

January 18, 2021

Dale Myers Washington State Department of Ecology Northwest Regional Office 3190 160th Avenue SE Bellevue, WA 98008-5452

#### Re: Progress Report No. 9 – January 2021

Texaco Strickland Cleanup Site 6808 196th Street SW, Lynnwood, Washington Agreed Order No. 14315 Ecology PM – Dale Myers Project No. 180357

Dear Dale:

Aspect Consulting, LLC (Aspect) is pleased to provide Progress Report No. 9 on behalf of potentially liable persons (PLPs) Strickland Real Estate Holdings (SREH) and Chevron Environmental Management Company (CEMC), who are signatories to Washington State Department of Ecology (Ecology) Agreed Order (AO) #14315, effective September 10, 2018. The AO requires that the PLPs submit quarterly progress reports to Ecology until satisfaction of the Agreed Order.

This Progress Report No. 9 is for the fourth quarter 2020 reporting period ending on December 31, 2020.

# **Progress Made During the Reporting Period**

The Remedial Investigation Work Plan (RIWP) Addendum was approved by Ecology on June 1, 2020. Implementation of the RIWP Addendum began in July 2020 and continued through August 2020. After the first round of RIWP Addendum implementation activities concluded in August 2020, the PLPs reviewed the groundwater gauging data and soil, groundwater, and soil gas analytical data to reassess the five RI data gaps identified in the RIWP Addendum. In an effort to streamline the RI process, the PLPs held a technical meeting with Ecology on September 24, 2020, to discuss the status of each data gap and a path towards closing the remaining data gaps ahead of the second groundwater sampling event which was scheduled for November 2020. Two of the RIWP Addendum data gaps were identified as still outstanding, and the PLPs and Ecology agreed on the path forward outlined below:

1. Lateral extents of groundwater exceedances – Groundwater has been delineated in the upgradient direction by the work performed by GHD on behalf of Shell for the 68th Center Site to the north. Additionally, groundwater was bound in the downgradient direction by MW-24 and in the sidegradient directions by MW-20, MW-25, and MW-26 (Figure 3; Table 2).

Groundwater was not bound in the southwest, downgradient direction due to a lack of groundwater at MW-27 and MW-28, even though both well screen intervals were expected to be saturated (Table 1). To close this data gap, Aspect obtained an access agreement for the

south-adjacent property's monitoring wells MW-1 through MW-4. For clarity, these wells are labeled CMW-1 through CMW-4 in our notes, tables, and figures. These wells were gauged during the November 2020 sampling event; monitoring wells CMW-1 and CMW-4 contained groundwater and were sampled.

2. Extents of Site soil gas impacts – The 2020 soil gas sampling event confirmed the results of the 2019 soil gas sampling event, and total petroleum hydrocarbons were detected at GP-03 at a concentration exceeding the Model Toxics Control Act (MTCA) Method B Subslab Soil Gas Screening Levels for unrestricted use (Figure 3; Table 4).

The exceedance of soil gas screening levels at GP-03 is outside the lateral extents of soil and groundwater impacts at the Site. The PLPs and Ecology considered two potential possibilities for this exceedance: a nearby utility corridor acting as a preferential vapor flow path or a potential secondary source in the vicinity of GP-03. To close this data gap, the PLPs and Ecology agreed to install two additional soil gas probes (Figure 5):

- GP-05 was installed nearby to GP-03 but to a greater depth. Based on historical depth to water in nearby groundwater monitoring well MW-2, groundwater in the vicinity of GP-03 has varied between approximately 7 and 12 feet below ground surface (bgs). The objective of installing GP-05 at a greater depth was twofold:
  - Determine if a secondary source may exist in the vadose zone soil samples were collected in accordance with the general procedures set forth in the RIWP and RIWP Addendum. Two samples across the length of the installation were submitted for laboratory analysis in accordance with the SAP/QAPP and RIWP Addendum.
  - Determine if the utility corridor is acting as a preferential flow path the utility corridor in the vicinity of GP-03 has been estimated at a depth of 3.5 to 4.5 feet bgs by a private utility locator using electromagnetic techniques. In order to achieve adequate vertical separation between the new gas probe GP-05 and the utility corridor/existing gas probe GP-03, the screen of gas probe GP-05 was set from 8 to 8.5 feet bgs.
- GP-06 was installed further along the utility corridor towards 68th Ave at a similar depth to GP-03 (4.5 to 5 feet bgs) to determine if the utility corridor is acting as a preferential flow path. A shallow soil sample was submitted for laboratory analysis in accordance with the SAP/QAPP and the RIWP Addendum to assess a potential secondary source of impacts to soil gas.

AO-required status updates were emailed to Ecology during the implementation of the RIWP Addendum and are included as Attachment 1. The following tasks were completed as part of the RIWP Addendum implementation:

# *Task 1 – Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning*

• An access agreement was executed with the neighboring property to sample existing wells MW-1 through MW-4 on the south-adjacent property.

### Task 2 – Soil Borings and Monitoring Well Installation

No additional soil borings or monitoring wells were installed during the fourth quarter of 2020.

### Task 3 – Soil and Groundwater Analyses

Soil samples were collected during the advancement of the gas probes GP-05 and GP-06 in accordance with Section 5.2 of the RIWP Addendum and the SAP/QAPP for the project (Appendix E of the RIWP). Soil samples were submitted for analysis as indicated in Section 5.3 of the RIWP Addendum.

Groundwater sampling was completed in November in accordance with the SAP/QAPP for the project and the RIWP Addendum.

### Task 4 – Soil Vapor Sampling

A second round of soil vapor sampling, which included the new gas probes GP-05 and GP-06, was completed in November 2020.

### Task 5 – Investigation Derived Waste

All investigation-derived waste generated during the RIWP Addendum implementation has been disposed in accordance with local, state, and federal regulations.

### Task 6 – Data Validation and EIM Uploads

All data generated during the implementation of the RIWP Addendum was submitted to a third party for validation. The soil, soil gas, and groundwater analytical reports have been validated and qualified and were uploaded to EIM. Historical data, as reported in Conestoga-Rovers & Associates' 2011 RI, has been uploaded to EIM. It is our understanding that the data is still pending acceptance by the Ecology EIM coordinator.

# Sampling and/or Testing Reports Received

Five laboratory analytical reports were received during the fourth quarter of 2020: one analytical report associated with soil sampling, two analytical reports associated with soil vapor sampling, and two analytical reports associated with groundwater sampling. The data for all five analytical reports has been validated by a qualified third party.

# **Summary of Deviations**

No deviations have been noted from the approved RIWP Addendum or from the scope of work agreed to by the PLPs and Ecology during the September 24, 2020, technical meeting.

# **Contacts with Other Entities or Public**

No contacts with the public or other entities occurred during the fourth quarter of 2020, with the exception of the access agreement executed with Anne Marie Kriedler for activities associated with the November 2020 groundwater sampling event.

# **Potential Problems and Suggested Solutions**

The PLPs reviewed the groundwater gauging data and soil, groundwater, and soil gas analytical data (which is included as Attachment 2) and reassessed the two RI data gaps identified as outstanding during the September 24, 2020 technical meeting with Ecology. The following is a status of each RIWP Addendum data gap and a recommendation towards closing the remaining outstanding data gap:

 Lateral extents of groundwater exceedances – CLOSED – Groundwater has been delineated in the upgradient direction by the work performed by GHD on behalf of Shell for the 68th Center Site to the north. Additionally, groundwater was bound in the downgradient direction by MW-24 and in the sidegradient directions by MW-20, MW-25, and MW-26 (Figure 2; Table 2).

Groundwater has now been bound in the southwest, downgradient direction based on the results of MW-27, CMW-1, and CMW-4 during the November 2020 groundwater sampling event (Table 2; Figure 2). Based on these results, groundwater has been completely delineated in all directions at the Site. Results from the November 2020 sampling event are shown on Figure 2.

Extents of Site soil gas impacts – OUSTANDING – The second 2020 soil gas sampling event confirmed the results of the 2019 and first 2020 soil gas sampling events, and total petroleum hydrocarbons (TPH) were detected near the southern property line at GP-03 and GP-05 at concentrations exceeding the MTCA Method B Subslab Soil Gas Screening Levels for unrestricted use (Figure 3; Table 3).

The exceedances of soil gas screening levels at GP-03 and GP-05 are outside the lateral extents of soil and groundwater impacts at the Site. The PLPs and Ecology had previously considered two potential possibilities for this exceedance: a nearby utility corridor acting as a preferential vapor flow path or a potential secondary source in the vicinity of GP-03. To attempt to close this data gap, two additional soil gas probes, GP-05 and GP-06, were installed prior to the second soil gas sampling event (Figure 3).

Soil samples analyzed from GP-05 and GP-06 did not indicate a potential secondary source existed in shallow vadose zone soils at either location. Soil analytical results are included in Table 1 and shown on Figure 1.

Soil gas analytical results from GP-05 indicate there are impacts to soil gas above the MTCA Method B subslab screening levels. GP-05 is installed at a depth greater than the utility corridor and GP-03. Conversely, GP-06, which was installed at the depth of the utility corridor but at a greater distance from the former service station building than GP-03 and GP-05, did not contain any exceedances of the MTCA Method B subslab screening levels in soil gas (Table 3; Figure 3). These results suggest that the soil gas exceedances at GP-03 and GP-05 are not due to the utility corridor or a potential secondary source in shallow vadose soil. Therefore, it appears that vapor intrusion for the building to the south of these locations is a potential concern.

The extent of Site soil gas impacts remains a data gap which precludes the completion of the AO-required RI report. To address this data gap, Aspect recommends performing Tier I and Tier II assessments to further evaluate the potential for vapor intrusion in the Chri-Mar Apartments building to the south. Aspect will attempt to obtain an access agreement for the south-adjacent property to perform subslab soil gas sampling. If granted, the following scope of work will be performed as part of the vapor intrusion assessment:

• Site Reconnaissance – A Site visit will be conducted to evaluate the Chri-Mar Apartments building. The purpose of the evaluation is to identify building construction characteristics, heating and ventilation systems, and background sources of possible chemical contaminants that may influence the results of indoor sampling. Potential sources of volatile organic compounds (VOCs) will be identified in the building by visual observation and by using a photoionization detector (PID), or similar air-monitoring device, to screen the building. The

site reconnaissance will be completed at least 48 hours prior to indoor air sampling to ensure that possible sources of cross-contamination are removed and/or documented to the extent practical.

• **Indoor and Ambient Air Sampling** – Indoor and ambient air sampling will consist of collecting two indoor air samples in the north end of the building and up to two ambient background air samples. These locations will ultimately depend on the layout of the ground floor of the building, which is unknown at this time. However, they will be located as close to practicable to the northern edge of the building and GP-05/GP-06.

Time-integrated 8-hour samples will be collected over the course of a day. Air samples will be collected using 6-liter (L) cannisters prepared under negative pressure and lab-certified clean for VOCs. The cannisters will be equipped with dedicated flow regulators set at a fill rate set for an approximate 8-hour sampling event.

The pressure in the cannister prior to commencement of the sampling event will be noted, as will the time the cannister is opened. During the sampling period, the pressure in the cannister will be monitored to ensure that the flow regulator is functioning properly. The final pressure at the end of sampling should be -5 to -6 inches of mercury. Once the canister has reached this point, sampling is complete, and the final pressure is recorded. Sample collection will be considered complete after 8 hours if the pressure in the cannister is less than -10 inches of mercury.

Ambient background air samples will be obtained concurrently with the indoor air sampling. An outdoor air sample will be collected using the same procedures as the indoor air samples, using 6-L cannisters prepared under negative pressure and lab-certified clean for VOCs. The canister will be placed upwind of the building and/or at the intake to the HVAC system, dependent on results of the site reconnaissance.

If the site reconnaissance identifies potential sources of background contamination to indoor air that cannot be removed from the building, then additional background indoor air samples may be collected. The background air sample will be collocated with the potential background source and collected concurrently with the other ambient air and indoor air samples, using a 6-L cannister as described above.

• Soil Gas Sampling – The day following indoor air sampling, subslab soil gas sampling will be completed in the Chri-Mar Apartments building to the south at the two locations where indoor air samples were collected. Subslab soil gas sampling will be performed in accordance with the SAP/QAPP (RIWP, Appendix E). Additionally, Aspect will resample soil gas probes GP-02, GP-03, GP-05, and GP-06 concurrent with the subslab soil gas sampling event.

# **Changes in Key Personnel**

No changes in key personnel occurred during the fourth quarter of 2020.

# **Activities Planned for the Next Reporting Period**

• Receive Ecology approval of the vapor intrusion assessment of the Chri-Mar Apartments building outlined above and attempt to close the remaining Site data gaps.

Washington State Department of Ecology January 18, 2021

- Execute a new access agreement with Anne Marie Kriedler to perform the vapor intrusion assessment of the Chri-Mar Apartments building
- If access is granted, perform the site reconnaissance, indoor/ambient air sampling, and subslab soil gas sampling outlined above.
- Conduct an additional round of groundwater gauging to confirm groundwater occurrence and flow direction.
- Perform a second round of soil gas sampling at gas probes GP-02, GP-03, GP-05, and GP-06 in conjunction with the subslab soil gas sampling proposed for the Chri-Mar Apartments building.
- Continue bimonthly AO progress reporting to Ecology during implementation.
- Complete evaluation of an interim action to treat or remove the light non-aqueous phase liquid (LNAPL) at the Site. After the PLPs complete this evaluation, an Interim Action Work Plan will be provided to Ecology.

The next quarterly progress report will be submitted on or before April 15, 2021.

If you have any questions concerning this progress report, please contact me at 206-780-7746.

Sincerely,

#### Aspect consulting, LLC

adam C B

Adam Griffin, PE Associate Engineer agriffin@aspectconsulting.com

Andrew Yonkofski, LHG Project Hydrogeologist ayonkofski@aspectconsulting.com

Attachments: Attachment 1 – AO Status E-mails – 10/15/2020, 11/02/2020, 11/16/2020, 12/01/2020, 12/15/20202
Attachment 2 – DRAFT Data Package: Figure 1 – DRAFT Soil Analytical Results Figure 2 – DRAFT Groundwater Analytical Results - 2020 Figure 3 – DRAFT Soil Gas Analytical Results – November 2020 Table 1 – DRAFT Soil Analytical Results Table 2 – DRAFT Remedial Investigation Groundwater Analytical Results Table 3 – DRAFT Groundwater Elevation Data

Table 4 – DRAFT Soil Gas Analytical Results

Washington State Department of Ecology January 18, 2021

Project No. 180357

cc: Ryan Megenity – Rainier Property Management Co. LLC Doug Steding – Northwest Resource Law PLLC Tom Strickland – Strickland Real Estate Holdings, LLC James Kiernan – CEMC Nate Blomgren – CEMC Jon-Erik Magnus – Rogers Joseph O'Donnell PLLC Robert Goodman – Rogers Joseph O'Donnell PLLC Eric Epple – Arcadis Christopher Dotson – Arcadis

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# **ATTACHMENT 1**

**RIWP Addendum Implementation Status** E-mails

То:	Myers, Dale - TCP (ECY)
Cc:	Adam Griffin; Ryan Megenity; Douglas Steding; Kiernan, James; Jon-Erik Magnus; Robert C.
	Goodman; Epple, Eric; Dotson, Christopher
Subject:	Texaco Strickland Site - RIWP Addendum Implementation Status Update - 2020.10.15

Dale –

Agreed Order #14135 requires status updates during Remedial Investigation (RI) activities to Ecology on the 1<sup>st</sup> and 15<sup>th</sup> of each month, except if those dates fall on a weekend or holiday. Field work activities associated with the Final RI Work Plan (RIWP) Addendum began on July 28, 2020. The following is a status of each Final RIWP Addendum task:

- Task 1 Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning
  - A new access agreement has been executed with the property to the south to access and sample four existing monitoring wells on that property.
- Task 2 Soil Borings and Monitoring Well Installation
  - This task is **complete**.
- Task 3 Soil and Groundwater Analyses
  - Soil sampling is complete.
  - The first groundwater sampling event is **complete**.
  - The second groundwater sampling event, including the additional four wells on the south-adjacent property, is tentatively scheduled for the week of November 16<sup>th</sup>.
- Task 4 Soil Vapor Sampling
  - The first soil gas sampling event is **complete**.
  - As discussed with Ecology in the September 24, 2020 meeting, two additional soil gas probes will be installed on the southeast portion of the property. This work is tentatively scheduled for the week of November 9<sup>th</sup>.
  - The second soil gas sampling event is tentatively scheduled for the week of November 16<sup>th</sup>.
- Task 5 Investigation Derived Waste Disposal
  - Investigation derived waste disposal is tentatively scheduled for the week of November 30<sup>th</sup>.
- Task 6 Data Validation and EIM Uploads
  - All data generated during the implementation of the RIWP Addendum was submitted to a third party for validation within a week of receipt from the laboratory.
  - Validated soil analytical results have been received and were uploaded within 60 days to EIM in accordance with the Agreed Order.
  - Historical data, as reported in CRA's 2011 RI, has been loaded into Aspect's database and will be submitted to EIM in conjunction with other EIM submittals.
  - Groundwater and soil gas analytical data have been submitted for third party data validation.

Let us know if you have any questions regarding the status of the RIWP Addendum implementation activities,

#### Andrew Yonkofski, LHG | Project Hydrogeologist | Direct: 206.413.5411 | Cell: 404.272.3488 Aspect Consulting LLC | 710 2nd Ave, Suite 550, Seattle, WA 98104 | www.aspectconsulting.com

То:	Myers, Dale - TCP (ECY)
Cc:	Adam Griffin; Ryan Megenity; Douglas Steding; Kiernan, James; Jon-Erik Magnus; Robert C.
	Goodman; Epple, Eric; Dotson, Christopher
Subject:	Texaco Strickland Site - RIWP Addendum Implementation Status Update - 2020.11.02

Dale –

Agreed Order #14135 requires status updates during Remedial Investigation (RI) activities to Ecology on the 1<sup>st</sup> and 15<sup>th</sup> of each month, except if those dates fall on a weekend or holiday. Field work activities associated with the Final RI Work Plan (RIWP) Addendum began on July 28, 2020. The following is a status of each Final RIWP Addendum task:

- Task 1 Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning

   Access agreements are in place to complete the remaining scope of work. This task is complete.
- Task 2 Soil Borings and Monitoring Well Installation
  - This task is **complete**.
- Task 3 Soil and Groundwater Analyses
  - Soil sampling is **complete.**
  - The first groundwater sampling event is **complete**.
  - The second groundwater sampling event, including the additional four wells on the south-adjacent property, is scheduled for the week of November 16<sup>th</sup>.
- Task 4 Soil Vapor Sampling
  - The first soil gas sampling event is **complete**.
  - As discussed with Ecology in the September 24, 2020 meeting, two additional soil gas probes will be installed on the southeast portion of the property. This work is scheduled for November 10<sup>th</sup>.
  - The second soil gas sampling event is scheduled for the week of November 16<sup>th</sup>.
- Task 5 Investigation Derived Waste Disposal
  - Investigation derived waste disposal is tentatively scheduled for the week of November 30<sup>th</sup>.
- Task 6 Data Validation and EIM Uploads
  - All data generated during the implementation of the RIWP Addendum was submitted to a third party for validation within a week of receipt from the laboratory.
  - Validated soil, groundwater, and soil gas analytical results have been received and were uploaded within 60 days to EIM in accordance with the Agreed Order.
  - Historical soil and groundwater data, as reported in CRA's 2011 RI, has been uploaded to EIM.
  - The second round of groundwater and soil gas analytical data will be submitted to a third party for validation within a week of receipt from the laboratory.

Let us know if you have any questions regarding the status of the RIWP Addendum implementation activities,

Andrew Yonkofski, LHG | Project Hydrogeologist | Direct: 206.413.5411 | Cell: 404.272.3488 Aspect Consulting LLC | 710 2nd Ave, Suite 550, Seattle, WA 98104 | www.aspectconsulting.com

То:	Myers, Dale - TCP (ECY)
Cc:	Adam Griffin; Ryan Megenity; Douglas Steding; Kiernan, James; Jon-Erik Magnus; Robert C.
	Goodman; Epple, Eric; Dotson, Christopher
Subject:	Texaco Strickland Site - RIWP Addendum Implementation Status Update - 2020.11.16

Dale –

Agreed Order #14135 requires status updates during Remedial Investigation (RI) activities to Ecology on the 1<sup>st</sup> and 15<sup>th</sup> of each month, except if those dates fall on a weekend or holiday. Field work activities associated with the Final RI Work Plan (RIWP) Addendum began on July 28, 2020. The following is a status of each Final RIWP Addendum task:

- Task 1 Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning

   Access agreements are in place to complete the remaining scope of work. This task is complete.
- Task 2 Soil Borings and Monitoring Well Installation
  - This task is **complete**.
- Task 3 Soil and Groundwater Analyses
  - Soil sampling is **complete.**
  - The first groundwater sampling event is **complete**.
  - The second groundwater sampling event, including the additional four wells on the south-adjacent property, began today.
- Task 4 Soil Vapor Sampling
  - The first soil gas sampling event is **complete**.
  - As discussed with Ecology in the September 24, 2020 meeting, two additional soil gas probes were on the southeast portion of the property. This work is **complete**.
  - The second soil gas sampling event is scheduled for later this week.
- Task 5 Investigation Derived Waste Disposal
  - Investigation derived waste disposal is tentatively scheduled for the week of November 30<sup>th</sup>.
- Task 6 Data Validation and EIM Uploads
  - All data generated during the implementation of the RIWP Addendum was submitted to a third party for validation within a week of receipt from the laboratory.
  - Validated soil, groundwater, and soil gas analytical results have been received and were uploaded within 60 days to EIM in accordance with the Agreed Order.
  - Historical soil and groundwater data, as reported in CRA's 2011 RI, has been uploaded to EIM.
  - The second round of soil, groundwater, and soil gas analytical data will be submitted to a third party for validation within a week of receipt from the laboratory.

Let us know if you have any questions regarding the status of the RIWP Addendum implementation activities,

Andrew Yonkofski, LHG | Project Hydrogeologist | Direct: 206.413.5411 | Cell: 404.272.3488 Aspect Consulting LLC | 710 2nd Ave, Suite 550, Seattle, WA 98104 | www.aspectconsulting.com

То:	Myers, Dale - TCP (ECY)
Cc:	Adam Griffin; Ryan Megenity; Douglas Steding; Kiernan, James; Jon-Erik Magnus; Robert C.
	Goodman; Epple, Eric; Dotson, Christopher
Subject:	Texaco Strickland Site - RIWP Addendum Implementation Status Update - 2020.12.01

Dale –

Agreed Order #14135 requires status updates during Remedial Investigation (RI) activities to Ecology on the 1<sup>st</sup> and 15<sup>th</sup> of each month, except if those dates fall on a weekend or holiday. Field work activities associated with the Final RI Work Plan (RIWP) Addendum began on July 28, 2020. The following is a status of each Final RIWP Addendum task:

- Task 1 Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning

   This task is complete.
- Task 2 Soil Borings and Monitoring Well Installation
  - This task is **complete.**
- Task 3 Soil and Groundwater Analyses
  - Soil sampling is **complete.**
  - The first and second groundwater sampling events are **complete**.
- Task 4 Soil Vapor Sampling
  - The two additional soil gas probes were installed on the property prior to the November 2020 sampling event.
  - The first and second soil gas sampling events are **complete.**
- Task 5 Investigation Derived Waste Disposal
  - Investigation derived waste from all RIWP Addendum implementation activities is being profiled for disposal.
- Task 6 Data Validation and EIM Uploads
  - The first round of validated soil, groundwater, and soil gas analytical results have been received and were uploaded within 60 days to EIM in accordance with the Agreed Order.
  - Historical soil and groundwater data, as reported in CRA's 2011 RI, has been uploaded to EIM.
  - The second round of soil, groundwater, and soil gas results will be submitted to a third party for validation within a week of receipt from the laboratory.

Let us know if you have any questions regarding the status of the RIWP Addendum implementation activities,

Andrew Yonkofski, LHG | Project Hydrogeologist | Direct: 206.413.5411 | Cell: 404.272.3488 Aspect Consulting LLC | 710 2nd Ave, Suite 550, Seattle, WA 98104 | www.aspectconsulting.com

То:	Myers, Dale - TCP (ECY)
Cc:	Adam Griffin; Douglas Steding; Ryan Megenity; Kiernan, James; Jon-Erik Magnus; Robert C.
	Goodman; Epple, Eric; Dotson, Christopher
Subject:	Texaco Strickland Site - RIWP Addendum Implementation Status Update - 2020.12.15

Dale –

Agreed Order (AO) #14135 requires status updates during Remedial Investigation (RI) activities to Ecology on the 1<sup>st</sup> and 15<sup>th</sup> of each month, except if those dates fall on a weekend or holiday. Field work activities associated with the Final RI Work Plan (RIWP) Addendum began on July 28, 2020. The following is a status of each Final RIWP Addendum task:

- Task 1 Permitting, Access Agreements, Location, Coordination with Others, and Health and Safety Planning

   This task is complete.
- Task 2 Soil Borings and Monitoring Well Installation
  - This task is **complete**.
- Task 3 Soil and Groundwater Analyses
  - Soil sampling is **complete.**
  - The first and second groundwater sampling events are **complete**.
- Task 4 Soil Vapor Sampling
  - The two additional soil gas probes were installed on the property prior to the November 2020 sampling event.
  - The first and second soil gas sampling events are **complete.**
- Task 5 Investigation Derived Waste Disposal
  - Investigation derived waste from all RIWP Addendum implementation activities has been removed from the property and disposed of in accordance with applicable regulations. This task is **complete**.
- Task 6 Data Validation and EIM Uploads
  - The second round of soil, groundwater, and soil gas analytical results have been received and submitted to a third party for validation. Validated results will be uploaded to EIM within 60 days of the completion of field activities in accordance with the AO.

As of this status report, field activities associated with the Final RIWP Addendum are complete, and therefore, this is the final email status update. AO progress reporting will continue quarterly with the next instance due on January 15, 2021, which is anticipated to include validated analytical results from the second round of the Final RIWP Addendum activities. Let us know if you have any questions,

Andrew Yonkofski, LHG | Project Hydrogeologist | Direct: 206.413.5411 | Cell: 404.272.3488 Aspect Consulting LLC | 710 2nd Ave, Suite 550, Seattle, WA 98104 | <u>www.aspectconsulting.com</u>

ATTACHMENT 2 DRAFT Data Package

#### Table 1. Soil Analytical Data

Project No. 180357, Lynnwood, Washington

		Location	GP	-05	GP-06
		Date	11/10/2020	11/10/2020	11/10/2020
		Sample	GP-05-1.25	GP-05-6	GP-06-2.5
		Depth	1.25 ft	6 ft	2.5 ft
		MTCA Method A			
Analyte	Unit	Cleanup Level			
TPHs					
Gasoline Range Organics	mg/kg	30	< 5 U	< 5 U	< 5 U
Diesel Range Organics	mg/kg	2000	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	mg/kg	2000	< 250 U	< 250 U	< 250 U
BTEX					
Benzene	mg/kg	0.03	< 0.02 U	< 0.02 U	< 0.02 U
Toluene	mg/kg	7	< 0.02 U	< 0.02 U	< 0.02 U
Ethylbenzene	mg/kg	6	< 0.02 U	< 0.02 U	< 0.02 U
Total Xylenes	mg/kg	9	< 0.06 U	< 0.06 U	< 0.06 U
PAHs					
Naphthalene	mg/kg	5	< 0.05 U	< 0.05 U	< 0.05 U

#### Notes:

U - Analyte not detected above the shown Reporting Limit (RL)

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Project No. 180357, Lynnwood, Washington

		Location	CMW-1	CMW-4		M۱	W-1			M	W-2		MW-4		M	W-6	
		Date	11/17/2020	11/17/2020	08/01/2019	11/20/2019	08/18/2020	11/18/2020	08/01/2019	11/20/2019	08/17/2020	11/17/2020	08/18/2020	07/31/2019	11/20/2019	08/17/2020	11/16/2020
		MTCA Method A															
Analyte	Unit	Cleanup Level															
TPHs																	
Gasoline Range Organics	ug/L	800	< 100 U	< 100 U	24000	44000	14000	31000	1600	4600	770	4100	170000	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500	< 50 U	< 50 U	2100 X	3200 X	2100 X	1800 X	790 X	2200 X	660 X	1300 X	4500 X	68 X	< 50 U	170 X	< 50 U
Motor Oil Range Organics	ug/L	500	< 250 U	< 250 U	1000 X	570 X	1100 X	810 X	< 250 U	260 X	310 X	< 250 U	1000 X	< 250 U	< 250 U	< 250 U	< 250 U
Diesel and Oil Extended Range Organics	ug/L	500	< 250 U	< 250 U	3100 X	3770 X	3200 X	2610 X	790 X	2460 X	970 X	1300 X	5500 X	68 X	< 250 U	170 X	< 250 U
BTEX																	
Benzene	ug/L	5	< 0.35 U	< 0.35 U	4200	6700	2200	5600	13	30	4.5	29	6000	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000	<1U	< 1 U	410	1500	180	740	2.2	6.5	< 1 U	7.8	21000	<1U	< 1 U	<1U	<1U
Ethylbenzene	ug/L	700	<1U	< 1 U	520	860	300	720	6.5	28	2.8	49	2300	<1U	< 1 U	<1U	<1U
Total Xylenes	ug/L	1000	< 2 U	< 2 U	1650	3680	750	2780	7.4	23.9	2.1	24.4	14100	< 2 U	< 2 U	< 2 U	< 2 U
Metals		-				<u>.</u>											-
Lead	ug/L	15			< 1 UJ	<1U			< 1 UJ	< 1 U				< 1 UJ	< 1 U		
PAHs																	
Naphthalene	ug/L	160	< 1 U	< 1 U	130	210	84	200	33	150	15	150	500	< 1 U	< 1 U	< 1 U	< 1 U

Notes:

Bold - Analyte Detected

Blue Shaded - Detected result exceeds MTCA Method A Cleanup Level

U = Analyte was not detected at or above the reported result.

X = Chromatographic pattern did not match fuel standard

#### DRAFT

Project No. 180357, Lynnwood, Washington

	Location		MV	V-7		MW-8		MV	V-9		MM	/-10	MM	/-10		MV	V-11	
	Date	07/31/2019	11/19/2019	08/17/2020	11/17/2020	08/18/2020	08/01/2019	11/20/2019	08/18/2020	11/16/2020	08/01/2019	11/20/2019	08/18/2020	11/17/2020	07/31/2019	11/19/2019	08/17/2020	11/17/2020
	MTCA Method A																	
Unit	Cleanup Level																	
ug/L	800	< 100 U	< 100 U	< 100 U	< 100 U	130000	< 100 U	560	< 100 U	< 100 U	19000	21000	5100	12000	13000	20000	27000	5400
ug/L	500	83 X	< 50 U	110 X	< 50 U	3200 X	88 X	290 X	80 X	< 54 U	1900 X	3900 X	1100 X	1400 X	1100 X	2400 X	1600 X	720 X
ug/L	500	< 250 U	< 250 U	< 260 U	< 250 U	550 X	< 250 U	< 250 U	< 250 U	< 250 U	260 X	340 X	360 X	< 250 U	< 250 U	310 X	260 X	< 250 U
ug/L	500	83 X	< 250 U	110 X	< 250 U	3750 X	88 X	290 X	80 X	< 250 U	2160 X	4240 X	1460 X	1400 X	1100 X	2710 X	1860 X	720 X
ug/L	5	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	4800	< 0.35 U	6.4	< 0.35 U	< 0.35 U	2400	2800	490	1800	320	270	330	160
ug/L	1000	< 1 U	2.7	< 1 U	< 1 U	18000	<1U	< 1 U	< 1 U	< 1 U	44	< 100 U	< 10 U	31	1800	1500	2200	290
ug/L	700	< 1 U	1.6	< 1 U	< 1 U	1600	< 1 U	6.6	< 1 U	< 1 U	670	1000	200	630	410	690	790	220
ug/L	1000	< 2 U	8.8	< 2 U	< 2 U	10300	< 2 U	3.3	< 2 U	< 2 U	1102.7	1500	240	620	1400	2580	3400	400
ug/L	15	< 1 UJ	< 1 U				< 1 UJ	<1U			< 1 UJ	< 1 U			3.49 J	1.85		
ug/L	160	< 1 U	< 1 U	< 1 U	< 1 U	400	< 1 U	< 1 U	< 1 U	< 1 U	160	270	60	220	42	130	140	110
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	Date           MTCA Method A Cleanup Level           ug/L         800           ug/L         500           ug/L         500           ug/L         500           ug/L         500           ug/L         500           ug/L         500           ug/L         1000           ug/L         1000           ug/L         1000	Date         07/31/2019           MTCA Method A Cleanup Level            ug/L         800         < 100 U           ug/L         500         83 X           ug/L         500         83 X           ug/L         500         < 250 U           ug/L         500         < 100 U           ug/L         500         < 250 U           ug/L         500         < 100 U           ug/L         1000         < 1 U           ug/L         1000         < 2 U           ug/L         1000         < 2 U           ug/L         15         < 1 UJ	Date         07/31/2019         11/19/2019           MTCA Method A Cleanup Level	Date         07/31/2019         11/19/2019         08/17/2020           MTCA Method A Cleanup Level         Image: Cleanup Level	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020           MTCA Method A Cleanup Level         MTCA Method A Cleanup Level         0         0         0         0           ug/L         800         < 100 U	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020           MTCA Method A Cleanup Level         <	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019           MTCA Method A Cleanup Level         MTCA Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         MTCA         Method A Cleanup Level         Method A Cleanup Level	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019           MTCA Method A Cleanup Level         MTCA Method A Cleanup Level <th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020           MTCA Method A Cleanup Level         Image: Cleanup Level         Ima</th> <th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020           Unit         MTCA Method A Cleanup Level         Image:         <thimage:< th="">         Image:<!--</th--><th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019           MTCA Method A Cleanup Level         MTCA Method A Cleanu</th><th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/16/2020         08/01/2019         11/20/2019         08/01/2019</th></thimage:<></th>	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020           MTCA Method A Cleanup Level         Image: Cleanup Level         Ima	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020           Unit         MTCA Method A Cleanup Level         Image:         Image: <thimage:< th="">         Image:<!--</th--><th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019           MTCA Method A Cleanup Level         MTCA Method A Cleanu</th><th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/16/2020         08/01/2019         11/20/2019         08/01/2019</th></thimage:<>	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019           MTCA Method A Cleanup Level         MTCA Method A Cleanu	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/01/2019         11/20/2019         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/16/2020         08/01/2019         11/20/2019         08/01/2019	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         08/18/2020         11/12/2019         08/18/2020         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/18/2020         08/11/2019         11/20/2019         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/18/2020         08/18/2020         11/16/2020         08/01/2019         11/20/2019         08/18/2020         08/01/2019         11/20/2019         08/18/2020         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         08/01/2019         11/20/2019         11/20/2019         08/01/2019         11/20/2019         11/20/2019         11/20/2019 <th>Interimentation         ON/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         11/12/2019         08/18/2020         11/16/2020         08/01/2019         11/12/2019         08/18/2020         11/16/2020         08/01/2019         11/12/2019         08/18/2020         11/17/2020         11/17/2020         11/17/2020         11/17/2020         08/18/2020         12/00         12/000         12/00</th> <th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/16/2020         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         1</th> <th>Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/20/2019         08/18/2020         11/17/2020         07/31/2019         11/19/2019           up/L         800         &lt;100 U</th> <100 U	Interimentation         ON/31/2019         11/19/2019         08/17/2020         11/17/2020         08/18/2020         11/12/2019         08/18/2020         11/16/2020         08/01/2019         11/12/2019         08/18/2020         11/16/2020         08/01/2019         11/12/2019         08/18/2020         11/17/2020         11/17/2020         11/17/2020         11/17/2020         08/18/2020         12/00         12/000         12/00	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/16/2020         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         08/01/2019         11/16/2020         1	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/20/2019         08/18/2020         11/17/2020         07/31/2019         11/19/2019           up/L         800         <100 U	Date         07/31/2019         11/19/2019         08/17/2020         11/17/2020         08/01/2019         11/16/2020

Notes:

Bold - Analyte Detected

Blue Shaded - Detected result exceeds MTCA Method A Cleanup Level

U = Analyte was not detected at or above the reported result.

X = Chromatographic pattern did not match fuel standard

Project No. 180357, Lynnwood, Washington

		Location		MW	/-12			MW	/-13			MW	V-14			MV	V-16	
		Date	08/01/2019	11/20/2019	08/17/2020	11/16/2020	07/31/2019	11/20/2019	08/17/2020	11/17/2020	07/31/2019	11/20/2019	08/18/2020	11/18/2020	07/31/2019	11/19/2019	08/17/2020	) 11/16/2020
		MTCA Method A																
Analyte	Unit	Cleanup Level																
TPHs																		
Gasoline Range Organics	ug/L	800	240	540	230	410	1400	1800	420	1200	7500	11000	5000	6400	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500	310 X	370 X	240 X	230 X	530 X	780 X	320 X	490 X	1200 X	1600 X	570 X	780 X	84 X	< 50 U	130 X	< 50 U
Motor Oil Range Organics	ug/L	500	< 250 U	260 X	330 X	300 X	< 250 U	290 X	< 250 U	< 250 U	< 250 U	< 250 U						
Diesel and Oil Extended Range Organics	ug/L	500	310 X	370 X	240 X	230 X	530 X	780 X	320 X	750 X	1530 X	1900 X	570 X	1070 X	84 X	< 250 U	130 X	< 250 U
BTEX																		
Benzene	ug/L	5	0.59	1.1	< 0.35 U	0.65	7.5	4	0.75	1.5	2400	2700	1200	2000	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	<1U	32	< 100 U	9.8	19	< 1 U	<1U	< 1 U	< 1 U
Ethylbenzene	ug/L	700	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	<1U	130	< 100 U	32	31	< 1 U	<1U	< 1 U	< 1 U
Total Xylenes	ug/L	1000	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	90	< 200 U	22.9	< 20 U	< 2 U	< 2 U	< 2 U	< 2 U
Metals																		
Lead	ug/L	15	< 1 UJ	< 1 U			< 1 UJ	< 1 U			< 1 UJ	< 1 U			< 1 UJ	1.02		
PAHs																		
Naphthalene	ug/L	160	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	50	< 100 U	31	46	< 1 U	<1U	< 1 U	< 1 U

Notes:

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X = Chromatographic pattern did not match fuel standard

Project No. 180357, Lynnwood, Washington

		Location		MW	/-17			MW	/-18			MM	/-19		MW	/-20	MV	W-21
		Date	07/31/2019	11/19/2019	08/17/2020	11/17/2020	07/31/2019	11/19/2019	08/18/2020	11/16/2020	07/31/2019	11/20/2019	08/18/2020	11/17/2020	08/17/2020	11/17/2020	08/17/2020	11/17/2020
		MTCA Method A																1
Analyte	Unit	Cleanup Level																
TPHs																		
Gasoline Range Organics	ug/L	800	1800	1100	550	1200	< 100 U	1300	< 100 U	340	< 100 U	< 100 U	< 100 U	< 100 U	120	< 100 U	7400	6600
Diesel Range Organics	ug/L	500	320 X	560 X	270 X	550 X	55 X	260 X	< 50 U	59 X	< 50 U	< 50 U	< 50 U	< 50 U	180 X	< 50 U	3200 X	2800 X
Motor Oil Range Organics	ug/L	500	< 250 U	260 X	360 X													
Diesel and Oil Extended Range Organics	ug/L	500	320 X	560 X	270 X	550 X	55 X	260 X	< 250 U	59 X	< 250 U	< 250 U	< 250 U	< 250 U	180 X	< 250 U	3460 X	3160 X
BTEX																		
Benzene	ug/L	5	< 0.35 U	4.2	1.1	5.7	1	240	1.2	61	< 0.35 U	21	25					
Toluene	ug/L	1000	< 1 U	2.8	<1U	6.9	< 1 U	8.2	< 1 U	< 1 U	<1U	<1U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	12
Ethylbenzene	ug/L	700	< 1 U	< 1 U	<1U	< 1 U	< 1 U	14	< 1 U	2.1	<1U	<1U	< 1 U	< 1 U	< 1 U	< 1 U	400	620
Total Xylenes	ug/L	1000	< 2 U	6.3	< 2 U	16	< 2 U	65	< 2 U	11.9	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	48	43
Metals																		
Lead	ug/L	15	< 1 UJ	< 1 U			< 1 UJ	< 1 U			< 1 UJ	< 1 U						
PAHs																		
Naphthalene	ug/L	160	< 1 U	1.6	< 1 U	1.9	< 1 U	5.2	<1U	2.4	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	470	440

Notes:

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X = Chromatographic pattern did not match fuel standard

Project No. 180357, Lynnwood, Washington

		Location	MV	V-22	MW	-23	MW	/-24	MW	/-25	MW	/-26	MW-27
		Date	08/17/2020	11/16/2020	08/18/2020	11/18/2020	08/18/2020	11/17/2020	08/18/2020	11/16/2020	08/18/2020	11/16/2020	11/20/2020
		MTCA Method A											
Analyte	Unit	Cleanup Level											
TPHs													
Gasoline Range Organics	ug/L	800	14000	24000	21000	27000	< 100 U						
Diesel Range Organics	ug/L	500	2500 X	3000 X	1900 X	2600 X	76 X	< 50 U	55 X	< 50 U	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	ug/L	500	< 250 U	410 X	< 250 U	390 X	< 250 U						
Diesel and Oil Extended Range Organics	ug/L	500	2500 X	3410 X	1900 X	2990 X	76 X	< 250 U	55 X	< 250 U	< 250 U	< 250 U	< 250 U
BTEX													
Benzene	ug/L	5	540	1000	3100	5300	< 0.35 U	< 0.35 U	< 0.35 U	0.53	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000	56	240	210	120	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	< 1 U
Ethylbenzene	ug/L	700	630	1300	400	640	< 1 U	< 1 U	< 1 U	< 1 U	<1U	< 1 U	< 1 U
Total Xylenes	ug/L	1000	1350	3880	900	930	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Metals													
Lead	ug/L	15											
PAHs													
Naphthalene	ug/L	160	220	390	110	170	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:

Bold - Analyte Detected

Blue Shaded - Detected result exceeds MTCA Method A Cleanup Level

U = Analyte was not detected at or above the reported result.

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# Table 2AO Progress Report No. 9Page 5 of 5

## Table 3. Groundwater Elevation Data

Project No. 180357, Lynnwood, Washington

Monitoring Well	TOC Elevation	Date	DTNAPL	DTW	Water Table (ft BTOC) <sup>1</sup>	Groundwater Elevation
		7/31/2019		12.86	12.86	438.88
MW-1	451.74	11/19/2019		13.81	13.81	437.93
10100-1	431.74	8/17/2020		11.82	11.82	439.92
		11/16/2020		12.85	12.85	438.89
		7/31/2019		11.51	11.51	439.08
	450 50	11/19/2019		11.76	11.76	438.83
MW-2	450.59	8/17/2020		10.77	10.77	439.82
		11/16/2020		11.3	11.30	439.29
		7/31/2019	10.45	10.75	10.52	441.17
	454 00	11/19/2019	11.62	12.00	11.71	439.98
MW-3	451.69	8/17/2020	9.69	9.94	9.75	441.94
		11/16/2020	10.93	11.09	10.97	440.72
		7/31/2019	11.22	11.33	11.25	440.76
	150.04	11/19/2019	12.36	12.67	12.43	439.58
MW-4	452.01	8/17/2020		10.41	10.41	441.60
		11/16/2020	11.69	11.71	11.69	440.32
		7/31/2019	9.87	10.69	10.07	441.31
		11/19/2019	11.37	11.73	11.46	439.92
MW-5	451.38	8/17/2020	9.23	9.33	9.25	442.13
		11/16/2020	10.56	10.71	10.60	440.78
		7/31/2019		9.01	9.01	440.39
		11/19/2019		9.10	9.10	440.30
MW-6	449.4	8/17/2020		8.44	8.44	440.96
		11/16/2020		8.62	8.62	440.78
		7/31/2019		8.29	8.29	441.85
		11/19/2019		9.12	9.12	441.02
MW-7	450.14	8/17/2020		7.79	7.79	442.35
		11/16/2020		8.4	8.40	441.74
		7/31/2019	9.41	9.92	9.53	441.78
		11/19/2019	10.66	11.07	10.76	440.55
MW-8	451.31	8/17/2020		8.84	8.84	442.47
		11/16/2020	9.89	10.02	9.92	441.39
		7/31/2019		11.9	11.90	439.85
		11/19/2019		13.25	13.25	438.50
MW-9	451.75	8/17/2020		10.20	10.87	440.88
		11/16/2020		12.37	12.37	439.38
		7/31/2019		13.53	13.53	437.81
		11/20/2019		13.99	13.99	437.35
MW-10	451.34	8/17/2020		12.59	12.59	438.75
		11/16/2020		13.35	13.35	437.99
		7/31/2019		9.81	9.81	441.00
		11/19/2019		10.83	10.83	439.98
MW-11	450.81	8/17/2020		9.19	9.19	439.98
		11/16/2020		9.19 10.02	10.02	441.82
		7/31/2019		10.02	10.93	438.49
		11/19/2019		10.93	10.93	438.55
MW-12	449.42	8/17/2020			10.26	438.55
		8/17/2020		10.26 10.52	10.26	439.16

### Table 3. Groundwater Elevation Data

Project No. 180357, Lynnwood, Washington

Monitoring Well	_		DTNAPL	DTW	Water Table (ft BTOC) <sup>1</sup>	Groundwater Elevation		
		7/31/2019		13.67	13.67	436.90		
MM/ 40	450.57	11/19/2019		13.83	13.83	436.74		
MW-13		8/17/2020		12.76	12.76	437.81		
		11/16/2020		13.28	13.28	437.29		
		7/31/2019		14.64	14.64	436.21		
	450.05	11/19/2019		14.73	14.73	436.12		
MW-14	450.85	8/17/2020		13.65	13.65	437.20		
		11/16/2020		14.14	14.14	436.71		
		7/31/2019	12.40	12.42	12.40	438.76		
	454.40	11/19/2019	13.97	14.15	14.01	437.15		
MW-15	451.16	8/17/2020	12.27	12.96	12.44	438.72		
		11/16/2020	13.22	13.88	13.38	437.78		
		7/31/2019		9.15	9.15	441.45		
MAL 40	450.0	11/19/2019		10.58	10.58	440.02		
MW-16	450.6	8/17/2020		8.40	8.40	442.20		
		11/16/2020		9.69	9.69	440.91		
	450.18	7/31/2019		8.47	8.47	441.71		
		11/19/2019		9.70	9.70	440.48		
MW-17		8/17/2020		7.90	7.90	442.28		
		11/16/2020		8.83	8.83	441.35		
	449.28	7/31/2019		12.08	12.08	437.20		
MW-18		11/19/2019		12.96	12.96	436.32		
		8/17/2020		11.04	11.04	438.24		
		11/16/2020		12.07	12.07	437.21		
		7/31/2019		11.54	11.54	434.48		
	446.02	11/19/2019		10.31	10.31	435.71		
MW-19		8/17/2020		9.76	9.76	436.26		
		11/16/2020		9.67	9.67	436.35		
	450.59 450.603 451.254	8/17/2020		8.54	8.54	442.05		
MW-20		11/16/2020		9.32	9.32	441.27		
		8/17/2020		11.41	11.41	439.19		
MW-21		11/16/2020		10.16	10.16	440.44		
1444 00		8/17/2020		11.38	11.38	439.87		
MW-22		11/16/2020		12.31	12.31	438.94		
	451.079	8/17/2020		13.16	13.16	437.92		
MW-23		11/16/2020		13.90	13.90	437.18		
104/ 51	449.094	8/17/2020		12.31	12.31	436.78		
MW-24		11/16/2020		12.02	12.02	437.07		
	449.701	8/17/2020		9.87	9.87	439.83		
MW-25		11/16/2020		11.43	11.43	438.27		
	449.13	8/17/2020		14.92	14.92	434.21		
MW-26		11/16/2020		15.73	15.73	433.40		
		8/17/2020		DRY				
MW-27	447.27	11/16/2020		15.94	15.94	431.33		
		8/17/2020		DRY				
MW-28		11/16/2020		DRY				

#### Notes

TOC = Top of Casing elevation in ft above mean sea level (NAVD88); NAPL = Non-aqueous phase liquid

DTNAPL = Depth to NAPL below TOC (ft); DTW = Depth to water below TOC (ft); btoc = below TOC

 $^{1}$  - In wells where NAPL is present, the depth to water table was calculated as Water Table = DTW + 0.76\*(DTNAPL-DTW)

#### **Aspect Consulting**

# Table 4. Soil Gas Analytical Data

Project No. 180357, Lynnwood, Washington

Location					GP-01		GP-02			GP-03				
Date					08/20/2020	07/25/2019	08/20/2020	11/20/2020	07/25/2019	07/25/2019	08/20/2020	08/20/2020	11/20/2020	
Analyte	Unit	Risk Driver	MTCA Method B Subslab Screening Level (Unrestricted) <sup>1</sup>											
BTEX														
Benzene	ug/m3	С	11	3.8	< 1.1 U	1.5	< 1.1 U	< 1.1 U	3.4	3.9	6.4	5.7	< 2.7 U	
Toluene	ug/m3	NC	76000	28	< 64 U	12	< 62 U	< 64 U	15	17	< 170 U	< 170 U	< 160 U	
Ethylbenzene	ug/m3	NC	15000	6	< 1.5 U	3.4	3.1	2.2	3.9	4.9	60	80	< 3.6 U	
Total Xylenes	ug/m3	NC	1500	32.9	< 3 U	18.3	16.7	12	21.5	27.1	293	382	10	
PAHs														
Naphthalene	ug/m3	С	2.5	< 0.84 U	< 0.89 U	< 0.81 U	1.2	< 0.89 U	< 2 U	< 2 U	< 2.3 U	< 2.3 U	< 2.2 U	
VOCs														
1,2-Dibromoethane (EDB)	ug/m3	NC	0.14	< 0.25 U		< 0.24 U			< 0.6 U	< 0.58 U				
1,2-Dichloroethane (EDC)	ug/m3	NC	3.2	< 0.13 U		< 0.13 U			< 0.32 U	< 0.3 U				
Methyl tert-butyl ether (MTBE)	ug/m3	NC	320	< 5.8 U		< 5.6 U			< 14 U	< 14 U				
APH														
C5 - C8 Aliphatic Hydrocarbons	ug/m3			410	580	350	630	210	9100	8700	15000	13000	3700	
C9 - C12 Aliphatic Hydrocarbons	ug/m3			2200	680	2600	890	480	11000	9600	2300	2200	1100	
C9 - C10 Aromatic Hydrocarbons	ug/m3			< 80 U	< 85 U	< 77 U	< 82 U	< 85 U	< 190 U	< 190 U	< 220 U	220	< 210 U	
Total Petroleum Hydrocarbons (ND = 1/2 RL)	ug/m3	NC	4,700	2,721	1,338	3,024	1,614	780	20,240	18,449	17,856	15,974	5,001	

#### Notes

(1) Model Toxic Control Act (MTCA) Method B Subslab Soil Gas Screening Levels (SLs).

(2) Commercial screening levels calculated by adjusting exposure frequency for both noncarcinogens and carcinogens to 0.30, and average body weight and breathing rate for noncarcinogens to 70 kg and 20 m<sup>3</sup>/day, respectively. These adjustments are in accordance with MTCA Equations 750-1 and 750-2 and Ecology's Implementation Memorandum No. 21 (FAQs Regarding VI and Ecology's 2009 Draft VI Guidance).

(3) Total petroleum hydrocarbon concentration is the sum total of VOCs and APHs, one-half of the laboratory detection limit was used for non-detects.

(4) Generic sub-slab TPH screening level based on generic TPH indoor air cleanup level of 140 ug/m3 and an attenuation factor of 0.03 (Ecology Implementation Memo #18.)

#### Bold - Analyte Detected

Blue Shaded - Detected result exceeded unrestricted use MTCA Method B Subslab Screening Level

Orange Shaded - Non-detected resulted exceeded unrestricted use MTCA Method B Subslab Screening Level; an amended lab report has been issued and is pending third-party data validation

BTEX = benzene, toleuene, ethylbenzene, and total xylenes

PAHs = polycyclic aromatic hydrocarbons

- VOCs = volatile organic compounds
- APH = air petroleum hydrocarbon

 $\mu g/m^3$  = micrograms per cubic meter

-- = not applicable

U = analyte was not detected at or above the reported result.

C = Carcinogenic; NC = Non carcinogenic

#### Aspect Consulting

#### DRAFT

# Table 4

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# Table 4. Soil Gas Analytical Data

Project No. 180357, Lynnwood, Washington

Location					GP-04		GP-05		SVS-01		SVS-02	
Date					08/20/2020	11/20/2020	11/20/2020	11/20/2020	07/25/2019	08/20/2020	07/25/2019	08/20/2020
Analyte	Unit	Risk Driver	MTCA Method B Subslab Screening Level (Unrestricted) <sup>1</sup>									
BTEX												
Benzene	ug/m3	С	11	1.2	1.7	< 13 U	< 14 U	2.7	2.2	17	3.3	1.8
Toluene	ug/m3	NC	76000	11	< 68 U	< 770 U	< 810 U	< 64 U	9.3	< 160 U	13	< 64 U
Ethylbenzene	ug/m3	NC	15000	3.4	5.1	< 18 U	< 19 U	5	2.6	7	2.9	5.8
Total Xylenes	ug/m3	NC	1500	18.7	28.3	37	< 37 U	25.8	14.4	57	14.2	31.3
PAHs												
Naphthalene	ug/m3	С	2.5	< 0.84 U	< 0.94 U	< 11 U	< 11 U	< 0.89 U	< 0.81 U	< 2.2 U	< 0.81 U	< 0.89 U
VOCs												
1,2-Dibromoethane (EDB)	ug/m3	NC	0.14	< 0.25 U					< 0.24 U		< 0.24 U	
1,2-Dichloroethane (EDC)	ug/m3	NC	3.2	< 0.13 U					< 0.13 U		< 0.13 U	
Methyl tert-butyl ether (MTBE)	ug/m3	NC	320	< 5.8 U					< 5.6 U		< 5.6 U	
APH												
C5 - C8 Aliphatic Hydrocarbons	ug/m3			510	650	< 20000 U	22000	160	1000	4100	1700	750
C9 - C12 Aliphatic Hydrocarbons	ug/m3			1800	470	6000	5000	390	1300	6700	1100	670
C9 - C10 Aromatic Hydrocarbons	ug/m3			100	< 90 U	< 1000 U	< 1100 U	< 85 U	78	< 210 U	100	< 85 U
Total Petroleum Hydrocarbons (ND = 1/2 RL)	ug/m3	NC	4,700	2,445	1,235	16,952	28,005	658	2,407	11,067	2,934	1,534

#### DRAFT

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