

**REMEDIAL INVESTIGATION
AND PROPOSED CLEANUP ACTION PLAN**
with
PHASE III SUBSURFACE INVESTIGATION RESULTS

Performed at:
Lynnwood Auto Body
19320 Highway 99
Lynnwood, Washington 98036
VCP NW 2555

AEROTECH
Environmental Consulting Inc.

February 6, 2017

Anchorage Seattle Portland

Cost-effective environmental solutions
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Aerotech Environmental Consulting, Inc.
13295 Interurban Boulevard., Suite No.210
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**REMEDIAL INVESTIGATION
AND PROPOSED CLEANUP ACTION PLAN
with
PHASE III SUBSURFACE INVESTIGATION RESULTS**

performed for:

Ms. Julie Stack
Aldercrest Auto Rebuild, Inc.
2415- 196th Street Southwest
Lynnwood, Washington 98036

Client:	Aldercrest Auto Body Shop 19230 Highway 99 Lynnwood, Washington 98036
Point of Contact/Owner:	Ms. Julie & Nicholas Stack
Property:	Lynnwood Auto Body (Kelly's Furniture Refinishing) 19230 and 19306 Highway 99 Lynnwood, Washington 98036
County:	Snohomish County, Washington
Parcel Number:	00-5853-00000-501
Coordinates:	Latitude: 47.82383, Longitude: -122.31372
Facility/Site No.:	21932318
Cleanup Site ID No.:	11735
VCP Project No.:	VCP NW 2555
Purpose of Report:	Request for Opinion : Model Remedy 3 - Site Specific No Further Action Determination with Environmental Covenant and Institutional Controls:
Project Number:	No. 217-8255
Licensed Geologist:	James McDermott (License No. 3163)
Report Date:	February 6, 2017

EXECUTIVE SUMMARY

SITE IDENTIFICATION AND INVESTIGATION/INTERIM ACTION SUMMARY

The subject Property, is a 0.59-acre tract of land located on the west side of Highway 99 approximately 700 feet north of the intersection of Highway 99 and Highway 524 (196th Street Southwest). It is designated by the address 19230 Highway 99, in the City of Lynnwood, Snohomish County, Washington. Significant bodies of water nearby include Scriber Lake 1,600 feet to the southeast, Scriber Creek 1,500 feet to the east, Hall Lake one mile to the south, and a ravine occupied by Perrinville Creek one mile to the northwest. Perrinville Creek discharges to the Puget Sound; Scriber Creek discharges to the Lake Washington. The Site is situated at an elevation of 395 feet MSL with a distinct slope to the east. Figure 2.

The Property consists of one assessor tax parcel encompassing a trapezoid-shaped area approximately 250 feet in length and 80 feet in width. An approximately 7,856 square foot single story brick and mortar body repair shop constructed on concrete slabs at grade is arrayed along the southern property line. Asphalt pavement dominates the Site. It is located within a mixed commercial and residential area. To the north is a restaurant; to the west is 60th Avenue West followed by a residential neighborhood; to the south is an office building, followed by a Texaco station; to the east is Highway 99 followed by offices. Figure 1.

Property History:

Following the construction of Highway 99 in the 1930s, the Site was initially developed in 1946 along the northern margins of a wetland area which then extended from Scriber Lake toward the northwest. An approximately 1,000 square-foot building was constructed south of the current north shop wing with occupancy by the *Tool Crib Company*. By 1961 the 2,000 square foot core of the current west wing of the building was constructed some 50 ft to the west, for use by the *Lynnwood Body Shop*, and in the 1970s building additions were added in the central space, and to the west, northeast and east.

History of Environmental Activities:

One diesel and one gasoline underground storage tank were reportedly installed northeast of the original 1946 building by the Tool Crib Company in the late 1940s and removed in 1979, at the time the North Shop wing of the building was constructed. No UST-related documentation is available. Aerotech completed a Phase I Environmental Site Assessment in July 2011, a Phase II Subsurface Investigation in August 2011, and corrective remedial action in October 2011, when *Langseth Environmental Services* excavated 659 tons of petroleum-impacted soil and transported it for landfill disposal. The Property was designated LUST Site No. 6564 on July 19, 2011, and application for Entry into the State Voluntary Cleanup Program was completed on November 30, 2011.

At the request of Ecology, a groundwater monitoring well was installed in December 2014 in the former tank basin area to a depth of 55 feet bgs, with a screened interval set between depths of 40 and 55 feet bgs in order to document conditions below the base of the Vashon till, in the Vashon Advance Outwash Aquifer. Petroleum constituents, lead, chlorinated volatile organic compounds, and PAH compounds were not detected during four consecutive quarters of groundwater monitoring, as reported in the Aerotech report dated September 15, 2015, and attached as an appendix to this report.

As documented in this report, in accordance with guidance provided by Ecology project manager, Glynis Carrosino in an email dated September 29, 2016, Aerotech completed a Phase III Subsurface Investigation on January 13, 2017, advancing an additional five soil borings to depths of 12 to 18 feet, in order to define the lateral extent of petroleum-impacted soils west and east of previous excavations.

CONCLUSIONS - REMEDIAL INVESTIGATION

Diesel-impacted soils were detected underneath the north shop addition, west of the former tank basin, at concentrations of 6,400 to 8,400 mg/kg, at depths between 6 and 15 feet bgs, and along the eastern Property perimeter at concentrations of 3,200 to 7,700 mg/kg, at depths between 12 and 16 feet bgs. No contaminants were detected west of the north shop.

The southern and northern perimeters of the contaminated area were previously defined. The off-site extent of contamination beyond the east property perimeter is unknown and cannot be readily addressed due to the presence of the highway and utility mains. However, in the absence of gasoline constituents at the Property margin, if the steep diesel concentration gradient is extrapolated, diesel-impacted soils at concentrations below 2,000 mg/kg would be expected within 2 to 10 feet east of the Property perimeter, beneath the sidewalk.

The vertical and lateral extent of petroleum-impacted soils is now well defined. Refer to Figures 4 and 5. Groundwater is not impacted, nor is the impacted soil exposed to groundwater.

Soil:

Contaminated soils span a distance of nearly 75 feet, extending from the North Shop to the east driveway, encompassing an area of approximately 806 square feet between depths of 6 and 23 feet bgs. An estimated 5,770 cubic feet (278 tons) of impacted soil remain on Site at depth, beneath the excavation, adjoining the public sidewalk and Highway 99, underneath or adjoining the North Shop, or adjoining a storm sewer conduit. Two “hot spots,” with an estimated mass of 67 tons of petroleum-impacted soil remaining in place, have been defined:

- (1) East of the North Shop: TPH-diesel concentrations approach 10,000 to 11,000mg/kg between depths of 8 and 14 ft bgs.
- (2) East Driveway: In an area situated between monitoring well MW-1 and the east Property line, where TPH-diesel concentrations approach 10,000 to 30,000 mg/kg between depths of 8 to 19 ft bgs between the east excavation wall and the east Property line). The bulk of this mass, perhaps 80 to 90 percent, corresponding to the known UST location, was removed during excavation activities in October 2011.

TPH-gasoline was not detected underneath the North Shop. Gasoline hot spots coincide with diesel hot spots. Gasoline concentrations approach 1,200 mg/kg at a depth of 12 feet, east of the North Shop; and 8,200 mg/kg at 14 feet, near the known former tank location. Chlorinated Volatile Organics, were not detected during this or previous investigations and Polynuclear Aromatic Hydrocarbons were not detected during previous investigations.

Groundwater:

Perched groundwater was not encountered during the January 2017 investigation, and was previously encountered only in small quantities within or near the excavated tank basin. The regional groundwater table has been documented below a depth of 33 feet bgs in MW-1, while soil contamination has been documented at a maximum depth above 23 feet bgs. The vertical descent of the contaminant has been limited by the presence of dense glacial till, and contaminants have not approached the underlying Vashon Advance Outwash Aquifer, present below depths of 33 feet bgs.

Contaminants have not been detected in groundwater in MW-1, and residual soil contaminants, by empirical demonstration, do not present a risk to the Qva aquifer. The vertical and lateral extent of gasoline and diesel impacted soils remaining in place beneath the former excavation, underneath the north shop wing, underneath an adjoining sanitary sewer pipe, and beside the Highway 99 right-of-way are depicted in Figures 4, 5, and 6. Impacted soils have been removed to the greatest degree practicable, given the presence of buildings, buried utilities, and the adjoining public sidewalk and highway.

RECOMMENDATIONS

Site Specific No Further Action Determination With Environmental Covenant and Institutional Controls (Model Remedy No. 3) :

“In 2013, the Washington Legislature made significant changes to the Model Toxics Control Act (MTCA). One of the provisions gave additional direction to Ecology regarding the establishment of model remedies. In response to the 2013 legislative amendments, Ecology has assembled information in this document to establish model remedies for sites with petroleum contaminated soil.” “To help streamline and accelerate the pace of cleanups, the Washington State Department of Ecology has developed standardized cleanup methods called “*Model Remedies*.” The Site is eligible for consideration as a Model Remedy for Sites With Petroleum Contaminated Soils, Model Remedy 3. ... Once the requirements for using a model remedy are met, it will not be necessary to conduct a Feasibility Study or Disproportionate Cost Analysis.”(WAC 173-340-390 and WAC 173-340-360)

Eligibility - The subject Property meets the following *Model Remedy* eligibility requirements: “These remedies do not apply to sites with contaminated soil below the water table or sites with petroleum contamination detected above the practical quantitation limits in groundwater. ... The site investigation must document that petroleum hydrocarbons consisting of gasoline, middle distillates/oils, or heavy fuels/oils and their constituents are the only contaminants present in the soils.” The Site meets the requirements in WAC 173-340-7491 and therefore qualifies for an exemption for a terrestrial ecological evaluation.

Remedy Selection: “Soil removal is the remedial action that will be used for Site Cleanup.” Excavation of petroleum-impacted soil was completed to the maximum extent practicable.

Model Remedies Toxics Cleanup Program (September 2015, Publication No. 15-09-043)

Industrial Site Specific Vapor Intrusion Exception Proposed.

Because diesel concentrations in soil above depths of 15 feet bgs exceed established vapor intrusion-related limits, vertical separation distances defined in *Ecology Publication 16-09-046* have not been met. However, because on a case-by-case basis some discretion is recommended in guidance documents, an exception to the pursuit of Tier I vapor intrusion sampling is proposed in this case, on the basis of the nature of body shop operations on Site. Employees are exposed to the same petroleum compounds presenting a vapor intrusion risk. Gasoline and diesel fueled vehicles are operated in the facility’s shops, and solvents, paints, and adhesives are also commonly utilized. These operations require year-round ventilation by means of fans and open windows or doors during business hours.

In Publication 09-09-047, *Guidance for Evaluating Soil Vapor Intrusion in Washington State, Investigation and Remediation*, Section 1.2, Ecology describes this scenario:

“This guidance does not apply to potential vapor intrusion scenarios where the receptors at risk are workers routinely exposed to higher concentrations of the same chemical ... A worker potentially exposed to vapor intrusion-contaminated indoor air is regularly and simultaneously exposed to the same hazardous chemical vapors in the workplace. The workplace vapor concentrations are routinely much higher than any levels expected from vapor intrusion. This worker understands that this exposure to the particular chemical is part of the job and is enrolled in the company’s OSHA-compliant employee protection program.”

Further action in the form of Vapor Intrusion sampling does not appear to be required or recommended by state guidance documents. On behalf of the Property owner, a *Property-Specific No Further Action Letter* is requested with an attached *Environmental Covenant* to be attached to the Property Title. Additionally, institutional controls are recommended in the form of the maintenance of the impervious cap above the petroleum-impacted area provided by the existing asphalt pavement.

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SECTION 1: INTRODUCTION

Site Information:

Property Name:	Lynnwood Auto Body Shop (Kelly's Furniture Refinishing)
Property Address:	19230 Highway 99, Washington 98036
County:	Snohomish County, Washington
Parcel Number:	00-5853-00000-501
Coordinates (center of Site):	Latitude: 47.82383, Longitude: -122.31372
Voluntary Cleanup Program (VCP) ID:	NW 2555
Facility/Site No.:	21932318
Cleanup Site ID No.:	11735
Project Consultant:	Aerotech Environmental Consultants, Inc. (Aerotech)
Project Consultant Contact Information:	Mr. Alan Blotch 13925 Interurban Avenue South, Suite 210 Seattle, Washington 98168 206 257 4211
Current Property Owner:	Mr. and Mrs. Nicholas and Julie Stack 425-775-1112
Purpose of Report:	Request for Closure: Model Remedies for Sites with Petroleum-Contaminated Soils - Remedy No. 3 - Site Specific No Further Action Determination with Environmental Covenant and Institutional Controls:
Project Number:	No. 217-8255

Purpose:

At the request of the property owner, and in accordance with guidance provided by means of Department of Ecology email communication sent on September 29, 2016 by Ecology Project Manager, Ms. Glynis Carrosino, Aerotech Environmental Consulting, Inc., performed a Limited & Targeted Phase III Subsurface Investigation¹ at the subject Property historically designated "19230 and 19306 Highway 99," in Lynnwood, Washington. It is currently designated as "19230 Highway 99." The objective of this Investigation was:

¹ This Phase III Site Assessment is "targeted" as defined by the ASTM *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, Designation E 1903-97 (Reapproved 2002); "an assessment performed in accordance with the process described in this [E 1903-97] practice, which addresses only certain *releases* or potential *releases*, or certain *target analytes*, at a property as selected by the *User* but which does not address all *releases*, potential *releases*, and *target analytes*.[E 1903-97, § 3.1.43]"

(1) to evaluate the condition of the subsurface soils in order to define the western and eastern perimeters of petroleum-impacted soils in the vicinity of former underground tanks and fuel dispenser pump islands. WAC 173-340-450 ;

(2) to address additional issues referenced in the September 2016 email communication in anticipation of a *Site Specific Letter of No Further Action*, with *Environmental Covenant* (*Uniform Environmental Covenants Act*, UECA, Chapter 64.70 RCW, WAC 173-340-440, WAC 173-340-449(8)(a)); and

(3) to complete a Final Cleanup Action Report in order to present the accumulated data and comprehensive analysis for the Property, in order to support the Site's eligibility under *the Model Remedies Toxics Cleanup Program* (September 2015, Publication No. 15-09-043, WAC 173-340-390), Model Remedy 3. This option requires that:

- (a) The soil removal action has been implemented to the greatest degree practicable;
- (b) The Site characterization confirms that no other pathway has or can reasonably be expected to be impacted; and
- (c) An environmental covenant is filed (or an institutional control is utilized for certain public right-of-ways) to ensure the remedy remains protective.

On September 29, 2016, the Ecology Project Manager for the Site, Ms. Glynis Carrosino, presented to Aerotech Environmental Consulting, Inc. in email form, a list of items to be addressed and actions to be completed.

At the request of the Property owner, Aerotech prepared this *Final Cleanup Action Report* for the Lynnwood Auto Body Shop, in Lynnwood, Snohomish County, Washington (Figure 1). Two former underground gasoline and diesel fuel tanks were formerly located on the subject Site between the late 1940s and 1979. (Figure 3). A release of petroleum constituents to soil was discovered in 2011 and reported to Ecology. The purpose of this report is to summarize remedial activities at the subject site, and to seek Site closure under the Voluntary Cleanup Program (VCP) / Model Remedies for Sites with Petroleum Contaminated Soils, and request the opinion of Ecology regarding this proposal for Closure with Environmental Covenant and Institutional Controls with regard to a *Site Specific No Further Action* determination.

SECTION 2: SITE IDENTIFICATION AND DESCRIPTION

Site and Property Location/Definition:

The subject Property, is a 0.59-acre tract of land located on the west side of Highway 99 approximately 700 feet north of the intersection of Highway 99 and Highway 524 (196th Street Southwest). It is designated by the address 19230 Highway 99, in the City of Lynnwood, Snohomish County, Washington. Figure 7.

Site Discovery and Regulatory Status:

One diesel and one gasoline underground storage tank were reportedly installed northeast of the original 1946 building by the Tool Crib Company in the late 1940s. These tanks and associated fuel pump islands were reportedly removed in 1979, apparently at the time the North Shop wing of the building was constructed. No UST-removal-related documentation is available regarding these activities. Refer to Figures 1 and 3.

Aerotech completed a Phase I Environmental Site Assessment in July 2011, recommending that a Phase II Subsurface Investigation be conducted at the Site. The Property was designated LUST Site No. 6564 on July 19, 2011, and application for Entry into the State Voluntary Cleanup Program was completed on November 30, 2011.

A Phase II Subsurface Investigation was completed in August 2011. Eight boreholes were advanced to depths between 11 and 17 feet bgs. Total Petroleum Hydrocarbons-Diesel and Total Petroleum Hydrocarbons-Gasoline constituents were documented at one location at concentrations above the most stringent MTCA Method A Cleanup Levels for soil. A copy of selected Phase II documents is attached to the final appendix of this report.

Corrective remedial action activities were performed in October 2011. *Langseth Environmental Services, Inc.* excavated 659 tons of petroleum-impacted soil and transported it for landfill disposal, at this time.

At the request of Ecology, a groundwater monitoring well was installed in December 2014 in the former tank basin area to a depth of 55 feet bgs, with a screened interval set between depths of 40 and 55 feet bgs in order to document conditions below the base of the Vashon till, in the Vashon Advance Outwash Aquifer.

The results of the additional work suggested by Ecology and completed in January 2017 have been attached to this report, and these data integrated with historic data in attached figures 3 through 6. Terrestrial Ecological Evaluation forms as well as the Vapor Intrusion Pathway documentation, are attached to this report.

Neighborhood Setting:

The Property consists of one assessor tax parcel encompassing a trapezoid-shaped area approximately 250 feet in length and 80 feet wide. A segmented approximately 7,856 square foot single story cinder block brick and mortar body repair shop constructed on concrete slabs at grade is arrayed along the southern property line. Asphalt pavement dominates the remainder of the Site, with the exception of narrow landscaped strips near the west and east property perimeters.

It is located within a mixed commercial and residential area. To the north is a restaurant and associated asphalt parking lot; to the west is 60th Avenue West followed by a residential neighborhood (northwest) and an expansive commercial mall area with asphalt parking areas (southwest); to the south is an office building, followed by a Texaco branded gasoline retail service station; to the east is Highway 99 followed by offices and playing fields operated by the Cedar Valley Community School. Commercial strips dominate both east and west sides of the Highway 99 corridor. Figure 1 and Figure 7.

Property Description: Southwest Quarter of Section 16, Township 27, Range 04, Block 000 D-01 - Lot 5

Known Ownership History:

Pre- 2009 - Peter Vanderlugt

Feb 2009 - Beverley B. Vanderlugt Credit Trust

Sep 2011 - Nicholas C. and Julie A.B. Stack

Physiographic Setting:

The Puget Lowland terrain is a 30 to 50 mile wide structural tectonic basin, which lies between the Olympic Mountains some 30 Miles west of Lynnwood, and the North Cascade Mountains some 30 miles to the east. Elevations in the mountains often exceed 5,000 feet, and volcanic composite volcanoes often approach elevation well over 10,000 and as much as 14,000 feet MSL. Elevations in the central portions of the Lowlands commonly range from sea level to 600 or more feet MSL. The geomorphology expressed reflects the series of glaciation events that have effected the valley during the past hundred thousand years or more. Generally north-south oriented ridges, glacial drumlins and the central fault-bounded Sound itself dominate the terrain.

The precise Property location is Latitude: 47.85877 North, Longitude: -122.28597 West as determined by DeLorme mapping data (NAD 83). The Site is situated near the axis of a broad undulating north-south oriented glacial ridge located between the Puget Sound to the west and Swamp Creek to the east, at an elevation of approximately 395 feet MSL (at the east driveway) to 400 feet MSL at the west driveway. The slope of the ground surface in the general vicinity is toward Scriber Lake to the southeast. Historical U.S. Geological Survey topographic maps dated prior to 1955 indicate that the Site straddles the northeastern margin of a wetland area that once extended from the current location of Scriber Lake west of 60th Avenue West. This wetland area appears to have been regraded with artificial fill following the construction of Highway 99 in the 1920s.

The subject Property, is a 0.59-acre tract of land located on the west side of Highway 99 approximately 700 feet north of the intersection of Highway 99 and Highway 524 (196th Street Southwest), in the City of Lynnwood, Snohomish County, Washington.

Significant bodies of water nearby include Scriber Lake 1,600 feet to the southeast, Scriber Creek 1,500 feet to the east, Hall Lake one mile to the south, and a ravine occupied by Perrinville Creek is one mile to the northwest. Perrinville Creek discharges to the west into the Puget Sound to the west while Scriber Creek discharges to the southeast into Lake Washington. The elevation of Lake Washington was lowered approximately 20 feet to the present level of approximately 22 feet MSL when in the early 20th century it's waters were diverted at its central section to Lake Union and Salmon Bay, then via the Chittenden Dam to sea level in the Puget Sound.

Elevations approach 470 feet MSL approximately one half mile to the northwest, where a water tank is prominently located. Farther to the northwest, elevations fall within a ravine situated northwest of Olympic View Drive; this ravine joins that defining the location of Perrinville Creek. Elevations diminish to the southeast, approaching 320 feet MSL approximately one half mile to the southeast, but rise rapidly to the north of Scriber Lake. Significant bodies of water nearby include Scriber Lake 1,600 feet to the southeast, Scriber Creek 1,500 feet to the east, Hall Lake one mile to the south, and a ravine occupied by Perrinville Creek is one mile to the northwest. Perrinville Creek discharges to the west into the Puget Sound to the west while Scriber Creek discharges to the southeast into Lake Washington. Elevations approach 470 feet MSL approximately one half mile to the northwest, where a water tank is prominently located. Farther to the northwest, elevations fall within a ravine situated northwest of Olympic View Drive; this ravine joins that defining the location of Perrinville Creek. Elevations diminish to the southeast, approaching 320 feet MSL approximately one half mile to the southeast, but rise rapidly to the north of Scriber Lake.

SECTION 3: PROPERTY DEVELOPMENT AND HISTORY

Current Property Use and Facilities:

The Property consists of an assessor tax parcels encompassing a trapezoid-shaped area approximately 250 feet in length and 80 feet wide. An approximately 7,856 square foot segmented single story brick and mortar body repair shop constructed on concrete pads at grade, is located along the southern property line. Numerous overhead roll-up service bay doors provide access from the north, and three overhead roll-up door provides access from the east. This array of nearly one dozen service bays and associated shop segments are utilized for typical auto body repair operations, with painting operations located generally to the west, and assembly or disassembly and finishing operations generally to the east. Vehicles are washed and detailed at a location west of the North Wing Shop (near the location of B-33), and waste water from these activities are permitted to drain to a nearby catch basin situated north of the north wall of the North Wing. The east central portion of the building houses an office area situated between shops to the southeast and north.

Asphalt pavement dominates the Site, with the exception of narrow landscaped areas near the west and east site perimeters. Access to the Site is achieved by means of driveways to the east and west, with access to Highway 99 and 60th Avenue West. Stormwater catch basins are located near the east driveway and the north wall of the north wing of the building. A sanitary sewer line extends along the southern Property line, serving restrooms situated along south wall of the building.

Historic Uses and Facilities:

Following the construction of Highway 99 in the 1930s, the Site was initially developed in 1946 along the northern margins of a depression mapped as a swamp-wetland area which then extended from the Scriber Lake to the northwest, beyond 60th Avenue West. An approximately 1,000 square-foot building was constructed south of the current north shop wing and occupied by the *Tool Crib Company* at that time.

The City of Lynnwood was incorporated in 1959, arising from the town of Alderwood Manor, once located near the current intersection of Interstate 5 and 196th Street Southwest. By 1961 the core of the west wing of the building was constructed some 50 ft to the west, for use by the *Lynnwood Body Shop*. Between 1971 and 1979, building additions were added in the central space, and building wings were added to the west, north and east.

One diesel and one gasoline underground storage tank were reportedly installed northeast of the building by the Tool Crib Company in the late 1940s. One fuel pump island is known to have been present. It is unclear whether the facility served in part of whole as a gasoline or diesel retail station with vehicle repair operations, or whether fuel was simply utilized for Tool Crib Company vehicles, prior to occupancy by Lynnwood Auto Body.

Underground tanks were reportedly removed in 1979, at the time the north shop wing of the building was constructed. No related documentation is available.

Site Observations and Reported Conditions:

With the exception of the above referenced environmental concerns, there were no additional Recognized Environmental Conditions or concerns identified as potential impacts to the Property.

Future or Proposed Uses:

No future or proposed future uses are planned for the Property as of the date of this report.

Zoning:

The Property is zoned for commercial use:

Transportation and Roads:

The Site is located north-northwest of the intersection of Aurora Highway (Highway 99), a major four to six lane thoroughfare, constructed in the 1930s, whose central local and regional arterial role was replaced to a great extent by the construction of Interstate Five, approaching approximately 1.5 miles to the east, in the late 1950s. Highway 99 continues to serve as a major commercial and retail strip. 196th Street Southwest (Highway 524) is a local east-west artery linking neighborhoods of central Lynnwood with Interstate 5 and Highway 99. It descends in a circuitous fashion in ravines and above the bluffs of the Puget Sound, arriving at the Edmonds Ferry Terminal approximately 3 miles west of the Site.

Utilities and Water Supply:

Water is supplied by the Alderwood Water District, and its waters are purchased from the City of Everett, with its source at reservoirs located in the Cascade Mountains to the east.

A storm sewer lateral extends from a catch basin near the North Wing Shop adjoining the office, to a Sewer Main under Highway 99. A sanitary sewer lateral serves two restrooms situated along the south wall of the complex, and extends to a sanitary sewer main underneath Highway 99. These mains discharge to the south, and to a pump station located a few hundred feet southeast of the Site. Wastewater ultimately arrives at the Lynnwood Wastewater Treatment plant situated along the Puget Sound Shoreline several hundred feet south of Perrinville Creek.

Petroleum Hydrocarbon Sources:

Two underground storage tanks and an associated fuel pump island were reportedly located near the eastern margin of the Site between the late 1940s and 1979, at which time they were reportedly removed. No documentation is available. The Texaco station located on the second adjoining property to the south, is considered as in the sidegradient or downgradient direction relative to the subject Site.

Environmental Investigation and Interim Action Summary:

A total of four (4) previously known environmental investigations have been completed at the Property and are summarized in the following reports:

- | | |
|--|---|
| * Aerotech Environmental. July 2011 | Phase I Environmental Site Assessment. |
| * Aerotech Environmental. August 19, 2011 | Phase II Analytical Addendum |
| * Aerotech Environmental. August 28, 2011 | Phase II Limited and Targeted Subsurface Investigation. |
| * Langseth Environmental. October 2011 | Remedial Excavation Report |
| * Aerotech Environmental. December 29, 2014 | Groundwater Monitoring Well Installation Report |
| * Aerotech Environmental. September 3, 2015 | 1 st Quarterly Groundwater Monitoring Report |
| * Aerotech Environmental. April 21, 2015 | 2 nd Quarterly Groundwater Monitoring Report |
| * Aerotech Environmental. June 3, 2015 | 3 rd Quarterly Groundwater Monitoring Report |
| * Aerotech Environmental. September 15, 2015 | 4 th Quarterly Groundwater Monitoring Report |

One diesel and one gasoline underground storage tank were reportedly installed northeast of the original 1946 building by the Tool Crib Company in the late 1940s. These tanks and associated fuel pump islands were reportedly removed in 1979, apparently at the time the North Shop wing of the building was constructed. No UST-removal-related documentation is available regarding these activities. Refer to Figures 1 and 3.

Aerotech completed a Phase I Environmental Site Assessment in July 2011, recommending that a Phase II Subsurface Investigation be conducted at the Site. The Property was designated LUST Site No. 6564 on July 19, 2011, and application for Entry into the State Voluntary Cleanup Program was completed on November 30, 2011.

A Phase II Subsurface Investigation was completed in August 2011. Eight boreholes were advanced to depths between 11 and 17 feet bgs. Total Petroleum Hydrocarbons-Diesel constituents were documented in one soil sample between the former tank location and the east driveway (SB-3) at a depth of ten feet bgs, at concentrations of 12,000 mg/kg, well above the most stringent MTCA Method A Cleanup Levels for soil of 2,000 mg/kg. Total Petroleum Hydrocarbons-Gasoline constituents were documented in this sample, at concentrations of 290 mg/kg, well above the most stringent MTCA Method A Cleanup Levels for soil of 30 mg/kg (where benzene is present on Site). A copy of selected Phase II documents is attached to the final appendix of this report. Refer to the discussion below, and to Figures 3, 4, 5, and 6 for descriptions and depictions of the locations and analytical results associated with soil boring and excavation activities.

Corrective remedial action activities were performed in October 2011. *Langseth Environmental Services, Inc.* excavated 659 tons of petroleum-impacted soil and transported it for landfill disposal. An approximately 500 square foot area was excavated to depths ranging from 13 to 19 feet bgs. The excavation proceeded to remove impacted soils to the greatest extent practicable, given the proximity of the area to the building and utilities. A partial copy of selected Corrective Action/Excavation Activities documents is attached to the final appendix of this report. Refer to the discussion below, and to Figures 3, 4, 5, and 6 for descriptions and depictions of the locations and analytical results associated with these excavation activities.

At the request of Ecology, a groundwater monitoring well was installed in December 2014 in the former tank basin area to a depth of 55 feet bgs, with a screened interval set between depths of 40 and 55 feet bgs in order to document conditions below the base of the Vashon till, in the Vashon Advance Outwash Aquifer. Petroleum constituents, lead, chlorinated volatile organic compounds, and PAH compounds were not detected during four consecutive quarters of groundwater monitoring, as reported in the Aerotech report dated September 15, 2015, and attached to the final appendix section of this report.

The southern and northern perimeters of the contaminated area were previously defined. The off-site extent of contamination beyond the east property perimeter is unknown and cannot be readily addressed due to the presence of the highway and utility mains. However, in the absence of gasoline constituents at the Property margin, if the steep diesel concentration gradient is extrapolated, diesel-impacted soils at concentrations below 2,000 mg/kg would be expected within 2 to 10 feet east of the Property perimeter, beneath the sidewalk. The vertical and lateral extent of petroleum-impacted soils is now well defined. Refer to Figures 4, 5, and 6. Groundwater is not impacted, nor is the impacted soil exposed to groundwater.

Soil: Contaminated soils span a distance of nearly 75 feet, extending from the North Shop to the east driveway, encompassing an area of approximately 806 square feet between depths of 6 and 23 feet bgs. An estimated 5,770 cubic feet (278 tons) of impacted soil remain on Site at depth, beneath the excavation, adjoining the public sidewalk and Highway 99, underneath or adjoining the North Shop, or adjoining a storm sewer conduit. Two “hot spots,” with an estimated mass of 67 tons of petroleum-impacted soil remaining in place, have been defined:

- (1) East of the North Shop: TPH-diesel concentrations approach 10,000 to 11,000mg/kg between depths of 8 and 14 ft bgs.
- (2) East Driveway: In an area situated between monitoring well MW-1 and the east Property line, where TPH-diesel concentrations approach 10,000 to 30,000 mg/kg between depths of 8 to 19 ft bgs between the east excavation wall and the east Property line). The bulk of this mass, perhaps 80 to 90 percent, corresponding to the known UST location, was removed during excavation activities in October 2011.

TPH-gasoline was not detected underneath the North Shop. Gasoline hot spots coincide with diesel hot spots. Gasoline concentrations approach 1,200 mg/kg at a depth of 12 feet, east of the North Shop; and 8,200 mg/kg at 14 feet, near the known former tank location. Chlorinated Volatile Organics, were not detected during this or previous investigations and Polynuclear Aromatic Hydrocarbons were not detected. The Site is currently listed as: VCP NW2555 “Cleanup Started” “Contamination: Soil.. above Cleanup Level.”

The results of the additional work completed in January 2017 have been attached to this report, and these data integrated with historic data. The Terrestrial Ecological Evaluation forms are attached to this report, as well as the Vapor Intrusion Pathway documentation.

SECTION 4: CONSTITUENTS OF POTENTIAL CONCERN

The following constituents were identified as constituents of potential concern (WAC Table 830-1):

- (1) Total Petroleum Hydrocarbons ("TPH"): Gasoline Range Organics;
- (2) Total Petroleum Hydrocarbons ("TPH"): Diesel and Lubricant Range Organics;
- (3) Benzene, Ethylbenzene, Toluene, and Xylenes (BTEX);
- (4) Chlorinated Volatile Organic Compounds ("VOC")
- (5) Polynuclear Aromatic Hydrocarbons ("PAH")
- (6) Fuel additives (EDB, EDC)
- (7) Lead

Based on the results of environmental activities conducted at the subject site, the constituents of concern for soil and groundwater are:

- (1) GRO,
- (2) DRO, and
- (3) BTEX,

all potentially originating from the known historical UST sources, the onsite facilities present between the late 1940s and 1979. These analytes were historically detected above MTCA Method A Cleanup Levels in soil. None of these constituents were detected in groundwater at the Site. (Table 1, Table 2, and Table 3).

Soil:

Laboratory analytical results, sample depth, and sample date for each soil sample submitted for analysis is presented in Table 1. Sample locations and other former site features are depicted in Drawing 3. The depths of the soil samples range from 2.5 to 31 feet bgs.

Groundwater:

One groundwater monitoring well has been installed to date, screened in the first shallow aquifer present at the Site, identified as the Quaternary Vashon Advance Outwash Aquifer. No groundwater has been detected within or perched above the glacial till distinguishing the near surface deposits at the Site:

Well ID(s): MW-1
Installation Date: December 3, 2014

The locations of the groundwater monitoring well, MW-1 may be found on Figure 1 and Figure 3. Groundwater sampling was conducted at the Site for five quarters, through December 9, 2014 and December 30, 2015. Laboratory analytical results indicate that hydrocarbon constituents, fuel additives and lead were not detected at or above laboratory detection limits. (Refer to Table 1, page 2)

Interim Actions:

Corrective remedial action activities were performed in October 2011. *Langseth Environmental Services, Inc.* excavated 659 tons of petroleum-impacted soil and transported it for landfill disposal. An approximately 500 square foot area was excavated to depths ranging from 13 to 19 feet bgs. A partial copy of selected Corrective Action/Excavation Activities documents is attached to the final appendix of this report.

Due to the presence of an intervening storm water utility conduit a few feet to the north of the former tank location area, the excavation was terminated within a few feet of this structure, in order to avoid damage to the pipe. A trench approximately three to four feet in width was excavated to depths of approximately 14 to 18 feet, approximately 15 feet to the north, effectively bisecting the asphalt paved area to the north of this line. Samples were collected at three representative depths and at three locations along the length of the approximately 35-foot length of the trench. A second trench was excavated to depths of 14 feet along a line approximately midway between the western perimeter of the main excavation and the North Wing Shop. Samples were also collected at three locations at depths between 12 and 14 feet bgs. Impacted soils have been removed to the greatest degree practicable, given the proximity of buildings, buried utilities, and the adjoining public sidewalk and highway. The excavation proceed to the greatest extent practicable, given the proximity of the building to the south and west, buried utilities to the north, and the public sidewalk to the east. Refer to Figures 3, 4, 5, and 6 for descriptions and depictions of the locations and analytical results associated with these excavation activities.

SECTION 5: NATURAL CONDITIONS

CONCEPTUAL SITE MODEL - HYDROGEOLOGIC CONDITIONS

Geologic Conditions:

Historical U.S. Geological Survey topographic maps dated prior to 1955 indicate that the Site straddles the northeastern margin of a wetland area that once extended from the current location of Scriber Lake west of 60th Avenue West. This wetland area appears to have been regraded with artificial fill prior to development following the construction of Highway 99 in the 1930s.

The subsurface soils and sediments in the area are mapped by the United States Geologic Survey as Quaternary Vashon Till. These subglacial soils tend to be densely compressed materials often dominated by fine grained silts and clays, but also containing sands with gravel and cobbles. Soil borings advanced by Aerotech in 2011, 2014 and 2017 document the predominant presence of densely compacted fine to medium sandy till to depths approaching 30.5 feet below grade, with a 2.5-foot silt unit at its base, between 30.5 and 33 feet depth bgs.

A 1985 geologic map depicts the Vashon Advance Outwash sands outcropping in ravines or lower lying areas approximately one mile northwest and south of the Site, with the finer grained Quaternary Vashon Till present at the surface east and northeast of the Site. This unit appears to be present at the Site below depths of 33 feet bgs. These two geologic units are characterized as:

Quaternary Vashon Till (Qvt) “These deposits mantle the hills, ridges, and slopes. The till (referred locally as the Vashon till) is a nonsorted mixture of mud, sand, pebbles, cobbles and boulders (diamicton); it resembles concrete mix. The till contains some lenses of stratified material, particularly in its lower part. It is compact to locally cemented lodgement till, commonly called hardpan. The till has a sheeting or fissility near and parallel to the surface and tends to spall and crumble where exposed. It is varied in clast composition and is similar to the recessional outwash. Outcrops of till are from 3 to 20 meters thick in the quadrangle. The till was deposited directly by the ice as it advanced over bedrock and older Quaternary sediments. Its compactness partly results from the weight of the ice, which was hundreds of meters thick when it overrode the till. Drainage is good in the uppermost 1 to 2 meters of loose, weathered material, but water ponds and moves laterally along the buried hardpan surface. The till lies unconformably on and against older underlying deposits.”

The Vashon Till is commonly underlain in the central Puget Lowlands by the following:

Quaternary Advance Outwash (Qva) “These deposits underlie the till. They consists of clean, mostly gray, well stratified, unconsolidated sand with shades of brown. Clasts are varied in composition and are similar to those in the recessional outwash. The advance outwash is as much as 70 meters thick in outcrop in the quadrangle. It was deposited as bar and channel sediment in and along meltwater streams flowing from the advancing Vashon glacier, and as deltas in ponded areas. The advance outwash in one of the thickest and most extensive aquifers in the region. It lies conformably on the transitional beds [Qtb]. As mapped, the advance outwash contains the Esperance Sand Member of the Vashon Drift (Newcomb, 1952).”

Geologic Map of the Edmonds East and Part of the Edmonds West Quadrangles, Washington, USGS Miscellaneous Field Studies Map MF 1541, James P. Minard, 1963

Natural in situ soils documented at the Site during this investigation are dominated by a very densely

compacted fine to medium sands, representing the glacially deposited Quaternary Vashon Till.

Hydrogeologic Conditions:

The Vashon till documented at the Site, dominated by fine grained sands, silty sands, or silt, generally serves as a poor reservoir for groundwater, and as relatively impermeable soils, they generally transmit groundwater slowly, or water infiltrates only slightly. Fine grained soils also tend to greatly restrict both the vertical and horizontal migration of petroleum contaminants, especially where they form laterally continuous geologic units. Beneath the upper several feet of weathered till, the till at the subject Property appears to be very dense. According to U.S. Geological Survey geologist James Minard, groundwater tends to percolate slowly to the base of the first few feet of weathered glacial till, where it pools and begins to travel laterally. This description seems to characterize conditions observed at the subject Site. Observations at the subject Site indicate the absence of shallow perched groundwater. However, this does not preclude the possibility that limited but perhaps incoherent or discontinuous areas of perched groundwater may have occasionally been present. Due to the presence of extensive paved areas on the Site and the adjoining Sites, in the direction of increasing elevations to the west and north, limited opportunity for shallow perched groundwater recharge are available.

Where shallow saturated or partially saturated tank basin fills have been encountered, underlying tills appear to be generally dry to slightly moist. Limited groundwater was observed as pooling in or near former tank basin fill and perhaps within permeable soils present in overlying fill utilized to regrade the Site during its development. The direction of shallow perched groundwater flow is expected to be governed by the geometry of the surface of the base of the weathered zone, which geometry is in turn generally expected to mimic that of the natural topography. According to Minard:

“The till is a nonsorted mixture of clay, silt, sand, pebbles, cobbles, and boulders, all in variable amounts. Though generally quite sandy, it locally contains much clay. Its poor sorting reflects mixing of the materials overridden and incorporated in the ice. It includes some lenses of stratified material, particularly near its base. Internal drainage is greatly retarded by the unweathered till. Water tends to percolate readily down through the 1 to 2 m of upper, loose, sandy, weathered material, but ponds and moves laterally along the buried, unweathered hardpan surface. These conditions result in swamps in flat areas on upland and hill and ridge tops, and broad areas of saturated weathered till on hill sides, during winter and spring, where such saturation normally would not be expected.” (Ibid.)

The pattern of petroleum-impacted soil is consistent with Minard’s characterization. The till appeared to be increasingly dense, and less weathered, with depth. Petroleum constituents appear to have descended to depths between 16 feet and 23 feet, with the deeper impact situated immediately below the former tank area. Petroleum impacted soils were also observed between depths of 8 and 18 feet in the area located between the former tank and the sidewalk and Highway 99 right-of-way adjoining to the east.

The Vashon Till in the Puget Sound lowlands is generally underlain by the Quaternary Advance Outwash, a sandy fluvial outwash deposit of the Vashon Stage of the most recent glaciation event. This unit commonly functions as a regional aquifer. The predominantly fine grained Vashon till, generally capping the uplands areas of these regionally extensive ridges in the Puget lowlands, commonly serves as an effective barrier to the vertical migration of groundwater, and where present, contaminants. Where present underneath a till cap, the Advanced Outwash aquifer would be expected to function as a confined or partially confined aquifer, but perhaps one in which the lower portion alone is saturated, and where groundwater eventually daylight in the bluffs, lowland areas, and ravines present no closer to the subject Site than one mile.

The monitoring well, MW-1, installed and screened within the Vashon Advance Outwash Aquifer beneath the Site, has not been impacted by petroleum contaminants released from former underground tanks or historic vehicle service and repair operations at the subject Property.

Natural Resources and Ecological Receptors:

Sensitive Receptor Survey Analysis:

Groundwater Pathway

Based upon groundwater monitoring and sampling data collected in 2014 and 2015, and soil analytical results collected from boreholes and the remedial excavation activities at the Site, the Groundwater pathway appears to be interrupted by the absence or paucity of perched water in the shallow fill or former tank basin fill. There are no public or private water supply wells located within approximately 2.5 miles of the subject site. It is therefore unlikely that residual petroleum remaining in soils beneath the subject site would pose a future risk to surface waters due to the limited migration potential at the site.

Direct Contact Pathway

The Direct Contact pathway is interrupted by the predominant presence of asphalt pavement at or near the impacted area, or the presence of the concrete floor slab at the North Wing Shop.

The possibility of exposure to construction/excavation workers during redevelopment at the Property is noted, and is addressed by means of the proposed Environmental Covenant.

Vapor Intrusion Pathway

The vapor intrusion pathway at the subject Property is governed by the following conditions:

1. Groundwater is not present in shallow fill (5 to 8 feet thick) or weathered till above depths of 30 feet, with the exception of that pooled within the porous backfill in the immediate vicinity of the former tank basin. Relatively dense impermeable glacial till generally serves to impede the migration of contaminants, water, and vapor. Although the upper several feet of weathered till, subject to bioturbation, seasonal temperature fluctuations, and possible fracturing, offers greater permeability.
2. Indications of residual LNAPL associated with releases from the two underground tanks, or associated fuel pumps and product distribution systems, present on Site for a period of approximately 30 years, are present between depths of approximately 8 and 23 feet bgs, with two areas in which concentrations of TPH-diesel are present within less than 10 to 20 feet of buildings on Site, and above depths of 15 feet bgs.
3. TPH-diesel constituents are present in soils beneath the North Wing Shop above depths of 15 feet bgs at concentrations less than 10,000 mg/kg, but may approach concentrations of 10,000 mg/kg near the east wall of the shop.
4. Daily operations at this facility entail the operation of diesel and gasoline-fueled vehicles inside buildings, as well as the use of paints, solvents and adhesives. Active ventilation is therefore required during business hours when employees are present.

The following memo supplements Chapter 2, “*Preliminary VI Assessments*,” in Washington Department of Ecology’s (Ecology’s) 2009 draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, Ecology 2009:

Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion – Implementation Memorandum No. 14, State of Washington Department of Ecology Publication No. 16-09-046, March 2016.

“There are provisions in the Model Toxics Control Act (MTCA) that apply to evaluating the VI pathway for potential impacts from petroleum (Ecology 2013). Specifically, four

provisions contain requirements related to soil vapors: WAC 173-340-740(3)(b)(iii)(C), WAC 173-340-740(3)(c)(iv), WAC 173-340-745(5)(b)(iii)(C), and WAC 173-340-745(5)(c)(iv). In general, the vapor pathway must be evaluated for sites with petroleum contamination when soil concentrations are significantly higher than a concentration derived for the protection of Washington State Department of Ecology Toxics Cleanup Program Implementation Memo #14 groundwater. However, the phrase “significantly higher” is not defined in either rule or guidance.

MTCA also specifies that for sites with diesel contamination, the vapor pathway must be evaluated when total petroleum hydrocarbons (TPH) concentrations in soil are greater than 10,000 mg/kg. This concentration-based criteria was developed in the late 1990’s as part of the 2001 MTCA rule revisions.

EPA’s and ITRC’s petroleum VI documents rely on information contained in EPA’s Evaluation of Empirical Data to Support Soil Vapor Intrusion Screening Criteria for Petroleum Hydrocarbon Compounds (USEPA 2013b). The document summarizes data from a large number of petroleum-contaminated sites. Given the scrutiny these data have received, Ecology believes that using the vertical separation distances empirically derived from this information is a reasonable approach for initially assessing the petroleum VI pathway at many fuel-release sites, provided the criteria set out later in this memo are met. Ecology has reviewed both of the EPA and ITRC petroleum VI documents. While both documents are technically sound, this memo relies primarily on EPA’s guidance for initially assessing and screening sites. If a site cannot be screened out using the EPA distance-based criteria, then further investigation work should be done using the applicable portions of Ecology’s Tier I and Tier II assessment process discussed in the 2009 draft guidance.”

Site Vapor Intrusion Evaluation

STEP 1 – Release Confirmed – August 2011

STEP 2 – Immediate Action – Corrective Remedial Action was taken in the form of excavation and removal of impacted soils in the vicinity of tank and pump islands in October 2011.

STEP 3 – Conceptual Site Model – Complete – Figures 4, 5 and 6 in this report. Vashon glacial till dominates the site, with five to eight feet of gravelly sand fill situated above weathered till. Weathering and therefore permeability of till diminishes with depth. Soils encountered during the installation of a groundwater monitoring well to depths of 55 feet bgs in 2015 and the advancement of five soil borings to maximum depths of 18 feet in August 2011 and January 2017, indicate the presence of predominantly dry unsaturated soils. Consistent with the conclusions of Milleneaux, the presence of ephemeral perched groundwater within the upper weathered portions of the till is possible, but may be confined to the wet winter months, if at all, and may be laterally discontinuous. Aside from pooled groundwater in the backfilled former tank basin, groundwater was not present on Site above depths of 33 feet, where it was encountered in the sub-till Advance Outwash Aquifer. The primary sources have been removed, and residual contamination remains only at depths below 15 feet in the tank basin area, and at depths as shallow as 5 to 8 feet bgs at the eastern perimeter of the Property, adjoining the public sidewalk, and an isolated area underneath the storm sewer pipe along the north side of the tank basin area. Impacted soils at concentrations above MTCA Method A Cleanup Levels for TPH-diesel and TPH-gasoline are generally present between depths of 7 and 21 feet bgs

STEP 4 – Other contaminants present: NO

STEP 5 – Precluding Factors - YES. Conditions that might be considered as likely to warrant greater lateral separation distances from buildings are present, including (a) the predominant presence of asphalt pavement which would restrict natural attenuation, and (b) the presence of relatively porous fill within the upper 5 to 8 feet of soils. However, these factors may be countered significantly by the presence of residual contamination confined to relatively impermeable fine grained dense till. The following pertinent conditions are not present on Site:

- Changing site conditions such as an expanding plume or planned development above/adjacent to the contamination; (No development is planned. No buildings are situated in the downgradient direction)
- Preferential pathways such as utility corridors or highly permeable soil zones; • Extremely low soil moisture content ; (Aside from shallow fill generally no more than 5 feet thick, utilities are present within this fill zone)
- Limited oxygen in the soil due to the presence of: relatively impermeable ground cover surrounding the building of interest (Yes), large structures (No), or methanogenesis (due to the release of higher ethanol blends of gasoline or the presence of very high organic material in the soil); (No)
- The presence of lead scavengers such as 1,2-dibromoethane (also known as ethylene dibromide or EDB) or 1,2-dichloroethane (also known as ethylene dichloride or EDC) in the released fuel; (No)
- The presence of other additives in the released fuel that may aerobically biodegrade more slowly than benzene; (No.)
- Subsurface petroleum VOC contamination in direct contact with the building's foundation. *If precluding factors are present, the appropriateness of using the screening criteria in Steps 6 and 7 below must be evaluated.* (No.)

STEP 6 – Determine if buildings are within the lateral exclusion zone: - Buildings are within 30-foot Lateral Exclusion Zone, and TPH-diesel impacted soil is present beneath one wing of one shop building – (YES.) SITE SPECIFIC DECISION WARRANTED: Daily site operations involved exposure to vapors identical to those vapors of concern, gasoline and diesel constituents.

Determining the lateral distance within which buildings or other structures might be threatened by petroleum vapors is a site-specific decision. EPA's petroleum VI guidance indicates that "though in theory the length of the lateral separation may be on the same scale as the vertical separation distance, a greater lateral distance is generally warranted in the down gradient direction." No buildings are situated in the downgradient direction.

"ITRC's 2014 petroleum VI guidance, as well as numerous state agencies' vapor intrusion guidance documents, rely on a 30-foot horizontal separation distance from the edge of the contamination to provide an adequate separation distance. For the purposes of this implementation memo: • If the degree and extent of contamination is well-defined and the dissolved phase plume is stable or receding, then a horizontal separation distance of 30 feet would generally be appropriate for establishing a lateral inclusion zone."

STEP 7 – Evaluating Vertical Screening Distance. (Vertical Separation Distance is not sufficient)

Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites, Chapter 5, EPA June 2015 is referenced to determine the appropriate vertical separation distances. Table 3 (p. 52)

A vertical separation of at least 15 feet is required where TPH concentrations are greater than 250 mg/kg. (YES. This criterion is met at the Site.)

TPH-diesel concentrations exceed 250 mg/kg; 8,400 mg/kg diesel is present at a depth of 8 feet below the floor slab at the north shop area adjoining the office. This is a well ventilated shop space utilized during a typical 8 hour work day, five days per week.

STEP 8 - Subslab soil gas sampling is recommended in accordance with the guidance addressed above. However, Ecology's 2015 VI Guidance document indicates final decisions may be made on a case by case basis. The following mitigating factors may be pertinent in supporting a decision to wave requirements for sub-slab soil or indoor air quality monitoring requirements:

Industrial Site Specific Vapor Intrusion Exception Proposed.

Because diesel concentrations in soil above depths of 15 feet bgs exceed established vapor intrusion-related limits, vertical separation distances defined in *Ecology Publication 16-09-046* have not been met. However, because on a case-by-case basis some discretion is recommended in guidance documents, an exception to the pursuit of Tier I vapor intrusion sampling is proposed in this case, on the basis of the nature of daily body shop operations on Site. Employees are exposed daily to the same petroleum compounds presenting a vapor intrusion risk. Gasoline and diesel fueled vehicles are operated in the facility's shops, and solvents, paints, and adhesives are also commonly utilized. These operations require year-round ventilation by means of fans and open windows or doors during business hours.

In Publication 09-09-047, *Guidance for Evaluating Soil Vapor Intrusion in Washington State, Investigation and Remediation*, Section 1.2, Ecology describes this scenario:

"A worker potentially exposed to vapor intrusion-contaminated indoor air is regularly and simultaneously exposed to the same hazardous chemical vapors in the workplace. The workplace vapor concentrations are routinely much higher than any levels expected from vapor intrusion. This worker understands that this exposure to the particular chemical is part of the job and is enrolled in the company's OSHA-compliant employee protection program."

Further action in the form of Vapor Intrusion sampling does not appear to be required or recommended by state guidance documents, and on behalf of the owner, Aerotech would like to request a conditional NFA determination with an Environmental Covenant and institutional controls.

Terrestrial Ecological Evaluation:

A Simplified Terrestrial Ecological Evaluation (TEE) Form was completed for the site. A full TEE is not required based on the absence of more than 1.5-acres of contiguous "undeveloped" land within 500 feet of the Site. The completed TEE form and Simplified TEE form are attached to this report.

SECTION 6: CONSTITUENT OF CONCERN-MOVEMENT AND OCCURRENCE

Waste Material:

Waste material that may currently be present at the site, in the form of 55-gallon drums containing non-hazardous petroleum-impacted soil cuttings derived from soil boring and well installation activities, will be removed from the Site and disposed of in accordance with all relevant State and Federal regulations..

Soil:

Cumulative soil analytical data can be found in Tables 1, 2, and 3. Soil sampling locations at which samples exhibiting hydrocarbon concentrations above the MTCA Method A Cleanup Levels are shown on Figure 3. Areas documented with hydrocarbon concentrations above the MTCA Method A Cleanup Levels on the Property are located in the vicinity and in the downgradient direction* relative to the former UST areas in the southeast octant of the property. The lateral extent of soil containing petroleum hydrocarbon concentrations above the MTCA Method A Cleanup Levels is depicted in Figure 3 and in cross-sectional view in Figure 5. The most shallow sample containing petroleum hydrocarbon concentrations exceeding the MTCA Method A Cleanup Levels was collected at 4 feet bgs, adjoining the stormwater sewer pipe, within a few feet north of the former tank basin. The deepest sample containing petroleum hydrocarbon concentrations above the MTCA Method A Cleanup Levels was collected at 21 feet bgs [MW-1 (21')].

* “downgradient” as used here, is defined in the context of the general absence of groundwater in the shallow fill and uppermost weathered zone in the underlying till. It therefore refers to the direction of the original ‘pre-Highway 99’ downslope direction, to the east or east-southeast. If present the slope of the base of the artificial fill, as well as that of the base of the significantly weathered till, would both be expected to .

Groundwater:

Cumulative groundwater monitoring results are shown on Table 1, Page 2. There is currently 1 monitoring well (MW1) located on the subject site. Petroleum hydrocarbons have not been detected in groundwater sampled from MW-1 at concentrations at or above laboratory detection limits, for a period of one year, during which time four consecutive groundwater monitoring events were completed.

This well is located within the former underground tank basin, adjoining the former fuel dispenser pump island location, as well as the location of the highest concentrations of both TPH-diesel and TPH-gasoline in soil. Petroleum-impacted soils were not encountered below depths of 23 feet bgs. Although a narrow zone of saturated or near-saturated soil was encountered above the dry silt layer encountered between 30.5 and 33 feet, this area may not be persistent laterally. There were no visual or olfactory indications, and petroleum constituents were not detected in a soil sample collected within this zone.

The most shallow regional groundwater table, that associated with the Quaternary Advance Outwash Aquifer, was encountered below the silt unit, with a potentiometric surface measured between depths of 31.6 and 34.8 feet bgs. The direction of groundwater flow in this regional aquifer (Figure 2B, 4, and 5) has been documented by the U.S. Geological Survey as toward the west-southwest. A groundwater divide is indicated to the east and northeast relative to the subject Property. Groundwater flow along the eastern side of this divide flows to the east or southeast, while flow direction west of this divide is toward the northwest, west or southwest.

Potentiometric Surface and Flow Direction in the Advance Outwash (Qva) Aquifer, 1992-93, in Aerial Recharge from Precipitation and Potentiometric Surfaces of Principle Aquifers, Western Snohomish County, Washington, B.E. Thomas, J.M. Wilkinson, and S.S. Embry, 1997, U.S. Geological Survey Water Resources Investigation Report 96-4312

SECTION 7: CONCEPTUAL SITE MODEL

MTCA Chapter 173-340-200 defines the conceptual site model as a “conceptual understanding of a site that identifies potential or suspected sources of hazardous substances, types and concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors.” (WAC, 2016). Sections 3 through 6 have described in detail the suspected sources of COPCs, the manner in which they were released, the types and extent of constituents detected at the Site, soil and groundwater containing hydrocarbons at the Site, and actual and potential receptors. This section provides a conceptual summary of the detailed information described in the previous sections.

Sources of COPCs:

The COPCs were released into soils adjoining two underground diesel and gasoline tanks, tank fill areas, tank product distribution pipes, and fuel dispenser pumps. Released Non-Aqueous Phase Liquid (“NAPL”) product migrated downward, and to a limited extent, where sufficiently permeable and or weathered till soils were available, to a depth within ten feet of the base of a sub-till silt (23 ft), below which groundwater associated with the regional Advance Outwash Aquifer is present (at 33ft). From the residual NAPL ‘trail’, vapor phase partitioning occurred during and after the descent; some limited lateral spreading will have occurred as well. NAPL and perhaps on occasion, dissolved phase partitioning of product where ephemeral slugs of coherent groundwater may have migrated to the vicinity of the source area, will have tended to migrate laterally, in the original direction of ground surface slope, prior to the regrading activities associated with the development of Highway 99. The original slope was toward the east or east-southeast, in the direction of Scriber Lake.

Neither groundwater, nor free product (NAPL) were observed at the Site during investigations conducted by Aerotech. All former hydrocarbon sources and structures associated with the gasoline and diesel tanks, product lines, and the pump island, were restricted to the northeast quadrant of the Site, and appear to have been removed. Very limited unpaved surface area within narrow landscaped areas near the western perimeter of the Property are now available to accommodate the infiltration of precipitation. Adjoining properties are dominated by buildings and pavement as well. Where infiltration and shallow perched groundwater recharge is possible, west of 60th Avenue West, the bulk of these waters would be expected to tend gravitate toward and travel along the former axis of the wetland depression rather than the northern margins of that depression, where the Site is located.

Fate and Transport:

The fate and transport of the COPCs are governed by the specific properties of the constituents and the surrounding environmental conditions at the Site. Hydrocarbons released at the subject site biodegrade most rapidly under aerobic conditions. Under aerobic conditions expected in the fill in which petroleum constituents were originally released, oxygen acts as the electron acceptor, facilitating degradation, but under increasingly anaerobic conditions within the increasingly dense till below, degradation is limited by both lack of sufficient oxygen and microbes. The shallow oxidizing environment permits naturally occurring microbes utilize to utilize the descending hydrocarbons as a food source until oxygen is depleted and anaerobic conditions prevail. Natural attenuation has therefore been primarily limited to shallow depths. One additional mode of transport of contaminant, aside from buried sources, would be that of surface spillage. In such a scenario, petroleum products would be expected to have travelled across the surface of the sloping pavement to the likely gravel-covered or landscaped margins of the Property. This property margin in the era prior to the incorporation of Lynnwood circa 1959, would not likely have been finished in the formal manner it is today. In addition to transport within and at the base of the permeable fill at the Site, this scenario offers a fine explanation for the presence of the highest concentration of diesel constituents at only a depth of eight feet near the Property margin. This area would have been situated directly down-slope relative to the tank fill location.

There are no indications that contaminants have ever migrated nearer than a vertical distance of ten feet from the Advance Outwash Aquifer. The density of the unweathered till, even associated with minimal fractions of fines, commonly restricts both the vertical and lateral migration of both groundwater and

dissolved hydrocarbons. The available groundwater data have by empirical demonstration indicated that the Vashon till has served and will likely continue to serve as a barrier, with regard to lateral flow that might otherwise transport hydrocarbons farther toward the east. The absence of petroleum constituents in groundwater intercepted by MW-1 confirms the prediction of this Conceptual Site Model.

Exposure Pathways and Receptors:

The Property is located within a mixed residential and commercial area that includes public streets, and commercial retail properties. Residential properties are located only in the upgradient/upslope direction relative to the Property, and all intervening properties between Scriber Lake and the subject Site are commercial in nature, as are those along the Highway 99 corridor. The predominant street and parking lot surfaces in the area are paved with asphalt or concrete, materials serving as effective barriers to both vapors rising from below, and the downward infiltration of precipitation.

There is no terrestrial habitat in the area, and groundwater in the area is not utilized for potable or non-potable purposes. Current exposure pathways and receptors are limited to the following:

- * Incidental ingestion of soils during excavation activities;
- * Incidental ingestion of pooled groundwater within the former tank basin, during excavation activities;

There is a potential for a future direct contact exposure pathway whereby construction workers digging in subsurface soil may be exposed to COPCs. As a result, cleanup levels will be developed based on industrial worker exposure cleanup levels, and an Environmental Covenant will be attached to the Property Deed.

No reports of petroleum-like odors in sewers are known, and no data is available to indicate whether petroleum products released at the Site have migrated to sewer main trenches located underneath the west side of the Highway 99 right-of-way.

Future Exposure Pathways and Receptors:

Impacted soils have been removed to the greatest degree practicable, given the presence of buildings, buried utilities, and the adjoining public sidewalk and highway. Future land use in the area is expected to remain mixed-use commercial and residential, although the corridor along Highway 99 is expected to remain exclusively commercial and industrial. Therefore, regarding protection of human health via direct exposure, the most probable and pressing risk apparent at the Site, the application of the MTCA Model Remedies Method Generic Method B Cleanup Level of 1,500 mg/kg TPH-gasoline/diesel is proposed as applicable to this Site. No significant changes in zoning are expected in the foreseeable future.

SECTION 8: CLEANUP STANDARDS

Soil Cleanup Levels:

The following pathways are considered for the establishment of soil cleanup levels at the Site:

- Protection of human health via direct exposure using the MTCA Model Remedies Method Generic Method B Cleanup Level of 1,500 mg/kg TPH-gasoline/diesel;
- Protection of ecological receptors, an ecological evaluation is required under MTCA;
- Protection of groundwater resources from COPCs leaching from soil; and
- The subject site and the adjacent properties are currently zoned commercial and/or residential (impacted soils lie beneath pavement and are situated over 250 feet from the nearest residence);
- Soil containing residual hydrocarbons at the subject site extends from the area surrounding the former USTs in the northeastern portion of the subject site with limited vadose-zone migration or possible historic surface-spill-related dispersion to the east (downgradient/original pre-development direction of slope direction).
- The limited groundwater observed at the subject site is that perched and pooled within the backfilled tank basin and the adjoining weathered fringe of dense fine sandy glacial till. Depth to the first encountered groundwater is approximately 10 feet below the deepest recorded occurrence of petroleum-impacted soil, at 33 feet bgs.

Groundwater Cleanup Levels:

The following pathways were considered for the establishment of groundwater cleanup levels at the subject site:

- Protection of human health via direct exposure using the MTCA Model Remedies Method Generic Method B Cleanup Level of 1,500 mg/kg TPH-gasoline/diesel is considered adequate due to the empirical demonstration of absence of groundwater impact at the Site; and

The following site-specific information is relevant:

- The limited groundwater observed at the subject site is that perched and pooled within the backfilled tank basin and the adjoining weathered fringe of dense fine sandy glacial till. Depth to the first encountered groundwater is approximately 10 feet below the deepest recorded occurrence of petroleum-impacted soil, at 33 feet bgs.

Final Cleanup Levels:

GRO analyzed in accordance with Ecology Method NWTPH-Gx.
MTCA Method B Cleanup Levels:

	Soil (mg/kg)	Groundwater (µg/L)
GRO	1,500 *	800

* MTCA Model Remedies Method Generic Method B Cleanup Level for total combined DRO and GRO.
Individual Method A Cleanup Levels for benzene (0.03 mg/kg) and GRO (30 mg/kg) must be met.

DRO and LRO analyzed in accordance with Ecology Method NWTPH-Dx
MTCA Method A Cleanup Levels:

	Soil (mg/kg)	Groundwater (µg/L)
DRO	2,000	500

HVOCs analyzed in accordance with EPA Method 8021 or 8260.
MTCA Cleanup Levels:

	Soil (mg/kg)	Groundwater (µg/L)
Benzene	0.03	5
Toluene	7	1,000
Ethylbenzene	6	700
Total Xylenes	9	1,000

Points of Compliance:

Points of compliance (POC), locations where the cleanup levels shall be achieved, are established for each applicable media at the Site. These media include groundwater and soil. The POCs for each medium are discussed in the following sections.

Soil Points of Compliance:

The POCs for soil are based on the following pathway of exposure: Soil direct contact – The MTCA standard POC for direct contact with soil is from the ground surface to a depth of 15 feet bgs. Compliance is determined by direct sampling of soil following the interim remediation by excavation and treatment.

Groundwater Conditional Points of Compliance:

The standard POC for groundwater under MTCA is “throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected by the site” (WAC 173-340-720(8)(b)). The POC for groundwater, therefore, is the Quaternary Advance Outwash Aquifer beneath the till at the subject site, where groundwater monitoring is accomplished at MW-1.

SECTION 9: AREAS REQUIRING FUTURE MANAGEMENT

Constituents of Concern:

Constituents of concern in soil on the subject site include GRO, DRO and BTEX. Constituents of concern in the groundwater on the Property include GRO, DRO, and BTEX.

Soil: Vertical and Lateral:

Figure 3 identifies soil sample locations at which hydrocarbon concentrations above the MTCA Model Remedies Method Generic Method B Cleanup Level of 1,500 mg/kg for combined TPH-gasoline/diesel. Cleanup Levels were recorded by means of laboratory analysis. Areas requiring future management include the soil above the MTCA Model Remedies Method Generic Cleanup Levels in the vicinity of the former USTs and to the east. These areas are effectively defined by the position of the 2,000 mg/kg iso-concentration contour line as depicted in Figure 3.

In the proposed Site-specific Environmental Covenant, detailed in the following sections, a conditional point of compliance is defined along the eastern Property perimeter, where between depths of approximately 8 and 16 feet bgs, petroleum constituents are present at concentrations from 3,200 to 7,700 mg/kg.

Groundwater: Vertical and Lateral:

Groundwater associated with the regional Advance Outwash (“Qva”) Aquifer at the Site has not been impacted by petroleum constituents at the Subject property. This determination has been made by empirical demonstration.

In the proposed Site-specific Environmental Covenant, detailed in the following sections, groundwater monitoring will be conducted on the subject site at 30-month intervals in order to verify that these conditions persist at groundwater monitoring well MW-1.

SECTION 10: CONCLUSIONS

The petroleum release documented at the subject Property **does not** present a hazard to human health or the environment for the following reasons:

- 1) **Groundwater Pathway:** The Groundwater Pathway is interrupted at three points: Groundwater in the area is not utilized as a potable water source; nor will likely it be in the future, in accord with local regulations, and by adherence to institutional controls as detailed in Section 11;
- 2) **Shallow Perched Groundwater:** Laterally-limited and vertically-restricted shallow perched groundwater present at the Site appear to have pooled at one location, that associated with the relatively porous gravelly sandy UST basin backfill material, and perhaps only rarely within weathered adjoining zones within the upper 20 or so feet of the naturally dense low-permeability tills on Site;
- 3) **Quaternary Advance Outwash Aquifer:** The Quaternary Advance Outwash Aquifer, underlying the upper glacial till layer, has been shown to be adequately protected by at least 10 feet of unimpacted densely compacted unweathered glacial till, a low-permeability material commonly serving as an effective barrier to the vertical migration of contaminants in the Puget Lowlands. Groundwater within the regional Qva Aquifer beneath the petroleum-impacted soils has been shown by empirical demonstration to be unimpacted by the documented petroleum hydrocarbon release at the Site; and
- 4) **The Direct Contact Pathway:** The Direct Contact Pathway is effectively interrupted by the presence of at least 6 feet of un-impacted fill (with one exception at 4 feet bgs adjoining the sewer pipe at the north side of the UST basin), and over 98 percent of the Site is effectively capped by asphalt pavement, concrete walkways, or the concrete pad and foundation of the building. If deemed useful, an impervious barrier could be constructed underneath the remaining landscaped areas near the UST basin, as a component of the engineering controls to be stipulated in the proposed Environmental Covenant. Limited areas of impacted soils, with concentrations above 10,000 mg/kg DRO (or above 1,000 mg/kg GRO) remain in place, as depicted in Figures 4 and Figure 5, between MW-1 and the public sidewalk, near the north-central portion of the former tank basin, and east of the North Wing Shop.

Petroleum-impacted soils have been removed from the Site to the maximum extent practicable. The proposed Environmental Covenant may stipulate that the remaining petroleum-impacted soils on Site shall be excavated and removed from the Site at such time as the buildings on Site are demolished, and that no new structures shall be constructed above or adjoining the impacted areas until that time. The recommended course of action is detailed in the following section.

SECTION 11: CLEANUP ACTION PLAN

The purpose of this section is to provide a detailed description of the means by which a Property-Specific Environmental Covenant will be implemented to satisfy Ecology's requirements for a Site-specific Conditional No Further Action determination.

Environmental Covenant:

Institutional controls designed to prevent the unplanned and unmitigated removal of soil impacted by petroleum hydrocarbon concentrations above the MTCA Model Remedies Method Generic Method B Cleanup Level of 1,500 mg/kg for combined TPH-diesel and TPH-gasoline constituents as well as MTCA Method A Cleanup Levels for benzene and gasoline (0.030 mg/kg and 30 mg/kg respectively), beneath the asphalt-paved parking lot and North Wing Shop in the northeast quadrant of the Property, and to prevent the installation of future drinking water wells within the Property boundary will be implemented by means of an Environmental Covenant in accordance with WAC 173-340-440(8)(a).

The Environmental Covenant shall be executed by the Property owner and recorded with the register of deeds for Snohomish County. The restrictive covenant shall be binding on the owner's successors and assigns. When the document is signed, it will be recorded in Snohomish County in accordance with the Uniform Environmental Covenants Act requirements in the Revised Code of Washington (RCW) Chapter 64.70.080(1). Copies of the Covenant would also be distributed to each signatory, each person holding a recorded interest in the Property, and each person in possession of the Property at the time that the Covenant is executed. An attempt to terminate the Environmental Covenant per RCW Chapter 64.70.100 will only be made if petroleum hydrocarbon concentrations in soil on the Property are demonstrated to be below specified MTCA Cleanup Levels.

Land Use Inspections and Possible Long-Term Groundwater Sampling:

Inspections to ensure land use is in compliance with the Environmental Covenant will be conducted every 30 months in conjunction with possible groundwater sampling. If Ecology deems long-term groundwater sampling as necessary, it will be conducted to confirm that groundwater in the underlying Quaternary Advance Outwash Aquifer remains un-impacted by petroleum hydrocarbon concentrations above the MTCA Method A Cleanup Levels for water until such time as Ecology determines monitoring is no longer necessary. However, Aerotech recommends, given that the leaching of contaminants into the underlying aquifer has not occurred since the tanks were removed from the Site in 1979 and nearly 70 years after tank installation at the Site, and remaining petroleum impacted soils are separated from the aquifer by nearly ten feet of relatively dense impervious glacial till, that additional groundwater monitoring may not be warranted.

Implementation:

Aerotech recommends submitting this Remedial Investigation and Proposed Cleanup Action Plan to Ecology for review and an opinion regarding past cleanup efforts and the proposed Environmental Covenant as a path to a **Site-Specific No Further Action** determination.

STATEMENT OF QUALITY ASSURANCE

I have performed this Phase II Subsurface Investigation in accordance with generally accepted environmental practices, procedures, and regulatory requirements, as of the date of this Report. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of this part. I have the specific qualifications based upon education, training, and experience necessary to plan and implement subsurface investigations.

STATEMENT OF THE LICENSED GEOLOGIST

As stipulated in the Regulatory Code of the State of Washington Title 18, Chapter 18.220, the undersigned is a licensed Geologist in the State of Washington, and has met the statutory requirements of RCW § 18.220.060 for such licensing including, but not limited to, educational requirements, work and field experience, examination proficiency, and acceptance by the State Licensing Board.

The undersigned Licensed Geologist has supervised the geological work performed as described in attached Report – a majority of said work being performed by employees of the firm which employs undersigned Licensed Geologist – as delineated in RCW Title 18, Chapter 18.220, Paragraph 190.

Signature of Licensed Washington Geologist:


Signature – James McDermott (License No. 3063)



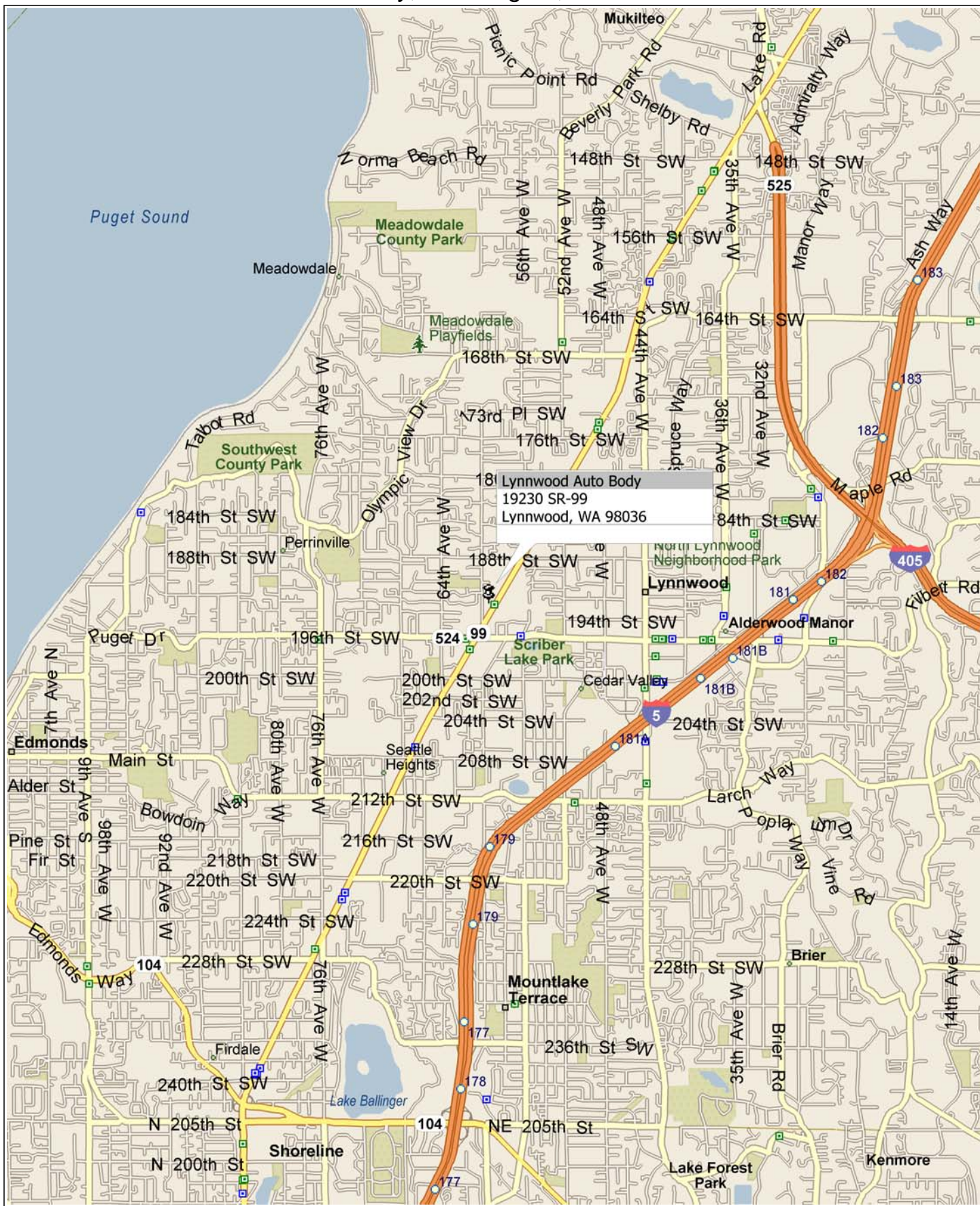
APPENDIX

- Site Location and Photographs
- Project Contract Documents
- Boring Logs
- Analytical Results and Chain of Custody
- Supporting Documents

APPENDICES

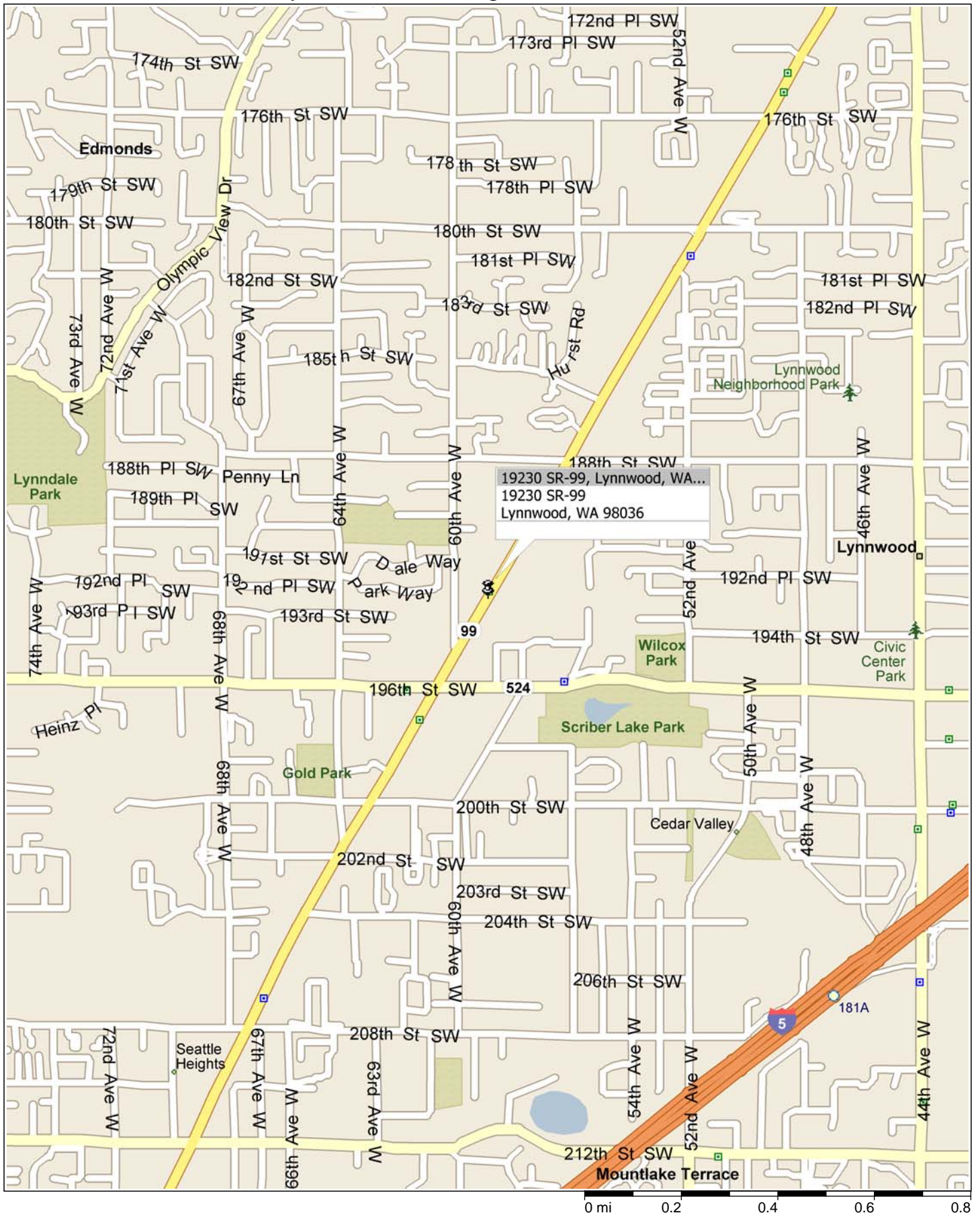
SITE LOCATION AND PHOTOGRAPHS

Cedar Valley, Washington, United States



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Portions © 1990–2006 InstallShield Software Corporation. All rights reserved. Certain mapping and direction data © 2005 NAVTEQ. All rights reserved. The Data for areas of Canada includes information taken with permission from Canadian authorities, including: © Her Majesty the Queen in Right of Canada, © Queen's Printer for Ontario. NAVTEQ and NAVTEQ ON BOARD are trademarks of NAVTEQ. © 2005 Tele Atlas North America, Inc. All rights reserved. Tele Atlas and Tele Atlas North America are trademarks of Tele Atlas, Inc.

Lynnwood, Washington, United States





PAGE 1 : Lynwood Auto Body Shop / Kelly's Furniture:
PH 3 - Jan 2017 - East Shop ventilation (View NW)



Southeast Shop (View east)



B-31 (View north)



B-31 Cores



B-32 (View east)



B-32 Cores



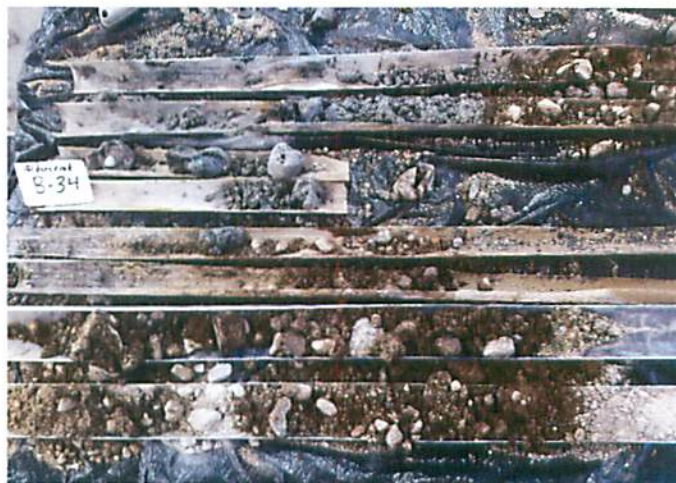
PAGE 2 : Lynwood Auto Body Shop / Kelly's Furniture:
PH 3 - Jan 2017 - B-33 (View east)



B-33 (View south toward Central Shop - right ; North
Shop - left.



B-34 (View north)



B-34 Cores

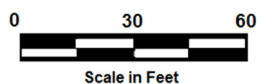


B-35 (View east)



B-35 Cores

FIGURES



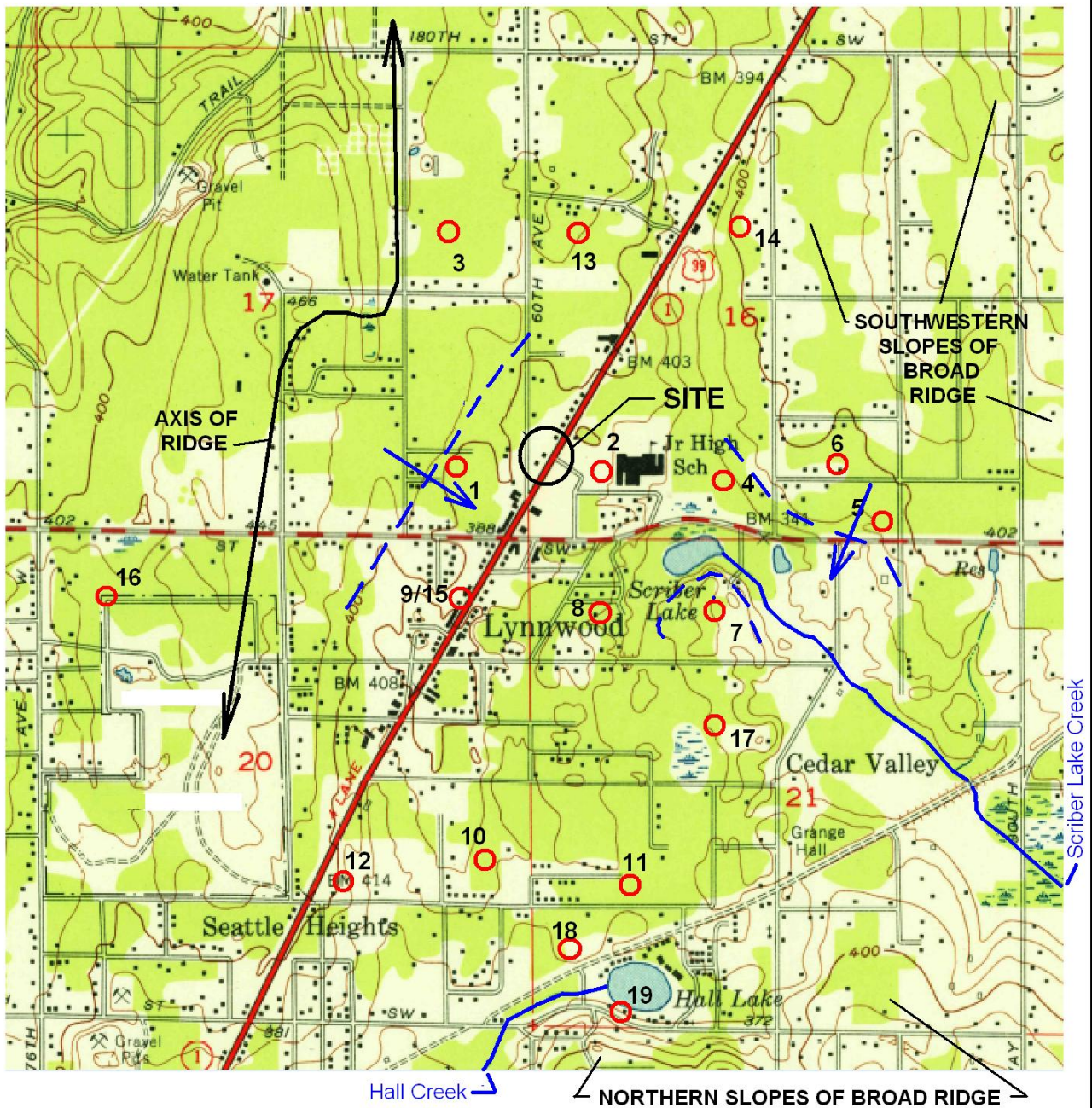
Aerotech Environmental Consulting, Inc
19600 International Blvd., Ste. 101
Seattle, Washington

Figure 1

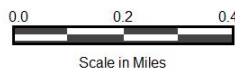
Drawing by McDermott : 15 Dec 2014

GROUNDWATER MONITORING WELL LOCATION MAP

Lynnwood Body Shop
19230 Highway 99
Lynnwood, WA



Shallow Aquifer Wells and Estimated Groundwater Elevations			
1 - 342	7 - 370	Scriber Lake - 330	Elevations in feet above mean sea level
4 - 343	9 - 325	Hall Lake - 330	
5 - 364			



- 1 ○ Water Well Location and Identification
- Inferred Groundwater Flow Direction
- Inferred 350 foot Equipotential Contour



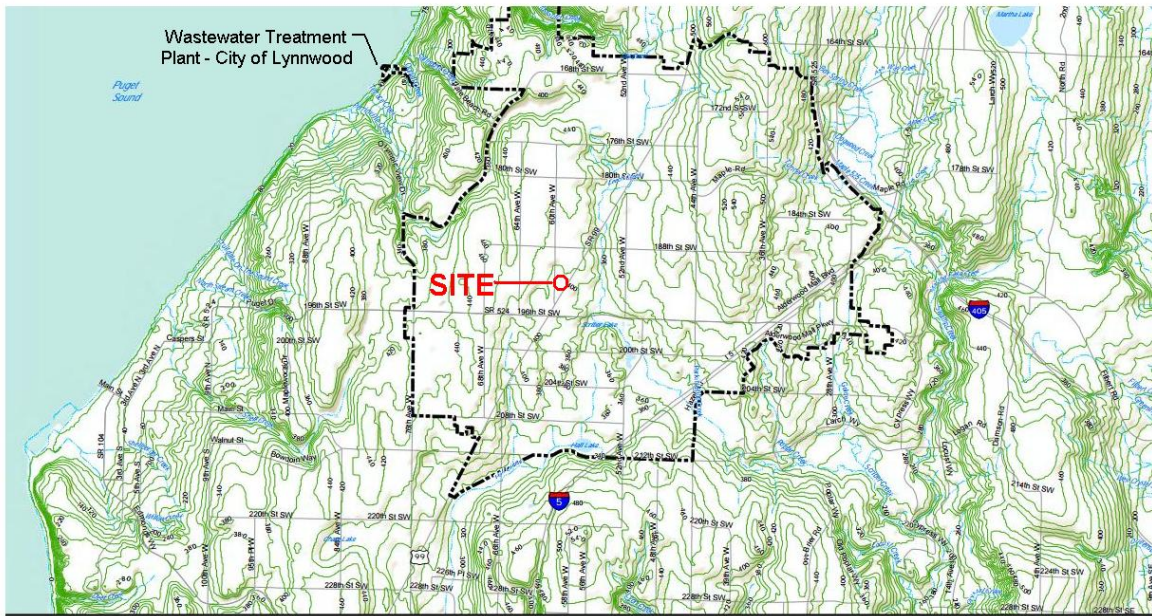
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SeaTac, Washington

FIGURE 2

Groundwater Flow Direction
Perched Aquifer
Atop Weathered Vashon Glacial Till
USGS Edmonds East
7.5-minute Quadrangle, 1953

Lynnwood Auto Body Shop
VCP Proj. No. NW 2555
19230 Highway 99
Lynnwood, WA

Drawing by McDermott : Aug 30, 2012 (Rev. Jan 20, 2017)



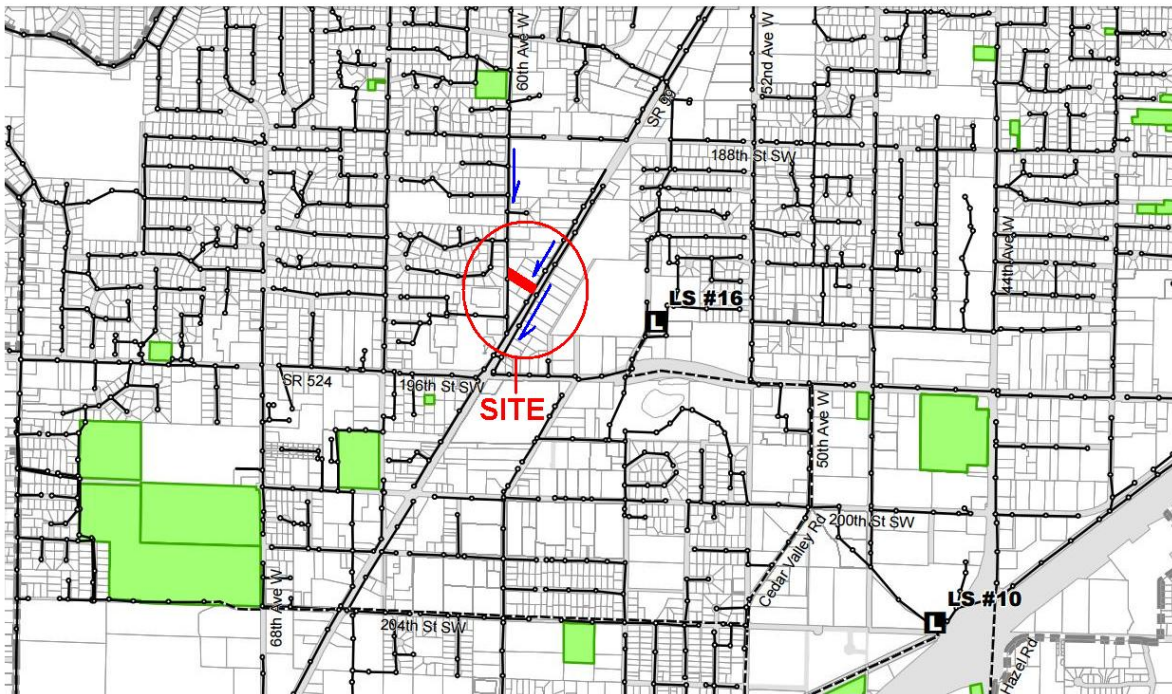
BHC CONSULTANTS
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206.505.3400
206.505.3400 (fax)
www.bhcconsultants.com
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GIS Base Data: Snohomish County
This map is a geographic representation based on information available. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.
Scale: 1" = 3,000'
Scale in Feet

City of Lynnwood
Water Bodies
Water Courses
20ft Contours

LYNNWOOD WASHINGTON

TOPOGRAPHIC MAP
City of Lynnwood
2012 Wastewater
Comprehensive Plan Update
August 2012



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GIS Base Data: Snohomish County
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Scale: 1" = 3,000'
Scale in Feet

City of Lynnwood
Water Bodies
Water Courses
20ft Contours

LYNNWOOD WASHINGTON

CITY SEWER MAP
City of Lynnwood
2012 Wastewater
Comprehensive Plan Update
August 2012

Direction of gravity flow
in sewers →

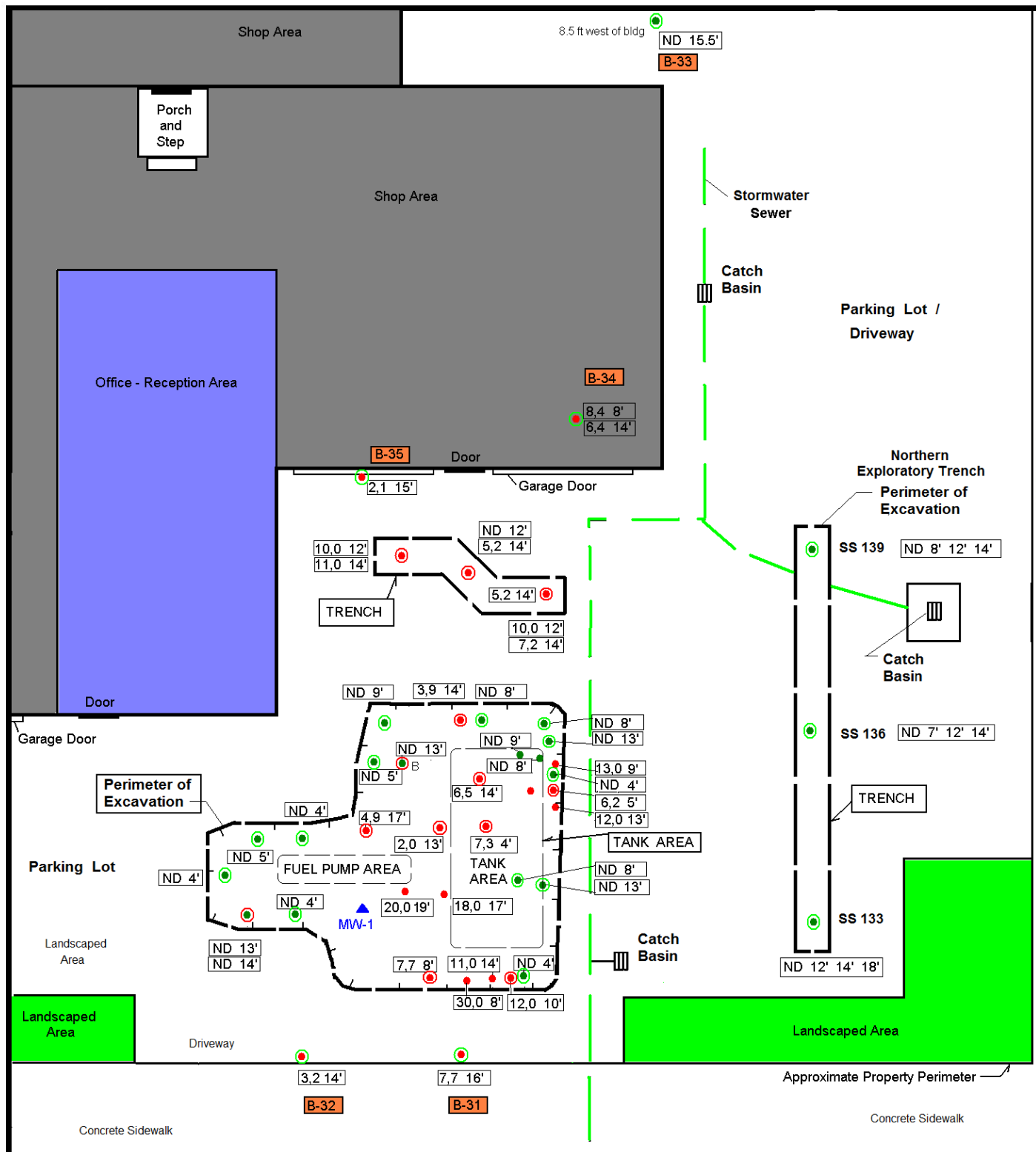
Aerotech Environmental Consulting, Inc
13925 Interurban Avenue South, Ste 210
Seattle, Washington
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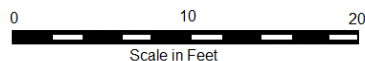
FIGURE 2A

**Topographic Map Excerpt
and Sewer Main Map
City of Lynnwood, Washington**

**Lynnwood Auto Body Shop
VCP Proj. No. NW 2555
19230 Highway 99
Lynnwood, WA**



HIGHWAY 99



TPH-diesel
x 1,000
mg/kg - 5.2 14'

ND = Not Detected
or < 2,000 mg/kg (MTCA Method A Cleanup Level)

Petroleum Constituent Concentration in Soil

Location Name
Phase 3
Jan 13, 2017

● Soil sample location
● Red denotes concentrations
above WA MTCA Method A
Cleanup Levels (indicated here)
● TPH-gas > 30 mg/kg
"B" denotes Benzene exceedance

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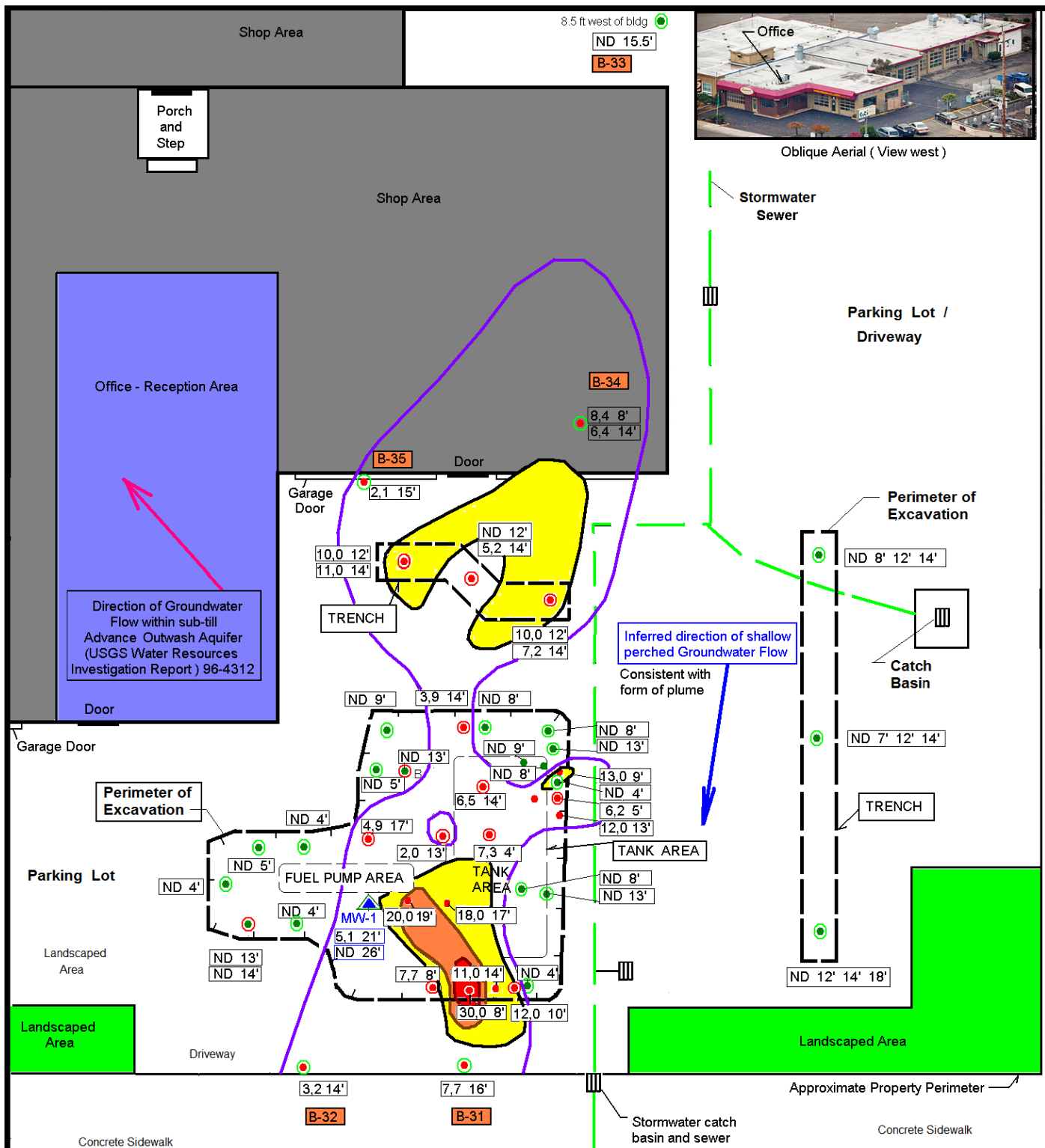
Drawing by McDermott : 23 Jan 2017

FIGURE 3

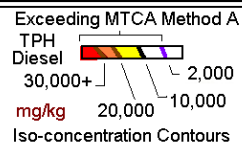
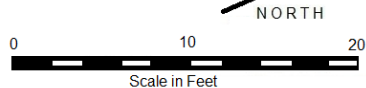
PHASE 3 INVESTIGATION

Historic Soil Sample Locations and Jan 2017
Borehole Location Map - With Analytical Results

Lynnwood Body Shop
(Kelly's Furniture Refinishing)
19230 Highway 99
Lynnwood, WA



HIGHWAY 99



Petroleum Constituent Concentration is Soil

TPH-diesel

x 1,000

mg/kg -5.2 14'

Depth (feet)

ND = Not Detected or < 2,000 mg/kg (MTCA Method A Cleanup Level)

Location Name

Phase 3

Jan 13, 2017

Well screen (below till) 40-55 ft

MW-1

B-31

Soil sample location

Red denotes diesel concentrations above WA MTCA Method A Cleanup Levels (indicated here)

or TPH-gas > 30 mg/kg

"B" denotes Benzene exceedance

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Seattle, Washington

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Drawing by McDermott 24 Jan 2017

FIGURE 4

PHASE 3 INVESTIGATION

PLUME PERIMETER DEFINITION

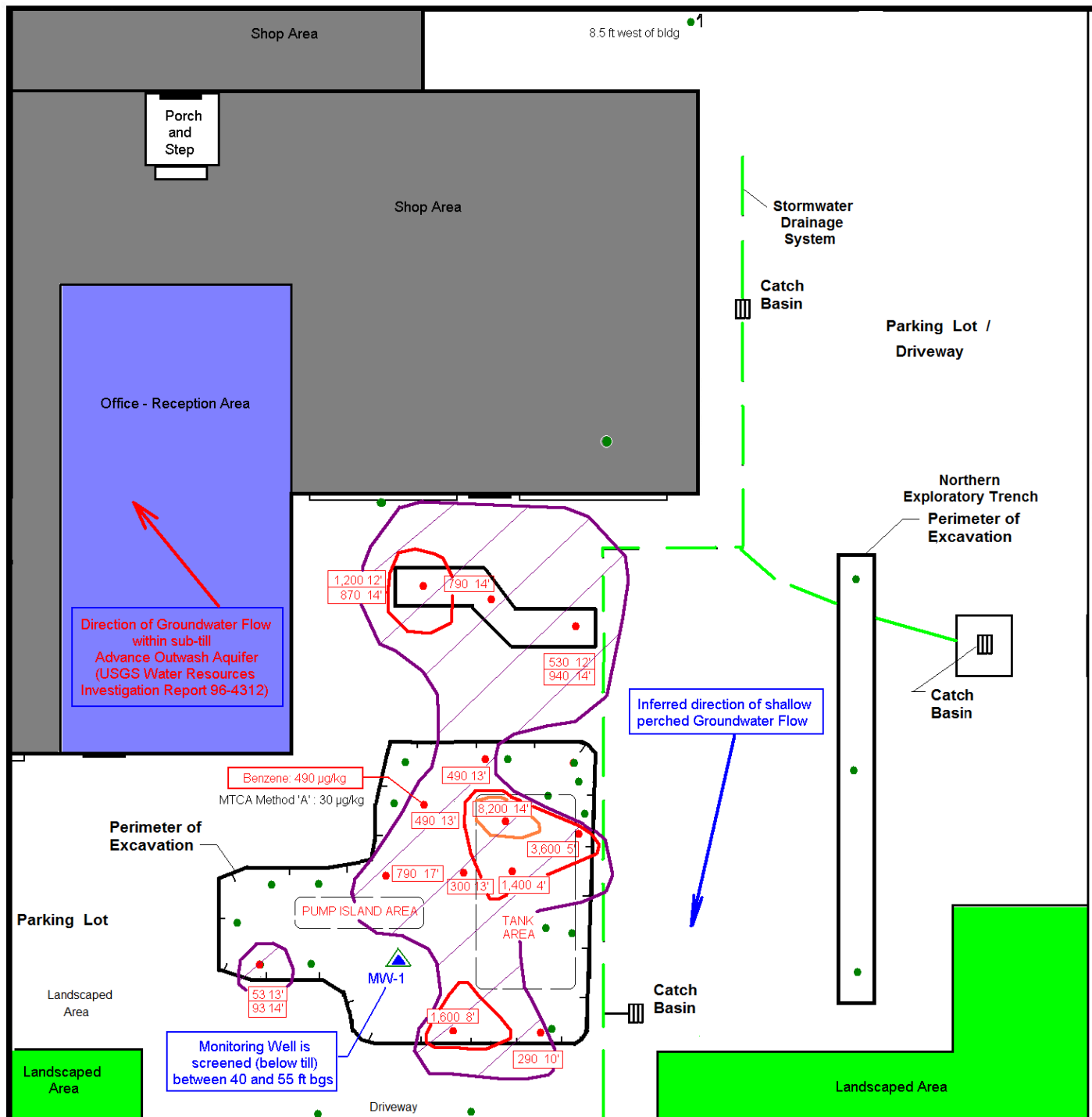
Total Petroleum Hydrocarbon - Diesel Concentrations

Lynnwood Body Shop

(Kelly's Furniture Refinishing)

19230 Highway 99

Lynnwood, WA



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Drawing by McDermott : 23 Jan 2017

FIGURE 5

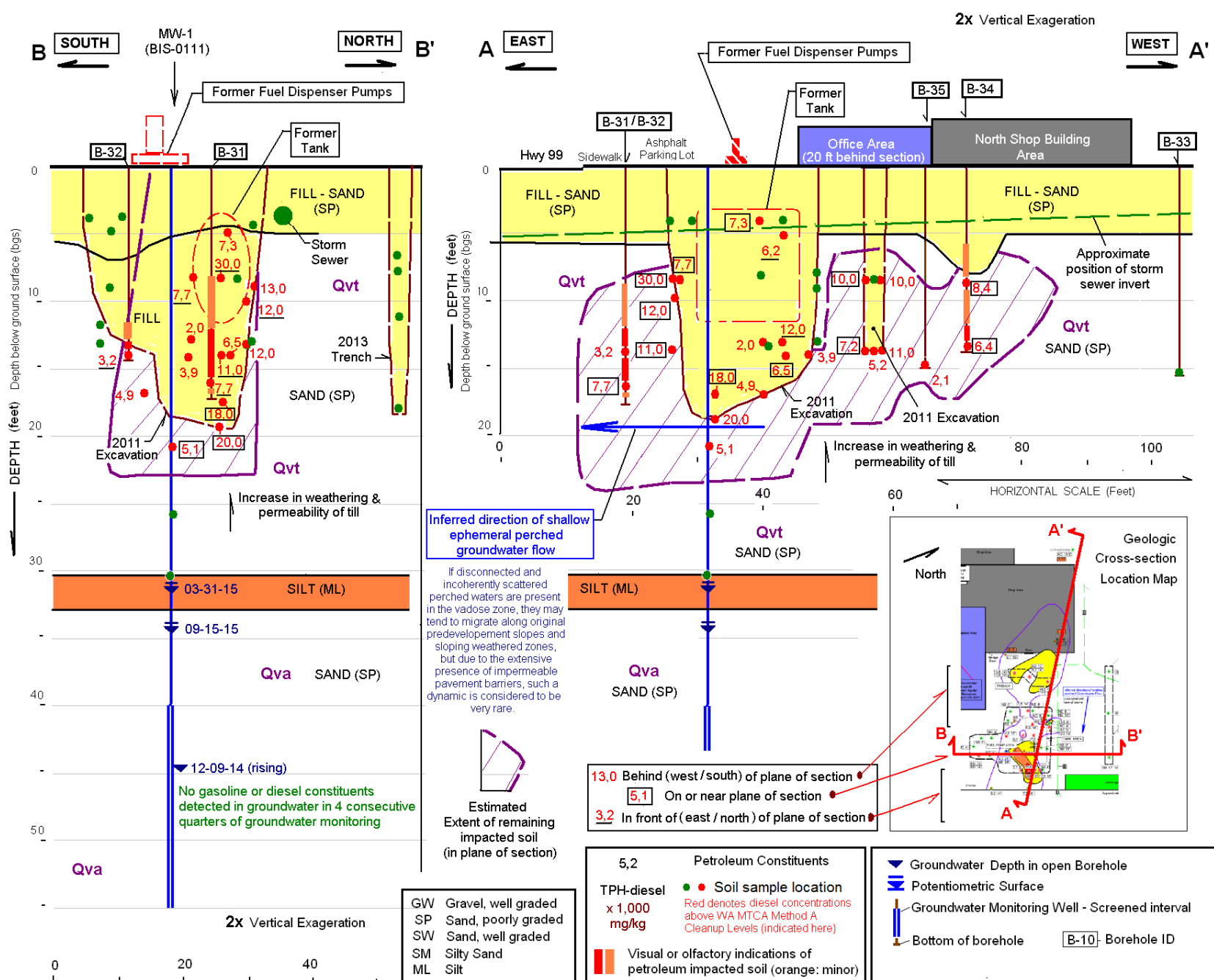
PHASE 3 INVESTIGATION PLUME PERIMETER DEFINITION TPH - Gasoline

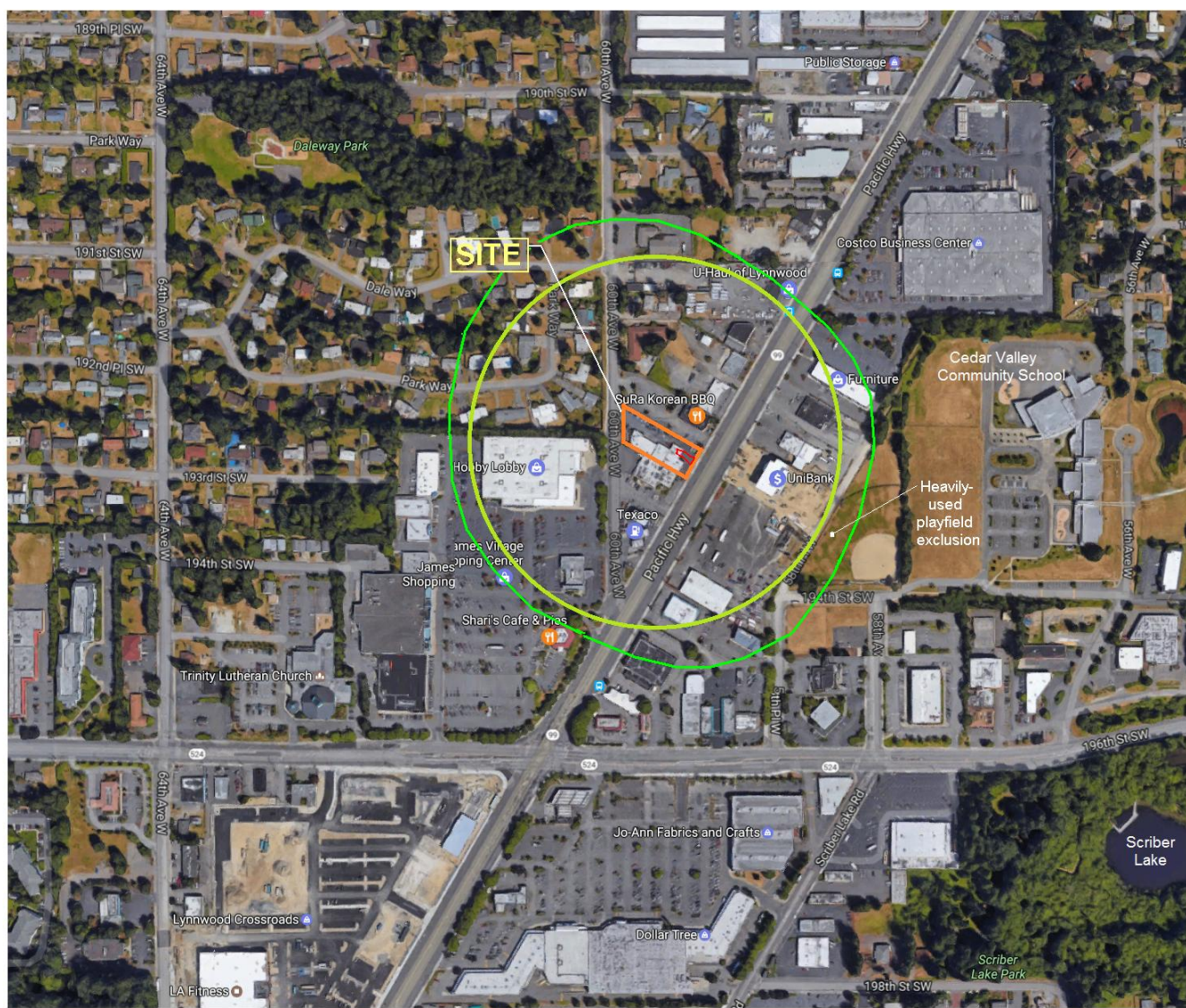
Lynnwood Body Shop
(Kelly's Furniture Refinishing)
19230 Highway 99
Lynnwood, WA

FIGURE 6

HYDROGEOLOGICAL CROSS-SECTIONS WITH LAB RESULTS

Lynnwood Body Shop
(Kelly's Furniture Refinishing)
19230 Highway 99
Lynnwood, WA



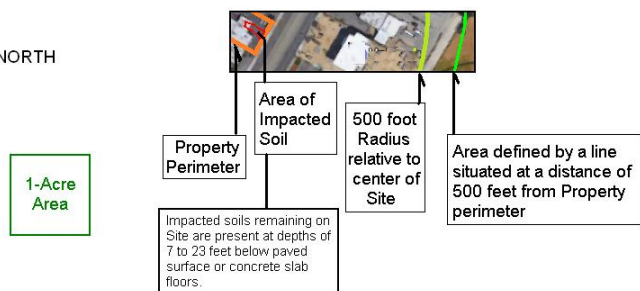


0 400 1,000

Image source: USGS, Google 2016

FEET

NORTH



Treatment based upon:
Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion
Implementation Memorandum No. 14
(State of Washington Department of Ecology Publication No. 16-09-046 - March 2016)

Terrestrial Ecological Evaluation Process- The Simplified Evaluation

No contiguous undeveloped tract of land greater than 1.5-acres in area is present within 500 feet of the Subject property.

There are no potential exposure pathways from soil contamination to soil biota, plants, or wildlife, due to the presence of artificial barriers (pavement and buildings)

Incomplete pathways may be due to the presence of man-made physical barriers, either currently existing. To ensure the barriers are maintained, a restrictive covenant shall be required by the department under a consent decree, agreed order, enforcement order, or as a condition in a written opinion letter issued under the Voluntary Cleanup Program.

The demonstration is based on a conditional point of compliance: an institutional control is required to prevent exposure caused by excavation of deeper soil.

The demonstration is based on commercial or industrial land use: an institutional control is required to prevent exposure to plants and soil biota in the event of a change in land use.

If the incomplete pathway is due to a man-made physical barrier, then an institutional control is required to ensure that the manmade barrier is maintained. Pavement and concrete building slab represent barriers on Site.

No hazardous substances listed in Table 749-2 for which a value is listed is, or will be, present in the soil at the point of compliance, at a concentration exceeding the value in Table 749-2, using the statistical compliance methods described in WAC 173-340-740(7).

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Seattle, Washington
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Drawing by McDermott : 28 Jan 2016

FIGURE 7

SITE AND VICINITY
Terrestrial Ecological Evaluation
AERIAL PHOTOGRAPH
Circa 2016

Lynnwood Body Shop
(Kelly's Furniture Refinishing)
19230 Highway 99
Lynnwood, WA

TABLES

TABLE 1

PROPERTY: Aldercrest - Lynnwood Body Shop (Kelly's Furniture)
19230 Highway 99, Lynnwood, Wa

Aerotech Environmental Consulting, Inc.
13925 Interurban Avenue South, Ste 210, Seattle, Wa

Analytical Results - TPH - DIESEL RANGE

Dupl

NWTPH-Dx, mg/kg		B-31 (13')	B-31 (16')	B-32 (14')	B-33 (15.5')	B-34 (8')	B-34 (14')	B-35 (15')	B-35 (15')	MTCA Method A Cleanup Limits
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	
Kerosene/Jet fuel Diesel/Fuel oil Heavy oil	20	nd	nd	nd	nd	nd	nd	nd	nd	2,000
	20	480	7,700	3,200	nd	8,400	6,400	2,100	2,000	2,000
	50	nd	nd	nd	nd	nd	nd	nd	nd	2,000
Moisture, %		13%	15%	12%		11%	13%	11%	11%	

Analytical Results - TPH - GASOLINE RANGE

Dupl

NWTPH-Gx / BTEX		B-31 (13')	B-31 (16')	B-32 (14')	B-32 (14')	B-33 (15.5')	B-34 (8')	B-34 (14')	B-35 (15')	MTCA Method A Cleanup Limits
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	

NWTPH-Gx, mg/kg										
Mineral spirits/Stoddard Gasoline	5.0	nd	nd	nd	nd	nd	nd	nd	nd	
	5.0	nd	nd	nd	nd	nd	nd	nd	nd	30

BTEX 8021B, µg/kg										
Benzene Toluene Ethylbenzene Xylenes	20	nd	nd	nd	nd	nd	nd	nd	nd	30
	50	nd	nd	nd	nd	nd	nd	nd	nd	7,000
	50	nd	120	nd	nd	nd	90	250	nd	6,000
	50	nd	190	nd	nd	nd	580	770	nd	9,000
Moisture, %				15%				11%	13%	

Analytical Results - VOLATILE ORGANIC COMPOUNDS

8260B, µg/kg		MTH BLK	LCS	B-31 (16')
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/18/17	01/18/17	01/18/17
Date analyzed	Limits	01/18/17	01/18/17	01/18/17
MTBE	100	nd		nd
Chloromethane	50	nd		nd
Vinyl chloride	50	nd		nd
Bromomethane	50	nd		nd
Chloroethane	50	nd		nd
Trichlorofluoromethane	50	nd		nd
1,1-Dichloroethene	50	nd		nd
Methylene chloride	20	nd		nd
trans-1,2-Dichloroethene	50	nd		nd
1,1-Dichloroethane	50	nd		nd
2,2-Dichloropropane	50	nd		nd
cis-1,2-Dichloroethene	50	nd		nd
Chloroform	50	nd		nd
1,1,1-Trichloroethane	50	nd		nd
Carbontetrachloride	50	nd		nd
1,1-Dichloropropene	50	nd		nd
1,2-Dichloroethane(EDC)	20	nd		nd
Trichloroethene	20	nd	98%	nd
1,2-Dichloropropane	50	nd		nd
Dibromomethane	50	nd		nd
Bromodichloromethane	50	nd		nd
cis-1,3-Dichloropropene	50	nd		nd
trans-1,3-Dichloropropene	50	nd		nd
1,1,2-Trichloroethane	50	nd		nd
Tetrachloroethene	50	nd		nd
1,3-Dichloropropane	50	nd		nd
Dibromochloromethane	20	nd		nd
1,2-Dibromoethane (EDB)*	5	nd		nd
Chlorobenzene	50	nd	94%	nd
1,1,1,2-Tetrachloroethane	50	nd		nd
1,2,3-Trichloropropane	50	nd		nd
1,1,2,2-Tetrachloroethane	50	nd		nd
2-Chlorotoluene	50	nd		nd
4-Chlorotoluene	50	nd		nd
1,3-Dichlorobenzene	50	nd		nd
1,4-Dichlorobenzene	50	nd		nd
1,2-Dichlorobenzene	50	nd		nd
1,2-Dibromo-3-Chloropropane	50	nd		nd
1,2,4-Trichlorobenzene	50	nd		nd
1,2,3-Trichlorobenzene	50	nd		nd

*Instrument detection limits

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed

Results reported on dry-weight basis
nd - not detected at listed reporting limits

M - matrix interference
Acceptable RPD limit: 30%
Acceptable Recovery limits: 70% TO 130%

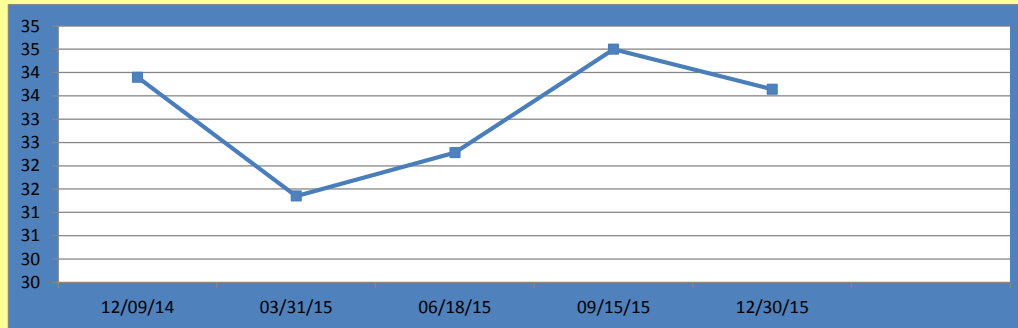
Groundwater Monitoring Well Analytical Results - VCP NW 2555

Lynnwood Auto Body, 19230 Hwy 99, Lynnwood, Washington

Monitoring Well 1 (Asphalt Lot and Driveway, east of building office area)

Well Depth	Sampling Date	Ground Water Level	GRO	DRO Kerosine/ Diesel	DRO Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	Total Lead	PAH	Chlorinated VOCs
Feet		Depth TOC* (Feet)	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx	EPA8021B	EPA8021B	EPA8021B	EPA8021B	EPA7010	EPA8270	8260B
55	12/09/14	33.90	<100	<200	<200	<1.0	<1.0	<1.0	<1.0	----	<1.0	----
	03/31/15	31.35	<100	<200	<500	<1.0	<1.0	<1.0	<1.0	----	<1.0	----
	06/18/15	32.28	<100	<200	<500	<1.0	<1.0	<1.0	<1.0	----	----	----
	09/15/15	34.50	<100	<200	<500	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	ND
	12/30/15	33.64	<100	<200	<500	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	----
MTCA Method A Cleanup Limit			800 mg/L	200 mg/L	500 mg/L	5 ug/L	700 ug/L	1,000 ug/L	1,000 ug/L	15 ug/L	0.1ug/L	Varies

Hydrograph



MW-1

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

Study	Specific Loca	Field Coll	Field Collect	Fid Fiel	Fiel	Sample ID	Sample Matrix	Sample	Result Parameter Name	Lab Analysis	Result Value	Result U	Result R	Re	Res	Digestion	Result Method	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Benzene	12/8/2014		0.02	mg/Kg	0.02	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Benzene	12/8/2014		0.02	mg/Kg	0.02	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Benzene	12/8/2014		0.02	mg/Kg	0.02	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Ethylbenzene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Toluene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Xylenes	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Ethylbenzene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Toluene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Xylenes	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Ethylbenzene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Toluene	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Xylenes	12/8/2014		0.05	mg/Kg	0.05	MRL	U	Dry	SW8021B	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Acenaphthylene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Benzo(a)anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Benzo(a)pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Benzo(b)fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Benzo(k)fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Chrysene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Dibenzo(a,h)anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Fluorene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Indeno(1,2,3-cd)pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Naphthalene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	1-Methylnaphthalene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	2-Methylnaphthalene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Phenanthrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Benzo(a)anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Benzo(a)pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Benzo(b)fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Benzo(k)fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Chrysene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Dibenzo(a,h)anthracene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Fluoranthene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Indeno(1,2,3-cd)pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Pyrene	12/8/2014		0.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Lead	12/8/2014		1.00	mg/Kg	1.00	MRL	U	Total	SW7010	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Acenaphthylene	12/8/2014		1.00	mg/Kg	1.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Lead	12/8/2014		1.00	mg/Kg	1.00	MRL	U	Total	SW7010	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Naphthalene	12/8/2014		1.10	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Phenanthrene	12/8/2014		4.60	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Gasoline Range Organics	12/8/2014		5.00	mg/Kg	5.00	MRL	U	Dry	NWTPH-GX	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	1,2-Dibromoethane	12/8/2014		5.00	mg/Kg	5.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Gasoline Range Organics	12/8/2014		5.00	mg/Kg	5.00	MRL	U	Dry	NWTPH-GX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Gasoline Range Organics	12/8/2014		5.00	mg/Kg	5.00	MRL	U	Dry	NWTPH-GX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	1,2-Dibromoethane	12/8/2014		5.00	mg/Kg	5.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	2-Methylnaphthalene	12/8/2014		11.00	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	1-Methylnaphthalene	12/8/2014		19.00	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	#1 Diesel	12/8/2014		20.00	mg/Kg	20.00	MRL	U	Dry	NWTPH-DX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	#1 Diesel	12/8/2014		20.00	mg/Kg	20.00	MRL	U	Dry	NWTPH-DX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Fluorene	12/8/2014		37.00	mg/Kg	0.10	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Heavy Fuel Oil	12/8/2014		50.00	mg/Kg	50.00	MRL	U	Dry	NWTPH-DX	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	1,2-Dichloroethane	12/8/2014		50.00	mg/Kg	50.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 26	ft	MW-1 (26	Solid/Sediment	Soil	Heavy Fuel Oil	12/8/2014		50.00	mg/Kg	50.00	MRL	U	Dry	NWTPH-DX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Heavy Fuel Oil	12/8/2014		50.00	mg/Kg	50.00	MRL	U	Dry	NWTPH-DX	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	1,2-Dichloroethane	12/8/2014		50.00	mg/Kg	50.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	Methyl t-butyl ether	12/8/2014		100.00	mg/Kg	100.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 31	ft	MW-1 (31	Solid/Sediment	Soil	Methyl t-butyl ether	12/8/2014		100.00	mg/Kg	100.00	MRL	U	Dry	SW8270	
NW2555-MW-1	Sample	12/3/2014	# 21	ft	MW-1 (21	Solid/Sediment	Soil	#1 Diesel	12/8/2014		5100.00	mg/Kg	20.00	MRL	U	Dry	NWTPH-DX	
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Benzene	8/2/2011		0.02	mg/Kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Toluene	8/2/2011		0.05	mg/Kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Mercury	9/22/2011		0.50	mg/Kg	0.5	MRL	U	Total	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Ethylbenzene	8/2/2011		0.56	mg/Kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Cadmium	9/22/2011		1.00	mg/Kg	1	MRL	U	Total	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Xylenes	8/2/2011		1.70	mg/Kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Lead	9/22/2011		5.00	mg/Kg	5	MRL	U	Total	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Arsenic	9/22/2011		5.00	mg/Kg	5	MRL	U	Total	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Chromium	9/22/2011		17.00	mg/Kg	5	MRL	U	Total	SW6020
NW2555-SB-2	Sample	7/27/2011	5	6	ft	SB-2-6	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011		9500.00	mg/Kg	10	MRL	U	Total	SW6020
NW2555-SB-3	Sample	7/27/2011	3	4	ft	SB-3-4	Solid/Sediment	Soil	Benzene	8/2/2011		0.02	mg/Kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-3	Sample	7/27/2011	9	10	ft	SB-3-10	Solid/Sediment	Soil	Benzene	8/2/2011		0.02	mg/Kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-3	Sample	7/27/2011	3	4	ft	SB-3-4	Solid/Sediment	Soil	Ethylbenzene	8/2/2011		0.05	mg/Kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-3	Sample	7/27/2011	3	4	ft	SB-3-4	Solid/Sediment	Soil	Toluene	8/2/2011		0.05	mg/Kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-3	Sample	7/27/2011	9	10	ft	SB-3-10	Solid/Sediment	Soil	Toluene	8/2/2011		0.05	mg/Kg	0.05	MRL	U	Dry	SW6020

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

NW2555-SB-4	Sample	7/27/2011	9	10	ft	SB-4-10	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-5	Sample	7/27/2011	#	13	ft	SB-5-13	Solid/Sediment	Soil	#1 Diesel	8/2/2011	6900.00	mg/kg	250	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	#1 Diesel	8/2/2011	250.00	mg/kg	250	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	#1 Diesel	8/2/2011	250.00	mg/kg	250	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	3	4	ft	SB-6-4	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-6	Sample	7/27/2011	9	10	ft	SB-6-10	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	#1 Diesel	8/2/2011	250.00	mg/kg	250	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	#1 Diesel	8/2/2011	250.00	mg/kg	250	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	3	4	ft	SB-7-4	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-7	Sample	7/27/2011	9	10	ft	SB-7-10	Solid/Sediment	Soil	Heavy Fuel Oil	8/2/2011	500.00	mg/kg	500	MRL	U	Dry	SW6020
NW2555-SB-8	Sample	7/27/2011	#	13	ft	SB-8-13	Solid/Sediment	Soil	Benzene	8/2/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SB-8	Sample	7/27/2011	#	13	ft	SB-8-13	Solid/Sediment	Soil	Ethylbenzene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-8	Sample	7/27/2011	#	13	ft	SB-8-13	Solid/Sediment	Soil	Toluene	8/2/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SB-8	Sample	7/27/2011	#	13	ft	SB-8-13	Solid/Sediment	Soil	Xylenes	8/2/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SB-8	Sample	7/27/2011	#	13	ft	SB-8-13	Solid/Sediment	Soil	Gasoline Range Organics	8/2/2011	480.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	#1 Diesel	10/4/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-101	Sample	10/4/2011	3	4	ft	SS-101-4	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	#1 Diesel	10/4/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-102	Sample	10/4/2011	3	4	ft	SS-102-4	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	12.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	#1 Diesel	10/4/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-103	Sample	10/4/2011	3	4	ft	SS-103-4	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	#1 Diesel	10/4/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-104	Sample	10/4/2011	4	5	ft	SS-104-5	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	14	ft	SS-105-13	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	13	ft	SS-106-13	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	14	ft	SS-105-13	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	14	ft	SS-105-13	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	13	ft	SS-106-13	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	13	ft	SS-106-13	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	14	ft	SS-105-13	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	13	ft	SS-106-13	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-105	Sample	10/4/2011	#	13	ft	SS-106-13	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	53.00	mg/kg	10				

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

NW2555-SS-108	Sample	10/4/2011	8	9 ft	SS-108-9	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-108	Sample	10/4/2011	8	9 ft	SS-108-9	Solid/Sediment	Soil	#1 Diesel	10/4/2011	13000.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	13.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	#1 Diesel	10/4/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-109	Sample	10/4/2011	3	4 ft	SS-109-4	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-110	Sample	10/4/2011	#	17 ft	SS-110-17	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-110	Sample	10/4/2011	#	17 ft	SS-110-17	Solid/Sediment	Soil	#1 Diesel	10/4/2011	18000.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-111	Sample	10/4/2011	#	13 ft	SS-111-13	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-111	Sample	10/4/2011	#	13 ft	SS-111-13	Solid/Sediment	Soil	#1 Diesel	10/4/2011	12000.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Benzene	10/4/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	300.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-112	Sample	10/4/2011	#	13 ft	SS-112-13	Solid/Sediment	Soil	#1 Diesel	10/4/2011	2000.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-113	Sample	10/4/2011	7	8 ft	SS-113-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-113	Sample	10/4/2011	7	8 ft	SS-113-8	Solid/Sediment	Soil	#1 Diesel	10/4/2011	13000.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-114	Sample	10/4/2011	#	19 ft	SS-114-18	Solid/Sediment	Soil	Acenaphthene	11/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270
NW2555-SS-114	Sample	10/4/2011	#	19 ft	SS-114-18	Solid/Sediment	Soil	Acenaphthylene	11/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270
NW2555-SS-114	Sample	10/4/2011	#	19 ft	SS-114-18	Solid/Sediment	Soil	Anthracene	11/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270
NW2555-SS-114	Sample	10/4/2011	#	19 ft	SS-114-18	Solid/Sediment	Soil	Benzo(a)anthracene	11/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Benzo(b)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Benzo(ghi)perylene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Benzo(k)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Chrysene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Dibenz(o,a,h)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Indeno(1,2,3-cd)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Ethylbenzene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Toluene	10/4/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Xylenes	10/4/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Pyrene	10/11/2011	0.27	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Anthracene	10/11/2011	0.33	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Acenaphthylene	10/11/2011	0.40	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Naphthalene	10/11/2011	1.70	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Fluorene	10/11/2011	2.60	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Phenanthrene	10/11/2011	3.80	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	1-Methylnaphthalene	10/11/2011	11.00	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/5/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	2-Methylnaphthalene	10/11/2011	12.00	mg/kg	0.02	MRL	Dry		SW8270	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/4/2011	200.00	mg/kg	200	MRL	Dry		SW6020	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	#1 Diesel	10/4/2011	6500.00	mg/kg	100	MRL	Dry		SW6020	
NW2555-SS-125	Sample	10/4/2011	# 14	ft	SS-125-14	Solid/Sediment	Soil	Gasoline Range Organics	10/4/2011	8200.00	mg/kg	10	MRL	Dry		SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	490.00	mg/kg	10	MRL	Dry		SW6020	
NW2555-SS-126	Sample	10/5/2011	# 14	ft	SS-126-14	Solid/Sediment	Soil	#1 Diesel	10/5/2011	3900.00	mg/kg	100	MRL	Dry		SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Benzene	10/5/2011	160.00	mg/kg	0.02	MRL	Dry		SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	490.00	mg/kg	10	MRL	Dry		SW6020	
NW2555-SS-127	Sample	10/5/2011	# 13	ft	SS-127-13	Solid/Sediment	Soil	#1 Diesel	10/5/2011	1100.00	mg/kg	100	MRL	Dry		SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-129	Sample	10/5/2011	# 13	ft	SS-129-13	Solid/Sediment	Soil	#1 Diesel	10/5/2011	890.00	mg/kg	100	MRL	Dry		SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-130	Sample	10/5/2011	# 8	ft	SS-130-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	680.00	mg/kg	10	MRL	Dry		SW6020	
NW2555-SS-131	Sample	10/5/2011	# 13	ft	SS-131-13	Solid/Sediment	Soil	#1 Diesel	10/5/2011	3300.00	mg/kg	100	MRL	Dry		SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-132	Sample	10/5/2011	# 8	ft	SS-132-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-133	Sample	10/5/2011	# 7	8	ft	SS-133-8	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-133	Sample	10/5/2011	# 12	ft	SS-134-12	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Acenaphthene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Acenaphthylene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzo(a)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzo(a)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzo(b)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzo(ghi)perylene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Benzo(k)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Chrysene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Dibenz(o,a,h)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Fluorene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-133	Sample	10/5/2011	# 14	ft	SS-135-14	Solid/Sediment	Soil	Fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Acenaphthene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Acenaphthylene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Benzo(a)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Benzo(a)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Benzo(b)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Benzo(g,h)perylene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Benzo(k)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Chrysene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Dibenzo(a,h)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Fluorene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Indeno(1,2,3-cd)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Naphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	1-Methylnaphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	2-Methylnaphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Phenanthrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	7	8	ft	SS-136-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-136	Sample	10/5/2011	# 12	ft	SS-137-12	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-136	Sample	10/5/2011	# 14	ft	SS-138-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Acenaphthene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Acenaphthylene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzo(a)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzo(a)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzo(b)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzo(g,h)perylene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Benzo(k)fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Chrysene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Dibenzo(a,h)anthracene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Fluorene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Fluoranthene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Indeno(1,2,3-cd)pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Naphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	1-Methylnaphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	2-Methylnaphthalene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Phenanthrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Pyrene	10/11/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW8270	
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Ethylbenzene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Toluene	10/5/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Xylenes	10/5/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	7	8	ft	SS-139-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-139	Sample	10/5/2011	# 12	ft	SS-140-12	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-139	Sample	10/5/2011	# 14	ft	SS-141-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020	
NW2555-SS-142	Sample	10/5/2011	# 12	ft	SS-142-12	Solid/Sediment	Soil	Benzene	10/5/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020	
NW2555-SS-142	Sample	10/5/2011	7	8	ft	SS-143-8	Solid/Sediment	Soil	Benzene	10/6/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2															

TABLE 2 Aldercrest-Results SOIL (EIM April 2016).xls

NW2555-SS-142	Sample	10/5/2011	7	8 ft	SS-143-8	Solid/Sediment	Soil	Gasoline Range Organics	10/6/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	7	8 ft	SS-143-8	Solid/Sediment	Soil	#1 Diesel	10/5/2011	100.00	mg/kg	100	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	#	12 ft	SS-142-12	Solid/Sediment	Soil	Heavy Fuel Oil	10/5/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	7	8 ft	SS-143-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/6/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	#	14 ft	SS-144-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/6/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	#	14 ft	SS-144-14	Solid/Sediment	Soil	Gasoline Range Organics	10/6/2011	870.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-142	Sample	10/5/2011	#	12 ft	SS-142-12	Solid/Sediment	Soil	Gasoline Range Organics	10/5/2011	1200.00	mg/kg	10	MRL			SW6020
NW2555-SS-142	Sample	10/5/2011	#	12 ft	SS-142-12	Solid/Sediment	Soil	#1 Diesel	10/5/2011	10000.00	mg/kg	100	MRL			SW6020
NW2555-SS-142	Sample	10/5/2011	#	14 ft	SS-144-14	Solid/Sediment	Soil	#1 Diesel	10/6/2011	11000.00	mg/kg	100	MRL			SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Benzene	10/6/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	12 ft	SS-146-12	Solid/Sediment	Soil	Benzene	10/6/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	14 ft	SS-147-14	Solid/Sediment	Soil	Benzene	10/6/2011	0.02	mg/kg	0.02	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Ethylbenzene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Toluene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	12 ft	SS-146-12	Solid/Sediment	Soil	Ethylbenzene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	12 ft	SS-146-12	Solid/Sediment	Soil	Toluene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	14 ft	SS-147-14	Solid/Sediment	Soil	Ethylbenzene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	14 ft	SS-147-14	Solid/Sediment	Soil	Toluene	10/6/2011	0.05	mg/kg	0.05	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Xylenes	10/6/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	12 ft	SS-146-12	Solid/Sediment	Soil	Xylenes	10/6/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	14 ft	SS-147-14	Solid/Sediment	Soil	Xylenes	10/6/2011	0.15	mg/kg	0.15	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Gasoline Range Organics	10/6/2011	10.00	mg/kg	10	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	#1 Diesel	10/6/2011	100.00	mg/kg	100	MRL	U	Dry	SW8270
NW2555-SS-145	Sample	10/6/2011	7	8 ft	SS-145-8	Solid/Sediment	Soil	Heavy Fuel Oil	10/6/2011	200.00	mg/kg	200	MRL	U	Dry	SW6020
NW2555-SS-145	Sample	10/6/2011	#	12 ft	SS-146-12	Solid/Sediment	Soil	Heavy Fuel Oil	10/6/2011	200.00	mg/kg	200	MRL			SW6020
NW2555-SS-145	Sample	10/6/2011	#	14 ft	SS-147-14	Solid/Sediment	Soil	Heavy Fuel Oil	10/6/2011	200.00	mg/kg	200	MRL			SW6020

TABLE 3 Aldercrest-Results WATER (EIM April 2016).xls

Study_Specific_Locat	Field_Collecti	Fid	File	Sample_ID	Sample_Source	Result_Parameter_Name	Lab_Analysis	Result_Value	Unit	Result_Reportin	Result	Re	Fraction	Resu	Result_Method
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	#1 Diesel	8/3/2011	400000.00	ug/L	250	MRL		Total		NWTPH-DX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Heavy Fuel Oil	8/3/2011	500.00	ug/L	500	MRL	U	Total		NWTPH-DX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Gasoline Range Organics	8/3/2011	59000.00	ug/L	100	MRL		Total		NWTPH-GX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Benzene	8/3/2011	1.00	ug/L	1	MRL	U	Total		NWTPH-GX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Ethylbenzene	8/3/2011	1.00	ug/L	1	MRL	U	Total		NWTPH-GX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Toluene	8/3/2011	1.00	ug/L	1	MRL	U	Total		NWTPH-GX
NW2555-SB-1	7/27/2011	#	14 ft	SB-1-W	Groundwater	Xylenes	8/3/2011	3.00	ug/L	3	MRL	U	Total		NWTPH-GX
NW2555-SB-3	7/27/2011	#	14 ft	SB-1-W	Groundwater	Lead	8/2/2011	5.20	ug/L	2	MRL		Total		SW6020
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	#1 Diesel	8/3/2011	30000.00	ug/L	250	MRL		Total		NWTPH-DX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Heavy Fuel Oil	8/3/2011	500.00	ug/L	500	MRL	U	Total		NWTPH-DX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Gasoline Range Organics	8/3/2011	2000.00	ug/L	100	MRL		Total		NWTPH-GX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Benzene	8/3/2011	2.40	ug/L	1	MRL		Total		NWTPH-GX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Ethylbenzene	8/3/2011	1.40	ug/L	1	MRL		Total		NWTPH-GX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Toluene	8/3/2011	1.00	ug/L	1	MRL	U	Total		NWTPH-GX
NW2555-SB-3	7/27/2011	#	11 ft	SB-3-W	Groundwater	Xylenes	8/3/2011	3.00	ug/L	3	MRL	U	Total		NWTPH-GX
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	#1 Diesel	4/2/2015	0.20	ug/L	0.20	MRL	U	Total		NWTPH-DX
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Heavy Fuel Oil	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		NWTPH-DX
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Gasoline Range Organics	4/2/2015	100.00	ug/L	100.00	MRL	U	Total		NWTPH-GX
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzene	4/2/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Ethylbenzene	4/2/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Toluene	4/2/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Xylenes	4/2/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Acenaphthylene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Anthracene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzo(a)anthracene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzo(a)pyrene	4/2/2015	0.10	ug/L	0.10	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzo(b)fluoranthene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzo(ghi)perylene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Benzo(k)fluoranthene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Chrysene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Dibenzo(a,h)anthracene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Fluorene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Fluoranthene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Indeno(1,2,3-cd)pyrene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Naphthalene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	1-Methylnaphthalene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	2-Methylnaphthalene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Phenanthrene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Pyrene	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Methyl t-butyl ether	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	1,2-Dichloroethane	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	1,2-Dibromoethane	4/2/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	3/31/2015	#	31 ft	MW-1	Groundwater	Lead	4/2/2015	2.00	ug/L	2.00	MRL	U	Total		SW7010
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	#1 Diesel	6/22/2015	0.20	ug/L	0.20	MRL	U	Total		NWTPH-DX
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Heavy Fuel Oil	6/22/2015	0.50	ug/L	0.50	MRL	U	Total		NWTPH-DX
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Gasoline Range Organics	6/22/2015	100.00	ug/L	100.00	MRL	U	Total		NWTPH-GX
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Benzene	6/22/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Ethylbenzene	6/22/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Toluene	6/22/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	6/18/2015	#	31 ft	MW-1	Groundwater	Xylenes	6/22/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	#1 Diesel	9/18/2015	0.20	ug/L	0.20	MRL	U	Total		NWTPH-DX
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Heavy Fuel Oil	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		NWTPH-DX
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Gasoline Range Organics	9/18/2015	100.00	ug/L	100.00	MRL	U	Total		NWTPH-GX
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Ethylbenzene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Toluene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Xylenes	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8021B
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Acenaphthylene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Anthracene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzo(a)anthracene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzo(a)pyrene	9/18/2015	0.10	ug/L	0.10	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzo(b)fluoranthene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzo(ghi)perylene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Benzo(k)fluoranthene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Chrysene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Dibenzo(a,h)anthracene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Fluorene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Fluoranthene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Indeno(1,2,3-cd)pyrene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Naphthalene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1-Methylnaphthalene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	2-Methylnaphthalene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Phenanthrene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Pyrene	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Methyl t-butyl ether	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2-Dichloroethane	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2-Dibromoethane	9/18/2015	0.50	ug/L	0.50	MRL	U	Total		SW8270
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Lead	9/18/2015	2.00	ug/L	2.00	MRL	U	Total		SW7010
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Tetrachloroethene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Bromodichloromethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Bromoethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Bromoform	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Bromomethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Carbon tetrachloride	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Chlorobenzene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Chloroethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total		SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Chloroform	9/18/2015	1.00	ug/L	1.00	MRL	U	Total</		

TABLE 3 Aldercrest-Results WATER (EIM April 2016).xls

NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2-Dichloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	cis-1,3-Dichloropropene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	trans-1,3-Dichloropropene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Methylene chloride	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1,2,2-Tetrachloroethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1,2-Trichloroethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Vinyl chloride	9/18/2015	0.20	ug/L	0.20	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Trichloroethene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	2,2-Dichloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1-Dichloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,3-Dichloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2,3-Trichloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2-Dibromo-3-Chloropropane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Dichlorodifluoromethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Trichlorofluoromethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Cis-1,2-dichloroethene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Bromochloromethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1,1-Trichloroethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1-Dichloropropene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,1,1,2-Tetrachloroethane	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	4-Chlorotoluene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2,4-Trichlorobenzene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Hexachloro-1,3-butadiene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	1,2,3-Trichlorobenzene	9/18/2015	1.00	ug/L	1.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	Methyl t-butyl ether	9/18/2015	5.00	ug/L	5.00	MRL	U	Total	SW8260C
NW2555-MW-1	9/15/2015	#	31 ft	MW-1	Groundwater	2-Butanone	9/18/2015	10.00	ug/L	10.00	MRL	U	Total	SW8260C
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	#1 Diesel	1/5/2016	0.20	ug/L	0.20	MRL	U	Total	NWTPH-DX
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Heavy Fuel Oil	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	NWTPH-DX
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Gasoline Range Organics	1/5/2016	100.00	ug/L	100.00	MRL	U	Total	NWTPH-GX
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzene	1/5/2016	1.00	ug/L	1.00	MRL	U	Total	SW8021B
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Ethylbenzene	1/5/2016	1.00	ug/L	1.00	MRL	U	Total	SW8021B
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Toluene	1/5/2016	1.00	ug/L	1.00	MRL	U	Total	SW8021B
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Xylenes	1/5/2016	1.00	ug/L	1.00	MRL	U	Total	SW8021B
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Acenaphthylene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Anthracene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzo(a)anthracene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzo(a)pyrene	1/5/2016	0.10	ug/L	0.10	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzo(b)fluoranthene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzo(ghi)perylene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Benzo(k)fluoranthene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Chrysene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Dibenzo(a,h)anthracene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Fluorene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Fluoranthene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Indeno(1,2,3-cd)pyrene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Naphthalene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	1-Methylnaphthalene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	2-Methylnaphthalene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Phenanthrene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Pyrene	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Methyl t-butyl ether	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	1,2-Dichloroethane	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	1,2-Dibromoethane	1/5/2016	0.50	ug/L	0.50	MRL	U	Total	SW8270
NW2555-MW-1	12/30/2015	#	31 ft	MW-1	Groundwater	Lead	1/5/2016	2.00	ug/L	2.00	MRL	U	Total	SW7010

SNOHOMISH COUNTY

SITE ID:	Kellys Furniture Refinishing	Cleanup Site ID: 11735	FS ID: 21932318
Alternate Name(s): Kellys Furniture Refinishing, Lynnwood Auto Body Shop, Lynwood Auto body Shop, Tool Crib Co			
LOCATION:	WRIA: 8	Lat/Long: 47.824 -122.313	View Vicinity Map
Address: 19230 HWY 99 LYNNWOOD 98036		Township Range Section 27N 4E 16	Legislative District: 32 Congressional District: 2
STATUS:	Cleanup Started	Rank:	View Site Web Page View Site Documents
Responsible Unit: Northwest		Site Manager: Carrosino, Glynis	
Is Brownfield?		Statute: MTCA	
Has Environmental Covenant?		Is PSI Site?	
NFA Received?		NFA Date: NFA Reason:	

ASSOCIATED CLEANUP UNIT(s)

culID	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
12327	Lynwood Auto Body Shop	Upland	Voluntary Cleanup Program	Cleanup Started		

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
LUST	6564	LUST - Notification		11/18/2011	11/18/2011			Carrosino, Glynis
LUST	6564	LUST - Report Received		8/28/2011	11/18/2011			
LUST	6564	LUST - Report Received		7/19/2011	11/18/2011			
LUST	6564	LUST - Report Received		12/18/2014	1/2/2015			
LUST	6564	LUST - Report Received		11/3/2011	11/18/2011			
LUST	6564	LUST - Report Received		12/22/2014	1/2/2015			
VcpProject	NW2555	VCP Application	Completed	11/30/2011				Fernandez, Sonia
VcpProject	NW2555	VCP Receipt of Plan or Report	Completed	11/30/2011				Fernandez, Sonia
VcpProject	NW2555	VCP Receipt of Plan or Report	Completed	11/30/2011				Fernandez, Sonia
VcpProject	NW2555	VCP Receipt of Plan or Report	Completed	11/30/2011				Fernandez, Sonia
VcpProject	NW2555	VCP Opinion on Site Cleanup	Completed	4/29/2012				Carrosino, Glynis
VcpProject	NW2555	VCP Opinion on Site Cleanup	In Process	1/2/2015				Carrosino, Glynis

AFFECTED MEDIA & CONTAMINANTS:
Media:

Contaminant:	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock	Key: B - Below Cleanup Level C - Confirmed Above Cleanup Level S - Suspected R - Remediated RA - Remediated-Above RB - Remediated-Below	
Petroleum-Gasoline			C					

CleanupSiteDetails2014

Terrestrial Ecological Evaluation Form



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Lynnwood Body Shop / Kelly's Furniture

Facility/Site Address: 19230 and 19306 Highway 99, Lynnwood, Washington 98036

Facility/Site No: 21932318

VCP Project No.: NW2555

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: James McDermott

Title: Hydrogeologist

Organization: Aerotech Environmental

Mailing address: 13925 Interurban Avenue South

City: Tukwila

State: WA

Zip code: 98168

Phone: 206 257 4211

Fax: 206 402 3872

E-mail: james@dirtydirt.us

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- ☒ Yes *If you answered "YES," then answer **Question 2**.*
- ☐ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- ☐ All soil contamination is, or will be,* at least 15 feet below the surface.
- ☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- ☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- ☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- ☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- ☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- ☐ Yes *If you answered "YES," then answer **Question 2** below.*
- ☐ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- ☐ Yes *If you answered "YES," then answer **Question 3** below.*
- ☐ No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- ☐ Yes *If you answered "YES," then answer **Question 4** below.*
- ☐ No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- ☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- ☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

Exposure Analysis: WAC 173-340-7492(2)(a)

- ☐ Area of soil contamination at the Site is not more than 350 square feet.
- ☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- ☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- ☐ Yes *If you answered “YES,” then answer **Question 2** below.*
- ☐ No *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?

- ☐ Yes If so, please identify the Ecology staff who approved those steps:
- ☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: VCP Coordinator 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

**Simplified Terrestrial
Ecological Evaluation
Table 749-1**

for:

**Lynnwood Auto Body Shop
19230 Highway 99
Lynnwood, Washington 98036**

VCP Site No. NW 2555

Performed by:

**Aerotech Environmental Consulting, Inc.
19600 International Blvd., Suite No. 101
SeaTac, Washington 98188**



Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).

1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.

	<u>Area (acres)</u>	<u>Points</u>
	0.25 or less	4
	0.5	5
	1.0	6
	1.5	7
	2.0	8
	2.5	9
	3.0	10
	3.5	11
	4.0 or more	12

2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1

3)^a Enter a score in the box to the right for the habitat quality of the site, using the following rating system: High=1, Intermediate=2, Low=3

4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.

5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.

6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.

Notes for Table 749-1

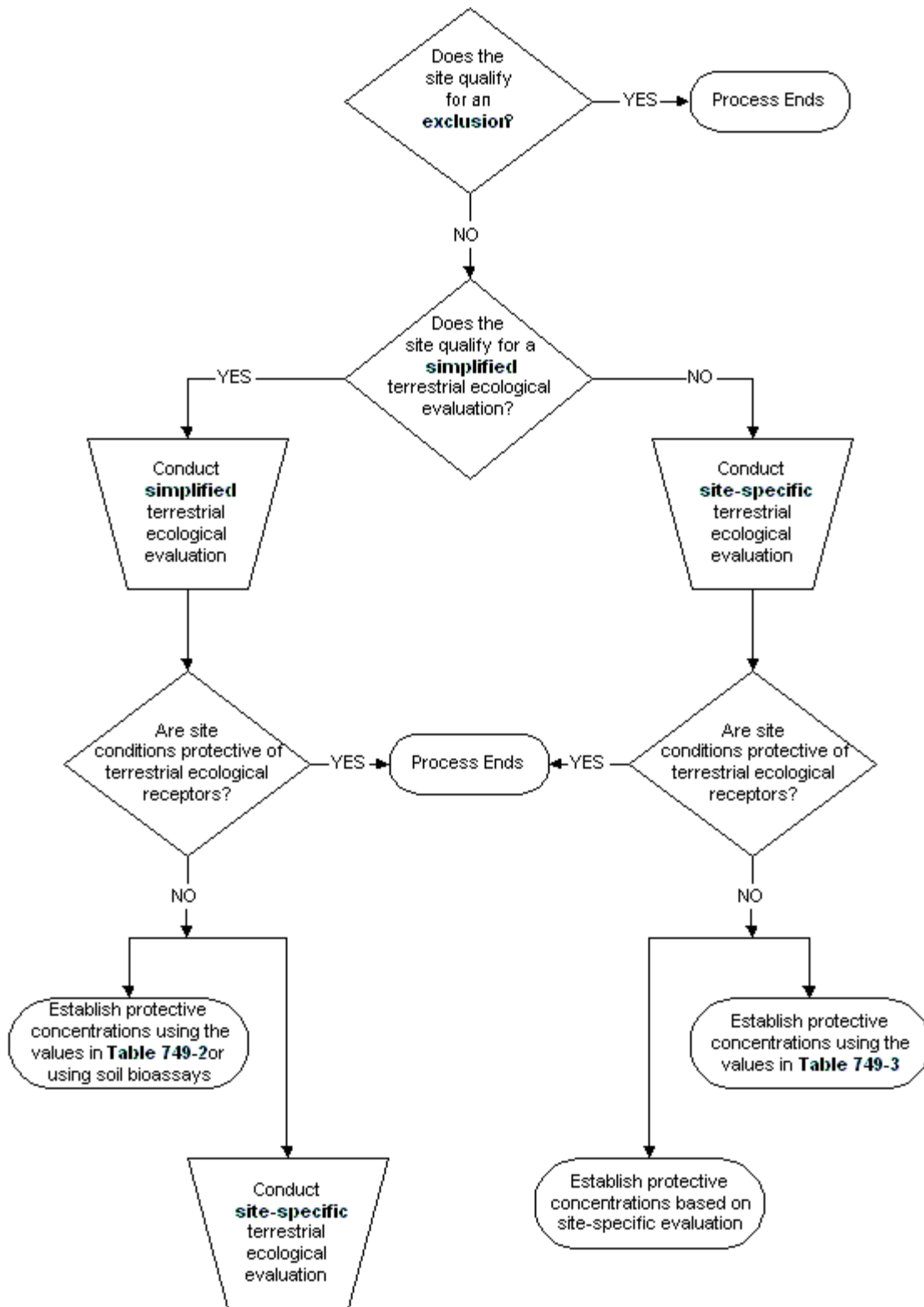
^a It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

^b **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

Low: Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

Selected Extracted Pages
USEPA and State of Washington Department of Ecology
Soil Vapor Intrusion
Guidance Documents

Flow Diagram of the Terrestrial Ecological Evaluation Process



Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion

Implementation Memorandum No. 14

Date: March 31, 2016

To: Interested Persons

From: Jeff Johnston, Section Manager
Information & Policy Section
Toxics Cleanup Program



Contact: Policy & Technical Support Unit, Headquarters

Attachments: A – Petroleum Vapor Intrusion Decision-Making Flowchart
B – Recommended vertical separation distances between contamination and building basement, floor, foundation, or crawlspace surface

Accommodation Requests: To request ADA accommodation including materials in a format for the visually impaired, call Ecology's Toxics Cleanup Program at 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

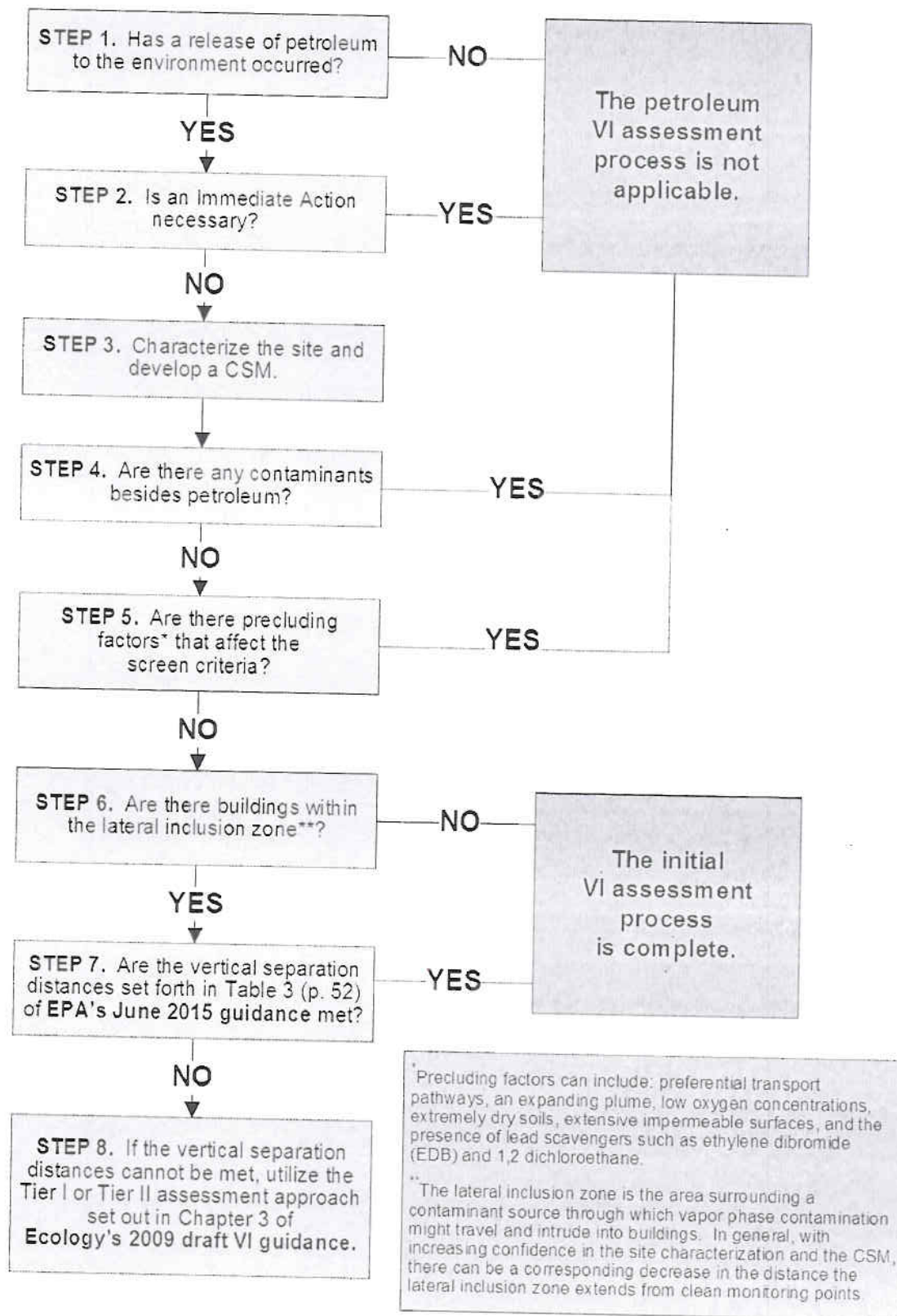
Purpose and Applicability

This implementation memo provides guidance on how to initially assess whether vapor intrusion (VI) is a potential concern at sites with petroleum contamination. The term "initially" is used throughout this memo and refers to the portion of the VI assessment process for determining if mitigation or some other interim action is necessary based on existing conditions. This will generally occur at the time a remedial investigation is being conducted to define the nature and extent of contamination at the site. When the memo indicates that "the initial assessment process is complete," this means that the existing situation does not pose a current vapor intrusion threat.

This memo supplements Chapter 2, "Preliminary VI Assessments," in Washington Department of Ecology's (Ecology's) 2009 draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Ecology 2009).

Attachment A

Petroleum Vapor Intrusion Decision-Making Flowchart

Attachment A: Petroleum Vapor Intrusion Decision-Making Flowchart

Attachment B

Recommended Vertical Separation Distances between Contamination and Building Basement Floor, Foundation, or Crawlspace Surface

Source: Technical Guide for Addressing Petroleum Vapor Intrusion
at Leaking Underground Storage Tank Sites
(USEPA 2015, June)

Attachment B: Recommended vertical separation distances between contamination and building basement floor, foundation, or crawlspace surface.

Media	Benzene	TPH	Vertical Separation Distance (feet)*
Soil (mg/kg)	≤10	≤ 100 (unweathered gasoline), or ≤ 250 (weathered gasoline, diesel)	6
	>10 (LNAPL)	> 100 (unweathered gasoline) >250 (weathered gasoline, diesel)	15
Groundwater (mg/L)	≤5 [5,000 µg/l]	≤30 [30,000 µg/l]	6
	>5 (LNAPL) [5,000 µg/l]	>30 (LNAPL) [30,000 µg/l]	15

The thresholds for LNAPL indicated in this table are indirect evidence of the presence of LNAPL. These thresholds may vary depending on site-specific conditions (e.g., soil type, LNAPL source). The value of 5 mg/L benzene is from EPA (2013a, p.31). A study by Peargin and Kolhatkar (2011) suggests that a dissolved source with benzene greater than 1 mg/L may behave like a LNAPL source in terms of vapor-generating capability. Decision-makers may have different experiences with LNAPL indicators and may use them as appropriate. For more information, see Section 6 (p.57) and Figure 7 in particular.

Bulk soil samples should be analyzed for Total Petroleum Hydrocarbon (TPH) and BTEX (plus any other potential contaminants). The objective of measuring TPH is to quantify the total vapor phase concentration of PHCs. TPH may be analyzed by methods appropriate for the type of fuel released. These methods may be designated as TPH-gasoline (or sometimes gasoline range organics or GRO), TPH-diesel (or sometimes diesel range organics or DRO). Method TO-15 (see <http://www.epa.gov/ttn/amtic/files/ambient/airtox/to-15r.pdf>) by itself only measures a small fraction of PHCs that may be present in the vapor-phase. TO-15 analyses require a correction factor to estimate bulk TPH. An extended TO-15 analysis can provide such an estimate. For more information on TPH in vapor intrusion studies, see Brewer et al. (2013).

*The vertical separation distance represents the thickness of clean, biologically active soil between the source of PHC vapors (LNAPL, residual LNAPL, or dissolved PHCs) and the lowest (deepest) point of a receptor (building basement floor, foundation, or crawlspace surface).

Source: *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites* (USEPA 2015, June)

Technical Guide For Addressing Petroleum Vapor Intrusion At Leaking Underground Storage Tank Sites

U.S. Environmental Protection Agency
Office of Underground Storage Tanks
Washington, D.C.

June 2015

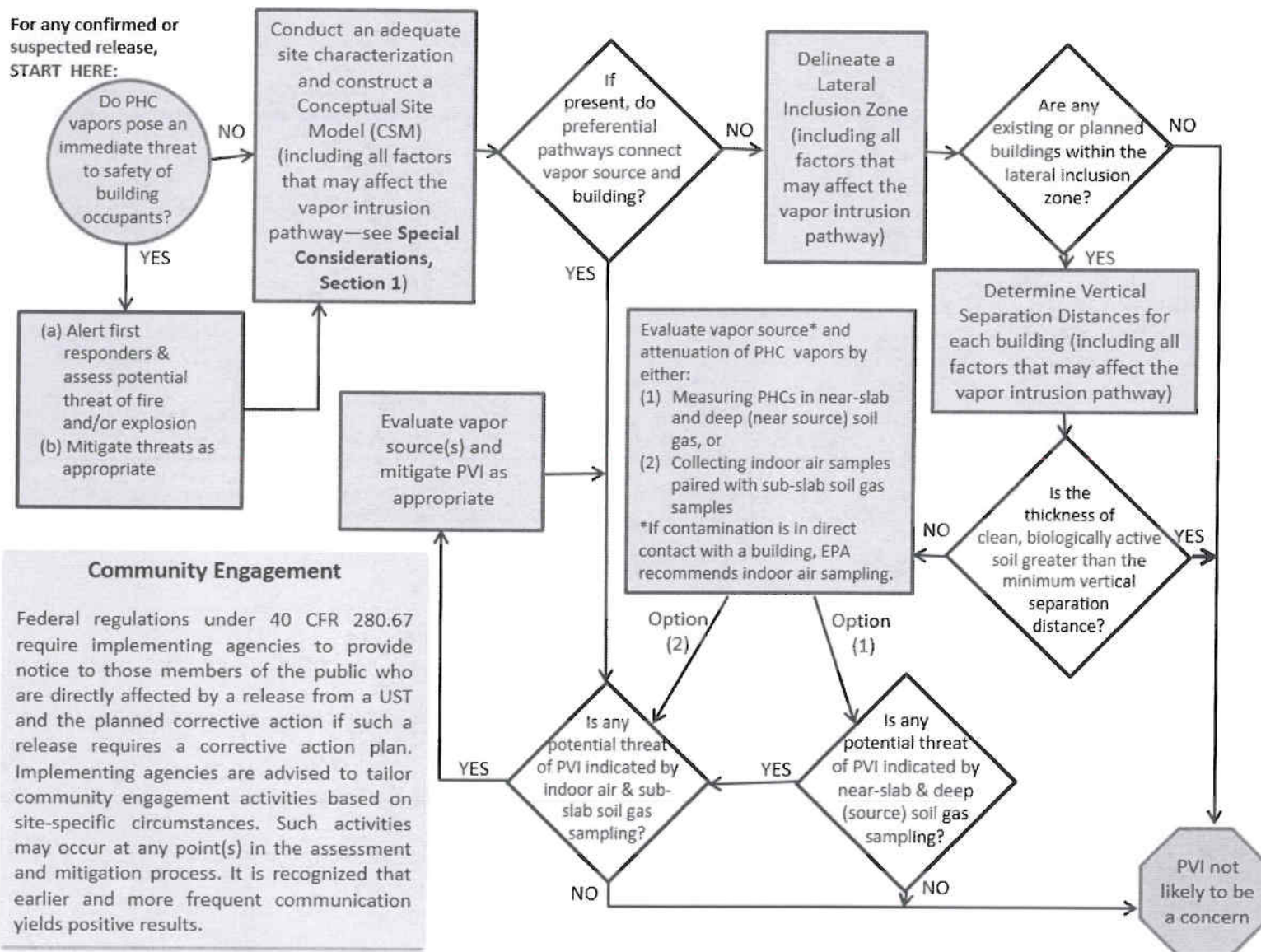


Figure 1. Flowchart For Addressing PVI At Leaking Underground Storage Tank Sites

Table 3. Recommended Vertical Separation Distance Between Contamination And Building Basement Floor, Foundation, Or Crawlspace Surface.

Media	Benzene	TPH	Vertical Separation Distance (feet)*
Soil (mg/Kg)	≤10	≤ 100 (unweathered gasoline), or ≤ 250 (weathered gasoline, diesel)	6
	>10 (LNAPL)	> 100 (unweathered gasoline) >250 (weathered gasoline, diesel)	15
Groundwater (mg/L)	≤5	≤30	6
	>5 (LNAPL)	>30 (LNAPL)	15

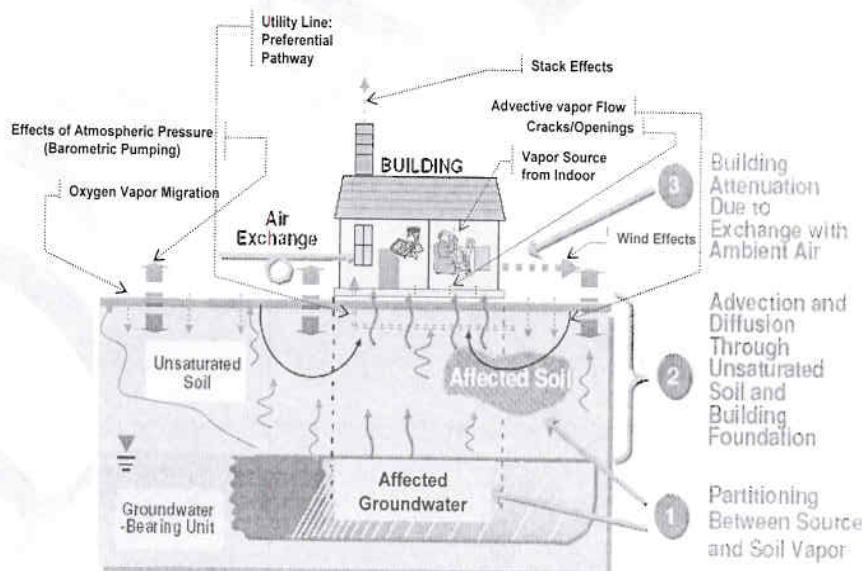
The thresholds for LNAPL indicated in this table are indirect evidence of the presence of LNAPL. These thresholds may vary depending on site-specific conditions (e.g., soil type, LNAPL source). The value of 5 mg/L benzene is from EPA (2013a, p.31). A study by Peargin and Kolhatkar (2011) suggests that a dissolved source with benzene greater than 1 mg/L may behave like a LNAPL source in terms of vapor-generating capability. Decision-makers may have different experiences with LNAPL indicators and may use them as appropriate. For more information, see **Section 6** (p.57) and **Figure 7** in particular.

Bulk soil samples should be analyzed for Total Petroleum Hydrocarbon (TPH) and BTEX (plus any other potential contaminants). The objective of measuring TPH is to quantify the total vapor phase concentration of PHCs. TPH may be analyzed by methods appropriate for the type of fuel released. These methods may be designated as TPH-gasoline (or sometimes gasoline range organics or GRO), TPH-diesel (or sometimes diesel range organics or DRO). Method TO-15 (see <http://www.epa.gov/ttn/amtic/files/ambient/airtox/to-15r.pdf>) by itself only measures a small fraction of PHCs that may be present in the vapor-phase. TO-15 analyses require a correction factor to estimate bulk TPH. An extended TO-15 analysis can provide such an estimate. For more information on TPH in vapor intrusion studies, see Brewer et al. (2013).

*The vertical separation distance represents the thickness of clean, biologically active soil between the source of PHC vapors (LNAPL, residual LNAPL, or dissolved PHCs) and the lowest (deepest) point of a receptor (building basement floor, foundation, or crawlspace surface).

Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action

Washington State Department of Ecology
Toxics Cleanup Program



Typical Example of Vapor Intrusion Pathway

Publication no. 09-09-047

REVIEW DRAFT OCTOBER 2009

REVIEW DRAFT REVISED FEBRUARY 2016 *

* **REVISION NOTE:** This publication was revised February 2016 with only one change from the October 2009 version: Table B-1 is outdated and should not be used. Please access the Microsoft Excel spreadsheet that contains updated screening levels by *copying and pasting* the following link into your browser: <http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/Vapor%20Intrusion%20Table%20update%20April%206%202015.xlsx>

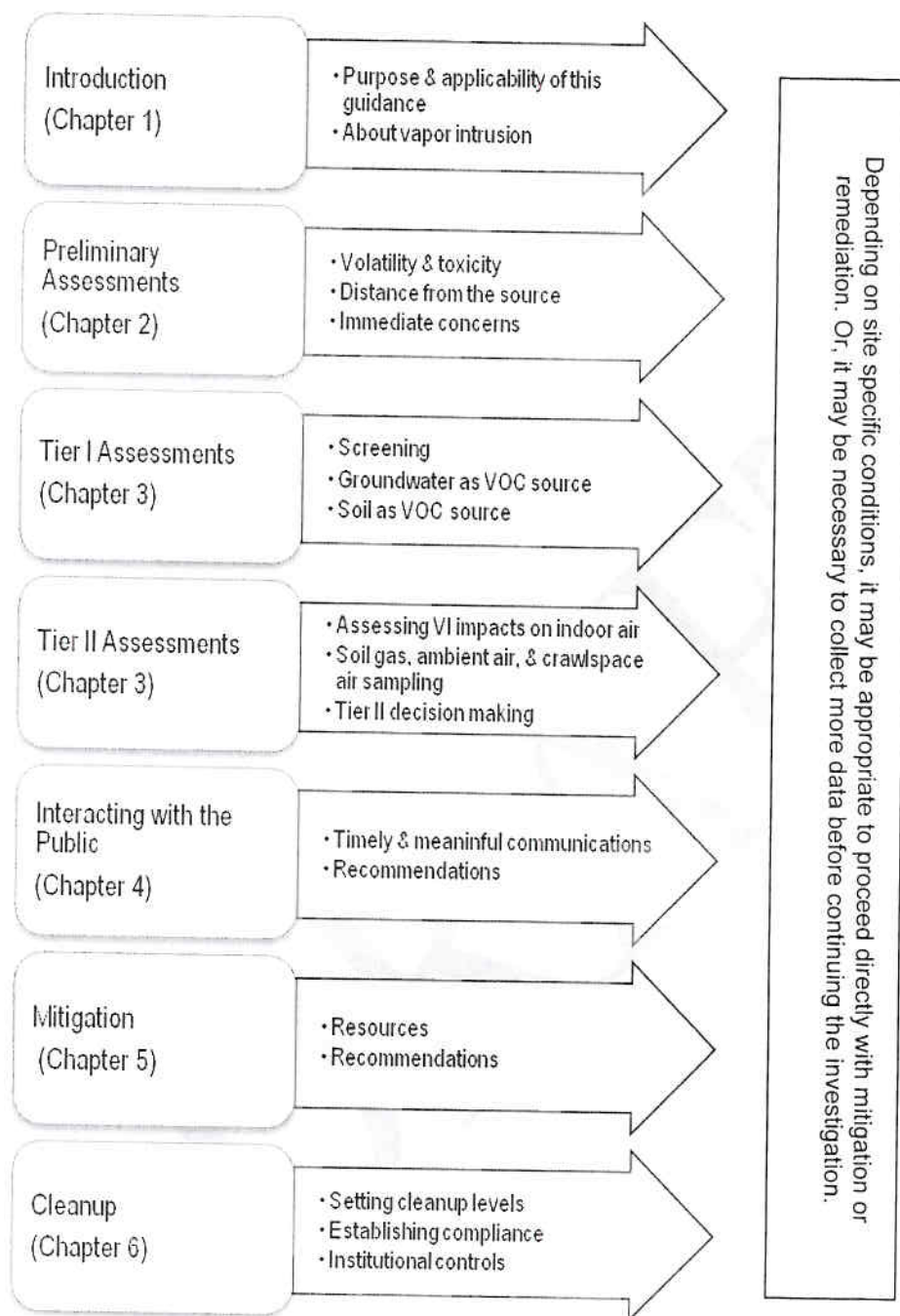


Figure 2. The step-wise content of the guidance document (first six chapters)

Likewise, a *Tier II* assessment may conclude that a particular building's indoor air is not being unacceptably impacted by vapor intrusion. The off-ramp, then, may be a decision that no further assessment of that building is needed. However, the subsurface contamination might still pose a potential threat to indoor air if the building were to be modified, used differently, or replaced by a different structure. Similarly, even though indoor air may not appear to be unacceptably impacted, soil gas concentrations may be significantly elevated. Decision-makers may therefore

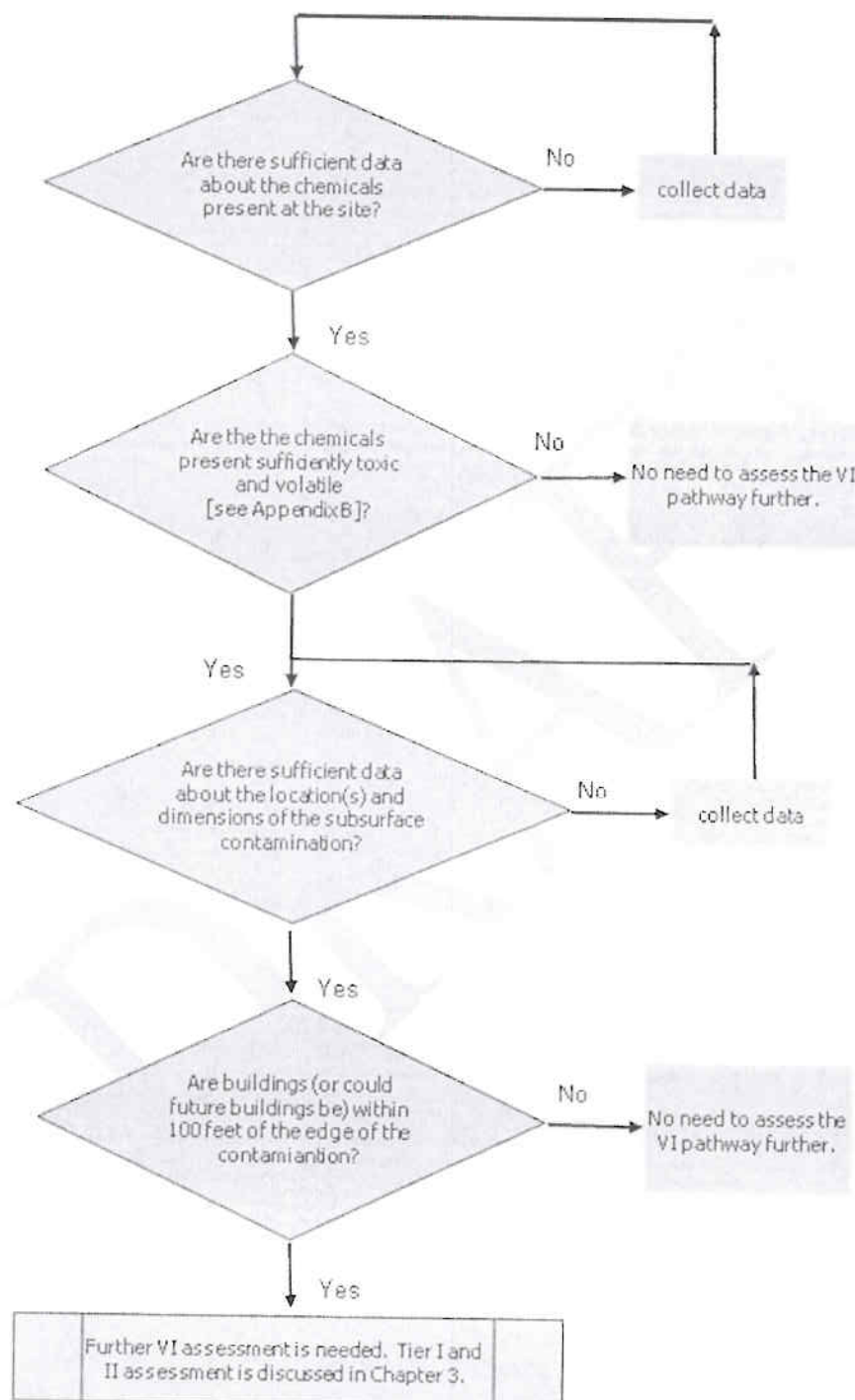


Figure 3. Preliminary Assessment.

The basic steps for deciding if further VI assessment is needed in Chapter 3.

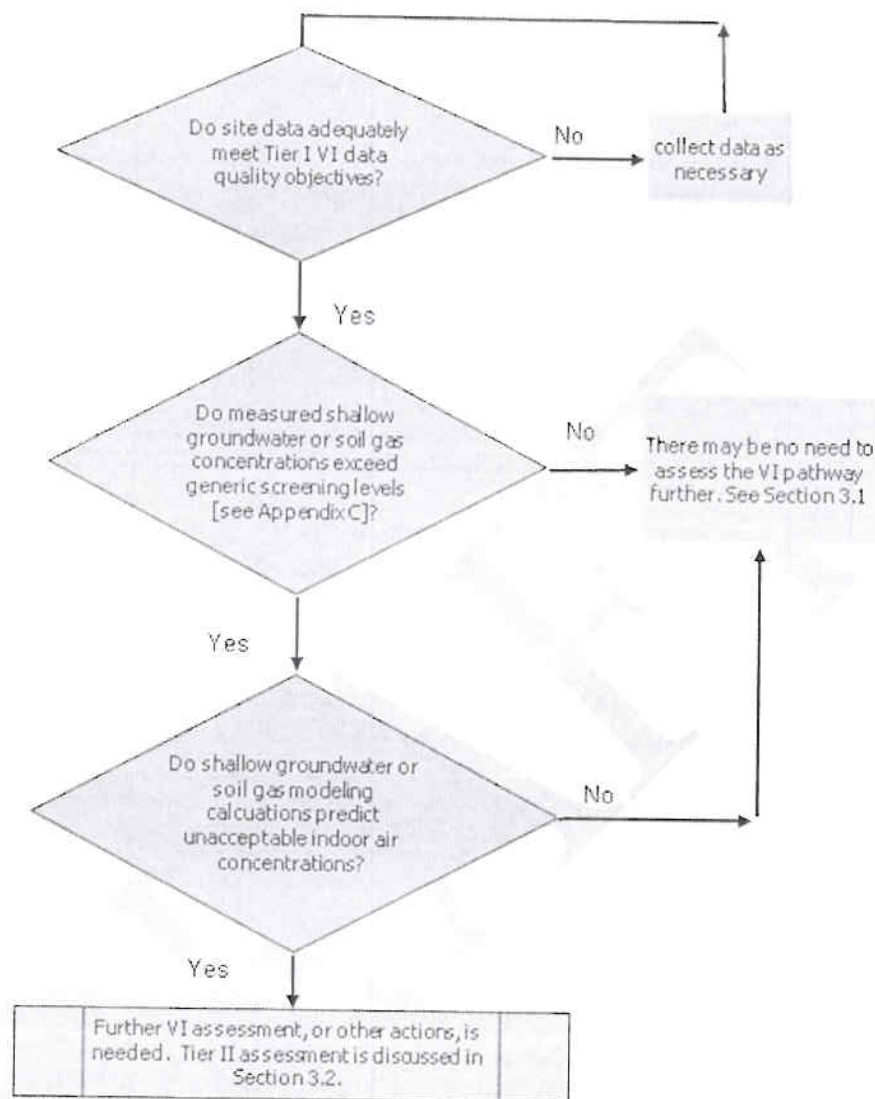


Figure 4. Tier I Assessment. The basic steps for performing a Tier I VI assessment.

- Inputs measured shallow groundwater or soil gas concentrations to a predictive model, such as the Johnson and Ettinger Model, and derives estimates of indoor air concentrations. These predicted concentrations can then be compared to acceptable indoor air levels (such as Method B or C air cleanup levels).

This task (bullet #4) can be performed whether the subsurface VOC source medium is contaminated soil or shallow groundwater. It is an unnecessary Tier I step, however, if measured groundwater or soil gas concentrations are below generic screening levels.

Sections 3.1.1 through 3.1.3.3 below discuss how investigators can determine if concentrations of VOCs in the subsurface are high enough to pose a potentially unacceptable threat to indoor air quality within current or future site area buildings.

SUBSURFACE SOURCE	TIER I ASSESSMENT APPROACH
shallow groundwater (only)	Use measured groundwater concentrations (compare to SLs or input to predictive model). See Section 3.1.1; and/or use measured soil gas concentrations (compare to SLs or input to predictive model). See Section 3.1.3.
vadose zone soil (only)	Use measured soil gas concentrations (compare to SLs or input to predictive model). See Section 3.1.3.
shallow groundwater and vadose zone soil	Use measured soil gas concentrations (compare to SLs or input to predictive model). See Section 3.1.3.
LNAPL (on top of the water table)	Use measured soil gas concentrations (compare to SLs or input to predictive model). See Section 3.1.3.

3.1.1 Tier I: When groundwater is the subsurface VOC source

Shallow groundwater concentration data are compared to generic groundwater screening levels in Tier I to evaluate the need for further assessment or action to address the VI pathway. In deriving the screening levels for groundwater shown on Table B-1 in Appendix B, assumptions have been made about the vadose zone, threatened building, and receptors. These assumptions are discussed below in Section 3.1.1.1. Investigators should not apply the Appendix B screening levels if the site or buildings being evaluated are so inconsistent with these assumptions that the resulting decisions may not be conservative.

Concentrations of suspected contaminants in groundwater are typically measured during the remedial investigation, when the nature and extent of the contaminant plume is being characterized. The quality and representativeness of these data will need to be assessed to determine if they are adequate to the purpose of evaluating the VI pathway for any given building. Groundwater measurements should accurately represent shallow (water table or perched) groundwater contaminant concentrations very near, if not under, the building of concern.²⁵

In general, for a VI screening evaluation, Ecology recommends comparing **maximum** building (existing or future)-specific measured shallow groundwater concentrations to screening levels. If these measured groundwater concentrations are below the screening values, and there is no soil contamination or LNAPL, it is reasonable to conclude that further VI assessment is not needed.

²⁵ This generally requires: using short screens (10 feet or less); locating a portion of the screen above the water table; and, utilizing low-flow sampling techniques to minimize VOC loss.

In order to derive groundwater VI screening levels, “acceptable” indoor air concentrations must first be established. In this guidance “acceptable” indoor air concentrations are based on MTCA Method B (or, in appropriate situations, Method C) air cleanup levels. The groundwater screening levels in Table B-1 of Appendix B were derived, per VOC, using Equation 1 (below).

Equation 1. Generic groundwater VI screening levels	
$SL_{GW} = \frac{SL_{IA}}{VAF * UCF * H_{cc}}$	
Where	
SL_{GW}	Screening level in groundwater protective of indoor air, µg/L
SL_{IA}	Acceptable indoor air screening level, µg/m ³ . These levels are concentrations protective of human health and can be calculated using the methods and parameters in the MTCA cleanup regulations (WAC 173-340-750).
VAF	Vapor attenuation factor (VAF; unitless); ²⁶ a default value of 0.001 should be assumed in Tier I
H_{cc}	Henry’s Law constant, unitless ²⁷
UCF	Unit conversion factor, 1000 L/m ³

Groundwater screening levels calculated with Equation 1 are not site- or building-specific. They assume an attenuation of 1000 times between soil gas concentrations at depth – in equilibrium with shallow groundwater concentrations – and indoor air concentrations. That is, the VAF is assumed to be 0.001. This default VAF should represent most worst case conditions. It was found to be an adequately protective assumption for 95% of the buildings in EPA’s vapor intrusion database (EPA, 2008).²⁸

²⁶ The VAF is the reciprocal of attenuation. It is defined as the indoor air concentration of a substance, due to vapor intrusion, divided by its subsurface soil gas concentration.

²⁷ Henry’s Law constants for many VOCs can be found in the Ecology CLARC database or are available from EPA. The constants are temperature dependent. Screening Levels in Appendix B have been calculated using H_{cc} values adjusted to 13°C (average Washington shallow groundwater temperature).

²⁸ 85% of the buildings in this database were residences. 10% were commercial buildings and 5% were “multi-use (a mixture of residential and non-residential).

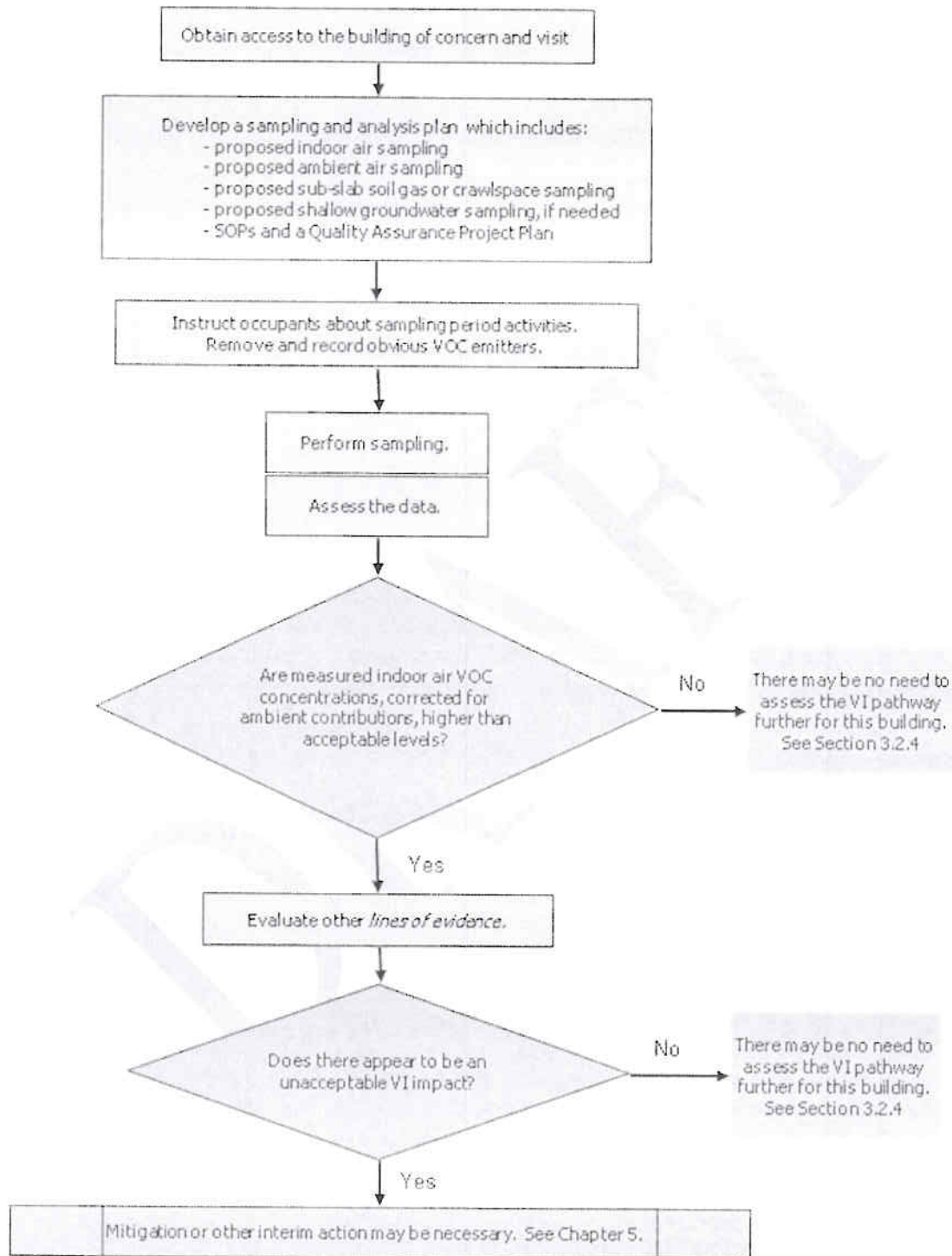


Figure 5. Tier II assessment process.

The figure summarizes the basic Tier II steps.

PROJECT CONTRACT DOCUMENTS

ENVIRONMENTAL CONTRACTOR'S CERTIFICATION

**Lynnwood Auto Body Shop
(Kelly's Furniture Refinishing)**

19230 Highway 99
Lynnwood, Washington

1. Contractor's Name: Aerotech Environmental Consulting, Inc.
2. Contractor's Address: 13925 Interurban Avenue South, Suite 210, Seattle, Washington 98168
3. Name and title of person completing this certification: Alan T. Blotch / President
4. Answer the following questions about each employee that contractor will have perform the assessment or prepare the report showing the results of the inspection:
 - a. Name and Title of Employee: Alan T. Blotch – Environmental Professional
 - b. Length of experience doing environmental assessments: 32 years
 - c. Education degrees received: Masters of Business Administration
Juris Doctor – Environmental Law
 - d. Relevant training received: ASTM E50 Environmental Assessment Committee Meetings
5. Identify any certifications and approvals issued to contractor pursuant to an official Federal, State or local program or policy to conduct environmental assessments: Registered Environmental Assessor
Issued by State of California
6. Describe the generally recognized standards which the contractor will use to perform the assessment.
Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process
(ASTM E 1903)
7. Disclose the nature of any previous environmental inspections contractor has ever performed for the Owner of the property: Phase I Environmental Site Assessment
8. Disclose the nature of any affiliation or association contractor now has, or ever had, with the above referenced seller of the property, of the above referenced buyer of the property: N/A
9. Describe the liability insurance carried by contractor to cover claims in the event that it fails to discover adverse environmental conditions during an environmental inspection.
Professional Errors & Omissions Coverage \$1,000,000 / claim and \$1,000,000 aggregate liability

THE UNDERSIGNED HEREBY CERTIFIES, UNDER PENALTY OF THE CRIMINAL AND/OR CIVIL PENALTIES IN 18 U.S.C. § 1001 FOR FALSE STATEMENTS TO THE UNITED STATES GOVERNMENT, THAT THE ABOVE INFORMATION IS TRUE AND CORRECT.



Signature

02.06.17

Date

CURRICULUM VITAE

James McDermott

State of Washington Licensed Professional Geologist No. 3063

Mr. McDermott has 15 years experience as a sole proprietor in small business, and 12 years experience in environmental consulting with increasing scope, responsibility, innovation and effective results involving commercial and industrial properties spanning the country from the upper Midwestern states within glacial, alluvial or coastal geologic/hydrogeologic settings to complex bedrock, volcanic and glacial/fluviol settings in the northern Rocky Mountain states, the Pacific Northwest and Alaska. He has conducted field work and mapping in mountainous terrain in northern Wyoming and in central Utah where he has published: Utah Geologic Survey Geologic Quadrangle (Chriss Canyon 7.5 min.). These projects included extensive sampling of soils, rock, surface waters, groundwater, limited submarine sampling, soil borings, monitoring well installations, soil vapor extraction wells and systems, and dual-phase extraction and incineration. He is proficient in the application of aerial photographs, satellite imagery and on-line tools, and has limited surveying experience. His work has included compliance activities involving Superfund Sites, and waste remediation sites, as well as Phase I Environmental Site Assessments, Phase II Subsurface Investigations, hydrogeologic studies, pump tests, remediation system design, and groundwater monitoring. His work has required a familiarity with ASTM Phase I and Phase II Protocols, and other relevant ASTM Protocols as well as State, USEPA, CERCLA, and RCRA regulations. He is familiar with Washington State MTCA regulations (hazardous assessments and independent remedial actions), as well as State of Oregon Risk Based Standards. His academic background has included work in organic chemistry and chemical engineering as well as an undergraduate engineering physics and calculus sequence.

Education	University of Illinois - Urbana, IL – BSci Geology – 1984 (Field Mapping: Sheridan, WY) Northern Illinois University - DeKalb, IL – Graduate research/Published USGS Map, Utah).
Publications	Chriss Canyon 7.5-Min. Geologic Quadrangle, Utah, Coauthor, UGS Map 185, 2003
Professional History	Aerotech Environmental Consulting, Inc. Hydrogeologist/Environmental Professional (2011-Present) James McDermott Consulting, Proprietor, Web Design-IT (1995-2010) (Including work with Bank One, Xerox, and IGO Cars) Earthscience Consulting, Proprietor, Hydrogeologist (1993-1994) ATEC Environmental Associates, Inc., Hydrogeologist (1991-1993) EIS Environmental, Inc., Staff Geoscientist (1989-1991)
Certifications	OSHA 40-hr Hazwoper, 8hr Refresher (2013) Participation Certificate: Chlorinated Solvent Remediation - Sequential In-Situ Chemical Oxidation and Enhanced Anaerobic Biodegradation.
Organizations & Memberships	Geological Society of America – Cordilleran Section, Rocky Mountain Section, Environmental and Engineering Geology Division, Hydrogeology Division, Structural Geology and Tectonics Division.
Expertise	Mr. McDermott has performed over 150 Phase I and Phase II investigations including property transfers and LUST closures, conducted site reconnaissance, and prepared Phase I and Phase II Site Assessment reports. Phase II investigations included groundwater monitoring well design, installation and monitoring. He has participated in the design and monitoring of several remediation systems installed at selected Phase II project sites, contributed to RCRA landfill compliance monitoring projects and often the associated subsurface investigation and planning. He managed and planned a large number of these projects, implemented the investigations,

created both preliminary and final reports, and defined and implemented the additional investigation where required.

USGS GEOLOGIC MAPPING PROGRAM (Utah Geological Survey): He has contributed to the study and mapping of geologic units as a part of the related US Geological Survey program to complete national coverage of geologic maps at the 1:24,000 scale. He has mapped intrusive and volcanic bodies, faults, landslide hazards, mineral deposits, hydrothermal alteration, and springs. He has integrated data such as petroleum exploration well logs (gamma/SP), aerial and satellite imagery.

SUPERFUND SITE INVESTIGATIONS : He has performed subsurface characterization and hydrogeological assessments including the assembly and interpretation of soil boring and laboratory data, monitoring well design, well installation and groundwater monitoring well sampling plans.

RCRA COMPLIANCE : He has participated in the subsurface characterization and hydrogeological assessments on RCRA sites and has contributed to research and evaluation of previous investigations as well as pertinent public records.

UST SITE CHARACTERIZATION & REMEDIATION: He has performed Phase I, Phase II investigation, and planned and participated in successful Phase III remediation projects, including the management and on-site supervision of the removal of tanks at a 40-unit, 25,000 gallon pre-WWII aircraft engine tank farm site. Contaminants included fuels, solvents and lubricants, DNAPLs. He has performed numerous subsurface characterization and hydrogeological assessments including soil borings, split spoon, cores, monitoring well design and installation, remediation sampling, monitoring, pump testing, modeling /analysis.

REAL ESTATE TRANSFERS: He has performed Phase II Subsurface investigation / preliminary hydrogeological evaluations for the purpose of property transfers for lenders, property owners and prospective buyers.

GEOPHYSICAL SURVEYS: He has participated in the performance of a groundwater investigation for the Illinois Geological Survey designed to locate and define gravel channel aquifers in buried bedrock valleys.

BIOREMEDIATION APPLICATIONS: He has participated in a seminar devoted to groundwater bioremediation with particular attention to chlorinated solvents and the use of in-situ chemical oxidation and enhanced anaerobic biodegradation. This technique is being applied to contaminated industrial properties in Washington state.

Notable Projects and Innovations

His subsurface investigation experience has also included field studies and reports on projects such a Superfund property in an industrial park, several RCRA landfill compliance projects, a large underground tank farm (over 40 25,000-gal. tanks and a great variety of fuels, solvents and lubricants) at the location of a former WWII-era aircraft engine plant, a contaminant incineration remediation project at a major LUST site located within a sensitive urban area, the mapping and excavation of over 20,000 cubic yards of contaminated fluvial and alluvial sands in an aging 19th – 20th century riverside industrial complex, landslide mapping, risk assessment and an aquifer mapping project for a State Geological Survey.

Innovations and improvements he has introduced during his environmental consulting career

have included the composition and refinement of numerous Standard Operating Procedures including those related to monitoring well design and encompassing equipment maintenance, calibration and operation. An innovation at the time and place, he initiated the routine incorporation of documentation and analysis of utility and transportation conduits (sewer, storm water and tunnel plans) in considering groundwater and contaminant flow dynamics, and their potential as primary or secondary conduits for the transport of contaminants in groundwater or in surface runoff for Phase I, Phase II and other investigations. For example, in one case in the central Chicago business district where flammable vapors were reported in the basement of a landmark building, he utilized both sewer design plans and subway depth measurements to trace probable vapor pathways and successfully divert the unproven assignment of primary responsibility from his client. In another case he devised and implemented a simple incinerator design change which greatly reduced time and cost associated with automated emergency systems shutdowns. In routinely evaluating previous studies prior to incorporation into his reports, he occasionally discovered and corrected errors in groundwater flow calculations or elevation data. He discovered forged soil boring logs, accepting no external material without some verification where the economic and legal concerns of a client might be jeopardized.

**Small Business
Experience**

He has fifteen years experience operating a web design and computer consulting business as a sole proprietor with several staff, meeting the unique needs and budgets of the small business and mid-sized business community, employing web design and marketing to increase the profits a of one small business by over 1000 percent.

SOIL BORING LOGS

Project Name: Aldercrest Lynnwood Auto)

Project Number: 216-

Drilling Information

Drilling Contractor: SEP, Tumwater, Wa
Drilling Method: Direct Push
Borehole Diameter: 2"
Sampler Type: Core sampler +
virgin poly-sleeve

Driller: Chris Ross (Wa Lic 3018)

Site Location: 19230 Hwy 99, Lynnwood, Wa VCNW 2555
0.5 ft west of east property line / inside of concrete public sidewalk
Borehole Location: 15.5 ft south of N end of driveway and 10 ft S of centerline of Storm Sewer
Borehole Area (AOC): Driveway approx 5 ft east of east margin of UST over-excavation

Logged by: J. McDermott: Boring Depth: 17.5 ft
GW Encountered: YES Static GW Level: 17.5 ft
(likely localized + ephemeral)
Notes:

Approx. LAT 47.82368 LNG 122.31343
Approx. Surface Elevation: 396 feet MSL

Start Date: 01-13-17 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
1							Asphalt Pavement	
2							SAND, fine to coarse, well graded, trace silt, little small to medium subrounded to subangular gravel, medium to dark brown, dry. No to very slight foul odor.	
3		1.6				SW		
4								
5								
6								
7							Vashon TILL (Qvt) - SAND, fine to medium, little coarse, mod to well graded, little small to large subrounded to subangular gravel, olive greenish gray above 8 ft, gray below 8 ft, dry. Mod density above 7 ft, increasing density below 7 ft. Mod to strong petroleum odor.	
8		53	LAB 0930			SW		
9								
10								
11						SW	Vashon TILL (Qvt) - Sand. Very dense. Same as above. Mod to strong petroleum odor.	
12		25	LAB 0942				-- SEAM - Gravel with fine to coarse sand at 11.7 to 12 ft	
13		144	LAB 0952					
14						SW	Vashon TILL (Qvt) - Sand. Very dense. Same as above. Strong to very Moist to very moist at 12 to 13 and at 15.5 to 16 ft	
15								
16		177 35	LAB 0958				Note: B-31 and B-32 are situated approx 5 ft east of former excavation	
17		9	LAB 1024			SW	Very moist to wet at 17.3 to 17.5	
18							Switch to 3/4-inch microcore. Refusal at 17.5 ft Bottom of borehole at 17.5 feet	
19							Groundwater (local/ephemeral) 17.3 ft.. No well installed.	
20							Borehole completed with bentonite chips.	

Project Name:

Drilling Information

Project Number:

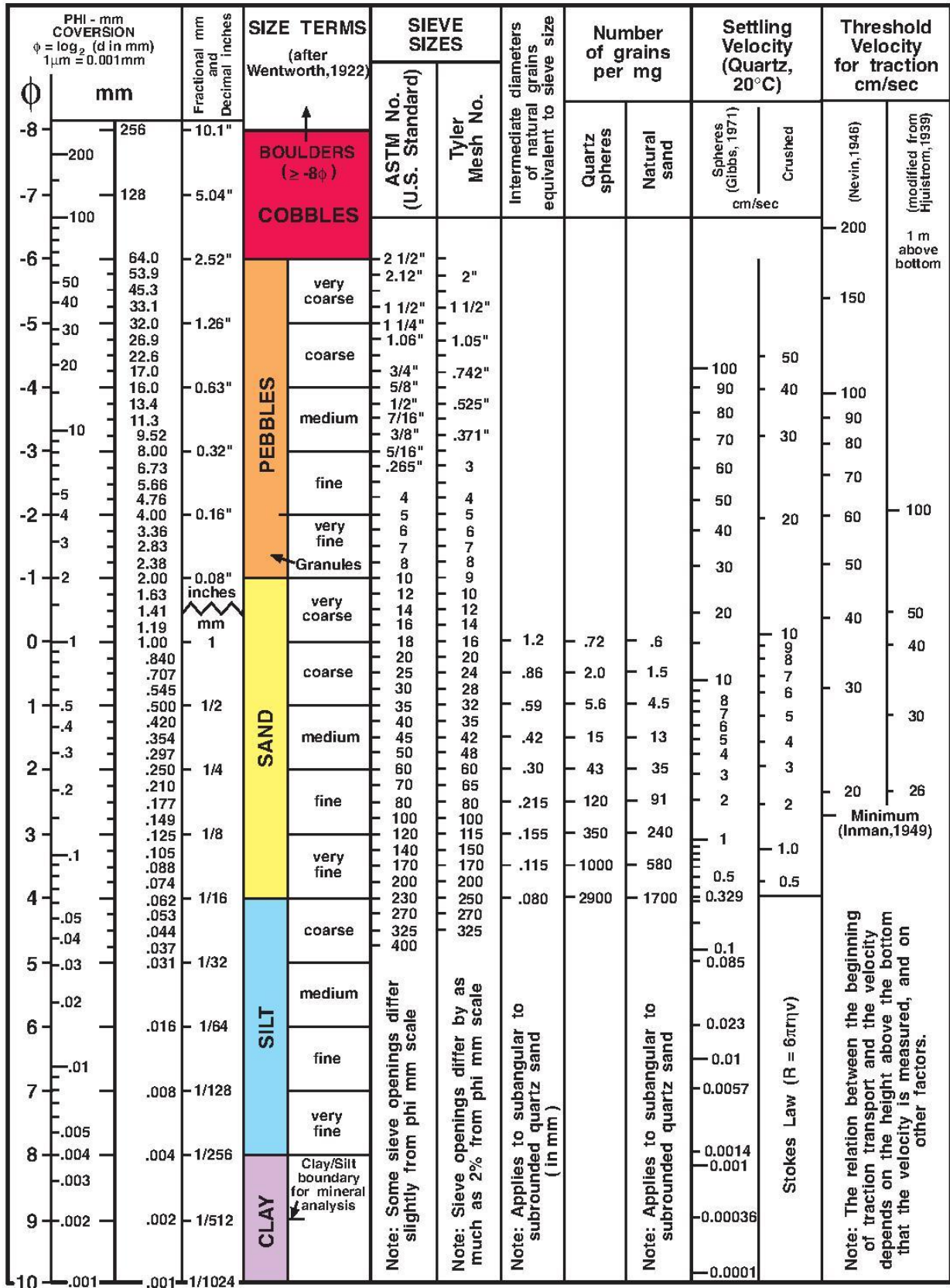
Drilling Contractor:

Logged by:

Start Date:
















End Date:

[illegible]



CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

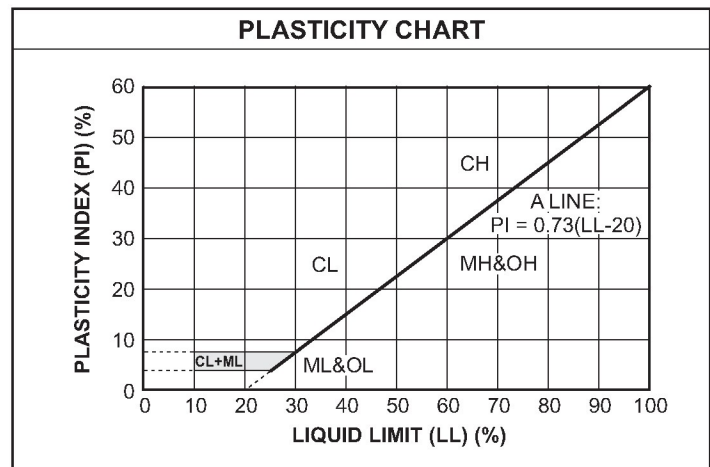
UNIFIED SOIL CLASSIFICATION SYSTEM

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART			
COARSE-GRAINED SOILS (more than 50% of material is larger than No. 200 sieve size.)			
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	Clean Gravels (Less than 5% fines)		
		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)		
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)		
		SW	Well-graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)		
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size.)			
SILTS AND CLAYS Liquid limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA		
GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
GP	Not meeting all gradation requirements for GW	
GM	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limits above "A" line with P.I. greater than 7	
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
SP	Not meeting all gradation requirements for GW	
SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols.
SC	Atterberg limits above "A" line with P.I. greater than 7	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent GW, GP, SW, SP
More than 12 percent GM, GC, SM, SC
5 to 12 percent Borderline cases requiring dual symbols



Project Name: Aldercrest Lynnwood Auto)

Project Number: 216-

Drilling Information

Drilling Contractor: SEP, Tumwater, Wa

Drilling Method: Direct Push

Borehole Diameter: 2"

Sampler Type:	Core sampler + virgin poly-sleeve
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Driller: Chris Ross (Wa Lic 3018)

Site Location: 19230 Hwy 99, Lynnwood, Wa VCNW 2555

0.5 ft west of east property line / inside of concrete public sidewalk

Borehole Location: 10.5 north of south end of driveway, 2 ft north of ext line of N wall, E wing

Borehole Area (AOC): South half of Driveway approx 5 ft east of east margin of UST over-excavation

Logged by: J. McDermott:

Boring Depth: 14.5 feet

GW Encountered: Y NO

Static GW Level:

Notes:

Approx. LAT 47.82368 LNG 122.31343

Approx. Surface Elevation: 396 feet MSL

Start Date: 01-13-17 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
1							Asphalt Pavement	
2							SAND, fine to coarse, well graded, trace to little silt, little small to large subrounded to subangular gravel, medium to dark brown - light brown at 4 to 6.5 ft., dry. No foul odor.	
3								
4		1.0				SW		
5								
6								
7								
8		1.4	LAB 1130			SW	Vashon TILL (Qvt) - SAND, fine to medium, little coarse, mod to well graded, little small to large subrounded to subangular gravel, gray, dry to very slightly moist. Mod density to very dense. No foul odor.	
9								
10								
11						SW	Same as above. Dry. No foul odor.	
12		1.1	LAB 1132					
13								
14		112 55	LAB 1140			SW	Vashon TILL (Qvt) - SAND, fine to coarse, little small to med subrounded to subangular gravel, gray. Dry. Slight to moderate petroleum odor, peaks at 13.5 to 14 ft bgs.	
15							Refusal at 14.5 ft with 2 in core tool and switch to micro-gain 6 in	
16								
17								
18							Bottom of borehole at 14.5 feet	
19							No groundwater encountered. No well installed.	
20							Borehole completed with bentonite chips.	

Project Name: Aldercrest Lynnwood Auto)

Project Number: 216-

Drilling Information

Drilling Contractor: SEP, Tumwater, Wa
Drilling Method: Direct Push
Borehole Diameter: 2"
Sampler Type: Core sampler +
virgin poly-sleeve

Driller: Chris Ross (Wa Lic 3018)

Site Location: 19230 Hwy 99, Lynnwood, Wa VCNW 2555

Borehole Location: 8.5 ft west and 1 ft south of NWX North Wing of building

Borehole Area (AOC): west of north wing

Logged by: J. McDermott: Boring Depth: 15.5 feet

GW Encountered: Y NO Static GW Level:

Notes:

Approx. LAT 47.82368 LNG 122.31343

Approx. Surface Elevation: 396 feet MSL

Start Date: 01-13-17 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
1							Asphalt Pavement	
2							SAND, fine to coarse, well graded, trace to little silt, little small to large subrounded to subangular gravel, medium brown at 1-2 ft, light brown below 2 ft, dry. No foul odor.	
3						SW		
4		0.3						
5								
6								
7						SW	Vashon TILL (Qvt) - SAND, fine to medium, little coarse, mod to well graded, little small to large subrounded to subangular gravel, gray, dry to very slightly moist, very moist at 8.5 - 9 ft. Very dense. No foul odor.	
8		0.0	LAB1355					
9								
10								
11		0.2				SW	Same as above. No foul odor.	
12								
13						SW	Same as above. No foul odor.	
14		0.1						
15		1.2	LAB 1432			SW	Same as above. No foul odor.	
16								
17								
18							Bottom of borehole at 15.5 feet	
19							No groundwater encountered. No well installed.	
20							Borehole completed with bentonite chips.	

Project Name: Aldercrest Lynnwood Auto)

Project Number: 216-

Drilling Information

Drilling Contractor: SEP, Tumwater, Wa

Drilling Method: Direct Push

Borehole Diameter: 2"

Sampler Type:	Core sampler + virgin poly-sleeve
---------------	--------------------------------------

Driller: Chris Ross (Wa Lic 3018)

Approx. LAT 47.82368 LNG 122.31343

Approx. Surface Elevation: 396 feet MSL

Start Date: 01-13-17 End Date: Same

Site Location: 19230 Hwy 99, Lynnwood, Wa VCNW 2555

Borehole Location: 4ft west and 7 ft south of NE corner of North Wing of building.

Borehole Area (AOC): Interior of building - north bay in North Wing

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: Y NO

Static GW Level:

Notes:

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction		
1								Concrete Slab atop gravel base.			
2								47.82368			
3							SW	SAND, fine to coarse, well graded, trace to little silt, little small to medium subrounded to subangular gravel, medium brown, dry. No foul odor.			
4		2.2									
5							SW	Same as above. Slightly moist. Slight petroleum odor.			
6											
7											
8		46	LAB 1538								
9											
10							SW	Vashon TILL (Qvt) - SAND, fine to medium, little coarse, mod to well graded, little small to large subrounded to subangular gravel, gray, dry. Very dense. Slight Petroleum odor.			
11											
12		36	LAB 1549								
13							SW	Same as above. Dry. Slight petroleum odor.			
14		40	LAB 1610								
15								Refusal at 14 ft			
16											
17											
18								Bottom of borehole at 14 feet+M32			
19								No groundwater encountered. No well installed.			
20								Borehole completed with bentonite chips.			

Project Name: Aldercrest Lynnwood Auto)

Project Number: 216-

Drilling Information

Drilling Contractor: SEP, Tumwater, Wa
Drilling Method: Direct Push
Borehole Diameter: 2"
Sampler Type: Core sampler +
virgin poly-sleeve

Driller: Chris Ross (Wa Lic 3018)

Site Location: 19230 Hwy 99, Lynnwood, Wa VCNW 2555

Borehole Location: 24 ft south and 0.5 ft east of NE corner of North Wing of building

Borehole Area (AOC): North Wing of building - south bay

Logged by: J. McDermott: Boring Depth: 15 feet

GW Encountered: Y NO

Static GW Level:

Approx. LAT 47.82368 LNG 122.31343

Approx. Surface Elevation: 396 feet MSL

Start Date: 01-13-17

End Date: Same

Notes:

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
1							Asphalt Pavement atop gravel base.	
2								
3						SW	SAND, fine to coarse, well graded, trace to little silt, little small to medium subrounded to subangular gravel, light to medium brown, dry. No foul odor.	
4	0.3							
5							Same as above. Dry.No foul odor.	
6						SW	Vashon TILL (Qvt) - SAND, fine to medium, little coarse, mod to well graded, little small to large subrounded to subangular gravel, gray, dry. Very dense. Slight Petroleum odor.	
7								
8	0.3							
9							Same as above. No foul odor.	
10						SW		
11								
12	0.5		LAB 1705					
13								
14						SW	Same as above. No foul odor.	
15	0.2		LAB 1725					
16							Refusal at 15 ft	
17								
18							Bottom of borehole at 15 feet+M2	
19							No groundwater encountered. No well installed.	
20							Borehole completed with bentonite chips.	

Project Name: Lynnwood Auto Body Shop
Project Number: 214-8142

Drilling Information

Drilling Contractor:	Borettec1, Spokane
Drilling Method:	9 in HAS
Borehole Diameter:	9 in
Sampler Type:	Split spoon core sampler (steel)

Site Location: 19230 Highway 99, Lynnwood, WA

Borehole Location: 8 ft north and 15 ft east of NEX Office (Between driveway and building)

Borehole Area (AOC): Near center of Oct 2011 UST-Impacted Soil Remediation/Excavation

Logged by: J. McDermott: Boring Depth: 56.5 feet

GW Encountered: NO Static GW Level: 44.5 (rising to 38 ft bgs)

Notes: Water sample collected Dec 9, 2014 - SWL at 33.9 ft below TOC

Approx. Surface Elevation: 395ft MSL (EIM)

Start Date: 12-03-14 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
1							FILL - Gravelly SAND, with cobbles, gray, dry (cuttings observed through 20 ft) Surface: 4 inch asphalt pavement atop gravel base. Possible concrete pavement fragments beside borehole between approximately 5 and 20 ft. Strong petrol odor estimated between approximately 15 and 20 ft. (Fill in this area is associated with the October 2011 Soil Remediation project - Aerotech Site Remediation and Closure report, dated Nov 3, 2011 The monitoring well location was determined by available maps and photographs created in October 2011)	2 in PVC
2								1.0'
3								
4								
5								
6								
7								
8			No core samples (0 - 20 ft)					
9			Cuttings monitored.					
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Project Name: Lynnwood Auto Body Shop

Project Number: 214-8142

Drilling Information

Drilling Contractor: Boretect1, Spokane, Wa

Logged by: James McDermott Lic. 3063

Start Date: 12-03-14 End Date: Same

Depth (ft)	Groundwater	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
21			18	14"		SAND, fine to very fine, well sorted, no gravel (little small to subrounded gravel below 25 ft), gray, dry to very moist (wet below 30.5 ft). SEAM at 25 to 26 ft: Fine SAND, medium, with little small gravel (subrounded). Very strong petrol odor above 23 ft, no odor below. Perched groundwater present atop underlying silt lens.	
			25				
22			48				
23							
24							
25				17"			
26			22		SP		
			28				
			53				
27							
28	Perched water at 27.5 ft					SILT, stiff, moderately hard, with subtle hints of lamination (1-3 mm), gray, dry. No odor. SEAM at base - 6 in thick silt with gravel.	
29				14"			
30			40				
31			50				
32				3"	ML		
33			50			SAND, fine to very fine, well sorted, trace small rounded gravel, gray, dry (wet below 44.6 ft, water rises to 38 ft during drilling)	
34							
35							
36							
37					SP		
38	Water level - post-installation: 38 feet						38'
39							
40							

Depth (ft)	Groundwater	Visual or Olfactory Evidence	Blow Counts	Recovery	USCS Classification	Soil Classification/Description	Well Construction
41		Water level rose to 38 ft after well installation				SAND, fine to very fine, well sorted, trace small rounded gravel, gray, dry (wet below 44.5 ft, water rose to 38 ft during drilling). SEAM at 50 ft (unknown thickness): SAND, fine, little medium to coarse sand/grit, small to medium subrounded gravel (No gravel content below 50 ft, color medium brown below 50 ft).	
42						GROUNDWATER MONITORING WELL INSTALLED: 2-inch diameter PVC with a 2-inch diameter No. 10 PVC slotted screen installed between the bottom of the well at 55.0 feet, and 40 feet. The borehole was overdrilling to 56.5 feet, without sampling, in order to counteract the impact of potential heaving sands. Nine 25 pound bags of <u>No 10 to No 20 sand filter pack</u> was installed in the annular spaces as the auger was withdrawn, with sand pack extending 2 feet above the top of the screened interval, to a depth of 38 feet bgs. <u>Fifteen 25 pound bags of bentonite pellets</u> were installed in the annular space between 38 feet bgs and approximately 2 feet bgs, in order to create the required sealed interval above the screened interval. <u>The well was finished with concrete and a flush-mounted steel well head fixture</u> , secured by two bolts. The top of casing ("TOC") was cut to a depth of approximately 0.25 feet bgs, and an expandable locking well cap was installed in order to secure the the well.	
43							
44			50	8"			
45	Wet below 44.5 ft				SP		
46							
47							
48							
49				5"			
50			50				
51							
52					SP		
53							
54			40	4"			
55			50				55'
56							56.5'
57							
58							
59							
60							

LIMITED PHASE II
Targeted Subsurface Investigation

Performed at:
LYNNWOOD BODY SHOP
19230 Highway 99
Lynnwood, Washington 98036

August 28, 2011

Performed by:
Aerotech Environmental Consulting, Inc.
19600 International Blvd., Suite No. 101
SeaTac, Washington 98188
Fax (206) 429-3594
(360) 429 - 3481

SUMMARY OF SAMPLE ACQUISITION

A total of eight discrete sample acquisition locations were advanced in areas of concern to a maximum depth of seventeen feet below ground surface. The following is a detailed description of each boring location, observations made during the acquisition, sampling information, and the field screening process. Please refer to the soil boring location map in the appendix for detailed soil boring locations.

Sample Acquisition Area No. SB-01 -West Side of Tank Pit (Within the Pit):

The Area of Acquisition was located sixteen feet north and thirty-two feet east of the southeast corner of where the 1946 office and garage area connect. This location is covered with asphalt. Boring operations revealed the site was underlain by a fine brown silty sand with occasional gravel. This material is likely imported fill used for backfilling the tank pit after the underground storage tanks were removed. A grey silty sand with gravel was found beneath the fine brown silty sand. The grey silty sand appears to be native material. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 14 feet. Groundwater was encountered at 12 feet..

Sample Acquisition Area No. SB-02 -East Side of the Tank Pit (Within the Pit):

The Area of Acquisition was located eleven feet east of the SB-1. This location is covered with asphalt. Boring operations revealed the site was underlain by a fine brown silty sand with occasional gravel. This material is likely imported fill used for backfilling the tank pit after the underground storage tanks were removed. A grey silty sand with gravel was found beneath the fine brown silty sand. The grey silty sand appears to be native material. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 11 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-03 - East Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located eleven feet east of the SB-3 near the Property line and sidewalk. This location was chosen to discover if potential contaminants had migrated off the subject Property. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel. This material appears to be native material. This was followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 17 feet. Groundwater was encountered at 13 feet.

Sample Acquisition Area No. SB-04 - North Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located twenty-six feet east of the northeast corner of the garage building. This location is covered with asphalt. Boring operations revealed the site was

underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 14 feet. Groundwater was encountered at 12 feet.

Sample Acquisition Area No. SB-05 –West Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located sixteen feet north and twenty-five feet east of the southeast corner of where the 1946 office and garage area connect. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-06 –: South Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located seven feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-07 –West Side of the Pump Island:

The Area of Acquisition was located eight feet north and two feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. Groundwater was encountered 12.5 feet.

Sample Acquisition Area No. SB-08 –East Side of the Pump Island:

The Area of Acquisition was located seven feet south and twelve feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

LABORATORY ANALYTICAL RESULTS

January 23, 2017

*James McDermott
Aerotech Environmental, Inc.
13925 Interurban Avenue South, Suite 210
Seattle, WA 98168*

Dear Mr. McDermott:

Please find enclosed the analytical data report for the *Lynnwood Body Shop (C70116-2)* Project.

Samples were received on *January 16, 2017*. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 702-8571.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Val G. Ivanov, Ph.D.
Laboratory Manager

4078 148 Ave NE ■ Redmond, WA 98052
425.702-8571
E-mail: aachemlab@yahoo.com

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C70116-2
Client:	Aerotech Environmental
Project Manager:	James McDermott
Client Project Name:	Lynnwood Body Shop
Client Project Number:	na
Date received:	01/16/17

AAL Job Number: C70116-2
 Client: Aerotech Environmental
 Project Manager: James McDermott
 Client Project Name: Lynnwood Body Shop
 Client Project Number: na
 Date received: 01/16/17

Analytical Results

8260B, µg/kg		MTH BLK	LCS	B-31 (16')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17
Date analyzed	Limits	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17
MTBE	100	nd		nd			
Chloromethane	50	nd		nd			
Vinyl chloride	50	nd		nd			
Bromomethane	50	nd		nd			
Chloroethane	50	nd		nd			
Trichlorofluoromethane	50	nd		nd			
1,1-Dichloroethene	50	nd		nd			
Methylene chloride	20	nd		nd			
trans-1,2-Dichloroethene	50	nd		nd			
2,2-Dichloropropane	50	nd		nd			
Chloroform	50	nd		nd			
1,1,1-Trichloroethane	50	nd		nd			
Carbontetrachloride	50	nd		nd			
1,1-Dichloropropene	50	nd		nd			
1,2-Dichloroethane(EDC)	20	nd		nd			
Trichloroethene	20	nd	98%	nd	95%	92%	4%
1,2-Dichloropropane	50	nd		nd			
Dibromomethane	50	nd		nd			
Bromodichloromethane	50	nd		nd			
cis-1,3-Dichloropropene	50	nd		nd			
trans-1,3-Dichloropropene	50	nd		nd			
1,1,2-Trichloroethane	50	nd		nd			
Tetrachloroethene	50	nd		nd			
1,3-Dichloropropane	50	nd		nd			
Dibromochloromethane	20	nd		nd			
1,2-Dibromoethane (EDB)*	5	nd		nd			
Chlorobenzene	50	nd	94%	nd	96%	91%	5%
1,1,1,2-Tetrachloroethane	50	nd		nd			
1,2,3-Trichloropropane	50	nd		nd			
1,1,2,2-Tetrachloroethane	50	nd		nd			
2-Chlorotoluene	50	nd		nd			
4-Chlorotoluene	50	nd		nd			
1,3-Dichlorobenzene	50	nd		nd			
1,4-Dichlorobenzene	50	nd		nd			
1,2-Dichlorobenzene	50	nd		nd			
1,2-Dibromo-3-Chloropropane	50	nd		nd			
1,2,4-Trichlorobenzene	50	nd		nd			
1,2,3-Trichlorobenzene	50	nd		nd			

*-instrument detection limits

AAL Job Number: C70116-2
 Client: Aerotech Environmental
 Project Manager: James McDermott
 Client Project Name: Lynnwood Body Shop
 Client Project Number: na
 Date received: 01/16/17

Analytical Results

8260B, µg/kg		MTH BLK	LCS	B-31 (16')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17
Date analyzed	Limits	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17	01/18/17

Surrogate recoveries

Dibromofluoromethane	115%	115%	105%	111%	109%
1,2-Dichloroethane-d4	117%	114%	98%	112%	103%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 M-matrix interference
 C - coelution with sample peaks
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C70116-2
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Lynnwood Body Shop
Client Project Number: na
Date received: 01/16/17

Analytical Results							Dupl
NWTPH-Gx / BTEX		MTH BLK	LCS	B-31 (13')	B-31 (16')	B-32 (14')	B-32 (14')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17

NWTPH-Gx, mg/kg							
Mineral spirits/Stoddard	5.0	nd		nd	nd	nd	nd
Gasoline	5.0	nd		nd	nd	nd	nd

BTEX 8021B, µg/kg							
Benzene	20	nd	71%	nd	nd	nd	nd
Toluene	50	nd	75%	nd	nd	nd	nd
Ethylbenzene	50	nd		nd	120	nd	nd
Xylenes	50	nd		nd	190	nd	nd

Surrogate recoveries:							
Trifluorotoluene		102%	108%	101%	99%	73%	85%
Bromofluorobenzene		90%	85%	94%	101%	83%	82%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C70116-2
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Lynnwood Body Shop
Client Project Number: na
Date received: 01/16/17

Analytical Results

NWTPH-Gx / BTEX		B-33 (15.5')	B-34 (8')	B-34 (14')	B-35 (15')	MS	MSD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	nd	nd	nd	nd		
Gasoline	5.0	nd	nd	nd	nd		

BTEX 8021B, µg/kg

Benzene	20	nd	nd	nd	nd	73%	78%
Toluene	50	nd	nd	nd	nd	110%	93%
Ethylbenzene	50	nd	100	290	nd		
Xylenes	50	nd	650	880	nd		

Surrogate recoveries:

Trifluorotoluene	75%	80%	130%	85%	118%	121%
Bromofluorobenzene	90%	105%	101%	80%	101%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C70116-2
 Client: Aerotech Environmental
 Project Manager: James McDermott
 Client Project Name: Lynnwood Body Shop
 Client Project Number: na
 Date received: 01/16/17

Analytical Results

NWTPH-Gx / BTEX		RPD
Matrix	Soil	Soil
Date extracted	Reporting	01/16/17
Date analyzed	Limits	01/16/17

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard	5.0	
Gasoline	5.0	

BTEX 8021B, µg/kg

Benzene	20	7%
Toluene	50	17%
Ethylbenzene	50	
Xylenes	50	

Surrogate recoveries:

Trifluorotoluene	
Bromofluorobenzene	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
 na - not analyzed
 M - matrix interference
 Results reported on dry-weight basis
 Acceptable Recovery limits: 70% TO 130%
 Acceptable RPD limit: 30%

AAL Job Number: C70116-2
 Client: Aerotech Environmental
 Project Manager: James McDermott
 Client Project Name: Lynnwood Body Shop
 Client Project Number: na
 Date received: 01/16/17

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	B-31 (13')	B-31 (16')	B-32 (14')	B-33 (15.5')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	480	7,700	3,200	nd
Heavy oil	50	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	109%	73%	M	99%	107%
o-Terphenyl	120%	84%	M	96%	90%

Data Qualifiers and Analytical Comments

na - not analyzed

Results reported on dry-weight basis

M - matrix interference

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: C70116-2
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Lynnwood Body Shop
Client Project Number: na
Date received: 01/16/17

Analytical Results		Dupl		RPD			
NWTPH-Dx, mg/kg		B-34 (8')	B-34 (14')	B-35 (15')	B-35 (15')	B-35 (15')	MTH BLK
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/23/17
Date analyzed	Limits	01/16/17	01/16/17	01/16/17	01/16/17	01/16/17	01/23/17
Kerosene/Jet fuel	20	nd	nd	nd	nd		nd
Diesel/Fuel oil	20	8,400	6,400	2,100	2,000	5%	nd
Heavy oil	50	nd	nd	nd	nd		nd

Surrogate recoveries:

Fluorobiphenyl	M	M	104%	111%	100%
o-Terphenyl	M	M	87%	104%	121%

Data Qualifiers and Analytical Comments

na - not analyzed

Results reported on dry-weight basis

M - matrix interference

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: C70116-2
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Lynnwood Body Shop
Client Project Number: na
Date received: 01/16/17

Analytical Results

NWTPH-Dx, mg/kg		B-31 (17.5')
Matrix	Soil	Soil
Date extracted	Reporting	01/23/17
Date analyzed	Limits	01/23/17
Kerosene/Jet fuel	20	nd
Diesel/Fuel oil	20	5,900
Heavy oil	50	nd

Surrogate recoveries:

Fluorobiphenyl	M
o-Terphenyl	M

Data Qualifiers and Analytical Comments

na - not analyzed

Results reported on dry-weight basis

M - matrix interference

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

Laboratory Job #: C70116-2

4078 148 Avenue NE
Redmond, WA 98052
(425) 702-8571
aachemlab@yahoo.com

Client: Aerotech

Project Name: Lynnwood Body Shop

Project Manager: J. McDERMOTT

Project Number: _____

Address: _____

Collector: J. McDERMOTT

Phone: _____ Fax: _____

Date of collection: 13 JAN 2017

	Sample ID	Time	Matrix	Container type	100% 100%														
--	-----------	------	--------	----------------	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Relinquished by:	Date/Time	Received by:	Date/Time
<u>Jane McDermtt</u>	<u>1/16/17 1110</u>	<u>Steve Zuck</u>	<u>1/16/17 1110</u>
Relinquished by:	Date/Time	Received by:	Date/Time
<u>Steve Zuck</u>	<u>1/16/17 1335</u>	<u>V. Naurv</u>	<u>01/16/17 1335</u>

Sample receipt info:

Turnaround time:

Total # of containers: _____
Condition (temp, °C) _____
Seals (intact?, Y/N) _____
Comments: _____

Same day ☐
24 hr ☐
48 hr ☐
Standard ☒

Laboratory Job #:

070116-2

4078 148 Avenue NE

Redmond, WA 98052

(425) 702-8571

aachemlab@yahoo.com

Client: AERTECH

Project Manager: J. McDERMOTT

Address:

Phone:

Fax:

Project Name:

Lynnwood Body Shop

Project Number:

Collector: J McDERMOTT

Date of collection:

13 JAN 2017

	Sample ID	Time	Matrix	Container type	8260 Volatiles	HVOC 8260	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	MTC5 Metals		Notes, comments	# of containers	
1	B-34 (12')	1543	SCIL	JAR VCA																		
2	B-34 (14')	1601					X		X													
3	B-35 (12')	1705																				
4	B-35 (15')	1725		↓			X		X													
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Relinquished by:

Date/Time

Received by:

Date/Time

Sample receipt info:

Turnaround time:

Total # of containers:

Same day ☐

Condition (temp, °C)

24 hr ☐

Seals (intact?, Y/N)

48 hr ☐

Comments:

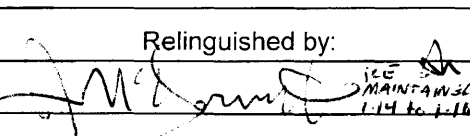

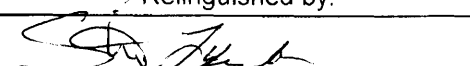
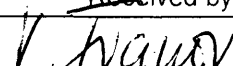
Standard ☒

Relinquished by:

Date/Time

Received by:

Date/Time

	1/16/17 1110		1/16/17 1110
	1/16/17 1335		01/16/17 1335

ICE MAINTAINED 1/14 to 1/16

SUPPORTING DOCUMENTS

Selected Figures

Previous Reports

LIMITED PHASE II
Targeted Subsurface Investigation

Performed at:
LYNNWOOD BODY SHOP
19230 Highway 99
Lynnwood, Washington 98036

August 28, 2011

Performed by:
Aerotech Environmental Consulting, Inc.
19600 International Blvd., Suite No. 101
SeaTac, Washington 98188
Fax (206) 429-3594
(360) 429 - 3481

**LIMITED PHASE II
TARGETED SUBSURFACE INVESTIGATION**

performed for:

Clients: Mr. Nick Stack
 ALDERCREST AUTO REBUILD
 2415 - 196th Street SW
 Lynnwood, Washington 98036

NORTHWEST BUSINESS DEVELOPMENT ASSOCIATION
 9019 E. Appleway Blvd., Suite No.200
 Spokane Valley, Washington 99212

U.S. SMALL BUSINESS ADMINISTRATION
 2401 Fourth Avenue, Suite 450
 Seattle, Washington 98121

Point of Contact: Mr. Nick Stack
 Aldercrest Auto Rebuild
 (425) 652-2059
 Cell (206) 909-8584

Property: **LYNNWOOD BODY SHOP**
 19230 Highway 99
 Lynnwood, Washington 98036

County: Snohomish

Property Parcels: Snohomish Assessor Nos.00585300000501 & 00585300000502

S.I.C. Code: Not provided

Commercial Activity: Automotive Repair Shop (currently vacant)

Licensed Geologist: Michael McGowan
 State of Washington License No. 1737

Project Number: No. 211 - 5189

Report Date: August 28, 2011

EXECUTIVE SUMMARY

Phase I Environmental Assessment Findings.....

The Site is occupied by a single building, the former Lynnwood Body Shop. The building is a one-story structure with various additions. An office is located at the front of the building followed by multiple service bays and a paint booth. There is an open parking area in the east side of the property allowing access from Highway 99.

The building is located on the south side of the site. It is divided into four distinct portions: in 1946 a concrete block building was built and occupied by the *Tool Crib Company*. Tool Crib subsequently installed the two underground gasoline tanks and pump island. The Lynnwood Body Shop building was built in 1961 to the rear of the original building. A new wing that connects the 1946 Tool Crib building to the 1961 Lynnwood Body Shop building was constructed in 1979. It was at this time that the gasoline storage tanks were removed from the Property.

The original Site occupant, the Tool Crib Company, also sold gasoline and diesel fuel; two on underground storage tanks were installed to store the gasoline and diesel. Reportedly both these tanks were removed in 1979 but no documentation was provided to attest to the tanks removal.

In order to determine if the tanks had been removed and if they had released product into the surrounding soil and groundwater Aerotech Environmental Services was engaged to conduct Limited & Targeted Phase II Subsurface Investigation. The Phase II included a Ground Penetrating Radar Study to attempt to locate the tanks or their former location; no evidence of existing tanks was discovered. Once the tank area was located eight soil borings were advanced in and along the perimeter of the tank pit and the pump island and samples were collected.

Phase II Subsurface Investigation Findings & Conclusions.....

Conclusions:

Aerotech Environmental Consulting, Inc. performed a Limited & Targeted Phase II Subsurface Investigation in the Areas of Concern. The Phase II Investigation identified elevated levels of petroleum in the perched water present in and to the east of the former tank pit, and beneath the former dispenser island. Perched water was not present on the west and south sides of the tank excavation, and to the east of the former dispenser island.

The analytical results indicate that petroleum-impacted groundwater has accumulated: (1) in the former tank excavation pit; (2) in an area immediately east of the former tank pit; and (3) underneath the former dispenser island.

Additionally, elevated levels of petroleum constituents in soil are only present in soil boring SB-03 located on the east side of the former underground storage tank - limited from four to a maximum of less than twelve feet below ground surface. At twelve feet below grade, the petroleum concentrations are below the laboratory limits of detection.

■ Recommendations:

Based upon the Site Investigation, ground penetrating radar study, physical observations of the Site subsurface soil conditions, and reported third party laboratory analytical results of the Contaminants of Concern further action is advised for the subject Property. This should include excavation of impacted soils and removal of the perched water, followed by the installation of groundwater monitoring wells.

Upon completion of the Remedial Action the Property should be entered into the Washington Voluntary Cleanup Program with the object of obtaining a No Further Action Determination.

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INTRODUCTION

Aerotech Environmental Consulting, Inc., performed this Limited & Targeted Phase II Subsurface Investigation¹ of the subject Property described as *The Lynnwood Body Shop* located at 1930 Highway 99, Lynnwood, Washington. The objective of this Investigation was to evaluate the condition of the subsurface soils for the Recognized Environmental Conditions in the Area of Concern to determine if the subject Property had in fact, been impacted by that specific Recognized Environmental Condition. On July 19, 2011, Mr. Nick Stack, potential purchaser of the subject Property engaged Aerotech Environmental Consulting, Inc. to perform a *Limited and Targeted Phase II Environmental Investigation* of the Site – the Scope of Work of said Investigation as delineated in Service Agreement No. 2011-07-19.1 on July 19, 2011.

PROJECT SCOPE OF WORK

Scope. By this Agreement and relative to environmental issues raised in the *Phase I Environmental Site Assessment* performed by Aerotech Environmental Consulting, Inc., on June 19, 2011, Project No. 211 - 5184. The Scope of Services on this Project is limited to:

SITE SUBSURFACE CHARACTERIZATION – Prior to the start of on Site boring activities, (1) a Ground Penetrating Radar Survey of the Areas of Concern will be performed by properly trained third-party professionals; and (2) an on Site Utilities Locate will be performed by third-party professionals in addition to the Location Services performed the potentially affected public and private utilities.

AREA OF CONCERN: The Center Section of the East Side In front of the Garage Area that fronts Highway 99) – Objective to determine the possible presence of subsurface contamination originating from the location of two underground storage tanks and one pump island dating back to when the subject property had gasoline service.. Two tanks are believed to have been used to store gasoline dating back to 1948. Both tanks are believed to have been removed in 1971. The Area of Concern (“AOC”) is located in front of the garage area that fronts Highway 99. This is the former location of the underground gasoline storage tanks and pump island. Investigation may or may not delineate the extent of contamination. Scope of Work to include:

- (i) soil explorations at Site AOC location to identify the existence of contamination as determined by the Scope of Work for Site-related constituents, including Total Petroleum Hydrocarbons (gasoline, diesel and oil), and BTEX compounds (Benzene, Toluene, Ethylbenzene, and Xylenes), and lead.

¹ This Phase II Site Assessment is “targeted” as defined by the ASTM *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, Designation E 1903-97 (Reapproved 2002); “an assessment performed in accordance with the process described in this [E 1903-97] practice, which addresses only certain *releases* or potential *releases*, or certain *target analytes*, at a property as selected by the *User* but which does not address all *releases*, potential *releases*, and *target analytes*. [E 1903-97, § 3.1.43]”

- (ii) subsurface borings at AOC locations to be performed to an average eleven to seventeen foot depth below ground surface by powered drilling equipment. Total number of subsurface penetrations will be eight.
- (iii) independent laboratory analysis of seven soil (or in the alternative groundwater) samples for Total Petroleum Hydrocarbons and BTEX;
- (iv) analytical response time 7 business days from sample submission, report preparation as delineated in the *Schedule* section of this Agreement;
- (v) a report of activities, observations, and findings will be prepared and delivered as agreed in the *Schedule* section of this Agreement;
- (vi) site activities may produce soil spoils that will be drummed and left on-site. Management and disposal of this material is not the responsibility of Aerotech.

Groundwater Sampling Exclusions – It is possible that groundwater will be encountered during the subsurface boring activities; samples will be collected. As a result, groundwater well installation and permanent groundwater monitoring is excluded from the Scope of Work of this Proposal.

* * * * *

SECTION I. SITE DESCRIPTION

Site Exterior Description:

The Site is occupied by a single building; the Lynnwood Body Shop. The building is a one story building that has been added on to at various times. According to Mr. Peter Vanderlugt, the present owner, the building is approximately 8,000 square foot in size. It is constructed of concrete blocks and built on a concrete slab. The building housed the office space and work areas for the Lynnwood Body Shop but was vacant at the time of Site Reconnaissance. An enclosed chain-linked fence is on the northeast, north, west sides of the subject property. This enclosed area was used as a secure storage/parking area for customer's automobiles. There is an open parking area in the east side of the property allowing access from Highway 99. The street front is landscaped and has a paved parking area.

The building is located on the south side of the site and is constructed with concrete blocks on a concrete slab on grade and has a wood-frame roof. The building has been added on to several times over the course of its history. It is divided into four distinct portions. In 1946 a concrete block building was built on Parcel 00585300000501 and housed the Tool Crib company. Tool Crib installed the two underground gasoline tanks and pump island. The Lynnwood Body Shop building was built in 1961 (Parcel 00 585300000502). A new wing that connects the 1946 Tool Crib building to the 1961 Lynnwood Body Shop building was built in 1979. It was at this time that the gasoline storage tanks were removed from the property.

During the on Site Reconnaissance, there were no readily observed visual indicators of active underground storage tanks, stained soils, stressed vegetation, oily sheens, or discolorations on standing water surfaces. There was no evidence of foul odors. Additionally, the Site Reconnaissance did not reveal the presence of discarded drums, barrels, or containers, construction debris, damaged or discarded containers of chemicals, paints, or pesticides. There are no waste storage or treatment lagoons, pits, ponds, or surface impoundments on the Site, or the adjoining properties.

The Property was first developed in 1946 with the construction of the building that housed the Tool Crib company. This business also sold gasoline and has an associated fueling island on the site. The present building was the result of additions built in 1961, 1971, and 1979.. The present owner of the subject Property is Mr. Peter Vanderlugt.

The subject Property is located in the City of Lynnwood.

Site Development Description:

The Property was first developed in 1946 with the construction of the building that housed the Tool Crib company. This business also sold gasoline and has an associated fueling island on the site. The present building was the result of additions built in 1961, 1971, and 1979.. The present owner of the subject Property is Mr. Peter Vanderlugt.

Site Observations and Reported Conditions:

No additional Recognized Environmental Conditions or concerns identified as potential impacts to the Property.

SECTION II. FIELD WORK

Notifications - "Public" Utilities:

Due to the developmental nature of the Site, a "public" utilities notification was performed prior to the start of work. The "public" utilities notification was performed on July 20, 2011 by Aerotech Environmental Consulting, Inc.² to the Utilities Underground Location Center. Ticket number 11158047.

Notifications - Private Utilities Location:

Due to the developmental nature of the Site, a "private" utilities notification was performed prior to the start of work. The Site exterior and building interior utilities were located by personnel engaged by Aerotech Environmental Consulting, Inc, and employed by Mountain View Utilities Detection Service, Inc., of Bonney Lake, Washington on July 27, 2011, prior to the start of the on Site drilling activities.

No unanticipated or unexpected situations were discovered or encountered during the "private" locating activities.

Ground Penetrating Radar Subsurface Investigation:

A Ground Penetrating Radar Study was performed in the Areas of Concern on July 27, 2011 by an independent third-party geophysical firm. A Ground Penetrating Radar ("GPR") Study is a geophysical methodology which uses radar pulses to reflect off of subsurface structures and thus provide an image of the subsurface conditions and THE possible presence of subsurface objects. The depth of GPR Survey is determined by the electrical conductivity of the ground and

² Aerotech Environmental Consulting, Inc., was previously issued Contractor Identification Number 58972 by the non-profit Utilities Underground Location Center (www.callbeforeyoudig.com).

the survey equipment transmitting frequency, and is limited to eight to thirteen feet below ground surface. However, the presence of significant subsurface obstructions or concrete rebar may limit the depth and effectiveness of the accuracy of the object identification. Additionally, surficial obstructions may limit the depth and effectiveness of the accuracy of the object identification.

The GPR Study performed for the subject Property did identify a previously unknown Recognized Environmental Concern in the form of an underground storage tank that is believed to be a gasoline storage used when a gasoline station occupied the subject Property. The scope of the subsurface investigation was revised to take the newly discovered underground storage tank into account. No further Recognized Environmental Concerns or issues were revealed.

Magnetometer Investigation:

Due to the nature of the anticipated Constituents of Concern, and lack performance of a Ground Penetrating Radar Study, a magnetometer investigation was performed prior to the initiation of the Site subsurface investigation – by personnel from Mountain View Locating, Inc.

Site Activities:

The *Limited & Targeted Phase II Subsurface Investigation* was performed on July 27, 2011, under contract with Aerotech Environmental Consulting, Inc. All the work was performed during normal business hours. No unusual or unforeseen circumstances occurred during the Site activities.

The subsurface borings were performed by equipment owned by and operated by Licensed Drillers from ESN Northwest Drilling, Inc. The on Site drilling equipment was operated by personnel employed by ESN Northwest Drilling, Inc. The laboratory analytical services were performed by the ESN Northwest Chemistry Laboratories in Bellevue and Lacey, Washington.

Drilling and Excavation Activities:

Due to the nature of the Site surfaces and working spaces around the Area of Concern, drilling operations employing a Geoprobe® style direct push truck mounted drill rig were employed for the Site work.

Groundwater Flow:

The principal aquifers in the Puget Sound Region occur in glacial drift, that along with finer grained interglacial sediments, underlies the basin lowland to depths of more than 1,00 feet. The sand and gravel units in the glacial drift form the principle aquifers. These aquifers receive ample recharge from the typically heavy precipitation characteristic of western Washington. The glacial drift in the Puget Sound region varies greatly in composition and water yielding capacity. Typically, wells in glacial drift that tap silt, clay, or till in the Region at approximately 75 to 100 feet below ground surface may have yields of 100 gallons or more per minute. Deeper wells tapping thick, saturated layers of highly permeable gravel and coarse sand, typically at depths greater than 250 feet below ground surface, can yield more than 1,000 gallons per minute. Based on topography the inferred groundwater flow is to the northwest.

Sample Collection:

Samples were collected at locations and at depths as identified by field personnel. Samples were collected from eleven to seventeen foot depths. A total of sixty-two discrete samples were collected on July 27, 2011. Fifty-eight soil samples were collected and four water samples were obtained.

In some situations the upper elevation sample was analyzed as being the most representative of surficial and subsurface conditions – considering the most likely source of possible contamination was surficial releases. In other locations, lower elevation samples were collected as representative of the assumed Site conditions.

Soils collected from each excavation location were physically observed for composition and odor. Samples were placed in sterile glass jars with teflon sealed lids. All sampling equipment for soil sampling, drive rods, and probes were decontaminated after each sampling point by washing with soapy distilled water and rinsing with distilled water. After washing, all external surfaces are wiped with clean paper towels. Plastic tubing is used only once.

Each sample was given a unique identifier number and placed in an iced cooler for sample preservation. A Chain of Custody recorded the collection and handling of every sample. As a result of the Site observations and recorded data, discrete soil and water samples were selected for laboratory analysis. The remaining soil samples were retained by the laboratory for analysis in the event that the groundwater or soil samples selected for laboratory analysis revealed elevated levels of constituents. Following the production of the initial Site sample results, followup laboratory analysis was requested and performed for the subject Site.

When applicable, water samples were collected from temporary wells that utilized the soil boring locations. The groundwater were collected employing the insertion of sterile, slotted tubing to screen the boring penetration at the appropriate depths. Generally, sample locations were screened at the six to ten foot below ground surface depth range. A sample screening tubing was disposed of after a single use.

Sample Screening:

The soil samples are typically collected from each excavation location were recorded and decided in a field log. The soil samples are placed in sterile glass jars with resealable Teflon lids.. Each sample jar is sealed and labeled.

Equipment Decontamination:

All sample acquisition equipment was decontaminated before and after each boring to eliminate the potential for cross-contamination between subsurface borings, as required. Since sample media was primarily collected by virgin polyurethane tubes and clean latex gloves, sample equipment decontamination was not required; and all sampling equipment was single-use only.

Site Restoration:

Due to the nature of ongoing Site excavation and preparation work, sampling location restoration was necessary. Each boring location into an asphalt paved area was filled with bentonite slurry mixture, and the final 6 to 8 inches were filled with “cold patch” asphalt – a quick set asphalt that matched the surrounding surficial conditions.

SUMMARY OF SAMPLE ACQUISITION

A total of eight discrete sample acquisition locations were advanced in areas of concern to a maximum depth of seventeen feet below ground surface. The following is a detailed description of each boring location, observations made during the acquisition, sampling information, and the field screening process. Please refer to the soil boring location map in the appendix for detailed soil boring locations.

Sample Acquisition Area No. SB-01 -West Side of Tank Pit (Within the Pit):

The Area of Acquisition was located sixteen feet north and thirty-two feet east of the southeast corner of where the 1946 office and garage area connect. This location is covered with asphalt. Boring operations revealed the site was underlain by a fine brown silty sand with occasional gravel. This material is likely imported fill used for backfilling the tank pit after the underground storage tanks were removed. A grey silty sand with gravel was found beneath the fine brown silty sand. The grey silty sand appears to be native material. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 14 feet. Groundwater was encountered at 12 feet..

Sample Acquisition Area No. SB-02 -East Side of the Tank Pit (Within the Pit):

The Area of Acquisition was located eleven feet east of the SB-1. This location is covered with asphalt. Boring operations revealed the site was underlain by a fine brown silty sand with occasional gravel. This material is likely imported fill used for backfilling the tank pit after the underground storage tanks were removed. A grey silty sand with gravel was found beneath the fine brown silty sand. The grey silty sand appears to be native material. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 11 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-03 - East Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located eleven feet east of the SB-3 near the Property line and sidewalk. This location was chosen to discover if potential contaminants had migrated off the subject Property. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel. This material appears to be native material. This was followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 17 feet. Groundwater was encountered at 13 feet.

Sample Acquisition Area No. SB-04 - North Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located twenty-six feet east of the northeast corner of the garage building. This location is covered with asphalt. Boring operations revealed the site was

underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 14 feet. Groundwater was encountered at 12 feet.

Sample Acquisition Area No. SB-05 –West Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located sixteen feet north and twenty-five feet east of the southeast corner of where the 1946 office and garage area connect. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-06 –: South Side of the Tank Pit (Outside the Pit):

The Area of Acquisition was located seven feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. There were no odors or visual indications of petroleum impact. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

Sample Acquisition Area No. SB-07 –West Side of the Pump Island:

The Area of Acquisition was located eight feet north and two feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. Groundwater was encountered 12.5 feet.

Sample Acquisition Area No. SB-08 –East Side of the Pump Island:

The Area of Acquisition was located seven feet south and twelve feet east of the southeast corner of office section of the 1946 garage. This location is covered with asphalt. Boring operations revealed the site was underlain by a brown silty sand with gravel followed by a grey silty sand with gravel. Petroleum-like odors were detected in some of the soil samples. Soil samples were collected at 2 foot intervals starting at 2 feet below ground surface with penetration terminated at 13 feet. No groundwater was encountered.

SECTION III. ANALYTICAL RESULTS

ANALYSIS OF WATER SAMPLES:

Gasoline, Diesel & Oil (TPH) Constituents in Water Concentrations:

All samples were below the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels.

Sample Number	Date Analyzed	Gasoline Range Organics	Diesel Range Organics	Lube Oil Range Organics
SB-01-W	08-2-11	59,000 ug/L*	400,000 ug/L	ND
SB-03- W	08-2-11	2,000 ug/L	30,00 ug/L	ND
SB-04- W	08-2-11	8,700 ug/L	6,900 ug/L	ND
SB-07-W	08-2-11	190,000 ug/L	190,000 ug/L	ND
MTCA Cleanup Levels		800 ug/L	500 ug/L	500 ug/L

* ug/L is the same as parts per billion ('ppb')

Benzene, Toluene, Ethylbenzene & Xylenes (BTEX) Constituents in Water Concentrations:

All samples were below the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels.

Sample Number	Date Analyzed	Benzene	Toluene	Ethylbenzene	Xylenes
SB-01-W	08-2-11	ND	ND	ND	ND
SB-03- W	08-2-11	2.4	ND	1.4	ND
SB-04- W	08-2-11	ND	1.3	ND	ND
SB-07-W	08-2-11	ND	ND	ND	3.1
MTCA Cleanup Levels		5.0 ug/L	1,000 ug/L	700 ug/L	1,000 ug/L

Total Lead Constituents in Water Concentrations by Method 6020:

All samples were below the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels.

Sample Number	Date Analyzed	Total Lead
SB-01-W	08-2-11	5.2 ug/L
SB-01- W (duplicate)	08-2-11	4.2 ug/L
MTCA Cleanup Level		15.0 ug/L



ANALYSIS OF SOIL SAMPLES:

Gasoline, Diesel & Oil ("TPH") Constituents in Soil Concentrations:

All samples were compared to the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels.

Sample No:	Date Analyzed:	Sample Depth:	Gasoline Range Organics:	Diesel Range Organics:	Lube Oil Range Organics:
SB 03-04	08-12-11	4' bgs	nd	nd	nd
SB 03-10	08-12-11	10' bgs	290 mg/kg	12,000 mg/kg	nd
SB 03-12	07-20-11	12' bgs	nd	nd	450 mg/kg
SB 03-20	07-20-11	20' bgs	nd	nd	nd
SB 04-04	08-12-11	4' bgs	nd	nd	nd
SB 04-10	08-12-11	10' bgs	nd	nd	nd
SB 06-04	08-12-11	4' bgs	nd	nd	nd
SB 06-10	08-12-11	10' bgs	nd	nd	nd
SB 07-04	08-12-11	4' bgs	nd	nd	nd
SB 07-10	08-12-11	10' bgs	nd	nd	nd
MTCA Cleanup Level:			30 or 100 mg/kg	2,000 mg/kg	2,000 mg/kg

* mg/kg is equivalent to as parts per million ('ppm')

**Benzene, Toluene, Ethylbenzene & Xylenes ("BTEX")
Constituents in Soil Concentrations:**

All samples were compared to the stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels.

Sample No:	Date Analyzed:	Sample Depth:	Benzene:	Toluene:	Ethyl-benzene:	Xylenes:
SB 02-06	07-28-11	6' bgs	nd	nd	0.56 mg/kg	1.7 mg/kg
SB 03-04	08-12-11	4' bgs	nd	nd	nd	nd
SB 03-10	08-12-11	10' bgs	nd	nd	0.41 mg/kg	1.5 mg/kg
SB 04-04	08-12-11	4' bgs	nd	nd	nd	nd
SB 04-10	08-12-11	10' bgs	nd	nd	nd	nd
SB 05-13	07-28-11	13' bgs	nd	nd	nd	nd
SB 06-04	08-12-11	4' bgs	nd	nd	nd	nd
SB 06-10	08-12-11	10' bgs	nd	nd	nd	nd
SB 07-04	08-12-11	4' bgs	nd	nd	nd	nd
SB 07-10	08-12-11	10' bgs	nd	nd	nd	nd
SB 08-13	07-28-11	13' bgs	nd	nd	nd	nd
MTCA A Cleanup Levels:			0.03 mg/kg	7.0 mg/kg	6.0 mg/kg	9.0 mg/kg

APPLICABLE ANALYTICAL METHODOLOGIES AND PARAMETERS

The analysis parameters requested were chosen to provide a comprehensive characterization of the subsurface soils and/or water present at the Site Areas of Concern and to comply with State of Washington recommended analysis parameters.

Analytical Methodology:

Gasoline Range Organics

Northwest Total Petroleum Hydrocarbons (Method NWTPH-Gx)

Diesel & Oil Range Organics

State of Washington NWTPH-Dx/Dx Extended

Residual Range Organics

State of Washington NWTPH-Dx/Dx Extended

Volatile Organic Compounds

EPA Method 8260B

Laboratory Analysis:

Laboratory analysis was provided by:

ESN Northwest Chemistry Laboratory
1210 Eastside Street S.E., Suite No.200
Olympia, Washington 98501
(360) 459-4670

APPLICABLE ANALYTICAL METHODOLOGIES AND PARAMETERS

The analysis parameters requested were chosen to provide a comprehensive characterization of the subsurface soils and/or water present at the Site Areas of Concern and to comply with State of Washington recommended analysis parameters.

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State of Washington NWTPH-Dx/Dx Extended

Volatile Organic Compounds

EPA Method 8260B

Laboratory Analysis:

Laboratory analysis was provided by:

ESN Northwest Chemistry Laboratory
1210 Eastside Street S.E., Suite No.200
Olympia, Washington 98501
(360) 459-4670

SECTION IV.

Conclusions:

Aerotech Environmental Consulting, Inc. performed a Limited & Targeted Phase II Subsurface Investigation in the Areas of Concern. The Phase II Investigation identified elevated levels of petroleum in the perched water present in and to the east of the former tank pit, and beneath the former dispenser island. Perched water was not present on the west and south sides of the tank excavation, and to the east of the former dispenser island.

The analytical results indicate that petroleum-impacted groundwater has accumulated: (1) in the former tank excavation pit; (2) in an area immediately east of the former tank pit; and (3) underneath the former dispenser island.

Additionally, elevated levels of petroleum constituents in soil are only present in soil boring SB-03 located on the east side of the former underground storage tank – limited from four to a maximum of less than twelve feet below ground surface. At twelve feet below grade, the petroleum concentrations are below the laboratory limits of detection.

■ Recommendations:

Based upon the Site Investigation, ground penetrating radar study, physical observations of the Site subsurface soil conditions, and reported third party laboratory analytical results of the Contaminants of Concern further action is advised for the subject Property. This should include excavation of impacted soils and removal of the perched water, followed by the installation of groundwater monitoring wells.

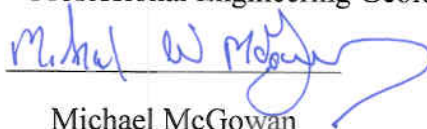
Upon completion of the Remedial Action the Property should be entered into the Washington Voluntary Cleanup Program with the object of obtaining a No Further Action Determination.

STATEMENT OF THE LICENSED GEOLOGIST

As stipulated in the Regulatory Code of the State of Washington Title 18, Chapter 18.220, the undersigned is a licensed Geologist in the State of Washington, and has met the statutory requirements of RCW § 18.220.060 for such licensing including, but not limited to, educational requirements, work and field experience, examination proficiency, and acceptance by the State Licensing Board.

The undersigned Licensed Geologist has supervised the geological work performed as described in attached Report – a majority of said work being performed by employees of the firm which employs undersigned Licensed Geologist – as delineated in RCW Title 18, Chapter 18.220, Paragraph 190.

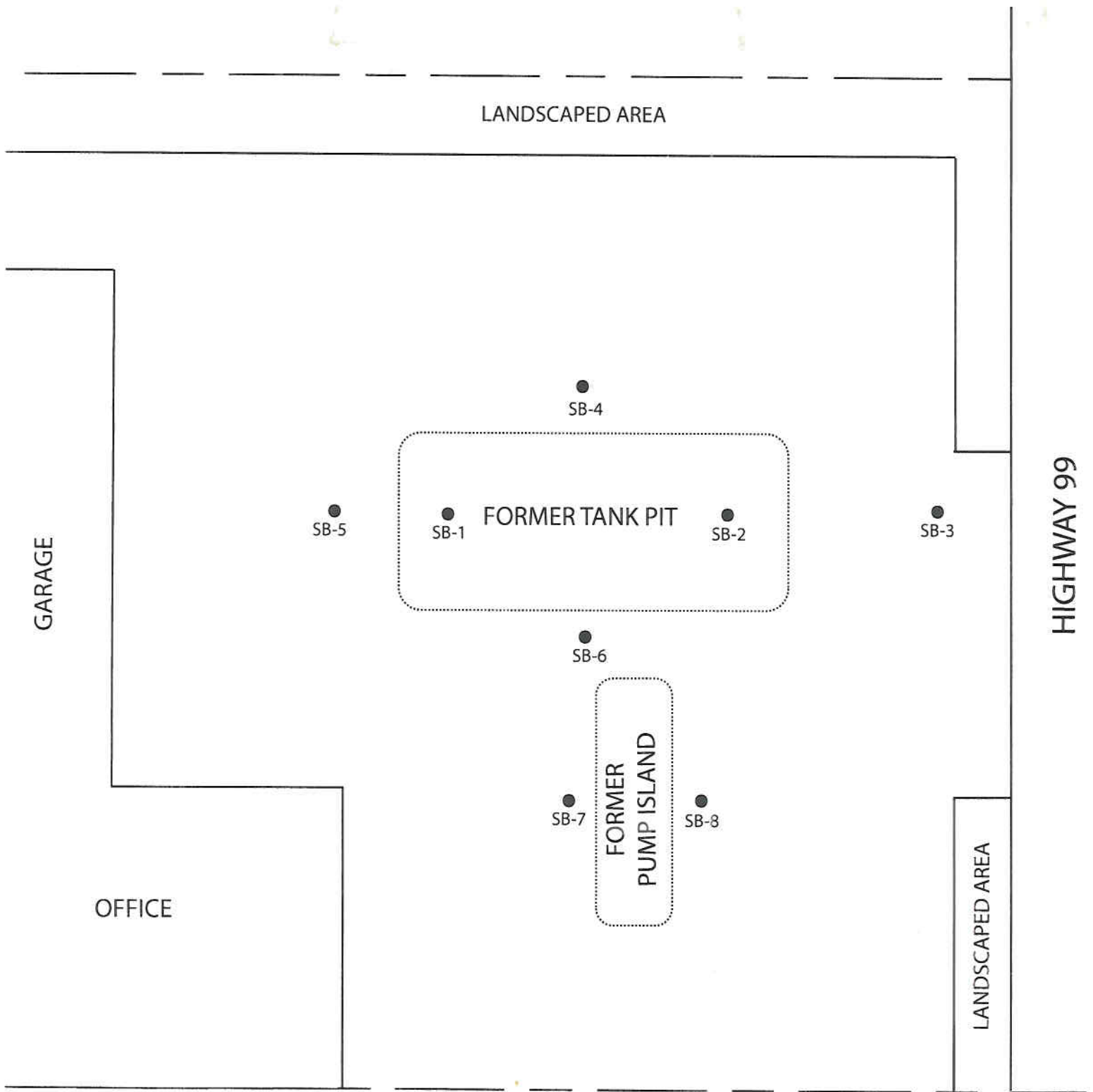
Signature of Licensed
Professional Geologist:
Professional Hydrogeologist:
Professional Engineering Geologist:



Michael McGowan
State of Washington License No 1737



Michael W. McGowan



ALDERCREST AUTO REBUILD
(LYNNWOOD BODY SHOP)
19230 HIGHWAY 99
LYNNWOOD, WASHINGTON 98036



— — — — — PROPERTY LINE
● SOIL BORINGS

AEROTECH
Environmental Consulting Inc.

19600 International Blvd, Suite No.101
SeaTac, Washington 98188
(360)710-5899

9951 Mickelberry Road NW, Suite No. 219
Silverdale, Washington 98383
(866) 800-4030

512 W. International Airport Road, Suite No.201
Anchorage, Alaska 99518
(907) 575-6661

5319 SW Westgate Dr., Suite No.24
Portland, Oregon 97221
(503) 360-4701

August 19, 2011

Mr. Nick Stack
ALDERCREST AUTO REBUILD
2415 - 196th Street Southwest
Lynnwood, Washington 98036

Re: **PHASE II ANALYTICAL ADDENDUM**
Lynnwood Body Shop
19230 Highway 99
Lynnwood, Washington 98036

Dear Mr. Stack;

As you are aware, following receipt of the initial laboratory analytical results and our meeting with yourself and the current Property Owner, we instructed the ESN Northwest analytical laboratory to complete additional laboratory analyses of the Site soil samples at varying depths in order to improve the accuracy of our preliminary *Range of Costs Summary* dated August 11, 2011.

The receipt of this second round of laboratory analytical data has allowed the following additional observations regarding the Site conditions:

Extent of Initial Remediation Excavation On Site. The laboratory samples appear to support the Range of Costs based upon the "likely maximum range of costs estimate." Sample SB-08-13 indicates that upon completion of the remedial action, gasoline-impacted soils may remain in place in the area of the former pump islands

Extent of Initial Remediation Off Site. Based upon the concentrations of diesel range organics present in Sample No. SB-03-10 – collected adjoining the sidewalk at 10 feet below ground surface – it appears likely that following the remedial action, petroleum-impacted soils will likely remain in place underneath the public sidewalk and right-of-way.

Installation and Monitoring of Groundwater. In the event that petroleum-impacted soils remain in place following completion of the remedial soil removal action, long term groundwater monitoring will likely be required by the Department of Ecology. Depending upon the monitoring results, there is always a possibility that some type of additional remedial action could be requested now, or in the future.

Mr. Nick Stack
Phase II Analytical Addendum
Lynnwood Body Shop
August 19, 2011
Page 2

Gasoline, Diesel, and Oil ("TPH-G" & "THP-D:) Constituents in Soil:

Sample No	Date Analyzed	Sample Depth	Gasoline Range Organics	Diesel Range Organics	Lube Oil Range Organics
SB-02-06	08/02/11	6' bgs	9,5000		
SB-03-04	08/12/11	4' bgs	ND	ND	ND
SB-03-10	08/16/11	10' bgs	290	12,000	ND
SB-04-04	08/12/11	4' bgs	ND	ND	ND
SB-04-10	08/12/11	10' bgs	ND	ND	ND
SB-05-13	08/02/11	13' bgs	ND		
SB-06-04	08/16/11	4' bgs	ND	ND	B}ND
SB-06-10	08/16/11	10' bgs	ND	ND	ND
SB-07-04	08/16/11	4'bgs	ND	ND	ND
SB-07-10	08/16/11	10' bgs	ND	ND	ND
SB-08-13	08/02/11	13' bgs	480		
MTCA Cleanup Level			30/100 mg/kg	2,000 mg/kg	2,000 mg/kg

Mr. Nick Stack
Phase II Analytical Addendum
Lynnwood Body Shop
August 19, 2011
Page 3

Benzene, Toluene, Ethylbenzene, and Xylene ("BTEX") Constituents in Soil:

Sample No.	Date Analyzed	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes
SB-02-06	08/02/11	6' bgs	ND	ND	0.56	1.7
SB-03-04	08/12/11	4' bgs	ND	ND	ND	ND
SB-03-10	08/16/11	10' bgs	ND	ND	0.41	1.5
SB-04-04	08/12/11	4' bgs	ND	ND	ND	ND
SB-04-10	08/12/11	10' bgs	ND	ND	ND	ND
SB-05-13	08/02/11	13' bgs	ND	ND	ND	ND
SB-06-04	08/16/11	4' bgs	ND	ND	ND	ND
SB-06-10	08/16/11	10' bgs	ND	ND	ND	ND
SB-07-04	08/16/11	4' bgs	ND	ND	ND	ND
SB-07-10	08/16/11	10' bgs	ND	ND	ND	ND
SB-08-13	08/02/11	13' bgs	ND	ND	ND	ND
MTCA Cleanup Level			0.03 mg/kg	7.0 mg/kg	6.0 mg/kg	9.0 mg/kg

As always, thank you for your interest in our firm. If I can answer any additional questions or be of further assistance, please do not hesitate to call me at (360) 710-5899.

Best Regards,


Alan T. Blotch

Selected Images
Excavation Activities

October 2011

Groundwater Monitoring Report

Lynnwood Auto Body

Fourth Consecutive Quarter

September 2015

FIELD ACTIVITIES

FIELD ACTIVITIES

January 2017

Notifications - "Public" Utilities:

Due to the developmental nature of the Site, a "public" utilities notification was performed prior to the start of work. The "public" utilities notification was performed on December 29, 2016 by Aerotech Environmental Consulting, Inc.¹, and was issued Ticket Number 16404886 and by the Utilities Underground Location Center. Additionally, a technician providing locations for natural gas and electrical utilities, was present on site prior to the arrival of the drilling crew, in order to more precisely locate those utilities, surveying those specific areas chosen for sampling based upon public utility markings.

According to the *Washington Utilities Notification Center* the utilities necessary for notification, with instructions to identify all underground utilities on and near the subject Property, included:

Washington Ticket#:	16404886	2 FULL BUSINESS DAYS	
Transmit Date:	12/29/16	Time: 1:48 PM	
Original Call Date:	12/29/16	Time: 1:40 PM	Type: CALL
Work to Begin Date:	1/04/17	Time: 12:00 AM	

Dig Site Location

County: KING State: WA

Place: LYNNWOOD

Address / Street: 19230 HWY 99

Map Twp: 26N Rng: 4E Sect-Qtr: 6

Excavation Coordinates for # Polygons: 1

Poly 1: NW Lat: 47.7710997 Lon:
-122.3450672

SE Lat: 47.7659437 Lon:

Notified:

District	Company	Marking Issues	Customer Serv.
BLKRC01	BLACK ROCK CABLE	(800)778-9140	(360)734-7930
CC7721	COMCAST CABLE	(800)778-9140	(800)266-2278
GTE12	FRONTIER COMMUNICATION	(800)778-9140	(877)462-8188
KCDPW02	KING COUNTY ROADS	(206)477-2535	(206)296-8153
LEVL301	LEVEL 3 COMMUNICATIONS	(877)366-8344	(877)366-8344
PUGG03	PUGET SOUND ENERGY GAS	(800)778-9140	(888)225-5773
SEACL01	SEATTLE CITY LIGHT	(206)684-4239	(206)684-4239
SEAH2001	SEATTLE PUB UTILITIES-WTR	(206)386-1849	(206)386-1800
SHRWST01	RONALD WASTEWATER DIST	(206)546-2494	(206)546-2494
WDOTNW05	WSDOT MTCE AREA 5	(425)739-3700	(425)739-3700

¹ Aerotech Environmental Consulting, Inc., was previously issued a Contractor Identification Number by the non-profit Utilities Underground Location Center (www.callbeforeyoudig.com).

Private Utilities Location - Due Diligence

Additionally, Aerotech engaged Mr. Dave Schaff of *Mountain View Locating Services* of Bonney Lake, Washington to locate building and site buried utilities on January 12, 2017, prior to the start of the on Site drilling activities.

Based in part upon markings made by utility location technicians; the location of utility fixtures such as irrigation, sewer, water, electrical and the presence of anomalies detected by induction or ground radar methodologies, borehole locations were chosen. The precise location of the connection between the side sewer and the sewer main could not be determined by methods employed by the personnel of Mountain View Locating Services.

Based in part upon pavement markings made by utility location technicians; the location of utility fixtures such as water, electrical, or manholes, and the presence of anomalies detected by induction or ground radar methodologies, borehole locations were chosen.

Ground Penetrating Radar Survey:

A Ground Penetrating Radar (“GPR”) Survey was conducted by Mountain View Locating Services staff on January 12, 2017, in order to verify the presence of sewer trenches. Mr. Dave Schaff of Mountain View Locating Services, LLC employed Radar equipment utilizing Dual Frequency Antennae (300 MHz/800 MHz) manufactured by Geophysical Survey Systems.

Critical utilities near site operations areas included a storm sewer situated along the north and west sides of the North Wing Shop, and an electrical utility conduit along the interior side of the overhead doors of the North Wing Shop. A sanitary sewer line was determined to be located

Site Activities:

Five soil borings, designated B-31 through B-35, were advanced on January 13, 2017, under contract with Aerotech Environmental Consulting, Inc. Refer to Figure 3 for locations. All work was performed during normal business hours. No unusual or unforeseen circumstances occurred during the Site activities, with one exception:

Drilling Activities:

Drilling operations on January 13, 2017 employed a Truck-mounted Direct Push Drilling Rig equipped with steel macrocore or microcore tools.

The subsurface soil boring activities were performed by equipment owned by and operated by a Licensed Driller from Standard Environmental Probe (“SEP”). The on Site drilling equipment was operated by personnel employed by *SEP*, Mr. Chris Ross (State of Washington Department of Ecology Well Driller’s License No. 3018). All subsurface work was overseen by State of Washington Licensed Geologist, Mr. James McDermott (No. 3063). The laboratory analytical services were performed by a State of Washington Licensed Lab, *Advanced Analytical Labs* in Redmond, Washington.

Sample Collection:

A total of 16 discrete soil samples were collected at 5 soil boring locations on January 13, 2017. Visual or olfactory indications of contaminated soils were observed at all locations with the exception of location B-33, advanced west of the North Wing Shop.

Soils collected from each location were visually inspected for color quality and evidence of discoloration, and physically observed for the purpose of recording composition and noting odor, where

distinctive. Each sample was handled with a fresh pair of clean latex gloves. Samples were placed in sterile four-ounce glass jars in accordance with procedures specified for USEPA Method 5035A.

Each sample was given a unique identifier number and placed in an iced cooler for sample preservation. Samples were held in the custody of the project manager, Mr. James McDermott, and ice was checked and replenished while samples were held overnight, and maintained to the time of delivery to the lab on the following morning. A Chain of Custody was maintained in order to record details associated with the collection and handling of each sample. The remaining soil samples were retained by the laboratory for analysis in the event that the soil samples selected for laboratory analysis revealed elevated levels of constituents. Following the production of the initial Site sample results for soil, no follow-up laboratory analyses were requested for the subject Site, as of the date of this report.

Equipment Decontamination:

All sample acquisition equipment was decontaminated before and after the completion of each borehole in order to eliminate the potential for cross-contamination between borings, as required. All reusable sampling equipment for soil sampling, drive rods, and probes were decontaminated after each sampling point by washing with an Alconox-distilled water solution and rinsing with distilled water.

Site Restoration:

Upon completion, all boreholes were sealed with bentonite chips. Limited site restoration was necessary where soil boreholes were advanced through concrete floors or asphalt pavement. In each case, the surface was restored with the appropriate concrete or asphalt patch. No landscape restoration was necessary.

Laboratory Analytical Information:

The analytical parameters selected were chosen to provide a comprehensive characterization of the subsurface soils and/or water present at the Site Areas of Concern and to comply with State of Washington recommended analytical parameters as indicated in MTCA Table 830-1.

Analytical Methodology (January 2017):

Soil: Gasoline Range Organics & Benzene, Ethylbenzene, Toluene, and Xylenes
State of Washington NWTPH-Gx/8260/8021B

Soil: Diesel / Lube Range Organics
State of Washington NWTPH-Dx/Dx Extended

Laboratory Analysis:

Laboratory analysis was provided by:

Advanced Analytical Laboratory, LLC
4078 148 Avenue NE
Redmond, WA 98052
425.702.8571 (office)
aachemlab@yahoo.com

Snohomish County Assessor
Parcel Information

Printable View

To print this document please press



Property Account Summary

Parcel Number	00585300000501	Property Address	19230 HIGHWAY 99 , LYNNWOOD, WA 98036-5231
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Parties - For changes use 'Other Property Data' menu

Role	Percent	Name	Mailing Address
Taxpayer	100	STACK NICHOLAS C & JULIE A B	8902 196TH ST SW, EDMONDS, WA 98026-6328
Owner	100	STACK NICHOLAS C & JULIE A B	8902 196TH ST SW, EDMONDS, WA 98026-6328

General Information

Property Description	Section 16 Township 27 Range 04 Quarter SW STATE PLAT IN SEC 16 TWP 27 RGE 04 BLK 000 D-01 - LOT 5
Property Category	Land and Improvements
Status	Active, Host Other Property, Locally Assessed
Tax Code Area	00452

Property Characteristics

Use Code	641 Automobile Repair & Services
Unit of Measure	Acre(s)
Size (gross)	0.59

Related Properties

2896862 is Located On this property

Active Exemptions

No Exemptions Found

Installments Payable

Tax Year	Installment	Due Date	Principal	Interest, Penalties and Costs	Total Due	Cumulative Due	Select to Pay
2017	1	04/30/2017	5,837.98	0.00	5,837.98	5,837.98	<input checked="" type="radio"/>
2017	2	10/31/2017	5,837.98	0.00	5,837.98	11,675.96	<input type="radio"/>

[Statement of Payable/Paid For Tax Year:](#)

Distribution of Current Taxes

District	Rate	Amount
CENTRAL PUGET SOUND REGIONAL TRANSIT AUT	0.25	276.00
CITY OF LYNNWOOD	2.13	2,354.64
EDMONDS SCHOOL DISTRICT NO 15	4.78	5,279.89
PUB HOSP #2	0.08	92.76
SNO-ISLE INTERCOUNTY RURAL LIBRARY	0.42	458.58
SNOHOMISH COUNTY-CNT	0.88	970.62
STATE	2.03	2,238.44

SNOHOMISH CONSERVATION DISTRICT		5.03
TOTALS	10.57	11,675.96

Property Values

Value Type	Tax Year 2017	Tax Year 2016	Tax Year 2015	Tax Year 2014	Tax Year 2013
Taxable Value Regular	1,104,000	1,051,000	1,051,000	531,000	461,700
Exemption Amount Regular					
Market Total	1,104,000	1,051,000	1,051,000	531,000	461,700
Assessed Value	1,104,000	1,051,000	1,051,000	531,000	461,700
Market Land	704,300	519,800	601,800	287,500	240,400
Market Improvement	399,700	531,200	449,200	243,500	221,300
Personal Property					

Levy Rate History

Tax Year	Total Levy Rate
2016	10.555855
2015	11.227158
2014	11.294786

Real Property Structures

Description	Type	Year Built	More Information
LYNNWOOD AUTO REBUILD w/Office	Commercial	1946	View Detailed Structure Information
LYNNWOOD AUTO REBUILD	Commercial	1950	View Detailed Structure Information

Property Sales (since 7/31/1999)

Transfer Date	Receipt Date	Sales Price	Excise Number	Deed Type	Grantor (Seller)	Grantee (Buyer)	Other Parcels
9/15/2011	9/29/2011	\$1,300,000	441100	W	VANDERLUGT BEVERLY B CREDIT TRUST	STACK NICHOLAS C & JULIE A B	Yes
1/28/2009	2/2/2009	\$0	126175	X	VANDERLUGT BEVERLY B ESTATE	VANDERLUGT BEVERLY B CREDIT TRUST	Yes
1/28/2009	2/2/2009	\$0	126176	QC	VANDERLUGT PETER	VANDERLUGT BEVERLY B CREDIT TRUST	Yes

Property Maps

Neighborhood Code	Township	Range	Section	Quarter	Parcel Map
5508000	27	04	16	SW	View parcel maps for this Township/Range/Section

Receipts

Date	Receipt No.	Amount Applied
10/18/2016 00:00:00	8954881	5,549.62
04/25/2016 00:00:00	8728987	5,549.61
10/26/2015 00:00:00	8446156	5,904.89
04/24/2015 00:00:00	8185299	2,983.31
04/24/2015 00:00:00	8185300	2,916.55
10/28/2014 00:00:00	7909651	3,001.27
04/21/2014 00:00:00	7634323	3,001.27
10/23/2013 00:00:00	7361424	2,734.79
04/30/2013 00:00:00	7209402	2,734.78
11/05/2012 00:00:00	6962496	1,938.52
04/23/2012 00:00:00	6545017	1,938.51

Events

Effective Date	Entry Date-Time	Type	Remarks
06/09/2015	06/09/2015 14:23:00	Tax Bill Recalculation	Seg/Merge for 2015 performed by strkdh
06/09/2015	06/09/2015 10:30:00	Tax Bill Recalculation	Seg/Merge for 2015 performed by strkdh
06/03/2015	06/03/2015 15:21:00	Seg/Merge Completed	Parent in Seg/Merge C140740, Effective: 01/01/2014 by sassis

06/03/2015	06/03/2015 15:21:00	Value Modification	Value Change Due to Segregation/Merger: C140740 by sassls
09/15/2011	10/31/2011 11:25:00	Property Assigned To Transfer/Sale	Property Assigned to Transfer/Sale. Filing No.: 441100, Statutory Warranty Deed by sasset
09/15/2011	10/31/2011 11:25:00	Owner Terminated	Property Transfer Filing No.: 441100 09/15/2011 by sasset
09/15/2011	10/31/2011 11:25:00	Owner Added	Property Transfer Filing No.: 441100 09/15/2011 by sasset
09/15/2011	09/29/2011 11:56:00	Taxpayer Changed	Property Transfer Filing No.: 441100 09/15/2011 by strbrl
09/15/2011	09/29/2011 11:56:00	Excise Processed	Property Transfer Filing No.: 441100, Statutory Warranty Deed 09/15/2011 by strbrl
01/28/2009	02/04/2009 13:53:00	Property Assigned To Transfer/Sale	Property Assigned to Transfer/Sale. Filing No.: 126176, Quit Claim Deed by sasset
01/28/2009	02/04/2009 13:52:00	Property Assigned To Transfer/Sale	Property Assigned to Transfer/Sale. Filing No.: 126175, Personal Representative Deed by sasset
01/28/2009	02/04/2009 13:52:00	Owner Terminated	Property Transfer Filing No.: 126175 01/28/2009 by sasset
01/28/2009	02/04/2009 13:52:00	Owner Added	Property Transfer Filing No.: 126175 01/28/2009 by sasset
01/28/2009	02/02/2009 16:35:00	Excise Processed	Property Transfer Filing No.: 126176, Quit Claim Deed 01/28/2009 by strphb
01/28/2009	02/02/2009 16:31:00	Taxpayer Changed	Property Transfer Filing No.: 126175 01/28/2009 by strphb
01/28/2009	02/02/2009 16:31:00	Excise Processed	Property Transfer Filing No.: 126175, Personal Representative Deed 01/28/2009 by strphb
03/29/2005	03/29/2005 15:42:00	Taxpayer Changed	Party/Property Relationship by strsas

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