GeoDesign Inc

July 7, 2008

Washington State Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, Washington 98504-7775

Attention: Mr. Steve Teel

Supplemental Cleanup Action Results
The Village at Evergreen
13800 to 14114 SE Mill Plain Boulevard
Vancouver, Washington
Ecology VCP Identification Number: SW0915
GeoDesign Project: BonesConst-7-01

INTRODUCTION

GeoDesign has recently completed cleanup actions at The Village at Evergreen located north of SE Mill Plain Boulevard in Vancouver, Washington (project site). The results of the cleanup actions are presented in our Cleanup Action Report, dated June 13, 2008. A total of 10 cleanup action areas were identified at the project site (Cleanup Action Areas 1 through 10) as a result of prior investigations and as identified during remedial actions. As noted in the Cleanup Action Report, the majority of residual contaminants were removed from the project site, except at the locations of four discrete areas where very low levels of contaminants were detected in Cleanup Action Areas 2, 4, and 5 as follows:

- Acetone-impacted soil collected at the location of sample Piping-14ox(1.5-2.0). This sample was collected beneath a section of piping associated with the septic system identified at Cleanup Action Area 4. Acetone was detected in this sample at a concentration of 67 micrograms per kilogram (µg/Kg), which is significantly below the established corresponding Method B protective value of 8,000,000 µg/Kg.
- Acetone-impacted soil collected at the location of sample Piping-17ox(2.0-2.5). This sample was collected beneath a section of piping associated with the septic system identified at Cleanup Action Area 5. Acetone was detected in this sample at a concentration of 89 µg/Kg, which is significantly below the established corresponding Method B protective value of 8,000,000 µg/Kg.

- PCB-impacted soil collected at the locations of samples CAA-2-24ox(10.5-11.0) and CAA-2-29ox(5.5-6.0). The June 13, 2008 Cleanup Action Report inadvertently identified sample CAA-2-29ox(5.5-6.0) as sample CAA-2-23ox(11.0-11.5). Sample CAA-2-24ox(10.5-11.0) was collected along the eastern sidewall of the remedial excavation associated with the former drainage feature at Cleanup Action Area 2, and sample CAA-2-29ox(5.5-6.0) was collected along a northern sidewall at the east end of the remedial excavation associated with the former gutter and wastewater settlement cells at Cleanup Action Area 2. The PCB aroclor 1254 was detected in samples CAA-2-24ox(10.5-11.0) at a concentration of 39 µg/Kg. The PCB aroclor 1260 was detected in samples CAA-2-24ox(10.5-11.0) and CAA-2-29ox(5.5-6.0) at concentrations of 160 µg/Kg and 57 µg/Kg, respectively. Each of these detected concentrations are less than the established corresponding MTCA Method A cleanup level of 1,000 µg/Kg; the total value for the sum of all PCBs.
- Pesticide-impacted soil at the location of sample CAA-2-29ox(10.5-11.0). The June 13, 2008 Cleanup Action Report inadvertently identified sample CAA-2-29ox(5.5-6.0) as sample CAA-2-23ox(11.0-11.5). This sample was collected along a northern sidewall at the east end of the remedial excavation associated with the former gutter and wastewater settlement cells at Cleanup Action Area 2. The pesticide endrin keytone was detected in this sample at a concentration of 17.9 µg/Kg. Washington State Department of Ecology (Ecology) has not established screening level criterion for endrin keytone.
- Semi-volatile organic compound- (SVOC-) impacted soil collected at the location of samples CAA-2-24ox(10.5-11.0). This sample was collected along the eastern sidewall of the remedial excavation associated with the former drainage feature at Cleanup Action Area 2. Two SVOCs, benzylbutyl phthalate and bis(2-ethylhexyl)phthalate, were detected in these samples at concentrations of 450 µg/Kg and 660 µg/Kg, respectively. These detected concentrations are significantly less than the established MTCA Method B protective values of 16,000,000 µg/Kg and 71,000 µg/Kg, respectively.

As noted above, all of the residual contaminants were detected at concentrations significantly below the regulatory cleanup levels; however, additional overexcavation of soil impacted with PCBs, pesticides, and/or SVOCs was conducted at two locations of Cleanup Action Area 2. This supplemental report summarizes the additional excavation activities and the analytical results from additional confirmation soil sampling.

SUPPLEMENTAL CLEANUP ACTIONS

Although none of the detected residual contaminants identified above exceeded established MTCA Method A cleanup levels or Method B protective values, a total of approximately 10 to 12 tons of soil represented by samples CAA-2-24ox(10.5-11.0) and CAA-2-29ox(5.5-6.0) was overexcavated and temporarily stockpiled and covered for later disposal at Hillsboro Landfill. This volume, in addition to the approximate 200 tons of soil generated from the vicinity of the underground sump, drainage feature, and wastewater settlement cells and gutter that was initially removed at Cleanup Action Area 2 (identified as F-listed waste) will be disposed as non-dangerous waste through Ecology's Contained-In Policy at Hillsboro Landfill under Permit Number 101050WA. Overexcavation of acetone-impacted soil represented by samples

Piping-14ox(1.5-2.0) and Piping-17ox(2.0-2.5), collected in Cleanup Action Areas 4 and 5, respectively, was not considered warranted given that the detected concentrations are five and two orders of magnitude less than the established MTCA Method B protective values, respectively.

New confirmation soil samples (identified as CAA-2-24ox2(10.5-11.0) and CAA-2-29ox2(5.5-6.0) were collected from the supplemental overexcavated limits of the remedial excavations on June 4, 2008. The locations of the initial confirmation soil samples (CAA-2-24[10.5-11.0] and CAA-2-29[5.5-6.0]), the confirmation soil samples collected from the interim overexcavated limits (CAA-2-24ox[10.5-11.0] and CAA-2-29ox[5.5-6.0]) and the new confirmation soil samples collected from the final overexcavated limits (CAA-2-24ox2[10.5-11.0] and CAA-2-29ox2[5.5-6.0]) are shown on Figure 1.

None of the residual contaminants targeted for removal during the overexcavation activities were detected in the new confirmation soil samples collected from the overexcavated limits. The results of the initial confirmation soil samples (CAA-2-24[10.5-11.0] and CAA-2-29[5.5-6.0]), the interim confirmation soil samples (CAA-2-24ox[10.5-11.0] and CAA-2-29ox[5.5-6.0]), and new confirmation soil samples (CAA-2-224ox2[10.5-11.0] and CAA-2-29ox2[5.5-6.0] are summarized in Tables 1 through 3.

CONCLUSIONS

The results of the supplemental cleanup actions indicate that the residual PCB, pesticide and SVOC-impacted soil that remained at Cleanup Action Area 2 has successfully been removed and will be disposed off site at the Hillsboro Landfill. Based on the results of the cleanup actions completed to date, the only remaining residual contamination at the project site is low levels of acetone detected in soil represented by samples Piping-14ox(1.5-2.0) and Piping-17ox(2.0-2.5) that were collected beneath piping associated with former septic systems at Cleanup Action Areas 4 and 5, respectively. The concentrations of acetone detected in these samples are five orders of magnitude less than the corresponding MTCA Method B protective value.

The data presented in this submittal, combined with the data presented in the June 13, 2008 Cleanup Action Report warrant an Opinion of "No Further Action" for soil at the project site. A completed "Request for Opinion Form" was enclosed with the June 13, 2008 Cleanup Action Report.

All of the chemical analytical data presented in the June 13, 2008 Cleanup Action Report, as well as the data presented in this submittal, have been loaded into Ecology's EIM system as required under Washington Administrative Code (WAC) 173-340-840(5).

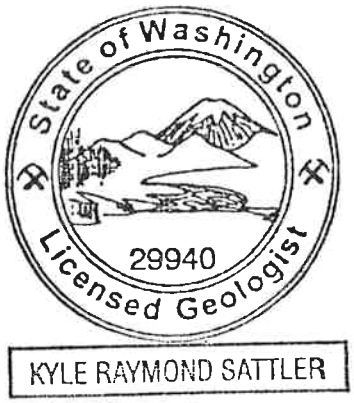
♦ ♦ ♦

Please contact us if you have questions regarding this submittal.

Sincerely,

GeoDesign, Inc.

Kyle R. Sattler, L.G.
Senior Project Geologist



Craig W. Ware
Principal

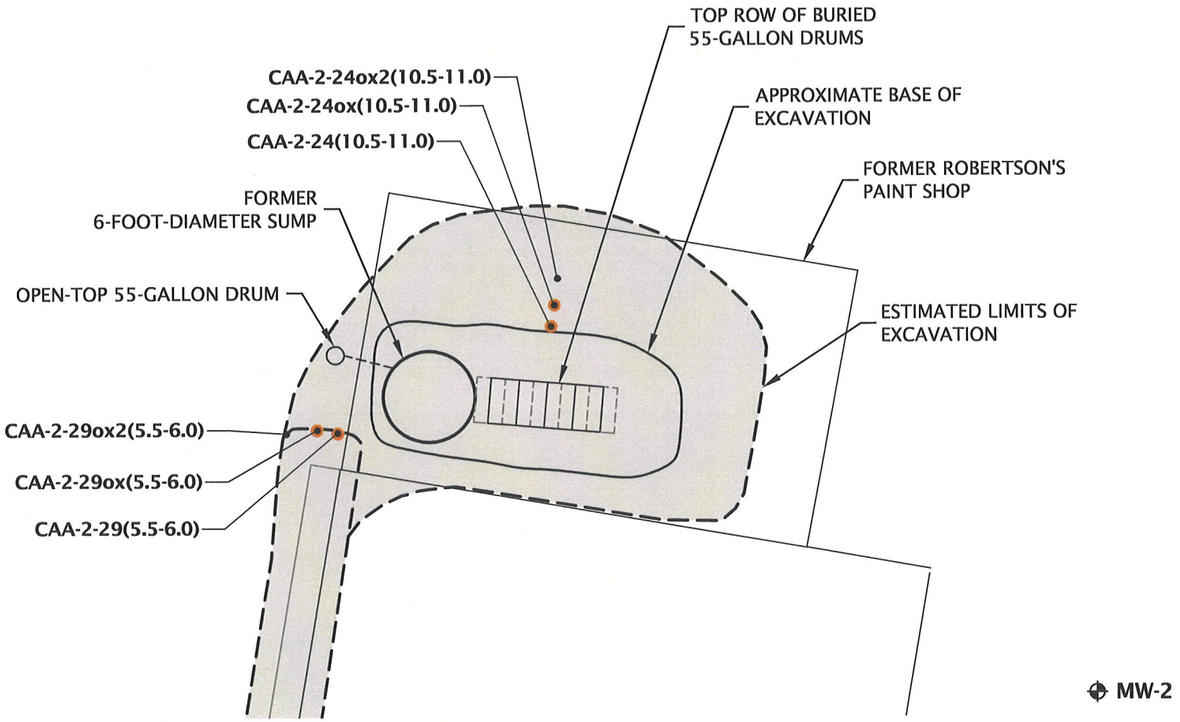
cc: Mr. Ron Skov, ROF Evergreen JV, LLC (via email only)
Ms. Michelle Limon, ATC Associates, Inc. (via email only)
Mr. Matt Ekerson, Bones Construction (via email only)

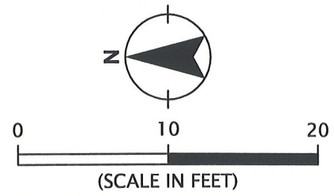
KRS:CWW:sms
Attachments
Two copies submitted
Document ID: BonesConst-7-01-070708-envl-supplement

FIGURES

LEGEND:

CAA-2-24(10.5-11.0) •	SOIL SAMPLE
CAA-2-24ox2(10.5-11.0) •	OVEREXCAVATED SOIL SAMPLE
MW-2 ⊕	MONITORING WELL
	EXCAVATION AREA





SITE PLAN BASED ON DRAWING PROVIDED BY
K C DEVELOPMENT
MAY 17, 2005

CLEANUP ACTION AREA 2 DETAIL VIEWS

FIGURE 1

THE VILLAGE AT EVERGREEN
VANCOUVER, WA

BONESCONST-7-01

JULY 2008

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File Name: \\chromite\Files\Jobs\A-D\BonesConst\BonesConst-7\BonesConst-7-01\Figures\CAD\Memo Figure\BonesConst-7-01-SP01.dwg | Layout: Figure 1

TABLES

TABLE 1
Soil Chemical Analytical Results
PCBs
The Landing at Evergreen
Cleanup Action Area 2
Vancouver, Washington

Sample Identification	Date	Depth (feet BGS)	EPA Method 8082 (µg/Kg)						
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Drainage Feature / Sump									
CAA-2-24(10.5-11.0)[1]	05/06/08	10.5-11.0	33 U	33 U	33 U	33 U	33 U	33 U	**41**
CAA-2-24ox(10.5-11.0)[1]	05/22/08	10.5-11.0	33 U	33 U	33 U	33 U	33 U	**39**	**160**
CAA-2-24ox2(10.5-11.0)	06/04/08	10.5-11.0	33 U	33 U	33 U	33 U	33 U	33 U	33 U
Wastewater Settlement Cells & Gutter									
CAA-2-29(5.5-6.0)[1]	05/06/08	5.5-6.0	33 U	33 U	33 U	33 U	33 U	33 U	**160**
DUP-11[1]	05/06/08	5.5-6.0	33 U	33 U	33 U	33 U	33 U	33 U	**180**
CAA-2-29ox(5.5-6.0)[1]	05/22/08	5.5-6.0	33 U	33 U	33 U	33 U	33 U	33 U	**57**
CAA-2-29ox2(5.5-6.0)	06/04/08	5.5-6.0	33 U	33 U	33 U	33 U	33 U	33 U	33 U
MTCA Method A Cleanup Level			1,000[2]						

Notes:
1. Soil represented by this sample was removed and transported off site for disposal at Hillsboro Landfill.
2. Cleanup level based on applicable federal law (40 CFR 76161). This is a total value for the sum of all PCBs.
U: Not detected above the laboratory MRL. Each MRL is reported.
BGS = below the ground surface
CFR = Code of Federal Regulations
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
MTCA = Model Toxics Control Act
PCB = polychlorinated biphenyl
µg/Kg = micrograms per kilogram

TABLE 2
Soil Chemical Analytical Results
Organochlorine Pesticides
The Village at Evergreen
Cleanup Action Area 2
Vancouver, Washington

Sample Identification	Sample Date	Depth of Sample (feet BGS)	Location of Sample	EPA Method 8081A (µg/Kg)																					
				Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	alpha-Chlordane	gamma-Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin Aldehyde	Endrin Keytone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Chlordane (Technical)	Toxaphene
Wastewater Settlement Cells & Gutter																									
CAA-2-29(5.5-6.0)[1]	05/06/08	5.5-6.0	Sidewall	10.8 U	10.8 U	10.8 U	10.8 U	67.4 U	10.8 U	10.8 U	10.8 U	10.8 U	67.4 U	10.8 U	10.8 U	10.8 U	10.8 U	10.8 U	10.8 U	67.4 U	67.4 U	10.8 U	198 U	158 U	475 U
DUP-11[1]	05/06/08	5.5-6.0	Duplicate of CAA-2-29(5.5-6.0)	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	**21.4**	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	31.4 U	10.3 U	30.2 U	151 U	452 U
CAA-2-29ox(5.5-6.0)[1]	05/22/08	5.5-6.0	Sidewall	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	51.4 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	**17.9**	14.5 U	8.23 U	151 U	121 U	363 U
CAA-2-29ox2(5.5-6.0)	06/04/08	5.5-6.0	Sidewall	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	4.0 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14	2.14 U	2.14 U	6.29 U	31.5 U	94.4 U
MTCA Regulatory Criteria[2]				2,400[3]	NE	NE	NE	770[4]	NE	NE	4,200[4]	2,900[4]	3,000	63[4]	480,000[3]		NE	24,000[3]	NE	NE	220[4]	110[4]	400,000[3]	2,900[4]	910[4]

Notes:
1. Soil represented by this sample was removed and transported off site for disposal at Hillsboro Landfill.
2. All values are MTCA Method A cleanup levels, unless otherwise noted.
3. MTCA Method B non-carcinogen protective values. These values are concentrations that are protective of human health for soil ingestion under Standard Method B using the equations and default values provided in the regulation. These values are not cleanup levels and do not take into consideration applicable state and federal laws, ecological impacts, dermal contact as part of the direct contact pathway, the vapor pathway, total site risk, natural background concentrations, or practical quantitation limits.
4. MTCA Method B carinogen protective values. These values are concentrations that are protective of human health for soil ingestion under Standard Method B using the equations and default values provided in the regulation. These values are not cleanup levels and do not take into consideration applicable state and federal laws, ecological impacts, dermal contact as part of the direct contact pathway, the vapor pathway, total site risk, natural background concentrations, or practical quantitation limits.

U: Not detected above the laboratory MRL. Each MRL is reported.
Bold: Indicates analyte detection above the laboratory MRL. Each MRL is reported.
BGS = below the ground surface
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
MTCA = Model Toxics Control Act
NE = not established
µg/Kg = micrograms per kilogram

TABLE 3
Soil Chemical Analytical Results
SVOCs
The Village at Evergreen
Cleanup Action Area 2
Vancouver, Washington

Sample Identification	Sample Date	Depth of Sample (feet BGS)	EPA Method 8270C (µg/Kg)																			
			Acenaphthene	Acenaphthylene	Anthracene	Benzidine	Benzo(a)anthracene[1]	Benzo(b)fluoranthene[1]	Benzo(k)fluoranthene[1]	Benzo(g,h,I)perylene	Benzo (a) pyrene[1]	Bis(2-chlorethoxy)methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl)ether	4-Bromophenyl-phenylether	2-Chloronaphthalene	4-Chlorophenyl-phenylether	Chyrsene[1]	Dibenz(a,h)anthracene[1]	3,3-Dichlorobenzidine	2,4-Dinitrotoulene
Drainage Feature / Sump																						
CAA-2-24(10.5-11.0)[2]	05/06/08	10.5-11.0	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U
CAA-2-24ox(10.5-11.0)[2]	05/22/08	10.5-11.1	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U
CAA-2-24ox2(10.5-11.0)	06/04/08	10.5-11.1	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	800 U	
MTCA Regulatory Criteria[3]			4,800,000[4]	NE	24,000,000[4]	4.3[5]	100[6]	100[6]	100[6]	NE	100[6]	NE	910[5]	3,200,000[4]	NE	NE	NE	100[6]	100[6]	2,200[5]	160,000[4]	

TABLE 3
Soil Chemical Analytical Results
SVOCs
The Village at Evergreen
Cleanup Action Area 2
Vancouver, Washington

Sample Identification	Sample Date	Depth of Sample (feet BGS)	EPA Method 8270C (µg/Kg)																		
			2,6-Dinitrotoulene	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachloro-1,3-butadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno (1,2,3-cd) pyrene[1]	Isophorone	Naphthalene	Nitrobenzene	n-Nitrosodimethylamine	n-Nitrosodiphenylamine	n-Nitrosodi-n-propylamine	Phenanthrene	Benzylbutyl phathalate	Bis(2-ethylhexyl)phthalate	Di-n-butyl phthalate
Drainage Feature / Sump																					
CAA-2-24(10.5-11.0)[2]	05/06/08	10.5-11.0	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	**940**	360 U
CAA-2-24ox(10.5-11.0)[2]	05/22/08	10.5-11.0	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	**450**	**660**	350 U
CAA-2-24ox2(10.5-11.0)	06/04/08	10.5-11.0	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
MTCA Regulatory Criteria[3]			80,000[4]	3,200,000[4]	3,200,000[4]	630[4]	13,000[5]	480,000[4]	71,000[5]	100[6]	1,100,000[5]	5,000[4]	40,000[4]	20[5]	200,000[5]	140[5]	NE	16,000,000[4]	71,000[5]	8,000,000[4]

TABLE 3
Soil Chemical Analytical Results
SVOCs
The Village at Evergreen
Cleanup Action Area 2
Vancouver, Washington

Sample Identification	Sample Date	Depth of Sample (feet BGS)	EPA Method 8270C (µg/Kg)																	
			Diethyl phthalate	Dimethyl phthalate	Di-n-octyl phthalate	Pyrene	1,2,4-Trichlorobenzene	4-Chloro-3methylphenol	2-Chlorophenol	2-Methylphenol	3&4-methyl phenol	2,4-Dichlorophenol	2,4-Dimehtylphenol	4,6-Dinitro-2-methylphenol	2,4-Dinitrophenol	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenol	2,4,6-Trichlorophenol
Drainage Feature / Sump																				
CAA-2-24(10.5-11.0)[2]	05/06/08	10.5-11.0	360 U	360 U	360 U	360 U	360 U	360 U	360 U	NA	NA	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U	360 U
CAA-2-24ox(10.5-11.0)[2]	05/22/08	10.5-11.0	350 U	350 U	350 U	350 U	350 U	350 U	350 U	NA	NA	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U	350 U
CAA-2-24ox2(10.5-11.0)	06/04/08	10.5-11.0	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	800 U	330 U	800 U	800 U	330 U	800 U	800 U	330 U	330 U
MTCA Regulatory Criteria[3]			64,000,000[4]	80,000,000[4]	1,600,000[4]	2,400,000[4]	800,000[4]	NE	400,000[4]	NE	NE	240,000[4]	1,600,000[4]	NE	160,000[4]	NE	NE	8,300[5]	48,000,000[4]	91,000[5]

Notes:
1 PAH is considered carcinogenic.
2. Soil represented by this sample was removed and transported off site for disposal at Hillsboro Landfill.
3. All values are MTCA Method A cleanup levels, unless otherwise noted.
4. MTCA Method B non-carcinogenic protective values. These values are concentrations that are protective of human health for soil ingestion under Standard Method B using the equations and default values provided in the regulation. These values are not cleanup levels and do not take into consideration applicable state and federal laws, ecological impacts, dermal contact as part of the direct contact pathway, the vapor pathway, total site risk, natural background concentrations, or practical quantitation limits.
5. MTCA Method B carcinogenic protective values. These values are concentrations that are protective of human health for soil ingestion under Standard Method B using the equations and default values provided in the regulation. These values are not cleanup levels and do not take into consideration applicable state and federal laws, ecological impacts, dermal contact as part of the direct contact pathway, the vapor pathway, total site risk, natural background concentrations, or practical quantitation limits.
6. MTCA Method A cleanup level is based on direct contact exposure pathway. The sum of all detected carcinogenic PAHs must meet this cleanup level using the toxicity equivalency methodology in WAC 173-340-708(8).
U: Not detected above the laboratory MRL. Each MRL is reported.
Bold: Indicates analyte detection above the laboratory MRL.
BGS = below the ground surface
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
MTCA = Model Toxics Control Act
NE = not established
PAH = polynuclear aromatic hydrocarbon
SVOC = semi-volatile organic compound
µg/Kg = micrograms per kilogram
WAC = Washington Administrative Code