CLEANUP ACTION REPORT

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

WDOE FS ID: #24470
VCP ID: #NW3093

ENVIRONMENTAL
ASSOCIATES, INC.
1380 - 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425) 455-9025 Office

May 21st, 2019 VCP# NW3093

Jing Song - Site Manager
WDOE Northwest Regional Office
Voluntary Cleanup Program
3190 160th Avenue Southeast
Bellevue, Washington 98008

SUBJECT: CLEANUP ACTION REPORT
Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

Dear Ms. Song:

Environmental Associates, Inc. (EAI) has prepared this report in support of property ownership's ongoing pursuit of a No Further Action (NFA) determination through Washington State Department of Ecology's (WDOE's) Voluntary Cleanup Program (VCP) Model Remedies. This report summarizes and presents prior environmental site assessment, site characterization, and cleanup action to the WDOE.

Inquiries for additional project information (if needed) can be directed to the undersigned at Environmental Associates, Inc.

Sincerely submitted,
ENVIRONMENTAL ASSOCIATES, INC.

Robert B. Roe, M.Sc.
Senior Hydrogeologist
License: 1125 (Washington)

for

Garrett J. Scheuerman
Environmental Geologist / Project Manager

Don W. Spencer, M.Sc., P.G.
Principal
License: 604 (Washington)

State of Washington Hydrogeologist 604 Licensed Geologist
DON W. SPENCER

Environmental Associates, Inc.

TABLE OF CONTENTS

Plates

Tables

Appendices

1. INTRODUCTION

The Site is at the approximate location depicted graphically on Plate 1, Vicinity/Topographic Map. The Site consists of an irregularly-shaped parcel (King County tax parcel #2613200134) covering approximately 25,480 square feet (0.58 acres) of land and is located at 4404 South 133rd Street in Tukwila, Washington 98188 (the "Property").

The Property was historically occupied by a gasoline and automotive service station. Contamination originating from an underground storage tank (UST) at the site was discovered and was reported to Ecology in 2013. During excavation of contaminated soils in 2016, a separate 1,100 gallon waste oil UST was subsequently discovered and removed. A total of 74.58 tons of soil were excavated and removed from the Property. Subsequent to this work, confirmation soil sampling was performed. The results of laboratory analysis indicated that remaining soils were in MTCA Method A compliance for unrestricted land use. Diesel-range hydrocarbons were detected above MTCA Method A compliance in one (1) groundwater sample collected from the open excavation. The lab "flagged" the groundwater result, stating that the chromatographic pattern of the specific analyte was suggestive of a high degree of naturally-occurring hydrocarbons. Follow-up analysis of that groundwater sample using silica-gel yielded a "non detect" for diesel and the concentration of heavy oil was below (i.e. compliant with) the MTCA Method A Cleanup levels. EAI tentatively concluded at that time that the limited cleanup action appeared to have been successful in achieving Washington State's target compliance levels for unrestricted land use in soil.

Referring to Plate 7, three (3) groundwater monitoring wells (MW-1 through MW-3) were installed on the Property in 2017. Regular groundwater monitoring has been performed since 2017 and four (4) consecutive sampling events have achieved compliance with MTCA Method A cleanup levels for all analytes evaluated. EAI has been assigned to request a formal Ecology opinion in pursuit of a No Further Action (NFA) determination through Ecology's VCP Model Remedies Program.

1.1. Purpose

The purpose of this report is to document the completion of decommissioning/removal of underground storage tanks, additional site characterization, completion of an independent cleanup action, and to request WDOE's issuance of a No Further Action (NFA) determination through the WDOE VCP Model Remedies Program. The Site qualifies for Model Remedy #1 for groundwater. As documented herein, all substantive requirements of the Model Toxics Control Act (MTCA) WAC-173-340 have been met, and an NFA determination is appropriate for the Site.

2. SITE DESCRIPTION

As noted earlier, the Site is located in Tukwila, Washington at the approximate location depicted graphically on Plate 1, Vicinity/Topographic Map and on Plate 2, Site Plan Overview. The Site consists of an irregularly-shaped parcel (tax parcel #2613200134) covering approximately 25,480 square feet (0.58 acres) of land and is located at 4404 South 133rd Street in Tukwila. The Property is currently vacant but historically operated as a gasoline and automotive service station. The following WDOE references apply to this site.

- Cleanup Site Name: Borrelli Real Estate Investments
- Cleanup Site ID# 12293
- Facility/Site ID# 24470
- VCP Project ID# NW3093

2.1. Site History

According to resources available at the Bellevue Public Library, Washington State Archives, and the King County Department of Assessments, the subject property was undeveloped until 1924 when a residence and a historic gasoline/automotive service station building were constructed on the east portion of the Property. The 1924-vintage residence was torn down in about 1947. A second residence was constructed on-the west portion of the Property in 1942. The gasoline and automotive service station reportedly operated on the Property from 1924 until the mid to late 1970's. The former residential and gasoline/automotive service station buildings were removed from the Property in 2014/2015.

2.2. Site Geology/Hydrogeology

Geographically, the subject 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 (Jones, M.A., 1998) 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.

As will be discussed in detail later within this report, six (6) test pits were excavated on May 9, 2016 at the approximate locations noted as TP-1 through TP-6 on Plate 4. All pits were placed within the southeastern section of the property in the location of the former gas station operation. Soils encountered within TP-1 through TP-6 generally consisted of well sorted brown and grey silty sand (fine to medium grain) with some pebbles and cobbles from the surface to approximately 10 feet below ground surface (bgs). At approximately 10 to 15 feet bgs in TP-5 and TP-6, a layer of highly organic material was present in fairly non-decomposed form (leafs, sticks, etc.) was noted with intermittent small layers of gray silty sands. The lower extent of this naturally occurring organic unit was not determined.

Topographically, the Property is situated on a fairly regular parcel approximately twenty (20) feet above sea level with a slightly perceptible grade toward the east/southeast. Based upon inference from topography, local drainage patterns, and upon groundwater level measurements made at the site, groundwater flow within the current network of monitoring wells has been somewhat variable but appears to trend in an east/southeasterly direction.

Over the course of the recently completed groundwater monitoring sampling and testing conducted by Environmental Associates, Inc. (EAI) between September of 2017 and May of 2019, groundwater was encountered between less than one (1) and five (5) feet beneath the ground surface, depending upon location.

Referring to Plate 2, with respect to surface water resources, Southgate Creek flows to the north along the east boundary of the subject site. Southgate Creek discharges to the Duwamish River approximately 1,600 feet to the north. The Duwamish River discharges to Elliott Bay of Puget Sound approximately 7.8 miles farther north.

2.3. Human Health and Environmental Concerns

At the conclusion of this current study, both soil and groundwater have demonstrated sustained compliance with WDOE levels for unrestricted land use. Acknowledging this finding there are no perceived pathways (direct contact to soil, groundwater, or soil vapor) for human health/environmental exposure to the contaminants of interest evaluated at this site.

2.4. Cleanup Standards

2.4.1. Contaminants of Concern

Potential contaminants of concern previously identified at this site consisted of gasoline, BTEX, diesel, and heavy oil.

2.4.2. Cleanup Levels

The WDOE had developed Method-A cleanup levels for "routine sites…involving relatively few hazardous substances" (WAC-173-340-700). The documented environmental conditions at the Site meet these criteria and therefore the WDOE Method-A compliance levels for unrestricted land use have been selected for this Site. Additionally, the Property qualifies for Model Remedy 1 for groundwater. The appropriate Method-A levels for the compounds of interest are listed at the bottoms of Tables 1 & 2 herein.

3. ENVIRONMENTAL WORK COMPLETED TO DATE

The following subsections discuss the various additional site characterization tasks that have been completed between May of 2013 and the present.

3.1. Initial Phase I Environmental Site Assessment

On May 7, 2013, Environmental Associates, Inc (EAI) presented the findings of a Phase-I Environmental Site Assessment to Borrelli Real Estate Investments, LLC for the subject property. The Phase-I identified the historic operation of a gasoline station on the subject parcel as a "recognized environmental condition" (REC). The Phase-I research found no evidence of any prior environmental assessment of the subject parcel. EAI suggested that a geophysical survey be conducted and that if an underground storage tank (UST) were discovered, that it be properly removed, and that an assessment of soil & groundwater environmental conditions be made.

3.2. Geophysical Survey

In an effort to locate and determine the exact location and status of the then suspected UST, in 2013 EAI's technical team performed a geophysical survey of the exterior areas of the property where such a UST would potentially be located. These locations are depicted on Plate 3, Former Tank & Pump Locations, and are predominately near the southern margin of the property.

On May 15, 2013, Underground Detection Services, Inc., presented their client (Joe Borrelli) with the results of a geophysical survey. The survey was conducted between 133rd Street and the now-removed gas station buildings. During the survey, a single geophysical "anomaly" indicative of a UST was detected to the south of the historic station garages.

3.3. Excavation & Removal of UST

On May 31, 2013, EAI observed the excavation of the "geophysical anomaly" which proved to be an out-of-service UST. The tank was accessed through an uncovered fill port and was found to contain approximately 300-gallons of gasoline and water. Global (tank decommissioning contractor) arranged to have a vacuum truck pump remaining product from the UST. Upon receiving the Tukwila Fire Marshal field inspector's permit sign-off, Global proceeded to remove the UST from the ground. The tank was constructed of single-wall steel and had an approximate diameter and length of 42-inches by 92-inches, which would correspond to a tank with a capacity of approximately 550 gallons. The tank was heavily rusted and had several holes due to corrosion in the bottom. The tank was then removed from the site. A moderate to strong petroleum odor was also noted emanating from the open excavation and from select soil samples obtained from the sidewalls of the excavation. Groundwater seepage was noted through the sidewalls of the excavation at a depth of approximately 5 to 6 feet.

Discrete soil samples were collected from each sidewall of the excavation at depths of approximately 5 feet, corresponding to the upper fringe of the groundwater seepage zone soil/groundwater interface. A discrete soil sample was also collected from the base of the excavation directly below the former UST at a depth of approximately 7 feet. An additional soil sample was collected at a depth of 3 feet adjacent to the former fuel dispenser pump to the west of the former gasoline UST. Finally, a field composite sample was collected from three (3) separate areas of the temporarily stockpiled overburden soil. All soil samples were collected following EPA methodology 5035A, which is intended to minimize the potential loss of volatile organic compounds (VOCs).

Initial laboratory analysis showed three (3) of the samples contained total petroleum hydrocarbons (TPH) at concentrations above the WDOE's 100 parts per million (ppm) target compliance level. Those concentrations ranged between 270 ppm to 1,000 ppm. No benzene, toluene, ethyl benzene, or xylene (BTEX) compounds (common to gasoline) were detected in any of the samples analyzed. Such a finding is often interpreted as an indication of an "older" release in which the residual gasoline has significantly "weathered." Two (2) soil samples with the highest concentrations of gasoline were further analyzed for total lead. Lead was detected in only one (1) sample at a concentration of 8.2 ppm, which is significantly less than the WDOE's target compliance level of 250 ppm.

On June 14, 2013, EAI presented the Client with an Underground Storage Tank Removal and Site Assessment report. That report recommended performing additional site assessment to deduce the lateral extent of the petroleum impacted soil following demolition/clearing and grading. The report further advised that such explorations could be performed by drilling or potentially more cost effectively by excavating numerous shallow "test-pits" with a backhoe.

3.4. Subsequent Site Characterization

Six (6) test pits were excavated on May 9, 2016 at the approximate locations noted as TP-1 through TP-6 on Plate 3. The test pits were excavated with an excavator provided and operated by the client. All pits were placed within the southeastern section of the property in the location of the former gas station operation.

On May 27, 2016, EAI presented a report entitled Limited Subsurface Sampling and Testing referring to the subject property to Borrelli Real Estate Investments, LLC. EAI observed excavation of six (6) test pits surrounding the former tank and dispenser area (known to be contaminated). Soil samples were obtained from each pit and groundwater was collected from four (4) of the pits. Soil and groundwater samples were analyzed for gasoline, diesel, and heavy oil petroleum hydrocarbons as well as benzene, toluene, ethylbenzene, and xylenes (BTEX). No contaminates were detected in any of the soil samples. Diesel-range hydrocarbons were initially reported as being detected in all four (4) groundwater samples. That said, diesel concentrations detected in groundwater collected in three samples were below the MTCA Method A Cleanup Level of 500 parts per billion (ppb) while one sample (TP-4) contained 520 ppb. These samples were all "flagged" in the laboratory report as "samples chromatographic pattern does not resemble the fuel standard used in quantitation" meaning that the detections may not be refined petroleum and may be due (in part) to the significant presence of naturally occurring organic material at that locality. EAI requested that the laboratory re-run the groundwater sample for diesel and heavy oil after it was put through a silica gel column to remove possible naturally occurring hydrocarbons. The results of the follow-up analysis were "non detect" for diesel and the concentration of heavy oil was below (i.e. compliant with) the MTCA Cleanup levels.

3.5. Independent Cleanup Action (Waste Oil UST)

On July 12, 2016, EAI was on site to observe the excavation of contaminated soil by Mitchell Contractors starting at the western end of the suspected impacted area with the excavation then progressing toward the east. At approximately 10 to 15 feet east of the western edge of the excavation, a previously unknown 1,100 gallon capacity underground storage tank was discovered. Excavation was resumed in July of 2016 when that tank was removed by Tank Wise, independently contracted by the property owner.

Following UST removal, EAI and Mitchell Contractors continued with the remedial excavation on the morning of July 15, 2016. By the end of the day, field observations suggested that the bulk of contaminated soil may have been excavated. During the excavation, the removed soil was divided into three (3) piles tentatively designated suspected "clean", potentially impacted, and "presumed" contaminated depending on field observations and the use of a photo-ionization detector (PID). Upon reaching the apparent lateral and vertical limits of contaminated soil, several samples were taken from each stockpile and tested for contaminants including (gasoline, BTEX, diesel, and heavy oil). Only samples from the "presumed" contaminated pile contained contaminants (gasoline and benzene) exceeding MTCA Cleanup Levels. Samples obtained from the other two stockpiles tested non detect for all contaminants except for a trace detection of gasoline in the "potentially" impacted pile. The "potentially" impacted pile contained 17 ppm of gasoline, well below the 30 ppm cleanup level of gasoline when benzene is present. A total of 74.58 tons of soil from the presumed contaminated stockpile was transported off-site to Republic Services for lawful disposal.

Soils encountered within the excavation generally consisted of well sorted brown and grey silty sand (fine to medium grain) with some pebbles and cobbles form 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 (leaves, sticks, etc.) and included intermittent thin layers of gray silty sands. The lower limit of this naturally occurring organic unit was not determined.

Twenty three (23) soil samples were collected from final limits of the overall remedial soil excavation and stockpiles. These included four (4) from the base of the excavation, nine (9) from the sidewalls and ten (10) from the stockpiles. Only the presumed contaminated stockpile sample contained contaminants above WDOE compliance levels (gasoline and benzene). As to the excavation, one base sample (excavation bottom) and one sidewall sample contained trace gasoline, diesel, heavy oil, toluene, ethylbenzene, xylenes, and lead with concentrations all being below (i.e. compliant with) WDOE Method A Cleanup Levels. A groundwater sample was collected from the open excavation using a bailer on July 18, 2016 and was analyzed for gasoline, BTEX, diesel, and heavy oil. All contaminants tested for were below laboratory reporting limits (i.e. non-detect). EAI concluded that the limited cleanup action appears to have been successful in achieving Washington State's unrestricted land use target compliance levels for soil.

3.6. Monitoring Well Installation & Groundwater Sampling/Testing

On September 25, 2017, monitoring wells MW-1, MW-2, and MW-3 were drilled and installed on the property at the location depicted on Plate 7.

The monitoring wells were completed using a truck mounted auger drill rig operated by ESN of Lacey, Washington; a Washington State licensed drilling company. Prior to installing the monitoring well, a continuous soil core was collected in 5-foot sections beginning at the ground surface and extending to a 15 to 20-foot maximum depth of exploration in each of the wells. As requested by Ecology during post-cleanup discussions with EAI, a soil sample was collected from the highly organic layer noted below approximately 13 feet below ground surface (bgs) in MW-3 for total organic carbon (TOC) analysis. Soil samples in MW-1 and MW-2 were also collected at similar depths but the organic layer was not as prevalent at those locations. The soil samples were collected, stored, and submitted to the project laboratory in accordance with protocol established in EPA guideline 5035A.

Following soil sample collection, auger casing was advanced to widen the borehole to facilitate the installation of the monitoring wells. The monitoring wells were installed to a depth of approximately 15 to 20 feet and were constructed of 2-inch diameter PVC with the lower 10-feet consisting of well screen.

3.6.1. Water Table Survey

After allowing the newly installed wells to equilibrate for a few days, on September 28, 2017, EAI returned to the site to survey the relative elevations of tops of the monitoring well casings (MW-1, MW-2, and MW-3), and measure the depth to groundwater in each monitoring well using those points for reference.

A groundwater monitoring flow map from the most recent May 2019 monitoring event is included in Appendix A. At that time, groundwater flow was toward the southwest. A rose-diagram in the upper right-hand corner of flow map depicts the variable flow directions from previously monitoring events. Examining the rose diagram, groundwater flow at this site has primarily been southwesterly or northeasterly.

3.6.2. Groundwater Monitoring

Between September of 2017 and May of 2019, the three (3) groundwater monitoring wells were used to sample and test groundwater as part of EAI's confirmation of current environmental conditions. A cumulative representation of all groundwater monitoring analysis performed to date is presented in Table 2 and shows the results of previous groundwater monitoring studies.

Prior to the sampling of each well, the monitoring wells were "micro-purged" utilizing a peristaltic pump. Micro-purging continued until three (3) well volumes were removed from each of the respective wells. Representative groundwater samples were then transferred directly to laboratory-prepared glassware.

3.6.3. Laboratory Analysis & Results

Laboratory analysis throughout the course of this project has been performed by Friedman and Bruya, Inc., of Seattle, Washington, a WDOE-accredited laboratory.
During the first three (3) sampling events, diesel range hydrocarbons were detected in the groundwater sample from MW-3 at a concentration of 2,100 parts per billion (ppb). The laboratory (Friedman and Bruya) opined that the detection was not indicative of "normal" diesel hydrocarbon chromatogram. Groundwater samples at that location (MW-3) were re-run after a silica gel treatment and the concentration was significantly lowered each time. The re-run samples were also flagged as not being indicative of normal diesel hydrocarbons. In a phone conversation with Mr. Matt Langston, a chemist of Friedman and Bruya, EAI was informed that chromatographs (attached to this report) did not show patterns commonly associated with diesel or petroleum breakdown products. Instead, the chemist opined that the observe chromatograph may be due to the presence of natural organics in the groundwater. Groundwater samples from MW-1 and MW-2 were non-detect for diesel and all three groundwater samples collected were non-detect for motor oil.

At the request of WDOE personnel, additional analysis, including, gasoline, BTEX, VOCs, PAHs, PCBs and lead, were performed beginning on the third sampling event for all three wells. A total organic carbon (TOC) analysis was also conducted on MW-2. One (1) detection over compliance level was present in gasoline in MW-3. The concentration was 1,000 ppb and the compliance level is 800 ppb when benzene is detected. All other detections were within compliance limits. The TOC analysis from the groundwater obtained from MW-2 was 53.6 mg/L, a relatively high concentration.

Subsequent to the fourth sampling event (June 28, 2018), on November 7th, 2018, Jing Song of WDOE provided the following guidance with respect to future sampling:

- Sample wells MW-1 and MW-2 for gasoline and BTEX for additional two quarters; if the results are all below Method A cleanup levels then no more sampling is needed. No need to sample diesel for these two wells.

- Sample well MW-3 for gasoline and BTEX for additional three quarters; if the results are all below Method A cleanup level then no more sampling is needed.

- Keep sampling well MW-3 for diesel for with and without silica gel cleanup. You can check back with me each quarter to see if additional analysis on diesel is needed.

- Notify ecology if any of the contaminants of concern are detected above the Method A cleanup levels. Additional sampling or other cleanup work may be needed at that point.

- Keep taking water level measurements for all three wells.

Referencing results presented in Table 1 from the November 20th, 2018, (fifth sampling event) sampling event, diesel range hydrocarbons were detected in the groundwater sample from MW-3 (without silica-gel cleanup) at a concentration of 370 ppb. As also indicated in Table 1, using the silica-gel cleanup procedure, the concentration of diesel was below the lab reporting limit.

Groundwater samples from MW-1 and MW-2 were non-detect for gasoline, diesel, and BTEX and all three groundwater samples collected were non-detect for motor oil. At MW-3, hydrocarbon detections in the boiling range of gasoline have significantly declined to 190 ppb and remained steady for four consecutive sampling events since the third (March 2018) gasoline concentration of 1,000 ppb.

As summarized in Table 2, a total of seven (7) sampling events occurred following specific guidance for analysis provided by Ecology personnel. Results of the four (4) most-recent consecutive sampling events have demonstrated compliance with MTCA Method A groundwater concentrations for all analyses.

4. CONCLUSION

In consideration of the findings and achievements documented in this report, it is EAI's opinion that the substantive requirements of the Model Toxics Control Act (WAC 173-340) have been met and that the Site qualifies for a determination of "no further action" (NFA). Specifically this conclusion is predicated on the following:

- All soil cleanup-up confirmation soil samples at the final limits of remediation were in compliance with Method A levels for unrestricted land use.
- Subsequent groundwater monitoring conforming to the directives and performance standard requested by the WDOE has demonstrated compliance
- No potential exposure pathways remain.

5. RECOMMENDATIONS

Acknowledging the findings of this study, it is our recommendation that the Property receive a determination of No Further Action (NFA) predicated on **Model Remedy #1** for groundwater from Ecology's Leaking Underground Storage Tank (LUST) and Confirmed/Suspected Contaminated Sites List (CSCSL) databases.

6. REFERENCES

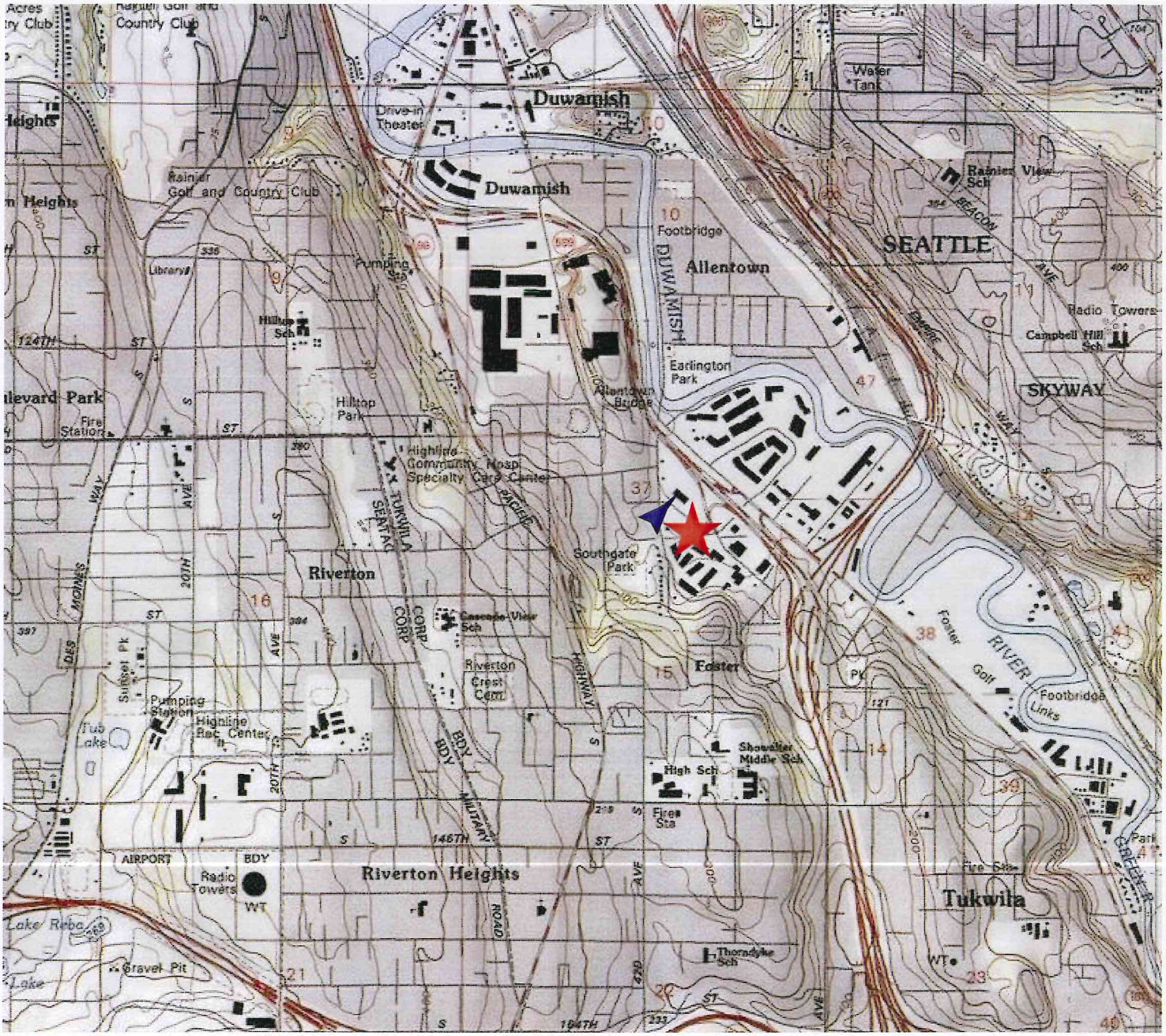
Environmental Associates, Inc., May 7, 2013, JN 33076, Phase I Environmental Site Assessment, 4404 South 133rd Street, Tukwila, Washington.

Environmental Associates, Inc., June 14, 2013, JN 33076-1, Underground Storage Tank Removal and Site Assessment, 4404 South 133rd Street, Tukwila, Washington.

Environmental Associates, Inc., May 27, 2016, JN 33076-2, Limited Subsurface Sampling and Testing, 4404 South 133rd Street, Tukwila, Washington.

Environmental Associates, Inc., September 1, 2016, JN 33076-3, Independent Cleanup Action, 4404 South 133rd Street, Tukwila, Washington.

Environmental Associates, Inc., December 11, 2017, JN 33076-4, Monitoring Well Installation & Initial Groundwater Testing Event, 4404 South 133rd Street, Tukwila, Washington.



ENVIRONMENTAL ASSOCIATES, INC.

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

Vicinity/Topographic Map

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	*Date:*		*Plate:*
NW3093	May 2019		1

Approximate Site Boundary

Location Detailed on Plate 3

Inferred Approximate Direction of Groundwater Flow

N

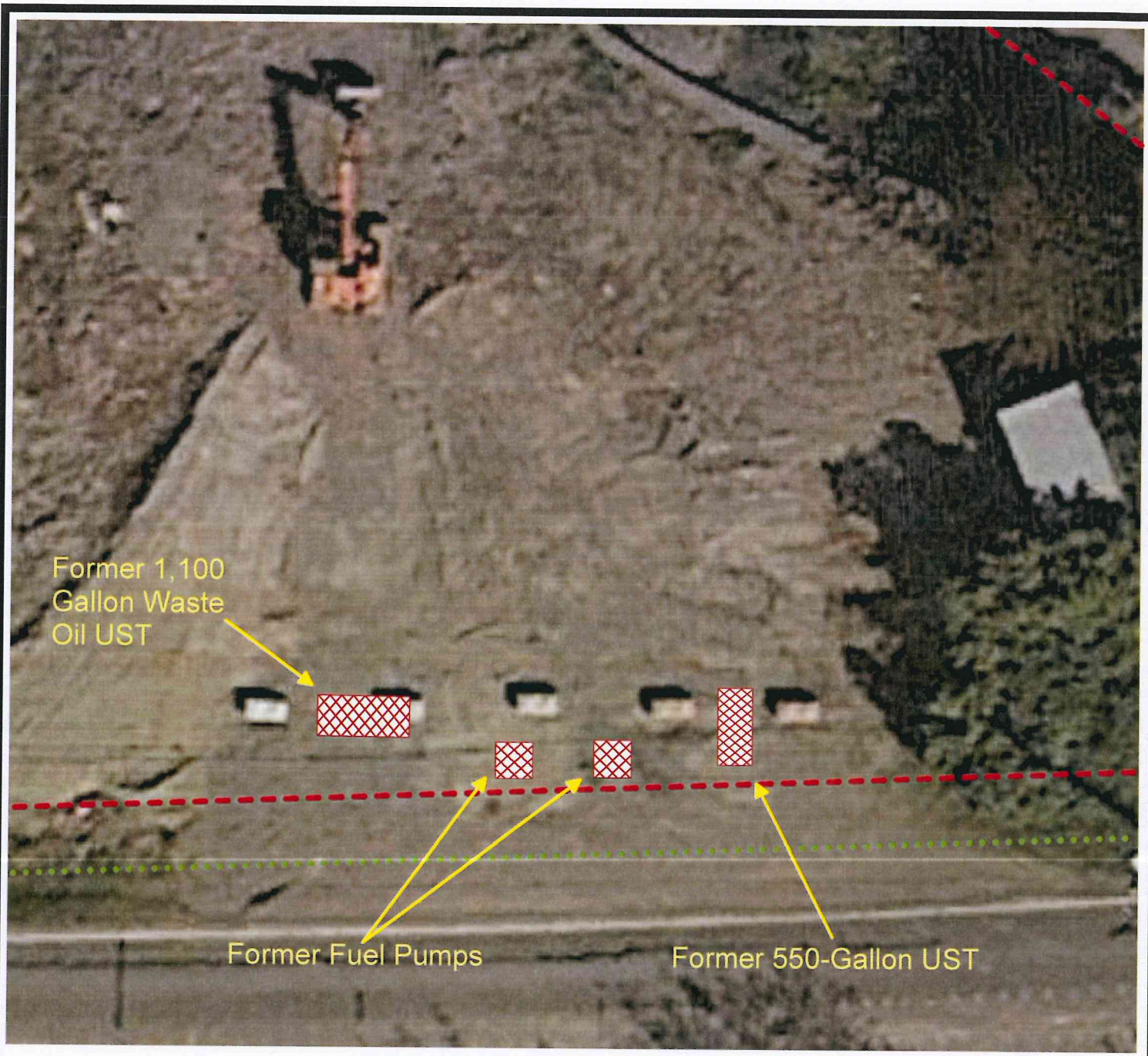
ENVIRONMENTAL ASSOCIATES, INC.

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

SITE PLAN

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	*Date:*		*Plate:*
NW3093	May 2019		2



Approximate Site Boundary

Approximate Location of Fiber Optic Line

Inferred Approximate Direction of Groundwater Flow

N

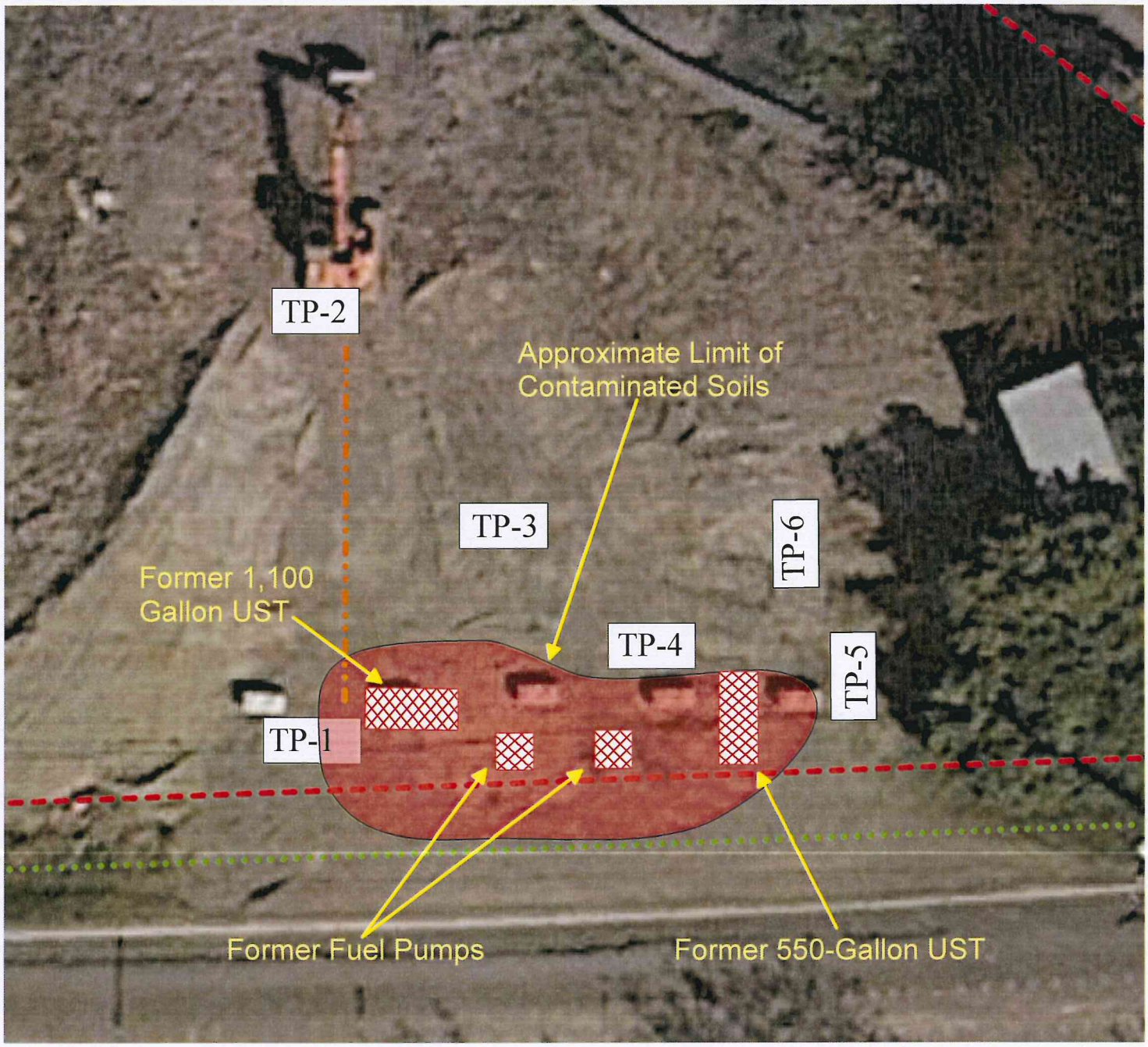
ENVIRONMENTAL
ASSOCIATES, INC.

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

FORMER TANK & PUMP LOCATIONS

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	Date:	Scale	Plate:
NW3093	May 2019	1"= 20'	3



Approximate Site Boundary

Approximate Location of Fiber Optic Line

Approximate Location of Underground Pipe Detection

Inferred Approximate Direction of Groundwater Flow

N

ENVIRONMENTAL ASSOCIATES, INC.

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

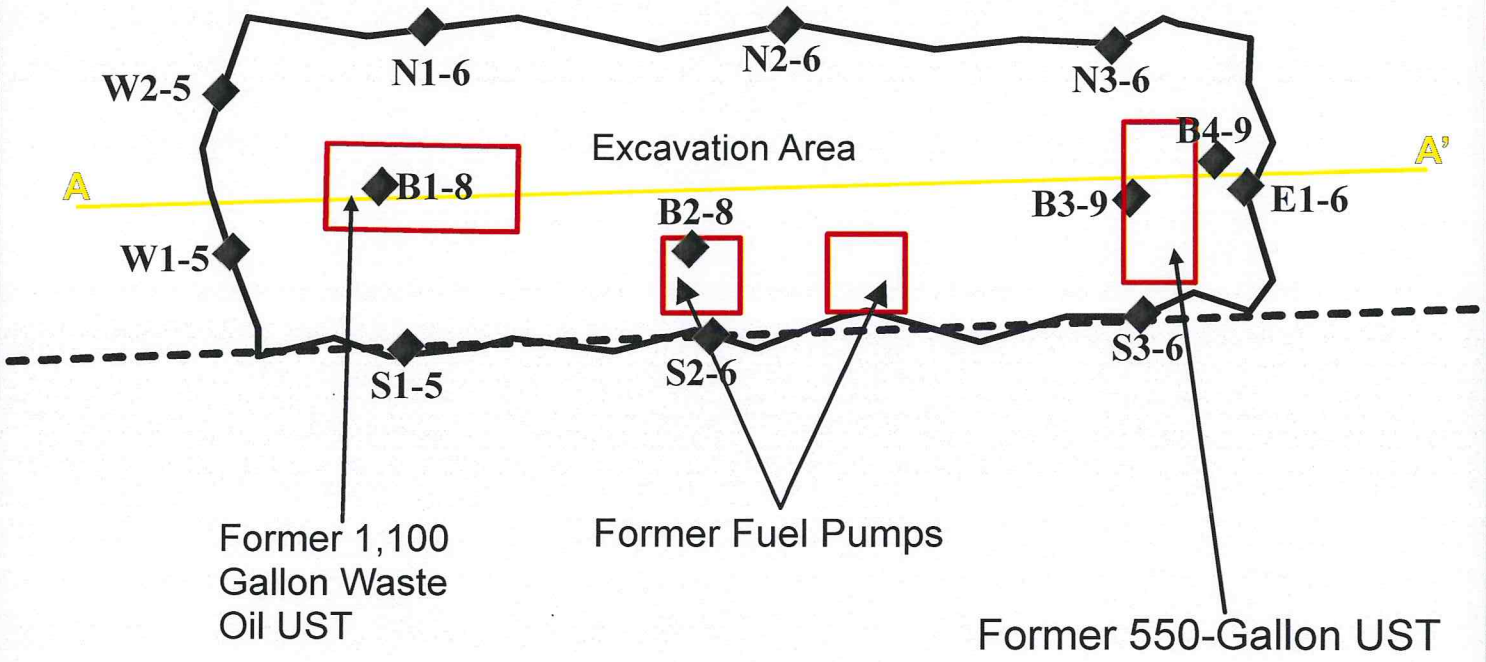
TEST PIT LOCATIONS

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

VCP Number:	Date:	Scale	Plate:
NW3093	May 2019	1"= 20'	4

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

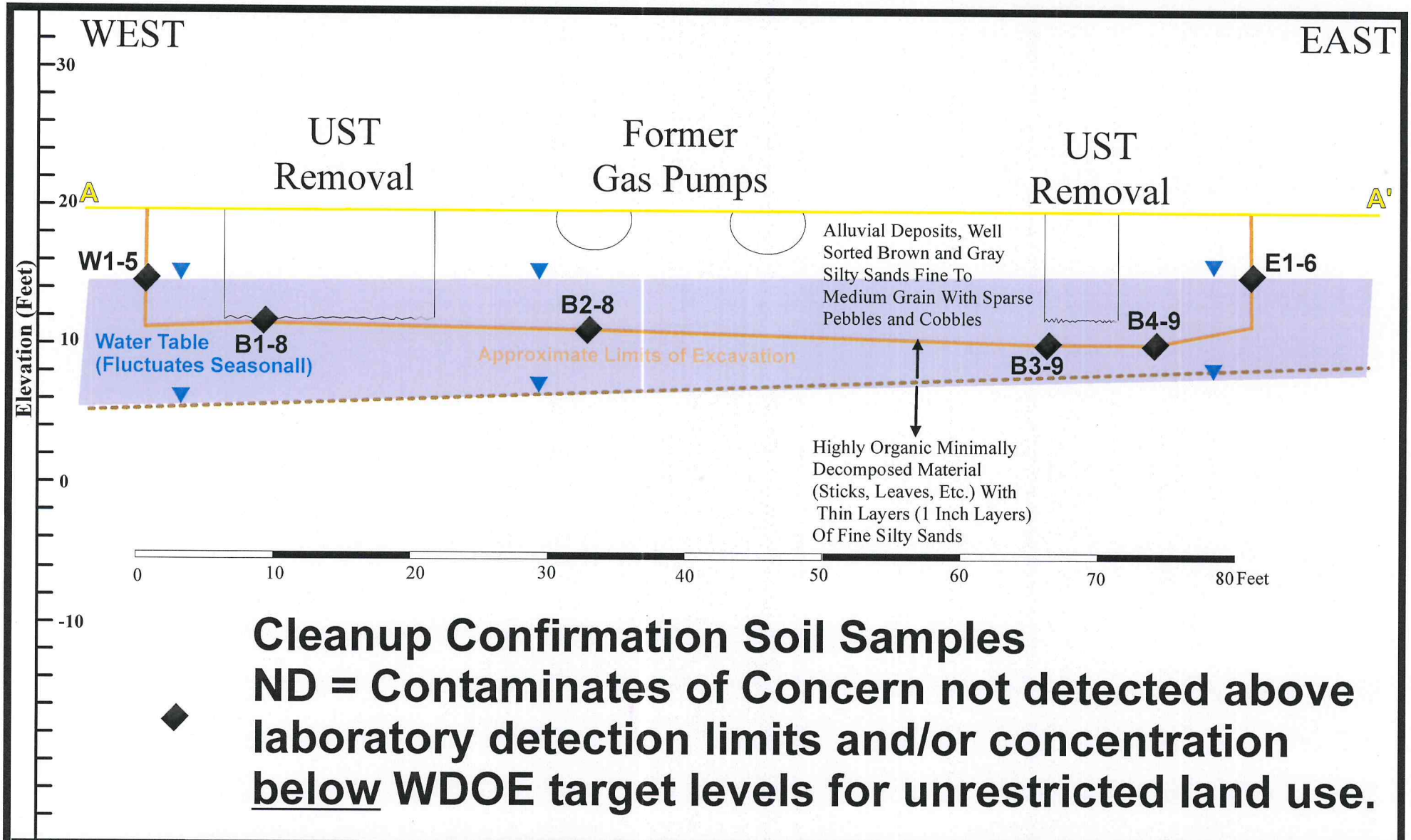
N

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

Excavation & Boring Locations Map

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	Date:	Scale	Plate:
NW3093	May 2019		5



Cleanup Confirmation Soil Samples

◆ **ND = Contaminates of Concern not detected above laboratory detection limits and/or concentration <u>below</u> WDOE target levels for unrestricted land use.**

ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

WEST-EAST CROSS-SECTION

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	*Date:*	*Scale:*	*Plate:*
NW3093	May 2019	Horizontal: 1"=10' Vertical: 1"= 5'	6

Approximate Limits of July 2016 Remediation Excavation

Approximate Site Boundary

Approximate Location of Monitoring Wells

N

ENVIRONMENTAL ASSOCIATES, INC.

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

Monitoring Well Locations

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP Number:	*Date:*		*Plate:*
NW3093	May 2019		7

TABLE 1 - Petroleum Hydrocarbons - Soil Sampling Results
Remediation Excavation - July 2016
All results and limits in parts per million (ppm)

Sample ID - Depth (ft)	Gasoline (TPH)	Diesel	Heavy Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
B1-8	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
B2-8	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
B3-9	27	170x	1300x	<0.02	0.03	0.0840	0.25
W1-5	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
W2-5	<1	<10	<50	<0.02	0.04	<0.02	<0.06
N1-5	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
N2-6	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
N3-6	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
S1-5	20	110x	<50	<0.02	0.09	0.1000	0.23
S2-6	9	<10	<50	<0.02	<0.02	<0.02	<0.06
S3-6	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
E1-6	<1	350	<50	<0.02	<0.02	<0.02	<0.06
SP1, SP2, SP3	***200***	<10	<50	***0.034/0.040***	0.81	2.0000	4.00
SP4, SP5, SP6	17	<10	<50	<0.02	<0.02	<0.02	<0.06
SP7, SP8, SP9, SP10	<1	<10	<50	<0.02	<0.02	<0.02	<0.06
Reporting Limit[3]	1	10	50	0.02	0.02	0.02	0.06
WDOE Target Compliance Level[4]	**30 or 100 [5]**	**2000**	**2000**	**0.03**	**7**	**6**	**9**

Notes:
1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
2- "NA" denotes sample not analyzed for specific analyte.
3- "Reporting Limit" represents the laboratory lower quantitation limit.
4- Method A soil cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
5- The MTCA gasoline TPH cleanup level is 30 ppm for soils with benzene otherwise it is 100 ppm.
6- Soil samples were field screened using a GasTech combustible gas meter to measure the concentration of combustible gas, such as petroleum VOCs. Headspace VOC concentrations were measured after placing the soil sample in a sealed plastic bag and allowing soil and air inside the bag to equilibrate.
x- The samples chromatographic pattern does not resemble the fuel standard used for quantitation

Bold and Italics denotes concentrations above MTCA Method A soil cleanup levels.

BGS - Below ground surface.

TABLE 1A - Metals, Other VOCs, PCBs, & PAHs - Soil Sampling Results
Remediation Excavation - July 2016
All results and limits in parts per million (ppm)

Sample ID - Depth (ft)	Arsenic	Cadmium	Chromium	Lead	Mercury	Naphthalene	Isopropylbenzene	sec-Butylbenzene	PCBs	PAHs
SP1, SP2, SP3 (stockpile)	3.87	<0.5	23.4	8	<0.25	0.083	0.17	0.069	ND	ND
B1-8	NA	NA	NA	4	NA	NA	NA	NA	NA	NA
B3-9	NA	NA	NA	5	NA	NA	NA	NA	NA	NA
W1-5	NA	NA	NA	30	NA	NA	NA	NA	NA	NA
S1-5	NA	NA	NA	3	NA	NA	NA	NA	NA	NA
S2-6	NA	NA	NA	2	NA	NA	NA	NA	NA	NA
Reporting Limit [3]	10	0.5	0.5	5	0.25	0.05	0.05	0.05	0.2	0.01
WDOE-Method-A Cleanup Level	20	2	2000 [(5)]	250	2	5	8,000	8,000	1	0.1

Notes:
1 - "ND" denotes that of the numerous individual compounds in this group, none were detected at or above listed Reporting Limit. See lab report for a list of all compounds tested for.
2- "NA" denotes sample not analyzed for specific analyte.
3- "Reporting Limit" represents the laboratory lower quantitation limit.
4- Method A or B cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
5- Results reported as total chromium. The Method A target compliance level for chromium III is 2,000 ppm, while the Method-A compliance level for chromium VI is 19 ppm. The Method-C target compliance level (for industrial properties) for chromium VI is 40.3 ppm (established for the protection of groundwater).

Bold and Italics denotes concentrations above existing MTCA Method A soil cleanup levels.

TABLE 2 - Groundwater Sampling Results - Petroleum Hydrocarbons/BTEX
All results and limits in parts per billion (ppb)

Monitoring Well / Sample Date	Gasoline (TPH)	Diesel	Heavy Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1							
09/28/17	NA	<250	<500	NA	NA	NA	NA
12/28/17	NA	<250	<500	NA	NA	NA	NA
03/29/18	<250	<250	<500	<1	<1	<1	<3
06/28/18	<250	<250	<500	<1	<1	<1	<3
11/20/2018	<250	<250	<500	<1	<1	<1	<3
2/20/2019	<250	NA	NA	<1	<1	<1	<3
MW-2							
09/28/17	NA	<250	<500	NA	NA	NA	NA
12/28/17	NA	<250	<500	NA	NA	NA	NA
03/29/18	<250	<250	<500	<1	<1	<1	<3
06/28/18	<250	<250	<500	<1	<1	<1	<3
11/20/2018	<250	<250	<500	<1	<1	<1	<3
2/20/2019	<250	NA	NA	<1	<1	<1	<3
MW-3							
09/28/17	NA	**1,600***	<500	NA	NA	NA	NA
12/28/17	NA	**690***	<500	NA	NA	NA	NA
03/29/18	**1,000**	**2,100***	<500	3.3	2.2	5.1	4.6
06/28/18	190	440*	<500	<1	1.7	1	<3
11/20/2018	190	370*	<500	<1	<1	1.2	<3
2/20/2019	210	410*	<500	1.2	1.3	1.3	4.2
5/8/2019	150	370*	<250	<1	<1	<1	<3
MW-3 (Silica Gel)							
09/28/17	NA	160*	NA	NA	NA	NA	NA
12/28/17	NA	97*	NA	NA	NA	NA	NA
03/29/18	NA	180*	NA	NA	NA	NA	NA
06/28/18	NA	85*	NA	NA	NA	NA	NA
11/20/2018	NA	<250	NA	NA	NA	NA	NA
2/20/2019	NA	<250	NA	NA	NA	NA	NA
5/8/2019	NA	NA	NA	NA	NA	NA	NA
Reporting Limit[3]	250	250	500	1	1	1	3
MTCA-Method-A Cleanup Levels[4]	**800 or 1000[5]**	**500**	**500**	**5**	**1000**	**700**	**1000**

Notes:
1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
2- "NA" denotes sample not analyzed for specific analyte.
3- "Reporting Limit" represents the laboratory lower quantitation limit.
4- Method A groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
5- The MTCA gasoline TPH cleanup level is 800 ppb for groundwater with benzene. Otherwise, the cleanup level is 1000 ppb.
(*)- The project laboratory reports that "the sample chromatographic pattern does not resemble the fuel standard used for quantitation."

Bold and Italics denotes concentrations above existing WDOE MTCA Method A groundwater cleanup levels.

TABLE 2A - Groundwater Sampling Results - Other VOCs, PCBs, PAHs, and Lead
March 2018 - 3rd Quarter Monitoring Event
All results and limits in parts per billion (ppb)

Monitoring Well	Isopropylbenzene	n-Propylbenzene	1,2,4 Trimethylbenzene	sec-Butylbenzene	p-Isopropyltoluene	Naphthalene	PCBs	PAHs	Lead
MW-1	<1	<1	<1	<1	<1	<0.06	ND	ND	<1
MW-2	<1	<1	<1	<1	<1	<0.06	ND	ND	<1
MW-3	17	19	1.1	1.9	1.3	0.31	ND	ND	<1
Reporting Limit [3]	1	1	1	1	1	0.06	0.1	0.06	1
MTCA-Method-A Cleanup Levels [4]	**800**	**800**	**---**	**800**	**---**	**160**	**0.1**	**0.1**	**15**

Notes:
1 - "ND" denotes that of the numerous individual compounds in this group, none were detected at or above listed Reporting Limit. See lab report for a list of all compounds tested for.
2- "NA" denotes sample not analyzed for specific analyte.
3- "Reporting Limit" represents the laboratory lower quantitation limit.
4- Method A groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.

Bold and Italics denotes concentrations above existing WDOE MTCA Method A groundwater cleanup levels.

TABLE 3: Water Table Survey
(feet)

Monitoring Well Number	Measurement Date	TOC Elevation	Depth to Water Below TOC	Elevation of Water Table
MW-1	09/28/17	23.11	0.97	22.14
	12/28/17		1.13	21.98
	03/29/18		1.15	21.96
	06/28/18		1.85	21.26
	11/20/18		1.84	21.27
	02/20/19		0.86	22.25
	05/08/19		1.59	21.52
MW-2	09/28/17	22.79	0.50	22.29
	12/28/17		0.77	22.02
	03/29/18		0.81	21.98
	06/28/18		1.52	21.27
	11/20/18		1.51	21.28
	02/20/19		0.48	22.31
	05/08/19		1.18	21.61
MW-3	09/28/17	25.00	2.50	22.50
	12/28/17		2.39	22.61
	03/29/18		2.73	22.27
	06/28/18		4.51	20.49
	11/20/18		4.32	20.68
	02/20/19		3.34	21.66
	05/08/19		4.37	20.63

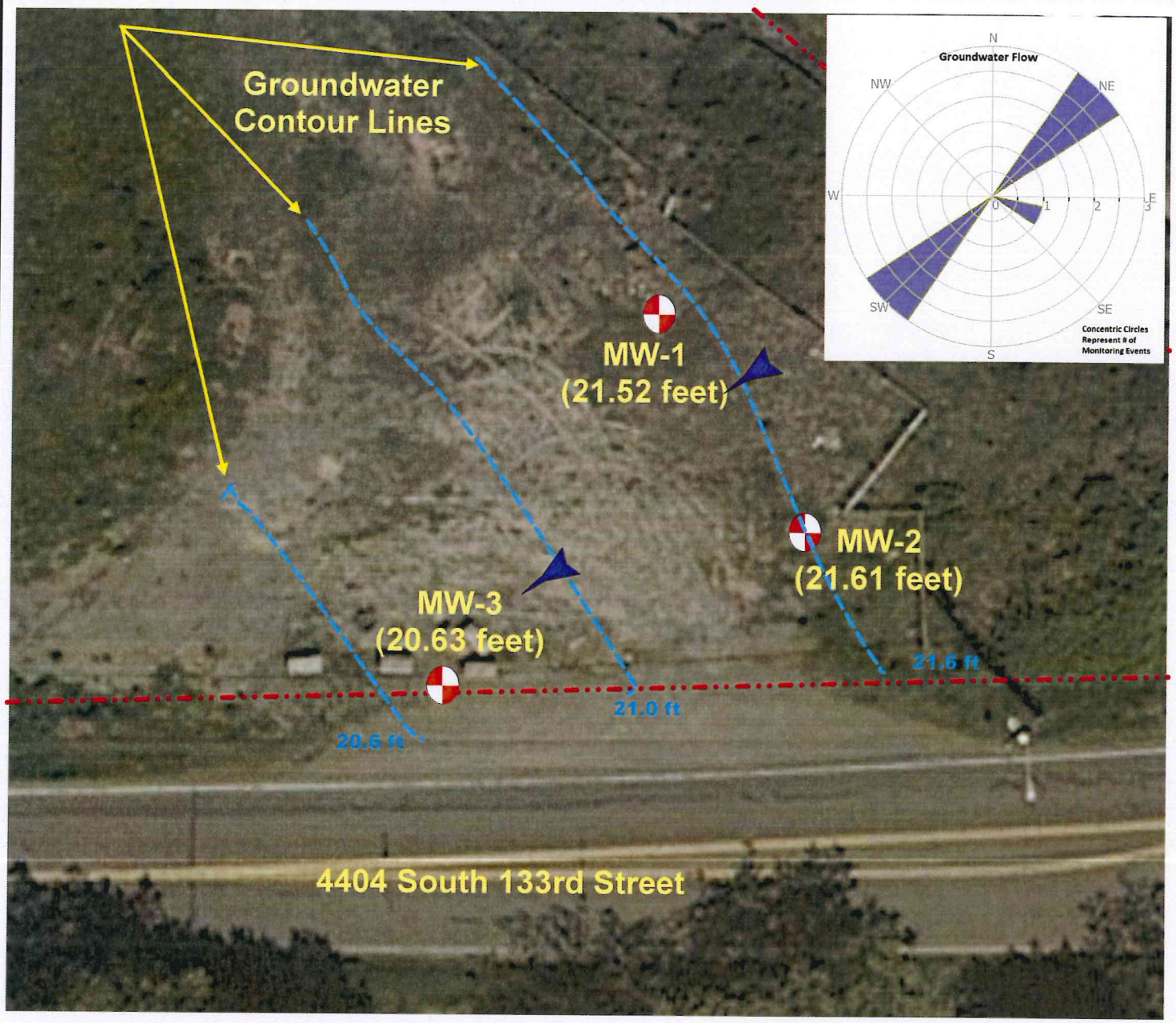
Notes:

(1) TOC. Top of well casing (north side) elevation.

(2) Elevations based upon assigning a "control point" an elevation of 46.00 feet above sea-level to the top of monitoring well casing MW-1.

APPENDIX - A

Water Table Maps



Approximate Site Boundary

Approximate Location of Monitoring Well With Groundwater Depth

Inferred Approximate Direction of Groundwater Flow (Current May 2019 Monitoring Event)

N

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

GROUNDWATER FLOW

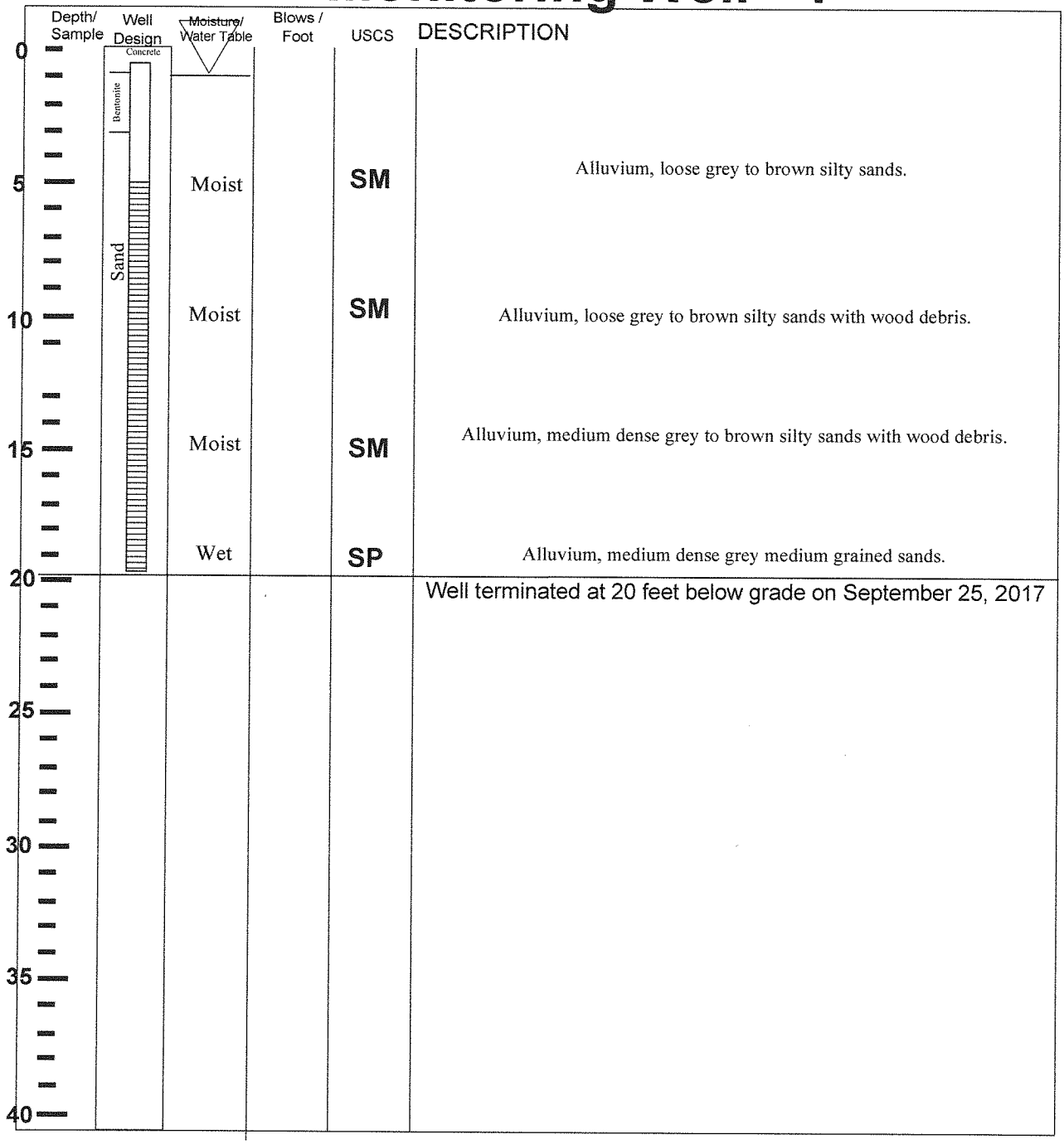
Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

VCP#	Date:		
Nw3093	May 2019		

APPENDIX - B

Boring Logs

Monitoring Well - 1



Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

ENVIRONMENTAL ASSOCIATES, INC.

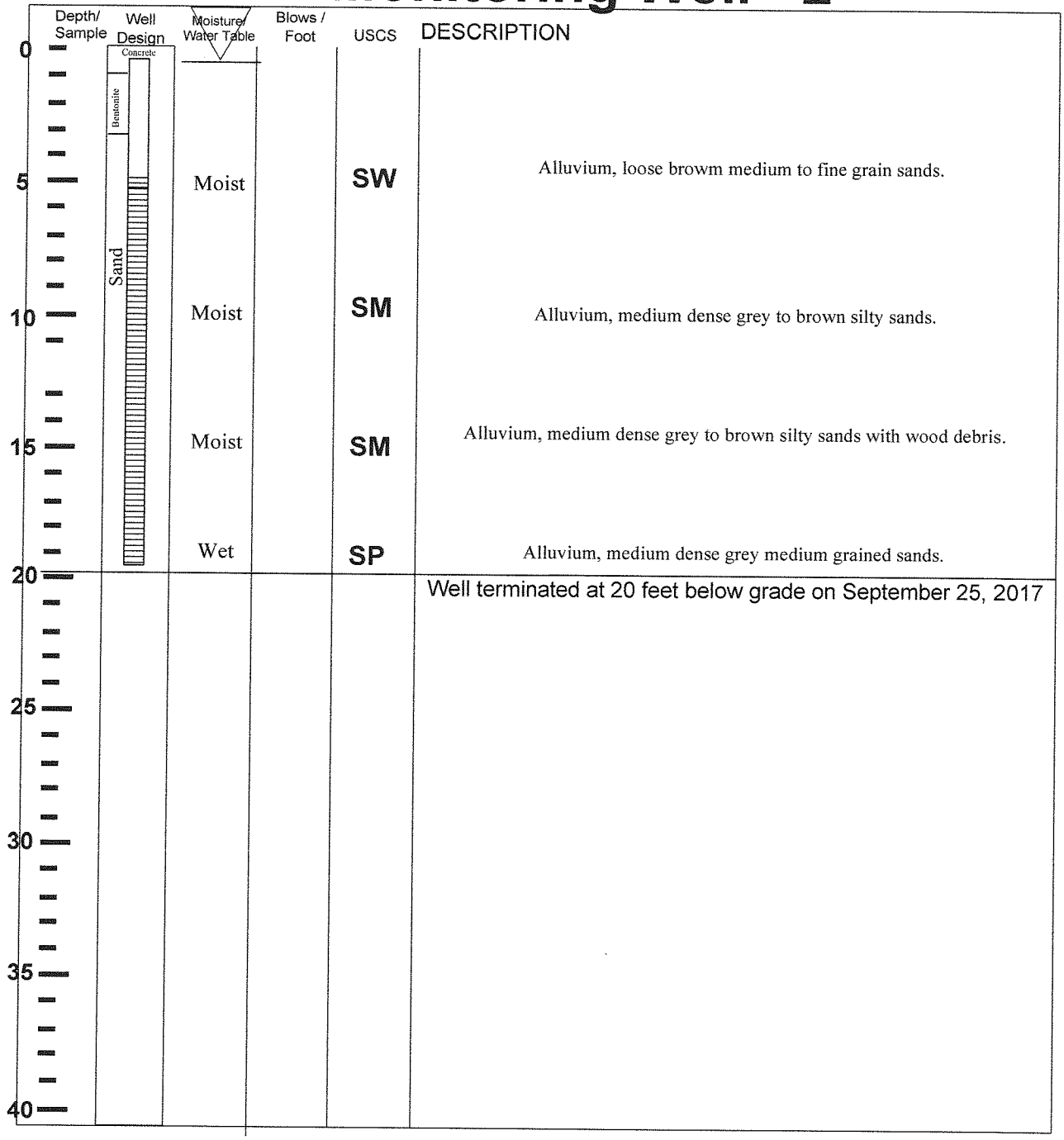
1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

Boring Log MW-1

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	*Date:*		
NW3093	May 2019		

Monitoring Well - 2



Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

ENVIRONMENTAL ASSOCIATES, INC.

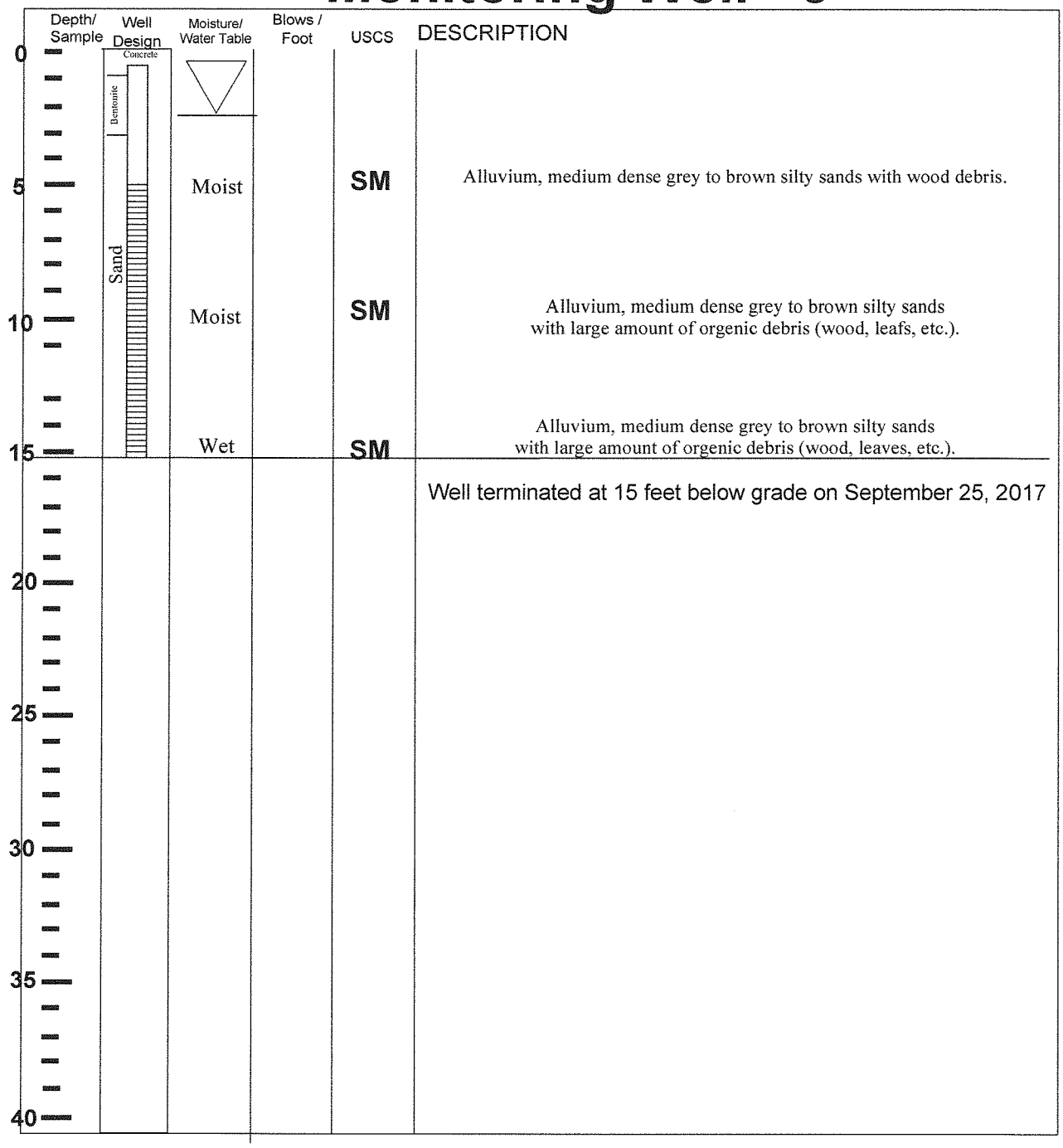
1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

Boring Log MW-2

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:		
NW3093	May 2019		

Monitoring Well - 3



Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

ENVIRONMENTAL ASSOCIATES, INC.

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

Boring Log MW-3

Borrelli Real Estate Investments
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:		
NW3093	May 2019		

APPENDIX -C

WDOE Correspondence

RE: RE: NW3093/Borrelli Update

From: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Sent: Fri, May 10, 2019 at 2:56 pm
To: gscheuerman@environmentalassociatesinc.com

Hi Garret,

Thanks for the update. I checked with our outreach staff, there is 8% of Spanish speaking population in this area. So the fact sheet needs translation services, which requires at least additional two weeks of time. In this case, we're very tight in schedule.

Please send me the RI draft ASAP so I can start putting together a letter. We will try our best to delist the site in August (if the last quarter of groundwater data comes back clean). But as I said, the schedule is very tight. If we cannot make it in August delisting, we will do it in February.

Thanks,

Jing

From: gscheuerman@environmentalassociatesinc.com [mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Monday, May 06, 2019 4:09 PM
To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: RE: RE: NW3093/Borrelli Update

Hello Jing,

I wanted to provide you with an update. I have a draft of the RI nearly ready. I should be able to have it to you by the end of the week. I've been working with one of our senior hydrogeologists, Rob Roe, to get everything as neat and clean as possible. I will also have room in my schedule to complete the (hopefully) final groundwater sampling in the next few days per your instructions.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Tuesday, March 12, 2019 2:03pm
To: "gscheuerman@environmentalassociatesinc.com" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garret,

Glad to talk to you today. I'm happy to see the site is moving into a NFA.

I re-think about the groundwater sampling after our call. Let's still keep the next groundwater sampling in May. To make sure we can get the paperwork ready for de-listing, **please schedule the groundwater sampling in early May and do a quick turnaround time if possible**. Again, please put together a report

based on the RI check list (https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html) in May so we can have the de-listing paperwork ready before June.

I hope it is clear to you.

Thanks,

Jing

From: Song, Jing (ECY)
Sent: Monday, March 11, 2019 7:13 AM
To: 'gscheuerman@environmentalassociatesinc.com' <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report
Importance: High

Hi Garret,

The results look good to me. MW-3 has been below the Method A Cleanup Levels for three quarters. The site is eligible for a NFA determination after one more quarter of clean groundwater data.

Based on the current data, Ecology recommends the following –

- Sample well MW-3 for gasoline, diesel, and BTEX for next quarter. If diesel concentration is above the Method A cleanup level, split the sample and conduct silica gel cleanup. If diesel concentration is below the Method A cleanup level, no need to conduct silica gel cleanup.
- No need to sample wells MW-1 and MW-2 for next quarter.
- Start to prepare the final report. You can finalize the report after the next quarter of groundwater data come in. The final report should be a comprehensive report in accordance with Ecology's RI checklist (https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html)
- This Site qualifies for *Model Remedy 1 for groundwater*. Please include a request for Model Remedy in your final report – so that a feasibility study and a disproportionate cost analysis are not needed.
- This Site needs to go through the de-listing process before a NFA determination can be issued. As I mentioned before, our goal is to make the Site to the August de-listing list. De-listing process costs a couple of months, so we need to work on the paperwork as soon as we can. Ecology suggests –
- Complete the last quarter of sampling in April.
- Submit the final report to Ecology in April or early May. You can submit a draft to me before the final report, so I can prepare a fact sheet for public comments.
- Start a 30-day public comment period in June or July.
- Complete the de-listing process in August.

Although it seems a lot to be done, but we're close to a NFA determination. I hope we can work together and get the site de-listed and NFA'd in August this year.

Please call me or email me if you have any questions.

Jing

From: gscheuerman@environmentalassociatesinc.com
[mailto:gscheuerman@environmentalassociatesinc.com]

Sent: Friday, March 08, 2019 4:22 PM
To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Thank you for your help and for checking in Jing.

I've attached the most recent groundwater data. I've also attached the cumulative results of sampling and water table. We can discuss further next week if needed but you can see there was a slight increase from the previous quarter. The water table was a bit higher this last sampling event. When you have had a chance to look over please let me know if you have any thoughts, questions, or comments.

Have a good weekend

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Thursday, March 7, 2019 1:52pm
To: "gscheuerman@environmentalassociatesinc.com" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garret,

I want to check with you for the result of the 6th quarter groundwater sampling and your schedule of the 7th quarter groundwater sampling.

If the 6th quarter groundwater sampling results are below the Method A cleanup level, and the 7th quarter sampling results are expected to be clean, you can start to prepare the final closure request for this site.

Please note this site is on the Hazardous Site List (HSL) with a ranking of 4. The site needs to be de-listed from HSL before Ecology can issue a No Further Action determination. Site de-listing publishes twice a year, in August and February. If you expect the groundwater data to be clean and want to go through the de-listing process in August, we need to expedite the process of finishing the last quarter of groundwater sampling and the final report.

Please let me know the new data and we can decide the next step.

Thanks,

Jing

From: gscheuerman@environmentalassociatesinc.com
[mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Wednesday, January 30, 2019 5:06 PM

To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hello Jing,

Thank you for checking in with me. Yes we have completed the 5th quarter of sampling. I have attached the results. Please let me know if you have any initial feedback on these results. Otherwise we will simply proceed as originally planned.

The write-up has been high on my "TO DO" list, as the next sampling event is coming up. I will make sure to have the report completed and submitted to you before that date. Our next sampling date (6th Quarter) is scheduled for Wednesday, February 20th.

I will be in touch.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Tuesday, January 29, 2019 2:08pm
To: "'gscheuerman@environmentalassociatesinc.com'" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garrett,

Happy New Year!

I am just checking to see if a new round of ground water sampling is done and what the results look like.

Thanks,

Jing

From: Song, Jing (ECY)
Sent: Wednesday, November 07, 2018 8:30 AM
To: gscheuerman@environmentalassociatesinc.com
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garret,

Because diesel in well MW-3 is a major contaminant of concern, Ecology would like to see additional quarters of data to confirm diesel is in compliance. Though the data from this site suggests using silica gel cleanup is acceptable, Ecology wants to see more data so we can make a good case for site closure. Does it make sense?

So for the next few quarters, please continue the following –

Sample wells MW-1 and MW-2 for gasoline and BTEX for additional two quarters; if the results are all below Method A cleanup levels then no more sampling is needed. No need to sample diesel for these two wells.
Sample well MW-3 for gasoline and BTEX for additional three quarters; if the results are all below Method A cleanup level then no more sampling is needed.
Keep sampling well MW-3 for diesel for with and without silica gel cleanup. You can check back with me each quarter to see if additional analysis on diesel is needed.
Notify ecology if any of the contaminants of concern is detected above the Method A cleanup levels. Additional sampling or other cleanup work may be needed at that point.
Keep taking water level measurements for all three wells.

Please let me know if you have any other questions.

Jing

From: gscheuerman@environmentalassociatesinc.com [mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Friday, November 02, 2018 4:05 PM
To: Song, Jing (ECY)
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Jing,

My apologies in advance but after talking with my client further we are still unclear what needs to be conducted for MW-3. You had instructed us in your recent emails to keep sampling MW-3 for gasoline and BTEX, and diesel with and without silica gel cleanup. We are clear on the reasoning for continuation of sampling for gas and BTEX, but not clear for the continuing analysis for diesel.

I have attached the previous correspondence which includes an email from you to Ryan on December 26, 2017. The email says that Ecology concurred that the DRO result of the silica gel cleanup is more accurate for the NWTPH-Dx method and to continue performing SGC on the groundwater. Furthermore, it seemed to be suggested that if the DRO result after SGC is below Method A cleanup levels for four consecutive quarters we would be good for those analysis.

The previous correspondence with Ryan leads us to believe that after our most recent (6/28/2018) sampling we now have four consecutive quarters of compliance for SGC and should have expected Ecology to be satisfied with TPHd and TPHo. My understanding is that we need (at least) another two quarters is needed of TPHg and BTEX for MW-1 and MW-2 and (at least) another three quarters of TPHg and BTEX for MW-3.

Is this understanding correct? Do we still need further diesel with and w/o SGC? If you would please clarify it would be appreciated. We are honestly not trying to disagree with any guidance, I simply just don't have a full understanding on everything and am trying to get fully up to speed.

Thank you for your help. Please get back to me at your earliest convenience and have a great weekend.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Thursday, November 1, 2018 1:22pm
To: "gscheuerman@environmentalassociatesinc.com" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Garrett,

When was your last sampling event? The most recent data I have is 6/28/2018. Have you done a sampling in 3Q2018? If not, please schedule your event as soon as possible. If you get this done within the next couple of weeks, it is ok. But you cannot conduct another event until January next year.

We don't need two hard copies. One hard copy of report is sufficient.

Jing

From:gscheuerman@environmentalassociatesinc.com
[mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Thursday, November 01, 2018 1:08 PM
To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Thank you Jing,

Couple further questions. I know we are a few weeks behind the ideal period of 90 days between sampling events. I will coordinate with my client and schedule the next sampling event as soon as possible but I wanted to check to make sure that this delay will be acceptable when with respect to quarterly monitoring and staying "consecutive". Are we ok as long as I get this done within the next couple of weeks?

Also, you will want those two hard copies of the fourth quarter? I have those ready for you so as long as you want them I will drop them by.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Thursday, November 1, 2018 12:42pm
To: "gscheuerman@environmentalassociatesinc.com" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garret,

I am fine with taking off the TPHd and TPHo analysis on well MW-1 and MW-2. But these two wells only have two consecutive quarters of TPHg and BTEX data. Ecology would recommend continuing two quarters of sampling on TPHg and BTEX to demonstrate compliance.

Thanks and please let me know if you have more questions.

Jing

From:gscheuerman@environmentalassociatesinc.com
[mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Thursday, November 01, 2018 12:36 PM
To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: FW: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Jing,

Haven't heard back from you on this. Please advise at your earliest convenience. Thank you.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: gscheuerman@environmentalassociatesinc.com
Sent: Thursday, October 25, 2018 11:54am
To: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Subject: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Thank you for your reply Jing.

To followup on your questions, there have been no on-site changes to land use. There was some road work when we were there on June 29th, but it appeared to only be repaving/resurfacing work. There have been no changes to sampling procedure either. I followed our previous micropurging procedure with at least 3 well volumes before taking the sample.

The one interesting detail we noted was the change in depth to water of MW-3. I remeasured 3 times to make sure the depth measured was correct. At present, it is unclear what caused this change from previous measurements.

Moving forward we will follow your instruction of continued sampling for gasoline, diesel, and BTEX with and without silica gel cleanup. Since we have four quarters of no detections in MW-1 and MW-2, we were hoping Ecology would be satisfied with only sampling the non-compliant well (MW-3) going forward. We will of course continue with monitoring depth to water in all wells but would like to cut sampling costs for compliant wells for our client if possible.

Please advise.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

-----Original Message-----
From: "Song, Jing (ECY)" <JISO461@ECY.WA.GOV>
Sent: Tuesday, October 23, 2018 7:54am
To: "gscheuerman@environmentalassociatesinc.com" <gscheuerman@environmentalassociatesinc.com>
Subject: RE: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Hi Garrett,

Thanks for sending me the report.

I noticed the diesel and gasoline concentrations in MW-3 decreased greatly. It is a good thing; but I want to know if there's any change on site which may lead to this decrease (property redevelopment, utility work, etc.). It there's any change in site use, please let me know.

Also is there any change on the sampling procedures? Is low flow sampling used for all four quarters of sampling? Please send me the groundwater sampling field notes for this quarter, and previous quarters.

For the next steps, please keep monitoring the three monitoring wells. Please keep sampling MW-3 for gasoline and BTEX, and diesel with and without silica gel cleanup. We need at least four consecutive quarters of data below Method A to demonstrate compliance. We also need more groundwater sampling results to see if the concentrations decline over time.

Thanks and please let me know if you have more questions.

Jing

From:
gscheuerman@environmentalassociatesinc.com[mailto:gscheuerman@environmentalassociatesinc.com]
Sent: Monday, October 22, 2018 5:31 PM
To: Song, Jing (ECY) <JISO461@ECY.WA.GOV>
Subject: NW3093/Borrelli Quarterly Monitoring - Fourth Quarter Report

Mr. Song,

You had previously been in correspondence with Mr. Ryan Opitz of our office. I have taken over his project as he has left our workforce in pursuit of further career development. I have been working directly with one of our other project managers, Mr. Rob Roe who is familiar with the history of this project.

We completed the fourth quarter of groundwater monitoring for the site. There was a bit of a delay with the transition after Ryan's departure and with our full summer workload, but we are ready proceed with an opinion from Ecology. I have attached the Fourth Quarter Monitoring Well Sampling and Testing Event

report. I have also made two physical copies for your records that I will be dropping off in person later this week.

Please let me know the next steps we need to take if further action is required. Thank you for your assistance.

Garrett Scheuerman
Project Manager

Environmental Associates, Inc.
1380 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425)455-9025 - Office
(206)383-0295 - Mobile

APPENDIX -D

Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 22, 2019

Garrett Scheuerman, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

Dear Mr Scheuerman:

Included are the amended results from the testing of material submitted on May 8, 2019 from the 33076-4, F&BI 905168 project. The project IDs were amended.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
EAI0517R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 17, 2019

Garrett Scheuerman, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

Dear Mr Scheuerman:

Included are the results from the testing of material submitted on May 8, 2019 from the 33076-4, F&BI 905168 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
EAI0517R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 8, 2019 by Friedman & Bruya, Inc. from the Environmental Associates 33076-4, F&BI 905168 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Associates
905168 -01	MW-3 (VOA)
905168 -02	MW-3 Duplicate (VOA)
905168 -03	MW-3 Amber
905168 -04	MW-3 Amber (Split/Duplicate)

All quality control requirements were acceptable.

Date of Report: 05/17/19
Date Received: 05/08/19
Project: 33076-4, F&BI 905168
Date Extracted: 05/09/19
Date Analyzed: 05/09/19

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW-3 (VOA) 905168-01	<1	1.0	<1	3.3	150	85
Method Blank 09-837 MB	<1	<1	<1	<3	<100	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/17/19
Date Received: 05/08/19
Project: 33076-4, F&BI 905168
Date Extracted: 05/09/19
Date Analyzed: 05/15/19

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-3 Amber 905168-03	370 x	<250	74
Method Blank 09-1079 MB	<50	<250	86

Date of Report: 05/17/19
Date Received: 05/08/19
Project: 33076-4, F&BI 905168

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	106	91	65-118	15
Toluene	ug/L (ppb)	50	110	92	72-122	18
Ethylbenzene	ug/L (ppb)	50	110	91	73-126	19
Xylenes	ug/L (ppb)	150	105	88	74-118	18
Gasoline	ug/L (ppb)	1,000	93	110	69-134	17

Date of Report: 05/17/19
Date Received: 05/08/19
Project: 33076-4, F&BI 905168

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	104	61-133	7

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

905168

SAMPLE CHAIN OF CUSTODY

ME 05-08-19

Page # 1 of 1 (Do 4)

Report To Garrett Scheuerman

Company Environmental Associates, Inc.

Address 1380 - 112th Ave NE #300

City, State, ZIP Bellevue, WA 98004

Phone [redacted] Email gscheuerman@environmentalassociates.com

SAMPLERS (signature)

PROJECT NAME 33076-4

PO #

REMARKS

INVOICE TO Borrelli Real Estate Investments

TURNAROUND TIME (WI)
- [x] Standard Turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Archive Samples
- [ ] Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes per GS 5/12/19 ME
MW-3 (Vial)	01	5-8-19	10:25a	GW	1			X	X								GBTEX on -01
MW-3 Duplicate (Vial)	02	↓	↓	↓	↑			X	X								
MW-3 Amber	03	↓	↓	↓	↓		X										Dx (NO SG) on 03
MW-3 - Amber (Split/Duplicate)	04	↓	↓	↓	↓		X										Split (Silica) - if req

Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Garrett Scheuerman	EAI	5-8-19	12:10
Received by:	Isaac Lessig	FBI	5/8/19	12:10
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282