



October 18, 1993
Project 0556-019.20

RECEIVED

OCT 19 1993

DEPT. OF ECOLOGY

Mr. Joe Hickey
Department of Ecology, Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008-5452

SR 10/19/93
12101

DEPARTMENT OF ECOLOGY	
NWRO/TCP TANK UNIT	
#3431	
INTERIM CLEANUP REPORT	<input type="checkbox"/>
SITE CHARACTERIZATION	<input type="checkbox"/>
FINAL CLEANUP REPORT	<input checked="" type="checkbox"/>
OTHER _____	<input type="checkbox"/>
AFFECTED MEDIA: <u>SOIL</u>	<input checked="" type="checkbox"/>
OTHER _____	<input type="checkbox"/>
INSPECTOR (INIT.) <u>RW</u>	<input checked="" type="checkbox"/>
DATE <u>10/29/93</u>	

Re: Request for Recognition of Clean Closure
Former Shell Station 71315
21641 Maple Valley Highway
Maple Valley, Washington 98086
WIC 246-5068-0101

Ref: *Site Assessment*, October 10, 1990, Sweet-Edwards/EMCON, Inc.
Groundwater Sampling Report, August 6, 1991, Sweet-Edwards/EMCON, Inc.
Underground Storage Tank Closure Report, February 12, 1993, EMCON Northwest, Inc.
Groundwater Sampling Report, May 7, 1993, EMCON Northwest, Inc.

Dear Mr. Hickey:

INTRODUCTION

The purpose of this letter is to request recognition of clean closure for the former Shell Oil Company service station located at 21641 Maple Valley Highway, in Maple Valley, Washington (Figure 1). The site was purchased by Texaco Refining and Marketing, Inc., in 1991, and is now operated as a Texaco service station. On behalf of Shell Oil Company, EMCON Northwest, Inc. (EMCON), has conducted subsurface environmental investigation work, groundwater sampling, and underground storage tank decommissioning. EMCON also completed an independent cleanup action after detecting soil containing regulated concentrations of petroleum hydrocarbon constituents.

The investigations and independent cleanup action were conducted in accordance with Washington State underground storage tank regulations,¹ and Department of Ecology

¹ Chapter 173-360 WAC, *Underground Storage Tank Regulation*.



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NOV 1993

DEPARTMENT OF ECOLOGY HARVEST REPORT UNIT	
<input type="checkbox"/>	INTERIM CLEANUP REPORT
<input type="checkbox"/>	SITE CHARACTERIZATION REPORT
<input type="checkbox"/>	FINAL CLEANUP REPORT
<input type="checkbox"/>	OTHER
<input type="checkbox"/>	AFFECTED MEDIA: <u>SOIL</u>
<input type="checkbox"/>	OTHER: <u>GW</u>
<input type="checkbox"/>	INSPECTOR (INITIALS) <u>DATE</u>

Independent Action Report Update

Site Name: Texaco Station Maple Valley

Inc. #: 3431 Date of Report: 10/18/93

County: King Date Report Rec'd: 10/12/93

Reviewed by: R. Nye

Comments (please include: free prod., tank info., media, contaminant migration, GW conc. trends, PCS treated/fate?):

This report is simply a summary of all previous activities already documented in reports on this site received 3/4/93 and 5/18/93.

The intent of the report is to request recognition of a completed cleanup.

Guidance documents.^{2,3} Results of the subsurface investigation, groundwater sampling, and underground storage tank decommissioning were forwarded to your office and presented to Shell Oil Company in the documents referenced above.

BACKGROUND

The site is located in the northeast ¼ of the southeast ¼ of Section 9, Township 22 North, Range 6 East. The station is bordered by State Route 169 to the east, a grocery store to the south, a towing service/rental car agency and a pet grooming shop to the west, and a real estate office to the north. According to a Shell Oil Company service station plot plan (1969), a private water well is located approximately 1,000 feet from the site. The Maple Valley Water District currently supplies water to the site facility and surrounding businesses.

According to the 1969 Shell plot plan, two 6,000-gallon and two 8,000-gallon gasoline tanks, one 500-gallon heating oil tank, and one 550-gallon waste oil tank were installed at the site when the station was constructed in 1969. Tanknology Corporation International of Houston, Texas, performed tightness tests on the gasoline tanks and product lines in August 1990, the heating oil tank and lines in October 1990, and the waste oil tank in November 1990. All tanks and lines were certified tight by Tanknology Corporation International. A site plan is included as Figure 2.

Site Investigation

Sweet-Edwards/EMCON, Inc., conducted an initial environmental assessment of the site in July and August of 1990. The results of the investigation are included in EMCON's report to Shell Oil Company, dated October 10, 1990. Six soil borings were drilled to a maximum depth of 11.5 feet below ground surface (bgs). Soil samples were collected and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and for total petroleum hydrocarbons (TPH) as gasoline. BTEX and TPH as gasoline were below the Washington State Department of Ecology Model Toxics Control Act (MTCA)⁴

² *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*, Department of Underground Storage Tank Program, February 1991.

³ *Guidance for Remediation of Releases from Underground Storage Tanks*, Washington State Department of Ecology, Toxics Cleanup Program, July 1991.

⁴ Chapter 173-340 WAC, *The Model Toxics Control Act Cleanup Regulation; Method A Cleanup Levels*. Amended February 1991.

Method A Cleanup Levels in all collected samples. A copy of the table summarizing the site investigation soil sample laboratory results is included in Appendix A.

One additional soil boring was drilled to 21 feet bgs and completed as a monitoring well (MW-3). A groundwater sample was collected from MW-3 on August 9, 1990, and analyzed for BTEX, TPH as gasoline, TPH as diesel, and total lead. The analytical results were below method detection limits.

Groundwater Monitoring

A second round of groundwater samples was collected from MW-3 in May 1991. The results were presented in EMCON's report to Shell Oil Company, dated August 6, 1991. The groundwater samples collected from MW-3 were analyzed for BTEX and TPH as gasoline. All results were below method detection limits.

On Friday, June 5, 1992, a water sample was collected from the bottom of the gasoline tank excavation. BTEX and TPH as gasoline concentrations from the water sample exceeded MTCA Method A Cleanup Levels. A temporary water line broke sometime during the weekend (July 6 or 7) and filled the excavation with potable water. The line was repaired, but the water in the excavation percolated into the soil before it could be pumped out. In August 1992, replacement monitoring wells (MW-11, MW-12, and MW-13) were installed at the site to evaluate the potential impact to groundwater from flushing the tank excavation with potable water. Groundwater samples were collected from MW-11, MW-12, and MW-13 in August 1992 and April 1993. The results were presented in reports to Shell Oil Company, dated February 12 and May 7, 1993. The groundwater samples were analyzed for BTEX and TPH as gasoline. One sample collected from MW-13 was also analyzed for TPH as oil. All results were below method reporting limits. These data indicate that groundwater beneath the site does not contain BTEX or TPH above MTCA Method A Cleanup Levels. A table summarizing the groundwater sample laboratory results is included in Appendix A.

MW-3 was decommissioned by Joe Hall Construction during the underground storage tank removal in June 1992.

Underground Storage Tank Closure and Independent Cleanup Action

Joe Hall Construction Company, Inc., of Fife, Washington, removed the four known underground gasoline storage tanks, associated distribution lines, heating oil, and waste oil tanks from the site in June and July of 1992. Three additional underground storage tanks were discovered during the tank closure and removed. After these tanks were

removed, the limits of the former tank basin was expanded to incorporate the newly discovered tank basin. Double-walled fiberglass underground storage tanks and lines were then installed at the site.

Soil samples were collected from the gasoline tank excavation and from beneath the product lines and analyzed for BTEX and TPH as gasoline. A review of the laboratory results indicates that only 2 of 21 samples collected contained TPH as gasoline and total xylenes concentrations exceeding MTCA Method A Cleanup Levels. All gasoline-impacted soil was excavated and treated on site.

Approximately 900 cubic yards of gasoline-impacted soil were excavated and treated on site by aeration using a mechanical screening device. A review of the laboratory results for samples collected from the treated soil stockpiles indicates compliance with MTCA Method A Cleanup Levels for TPH as gasoline and BTEX. Approximately 500 cubic yards of treated soil were transported to Coal Creek Landfill for disposal. Joe Hall Construction Company, Inc., disposed of approximately 400 cubic yards of clean rock separated from the treated soil off site.

The waste-oil tank was removed, and soil samples were collected from the resulting excavation. Samples from the waste oil tank excavation were analyzed for TPH as gasoline, as diesel, and as oil. Soil samples collected from the excavation contained detectable concentrations of TPH as oil, but were below MTCA Method A Cleanup Levels. Samples of soil removed from the waste oil tank excavation were tested for, but did not contain, detectable concentrations of volatile organics, semivolatile organics, PCBs, or TCLP metals.

The heating oil tank was excavated in conjunction with the gasoline tank removal. Soil samples collected were analyzed for BTEX, TPH as gasoline, TPH as diesel, and TPH as oil. All the results were below method detection limits.

The results of the underground storage tank decommissioning were presented to Shell Oil Company in the report dated February 12, 1993.

CONCLUSIONS

Seven soil borings were drilled at the site in 1990. Laboratory results from all collected soil samples were below MTCA Method A Cleanup Levels for BTEX and TPH as gasoline. One soil boring was completed as a monitoring well (MW-3). Groundwater samples were analyzed for BTEX and TPH as gasoline, TPH as diesel, and total lead. All results were below method detection limits.

Four gasoline tanks, a waste oil tank, a heating oil tank, and associated distribution lines were removed from the site and replaced with double-walled fiberglass tanks and lines. Three additional gasoline tanks discovered near the north end of the pump islands during soil excavation were also removed. During the removal of the gasoline tanks and product lines, approximately 900 cubic yards of gasoline-impacted soils were excavated and treated on site. All gasoline-impacted soil was treated to below MTCA Method A Cleanup Levels and disposed of off site. Laboratory results for soil samples collected at the limits of the gasoline tank and pump islands excavations indicate compliance with MTCA Method A Cleanup Levels for TPH as gasoline and BTEX. Soil samples collected from the waste oil tank excavation contained detectable concentrations of TPH as oil, but were below MTCA Method A Cleanup Levels.

Groundwater quality at the site has consistently been below method detection limits for BTEX and TPH as gasoline.

Based on a review of soil and groundwater sample laboratory results, MTCA Method A Cleanup Levels have been achieved in the vicinity of the former underground storage tanks, lines, and fuel dispensers. In EMCON's opinion, no further environmental assessment or remediation is warranted. On behalf of Shell Oil Company, we therefore request recognition of clean closure of the former fuel storage and dispensing system at this site, with respect to MTCA and underground storage tank regulations, and confirmation that no additional environmental site work is warranted.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Mr. Joe Hickey
October 18, 1993
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If you have any questions regarding the information presented here or in the referenced documents, please call.

Sincerely,

EMCON Northwest, Inc.



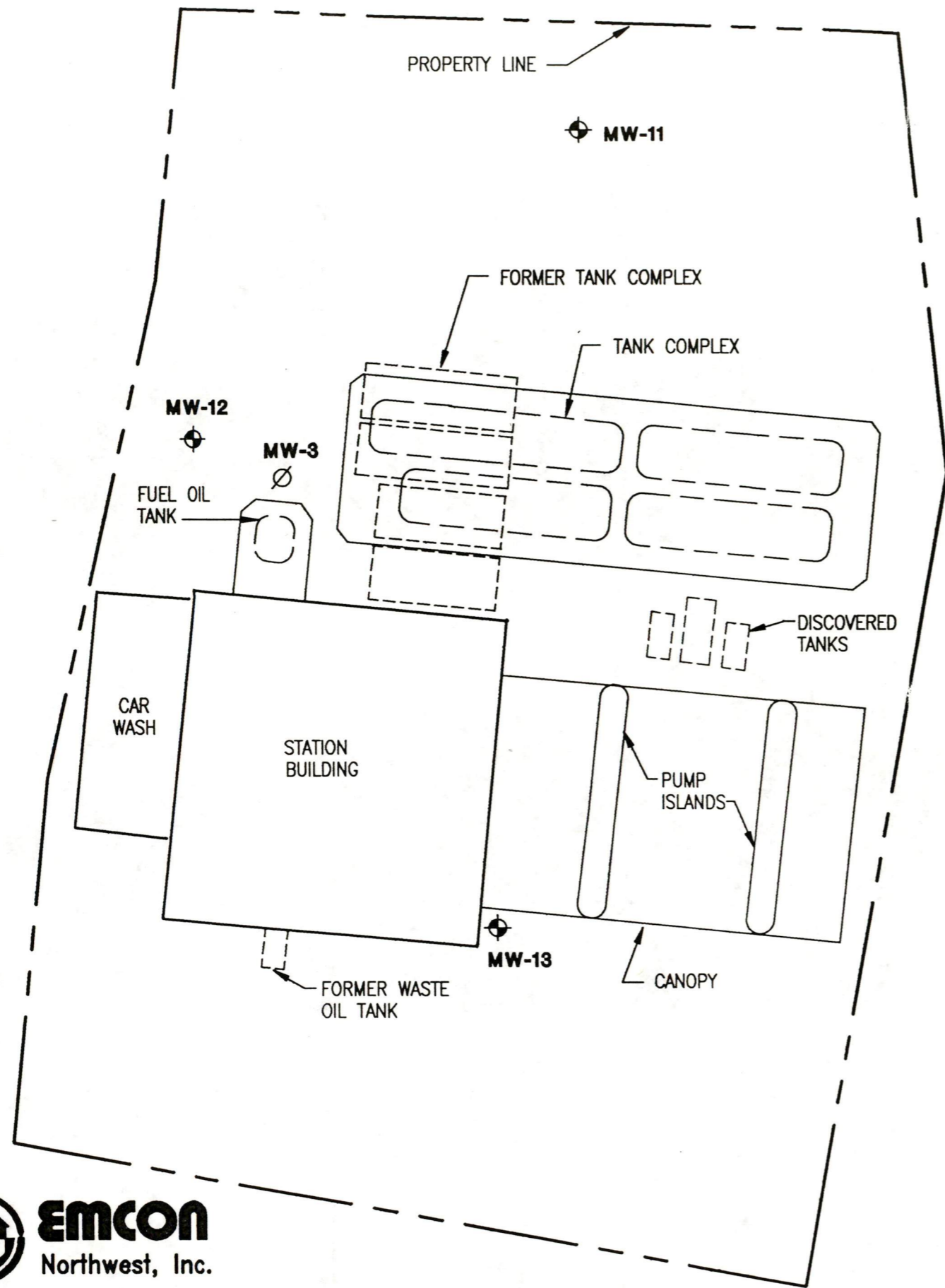
Lisa A. Rutan
Project Engineer



Patrick Brooks
Project Manager

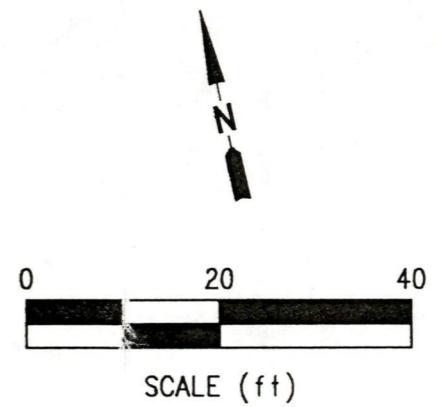
Enclosures: Figure 1 - Vicinity Map
Figure 2 - Site Plan
Appendix A - Summary of Soil and Groundwater Laboratory Results

cc/enc: Frank Fossati, Shell Oil Company
Lynn Chun, Texaco Refining and Marketing, Inc.
Mark Wells, Texaco Environmental Services



LEGEND:

- MW-11** APPROXIMATE MONITORING WELL LOCATION
- MW-3** DECOMMISSIONED MONITORING WELL



DATE	10-93
DWN.	MLP
REV.	
APPR.	PCB
PROJECT NO.	0556-019.20

Figure 2
 FORMER SHELL SERVICE STATION
 21641 MAPLE VALLEY HIGHWAY
 MAPLE VALLEY, WASHINGTON
SITE PLAN

APPENDIX A

**SUMMARY OF SOIL AND
GROUNDWATER LABORATORY RESULTS**

Table 1

Soil Sample Chemical Analyses
 21641 Maple Valley Highway
 Maple Valley, Washington
 WIC 246-5068-0101

Sample Location	Sample Depth	Sample Number	BTEX Compounds ^a					Total Petroleum Hydrocarbons ^b		
			Benzene	Toluene	Ethylbenzene	Xylenes		Gasoline	Diesel #1	Diesel #2
						m,p	o			
SB-2	5	19-SB2-5	ND	ND	ND	ND	ND	ND	ND	ND
SB-3	5	19-SB1-5	ND	55	ND	ND	ND	ND	ND	ND
SB-3	10	19-SB1-10	ND	50	ND	ND	ND	ND	ND	ND
SB-3	15	19-SB1-15	ND	ND	ND	ND	ND	ND	ND	ND
HB-6	5	19-HB6-5	ND	ND	ND	ND	ND	ND	ND	ND
HB-8	5	19-HB8-5	ND	ND	ND	ND	ND	ND	ND	ND

NOTE: ND = No detection.
 - = Not analyzed.
 * = Depth is reported in feet bgs.

^a Results for analyses of soil samples for BTEX were obtained using EPA Method 8020 (Purge and Trap) and reported in ng/g (ppb).
^b Results for analyses of soil samples for total petroleum hydrocarbons were obtained using modified EPA method 8015 (GC/FID) and reported in mg/Kg (ppm).

Table 2

**Groundwater Sample Analytical Results
Former Shell Service Station 71315
21641 Maple Valley Highway
Maple Valley, Washington 98036
WIC 246-5068-0101**

Sample Date	Sample Location	Sample Number	BTEX Compounds (ppb) ^a				Total Petroleum Hydrocarbons (ppm) ^b			Total Lead ^c (ppb)
			Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	Diesel	Oil	
MTCA ^d Cleanup Levels			5	40	30	20	1	1	1	5
04/09/93	MW-11	MW-11-0493	ND	ND	ND	ND	ND	—	—	—
04/09/93	MW-12	MW-12-0493	ND	ND	ND	ND	ND	—	—	—
04/09/93	MW-12(dup)	MW-14-0493	ND	ND	ND	ND	ND	—	—	—
04/09/93	MW-13	MW-13-0493	ND	ND	ND	ND	ND	—	—	—
04/09/93	Field Blank	FB-1-0493	ND	ND	ND	ND	ND	—	—	—
04/08/93	Trip Blank	Trip Blank	ND	ND	ND	ND	ND	—	—	—
08/17/92	MW-11	MW-11	ND	ND	ND	ND	ND	—	—	—
08/17/92	MW-12	MW-12	ND	ND	ND	ND	ND	—	—	—
08/17/92	MW-13	MW-13	ND	ND	ND	ND	ND	—	ND	—
08/17/92	MW-12(dup)	MW-14	ND	ND	ND	ND	ND	—	—	—
08/17/92	Field Blank	Field Blank	ND	ND	ND	ND	ND	—	—	—
08/14/92	MW-12	MW-12 (Purge)	ND	0.74	1.2	17	0.220	—	—	—
08/14/92	MW-13	MW-13 (Purge)	ND	ND	ND	ND	ND	—	—	—
08/07/92	MW-11	MW-11 (Purge)	ND	0.78	ND	ND	ND	—	—	—
06/05/92	Excavation	Pitwater	100	740	140	1,100	6.2	—	2.3	8.9
05/08/91	MW-3	MW-3	ND	ND	ND	ND	ND	—	—	—
08/09/90	MW-3	MW-3	ND	ND	ND	ND	ND	ND	—	ND

NOTE: ND = Not detected.
— = Not analyzed.
dup = Duplicate Sample.
Shading indicates values exceeded MTCA Method A Cleanup Levels.

^a Results for analyses of groundwater samples for benzene, toluene, ethylbenzene, and total xylenes (BTEX) were obtained using EPA Methods 5030/8020 and reported in parts per billion (ppb).

^b Results for analyses of groundwater samples for total petroleum hydrocarbons (TPH) were obtained using Methods WTPH-G for gasoline and WTPH-D extended for diesel and oil and reported in parts per million (ppm).

^c Results for analyses of groundwater samples for total lead were obtained using EPA Method 7421 and reported in ppb.

^d Chapter 173-340 WAC, *The Model Toxics Control Act Cleanup Regulations, Method A Cleanup Levels*. Amended February 1991.

Table 3

Soil Sample Analytical Results
Former Shell Service Station 71315
21641 Maple Valley Highway
Maple Valley, Washington 98036
WIC 246-5068-0101

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Sample Date	Sample Number	Sample Depth (feet)	BTEX Compounds (ppm) ¹				Total Petroleum Hydrocarbons (ppm) ²			Hydrocarbon Identification ³ HCID (ppm)			Total Lead (ppm)	PID ⁴ (ppm)
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	Gasoline	Diesel	Oil	Gasoline	Diesel	Oil		
MTCA ⁶ Cleanup Levels			0.5	40	20	20	100	200	200	--	--	--	1,000	--
Gasoline and Heating Oil Tank Excavation														
06/02/92	TP-9	9	ND	ND	ND	ND	1.1	--	--	ND	ND	ND	ND	1,132
06/04/92	WESTWALL-9	9	ND	ND	ND	ND	ND	--	--	--	--	--	13	0
06/04/92	NORTHWALL-9	9	ND	ND	ND	ND	ND	--	--	--	--	--	56	4
06/04/92	NORTHWALL-E-11	11	ND	ND	ND	ND	1.9	--	--	--	--	--	14	200
06/04/92	TANK1-WBTM-11	11	ND	ND	ND	0.24	41	--	--	--	--	--	13	400
06/04/92	TANK2-EBTM-11	11	ND	0.96	2.0	140	2,300	--	--	--	--	--	19	5,000
06/04/92	HOTANK-FLR-5	5	ND	ND	ND	ND	ND	--	--	ND	ND	ND	42	10
Discovered Gasoline Tank Excavation														
06/11/92	NORTH SIDEWALL MIDDLE-12 & EAST-12	12	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/11/92	SOUTH SIDEWALL MIDDLE-12	12	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/11/92	SOUTH SIDEWALL EAST-11	11	ND	ND	ND	ND	ND	--	--	--	--	--	12	0
06/11/92	EAST SIDEWALL-12	12	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/11/92	SOUTH SIDEWALL & SEPTIC-5	5	ND	ND	ND	ND	ND	--	--	ND	ND	ND	--	0
Pump Island Excavation														
06/16/92	WEST PUMPN-1	1	ND	9.6	5.1	350	6,400	--	--	--	--	--	--	1,000
06/17/92	PMCAS-10	10	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/17/92	SWPCAS-8	8	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/17/92	NWPIPE-3	3	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/17/92	NEPIPE-3	3	ND	ND	ND	ND	ND	--	--	--	--	--	--	0

Table 3

Soil Sample Analytical Results
Former Shell Service Station 71315
21641 Maple Valley Highway
Maple Valley, Washington 98036
WIC 246-5068-0101

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Sample Date	Sample Number	Sample Depth (feet)	BTEX Compounds (ppm) ¹				Total Petroleum Hydrocarbons (ppm) ²			Hydrocarbon Identification ³ HCID (ppm)			Total Lead (ppm)	PID ⁴ (ppm)
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	Gasoline	Diesel	Oil	Gasoline	Diesel	Oil		
MTCA ⁶ Cleanup Levels			0.5	40	20	20	100	200	200	--	--	--	1,000	--
06/17/92	SEPIPE-3	3	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/18/92	SWPIPE-4	4	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/18/92	SEPCAS-7.5	7.5	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
06/18/92	NEPCAS-7.5	7.5	ND	ND	ND	ND	ND	--	--	--	--	--	--	0
Waste Oil Tank Excavation														
06/22/92	WO-WNS-6	6	--	--	--	--	--	--	83	--	--	--	--	5
06/22/92	WO-WEW-6	6	--	--	--	--	--	--	40	--	--	--	--	3
06/22/92	WO-B-10	10	--	--	--	--	--	--	--	ND	ND	ND	--	0
Soil Borings														
08/06/92	MW-11 COMP	0-22	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
08/06/92	MW-12 COMP	0-20	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
08/11/92	S-12-13 (cuttings, borings MW-12 and MW-13)	0-20	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
Treated Soil Stockpile														
06/05/92	SCREENSOIL1	0-12	ND	ND	ND	0.18	91	--	--	--	--	--	--	460
06/05/92	SCREENSOIL2	0-12	ND	ND	ND	2.1	170	--	--	--	--	--	--	245
06/05/92	SCREENSOIL3	0-12	ND	ND	ND	0.57	160	--	--	--	--	--	--	1,350
06/05/92	SCREENSOIL4	0-12	ND	ND	ND	0.87	130	--	--	--	--	--	--	1,550
06/05/92	SCREENSOIL5	0-12	ND	ND	ND	0.11	91	--	--	--	--	--	--	770
06/05/92	RESCREEN1	0-12	ND	0.88	0.43	7.2	130	--	--	--	--	--	--	634
06/05/92	RESCREEN2	0-12	ND	1.2	0.53	8.6	140	--	--	--	--	--	--	483
06/05/92	RESCREEN3	0-12	ND	2.1	0.95	17	230	--	--	--	--	--	--	500
06/08/92	3PASS-1	0-12	ND	ND	ND	0.62	53	--	--	--	--	--	--	--
06/08/92	3PASS-2	0-12	ND	0.12	ND	1.0	63	--	--	--	--	--	--	--

Table 3

Soil Sample Analytical Results
Former Shell Service Station 71315
21641 Maple Valley Highway
Maple Valley, Washington 98036
WIC 246-5068-0101

Page 3 of 3

Sample Date	Sample Number	Sample Depth (feet)	BTEX Compounds (ppm) ¹				Total Petroleum Hydrocarbons (ppm) ²			Hydrocarbon Identification ³ HCID (ppm)			Total Lead (ppm)	PID ⁴ (ppm)
			Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	Diesel	Oil	Gasoline	Diesel	Oil		
MTCA ⁶ Cleanup Levels			0.5	40	20	20	100	200	200	--	--	--	1,000	--
06/08/92	3PASS-3	0-12	ND	ND	ND	0.73	55	--	--	--	--	--	--	--
06/08/92	3PASS-4	0-12	ND	ND	ND	0.51	47	--	--	--	--	--	--	--
06/08/92	3PASS-5	0-12	ND	ND	ND	0.76	61	--	--	--	--	--	--	--
06/15/92	STKPILE1	0-12	ND	ND	ND	ND	3.8	--	--	--	--	--	--	50
06/15/92	STKPILE2	0-12	ND	ND	ND	ND	3.4	--	--	--	--	--	--	50
06/15/92	STKPILE3	0-12	ND	ND	ND	ND	3.5	--	--	--	--	--	--	50
07/02/92	READSCREEN-1	0-12	ND	ND	ND	ND	ND	--	--	--	--	--	--	2.8
07/02/92	READSCREEN-2	0-12	ND	ND	ND	ND	ND	--	--	--	--	--	--	2.8
07/02/92	READSCREEN-3	0-12	ND	ND	ND	ND	2.1	--	--	--	--	--	--	2.8

NOTES: ND = Not detected

-- = Not analyzed

Shading indicates values exceeded MTCA Method A Cleanup Levels

¹ Results for analyses of soil samples for benzene, toluene, ethylbenzene, and total xylenes (BTEX) were obtained using EPA Methods 5030/8020 and reported in parts per billion (ppb), shown here in ppm² Results for analyses of soil samples for total petroleum hydrocarbons (TPH) were obtained using EPA Methods 5030/8015 Modified and EPA Method 418.1 (IR) and reported in parts per million (ppm)³ Results for analyses of soil samples for hydrocarbon identification (HCID) methods were obtained using Method WTPH-HCID and reported in mg/l (ppm)⁴ Photoionization detector (PID) readings were obtained in the field at the time of sample collection and are reported in ppm⁵ Chapter 173-340 WAC, "The Model Toxics Control Act Cleanup Regulations, Method A Cleanup Limits." Amended February 1991.

Caution on misusing Method A tables. Method A tables have been developed for specific purposes. They are intended to provide conservative cleanup levels for sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. The tables may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in these tables should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in these tables do not necessarily trigger requirements for cleanup action under this chapter.

