



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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August 21, 2017

Mr. Joe Borrelli  
TriArc Electric Supply  
13028 Interurban Ave S, Suite 108  
Tukwila, WA 98168

**Re: Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site:**

- **Name:** Borrelli Real Estate Investments
- **Address:** 4404 South 133<sup>rd</sup> Street, Tukwila, WA 98168
- **Facility/Site No.:** 24470
- **VCP No.:** NW3093
- **Cleanup Site ID No.:** 12293

Dear Mr. Borrelli:

Thank you for submitting documents regarding your remedial actions for the Borrelli Real Estate Investments facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site:

- Total gasoline-range petroleum hydrocarbons (TPHg) in Soil;
- Total diesel-range petroleum hydrocarbons (TPHd) in Ground Water.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on



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Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Environmental Associates, Inc. (EAI), *Phase I Environmental Assessment*, May 7, 2013.
2. EAI, *Underground Storage Tank Removal & Site Assessment*, June 14, 2013.
3. EAI, *Limited Subsurface Sampling and Testing*, May 27, 2016.
4. EAI, *Independent Cleanup Action*, September 1, 2016.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at 425-649-7235 or sending an email to: [nwro\\_public\\_request@ecy.wa.gov](mailto:nwro_public_request@ecy.wa.gov).

The Site is defined by the extent of contamination caused by the following releases:

- TPHg in Soil;
- TPHd in Ground Water.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site, Ecology has determined:**

- For Ecology to issue a Site No Further Action (NFA) determination, complete Site characterization is needed for each media that is affected. The following comments are related to Site characterization:
  - Ground water monitoring wells should be installed to determine the Site ground water flow direction and collect representative ground water samples. A minimum of four consecutive quarters of ground water monitoring data below cleanup levels is necessary to demonstrate

compliance. However, if the first quarterly ground water monitoring data confirms Site ground water is not detectable using appropriate method detection levels, Ecology may issue a NFA determination earlier.

- Ecology does not concur with the use of silica gel cleanup in the TPHd analysis of ground water samples unless uncontaminated background samples indicate that naturally occurring organic matter is a significant component of the TPHd being detected in the ground water samples. If silica gel cleanup is used, ground water samples should be split and analyzed both with and without silica gel cleanup. Clean background ground water samples should be analyzed for Total Organic Carbon (TOC) to determine the significance of organic matter present in ground water. Boring logs should provide geologic information regarding the presence of organic matter.
- Southgate Creek is within 200 feet of the Site. Depending on the results of the ground water monitoring data, additional evaluation may be necessary to demonstrate that surface water quality is not impacted by Site ground water, and ground water cleanup levels may be adjusted to be protective of surface water.
- The Terrestrial Ecological Evaluation (TEE) needs to be revised. The Site may qualify for the undeveloped land exclusion on the TEE form found at <http://www.ecy.wa.gov/programs/tcp/vcp/vcp2008/vcpForms.html>. If the Site appears to qualify for this exclusion, describe any undeveloped land in the vicinity of the Site and submit the TEE form with a map showing the 500-foot radius surrounding the Site boundary.
- Ecology requires a comprehensive report documenting all work done to date before issuing a NFA determination. At minimum, summary tables and figures documenting all sampling locations and results to date should be included in future deliverables. The Site may qualify as a Model Remedy for ground water. If you choose to use a Model Remedy, a feasibility study and disproportionate cost analysis is not required for the Site. Additional information required in the comprehensive report is identified in Ecology's *Remedial Investigation Checklist* for this Site that is attached as Enclosure B to this letter.
- This Site is currently listed in Ecology's Hazardous Sites List with a hazard ranking of 4 (Low-Moderate Risk). The Final decision for the Site needs to go through a 30-day public notice and comment period. Ecology will prepare for and conduct the comment period as part of MTCA Requirement 173-340-330-(7)(10).

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If all comments during the 30-day period are properly addressed, a Site NFA determination can be issued and the Site will be removed from the Hazardous Sites List.

**This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action.** To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at 425-649-7109 or [jing.song@ecy.wa.gov](mailto:jing.song@ecy.wa.gov).

Sincerely,



Jing Song  
Site Manager  
Toxics Cleanup Program, NWRO

Enclosure (2): A – Description and Diagrams of the Site  
B – Remedial Investigation Checklist

cc: Ryan D. Opitz, Environmental Associates, Inc.  
Sonia Fernandez, VCP Coordinator, Ecology

## **Enclosure A**

### **Description and Diagrams of the Site**

## Site Description

*This section provides Ecology's understanding and interpretation of site conditions, and is the basis for the opinions expressed in the body of the letter.*

**Site:** The Site is defined by total TPHg in soil and total TPHd in ground water. The Site consists of King County parcel number 2613200134, which covers 0.58 acres of irregular-shaped land with the street address of 4404 South 133<sup>rd</sup> Street in Tukwila, Washington (Property).

**Area and Property Description:** The Property is located within a commercial and residential area approximately 2.2 miles north of Tukwila City Hall, and approximately 2 miles northeast of Seattle Tacoma International Airport. The Property is bounded to the north by South 131<sup>st</sup> Street with an office building and a warehouse beyond, to the south by South 133<sup>rd</sup> Street and two large warehouse buildings beyond, to the east by a small vacant parcel and South 131<sup>st</sup> Street with a warehouse and a cell phone tower beyond, to the west by 44<sup>th</sup> Avenue South and a single family house beyond.

**Site History and Current Use:** The Property was undeveloped until 1924 when a residential building and a gas station building with a UST were constructed on the eastern portion. The 1936 King County IMAP aerial photograph shows the gas station building on the southeastern portion, and the residential building on the northeastern portion of the Property. The western portion of the Property along with adjacent land to the west were used for agriculture at that time.

A second residential house was constructed on the west portion of the Property in 1942. The 1924 residential building was torn down in about 1947. In or prior to 1969, 44<sup>th</sup> Avenue South was constructed to the west of the current west Property boundary. The former gas station building and the 1942 residential house remained on the Property until 2013. Remaining structures on Property were demolished between 2014 and 2015, based on King County IMAP aerial photographs. A 550-gallon gasoline UST on the southeastern portion of the Property was discovered and removed in 2013. A 1,100-gallon waste oil UST was discovered approximately 50 feet west of the gasoline UST and removed from the Property in 2016.

The Property is currently vacant and covered with natural grass and brush. Current Property use is depicted on Figure 1 of the Site Diagrams.

**Sources of Contamination:** The sources of contamination at the Site are the releases from the USTs and dispenser islands associated with the former gas station. The gasoline release in soils was discovered during the removal of the 550-gallon gasoline UST in 2013. The diesel release in ground water was discovered during the environmental investigation in 2016 and is also likely related with the 550-gallon gasoline UST. The exact timing of the release occurrence is unknown.

**Physiographic Setting:** The Site is situated at an elevation of approximately 40 feet above mean sea level. The land surface in the immediate vicinity of the Site is relatively flat and slopes

gently to the north.

**Surface/Storm Water System:** Southgate Creek is located approximately 200 feet east of the Site. A tributary of Southgate Creek is also located approximately 260 feet west of the Site across 44<sup>th</sup> Avenue South. Southgate Creek flows to the north and discharges to the Duwamish River approximately 1,600 feet to the north. Storm water from the Property and adjoining properties flows to King County municipal storm drains.

**Ecological Setting:** The Property and adjacent properties to the north, south and east are zoned for commercial/light industrial use. The adjacent property to the west is zoned for residential use. Land surfaces to the north, south and east are primarily covered by buildings and asphalt or concrete pavement, except for the small vacant parcel immediately to the east which is covered by natural grass and brush. The land surface to the west across 44<sup>th</sup> Avenue South is a large lot covered by trees and grass developed with a single family house. Riverton Park is located approximately 430 feet west of the Site beyond the single family house. Riverton Park is a City of Tukwila park with 4.14 acres of land covered predominantly by trees, grass, and plants.

**Geology:** The Site is situated on the floor of a broad, alluvial valley known locally as the Duwamish River Valley. Published geologic maps for the Site vicinity suggest that much of the underlying geologic material is “alluvium” which may predominately include organic-rich silt to fine sands with some gravel and with possible deposits of artificial fill. Typically, the alluvium exhibits highly variable vertical hydraulic conductivity depending on the texture and gradation of the material. The geologic map also shows that the area nearby to the east has been modified extensively by excavation, filling, or construction. These man-made processes have greatly modified or obscured the original geology. Additionally, the area only a short distance to the west may be underlain by glacial outwash, a deposit of sand and gravel carried by running water from the melting ice of a glacier. Based on the excavation and test pits completed on Site, the underlying subsurface soil consists of well-sorted fine to medium grain brown and grey silty sand with some pebbles and cobbles from the surface to approximately 10 to 12 feet below ground surface (bgs). At approximately 10 to 15 feet bgs, a layer of highly organic material was present in fairly non-decomposed form and included intermittent thin layers of grey silty sands. The lower limit of this naturally occurring organic unit was not reached.

**Ground Water:** Ground water was observed at approximately 7 feet bgs in the UST excavation. Ground water occurrence on the Site has not been characterized.

**Release and Extent of Contamination:** Petroleum hydrocarbons released to soil were initially confirmed in May 2013 during the removal of a 550-gallon gasoline UST on the southeastern portion of the Site. TPHg concentrations were detected above Model Toxics Control Act (MTCA) Method A soil cleanup levels in the soil samples collected at the bottom of the UST excavation at 7 feet bgs, and in the south and east sidewalls of the UST excavation at 5 feet bgs.

Six test pits were excavated in May 2016 to characterize the extent of petroleum hydrocarbon-impacted soils which were subsequently excavated in July 2016. A second 1,100-gallon waste oil UST was discovered during excavation of the petroleum hydrocarbon-impacted soils and

removed from the Site. Final excavation was completed to 8 feet bgs on the west and 9 feet bgs on the east. A total of 74.58 tons of petroleum hydrocarbon-impacted soils were removed from the Site. Soil samples collected at final excavation limits showed petroleum hydrocarbon concentrations below MTCA Method A soil cleanup levels, which indicated all known petroleum hydrocarbon impacted soils were removed from Site. The confirmation soil samples collected from the vicinity of the waste oil UST were not analyzed for the full suite of constituents per Table 830-1 of MTCA and Table 7.2 in Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*. However, since these soil samples did not contain detectable concentrations of TPHd and total heavy oil-range petroleum hydrocarbons (TPHo), additional soil sampling in this area is not necessary. Future soil sampling at a waste oil UST shall all be analyzed for the full suite of constituents. Final excavation limits and soil sampling locations in July 2016 are depicted on Figures 2 and 3 of the Site Diagrams.

Ground water was encountered at 5 to 7 feet bgs in test pits and excavations. Four water samples were collected in test pits TP-1 through TP-4, and one additional water sample was collected in the excavation in 2016. One of the water samples collected from test pit TP-4 located approximately 3 feet northwest of the 550-gallon gasoline UST showed TPHd concentration of 520 mg/kg, and TPHo concentration of 450 mg/kg. This TPHd concentration was above MTCA Method A ground water cleanup level of 500 mg/kg, confirming the ground water is contaminated by the petroleum hydrocarbon releases likely associated with the 550-gallon gasoline UST. Other water samples did not contain petroleum hydrocarbon concentrations above MTCA Method A ground water cleanup levels, but these water samples were collected from excavated areas and are not considered representative of Site ground water conditions. Site ground water is inferred to flow to the north based on regional topography, but the ground water flow direction has not been determined using Site-specific data. Ground water monitoring wells are warranted to determine the ground water flow direction and Site ground water conditions. In addition, potential impacts to nearby surface water (Southgate Creek) have not been evaluated.



## Site Diagrams

# Enclosure A: Figure 1



**Approximate Site Boundary**



**Location Detailed on Plate 3**



**Inferred Approximate Direction of Groundwater Flow**



**ENVIRONMENTAL  
ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

## SITE PLAN

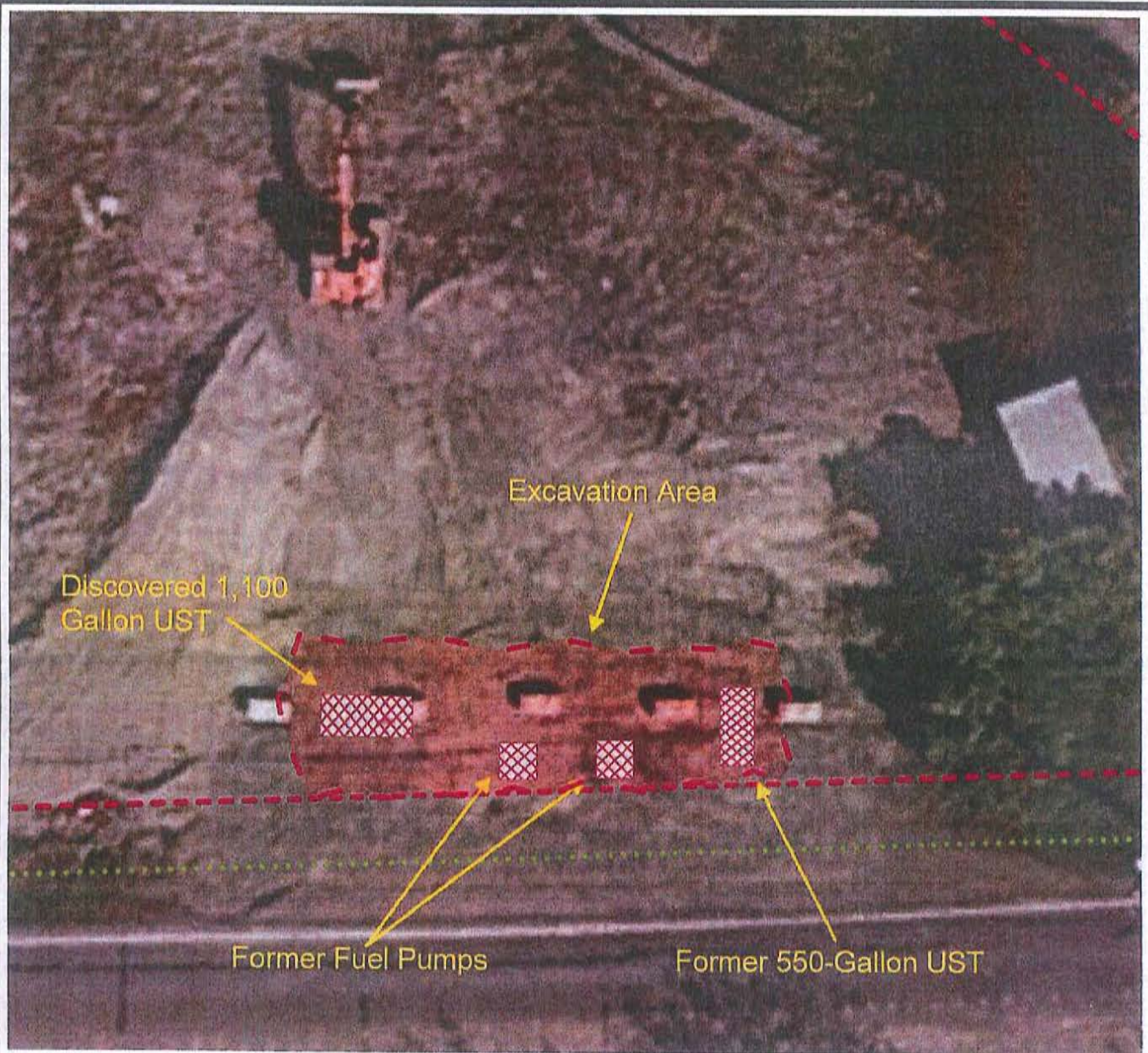
Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

Job Number:  
JN 33076-3

Date:  
September 2016

Plate:  
2

Enclosure A: Figure 2



Approximate Site Boundary



Approximate Location of Fiber Optic Line



Inferred Approximate Direction of Groundwater Flow



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Bellevue, Washington 98004

**FORMER TANK AND  
PUMP LOCATIONS**

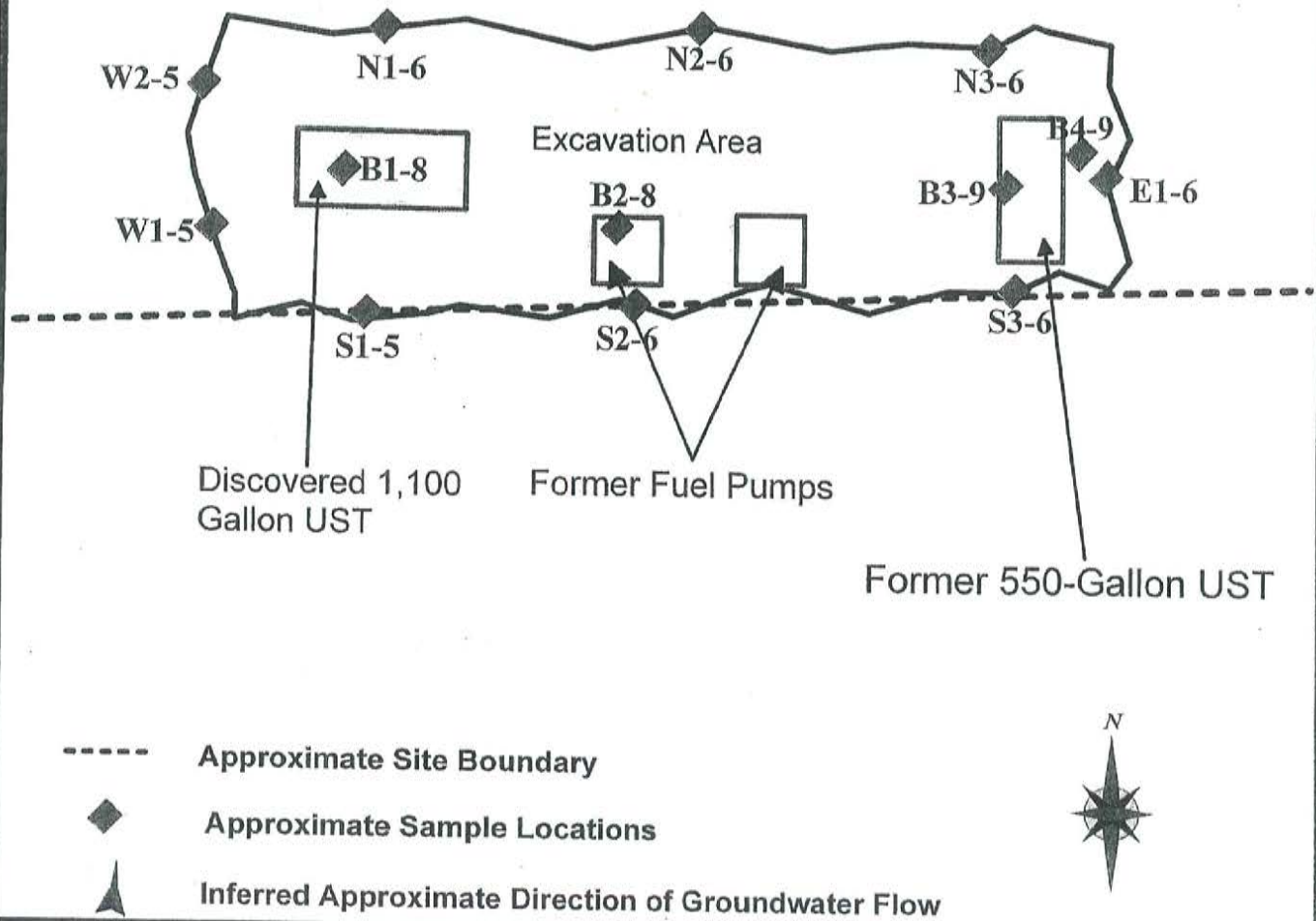
Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

<i>Job Number:</i>	<i>Date:</i>	<i>Scale:</i>	<i>Plate:</i>
JN 33076-3	September 2016	1" = 20'	3

# Enclosure A: Figure 3

## SOURCE OF STOCKPILE (SP) SAMPLES (not shown on sketch below)

Presumed Contaminated Stockpile	Potentially Impacted Stockpile	Suspected Clean Stockpile
SP-1	SP-4	SP-7
SP-2	SP-5	SP-8
SP-3	SP-6	SP-9
		SP-10



Approximate Site Boundary



Approximate Sample Locations



Inferred Approximate Direction of Groundwater Flow



**ENVIRONMENTAL ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

## Excavation and Boring Locations Map

Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

Job Number:  
JN 33076-3

Date:  
September 2016

Scale

Plate:

4

## **Enclosure B**

### **Remedial Investigation Checklist**

Incomplete Report: The reports submitted to Ecology are not equivalent to a complete Remedial Investigation (RI) report. A comprehensive RI or Cleanup Action Report is recommended to document all work done to date, including but are not limited to site description, site history, a summary of past environmental investigations/remedial actions, site characterization of each media, a Conceptual Site Model, cleanup level selection for each media, and conclusion. Comprehensive figures and tables need to be included as well. Please go through the checklist for items required for the comprehensive report.

2017

## Remedial Investigation Checklist Borrelli Real Estate Investment NW3093



May 2016

Publication No. 16-09-006

### FOR ECOLOGY USE ONLY

FSID: 24470

Report Name: Independent Cleanup Action

Date Submitted: 9/1/2016

Reviewed By: Jing Song

Review Date: 7/25/2017

**Remedial Investigation (RI) Checklist Guidance**

The Model Toxics Control Act (MTCA) regulation Washington Administrative Code (WAC) 173-340-350(7) broadly describes the elements necessary to complete a RI. The purpose of a RI is to collect and evaluate sufficient information to fully characterize the nature and extent of contamination at a site.

This RI checklist is considered guidance based on the MTCA cleanup regulation WAC 173-340. Cleanup project managers with the Washington State Department of Ecology (Ecology) have discretion when reviewing and accepting RI reports as site-specific circumstances dictate the necessary scope and breadth of each report.

**Remedial Investigation Report Body**

- I. **Cover Letter.** Include a letter describing the submittal and specifying the desired department action or response.
- II. **Introduction.**
  - a. **General Site Information.** Include contact information for project coordinators (Ecology site manager, consultants, potentially liable persons (PLP), and current owner/operator). Include the site name and identification numbers, general description, and location (e.g., GPS coordinates, assessor parcel number, Quarter Section Township Range, address).
  - b. **Site History.** Describe site from earliest known time of habitation and/or development. Describe previous owners/operators, past uses of the site, and all potential/known sources (both on-site and off-site) of contamination (e.g., petroleum storage tanks, manufacturing processes, chemical storage, etc.). Include approximate dates or periods of past product and waste spills, identification of the materials spilled, and amount/location of the spill.
  - c. **Site Use.** Describe current site uses, land use/zoning, and future use plans.

**III. Field Investigations**

- a. **Previous Environmental Investigations.** Discuss prior work performed, samples obtained, why sampling locations were chosen, etc. Cite any previous environmental reports.
- b. **Site Characterization.** Discuss current site characterization activities for each site media (surface water/sediments, soils, groundwater systems, air, and cultural history/archeology, if applicable). Name site contaminants of concern (COCs) and discuss why they were chosen for analysis. Describe how prior and current work efforts contribute to the understanding of the nature and extent of contamination.

FOR ECOLOGY USE ONLY					Comments
Adequate	Incomplete	Missing	N/A		
		X			
	X				Most information is included in the Phase I site assessment report in 2013. Please include in the comprehensive report.
	X				Most information is available in Phase I report. The final comprehensive report shall include all site history information such as past property use and owners (P8-10 of Phase I report), potential on-site source, and potential off-site source (P14-17 of Phase I report).
X					
X					
	X				Current site characterization activities are discussed in the report. However groundwater and surface water is not adequately characterized. See opinion letter for detail. Also need to add COC discussion.

- c. **Sampling/Analytical Results.** Discussion of sampling/analytical results should include contaminants analyzed for in samples from each applicable site media (soil, groundwater, vapor, surface water). Include comparison of the results to the applicable Method (A, B, or C) cleanup level, sampling method, laboratory method, and any special sampling or analytical protocols (silica gel, filtration, etc.). Evaluate the quality of the data.

**IV. Conceptual Site Model**

- a. **Conceptual Site Model (CSM).** Discuss contaminant release, fate and transport, exposure pathways (surface water, groundwater wells, air, direct contact, etc.), and potential receptors (human, aquatic, terrestrial). Describe typical concerns for this type of environmental contamination, and include a discussion of site specific concerns (hydro-geologic setting, receptors, current or future site zoning/land use etc.).

**V. Proposed Cleanup Standards**

- a. **General.** Clearly identify proposed cleanup levels for each media and rationale for selected level. Explain/justify mixing MTCA methods for different media. Must include a demonstration of conditions that require a calculated solution if one is to be use (e.g., background calculations, use of Method B or C, etc.) and show calculation of the cleanup level, including a list of the input parameters. Include point(s) of compliance.
- b. **Terrestrial Ecological Evaluation (TEE).** A TEE should be performed, if required, as part of cleanup level selection. Reference WAC 173-340-7491 to see if the site qualifies for an exclusion.

[www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm](http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm)

**VI. Summary, Conclusions, and Recommendations**

- a. **Summary and Conclusions.** Summarize what is known about the site and contamination (updated CSM). Include discussion of COCs that exceed MTCA or are “indicator hazardous substances.” Ensure conclusions are supported by the tables and figures included with the report.
- b. **Recommendations.** Outline possible interim/remedial actions if appropriate.

**Remedial Investigation Figures**

**General** – Figures should include a north arrow, scale, complete legend, measurement units, and annotated clarification as necessary. Figures should not be cluttered and must be legible and explicable. Document text must reference figures and draw conclusions consistent with information presented on figures. Consider using multiple figures when showing large amounts of information.

<b>FOR ECOLOGY USE ONLY</b>			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampling and laboratory method not described.			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CSM including discussion of source, transport, exposure pathways, and receptors is not included.			
Adequate	Incomplete	Missing	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Method A cleanup levels are selected but rationale for the selected level is not provided. Groundwater cleanup level may need to adjust to protect surface water.			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No TEE done for the site.			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Briefly discussed. Add more discussion of groundwater and surface water.			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lots of Key information missing. Site boundary needs to be defined. At least one more cross section is needed. Additional figures needed to show current and historical site feature, all sampling and excavation locations, historical contamination extent and current conditions for each media, groundwater flow direction and gradient, etc.			



**I. Vicinity Map(s)**

- a. Show property in relation to surrounding region. Area covered by Vicinity Map should be proportional to site size.
- b. Show other applicable items including (but not limited to): surface topography, natural areas, surrounding land uses, location of groundwater supply and monitoring wells within a one mile radius.

**II. Site Map(s)**

- a. Show overall site layout with site features and existing well, boring, and sampling locations labeled consistently with current and historical site data and sample names used in the report. If multiple names exist for a sampling location or area of the site indicate this.
- b. Include COC locations, concentrations, and estimated vertical and horizontal extent of contamination for site media, as applicable. Include waste materials present on site as well as hazardous substance treatment, storage, or disposal areas (show current and historical features).
- c. Show geologic/hydrogeologic information including soil types, wells, screened intervals, and water levels (cross sections are useful for showing this information). Show groundwater flow direction and gradient.
- d. Show other relevant information including (but not limited to): site and property boundaries, buildings/facilities on site, historical site features, underground storage tanks (USTs), previous excavation/interim action activity, etc.

**III. Conceptual Site Model**

- a. Provide figures showing contaminant release(s), fate and transport, exposure pathways, and potential and/or actual receptors. The lateral and vertical extent of contamination, as currently understood, should be clearly conveyed.

**Remedial Investigation Tables**

**General** - Tables should include detailed notes that explain any laboratory or other designations, assumptions, and references. All acronyms used in the table should be defined in a section of the notes even if they are defined in the body of the report, so table information can be quickly understood.

- a. **Sampling Information/Laboratory Methods.** Include current and historical sampling methods and numerical cleanup levels, lab methods, reporting limits, and any special sampling protocols with justification or explanation (e.g. silica gel, filtration).
- b. **Cleanup Levels.** Include potentially applicable ARAR values and recommended cleanup levels.

FOR ECOLOGY USE ONLY				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Adequate	Incomplete	Missing	N/A	
	X			
Need a comprehensive map to show all sampling locations since 2013, with excavation limit and former UST locations.				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Need map to show current and historical site features. Also need maps to show historical contamination extent and current conditions for each media.				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Include at least one more cross section after well install. Need groundwater contour/gradient map.				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Define MTCA site boundary.				
<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	
No CSM done.				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comprehensive tables for all sampling results for each media are not provided. Sampling dates and depths are not included in tables. Non-detectible levels should be noted as 'U' with RL in tables.				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comprehensive soil and groundwater tables are not provided.				
X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Groundwater cleanup levels may be adjusted based on protection of surface water.				

- c. **Site Data.** Include current and historical analytical and field-measured data. Group by media type. For larger data sets, consider making a summary table of exceedances. Tables should include proposed cleanup levels with any contaminant exceedances clearly indicated using bold font or shading. Non-detectible levels should be noted as 'U' with the numerical laboratory reporting limit (RL) provided rather than 'ND'.

**Remedial Investigation Appendices**

**General.** Appendices should contain a description of content and explain how to interpret the information for use. Not all of the following suggestions will apply to all sites.

- a. Exploratory logs, well installation diagrams, groundwater sampling logs, and field records.
- b. Analytical laboratory report and Quality Assurance/Quality Control report.
- c. **Limitations.** Explain any limitations that apply to the work.
- d. Details of field and analytical methods used in former and current investigations and remedial activities. If applicable, append Work Plan/Sampling and Analysis Plan/Quality Assurance Project Plan/Health and Safety Plan.
- e. Other documents that provide additional context or contribute to the understanding of the site – see suggested report format for additional information.

**Miscellaneous Items**

- a. **Environmental Information Management (EIM).** All sampling data must be uploaded into Ecology's EIM database. This allows Ecology to access data, check results, and/or perform additional analyses. For more information, reference: [www.ecy.wa.gov/programs/tcp/data\\_submittal/Data\\_Requirements.htm](http://www.ecy.wa.gov/programs/tcp/data_submittal/Data_Requirements.htm)
- b. **Certification (Licensed Professional Stamp).** Engineering, geologic, and hydrogeologic work must be performed under seal of an appropriately licensed professional (RCW 18.43 and 18.220).
- c. **Additional information may be requested by Ecology as required to fully define the site.**
- d. **Submittal Requirements:** Ecology requests three copies of reports submitted per WAC 173-340-850. Please contact the cleanup project manager for specific submittal requirements.

To request ADA accommodation or materials in a format for the visually impaired, call Ecology at 509-454-7834, Relay Service 711, or TTY 877-833-6341.

<b>FOR ECOLOGY USE ONLY</b>			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampling dates and depths are not included. Non-detectible levels should be noted as "U" with RL.			
Adequate	Incomplete	Missing	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No wells/borings conducted so far. Boring logs needed after well install.			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field and analytical methods are not discussed in text.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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No data uploaded to EIM.			
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See opinion letter.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
One copy is sufficient.			