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Release 3431
Texaco station Maple Valley
Maple Valley

www.deltaenv.com

September 16, 2003
Project A81-21641 Maple Valley

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

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

Dear Mr. Wietfeld:

Delta Environmental Consultants, Inc. (Delta), formerly 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 (Delta) at (503) 639-8098 or Mr. Tony Palagy (SHELL) at (425) 377-8530.

entered
cm
10/17/03

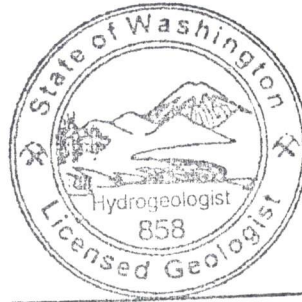
Sincerely,
DELTA ENVIRONMENTAL CONSULTANTS, INC.

Tena Seeds

Tena Seeds, E.I.T.
Project Engineer

Ward Crell

Ward Crell, R.G.
Senior Geologist



Edward Crell

Attachments: Shell GRASP Monitoring Report

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

September 16, 2003

SHELL GRASP MONITORING REPORT

Station Address.: 21641 Maple Valley Highway
Maple Valley, Washington
SHELL GRASP Incident No.: 97420022
DELTA Project No.: A81-21641 Maple Valley/ST21-641
SHELL Environmental Engin./Phone No.: Tony Palagyi/(425) 377-8530
DELTA 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 Yes No
(Well #'s):
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: 12.50 to 13.52 feet
Groundwater Gradient: SSW @ approximately 0.006 ft/ft
Summary of Unusual Activity: None

Brian Pletcher
Project Manager (Delta)

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

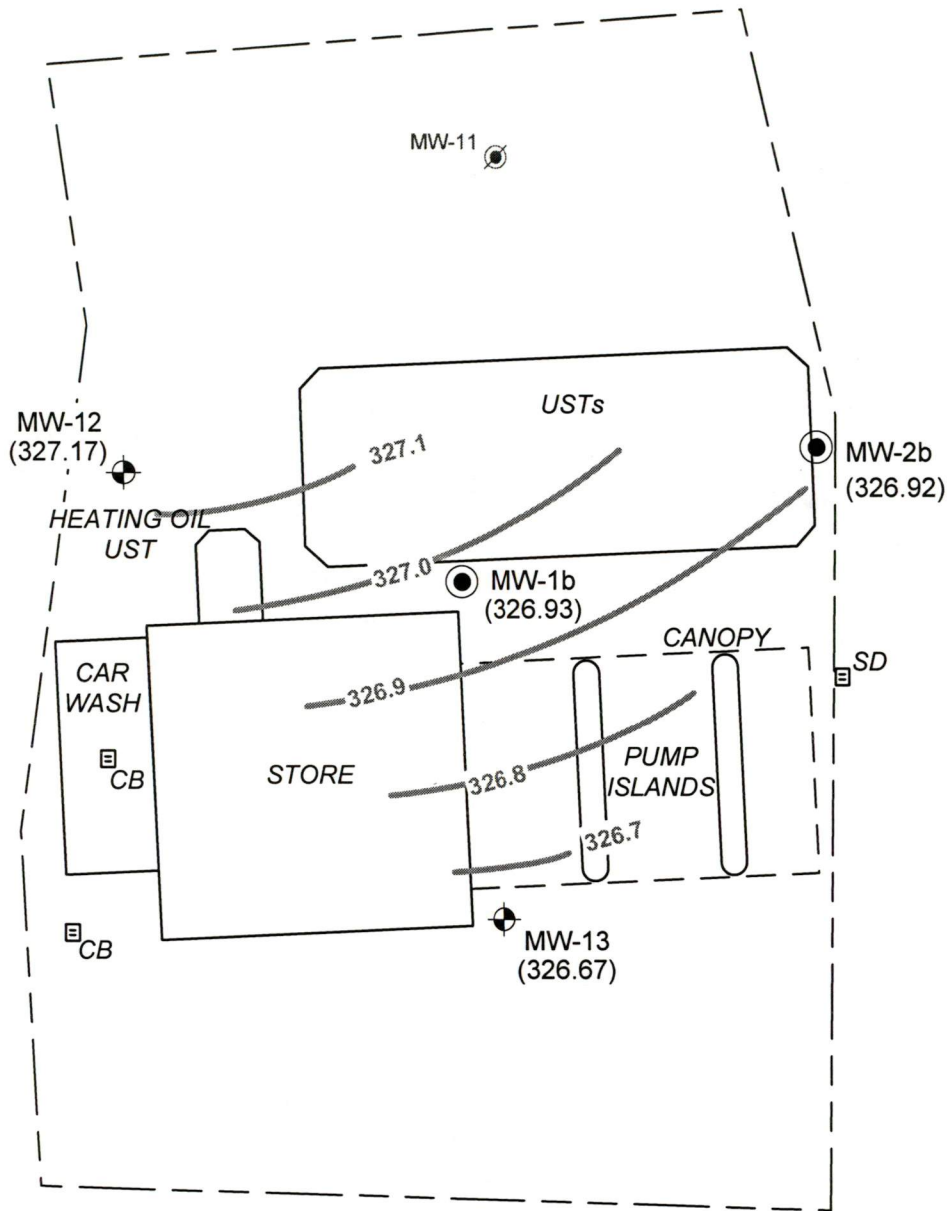
TABLE 1
GROUNDWATER GAUGING AND ANALYTICAL DATA
 21641 Maple Valley Highway
 Maple Valley, Washington

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)	Ethanol (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	NA	12.53	0.00	327.50
340.03	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	NA	12.47	0.00	327.56
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	<5,000	13.10	0.00	326.93
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	NA	11.57	0.00	327.85
339.42	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	NA	11.51	0.00	327.91
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	<5,000	12.50	0.00	326.92
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	NA	12.95	0.00	327.43
340.38	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	NA	12.90	0.00	327.48
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	<5,000	13.21	0.00	327.17
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	NA	12.70	0.00	327.49
340.19	05/13/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	NA	12.62	0.00	327.57
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	<5	<5	<5	<50	<5,000	13.52	0.00	326.67





MTCA Method A Cleanup Levels:	1000²	500	500	5	1000	700	1000	20	-	-	-	-	-	-	-	-	-
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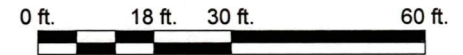
Notes:
 µg/l = micrograms per liter
 TOC = Top of well casing elevation (feet)
 SPH = Separate-phase hydrocarbons
 TPH-G = Total Petroleum Hydrocarbons as Gasoline
 TPH-D = Total Petroleum Hydrocarbons as Diesel
 TPH-O = Total Petroleum Hydrocarbons as Oil
 MTBE = Methyl tert-butyl ether
 DIPE = Di-isopropyl 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
¹TOC elevation and groundwater elevation relative to Mean Sea Level
²MTCA Method A Cleanup Level for TPH-Gasoline is 800 µg/l if benzene is detectable in groundwater.

FIGURES



Legend

-  Groundwater Monitoring Well Installed by KHM
-  Groundwater Monitoring Well Installed by Others
-  Abandoned Groundwater Monitoring Well
- (326.93) Groundwater Elevation, August 20, 2003
- 327.0  Groundwater Elevation Contour, August 20, 2003



Approximate Scale

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP

Shell / Equiva Site - SAP 120891
 21641 Maple Valley Highway
 Maple Valley, Washington

PROJECT NO.
 A81-21641 Maple Valley

DRAWN BY
 OP 9-02-03

FILE NO.
 1

PREPARED BY
 OP

REVISION NO.
 1

REVIEWED BY
 DL



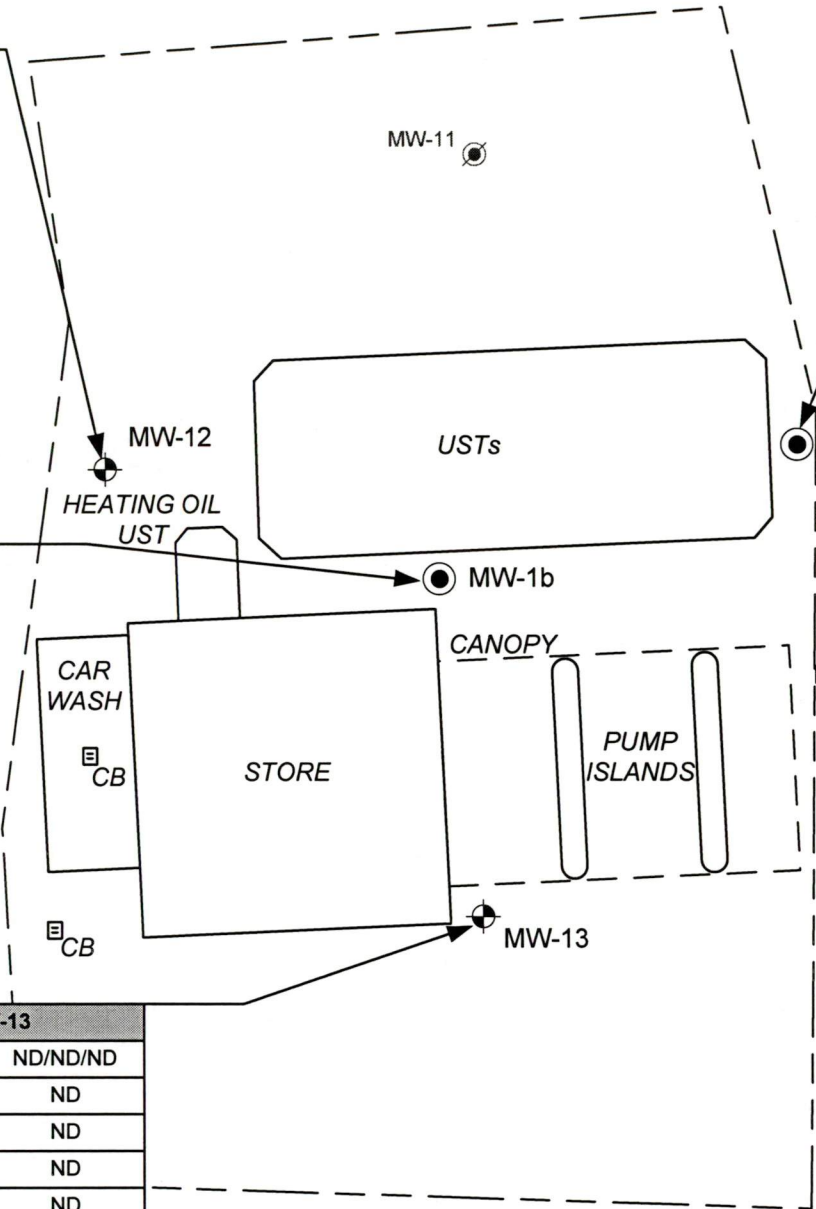


MW-12	
TPH-G/D/O	ND/ND/ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TBA	ND




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

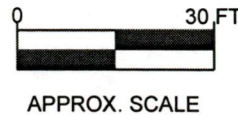
-  Groundwater Monitoring Well Installed by KHM
-  Groundwater Monitoring Well Installed by Others
-  Abandoned Monitoring Well
- TPH-G/D/O Total Petroleum Hydrocarbons as Gasoline/Diesel/Oil
- B Benzene
- T Toluene
- E Ethylbenzene
- X Total Xylenes
- MTBE Methyl tert-Butyl Ether
- TBA Tert-Butyl Alcohol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

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

FIGURE 3
HYDROCARBON DISTRIBUTION IN GROUNDWATER,
SEPTEMBER 3, 2003

Shell / Equiva Site - SAP 120891
21641 Maple Valley Highway
Maple Valley, Washington

PROJECT NO. A81-21641 Maple Valley	DRAWN BY SB 9-16-03
FILE NO. 1	PREPARED BY SB
REVISION NO. 1	REVIEWED BY DL



APPENDIX A
FIELD DATA SHEETS

APPENDIX B
FIELD PROCEDURES

GROUNDWATER MONITORING AND SAMPLING

Before the sampling event, Delta 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

Shell Oil Products US

Certificate of Analysis Number:

03080782

Report To: Delta Environmental Consultants, Inc. Stacey Bennett 17720 NE 65th Street Suite 201 Redmond WA 98052- ph: (425) 558-0134 fax:	Project Name: INC#97420022/SAP #120891 Site: 21641 Maple Valley Highway Site Address: 21641 Maple Valley Highway Maple Valley WA PO Number: State: Washington State Cert. No.: C156 Date Reported: 9/3/2003
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This Report Contains A Total Of 15 Pages

Excluding This Page

And

Chain Of Custody

9/3/2003

Date



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

Shell Oil Products US

Certificate of Analysis Number:

03080782

Report To: Delta Environmental Consultants, Inc.
 Stacey Bennett
 17720 NE 65th Street
 Suite 201
 Redmond
 WA
 98052-
 ph: (425) 558-0134 fax: (425) 869-7494

Project Name: INC#97420022/SAP #120891
Site: 21641 Maple Valley Highway
Site Address: 21641 Maple Valley Highway
 Maple Valley WA
PO Number:
State: Washington
State Cert. No.: C156
Date Reported: 9/3/2003

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1b	03080782-01	Water	8/20/2003 9:20:00 AM	8/22/2003 9:30:00 AM		<input type="checkbox"/>
MW-2b	03080782-02	Water	8/20/2003 10:00:00 AM	8/22/2003 9:30:00 AM		<input type="checkbox"/>
MW-12	03080782-03	Water	8/20/2003 10:40:00 AM	8/22/2003 9:30:00 AM		<input type="checkbox"/>
MW-13	03080782-04	Water	8/20/2003 11:30:00 AM	8/22/2003 9:30:00 AM		<input type="checkbox"/>

9/3/2003

Elessa Sommers
 Senior Project Manager

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: 08/20/2003 9:20 SPL Sample ID: 03080782-01

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		08/28/03 21:43	AM	1843805
Motor Oil	ND	0.5	1		08/28/03 21:43	AM	1843805
Surr: n-Pentacosane	66.0	% 20-131	1		08/28/03 21:43	AM	1843805

Prep Method	Prep Date	Prep Initials
SW3510C	08/22/2003 6:24	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		08/28/03 11:00	AE	1843591
Surr: 1,4-Difluorobenzene	102	% 62-144	1		08/28/03 11:00	AE	1843591
Surr: 4-Bromofluorobenzene	122	% 44-153	1		08/28/03 11:00	AE	1843591

SEMIVOLATILE HYDROCARBONS - ALCOHOL			MCL	SW8015B	Units: mg/L		
Ethanol	ND	5	1		08/27/03 7:12	J_F	1844298

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	8/22/03	0	1		08/22/03 0:00	K_L	1839714

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		08/29/03 0:51	KA	1846198
Diisopropyl Ether	ND	5	1		08/29/03 0:51	KA	1846198
Ethyl tert-butyl ether	ND	5	1		08/29/03 0:51	KA	1846198
Ethylbenzene	ND	1	1		08/29/03 0:51	KA	1846198
Methyl tert-butyl ether	ND	1	1		08/29/03 0:51	KA	1846198
t-Butyl Alcohol	ND	50	1		08/29/03 0:51	KA	1846198
tert-Amyl methyl ether	ND	5	1		08/29/03 0:51	KA	1846198
Toluene	ND	1	1		08/29/03 0:51	KA	1846198
m,p-Xylene	ND	1	1		08/29/03 0:51	KA	1846198
o-Xylene	ND	1	1		08/29/03 0:51	KA	1846198
Xylenes, Total	ND	1	1		08/29/03 0:51	KA	1846198
Surr: 1,2-Dichloroethane-d4	129 MI	% 76-126	1	*	08/29/03 0:51	KA	1846198
Surr: 4-Bromofluorobenzene	98.8	% 79-122	1		08/29/03 0:51	KA	1846198
Surr: Toluene-d8	102	% 73-122	1		08/29/03 0:51	KA	1846198

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: 08/20/2003 10:00

SPL Sample ID: 03080782-02

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		08/29/03 0:22	AM	1843809
Motor Oil	ND	0.5	1		08/29/03 0:22	AM	1843809
Surr: n-Pentacosane	69.2	% 20-131	1		08/29/03 0:22	AM	1843809

Prep Method	Prep Date	Prep Initials
SW3510C	08/22/2003 6:24	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		08/28/03 12:25	AE	1843594
Surr: 1,4-Difluorobenzene	104	% 62-144	1		08/28/03 12:25	AE	1843594
Surr: 4-Bromofluorobenzene	113	% 44-153	1		08/28/03 12:25	AE	1843594

SEMIVOLATILE HYDROCARBONS - ALCOHOL			MCL	SW8015B	Units: mg/L		
Ethanol	ND	5	1		08/27/03 7:28	J_F	1844299

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	8/22/03	0	1		08/22/03 0:00	K_L	1839715

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		08/29/03 1:22	KA	1846199
Diisopropyl Ether	ND	5	1		08/29/03 1:22	KA	1846199
Ethyl tert-butyl ether	ND	5	1		08/29/03 1:22	KA	1846199
Ethylbenzene	ND	1	1		08/29/03 1:22	KA	1846199
Methyl tert-butyl ether	ND	1	1		08/29/03 1:22	KA	1846199
t-Butyl Alcohol	ND	50	1		08/29/03 1:22	KA	1846199
tert-Amyl methyl ether	ND	5	1		08/29/03 1:22	KA	1846199
Toluene	ND	1	1		08/29/03 1:22	KA	1846199
m,p-Xylene	ND	1	1		08/29/03 1:22	KA	1846199
o-Xylene	ND	1	1		08/29/03 1:22	KA	1846199
Xylenes, Total	ND	1	1		08/29/03 1:22	KA	1846199
Surr: 1,2-Dichloroethane-d4	133	MI % 76-126	1	*	08/29/03 1:22	KA	1846199
Surr: 4-Bromofluorobenzene	101	% 79-122	1		08/29/03 1:22	KA	1846199
Surr: Toluene-d8	103	% 73-122	1		08/29/03 1:22	KA	1846199

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



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

Client Sample ID MW-12 Collected: 08/20/2003 10:40 SPL Sample ID: 03080782-03

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		08/29/03 1:02 AM		1843810
Motor Oil	ND	0.5	1		08/29/03 1:02 AM		1843810
Surr: n-Pentacosane	76.6 %	20-131	1		08/29/03 1:02 AM		1843810

Prep Method	Prep Date	Prep Initials
SW3510C	08/22/2003 6:24	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		08/28/03 12:46 AE		1843595
Surr: 1,4-Difluorobenzene	103 %	62-144	1		08/28/03 12:46 AE		1843595
Surr: 4-Bromofluorobenzene	96.7 %	44-153	1		08/28/03 12:46 AE		1843595

SEMIVOLATILE HYDROCARBONS - ALCOHOL			MCL	SW8015B	Units: mg/L		
Ethanol	ND	5	1		08/27/03 7:44 J_F		1844300

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	8/22/03	0	1		08/22/03 0:00 K_L		1839716

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		08/29/03 1:53 KA		1846200
Diisopropyl Ether	ND	5	1		08/29/03 1:53 KA		1846200
Ethyl tert-butyl ether	ND	5	1		08/29/03 1:53 KA		1846200
Ethylbenzene	ND	1	1		08/29/03 1:53 KA		1846200
Methyl tert-butyl ether	ND	1	1		08/29/03 1:53 KA		1846200
t-Butyl Alcohol	ND	50	1		08/29/03 1:53 KA		1846200
tert-Amyl methyl ether	ND	5	1		08/29/03 1:53 KA		1846200
Toluene	ND	1	1		08/29/03 1:53 KA		1846200
m,p-Xylene	ND	1	1		08/29/03 1:53 KA		1846200
o-Xylene	ND	1	1		08/29/03 1:53 KA		1846200
Xylenes, Total	ND	1	1		08/29/03 1:53 KA		1846200
Surr: 1,2-Dichloroethane-d4	124 %	76-126	1		08/29/03 1:53 KA		1846200
Surr: 4-Bromofluorobenzene	99.6 %	79-122	1		08/29/03 1:53 KA		1846200
Surr: Toluene-d8	110 %	73-122	1		08/29/03 1:53 KA		1846200

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: 08/20/2003 11:30 SPL Sample ID: 03080782-04

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		08/29/03 1:41	AM	1843811
Motor Oil	ND	0.5	1		08/29/03 1:41	AM	1843811
Surr: n-Pentacosane	69.4	% 20-131	1		08/29/03 1:41	AM	1843811

Prep Method	Prep Date	Prep Initials
SW3510C	08/22/2003 6:24	KL

GASOLINE RANGE ORGANICS			MCL	NWTPH-GX	Units: mg/L		
Gasoline Range Organics	ND	0.25	1		08/28/03 13:07	AE	1843597
Surr: 1,4-Difluorobenzene	101	% 62-144	1		08/28/03 13:07	AE	1843597
Surr: 4-Bromofluorobenzene	105	% 44-153	1		08/28/03 13:07	AE	1843597

SEMIVOLATILE HYDROCARBONS - ALCOHOL			MCL	SW8015B	Units: mg/L		
Ethanol	ND	5	1		08/27/03 7:59	J_F	1844301

SILICA GEL CLEANUP			MCL	SW3630C	Units:		
Date Performed	8/22/03	0	1		08/22/03 0:00	K_L	1839717

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND	1	1		08/29/03 2:25	KA	1846201
Diisopropyl Ether	ND	5	1		08/29/03 2:25	KA	1846201
Ethyl tert-butyl ether	ND	5	1		08/29/03 2:25	KA	1846201
Ethylbenzene	ND	1	1		08/29/03 2:25	KA	1846201
Methyl tert-butyl ether	ND	1	1		08/29/03 2:25	KA	1846201
t-Butyl Alcohol	ND	50	1		08/29/03 2:25	KA	1846201
tert-Amyl methyl ether	ND	5	1		08/29/03 2:25	KA	1846201
Toluene	ND	1	1		08/29/03 2:25	KA	1846201
m,p-Xylene	ND	1	1		08/29/03 2:25	KA	1846201
o-Xylene	ND	1	1		08/29/03 2:25	KA	1846201
Xylenes, Total	ND	1	1		08/29/03 2:25	KA	1846201
Surr: 1,2-Dichloroethane-d4	120	% 76-126	1		08/29/03 2:25	KA	1846201
Surr: 4-Bromofluorobenzene	97.2	% 79-122	1		08/29/03 2:25	KA	1846201
Surr: Toluene-d8	108	% 73-122	1		08/29/03 2:25	KA	1846201

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

Quality Control Documentation



Quality Control Report

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

Shell Oil Products US
INC#97420022/SAP #120891

Analysis: Silica Gel Cleanup
Method: SW3630C

WorkOrder: 03080782
Lab Batch ID: R92556

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
03080782-01A	MW-1b
03080782-02A	MW-2b
03080782-03A	MW-12
03080782-04A	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/SAP #120891

Analysis: Diesel Range Organics
Method: NWTPH-Dx

WorkOrder: 03080782
Lab Batch ID: 31259

Method Blank

Samples in Analytical Batch:

RunID: HP_V_030828A-1843798 Units: mg/L
Analysis Date: 08/28/2003 17:06 Analyst: AM
Preparation Date: 08/22/2003 6:24 Prep By: KL Method SW3510C

Lab Sample ID Client Sample ID
03080782-01A MW-1b
03080782-02A MW-2b
03080782-03A MW-12
03080782-04A MW-13

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Diesel Range Organics (ND, 0.25), Motor Oil (ND, 0.50), and Surr: n-Pentacosane (77.4, 20-131).

Laboratory Control Sample (LCS)

RunID: HP_V_030828A-1843799 Units: mg/L
Analysis Date: 08/28/2003 17:46 Analyst: AM
Preparation Date: 08/24/2003 19:30 Prep By: KL Method SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row for Diesel Range Organics shows 2.5 spike, 1.93 result, 77% recovery, 21 lower limit, 175 upper limit.

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

Sample Spiked: 03080782-01
RunID: HP_V_030828A-1843806 Units: mg/L
Analysis Date: 08/28/2003 22:23 Analyst: AM
Preparation Date: 08/22/2003 6:24 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 shows ND sample result, 5 MS spike, 3.37 MS result, 66.3% MS recovery, 5 MSD spike, 3.17 MSD result, 62.3% MSD recovery, 6.06 RPD, 20 RPD limit, 21 low limit, 175 high limit.

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/SAP #120891

Analysis: Semivolatile Hydrocarbons - Alcohol
Method: SW8015B

WorkOrder: 03080782
Lab Batch ID: R92797

Method Blank

Samples in Analytical Batch:

RunID: VARH_030827A-1844274 Units: mg/L
Analysis Date: 08/27/2003 5:23 Analyst: J_F

Lab Sample ID Client Sample ID
03080782-01D MW-1b
03080782-02D MW-2b
03080782-03D MW-12
03080782-04D MW-13

Table with 3 columns: Analyte, Result, Rep Limit. Row: Ethanol, ND, 5.0

Laboratory Control Sample (LCS)

RunID: VARH_030827A-1844306 Units: mg/L
Analysis Date: 08/27/2003 9:18 Analyst: J_F

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Ethanol, 200, 195, 98, 49, 146

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

Sample Spiked: 03080663-01
RunID: VARH_030827A-1844307 Units: mg/L
Analysis Date: 08/27/2003 9:33 Analyst: J_F

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: Ethanol, ND, 200, 197, 98.5, 200, 198, 99.0, 0.537, 20, 57, 136

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/SAP #120891

Analysis: Gasoline Range Organics
Method: NWTPH-Gx

WorkOrder: 03080782
Lab Batch ID: R92753

Method Blank

Samples in Analytical Batch:

RunID: HP_N_030826B-1843588 Units: mg/L
Analysis Date: 08/26/2003 20:15 Analyst: AE

Lab Sample ID Client Sample ID
03080782-01B MW-1b
03080782-02B MW-2b
03080782-03B MW-12
03080782-04B 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_N_030826B-1843585 Units: mg/L
Analysis Date: 08/26/2003 12:10 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: 03080778-01
RunID: HP_N_030826B-1843586 Units: mg/L
Analysis Date: 08/26/2003 19:29 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.



Quality Control Report

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

Shell Oil Products US
INC#97420022/SAP #120891

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 03080782
Lab Batch ID: R92906

Method Blank

Samples in Analytical Batch:

RunID: MSDVOA1_030828C-18461 Units: ug/L
Analysis Date: 08/28/2003 17:02 Analyst: KA

Lab Sample ID Client Sample ID
03080782-01C MW-1b
03080782-02C MW-2b
03080782-03C MW-12
03080782-04C MW-13

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 three Surr: entries.

Laboratory Control Sample (LCS)

RunID: MSDVOA1_030828C-18462 Units: ug/L
Analysis Date: 08/28/2003 23:49 Analyst: KA

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.

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

Sample Spiked: 03080663-01
RunID: MSDVOA1_030828C-18462 Units: ug/L
Analysis Date: 08/29/2003 5:01 Analyst: KA

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/SAP #120891

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 03080782
Lab Batch ID: R92906

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.

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:	03080782	Received By:	NB
Date and Time Received:	8/22/2003 9:30:00 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:

8880 Interchange

Houston, TX 77054

713-660-0901

800-969-6775

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT-HOUSTON

Anthony Palagyi

INCIDENT NUMBER (S&E ONLY)

97420022

SAP or CRMT NUMBER (TS/CRMT)

120891

DATE: 8/20/03

PAGE: 1 of 1

CONSULTANT COMPANY: *Delta Env.*
 ADDRESS: *17720 NE 65th St. #201*
 CITY: *Redmond WA 98052*
 TELEPHONE: *425-558-0134* FAX: *425-869-7494* E-MAIL: *sbennett@deltaenv.com*

SITE ADDRESS (Street and City): *21641 Maple Valley Hwy, Maple Valley, WA*
 PROJECT CONTACT (Report to): *Stacey Bennett* CONSULTANT PROJECT NO.: *A81-21641 Maple Valley*
 SAMPLER NAME(S) (Print): *O.P.* LAB USE ONLY: *BAC*

TURNAROUND TIME (BUSINESS DAYS):
 10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS

REQUESTED ANALYSIS

LA - RWQCB REPORT FORMAT UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT C: *300*

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	NWTPH-D _x w/ silica gel cap	GRO-NW _x	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE (8260B) Confirmation, See Not	Ethanol (8015)
		DATE	TIME									
	MW-1b	8-20	9:20	W	9	X	X	X			X	
	MW-2b	↓	10:40	↓	↓	↓	↓	↓			↓	
	MW-12	↓	10:40	↓	↓	↓	↓	↓			↓	
	MW-13	↓	11:30	↓	↓	↓	↓	↓			↓	

FIELD NOTES:
 Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature) *[Signature]* Staff Geologist

Received by: (Signature) *[Signature]* 8/22/03 0930

Date: 8/21/03

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

[Handwritten signature]



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17720 NE 65th Street • Suite 201
Redmond, Washington 98052 USA

425.558.0134 800.477.7411
Fax 425.869.7494

Date: September 19, 2003
Projects: A81-Variou

To: Mr. John Wietfeld
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:
1	14210 SE Petrovitsky Road, Renton, Washington
1	21641 Maple Valley Highway, Maple Valley, Washington
1	17941 108 th Avenue SE, Renton, Washington

For your:

- Use
- Approval
- Review
- Information

Comments: _____

Ward Crell / *813*

RECEIVED
SEP 22 2003
DEPT OF ECOLOGY

