Terracon

October 12, 2017

RECEIVED
OCT 13 2017
DEPT OF ECOLOGY
TCP - NWRO

Ms. Diane Escobedo
Department of Ecology, Northwest Region
3190 160th Avenue SE
Bellevue, WA 98008

Re: **Response to Ecology July 25, 2017 Opinion Letter**
Former Tosco Bainbridge Island Bulk Plant 1784
Weaver Avenue & Shepard Way NW
Bainbridge Island, Kitsap County, Washington
Cleanup Site ID No. 3690
Facility/Site ID No. 26595127
VCP Site NW3070
Project Number: 81177343

Dear Ms. Escobedo:

Terracon Consultants, Inc. (Terracon) has reviewed the Washington State Department of Ecology (Ecology) Opinion letter, dated July 25, 2017, regarding the completed Remedial Action at the above-referenced site. We offer the following responses and clarifications on behalf of the Voluntary Cleanup Program (VCP) Customer, PNEC Corporation d.b.a. SC Fuels, and request a meeting to discuss the site closure process.

The July 2017 letter includes fourteen bullet-point comments (one of the fourteen comments has five sub-points); one comment relating to site history, nine comments relating to site characterization, and four comments relating to figures or tables previously submitted and reviewed by Ecology for a prior VCP Customer. The five sub-points of one of the figure comments request that new figures be created from historical data previously submitted and reviewed by Ecology for a prior VCP Customer.

With respect to the nine comments relating to site characterization, Ecology reviewed reports and data submitted by a prior VCP Customer, and Ecology provided comments on the characterization of the Site to a prior VCP Customer. Some of the site characterization comments in the July 2017 letter had been previously discussed with Ecology and issues or questions were resolved at that time. Terracon requests that a review of previous Ecology file notes and comments be considered prior to our requested meeting so that the previous Ecology findings can be discussed.

With respect to the four comments and the five sub-points relating to figures, Ecology requests a substantial amount of processing and reformatting of historical data that were previously provided to Ecology in reports submitted by a prior VCP Customer. The current VCP Customer does not have possession of the CAD and Excel files that Ecology is asking us to reprocess and reformat, and should not be held responsible for summarizing or otherwise resubmitting site data that were previously submitted to Ecology by the former VCP Customer. These historical site data were

reviewed and accepted by Ecology staff at the time, and the VCP fees for these reviews were paid by the former VCP Customer at the time the reviews were completed. The current VCP Customer has no responsibility for the format or presentation of these previously-submitted report documents, as they were prepared and submitted to Ecology on behalf of the previous VCP Customer.

Terracon understands that Ecology has recently created several checklists (June 2016), which consultants have been told are to ensure that site information and data required for Ecology to appropriately evaluate site characterization and cleanup activities at a site meet the requirements of the Washington State Model Toxics Control Act (MTCA). However, Ecology's June 2016 VCP document submittal checklist requirements should not be retroactively applied to historical documents submitted to, and accepted by, Ecology under the VCP. Terracon provided Ecology with a *Site Remedial Action and Monitoring Summary Report*, dated November 18, 2016, that included historical site data in a convenient appendix (Appendix D).

Terracon provides the following specific responses to the bulleted items contained in the July 2017 Ecology letter:

- *In working toward a Site No Further Action determination complete Site characterization is a necessary prerequisite for determining appropriate cleanup standards and for determining the adequacy of cleanup actions. The Site is defined by the full extent of contamination which likely extends beyond the Property boundary. The southern Property boundary extends south into Eagle Harbor. In addition, Weaver Creek runs along the west side of the Property. Until the extent of Site contamination is determined, it is unknown if cleanup levels protective of surface water and sediment are necessary*.

  Response: Terracon disagrees that the Site has not been characterized. The extent of contamination (and thus the Site, as defined by MTCA, based on soil and groundwater sampling data, is the area of the former aboveground storage tanks (ASTs) and associated pumping station and overhead loading rack located in the central portion of the property. The facility was used to store heating oil (diesel-range organics) for distribution by truck. In accordance with MTCA Table 830-1, soil and groundwater samples collected from the Site were analyzed for diesel-range total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and xylenes (BTEX); and polycyclic aromatic hydrocarbons (PAHs). Wells MW-2A, MW-4, and MW-5, located downgradient of the former ASTs area, have been in compliance with MTCA cleanup criteria for more than four (4) consecutive quarters. Thus, the extents of the Site are confined to the property and have been defined. Please refer to Terracon's *Groundwater Monitoring Report – July & November 2016 and February 2017*, dated September 25, 2017 (Terracon September 2017 report) and included with this letter, for details from the sampling events in July and November 2016 and February 2017.

According to the current Cleanup Site Details document for this site found on the Ecology website (attached), the Site was initially investigated and listed as contaminated in March 1993. Sediments are not listed as a suspected contaminated medium, so there is no reason for the VCP Customer to perform sediment sampling. Petroleum or other contaminants have not been used, stored, or transferred at the Site for over 20 years. The identified contaminated area that resulted in the March 13, 1993 Site Discovery/Release Report was the location of the aboveground storage tank, overhead loading rack, and pumping station located in the central portion of the property. Ecology has reviewed numerous assessment reports for the Site over the past 20 years and has not previously identified sediments or the detention pond outfall pipe an area of concern.

- *In the case where groundwater monitoring wells are also used as remediation wells, more than four quarters of monitoring may be necessary to demonstrate that post-remediation rebound has not occurred.*

  Response: Remedial treatment occurred at well RW-1 in January 2015, as documented in Terracon's reports. Post-treatment quarterly groundwater sampling events over the past 2 years have demonstrated that post-remediation rebound has not occurred. Please refer to the Terracon September 2017 report for details from the sampling events in July and November 2016 and February 2017.

- *Although EPH/VPH analysis results may be used to establish a MTCA Method B cleanup level for groundwater that is protective of drinking water use, the TPH-Dx analytical method without silica gel cleanup must be used to demonstrate compliance. Ecology does not accept results from the use of silica gel cleanup for compliance groundwater samples. A minimum of four consecutive quarters of groundwater samples below MTCA Method A or B cleanup levels is needed to demonstrate compliance. In addition, it may be necessary to make additional adjustments to the cleanup level to account for potential surface water and sediment impacts.*

  Response: Terracon strongly disagrees that the Ecology NWTPH-EPH analytical method cannot be used to demonstrate that the remnant TPH-associated impacts to groundwater at wells MW-2A, MW-5, and RW-1 is not an acceptable method to demonstrate protection of groundwater as a potential source of drinking water. Please refer to the Terracon September 2017 report.

- *Exhibit 1 in the 2016 Site Remedial Action and Monitoring Summary Report should be redone so that the Site is in the center of the topographic map rather than at the very bottom edge of the page. This figure should show the entire parcel boundary (Property).*

  Response: Please see the Terracon September 2017 report Exhibit 1 – Topographic Map showing the Site location in the approximate center of the Exhibit, and Exhibit 1A –

Kitsap County Parcel Map showing the entire parcel boundary and referencing the Exhibit 2 – Site Diagram that shows the extent of the Site on the property.

- *Ecology recommends using different colors for the lithologies presented in the two cross-sections (Exhibits 3 and 4). Ensure the cross sections accurately portray the slope of the sidewalls so that it is clear where and to what depth contaminated soil was removed.*

  Response: Please see the revised Exhibit 3 and Exhibit 4 Cross-Section diagrams that have been updated with different colors, and to accurately depict the slopes of the soil removal excavation sidewalls.

- *Additional discussion of the variation in historical groundwater flow direction and how it may have impacted contaminant migration is needed. Historical groundwater monitoring reports indicate that between 2004 and 2007 groundwater flow was predominantly northeast until it became divergent (NW/SE) sometime in 2007, after which there was a 7-year gap in monitoring.*

  Response: The VCP Customer is not responsible for the reporting that occurred prior to 2007, which was submitted by the previous VCP Customer. All reports prior to 2007 were submitted to Ecology by the prior VCP Customer, and Ecology was compensated under the VCP for their review time. The groundwater flow direction at the Site from 2014 to 2017 has consistently been toward the south (toward Eagle Harbor) as shown in the rose diagrams presented in the Terracon September 2017 report (see Exhibits 3 through 5). Given the Site elevation and proximity of the Site to Eagle Harbor, it is reasonable to expect groundwater to migrate toward the south.

- *According to the rose diagram provided as Exhibit 5 in the 2016 Site Remedial Action and Monitoring Summary Report, the predominant groundwater flow direction is to the south. TPH-G and TPH-D concentrations in groundwater samples collected from boring location SB-7 were 32,300 and 104,000 micrograms per liter, respectively. Post excavation groundwater conditions were not assessed. A monitoring well down gradient of the detention pond excavation is recommended. In addition, the down and cross-gradient extent of contamination in groundwater beyond MW-2A and MW-5 need to be delineated.*

  Response: The results from the grab groundwater sample collected from soil boring SB-7 in 1999 does not reflect the post-remedial excavation and treatment groundwater conditions in that area of the Site. Additional source soil was removed after 1999. Remnant TPH-associated impacts to groundwater at wells MW-2A, MW-4, and MW-5 have clearly demonstrated protection of groundwater for at least the past 6 quarterly groundwater sampling events. Terracon sees no valid reason why groundwater beyond these compliant monitoring well locations would have higher impacts than the compliant

wells located in proximity to the contaminant source area (the former ATS, pumps, and loading rack).

- *Monitoring well MW-2A appears to be screened in excavation backfill and within the excavation boundaries. if that is the case, this well location is not representative of Site groundwater conditions and so cannot be used to demonstrate compliance. Ecology recommends that a representative monitoring well be installed.*

  Response: Monitoring well MW-2A is screened in native soil from 9 to 15 feet below the ground surface (bgs) at the west edge of the former excavation area. Groundwater samples are collected from the well at the mid-screen depth (10 feet bgs), within the native soil, using a low-flow sampling technique. Therefore, groundwater data collected from well MW-2A are representative of aquifer conditions.

- *Summary tables should include all compounds that have been detected in each media throughout the history of the Site, and the proposed cleanup level for each compound. All non-detectable results should be shown as "'<" with the actual reporting limits, not as "ND" on tables. All sample locations in materials that have been subsequently removed from the Site during remedial excavations should be shown clearly on tables and figures as having been removed.*

  Response: The current VCP Customer has complied with Ecology's request by providing sample reporting limits and sample locations in report tables and figures (see Terracon's September 2017 report). Reports provided to Ecology prior to 2007, including remedial excavation reports, were submitted to Ecology by the prior VCP Customer under the standards that were in place at that time, and Ecology was paid for their review time. Ecology cannot reasonably expect the current VCP Customer to provide Ecology with revised tables and figures for work they did not perform.

- *Soil samples should be analyzed according to Table 830—1 of the MTCA regulation and Table 7.2, page 95, in the **Guidance for the Remediation of Petroleum Contaminated Sites**, Ecology Publication No. 10-09—057, September 2011.*

  Response: Reports provided to Ecology prior to 2007 by the prior VCP Customer indicate that soil samples were analyzed for diesel-range TPH, BTEX, and PAHs, in compliance with MTCA Table 830-1, and as recommended in Table 7.2 of Ecology's *Guidance for the Remediation of Petroleum Contaminated Sites*.

- *Comprehensive figures are needed to illustrate where contamination was detected above cleanup levels, sampling locations relative to excavation (indicating if contaminated soil above cleanup levels was removed during excavation), excavation continuation soil sample results and areas where contaminated soil is known to be left in place. Use*

dashed lines to represent Where the extent of known contamination is estimated. Ecology requests the following additional figures be submitted (11" X 17" in size; in color):

- *A figure that includes all historic soil borings including hand angered boring locations included in the 2016 Site Remedial Action and Monitoring Summary Report Appendix D, Attachment 1 (HA-1 through HA-7 and S8-1 through SB-10), sample depths and concentrations for each petroleum range or detection limit if not detected should be submitted. Use colors to illustrate above/below cleanup levels.*

  Response: As stated above, Ecology cannot reasonably expect the current VCP Customer to be responsible for providing updated figures and tables that were part of historical Site reports submitted to, and reviewed by, Ecology by the previous VCP Customer.

- *A figure that includes all soil borings including hand angered locations so that it is clear where these locations are relative to the 2001 excavation boundaries. Use colors and/or symbols to indicate which of these sample locations were removed during excavation.*

  Response: As stated above, Ecology cannot reasonably expect the current VCP Customer to be responsible for providing updated figures and tables that were part of historical Site reports submitted to, and reviewed by, Ecology by the previous VCP Customer.

- *A figure illustrating the boundaries of the 2001 and 2003 excavations, sampling locations and results. The figure should illustrate why the additional 2003 excavation was needed (use sample points, depths and concentrations along the western edge of the 2001 excavation to indicate this) and where any soil above cleanup levels was left in place. Enlarge this area for the purpose of legibility and clarity.*

  Response: As stated above, Ecology cannot reasonably expect the current VCP Customer to be responsible for providing updated figures and tables that were part of historical Site reports submitted to, and reviewed by, Ecology by the previous VCP Customer.

- *At least one cross-section showing the excavation limits with confirmation soil sampling locations and analytical results should be provided.*

  Response: Please see the revised Exhibit 3 Cross-Section diagram with confirmation soil sampling locations and analytical results added.

- *Include the location of Weaver Creek on the Site diagram to illustrate the location of the creek relative to the Site.*

  Response: See Exhibit 1A in the Terracon September 2017 report for the location of Weaver Creek in relation to the property. Note that Weaver Creek is not located within the Site boundary, as depicted in Exhibit 2 of the Terracon September 2017 report.

- *The extent of soil and groundwater contamination for this Site has not been determined. Therefore, it cannot be determined at this time if the simplified Terrestrial Ecological Evaluation process can be ended based on the Exposure Analysis, WAC 173-340-7492(2)(a) — the area of soil contamination being less than 350 square feet.*

  Response: As stated earlier, the extent of soil and groundwater contamination (and thus the Site is the area of the ASTs and associated pumping station and overhead loading rack located in the central portion of the property. A small area of remnant diesel-range TPH impacted soil is located in the area of monitoring well MW-2A. Wells MW-2A, MW-4, and MW-5, located downgradient of the former ASTs area, have been in compliance with MTCA cleanup criteria for more than four (4) consecutive quarters. Thus, the remnant soil impacts near well MW-2A are empirically demonstrated to not affect groundwater quality at the Site, and are of limited extents. Thus, the Terrestrial Ecological Evaluation (TEE) Exposure Analysis that the area of remnant soil contamination is less than 350 square feet applies to this Site.

- *Confirmed releases of TPH-D and TPH-O occurred in the detention pond. A sediment sample needs to be collected from the pond outfall pipe to assess current conditions.*

  Response: As stated earlier, sediments are not listed as a suspected contaminated media, so there is no reason for the VCP Customer to perform sediment sampling at the pond outfall pipe. Petroleum or other contaminants have not been used, stored, or transferred at the Site for over 20 years. The identified contaminated soil in the pond area was excavated and removed, as previously reported to Ecology. No discharges from the pond are known, and none have occurred in the past 20 years. Ecology inspected the waterfront area during a July 2017 site walk, and no petroleum sheen was noted at the waterfront.

- *Information regarding the historic transport of petroleum products to and from the Property is needed. This Site's location on Eagle Harbor make it likely that fuel delivery was from the water side of the Property. Details regarding the facility infrastructure and adequate sampling is needed for a complete Site assessment.*

Response: Terracon requested facility building records from Bainbridge Island, and was informed that none exist. Aerial photographs from 1972 and 1985 (attached) do not show a loading dock, wharf, float, or other indication that over-water fuel transfers occurred at the facility. Anecdotal information provided by PNEC employees indicate that the facility was used as an auxiliary heating oil storage facility for operations by the associated PNEC Bremerton bulk petroleum storage facility, and that all product transfers were by truck.

If you have any questions or comments regarding this response to your July 2017 Opinion letter, please do not hesitate to contact us at your convenience.

Sincerely,
Terracon Consultants, Inc.

Michael D. Noll, L.G., L.H.G.
Senior Project Manager

Attachments: Terracon September 2017 Report
Ecology Cleanup Site Details Report
Exhibit 3 Cross-Section
Exhibit 4 Cross-Section
1972 Aerial Photograph
1985 Aerial Photograph

KITSAP COUNTY

SITE ID:	**Tosco Bainbridge Island Bulk Plant 1784**		Cleanup Site ID: 3960	FS ID: 26595127
	Alternate Name(s):	CONOCOPHILLIPS BULK FACILITY 1961, CONOCOPHILLIPS FACILITY 0961, PACIFIC COAST ENERGY CO 1783A, PACIFIC COAST HEMPHILL WINSLOW, PACIFIC NORTHWEST ENERGY COMPANY, TOSCO BAINBRIDGE ISLAND BULK PLANT 1784, UNOCAL BULK PLANT 1784		

LOCATION:

WRIA: 15 | Lat/Long: 47.627 -122.530 | View Vicinity Map

Address: WEAVER AVE & SHEPARD WAY NW
BAINBRIDGE ISLAND 98110

Township	Range	Section
25N	2E	27

Legislative District: 23
Congressional District: 6

STATUS: **Cleanup Started** | Rank: 2 | View Site Web Page | View Site Documents

Responsible Unit: Northwest | Site Manager: Escobedo, Diane | Statute: MTCA
Is Brownfield? | Has Environmental Covenant? | Is PSI Site? Yes
NFA Received? | NFA Date: | NFA Reason:

ASSOCIATED CLEANUP UNIT(s)

cuID	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
3563	TOSCO BAINBRIDGE ISLAND BULK PLANT 1784	Upland	Voluntary Cleanup Program	Cleanup Started		N14848

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Site Discovery/Release Report Received	Completed	3/13/1993	3/13/1993			Peck, Norm
CleanupSite		Site Discovery/Release Report Received	Completed	3/18/1993	3/18/1993			Northwest Region
CleanupSite		Initial Investigation / Federal Preliminary Assessment	Completed	3/18/1993	3/18/1993		Ecology	Northwest Region
CleanupSite		Early Notice Letter(s)	Completed	9/23/1994	9/23/1994			Northwest Region
CleanupSite		Site Hazard Assessment/Federal Site Inspection	Completed	8/20/2008	12/15/2008		Local Government	County Health-NW
CleanupSite		Hazardous Sites Listing/NPL	Completed	2/4/2009	2/4/2009			Musa, Donna
VcpProject	NW0425	VCP Opinion on Remedial Investigation Work Plan	Canceled	3/22/2000				Timm, Ron
VcpProject	NW3070	VCP Receipt of Plan or Report	Completed	6/6/2016	6/6/2016			Fernandez, Sonia
VcpProject	NW3070	VCP Receipt of Plan or Report	Completed	6/6/2016	6/6/2016			Fernandez, Sonia
VcpProject	NW3070	VCP Receipt of Plan or Report	Completed	6/6/2016	6/6/2016			Fernandez, Sonia
VcpProject	NW3070	VCP Receipt of Plan or Report	Completed	6/6/2016	6/6/2016			Fernandez, Sonia
VcpProject	NW3070	VCP Receipt of Plan or Report	Completed	6/6/2016	6/6/2016			Fernandez, Sonia

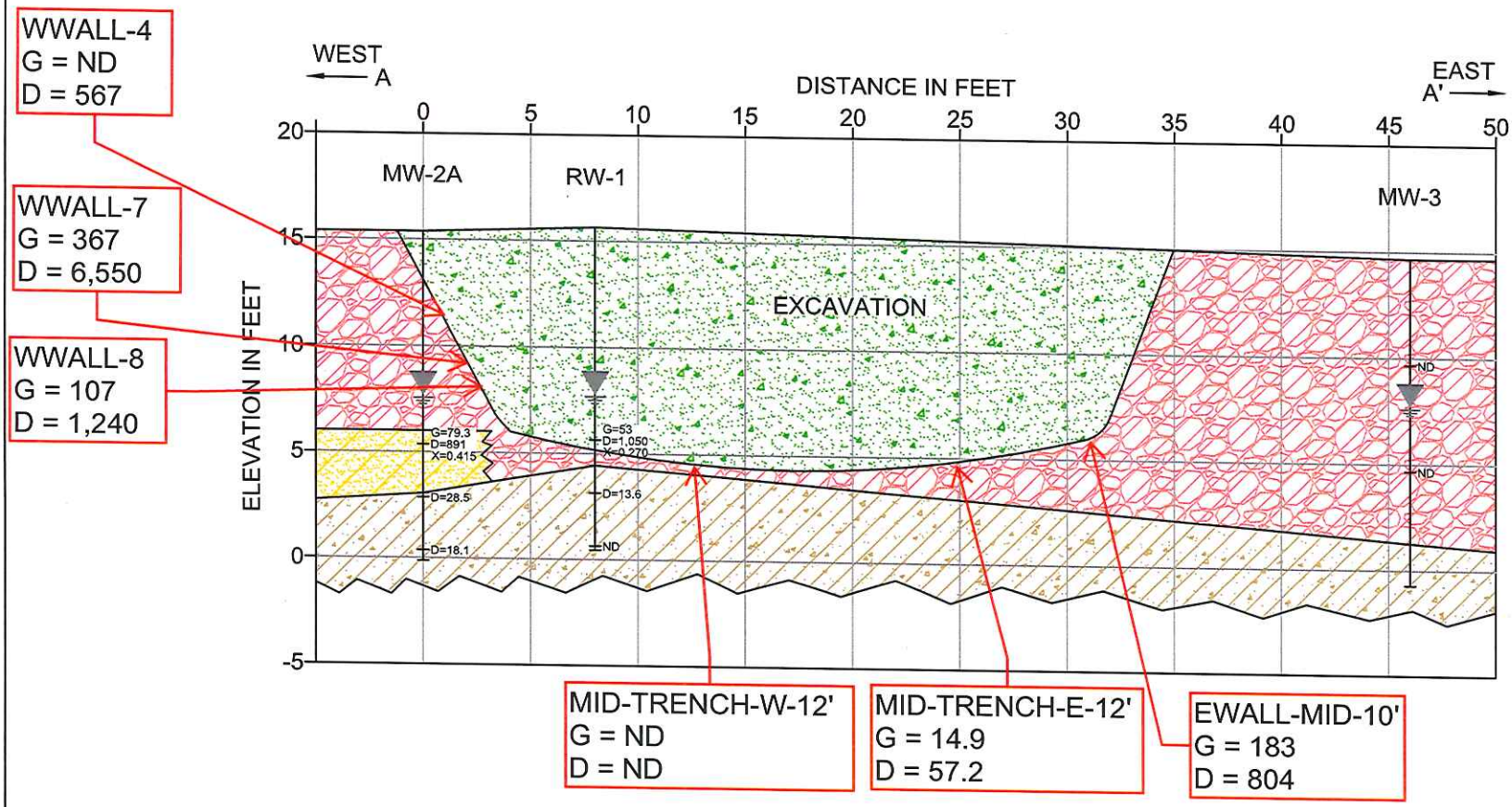
VcpProject	NW3070	VCP Opinion on Site Cleanup	Completed	6/6/2016	7/25/2017			Escobedo, Diane

AFFECTED MEDIA & CONTAMINANTS:

Contaminant:	Media: Ground Water	Surface Water	Soil	Sediment	Air	Bedrock
Benzene			B			
Lead	B		B			
Metals Priority Pollutants	C					
Non-Halogenated Solvents	C					
Petroleum Products-Unspecified	C	S	C			
Petroleum-Diesel	C		C			
Petroleum-Gasoline	C		C			
Petroleum-Other	C		B			
Polycyclic Aromatic Hydrocarbons	B		B			

Key:
B - Below Cleanup Level
C - Confirmed Above Cleanup Level
S - Suspected
R - Remediated
RA - Remediated-Above
RB - Remediated-Below

CleanupSiteDetails2014



LEGEND

- GRAVELLY SAND FILL (SW-SP)
- SILTY SAND W/ GRAVEL (SM)
- GRAVELLY SILT WITH SAND/ SANDY SILT WITH GRAVEL (ML)
- SANDY GRAVEL(GP)/ SILTY GRAVEL WITH SAND (GM)
- DEPTH TO GROUNDWATER OBSERVED IN WELLS JULY 7, 2016

8 0 2 4 8

APPROXIMATE SCALE IN FEET

SOIL SAMPLE ANALYTICAL RESULTS (MILLIGRAMS PER KILOGRAMS)

G = GASOLINE-RANGE TPH
D = DIESEL-RANGE TPH
O = OIL-RANGE TPH
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES
TPH = TOTAL PETROLEUM HYDROCARBONS
HD = NOT DETECTED

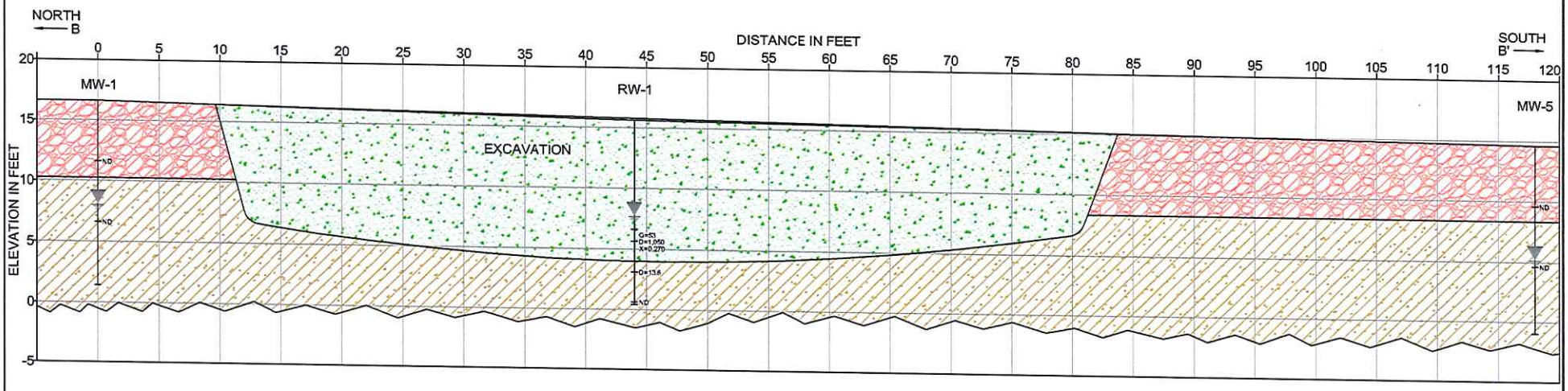
Project Mngr:	MDN
Drawn By:	AMP
Checked By:	SD
Approved By:	MDN
Project No.	81177343
Scale:	AS SHOWN
File No.	Exhibit 3
Date:	November 2016

Terracon
Consulting Engineers and Scientists
21905 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043
PH. (425) 771-3304 FAX. (425) 771-3549

CROSS SECTION A-A'

Former PNEC Bulk Petroleum Facility
Shepard Way NW & Bromley Place NW
Bainbridge Island, Kitsap County, Washington

EXHIBIT 3



SOIL SAMPLE ANALYTICAL RESULTS (MILLIGRAMS PER KILOGRAMS)

G = GASOLINE-RANGE TPH
D = DIESEL-RANGE TPH
O = OIL-RANGE TPH
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES
TPH = TOTAL PETROLEUM HYDROCARBONS
ND = NOT DETECTED

LEGEND

- FILL (GRAVELLY SAND (SW, SP))
- SANDY GRAVEL/GP/ SILTY GRAVEL WITH SAND (GU)
- GRAVELLY SILT WITH SAND/ SANDY SILT WITH GRAVEL/ SILT WITH GRAVEL (M/L)
- DEPTH TO GROUNDWATER OBSERVED IN WELLS JULY 7, 2016

8 0 2 4 8
APPROXIMATE SCALE IN FEET

Project Mngr:	MDN
Drawn By:	AMP
Checked By:	SD
Approved By:	MDN
Project No:	81177343
Scale:	AS SHOWN
File No:	Exhibit 4
Date:	November 2016

Terracon
Consulting Engineers and Scientists
21905 64th Avenue W, Ste 100 Mountlake Terrace, WA 98043
PH (425) 771-3304 FAX (425) 771-3549

CROSS SECTION B-B'

Former PNEC Bulk Petroleum Facility
Shepard Way NW & Bromley Place NW
Bainbridge Island, Kitsap County, Washington

EXHIBIT 4


1972 bainbridge.jpg - Windows Photo Viewer
Site
1:36 PM
9/21/2017


1985 SOUND BLOCK.jpg - Windows Photo Viewer
File
Print
E-mail
Burn
Open
Site