TEXACO Station
Maple Valley
LUST 3431

March 25, 2009

Ms. Carol Campagna
Shell Oil Products US
20945 S. Wilmington Avenue
Carson, California 90810-1039

DELTA

SUBJ: SHELL GRASP MONITORING REPORT
Shell Service Station
21641 Maple Valley Highway
Maple Valley, Washington
Delta Project SWA21-641-G

Dear Ms. Campagna:

Delta Consultants (Delta), 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 Matthew Miller (Delta) at (425) 498-7722.

Sincerely,

DELTA CONSULTANTS

Matthew Miller, L.G.
Project Specialist

Attachments: Shell GRASP Monitoring Report

cc: John Wietfield, Department of Ecology, 3190 160th Avenue SE Bellevue, WA 98008

State of Washington
532
Licensed Geologist
Matthew Miller

a member of: Inogen Environmental Alliance

4006 148TH AVENUE NE REDMOND, WASHINGTON 98052 USA
PHONE 425.882.3528 / 800.477.7411 FAX 425.869.1892 WWW.DELTAENV.COM

March 25, 2009

SHELL GRASP MONITORING REPORT

Station Address:	21641 Maple Valley Highway Maple Valley, Washington
SHELL GRASP Incident No.:	97420022
DELTA Project No.:	SWA21-641-G
SHELL Environmental Engin./Phone No.:	Carol M. Campagna / (707) 864-1617
DELTA Project Manager/Phone No.:	Matthew Miller / (425) 498-7722

Current Phase of Project:	GRASP Groundwater Monitoring
Frequency of Sampling:	Annual
Frequency of Monitoring:	Annual
Most Recent Sampling Event:	February 10, 2009
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:	11.26 to 12.66 feet
Groundwater Gradient	Westerly @ 0.007 ft/ft
Summary of Unusual Activity:	None

Matthew Miller, L.G.
Project Specialist (Delta)

ATTACHED:

- Table 1 – Groundwater Gauging and Analytical Data
- 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. TOC[1]	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)	EDB (µg/l)	EDC (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	NA	NA	<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	NA	NA	<5	<5	<5	<50	NA	12.47	0.00	327.56
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.10	0.00	326.93
	12/10/03	530	<250	<500	240	180	5.7	21.2	<1	NA	NA	<5	<5	<5	<50	<5,000	12.25	0.00	327.78
	01/08/04[2]	<100	NA	NA	<0.25	<0.5	<0.5	<1	NA	NA	NA	NA	NA	NA	NA	NA	12.35	0.00	327.68
	05/26/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	12.75	0.00	327.28
	11/15/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	12.95	0.00	327.08
	05/24/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	12.44	0.00	327.59
	10/26/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	13.10	0.00	326.93
	04/26/06	<50.0	<236	<472	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<150	12.39	0.00	327.64
	10/26/06	<50.0	<96.2	<96.2	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<250	12.80	0.00	327.23
	04/05/07	<50.0	<250	<500	<0.500	<0.500	<0.500	<3.00	<5.00	<0.500	<0.500	<1.00	<1.00	<1.00	<50.0	<250	15.12	0.00	324.91
	05/29/08	<50.0	<250	<500	<1	<1	<1	<1	<1	<0.01	<1	<1	<1	<1	<5	<5,000	12.62	0.00	327.41
	02/10/09	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	<1.0	NA	NA	<2.0	<2.0	<2.0	<10	<100	12.29	0.00	327.74
MW-2b	12/19/02	<250	<250	<750	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	<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	NA	NA	<5	<5	<5	<50	NA	11.51	0.00	327.91
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	12.50	0.00	326.92
	12/10/03	<250	<250	<500	3.2	2.6	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	11.32	0.00	328.10
	01/08/04[2]	<100	NA	NA	<0.25	<0.5	<0.5	<1	NA	NA	NA	NA	NA	NA	NA	NA	11.41	0.00	328.01
	05/26/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	11.78	0.00	327.64
	11/15/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	11.97	0.00	327.45
	05/24/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	12.41	0.00	327.01
	10/26/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	12.04	0.00	327.38
	04/26/06	<50.0	<236	<472	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<150	11.34	0.00	328.08
	10/26/06	<50.0	<97.1	<97.1	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<250	11.78	0.00	327.64
	04/05/07	<50.0	<250	<500	<0.500	<0.500	<0.500	<3.00	<5.00	<0.500	<0.500	<1.00	<1.00	<1.00	<50.0	<250	14.85	0.00	324.57
	05/29/08	<50.0	<250	<500	<1	<1	<1	<1	<1	<0.01	<1	<1	<1	<1	<5	<5,000	11.59	0.00	327.83
	02/10/09	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	<1.0	NA	NA	<2.0	<2.0	<2.0	<10	<100	11.26	0.00	328.16

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

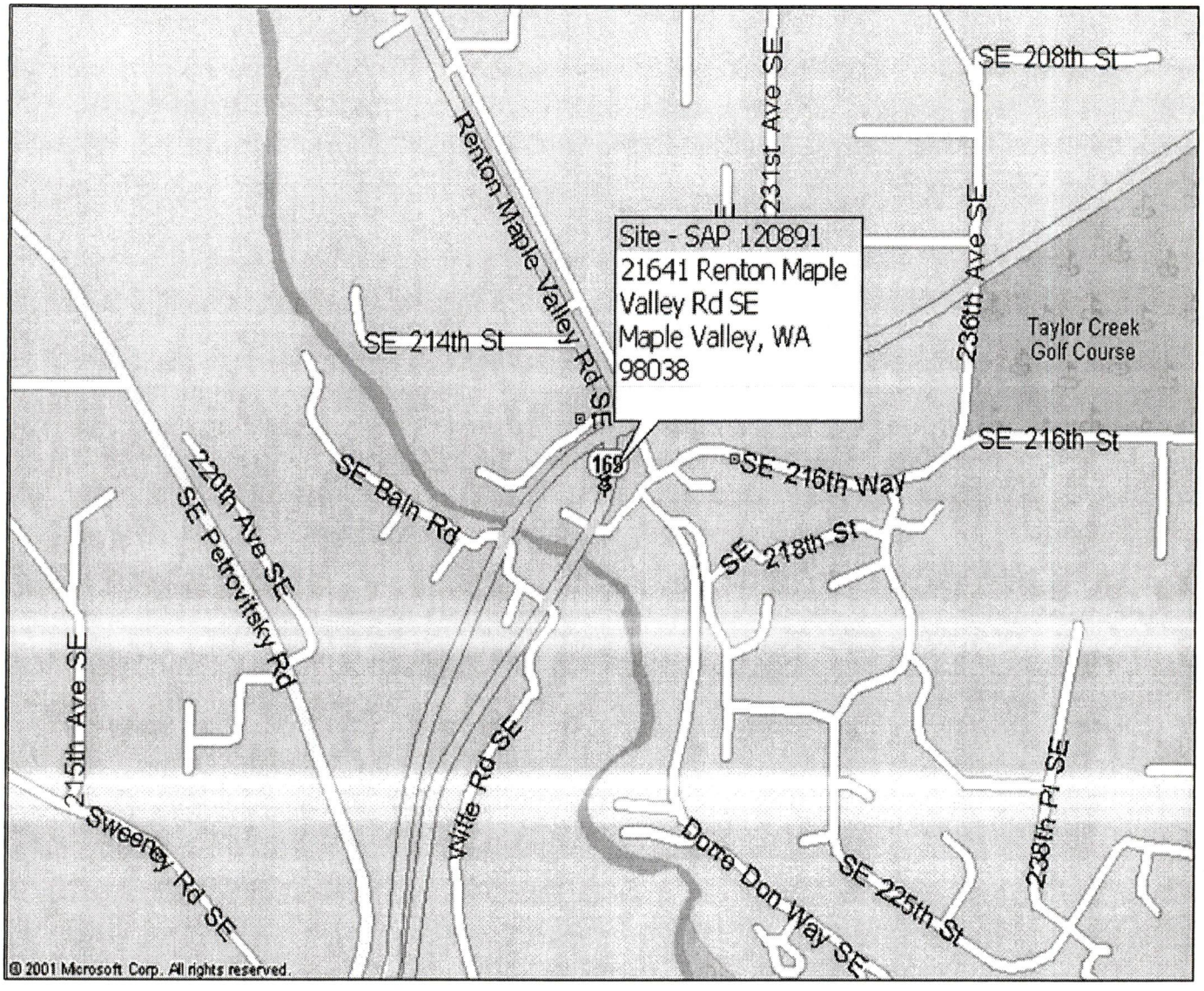
Sample I.D. TOC[1]	Sample Date	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	EDB (µg/l)	EDC (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	TBA (µg/l)	Ethanol (µg/l)	Depth to GW (feet)	SPH (feet)	GW Elev.[1] (feet)
MW-12	12/19/02	<250	<250	<750	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	<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	NA	NA	<5	<5	<5	<50	NA	12.90	0.00	327.48
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.21	0.00	327.17
	12/10/03	<250	<250	<500	32	24	<1	2.3	<1	NA	NA	<5	<5	<5	<50	<5,000	12.66	0.00	327.72
	01/08/04[2]	<100	NA	NA	0.326	2.14	<0.5	<1	NA	NA	NA	NA	NA	NA	NA	NA	12.83	0.00	327.55
	05/26/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.10	0.00	327.28
	11/15/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.29	0.00	327.09
	05/24/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	12.80	0.00	327.58
	10/26/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	13.41	0.00	326.97
	04/26/06	<50.0	<245	<490	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<150	12.75	0.00	327.63
	10/26/06	<50.0	<96.2	138	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<250	13.11	0.00	327.27
	04/05/07	<50.0	<250	<500	<0.500	<0.500	<0.500	<3.00	<5.00	<0.500	<0.500	<1.00	<1.00	<1.00	<50.0	<250	16.24	0.00	324.14
	05/29/08	<50.0	<250	<500	<1	<1	<1	<1	<1	<0.01	<1	<1	<1	<1	<5	<5,000	12.91	0.00	327.47
	02/10/09	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	<1.0	NA	NA	<2.0	<2.0	<2.0	<10	<100	12.66	0.00	327.72
MW-13	12/19/02	<250	<250	<750	<0.5	0.69	<0.5	<0.5	<0.5	NA	NA	<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	NA	NA	<5	<5	<5	<50	NA	12.62	0.00	327.57
	08/20/03	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.52	0.00	326.67
	12/10/03	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	12.37	0.00	327.82
	01/08/04[2]	<100	NA	NA	<0.25	<0.5	<0.5	<1	NA	NA	NA	NA	NA	NA	NA	NA	12.54	0.00	327.65
	05/26/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	12.83	0.00	327.36
	11/15/04	<250	<250	<500	<1	<1	<1	<1	<1	NA	NA	<5	<5	<5	<50	<5,000	13.01	0.00	327.18
	05/24/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	12.51	0.00	327.68
	10/26/05	<50	<250	<500	<1	<1	<1	<1	<1	NA	NA	<2	<2	<5	<50	<5,000	13.28	0.00	326.91
	04/26/06	<50.0	<245	<490	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<150	12.44	0.00	327.75
	10/26/06	<50.0	<96.2	129	<0.500	<0.500	<0.500	<3.00	<5.00	NA	NA	<1.00	<1.00	<1.00	<50.0	<250	12.89	0.00	327.30
	04/05/07	<50.0	<250	<500	<0.500	<0.500	<0.500	<3.00	<5.00	<0.500	<0.500	<1.00	<1.00	<1.00	<50.0	<250	15.91	0.00	324.28
	05/29/08	<50.0	<250	<500	<1	<1	<1	<1	<1	<0.01	<1	<1	<1	<1	<5	<5,000	12.65	0.00	327.54
	02/10/09	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	<1.0	NA	NA	<2.0	<2.0	<2.0	<10	<100	12.36	0.00	327.83
MTCA Method A Cleanup Levels:		**1000[3]**	**500**	**500**	**5**	**1000**	**700**	**1000**	**20**	**700**	**700**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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

Sample I.D. TOC[1]	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)	EDB (µg/l)	EDC (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)

Notes:
µg/l = micrograms per liter
TOC = Top of well casing elevation (feet)
SPH = Separate-phase hydrocarbons
TPH-G = Total Petroleum Hydrocarbons in the Gasoline range
TPH-D = Total Petroleum Hydrocarbons in the Diesel range
TPH-O = Total Petroleum Hydrocarbons in the Oil range
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
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]Well was purged prior to groundwater sampling on January 8, 2004
[3]MTCA Method A Cleanup Level for TPH-Gasoline is 800 µg/l if benzene is detectable in groundwater.

FIGURES



North

NOT TO SCALE

FIGURE 1

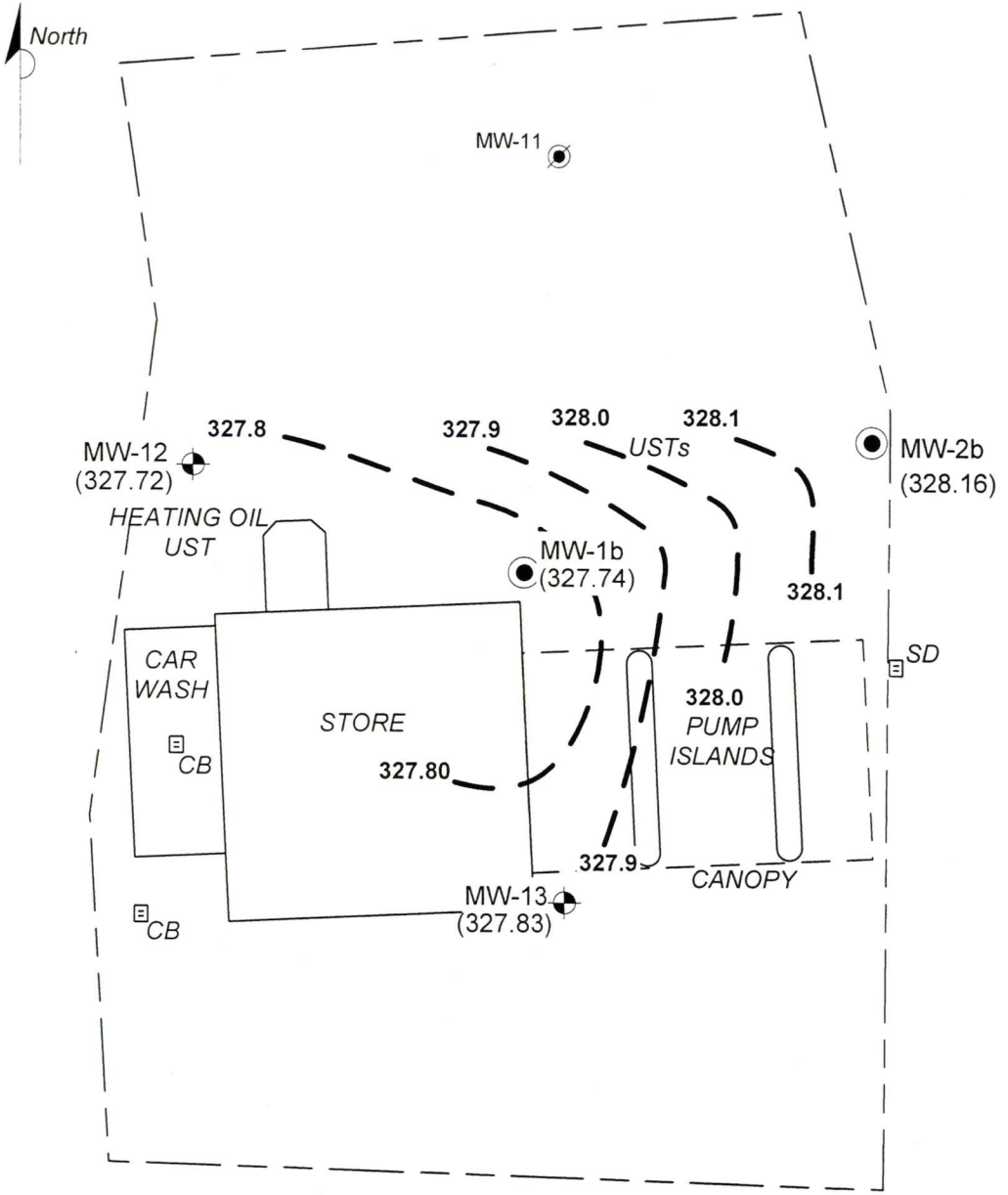
SITE LOCATION MAP

Shell Oil Products US- SAP 120891
21641 Maple Valley Highway
Maple Valley, Washington

PROJECT NO. SWA21-641-G	DRAWN BY SB 12-10-04
FILE NO. SAP 120891	PREPARED BY BS
REVISION NO. 1	REVIEWED BY DL

DELTA

GENERAL NOTES:
BASE MAP FROM MICROSOFT STREETS & TRIPS 2003



Legend

- Groundwater Monitoring Well Installed by KHM
- Groundwater Monitoring Well Installed by Others
- Abandoned Groundwater Monitoring Well
- (327.74) Groundwater Elevation, February 10, 2009
- 327.9 Groundwater Elevation Contour, February 10, 2009

0 30 FT

APPROX. SCALE

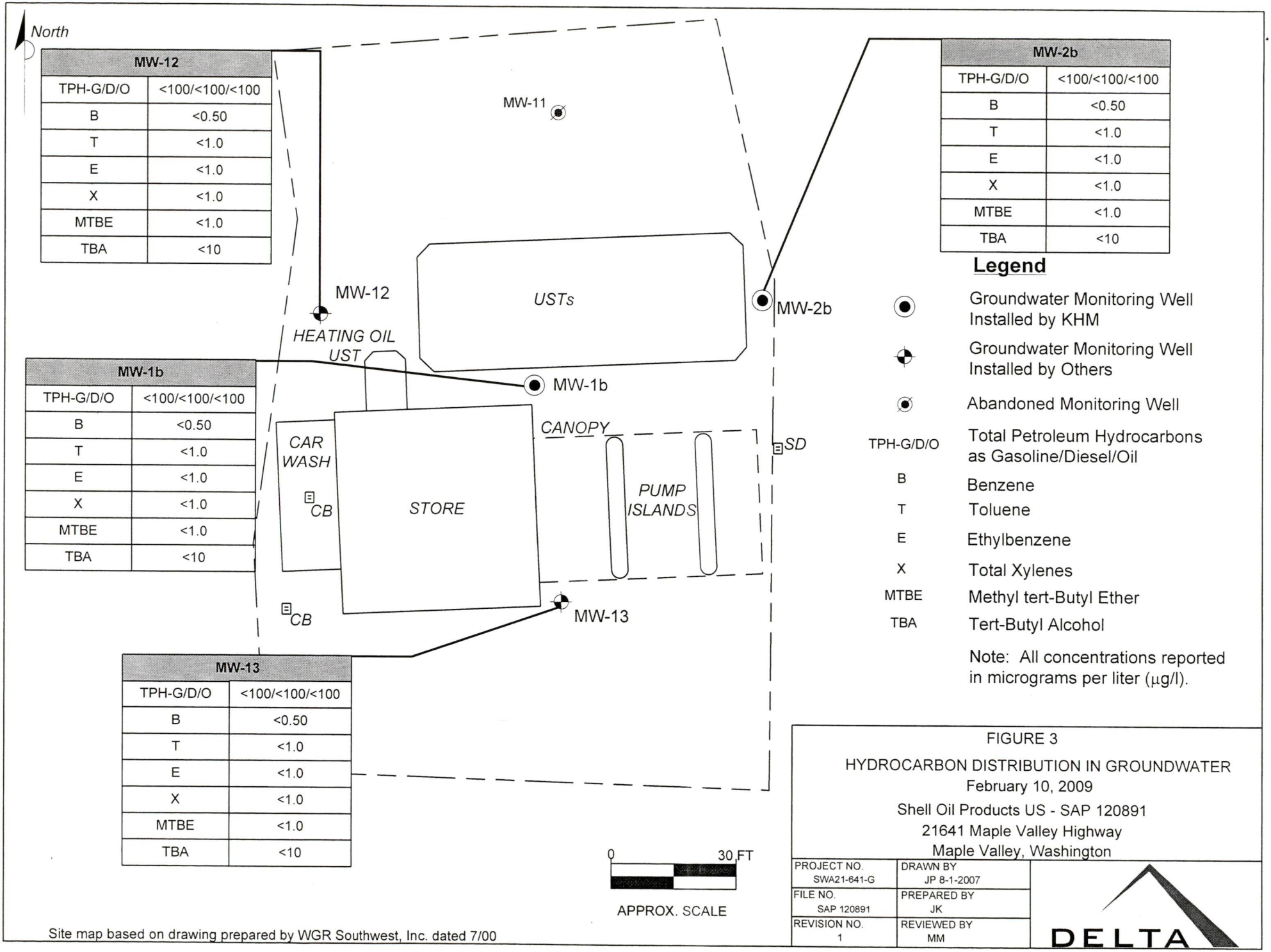
Site map based on drawing prepared by WGR Southwest, Inc. dated 7/00

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP

Shell Oil Products US - SAP 120891
21641 Maple Valley Highway
Maple Valley, Washington

PROJECT NO. SWA21-641-G	DRAWN BY JP 5-2-07
FILE NO. SAP 120891	PREPARED BY BS
REVISION NO. 1	REVIEWED BY MM

DELTA



MW-12	
TPH-G/D/O	<100/<100/<100
B	<0.50
T	<1.0
E	<1.0
X	<1.0
MTBE	<1.0
TBA	<10

MW-2b	
TPH-G/D/O	<100/<100/<100
B	<0.50
T	<1.0
E	<1.0
X	<1.0
MTBE	<1.0
TBA	<10

MW-1b	
TPH-G/D/O	<100/<100/<100
B	<0.50
T	<1.0
E	<1.0
X	<1.0
MTBE	<1.0
TBA	<10

MW-13	
TPH-G/D/O	<100/<100/<100
B	<0.50
T	<1.0
E	<1.0
X	<1.0
MTBE	<1.0
TBA	<10

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

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

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

FIGURE 3

HYDROCARBON DISTRIBUTION IN GROUNDWATER
February 10, 2009
Shell Oil Products US - SAP 120891
21641 Maple Valley Highway
Maple Valley, Washington

PROJECT NO. SWA21-641-G	DRAWN BY JP 8-1-2007
FILE NO. SAP 120891	PREPARED BY JK
REVISION NO. 1	REVIEWED BY MM

DELTA

APPENDIX A

FIELD DATA SHEETS

Shell SAP #120891
21641 Maple Valley Highway
2008 Annual Sampling
Site Contact #

No purge sampling

Delta Project: SWA21-641-G
801309 (Sample 4 Wells)
Project Manager: Matthew Miller (425) 269-7178
Incident #97420022
Quarter to be sampled **1 QTR 2009**
Purge Sampling

Subjective analysis = depth to water/depth to product and dissolved oxygen, well integrity
Sampling parameters = DTW/DTP, pH, conductivity, temperature, ORP, DO, Turbitity

Well ID	NWTPH-Gx/BTEX	NWTPH-Dx	Ethanol	Oxygenates*	Total Lead	Sulfate Sulfide	Subjective Analysis	Potential Product?	Do Not Monitor
MW-1B	X	X	X	X					
MW-2B	X	X	X	X					
MW-12	X	X	X	X					
MW-13	X	X	X	X					

* Oxygenates include MTBE, TBA, DIPE, ETBE and TAME

Note: Sample ID = well name-date
example: Date 2/12/07 for MW-2; Sample ID = MW-2-0207

Approval:
Date: 2/10/09

GROUNDWATER SAMPLING FIELD SHEET

DELTA PROJECT NUMBER:	SWA2L-641-6	**CLIENT:**	Shell
SAP No./Incident No.:	120891 /97420022	**PAGE**	1 of 1
SITE ADDRESS/LOCATION:	21641 Maple Valley Highway	**DATE:**	2-10-09
FIELD PERSONNEL:	Brandon Slone	**WEATHER:**	Snowing

Well ID	Time	Well Diameter (in.)	Depth to Bottom (feet)	Depth to Water (feet)	Depth to LPH (feet)	LPH Thickness (feet)	Calc. Purge (gal)	Actual Purge (gal)	Purge Method (B/LF/P)	Sample Appearance/Comments
MW-1B	8:30	2	—	12.29	—	—	—	—	—	clear
MW-2B	8:00	2	—	11.26	—	—	—	—	—	clear
MW-12	9:30	4	—	12.06	—	—	—	—	—	clear
MW-13	9:00	4	—	12.36	—	—	—	—	—	clear

Additional Field Parameters: (Pre-Purge / Post-Purge / Low-flow Cell)

Well ID	pH	Conductivity (ms/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (°C / °F)	TDS (g/L)	ORP (mV)	Comments
MW-1B	6.14	19.3	—	7.61	7.9	.13	388	conductivity in mS/cm
MW-2B	6.35	19.1	—	7.32	6.8	.13	394	
MW-12	6.06	18.0	—	7.06	8.2	.12	394	
MW-13	6.38	19.8	—	8.13	8.2	.13	391	

System Instructions:

Remedial System On-Site (Y/N)?	**Comments:**	
Operational Upon Arrival (Y/N)?	**Comments:**	
Shut Down System 1 / 24 hours before gauging (Y/N)?	**Time/Date Downed:**	
Re-Start System (Y/N)?	**Time/Date Restarted:**	
Purge Method:	**Comments:**	

Purge Water Disposal Method:

- ☐ Treated through mobile carbon treatment unit and discharged on-site
- ☑ Placed in drums on site — No. of drums: 1
- ☐ Transported off-site for treatment — Facility/Location:

Measuring Device(s): Horriba U-22, water level meter

WASTE INVENTORY RECORD

Delta Environmental Consultants, Inc.

Project No. SWA21-641-6

Location/SS# 21641 Maple Valley Hwy Maple Valley, WA

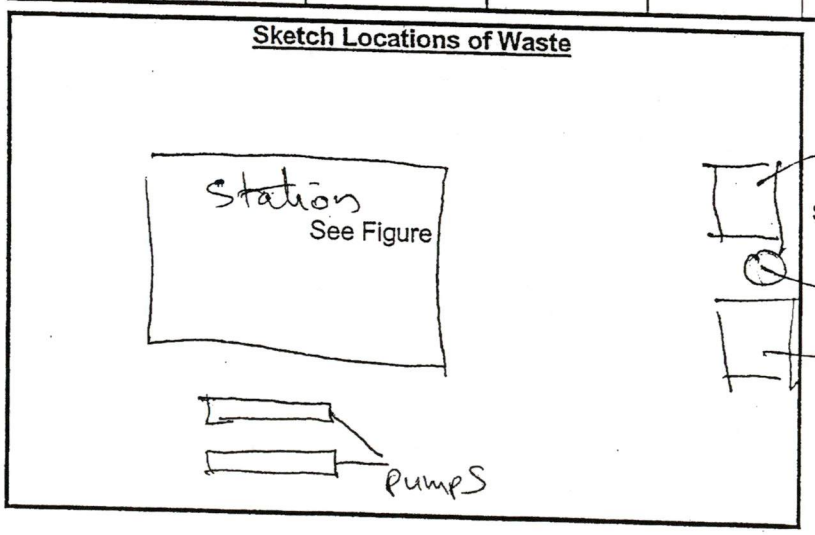
Date Generated 2-10-09

Client Shell

Date Removed

Well or Boring ID	Depth (Interval) Feet	Type of Waste	Waste Volume 55-gallon drum	Date Generated	Drum & ID or Stock Pile and Designation	pH # Water only	Comments (wet,odor,chemical constituents, etc.)
MW-1B	10-13ft	~~purge~~ waste water	<.25	2-10-09	Pur-1	6.14	none detected
MW-2B	↓		↓	↓	↓	6.35	↓
MW-12						6.06	
MW-13	↓		↓	↓	↓	6.08	↓

Sketch Locations of Waste



Stock Pile on Site & Volume

Trash

Pur-1

recycling

< 1.0 gallons

Total Number of Drums at Site

1

C:\Documents and Settings\mattm\My Documents\Shell\Waste Inventory Form Blank

Job Clearance Form

CONTRACTOR INSTRUCTIONS PRIOR TO START OF WORK: 1. Review form, check appropriate boxes, read and sign bottom of this form. 2. Inform dealer, manager, or site representative of the job to be performed and potential safety concerns and obtain signature.

Station #	Station Address:		Work Order Number:			Date:		
120891	21641 Maple Valley, Maple Valley WA		120891- 2-10-09			2-10-09		
Contractor Company Name:	Contractor person in charge (print name):	Number of Workers:	JSA Reference Number:	Start Time:	End Time:	Labor:	Travel Time:	Travel Distance:
Delta Consultants	Matthew Miller							

Problem/Work Description:
Groundwater Monitoring

	YES	NO
Return Call:	☐	☐
Damage Claim:	☐	☐

PPE REQUIRED (CHECK AND/OR FILL BLANK SPACE)

☑ SAFETY VEST	☑ HARD HAT	☑ SHOES & BOOTS	☐ HEARING PROTECTION	☐ RESPIRATOR	
☑ PROTECTIVE CLOTHING	☑ GLOVES	☑ SAFETY GLASSES/GOGGLES	☐ WELDING PPE	☐ OTHER:	

Contractor to complete the section below if circumstances, either on-site or specific to this job, may generate additional hazards that are not described in the JSA

TASK/STEP	Hazards not covered by JSA	How to reduce or eliminate risk - PPE to be Worn

WORK DOCUMENTATION REQUIREMENTS: **Lower Risk** - no JSA required **Medium Risk / Higher Risk** - JSA required **Higher Risk** - JSA required & appropriate checklist completed (see below)

Examples of Higher / Medium risk tasks:

- ☐ Work at heights: in all cases on open sites - on closed sites if no JSA present
- ☐ Trenching or excavation related to underground tank / product line
- ☐ Heavy lifting
- ☐ Work in confined spaces (e.g. tank, interceptor or deep manhole entry)
- ☐ Hot work with risk of product or vapor ignition
- ☐ LPG system degassing, installation or maintenance

This form must be completed for each job and updated and re-signed if circumstances change or additional hazards identified

SIGN IN

Operating sites: to be signed by the Site Representative
Non-operating sites: to be signed by the Contractor Representative only

Contractor representative name	Signature
Brandon Slone	

GENERAL SAFETY CHECKS

- Have all site personnel been informed?
- Has fuel delivery service been informed?
- Is a fuel delivery due?
- Have isolation procedures been agreed - lock out/tag out?
- Are work areas cordoned off to protect workers, site staff & public?
- Other?

Site Representative Name	Signature

SIGN OUT

GENERAL SAFETY CHECKS

- Has the work area been left tidy and safe?
- Are site personnel aware of status of work including remaining isolation?
- Are changes to equipment documented and communicated?
- Other?

Contractor signature

Site Representative Name	Signature

PARTS - Ordered, replaced, and/or disposed of (include model and serial #'s as appropriate)

The contractor, through is authorized representative, shall sign, issue, and be solely responsible for all job clearance forms and the obligations arising there under applicable to the work.
This form covers important reminders and is not intended to relieve contractor from safely performing the work in compliance with all applicable laws and regulations.
The Site Representative may require the contractor to stop work if it appears that the contractor or any of its workers are failing to comply with the requirements in the applicable items of this form or other applicable safety requirements.

ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

COST CENTER # SWA21-641-G
DATE: 2-10-09
ADDRESS 21641 Maple Vall Hwy
CITY & STATE Maple Valley, WA

Well ID	Observations Upon Arrival: Manway Cover, Type, Condition & Size					Well Labeled / Painted Properly*		Well Cap (Gripper) Condition		Well Lock Condition			Well Pad / Surface Condition		Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition		Repair Date and PM Initials
MW-1B	Standpipe	(Flush)	(G)	P	Size (inch) 6-7	(Y)	N	(G)	R	(G)	R	NL	(G)	P	None made ↓	Y	(N)	
MW-2B	Standpipe	(Flush)	(G)	P	Size (inch) 6-7	(Y)	N	(G)	R	(G)	R	NL	(G)	P	↓	Y	(N)	
MW-12	Standpipe	(Flush)	(G)	P	Size (inch) 6-7	(Y)	N	(G)	R	(G)	R	NL	(G)	P	↓	Y	(N)	
MW-13	Standpipe	(Flush)	(G)	P	Size (inch) 6-7	(Y)	N	(G)	R	(G)	R	NL	(G)	P	↓	Y	(N)	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	
On-site Drinking Water Well	Standpipe	Flush	G	P	Size (inch)	Y	N	G	R	G	R	NL	G	P		Y	N	

TOTAL # CAPS REPLACED = Ø | Ø **= TOTAL # OF LOCKS REPLACED**

Condition of Soil Boring Patches or Abandoned Monitoring Wells:	G	P	(N/A)	If POOR, Borings/Well IDs or Location Description:		Y	N

Remediation Compound Type (Check boxes that apply)		Condition of Enclosure			Condition of Area Inside Enclosure			Compound Security			Emergency Contact Info Visible			Cleaning / Repairs Recommended and Conducted	Photos of Condition		Repair Date and PM Initials
NA	✓	G	P	(N/A)	G	P	(N/A)	G	P	(N/A)	Y	N	(N/A)	MW1B – needs 3 bolts MW-2B – needs 2 bolts MW-12 – needs 3 bolts MW-13 – needs 3 bolts	Y	(N)	
Building																	
Building w/ Fence Comp.																	
Fenced Compound																	
Trailer																	

Number of Drums On-site	Does the Label Reveal the Source of the Contents			Labeled Correctly and Writing Legible			Drum Condition			Confirm Drums Related to Environmental		Drums Located to Min Business Interference			Detailed Explanation of Any Issues Resolved	Photos of Drum Condition		Date Drums Removed from Site and PM Initials
1	(Y)	N	N/A	(Y)	N	N/A	(G)	P	N/A	(Y)	N	(Y)	N	N/A		Y	(N)	

G = Good (Acceptable) R = Replaced
P = Poor (needs attention) NL = No Lock Required
Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.
Version 2.4, March 2008

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Brandon Slone / Delta Consultants
Print or type Name of Field Personnel & Consultant Company

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☑ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
☐ ENV. SERVICES | ☐ MOTIVA RETAIL | ☑ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Carol Campagna
PO #
INCIDENT # (ENV SERVICES): 9 7 4 2 0 0 2 2 | ☐ CHECK IF NO INCIDENT # APPLIES
SAP #: 1 2 0 8 9 1
DATE: 2-11-09
PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants
LOG CODE:
ADDRESS: 4006 148th Avenue NE, Redmond, WA
PROJECT CONTACT (Hardcopy or PDF Report to): Matthew Miller
TELEPHONE: (425) 498-7722 | FAX: (425) 869-1892 | E-MAIL: mmiller@deltaenv.com

SITE ADDRESS: Street and City: 21641 Maple Valley Hwy, Maple Valley | State: WA | GLOBAL ID NO.:
EDF DELIVERABLE TO (Name, Company, Office Location): | PHONE NO.: | E-MAIL: | CONSULTANT PROJECT NO.: SWA21-641-G
SAMPLER NAME(S) (Print): Brandon Sloye
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	NWTPH - Gx	NWTPH-Dx w/Silica Gel	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8011)	Ethanol (8015)	Methanol (8015M)	Total Lead (EPA 6020)	Container PID Readings or Laboratory Notes
	MW-1B	2-10-09	8:30	W	X			X		7	X	X	X	X								X			
	MW-2B		8:00																						
	MW-12		9:30																						
	MW-13		9:00																						

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

05/2/06 Revision

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

Calscience
Environmental
Laboratories, Inc.

February 26, 2009

Matthew Miller
Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Subject: **Calscience Work Order No.:** **09-02-1335**
Client Reference: **21641 Maple Valley Hwy, Maple Valley, WA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/13/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Philip Samelle for

Calscience Environmental
Laboratories, Inc.
Jessie Kim
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants		Date Received:	02/13/09
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 5030B
		Method:	NWTPH-Gx

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1B	**09-02-1335-1-C**	**02/10/09 08:30**	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09 21:14**	**090219B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	79	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2B	**09-02-1335-2-C**	**02/10/09 08:00**	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09 21:48**	**090219B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	75	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	**09-02-1335-3-C**	**02/10/09 09:30**	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09 22:21**	**090219B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	78	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13	**09-02-1335-4-C**	**02/10/09 09:00**	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09 22:54**	**090219B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	78	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants		Date Received:	02/13/09
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 5030B
		Method:	NWTPH-Gx

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-743-148**	**N/A**	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09 15:42**	**090219B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	100	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	77	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants		Date Received:	02/13/09
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 3510C
		Method:	NWTPH-Dx
		Units:	ug/L
Project: 21641 Maple Valley Hwy, Maple Valley, WA			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1B	09-02-1335-1-G	02/10/09 08:30	Aqueous	GC 47	02/13/09	02/14/09 17:30	090213B09

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
TPH as Diesel Range	ND	100	1		TPH as Motor Oil Range	ND	100	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decachlorobiphenyl	108	68-140							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2B	09-02-1335-2-G	02/10/09 08:00	Aqueous	GC 47	02/13/09	02/14/09 17:48	090213B09

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
TPH as Diesel Range	ND	100	1		TPH as Motor Oil Range	ND	100	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decachlorobiphenyl	99	68-140							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	09-02-1335-3-G	02/10/09 09:30	Aqueous	GC 47	02/13/09	02/14/09 18:05	090213B09

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
TPH as Diesel Range	ND	100	1		TPH as Motor Oil Range	ND	100	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decachlorobiphenyl	118	68-140							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13	09-02-1335-4-G	02/10/09 09:00	Aqueous	GC 47	02/13/09	02/14/09 18:22	090213B09

Comment(s): -The sample extract was subjected to Silica Gel treatment prior to analysis.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
TPH as Diesel Range	ND	100	1		TPH as Motor Oil Range	ND	100	1	
Surrogates:	REC (%)	Control Limits		Qual					
Decachlorobiphenyl	108	68-140							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-840-46	N/A	Aqueous	GC 47	02/13/09	02/14/09 12:38	090213B09

Parameter	Result	RL	DF	Qual
TPH as Diesel Range	ND	100	1	
Surrogates:	REC (%)	Control Limits		Qual
Decachlorobiphenyl	103	68-140		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants		Date Received:	02/13/09
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	N/A
		Method:	EPA 8015B(M)

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1B	09-02-1335-1-E	02/10/09 08:30	Aqueous	GC 9	N/A	02/17/09 14:47	090217L02

Parameter	Result	RL	DF	Qual	Units
Ethanol	ND	0.10	1		mg/L

Surrogates:	REC (%)	Control Limits	Qual
Hexafluoro-2-propanol	91	63-147	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2B	09-02-1335-2-E	02/10/09 08:00	Aqueous	GC 9	N/A	02/17/09 15:09	090217L02

Parameter	Result	RL	DF	Qual	Units
Ethanol	ND	0.10	1		mg/L

Surrogates:	REC (%)	Control Limits	Qual
Hexafluoro-2-propanol	91	63-147	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	09-02-1335-3-E	02/10/09 09:30	Aqueous	GC 9	N/A	02/17/09 15:31	090217L02

Parameter	Result	RL	DF	Qual	Units
Ethanol	ND	0.10	1		mg/L

Surrogates:	REC (%)	Control Limits	Qual
Hexafluoro-2-propanol	92	63-147	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13	09-02-1335-4-E	02/10/09 09:00	Aqueous	GC 9	N/A	02/17/09 15:52	090217L02

Parameter	Result	RL	DF	Qual	Units
Ethanol	ND	0.10	1		mg/L

Surrogates:	REC (%)	Control Limits	Qual
Hexafluoro-2-propanol	93	63-147	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Date Received: 02/13/09
Work Order No: 09-02-1335
Preparation: N/A
Method: EPA 8015B(M)

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-006-2,808**	**N/A**	**Aqueous**	**GC 9**	**N/A**	**02/17/09 13:41**	**090217L02**

Parameter	Result	RL	DF	Qual	Units
Ethanol	ND	0.10	1		mg/L

Surrogates:	REC (%)	Control Limits	Qual
Hexafluoro-2-propanol	100	63-147	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants	Date Received:	02/13/09
4006 148th Ave., NE	Work Order No:	09-02-1335
Redmond, WA 98052-5165	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1B	09-02-1335-1-A	02/10/09 08:30	Aqueous	GC/MS QQ	02/20/09	02/20/09 22:14	090220L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	103	82-130		1,2-Dichloroethane-d4	109	75-141	
Toluene-d8	104	83-113		1,4-Bromofluorobenzene	91	70-118	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2B	09-02-1335-2-A	02/10/09 08:00	Aqueous	GC/MS QQ	02/20/09	02/20/09 22:37	090220L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	111	82-130		1,2-Dichloroethane-d4	116	75-141	
Toluene-d8	106	83-113		1,4-Bromofluorobenzene	90	70-118	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	09-02-1335-3-A	02/10/09 09:30	Aqueous	GC/MS QQ	02/20/09	02/20/09 23:00	090220L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	108	82-130		1,2-Dichloroethane-d4	115	75-141	
Toluene-d8	105	83-113		1,4-Bromofluorobenzene	90	70-118	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Consultants	Date Received:	02/13/09
4006 148th Ave., NE	Work Order No:	09-02-1335
Redmond, WA 98052-5165	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: 21641 Maple Valley Hwy, Maple Valley, WA — Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-13	**09-02-1335-4-B**	**02/10/09 09:00**	**Aqueous**	**GC/MS QQ**	**02/21/09**	**02/21/09 17:40**	**090221L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	101	82-130		1,2-Dichloroethane-d4	109	75-141	
Toluene-d8	108	83-113		1,4-Bromofluorobenzene	90	70-118	

Method Blank	099-10-006-28,558	N/A	Aqueous	GC/MS QQ	02/20/09	02/20/09 17:08	090220L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	107	82-130		1,2-Dichloroethane-d4	110	75-141	
Toluene-d8	101	83-113		1,4-Bromofluorobenzene	91	70-118	

Method Blank	099-10-006-28,584	N/A	Aqueous	GC/MS QQ	02/21/09	02/21/09 15:21	090221L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	1.0	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Toluene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Xylenes (total)	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	101	82-130		1,2-Dichloroethane-d4	107	75-141	
Toluene-d8	105	83-113		1,4-Bromofluorobenzene	90	70-118	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Consultants		Date Received:	02/13/09
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-1362-1	**Aqueous**	**GC 11**	**02/19/09**	**02/19/09**	**090219S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	80	79	68-122	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Date Received: 02/13/09
Work Order No: 09-02-1335
Preparation: N/A
Method: EPA 8015B(M)

Project 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1B	**Aqueous**	**GC 9**	**N/A**	**02/18/09**	**090217S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Ethanol	95	94	73-109	1	0-23	
Methanol	93	96	64-118	3	0-20	
Isopropanol	87	80	70-130	8	0-25	
2-Butanol	93	86	70-130	7	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Date Received: 02/13/09
Work Order No: 09-02-1335
Preparation: EPA 5030B
Method: EPA 8260B

Project 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-1447-12	Aqueous	GC/MS QQ	02/20/09	02/20/09	090220S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	104	88-118	2	0-7	
Carbon Tetrachloride	115	117	67-145	2	0-11	
Chlorobenzene	102	104	88-118	1	0-7	
1,2-Dibromoethane	105	103	70-130	2	0-30	
1,2-Dichlorobenzene	100	103	86-116	3	0-8	
1,1-Dichloroethene	114	112	70-130	2	0-25	
Ethylbenzene	104	105	70-130	1	0-30	
Toluene	106	108	87-123	2	0-8	
Trichloroethene	106	108	79-127	2	0-10	
Vinyl Chloride	107	116	69-129	7	0-13	
Methyl-t-Butyl Ether (MTBE)	104	104	71-131	0	0-13	
Tert-Butyl Alcohol (TBA)	86	91	36-168	5	0-45	
Diisopropyl Ether (DIPE)	105	104	81-123	1	0-9	
Ethyl-t-Butyl Ether (ETBE)	103	103	72-126	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	101	72-126	1	0-12	
Ethanol	103	102	53-149	1	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Consultants	Date Received: 02/13/09
4006 148th Ave., NE	Work Order No: 09-02-1335
Redmond, WA 98052-5165	Preparation: EPA 5030B
	Method: EPA 8260B

Project 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-1333-3	**Aqueous**	**GC/MS QQ**	**02/21/09**	**02/21/09**	**090221S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	103	88-118	1	0-7	
Carbon Tetrachloride	112	112	67-145	0	0-11	
Chlorobenzene	99	99	88-118	1	0-7	
1,2-Dibromoethane	102	101	70-130	2	0-30	
1,2-Dichlorobenzene	95	96	86-116	0	0-8	
1,1-Dichloroethene	108	111	70-130	2	0-25	
Ethylbenzene	107	107	70-130	0	0-30	
Toluene	109	107	87-123	2	0-8	
Trichloroethene	110	108	79-127	2	0-10	
Vinyl Chloride	99	110	69-129	11	0-13	
Methyl-t-Butyl Ether (MTBE)	100	99	71-131	1	0-13	
Tert-Butyl Alcohol (TBA)	102	94	36-168	9	0-45	
Diisopropyl Ether (DIPE)	97	96	81-123	1	0-9	
Ethyl-t-Butyl Ether (ETBE)	98	97	72-126	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	100	72-126	1	0-12	
Ethanol	115	104	53-149	11	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Consultants		Date Received:	N/A
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 5030B
		Method:	NWTPH-Gx

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-743-148	Aqueous	GC 11	02/19/09	02/19/09	090219B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	82	83	78-120	1	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Consultants		Date Received:	N/A
4006 148th Ave., NE		Work Order No:	09-02-1335
Redmond, WA 98052-5165		Preparation:	EPA 3510C
		Method:	NWTPH-Dx

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-840-46	Aqueous	GC 47	02/13/09	02/14/09	090213B09

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel Range	108	115	75-117	7	0-13	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Consultants	Date Received: N/A
4006 148th Ave., NE	Work Order No: 09-02-1335
Redmond, WA 98052-5165	Preparation: N/A
	Method: EPA 8015B(M)

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-006-2,808	Aqueous	GC 9	N/A	02/17/09	090217L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Ethanol	96	97	76-112	1	0-19	
Methanol	87	92	69-117	5	0-22	
2-Butanol	85	83	70-130	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Date Received: N/A
Work Order No: 09-02-1335
Preparation: EPA 5030B
Method: EPA 8260B

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-28,558	Aqueous	GC/MS QQ	02/20/09	02/20/09	090220L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	97	95	84-120	78-126	2	0-8	
Carbon Tetrachloride	105	100	63-147	49-161	5	0-10	
Chlorobenzene	99	99	89-119	84-124	1	0-7	
1,2-Dibromoethane	108	105	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	100	95	89-119	84-124	5	0-9	
1,1-Dichloroethene	105	98	77-125	69-133	7	0-16	
Ethylbenzene	99	97	80-120	73-127	2	0-20	
Toluene	102	99	83-125	76-132	3	0-9	
Trichloroethene	101	97	89-119	84-124	4	0-8	
Vinyl Chloride	101	100	63-135	51-147	2	0-13	
Methyl-t-Butyl Ether (MTBE)	105	102	82-118	76-124	2	0-13	
Tert-Butyl Alcohol (TBA)	86	89	46-154	28-172	4	0-32	
Diisopropyl Ether (DIPE)	100	99	81-123	74-130	1	0-11	
Ethyl-t-Butyl Ether (ETBE)	103	101	74-122	66-130	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	100	76-124	68-132	1	0-10	
Ethanol	99	100	60-138	47-151	1	0-32	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Consultants
4006 148th Ave., NE
Redmond, WA 98052-5165

Date Received: N/A
Work Order No: 09-02-1335
Preparation: EPA 5030B
Method: EPA 8260B

Project: 21641 Maple Valley Hwy, Maple Valley, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-28,584	Aqueous	GC/MS QQ	02/21/09	02/21/09	090221L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	107	103	84-120	78-126	4	0-8	
Carbon Tetrachloride	120	110	63-147	49-161	9	0-10	
Chlorobenzene	100	98	89-119	84-124	2	0-7	
1,2-Dibromoethane	103	103	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	97	96	89-119	84-124	1	0-9	
1,1-Dichloroethene	118	110	77-125	69-133	7	0-16	
Ethylbenzene	110	105	80-120	73-127	4	0-20	
Toluene	115	108	83-125	76-132	7	0-9	
Trichloroethene	113	108	89-119	84-124	5	0-8	
Vinyl Chloride	114	106	63-135	51-147	7	0-13	
Methyl-t-Butyl Ether (MTBE)	102	102	82-118	76-124	0	0-13	
Tert-Butyl Alcohol (TBA)	87	95	46-154	28-172	9	0-32	
Diisopropyl Ether (DIPE)	98	96	81-123	74-130	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	98	97	74-122	66-130	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	103	100	76-124	68-132	3	0-10	
Ethanol	89	107	60-138	47-151	18	0-32	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-02-1335

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☑ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☑ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Carol Campagna

PO #

INCIDENT # (ENV SERVICES): 9 7 4 2 0 0 2 2

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 2-11-09

PAGE: 1 of 1

SAP #: 1 2 0 8 9 1

SAMPLING COMPANY: Delta Consultants	LOG CODE:	SITE ADDRESS: Street and City: 21641 Maple Valley Hwy, Maple Valley	State: WA
GLOBAL ID NO.:			
ADDRESS: 4006 148th Avenue NE, Redmond, WA		EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:
E-MAIL:	CONSULTANT PROJECT NO.: SWA21-641-G		
PROJECT CONTACT (Hardcopy or PDF Report to): Matthew Miller		SAMPLER NAME(S) (Print): Brandon Slone	LAB USE ONLY 02-1335
TELEPHONE: (425) 498-7722	FAX: (425) 869-1892	E-MAIL: mrmiller@deltaenv.com	

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	NWTPH - Gx	NWTPH-Dx w/ Silica Gel	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8011)	Ethanol (8015)	Methanol (8015M)	Total Lead (EPA 6020)	TEMPERATURE ON RECEIPT C° / Container PID Readings or Laboratory Notes
1	MW-1B	2-10-09	8:30	W	X			X		7	X	X	X	X								X			
2	MW-2B	↓	8:00	↓	↓			↓		↓	↓	↓	↓	↓								↓			
3	MW-12		9:30																						
4	MW-13	↓	9:00	↓	↓			↓		↓	↓	↓	↓	↓								↓			

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 2/13/09	Time: 0930
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Fedex 868993045896

05/2/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-02- 1 2 3 5

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Delta DATE: 02/13/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.1 °C - 0.2 °C (CF) = 2.9 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by:_____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: JH

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: JH

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: JH

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☑5VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2

☐1AGBs ☑2500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB

☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Checked/Labeled by: JH

Reviewed by: DL

Scanned by: JH