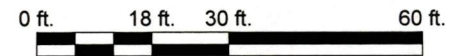
Sample I.D.	Sample Date	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	TBA (µg/l)	Depth to GW (feet)	SPH (feet)	GW Elev. ¹ (feet)
MW-1b	12/19/02	<250	<250	<750	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	12.53	0.00	327.50
340.03	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	12.47	0.00	327.56
MW-2b	12/19/02	<250	<250	<750	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	11.57	0.00	327.85
339.42	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	11.51	0.00	327.91
MW-12	12/19/02	<250	<250	<750	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	12.95	0.00	327.43
340.38	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	12.90	0.00	327.48
MW-13	12/19/02	<250	<250	<750	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	12.70	0.00	327.49
340.19	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	12.62	0.00	327.57
MTCA Method A Cleanup Levels:		1000²	500	500	5	1000	700	1000	20	-	-	-	-	-	-	-
Notes: µg/l = micrograms per liter TOC = Top of well casing elevation (feet) SPH = Separate-phase hydrocarbons TPH-G = Total Petroleum Hydrocarbons as Gasoline TPH-D = Total Petroleum Hydrocarbons as Diesel TPH-O = Total Petroleum Hydrocarbons as Oil MTBE = Methyl tert-butyl ether DIPE = Di-isopropyl ether ETBE = Ethyl tert-butyl ether TAME = tert-Amyl methyl ether TBA = t-Butyl Alcohol NA = Not analyzed <n = Below the detection limit TPH-D and TPH-O quantified using Northwest Method NWTPH-Dx TPH-G quantified using Northwest Method NWTPH-Gx BTEX Compounds, MTBE, DIPE, ETBE, TAME, and TBA analyzed using EPA Method 8260B ¹ TOC elevation and groundwater elevation relative to Mean Sea Level ² MTCA Method A Cleanup Level for TPH-Gasoline is 800 ppb if benzene is detectable in groundwater.																

FIGURES



Legend

- Groundwater Monitoring Well Installed by KHM
- ⊕ Groundwater Monitoring Well Installed by Others
- ⊙ Abandoned Groundwater Monitoring Well
- (327.57) Groundwater Elevation, May 13, 2003
- 327.6 — Groundwater Elevation Contour, May 13, 2003



Approximate Scale

Site map based on drawing prepared by WGR Southwest, Inc. dated 7/00

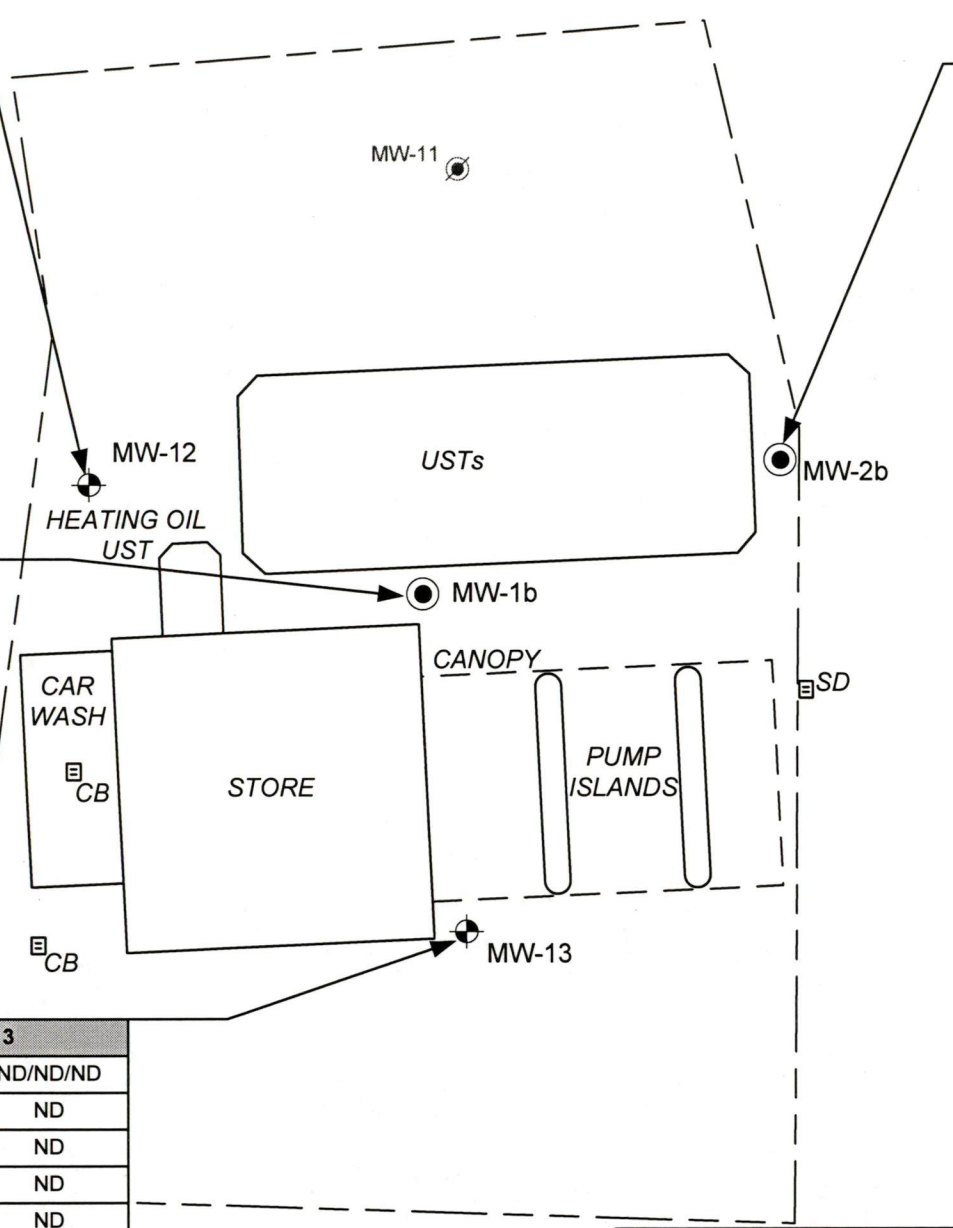
KHM ENVIRONMENTAL MANAGEMENT, INC.	GROUNDWATER ELEVATION CONTOUR MAP		
	Shell/Equiva Site - SAP 120891 21641 Maple Valley Highway Maple Valley, Washington		
	DATE 6/05/03	PROJECT A81-21641 Maple Valley	FIGURE 2

MW-12	
TPH-G/D/O	ND/ND/ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND

MW-2b	
TPH-G/D/O	ND/ND/ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND

MW-1b	
TPH-G/D/O	ND/ND/ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND

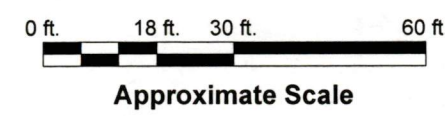
MW-13	
TPH-G/D/O	ND/ND/ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND



Legend

- Groundwater Monitoring Well Installed by KHM
- Groundwater Monitoring Well Installed by Others
- Abandoned Monitoring Well
- TPH-G/D/O Total Petroleum Hydrocarbons as Gasoline/Diesel/Oil
- B Benzene
- T Toluene
- E Ethylbenzene
- X Total Xylenes
- MTBE Methyl tert-Butyl Ether
- TBA Tert-Butyl Alcohol
- ND Not Detected

Note: All concentrations reported in micrograms per liter (ug/l).



	HYDROCARBON DISTRIBUTION IN GROUNDWATER, MAY 13, 2003	
	Shell/Equiva Site - SAP 120891 21641 Maple Valley Highway Maple Valley, Washington	
DATE 6/05/03	PROJECT A81-21641 Maple Valley	FIGURE 3

Site map based on drawing prepared by WGR Southwest, Inc. dated 7/00

APPENDIX A

FIELD DATA SHEETS

APPENDIX B

FIELD PROCEDURES

GROUNDWATER MONITORING AND SAMPLING

Before the sampling event, KHM measured depth to water in each groundwater monitoring well at the facility with an electronic water level meter. This information was recorded on waterproof field sheets. Groundwater elevations (GWE) were measured to an accuracy of 0.01 feet. Samples were withdrawn from each well using a disposable polyethylene bailer and placed in the appropriate laboratory-provided container. Samples were labeled, placed into ice filled coolers, logged onto chain-of-custody forms and transported to the laboratory.

APPENDIX C

**LABORATORY REPORT AND
CHAIN-OF-CUSTODY DOCUMENTS**



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

RECEIVED
 JUN 02 2003
 BY: _____

Shell Oil Products US

Certificate of Analysis Number:
03050578

<p>Report To: Delta Environmental Consultants Tena Seeds 17720 NE 65th Street Suite 201 Redmond WA 98052- ph: (425) 558-0134 fax:</p>	<p>Project Name: INC# 97420022 Site: 21641 Maple Valley Highway Site Address: 21641 Maple Valley Highway Maple Valley WA PO Number: SAP #120891 State: Washington State Cert. No.: C156 Date Reported: 5/29/2003</p>
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This Report Contains A Total Of 15 Pages

Excluding This Page

And

Chain Of Custody

5/29/2003

Date



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Shell Oil Products US

Certificate of Analysis Number:

03050578

Report To: Delta Environmental Consultants
 Tena Seeds
 17720 NE 65th Street
 Suite 201
 Redmond
 WA
 98052-
 ph: (425) 558-0134 fax: (425) 869-7494

Project Name: INC# 97420022
Site: 21641 Maple Valley Highway
Site Address: 21641 Maple Valley Highway
 Maple Valley WA
PO Number: SAP #120891
State: Washington
State Cert. No.: C156
Date Reported: 5/29/2003

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1b	03050578-01	Water	5/13/2003 9:30:00 AM	5/15/2003 10:00:00 AM		<input type="checkbox"/>
MW-2b	03050578-02	Water	5/13/2003 10:00:00 AM	5/15/2003 10:00:00 AM		<input type="checkbox"/>
MW-12	03050578-03	Water	5/13/2003 10:30:00 AM	5/15/2003 10:00:00 AM		<input type="checkbox"/>
MW-13	03050578-04	Water	5/13/2003 11:00:00 AM	5/15/2003 10:00:00 AM		<input type="checkbox"/>
Trip Blank	03050578-05	Water	5/13/2003	5/15/2003 10:00:00 AM		<input type="checkbox"/>

Elessa Sommers
 Senior Project Manager

5/29/2003

Date

Joel Grice
 Laboratory Director

Ted Yen
 Quality Assurance Officer



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID MW-1b Collected: 05/13/2003 9:30 SPL Sample ID: 03050578-01

Site: 21641 Maple Valley Highway

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	NWTPH-DX	Units: mg/L		
Diesel Range Organics	ND	0.25	1		05/23/03 19:29	AM	1688139
Motor Oil	ND	0.5	1		05/23/03 19:29	AM	1688139
Surr: n-Pentacosane	66.8	% 20-131	1		05/23/03 19:29	AM	1688139

Prep Method	Prep Date	Prep Initials
SW3510C	05/17/2003 11:25	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		05/21/03 23:52	AE	1675773
Surr: 1,4-Difluorobenzene	99.0	% 62-144	1		05/21/03 23:52	AE	1675773
Surr: 4-Bromofluorobenzene	97.0	% 44-153	1		05/21/03 23:52	AE	1675773

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	5/17/03	0	1		05/17/03 0:00	KL	1687253

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		05/21/03 20:53	DO	1674371
Diisopropyl Ether	ND	5	1		05/21/03 20:53	DO	1674371
Ethyl tert-butyl ether	ND	5	1		05/21/03 20:53	DO	1674371
Ethylbenzene	ND	1	1		05/21/03 20:53	DO	1674371
Methyl tert-butyl ether	ND	1	1		05/21/03 20:53	DO	1674371
t-Butyl Alcohol	ND	50	1		05/21/03 20:53	DO	1674371
tert-Amyl methyl ether	ND	5	1		05/21/03 20:53	DO	1674371
Toluene	ND	1	1		05/21/03 20:53	DO	1674371
m,p-Xylene	ND	1	1		05/21/03 20:53	DO	1674371
o-Xylene	ND	1	1		05/21/03 20:53	DO	1674371
Xylenes, Total	ND	1	1		05/21/03 20:53	DO	1674371
Surr: 1,2-Dichloroethane-d4	94.1	% 70-130	1		05/21/03 20:53	DO	1674371
Surr: 4-Bromofluorobenzene	103	% 70-130	1		05/21/03 20:53	DO	1674371
Surr: Toluene-d8	99.0	% 70-130	1		05/21/03 20:53	DO	1674371

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID MW-2b Collected: 05/13/2003 10:00 SPL Sample ID: 03050578-02

Site: 21641 Maple Valley Highway

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	NWTPH-DX	Units: mg/L		
Diesel Range Organics	ND	0.25	1		05/23/03 21:26 AM		1688142
Motor Oil	ND	0.5	1		05/23/03 21:26 AM		1688142
Surr: n-Pentacosane	72.6	% 20-131	1		05/23/03 21:26 AM		1688142

Prep Method	Prep Date	Prep Initials
SW3510C	05/17/2003 11:25	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		05/22/03 0:17	AE	1675774
Surr: 1,4-Difluorobenzene	98.7	% 62-144	1		05/22/03 0:17	AE	1675774
Surr: 4-Bromofluorobenzene	113	% 44-153	1		05/22/03 0:17	AE	1675774

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	5/17/03	0	1		05/17/03 0:00	KL	1687254

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		05/21/03 21:21	DO	1674372
Diisopropyl Ether	ND	5	1		05/21/03 21:21	DO	1674372
Ethyl tert-butyl ether	ND	5	1		05/21/03 21:21	DO	1674372
Ethylbenzene	ND	1	1		05/21/03 21:21	DO	1674372
Methyl tert-butyl ether	ND	1	1		05/21/03 21:21	DO	1674372
t-Butyl Alcohol	ND	50	1		05/21/03 21:21	DO	1674372
tert-Amyl methyl ether	ND	5	1		05/21/03 21:21	DO	1674372
Toluene	ND	1	1		05/21/03 21:21	DO	1674372
m,p-Xylene	ND	1	1		05/21/03 21:21	DO	1674372
o-Xylene	ND	1	1		05/21/03 21:21	DO	1674372
Xylenes, Total	ND	1	1		05/21/03 21:21	DO	1674372
Surr: 1,2-Dichloroethane-d4	94.2	% 70-130	1		05/21/03 21:21	DO	1674372
Surr: 4-Bromofluorobenzene	103	% 70-130	1		05/21/03 21:21	DO	1674372
Surr: Toluene-d8	98.6	% 70-130	1		05/21/03 21:21	DO	1674372

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID MW-12

Collected: 05/13/2003 10:30 SPL Sample ID: 03050578-03

Site: 21641 Maple Valley Highway

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	NWTPH-DX	Units: mg/L		
Diesel Range Organics	ND	0.25	1		05/23/03 22:05	AM	1688143
Motor Oil	ND	0.5	1		05/23/03 22:05	AM	1688143
Surr: n-Pentacosane	85.8	% 20-131	1		05/23/03 22:05	AM	1688143

Prep Method	Prep Date	Prep Initials
SW3510C	05/17/2003 11:25	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		05/22/03 0:42	AE	1675775
Surr: 1,4-Difluorobenzene	97.0	% 62-144	1		05/22/03 0:42	AE	1675775
Surr: 4-Bromofluorobenzene	116	% 44-153	1		05/22/03 0:42	AE	1675775

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	5/17/03	0	1		05/17/03 0:00	KL	1687256

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		05/21/03 21:50	DO	1674373
Diisopropyl Ether	ND	5	1		05/21/03 21:50	DO	1674373
Ethyl tert-butyl ether	ND	5	1		05/21/03 21:50	DO	1674373
Ethylbenzene	ND	1	1		05/21/03 21:50	DO	1674373
Methyl tert-butyl ether	ND	1	1		05/21/03 21:50	DO	1674373
t-Butyl Alcohol	ND	50	1		05/21/03 21:50	DO	1674373
tert-Amyl methyl ether	ND	5	1		05/21/03 21:50	DO	1674373
Toluene	ND	1	1		05/21/03 21:50	DO	1674373
m,p-Xylene	ND	1	1		05/21/03 21:50	DO	1674373
o-Xylene	ND	1	1		05/21/03 21:50	DO	1674373
Xylenes, Total	ND	1	1		05/21/03 21:50	DO	1674373
Surr: 1,2-Dichloroethane-d4	94.9	% 70-130	1		05/21/03 21:50	DO	1674373
Surr: 4-Bromofluorobenzene	103	% 70-130	1		05/21/03 21:50	DO	1674373
Surr: Toluene-d8	96.8	% 70-130	1		05/21/03 21:50	DO	1674373

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TX 77054
 (713) 660-0901

Client Sample ID MW-13

Collected: 05/13/2003 11:00 SPL Sample ID: 03050578-04

Site: 21641 Maple Valley Highway

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	NWTPH-DX	Units: mg/L		
Diesel Range Organics	ND	0.25	1		05/23/03 22:44 AM		1688144
Motor Oil	ND	0.5	1		05/23/03 22:44 AM		1688144
Surr: n-Pentacosane	61.0	% 20-131	1		05/23/03 22:44 AM		1688144

Prep Method	Prep Date	Prep Initials
SW3510C	05/17/2003 11:25	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		05/22/03 1:07 AE		1675776
Surr: 1,4-Difluorobenzene	95.3	% 62-144	1		05/22/03 1:07 AE		1675776
Surr: 4-Bromofluorobenzene	101	% 44-153	1		05/22/03 1:07 AE		1675776

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	5/17/03	0	1		05/17/03 0:00	KL	1687257

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		05/21/03 22:19	DO	1674374
Diisopropyl Ether	ND	5	1		05/21/03 22:19	DO	1674374
Ethyl tert-butyl ether	ND	5	1		05/21/03 22:19	DO	1674374
Ethylbenzene	ND	1	1		05/21/03 22:19	DO	1674374
Methyl tert-butyl ether	ND	1	1		05/21/03 22:19	DO	1674374
t-Butyl Alcohol	ND	50	1		05/21/03 22:19	DO	1674374
tert-Amyl methyl ether	ND	5	1		05/21/03 22:19	DO	1674374
Toluene	ND	1	1		05/21/03 22:19	DO	1674374
m,p-Xylene	ND	1	1		05/21/03 22:19	DO	1674374
o-Xylene	ND	1	1		05/21/03 22:19	DO	1674374
Xylenes, Total	ND	1	1		05/21/03 22:19	DO	1674374
Surr: 1,2-Dichloroethane-d4	95.4	% 70-130	1		05/21/03 22:19	DO	1674374
Surr: 4-Bromofluorobenzene	99.6	% 70-130	1		05/21/03 22:19	DO	1674374
Surr: Toluene-d8	97.9	% 70-130	1		05/21/03 22:19	DO	1674374

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID Trip Blank

Collected: 05/13/2003 0:00

SPL Sample ID: 03050578-05

Site: 21641 Maple Valley Highway

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		05/21/03 19:21	DO	1674368
Diisopropyl Ether	ND	5	1		05/21/03 19:21	DO	1674368
Ethyl tert-butyl ether	ND	5	1		05/21/03 19:21	DO	1674368
Ethylbenzene	ND	1	1		05/21/03 19:21	DO	1674368
Methyl tert-butyl ether	ND	1	1		05/21/03 19:21	DO	1674368
t-Butyl Alcohol	ND	50	1		05/21/03 19:21	DO	1674368
tert-Amyl methyl ether	ND	5	1		05/21/03 19:21	DO	1674368
Toluene	ND	1	1		05/21/03 19:21	DO	1674368
m,p-Xylene	ND	1	1		05/21/03 19:21	DO	1674368
o-Xylene	ND	1	1		05/21/03 19:21	DO	1674368
Xylenes, Total	ND	1	1		05/21/03 19:21	DO	1674368
Surr: 1,2-Dichloroethane-d4	94.1	% 70-130	1		05/21/03 19:21	DO	1674368
Surr: 4-Bromofluorobenzene	104	% 70-130	1		05/21/03 19:21	DO	1674368
Surr: Toluene-d8	96.9	% 70-130	1		05/21/03 19:21	DO	1674368

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Shell Oil Products US

INC# 97420022

Analysis: Silica Gel Cleanup
Method: SW3630C

WorkOrder: 03050578
Lab Batch ID: R85766

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
03050578-01B	MW-1b
03050578-02B	MW-2b
03050578-03B	MW-12
03050578-04B	MW-13

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
 N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Shell Oil Products US

INC# 97420022

Analysis: Diesel Range Organics
Method: NWTPH-Dx

WorkOrder: 03050578
Lab Batch ID: 28342

Method Blank

Samples in Analytical Batch:

RunID: HP_V_030524A-1688156 Units: mg/L
Analysis Date: 05/24/2003 6:29 Analyst: AM
Preparation Date: 05/17/2003 11:25 Prep By: KL Method SW3510C

Lab Sample ID Client Sample ID
03050578-01B MW-1b
03050578-02B MW-2b
03050578-03B MW-12
03050578-04B MW-13

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Diesel Range Organics, Motor Oil, and Surr: n-Pentacosane.

Laboratory Control Sample (LCS)

RunID: HP_V_030524A-1688155 Units: mg/L
Analysis Date: 05/24/2003 5:51 Analyst: AM
Preparation Date: 05/17/2003 11:25 Prep By: KL Method SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Diesel Range Organics.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03050578-01
RunID: HP_V_030524A-1688140 Units: mg/L
Analysis Date: 05/23/2003 20:08 Analyst: AM
Preparation Date: 05/17/2003 11:25 Prep By: KL Method SW3510C

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row for Diesel Range Organics.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Shell Oil Products US

INC# 97420022

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 03050578
Lab Batch ID: R85257

Method Blank

RunID: MDSVOA2_030521A-16743 Units: ug/L
Analysis Date: 05/21/2003 12:26 Analyst: DO

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
03050578-01A MW-1b
03050578-02A MW-2b
03050578-03A MW-12
03050578-04A MW-13
03050578-05A Trip Blank

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Diisopropyl Ether, Ethyl tert-butyl ether, Ethylbenzene, Methyl tert-butyl ether, t-Butyl Alcohol, tert-Amyl methyl ether, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surr. entries.

Laboratory Control Sample (LCS)

RunID: MDSVOA2_030521A-16743 Units: ug/L
Analysis Date: 05/21/2003 11:29 Analyst: DO

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Diisopropyl Ether, Ethyl tert-butyl ether, Ethylbenzene, Methyl tert-butyl ether, t-Butyl Alcohol, tert-Amyl methyl ether, Toluene, m,p-Xylene, o-Xylene, and Xylenes, Total.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Shell Oil Products US

INC# 97420022

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 03050578
Lab Batch ID: R85257

Sample Spiked: 03050472-03
RunID: MDSVOA2_030521A-16743 Units: ug/L
Analysis Date: 05/21/2003 14:49 Analyst: DO

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Benzene, Diisopropyl Ether, Ethyl tert-butyl ether, Ethylbenzene, Methyl tert-butyl ether, t-Butyl Alcohol, tert-Amyl methyl ether, Toluene, m,p-Xylene, o-Xylene, and Xylenes,Total.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Shell Oil Products US

INC# 97420022

Analysis: Gasoline Range Organics
Method: NWTPH-Gx

WorkOrder: 03050578
Lab Batch ID: R85311

Method Blank

RunID: HP_S_030521B-1675772 Units: mg/L
Analysis Date: 05/21/2003 20:57 Analyst: AE

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
03050578-01A MW-1b
03050578-02A MW-2b
03050578-03A MW-12
03050578-04A MW-13

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP_S_030521B-1675769 Units: mg/L
Analysis Date: 05/21/2003 18:27 Analyst: AE

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Gasoline Range Organics.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 03050578-01
RunID: HP_S_030521B-1675770 Units: mg/L
Analysis Date: 05/21/2003 20:07 Analyst: AE

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row for Gasoline Range Organics.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist
And
Chain of Custody*



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	03050578	Received By:	NB
Date and Time Received:	5/15/2003 10:00:00 AM	Carrier name:	FedEx
Temperature:	3	Chilled by:	Water Ice

- 1. Shipping container/cooler in good condition? Yes No Not Present
- 2. Custody seals intact on shipping container/cooler? Yes No Not Present
- 3. Custody seals intact on sample bottles? Yes No Not Present
- 4. Chain of custody present? Yes No
- 5. Chain of custody signed when relinquished and received? Yes No
- 6. Chain of custody agrees with sample labels? Yes No
- 7. Samples in proper container/bottle? Yes No
- 8. Sample containers intact? Yes No
- 9. Sufficient sample volume for indicated test? Yes No
- 10. All samples received within holding time? Yes No
- 11. Container/Temp Blank temperature in compliance? Yes No
- 12. Water - VOA vials have zero headspace? Yes No Not Applicable
- 13. Water - pH acceptable upon receipt? Yes No Not Applicable

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:



ENVIRONMENTAL MANAGEMENT, INC.

Date: June 5, 2003

Projects: Various

To: Mr. John Weitfield
Washington State Department of Ecology
Northwest Regional Office
Toxics Cleanup Program, UST Division
3190 160th Avenue SE
Bellevue, Washington 98008-5452

We have enclosed:

Copies	Description
	Shell GRASP Monitoring Reports for the following sites:
<u>1</u>	<u>1935 N. Northgate Way, Seattle, Washington</u>
<u>1</u>	<u>4102 NE 4th Street, Renton, Washington</u>
<u>1</u>	<u>17941 108th Avenue SE, Renton, Washington</u>
<u>1</u>	<u>21641 Maple Valley Highway, Maple Valley, Washington</u>
<u>1</u>	<u>1505 NE 205th Street, Shoreline, Washington</u>
<u>1</u>	<u>14210 SE Petrovitsky Road, Renton, Washington</u>

RECEIVED

JUN 11 2003

DEPT OF ECOLOGY

For your:

- Use
- Approval
- Review
- Information

Comments: _____


Ward Crell