PSE - Sheffield

GeoEngineers

November 19, 2002

Consulting Engineers
and Geoscientists

Washington State Department of Ecology
Northwest Regional Office
3190-160th Avenue Southeast
Bellevue, Washington 98008-5452

Attention: Joe Hickey

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DEPT OF ECOLOGY

Petition for Termination of Parcel 2
Groundwater Compliance Monitoring
Grady Way Complex Property
Renton, Washington
File No. 0186-407-00

INTRODUCTION

The purpose of this letter is to request approval from the Washington State Department of Ecology (Ecology) to terminate groundwater compliance monitoring activities for Parcel 2 of the former Puget Sound Energy (PSE) Grady Way/Talbot Storage Yard. The site is located at 915 Grady Way South in Renton, Washington as shown in Figure 1. Parcel 2 comprises the westernmost portion of a larger property that PSE owned and operated prior to vacating the site in about 1998. The layout of Parcel 2 and adjacent property (Parcels 1 and 3) that comprises the former PSE site is shown in Figure 2. Puget Western, Inc. (PWI) currently owns the site.

The Washington State Department of Ecology (Ecology) granted a determination of "No Further Action" (NFA) for each of the three parcels (Parcels 1 through 3) that comprise the site. The NFAs were granted based on conditions outlined in a restrictive covenant. Ecology also required that the site be monitored in accordance with Groundwater Compliance Monitoring Plans (GCMP) that were prepared for each parcel. The GCMPs for each parcel are dated February 1, 2000.

Groundwater monitoring activities were terminated in Parcels 1 and 3 prior to completing the original schedule presented in the GCMPs. These monitoring activities were terminated based on favorable monitoring results, as described in GeoEngineers' July 9, 2001 letter entitled "Petition for Modifications to the Groundwater Compliance Monitoring Plan" and Ecology's response letter dated July 17, 2001.

Groundwater monitoring activities in Parcel 2 have been conducted through the 3rd quarter 2002 in accordance with the GCMP. PWI is hereby proposing to terminate additional groundwater monitoring activities in Parcel 2 based on the favorable monitoring results that have been obtained to date.

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REGULATORY FRAMEWORK

The groundwater analytical results from this site are evaluated relative to cleanup levels presented in the January 1996 version of the Model Toxics Control Act (MTCA). This version of MTCA is used because the final cleanup action at the site was initiated prior to August 15, 2001 [Washington Administrative Code (WAC) 173-340-702(12)(b)].

PARCEL 2 GROUNDWATER MONITORING RESULTS

The original groundwater monitoring requirements for Parcel 2, as outlined in the GCMP, are shown in Table 1. PWI satisfied its obligation to monitor arsenic concentrations and submitted the results to Ecology. No further activities are planned in Parcel 2 to monitor arsenic concentrations in groundwater.

Petroleum hydrocarbon concentrations have been monitored in three wells (GMW-8, GMW-13 and GWM-14) located on Parcel 2, as required by the GCMP. These activities are scheduled to continue until 2004. The results of past monitoring activities were submitted to Ecology in our third quarter 2002 groundwater monitoring report dated August 28, 2002. The analytical results from past monitoring events are shown in Table 2 of this letter. A trend plot of petroleum hydrocarbon concentrations in Parcel 2 is shown in Figure 3.

Petroleum hydrocarbon concentrations in groundwater samples obtained from Parcel 2 have, in general, displayed an overall decreasing trend since the November 1998 monitoring event. Petroleum hydrocarbon concentrations did not exceed the MTCA Method A cleanup level during the past two monitoring events in GMW-8, the past five monitoring events in GMW-13 and the past four monitoring events in GMW-14.

Based on historical water level measurements, shallow groundwater beneath Parcel 2 appears to flow in a westerly direction, with one exception. A localized easterly flow direction has been observed beneath the western-most corner of Parcel 2, near GMW-8. This localized gradient reversal has been attributed to possible groundwater "mounding" near underground utilities adjacent to Grady Way South and Talbot Road. Based on this information, the petroleum-related contamination detected in groundwater beneath Parcel 2 appears to be migrating onto the site from beneath the adjacent street (Talbot Road), as described in our previous reports.

DISCUSSION

In our opinion, it is no longer necessary to monitor petroleum hydrocarbon concentrations in groundwater beneath Parcel 2 for the following reasons:

- The source for the petroleum-related groundwater contamination is located off-site, and is not subject to the control of PWI.
- Petroleum hydrocarbon concentrations have generally declined since November 1998 and have exceeded the MTCA Method A cleanup level in only one of three monitoring wells during the past four monitoring events.
- Deed restrictions have been recorded for Parcels 1 through 3. The deed restrictions specify that groundwater may not be extracted from the site for any purposes.

- There is no obvious downgradient property that would be protected by continuing to monitor petroleum hydrocarbon concentrations beneath Parcel 2. Petroleum-related contamination that is migrating beneath Parcel 2 from adjacent streets does not appear to be migrating beneath other portions of the former PSE Grady Way site (Parcels 1 and 3) based on analytical results from GMW-13 and GMW-14 during the last four monitoring events.

Based on the site conditions described above, PWI proposes to terminate groundwater monitoring activities at this time. PWI requests that Ecology provide written concurrence if, after reviewing this letter, Ecology agrees with this proposal. Terminating groundwater monitoring activities in Parcel 2 at this time would eliminate two sampling events (1st and 3rd quarters of 2004) that were originally scheduled in the GCMP.

LIMITATIONS

We have prepared this letter for use by Puget Western, Inc. and Ecology as part of their evaluation of environmental conditions at the subject site. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood. Please refer to the attachment titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this letter.

We look forward to your response concerning our proposed modifications to the GCMP for Parcel 2. We will be pleased to discuss any issues that require clarification. Please call if you have questions.

Yours very truly,
GeoEngineers, Inc.

for SCW

Stephen C. Woodward, P.G.
Senior Project Manager

Kurt R. Fraese, P.G.
Principal

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Attachments

One copy submitted

cc: Bob Boyd (one copy)
Puget Western, Inc.
19515 North Creek Parkway
Suite 310
Bothell, Washington 98011

TABLE 1
SAMPLING AND ANALYSIS PLAN
GROUNDWATER COMPLIANCE MONITORING

Parcel 2 of the Former Puget Sound Energy
Grady Way/Talbot Storage Yard
Renton, Washington

Monitoring Well	Year 2000				Year 2001				Year 2002				Year 2003				Year 2004			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Parcel 2																				
GMW-8	TPH, As								TPH		TPH						TPH		TPH	
GMW-9																				
GMW-13	TPH, As	As	As	As					TPH		TPH						TPH		TPH	
GMW-14	TPH, As	As	As	As					TPH		TPH						TPH		TPH	

Notes:
1. Shading indicates that groundwater samples will not be obtained from the specified well unless contaminant concentrations significantly increase in other on-site wells.
2. TPH = Total petroleum hydrocarbons. TPH will be analyzed using Ecology Method NWTPH-D extended.
3. As = Dissolved Arsenic. Dissolved arsenic will be analyzed using EPA Method 6020.

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TABLE 2 (Page 1 of 2)
SUMMARY OF GROUNDWATER CHEMICAL ANALYTICAL DATA[1]

Parcel 2 of the Former Puget Sound Energy
Grady Way/Talbot Storage Yard
Renton, Washington

Sample Number[2]	Date Sampled	Petroleum Hydrocarbons[3] (mg/l)		PCBs[4] (µg/l)	Dissolved Arsenic[5] (µg/l)	pH[6] (pH units)
		Diesel-Range	Lube Oil-Range			
GMW-8	08/29/1998	<0.250	<0.500	<0.100	5.95	7.31
	11/03/1998	0.385	0.942	<0.100	2.28	6.44
	11/24/1998	1.84	5.13	--	--	--
	02/24/1999	0.372	<0.500	<0.100	3.19	6.24
	05/20/1999	0.886	2.42	<0.100	--	--
	01/28/2000	0.736	0.960	--	3.18	--
	01/04/2002	<0.250	<0.500	--	--	--
	07/03/2002	<0.250	<0.500	--	--	--
GMW-13	11/24/1998	0.472	1.21	--	--	--
	02/24/1999	<0.250	<0.500	--	--	6.30
	05/20/1999	<0.250	<0.500	--	--	--
	01/28/2000	<0.250	<0.500	--	<1.00	--
	04/14/2000	--	--	--	<1.00	--
	07/21/2000	--	--	--	<1.00	--
	10/19/2000	--	--	--	<1.00	--
	01/04/2002	<0.250	<0.500	--	--	--
	07/03/2002	<0.250	<0.500	--	--	--
GMW-14	11/24/1998	1.06	2.98	--	--	--
	02/24/1999	0.556	0.969	--	--	6.31
	05/20/1999	<0.250	<0.500	--	--	--
	01/28/2000	0.330	<0.500	--	2.53	--
	04/14/2000	--	--	--	2.27	--
	07/21/2000	--	--	--	23.1	--
	10/19/2000	--	--	--	2.98	--
	01/04/2002	<0.250	<0.500	--	--	--
	07/03/2002	0.254	0.589	--	--	--
MTCA Method A Cleanup Level[7]		1.0[8]		0.1	5.0	NA

Notes appear on Page 2 of 2

TABLE 2 (Page 2 of 2)

Notes:

[1] Chemical analyses were performed by North Creek Analytical Laboratory of Bothell, Washington.

[2] Groundwater sampling locations are shown in Figure 2.

[3] Diesel- and lube oil-range hydrocarbons analyzed using Ecology Method NWTPH-D extended.

[4] Polychlorinated biphenyls (PCBs) analyzed using EPA Method 8082.

[5] Dissolved arsenic analyzed using EPA Method 6000/7000 Series.

[6] pH analyzed using EPA Method 150.1.

[7] The January 1996 MTCA Method A cleanup levels are referenced because the final cleanup action was initiated prior to August 15, 2001 [Washington Administrative Code (WAC) 173-340-702(12)(b)].

[8] The MTCA Method A cleanup level applies to the sum of all ranges of petroleum hydrocarbons.

"–" = not tested

NA = not applicable

mg/l = milligrams per liter

µg/l = micrograms per liter

MTCA = Model Toxics Control Act

Shaded values exceed MTCA Method A cleanup levels.

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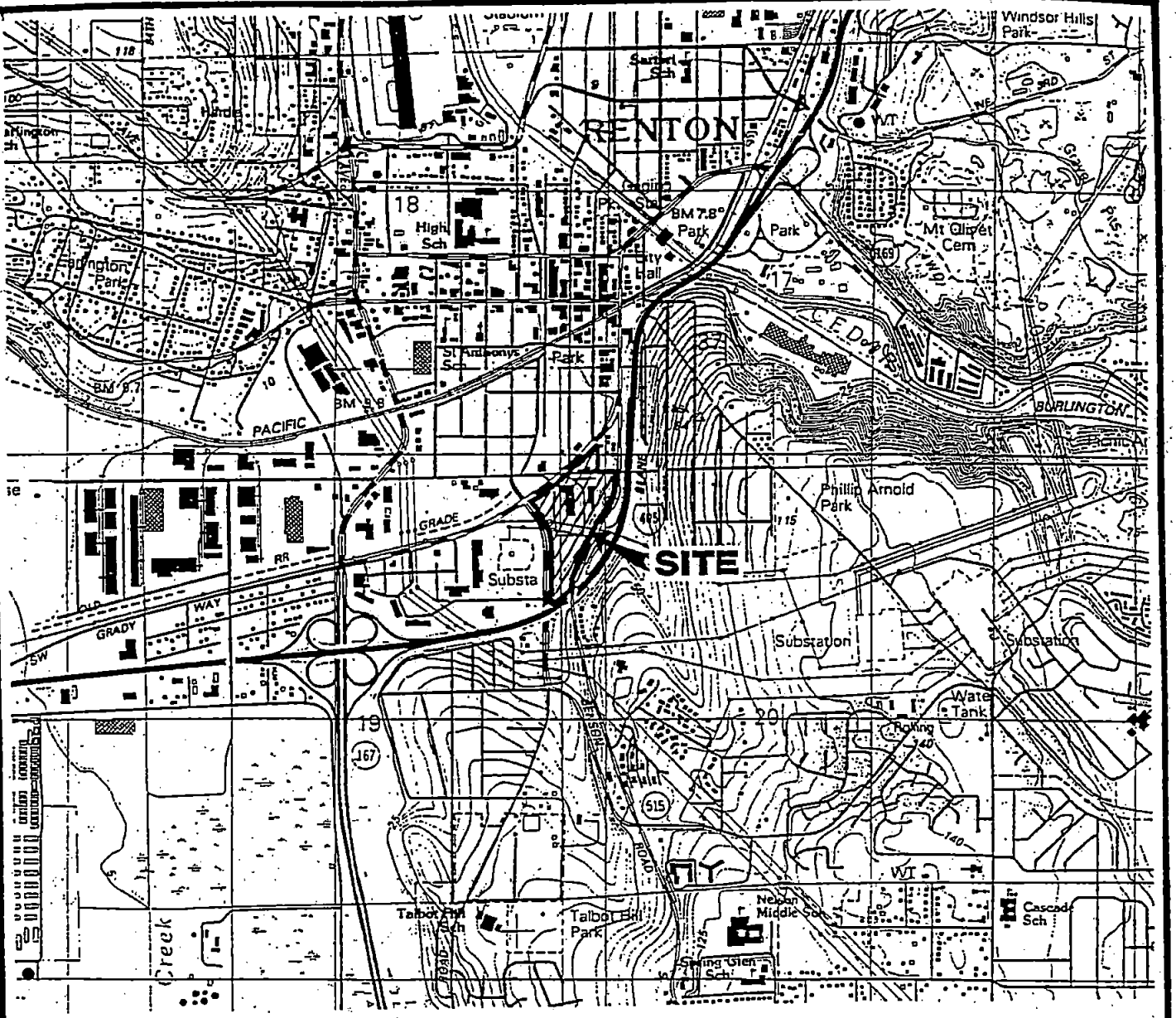

Reference: USGS 7.5' X 15' topographic–bathymetric quadrangle map "Renton, Wash.," dated 1983.

Geo Engineers	VICINITY MAP
	FIGURE 1

BPP:SYF 0186-407-00 02/15/00

0186-316-R95 LCM:ROH 9/11/95

10/18/95

MAIN AVENUE S.

I-405

PARKING STRUCTURE

Property Boundary

RESIDENTIAL

BENSON ROAD S.

GRADY WAY SOUTH

UNDEVELOPED

UNDEVELOPED

WETLAND AREA

TALBOT ROAD

COMMERCIAL AND OFFICES

PARCEL 1

PARCEL 2

PARCEL 3

DIVISION OFFICE (Removed)

SERVICE CENTER (REMOVED)

BAY

STORES BUILDING (REMOVED)

Transformer Storage Dock

GMW-15 94.91

GMW-16 91.90

GMW-17 92.00

GMW-1 94.87

GMW-2/2a 95.00

GMW-3/3a 94.48

GMW-4/4a 93.80

GMW-5 92.72

GMW-6 93.14

GMW-7 91.51

GMW-8 91.95

GMW-9 91.66

GMW-10 91.72

GMW-11 93.08

GMW-12/12a 93.98

GMW-13 91.91

GMW-14 92.01

MW-4 89.02

MW-8 NA

MW-10 91.75

MW-20 91.34

94.0

93.0

92.0

91.0

90.0

95.0

SS

EXPLANATION:

GMW-1 / 94.87 ● MONITORING WELL GROUNDWATER ELEVATION BASED ON 07/03/02 MEASUREMENTS

INFERRED DIRECTION OF SHALLOW GROUNDWATER FLOW BASED ON 07/03/02 MEASUREMENTS

94 INTERPOLATED GROUNDWATER ELEVATION CONTOUR (1.0-FOOT INTERVAL) BASED ON 07/03/02 MEASUREMENTS

NA NOT AVAILABLE: THIS WELL WAS NOT UTILIZED FOR GROUNDWATER MONITORING ACTIVITES

Ⓢ MANHOLE

CATCH BASIN

N

0 120 240

SCALE IN FEET

Notes: 1. The locations of all features shown are approximate.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Reference: Base drawing provided by Puget Sound Energy, no date.

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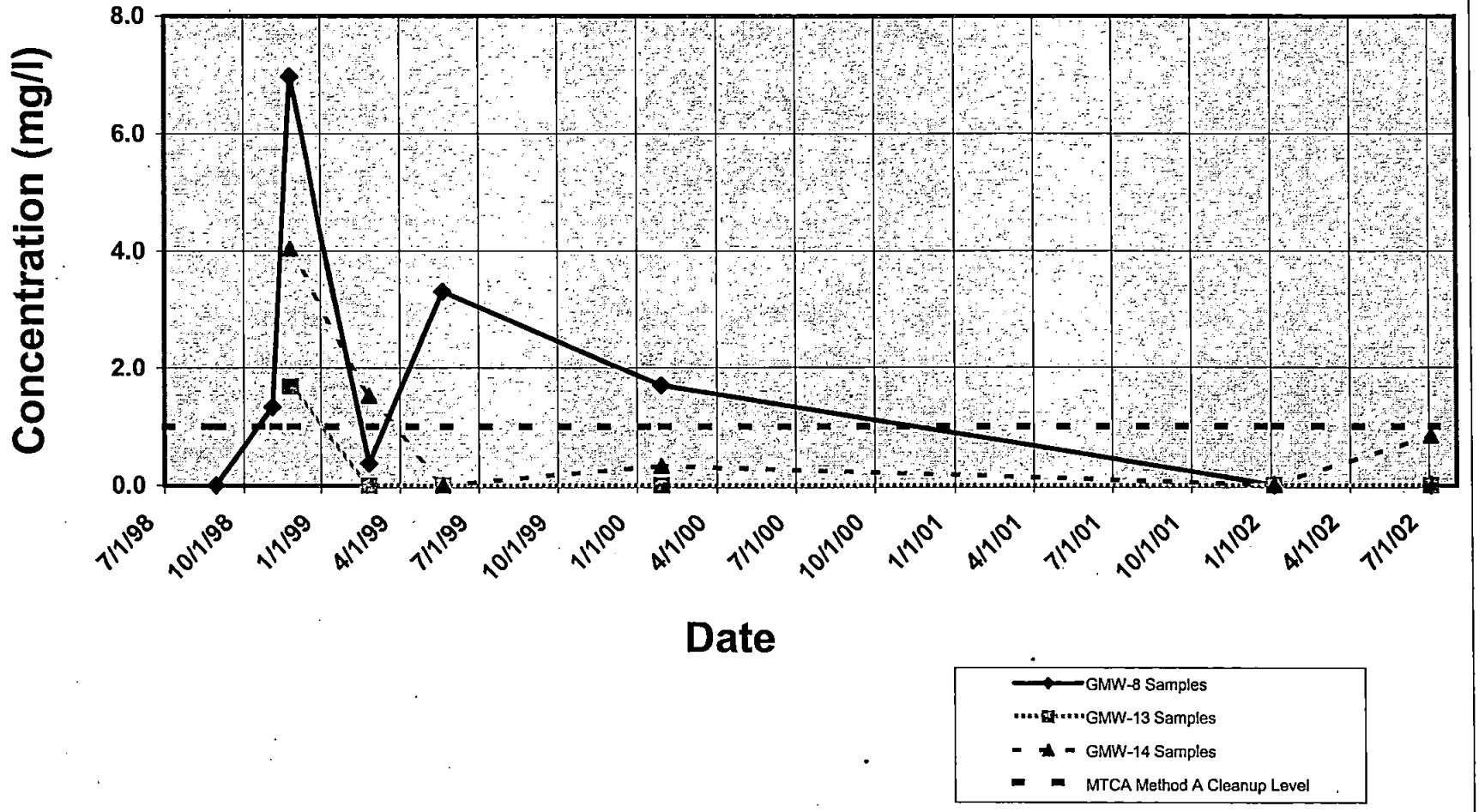
GROUNDWATER LEVEL MEASUREMENTS 07/03/02

FIGURE 2

SEAT\P:\0186407\CAD\00\T2\0186407002C.DWG 11/13/02 BPP:SYF

Figure 3
Parcel 2 Ground Water Analytical Results
Total Petroleum Hydrocarbons



REPORT LIMITATION AND GUIDELINES FOR USE

REPORT LIMITATION AND GUIDELINES FOR USE[1]

This section provides information to help Puget Western, Inc. manage risks with respect to the use of this report.

READ THESE PROVISIONS CLOSELY

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

ENVIRONMENTAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES, PERSONS AND PROJECTS

This report has been prepared for the exclusive use by Puget Western, Inc. (PWI), their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except PWI should rely on this environmental report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

THIS ENVIRONMENTAL REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

This report has been prepared for the former Puget Sound Energy Grady Way site. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

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[1] Developed based on material provided by ASFE, Professional Firms Practicing in the GeoSciences, www.asfe.org.

RELIANCE CONDITIONS FOR THIRD PARTIES

No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

ENVIRONMENTAL REGULATIONS ARE ALWAYS EVOLVING

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

UNCERTAINTY MAY REMAIN EVEN AFTER THIS STUDY IS COMPLETED

No ESA can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely-spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

SUBSURFACE CONDITIONS CAN CHANGE

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or ground water fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

SOIL AND GROUND WATER END USE

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other sites or for other on-site uses of the affected media (soil and/or ground water). Note that hazardous substances may be present in some of the site soil and/or ground water at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or ground water from the subject site or reuse of the affected media on site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or ground water from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

MOST ENVIRONMENTAL FINDINGS ARE PROFESSIONAL OPINIONS

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

DO NOT REDRAW THE EXPLORATION LOGS

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

GEOTECHNICAL, GEOLOGIC AND GEOENVIRONMENTAL REPORTS SHOULD NOT BE INTERCHANGED

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.