

**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**

February 6, 2017

Performed by:

**Aerotech Environmental Consulting, Inc.**  
13295 Interurban Boulevard., Suite No.210  
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**REMEDIAL INVESTIGATION  
AND PROPOSED CLEANUP ACTION REPORT  
with  
PHASE III SUBSURFACE INVESTIGATION RESULTS**

performed for:

**Ms. Julie Stack**  
**Aldcrest Auto Rebuild, Inc.**  
2415- 196<sup>th</sup> Street Southwest  
Lynnwood, Washington 98036

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Client:	<b>Aldcrest Auto Body Shop</b> 19230 Highway 99 Lynnwood, Washington 98036
Point of Contact/Owner:	Ms. Julie & Nicholas Stack
Property:	<b>Lynnwood Auto Body</b> (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

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Selected Images  
Excavation Activities

October 2011

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**SITE REMEDIATION  
and  
CLOSURE REPORT**

*Performed at:*

**LYNNWOOD AUTO BODY SHOP  
19230 Highway 99  
Lynnwood, Washington 98036**

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**November 3, 2011**

**Performed by:  
Aerotech Environmental Consulting, Inc.  
19600 International Blvd., Suite No.101  
SeaTac, Washington 98188  
Fax (206) 402-3473  
(866) 800-4030**

## **SITE REMEDIATION & CLOSURE REPORT**

performed for:

**LYNNWOOD AUTO BODY SHOP**  
19230 Highway 99  
Lynnwood, Washington 98036

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**Clients:** **ALDERCREST AUTO REBUILD**  
2415 - 196<sup>th</sup> S.W.  
Lynnwood, Washington 98036

**UMPQUA BANK**  
111 Third Avenue, Suite No.100  
Seattle, Washington 98101

**Point of Contact:** Mr. Nick Stack  
Aldercrest Auto Rebuild

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

**Subject Property:** Snohomish County Assessor:  
Parcel No. 005853-00000-501 and .....502

**SIC / NAICS Code:** Not Provided

**Commercial Activity:** Auto Body Shop

**Aerotech Project Mgr:** Mr. Michael McGowan  
Licensed Geologist  
Licensed Engineering Geologist  
Licensed Hydrogeologist  
State of Washington License No. 1737

**Project No.:** No.211-5219

**Report Date:** November 3, 2011

## EXECUTIVE SUMMARY

From October 4 through October 6, 2011, Aerotech Environmental Consulting, Inc., ("Aerotech") observed and sampled the remediation services performed by Langseth Environmental Services, Inc. at the Lynnwood Auto Body Shop located at 19230 Highway 99 in the City of Lynnwood, Washington.

The subject consists of two contiguous Parcels of commercial land that combined are approximately 0.75 acres, occupied by a single building; the *Lynnwood Body Shop*. In 1946 a concrete block building was built which housed the Tool Crib Company. This business installed the two underground gasoline storage tanks and a pump island. In 1961, the Lynnwood Body Shop building was constructed adjoining the rear of the the 1946 Tool Crib building to create a single building. In 1979, an additional was added to the building, and the underground gasoline storage tanks were removed.

### Conclusions & Recommendations:

Aerotech Environmental Consulting, Inc. observed Langseth Environmental Services perform a subsurface Site Remediation from October 4 though October 6, 2011, to remove soil that had been impacted with petroleum products during the previous gasoline and diesel fueling retail operations. All the Areas of Concern identified in the previous Aerotech Phase II Subsurface Investigations were excavated. A total of approximately 339.07 tons of contaminated soil was removed from the Site.

#### Former Pump Island:

All of the petroleum-impacted soils underneath the former pump dispensers were removed to concentrations below the most stringent Model Toxics Control Act ("MTCA") Cleanup Levels.

#### Former Underground Tank Pit:

Petroleum-impacted soils were excavated from the area previously identified via Ground Penetrating Radar and photographic review as the former underground tank pit. Petroleum-impacted soils were generally encountered beginning at nine feet below ground surface and extending to approximately twenty feet below ground surface - which was the maximum depth that could be safely completed at the Site without causing significant disturbance to the eastern adjoining City of Lynnwood utilities and State of Washington Highway 99 right-of-way.

The remediation objective was to remove all areas of petroleum impacted soil contamination previously identified in the Phase II Subsurface Investigations above the most MTCA Method "A" Unrestricted Residential Soil Cleanup Levels. However excavation operations revealed that in the tank pit soil contamination extended deeper than twenty feet below ground surface. Excavation at greater depths was determined to be impractical and soil removal was terminated at the twenty foot level.

Soil concentrations above the most stringent MTCA Method A Cleanup Levels remained in place (1) along the eastern wall of the excavation adjoining Highway 99; (2) at the bottom of the excavation approximately twenty feet below ground surface; and (3) on the western side of the excavation at sixteen to twenty feet below ground surface.

An Exploratory Trench along the northern Property boundary confirmed that petroleum impact did not extend off Site to the north. An Exploratory Trench west of the area of the excavation encountered elevated levels of petroleum at approximately fourteen feet below ground surface encountered elevated levels of gasoline and diesel range organics at approximately fourteen feet below ground surface.

#### Presence of Groundwater:

Perched groundwater was present inside the former underground tank pit at approximately eleven to thirteen feet below ground surface. The entire former underground tank pit was excavated to a final depth of twenty feet below ground surface. The bottom of the excavation (at twenty feet below ground surface) remained open for 24 hours. After that period of time, there was no groundwater or seepage present in the bottom of the excavation pit.

■ **Recommendation:**

Based upon the laboratory results reported by the on Site ESN Northwest, Inc., all readily and practicably accessible petroleum-impacted soils have been excavated and removed from the subject Property. Further excavation of impacted soils is not practical – and further presents a significant risk of structural damage to the building and Highway 99 from collapse. No further excavation activities are recommended at the subject Property.

It is recommended that the subject Property enter the State of Washington Department of Ecology's Voluntary Cleanup Program and obtain a no further action determination.

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## INTRODUCTION

Aerotech Environmental Consulting, Inc., supervised this Site Remediation and Closure Report of the subject Property described as the *Lynnwood Bodyshop* located at 19230 Highway 99 in Lynnwood, Washington. The objective of this Investigation was to excavate the subsurface soils impacted by petroleum product above the most stringent Model Toxics Control Act ("MTCA") Method A Residential Cleanup Levels.

Aerotech intends to submit the Phase II Subsurface Site Investigation on to the Department of Ecology under the Voluntary Cleanup Program ("VCP").

Ms. Gwen Lundgren of the Umpqua Bank engaged Aerotech Environmental Consulting, Inc. to perform a *Site Remediation Cleanup* for the Site.

## PROJECT SCOPE OF WORK

The objective of the Site remediation Program was to excavate – to every extent practicable – petroleum impacted soils and transport off Site for final disposal. The Areas of Excavation and Exploration included:

### AREA OF EXCAVATION:

**The Former Tank Pit and Pump Island** – 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 and possibly diesel dating back to 1948. Both tanks are believed to have been removed in 1971. The Area of Concern ("AOC") was located in front of the garage area that fronts Highway 99; the former location of the underground gasoline storage tanks and pump island.

### AREAS OF SITE CHARACTERIZATION:

**The North Excavation Trench** – Objective to determine the possible off Site migration to the north of contaminants originating from the former tank pit and fueling island. The North Trench was created through excavation of soil from the northeast corner of the subject Property and went to a depth of fourteen feet below ground surface. The excavation and laboratory analysis of Area was intended to characterize the northern limit possible contamination from spillage or leakage from the former tank pit and fueling island.

The laboratory results indicated that petroleum hydrocarbon soil and groundwater impacts do not appear to have extended off Site to the north.

**The West Excavation Trench** – Objective to determine the possible on site western migration of contaminants originating from the former tank pit and fueling island. The West Trench was located west of the former tank pit and east of the existing garage building. Excavation extended to a depth of fourteen feet below ground surface. The trench was located in the asphalted area in front of the garage building. The excavation and laboratory analysis of removed soil is intended to characterize the western limit of possible contamination from spillage or leakage from the former tank pit and fueling island.

The laboratory results indicated that no petroleum hydrocarbon impact was present until a depth of fourteen feet below ground

## SECTION I. SITE DESCRIPTION

### **Site Exterior Description:**

The Site is occupied by a single building; the Lynnwood Body Shop. The building was vacant at the time of Site remediation. The building is a one story building that has been added on to at various times. The building is approximately 8,000 square foot in size, constructed of concrete blocks with a concrete slab on grade foundation. The building is located on the south side of the Parcel. The building has been added on to several times over the course of its history. It is divided into four distinct portions.

The building interior is configured with an office space followed by shop 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 is 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.

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 connecting wing that between the original 1946 Tool Crib building and the 1961 Lynnwood Body Shop building was completed in 1979. It was at this time that the gasoline storage tanks were removed from the property.

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 Property is located within the City limits of Lynnwood.

### **Site Development Description:**

The Property was first developed in 1946 with the construction of the building fronting Highway 99; this building housed the Tool Crib Company. This business also sold gasoline and likely diesel. The tank pit and associated pump island were located on the eastern side of the Site. This constitutes the primary Areas of Remediation Concern. The present building was the result of additions constructed in 1961, 1971, and 1979.

### **Previously Recognized Environmental Conditions:**

No previously Recognized Environmental Conditions for the subject Property were discovered.

### **Site Observations and Reported Conditions:**

With the exception of petroleum impacted soils there were no additional Recognized Environmental Conditions or concerns identified as potential impacts to the Property.

## SECTION II. FIELD WORK

### **Notifications - "Public" Utilities:**

A "public" utilities notification was performed on October 4 prior to the start of the Remediation and Cleanup work performed on October 4-6, 2011.

### **Notifications - Private Utilities Location:**

A "private " utilities notification was performed prior to the start of the Site Remediation & Closure preformed on October 4-6, 2011.

### **Ground Penetrating Radar Subsurface Investigation:**

A Ground Penetrating Radar Study was performed on October 4, 2011 by an independent third-party geophysical firm was performed prior to the start of the Site Remediation.

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 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 conducted on October 4, 2011 did not identify any previously unknown or unsuspected Recognized Environmental Concerns or issues that were not analyzed or discussed in the above referenced Phase I Environmental Site Assessment.

### **Magnetometer Investigation:**

Due to the nature of the anticipated Constituents of Concern a magnetometer investigation was also performed on October 4, prior to the initiation of the Site remediation activities.

### **Site Activities:**

The *Site Remediation* was performed from October 4 through October 6, 2011 by Langseth Environmental Services, Inc., as observed by - 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 excavations were performed by equipment owned by and operated by Langseth Environmental Services, Inc.. The laboratory analytical services were performed by an on Site laboratory owned and operated by ESN Northwest Chemistry Laboratories of Bellevue and Lacey, Washington.

### **Excavation Activities:**

A previous subsurface investigation performed on July 27, 2011 was used to targeted the Areas of Concern ("AOC") identified above.

Site excavation of the Areas of Concern were performed by powered excavation equipment supplemented with hand digging operations. Approximately 339.07 tons of petroleum-impacted soils were excavated and loaded onto dump trucks for off Site removal and final disposal.

Confirmatory soil samples from the excavations were collected and analyzed by the on Site mobile laboratory for gasoline, diesel, lube oils ("Total Petroleum Hydrocarbons") and benzene, toluene, ethylbenzene, xylenes ("BTEX").

#### **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.

Groundwater was not encountered during the Site excavation activities.

#### **Sample Collection:**

Samples were hand collected at locations and at depths as identified by the Aerotech Licensed Hydrogeologist. Samples from the former tank pit, the former pump island excavated areas, the North Excavation Trench, and the West Excavation Trench. Samples were collected at approximately intervals of two feet with samples taken at the corners, side and bottom of the excavated areas to a depth of six to twenty feet below ground surface ("bgs").

The paved area, the northwest, the northeast, and the southeast excavations (the tank pit and pump island), were excavated in intervals of two foot to a depth of six feet. Below six feet samples were collected to a maximum depth of eighteen feet. From the depth of four to six feet samples were hand collected from the walls of the area. After six feet, due to safety reasons, samples were collected from the bucket of the back hole. A total of fifty discrete soil samples were collected from October 4 through 6, 2011. All the samples collected were soil samples, no water samples were obtained.

Soils collected from each excavation location were physically observed for composition and odor. Samples were placed in sterile glass jars with teflon sealed lids.

Each sample was given a unique identifier number and immediately taken to the on site laboratory for analysis. A Chain of Custody recorded the collection and handling of every sample.

#### **Sample Screening:**

The soil samples are topically collected from each excavation location were recorded in the Chain of Custody. 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 was collected by clean latex gloves and placed in clean glass jars.

**Site Restoration:**

Due to the nature of ongoing Site excavation and preparation work, the Areas of Concern created sizable excavation pits therefore restoration was necessary. The former tank pit and fueling island areas were backfilled with approximately 319.59 tons of imported structural fill.

The structural fill was placed in two to three foot lifts with each lift being compacted by mechanized compacting plates attached by the excavating machine. The areas were covered with asphalt at a latter date. No landscape restoration was done.

## SUMMARY OF SAMPLE ACQUISITION

A total of fifty discrete hand collected samples were acquired in Areas of Concern to a maximum depth of twenty feet below ground grade. No groundwater was encountered; very minor seepage occurred over night in the southeast excavation. Excavation operations did not appear to encounter the local water table. (Please refer to the Sample Site Map located in the appendix for detailed information on the individual sample locations).

The soil excavation program revealed the subject Property to be overlain by a brown silty sand with occasional gravel followed by a grey silty sand also with some gravel. This appears to be native material. The excavation area reach a depth of approximately twenty feet below grade.

### SECTION III. ANALYTICAL RESULTS

#### ANALYSIS OF SOIL SAMPLES:

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

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

#### EXCAVATION PROGRESS SAMPLES.....

##### Excavation Progress Samples:

##### Petroleum Product Constituents in Soil Greater Than MTCA Cleanup Levels:

Twenty-two samples collected as confirmatory soil samples during the excavation process were above the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels. In these locations, additional excavation was performed until sample results were below the Method "A" Cleanup Level:

FORMER PUMP ISLAND & TANK PIT						
Sample Number:	Location:	Depth (feet):	Date Analyzed:	Gasoline Range Organics mg/kg*	Diesel Range Organics mg/kg*	Lube Oil Range Organics mg/kg*
SS-107	Tank Pit: W. Wall bottom	16.5' bgs	10-04-11	790 mg/kg	4,900 mg/kg	ND

SS-108	Tank Pit: S. Wall	9.0' bgs	10-04-11	***	13,000 mg/kg	ND
SS-110	Tank Pit: N. Wall bottom	17.0' bgs	10-04-11	***	18,000 mg/kg	ND
SS-111	Tank Pit: N. Wall	13.0' bgs	10-04-11	***	12,000 mg/kg	ND
SS-112	Tank Pit: W. Wall	13.5' bgs	10-04-11	300 mg/kg	2,000 mg/kg	ND
SS-113	Tank Pit: E. Wall	8.0' bgs	10-04-11	***	13,000 mg/kg	ND
SS-114	Tank Pit: bottom	18.5' bgs	10-04-11	***	20,000 mg/kg	ND
SS-115	Tank Pit: E. Wall	13.5' bgs	10-04-11	***	11,000	ND
SS-116	Tank Pit: E. Wall	8.0' bgs	10-04-11	1,600 mg/kg	7,700 mg/kg	ND
SS-118	Tank Pit: W. Wall	4.0' bgs	10-05-11	1,400 mg/kg	7,300 mg/kg	ND
SS-119	Tank Pit: S. Wall	5.0' bgs	10-05-11	ND	ND	ND
SS-120	Tank Pit: N. Wall	4.0' bgs	10-05-11	3,600 mg/kg	6,200 mg/kg	ND
SS-125	Tank Pit: Bottom	14.0' bgs	10-05-11	8,200 mg/kg	6,500 mg/kg	ND
SS-126	Tank Pit: W. Wall	13.0' bgs	10-05-11	490 mg/kg	ND	ND
SS-127	Tank Pit: S. Wall	13.0' bgs	10-05-11	160 mg/kg	1,100 mg/kg	ND
SS-128	Tank Pit: N. Wall	12.5' bgs	10-05-11	Sample	Not	Tested
SS-129	Tank Pit: N wall center	13.0' bgs	10-05-11	190 mg/kg	890 mg/kg	ND
<b>WEST EXCAVATION TRENCH</b>						

SS-142	West Trench: S. End	12.0' bgs	10-05-11	1,200 mg/kg	10,000 mg/kg	ND
SS-146	West Trench: Center	12.0' bgs	10-05-11	600 mg/kg	4,300 mg/kg	ND
SS-147	West Trench: Center	14.0' bgs	10-05-11	790 mg/kg	5,200 mg/kg	ND
SS-148	West Trench: N. End	8.0' bgs	10-05-11	1,600 mg/kg	3,500 mg/kg	ND
SS-149	West Trench: N. End	12.0' bgs	10-05-11	530 mg/kg	10,000 mg/kg	ND
SS-150	West Trench: N. End	14.0' bgs	10-05-11	940 mg/kg	7,200 mg/kg	ND
MTCA Cleanup Level				100 mg/kg	2,000 mg/kg	2,000 mg/kg

## POST EXCAVATION CONFIRMATORY SAMPLES.....

### **Post-Excavation Confirmatory Sampling for Petroleum Product Constituents in Soils:**

All of the post-excavation confirmatory soil samples were compared to the most stringent State of Washington Model Toxics Control Act Method "A" Residential Unrestricted Use cleanup levels:

FORMER PUMP ISLAND & TANK PIT						
Sample Number:	Location:	Depth (feet):	Date Analyzed:	Gasoline Range Organics mg/kg*	Diesel Range Organics mg/kg*	Lube Oil Range Organics mg/kg*
SS-101	Fueling Island: S. Wall	4.0' bgs	10-04-11	ND	ND	ND
SS-102	Fueling Island: N. Wall	4.0' bgs	10-04-11	ND	ND	ND
SS-103	Fueling Island: E. Wall	4.0' bgs	10-04-11	12 mg/kg*	ND	ND
SS-104	Fueling Island: W. Wall bottom	5.0' bgs	10-04-11	ND	ND	ND
SS-105	Tank Pit: E. Wall, bottom	13.5' bgs	10-04-11	67 mg/kg	140 mg/kg	ND
SS-106	Tank Pit: E. Wall, bottom	13.0' bgs	10-04-11	53 mg/kg	400 mg/kg	ND
SS-109	Tank Pit: S. Wall	4.0' bgs	10-04-11	13 mg/kg	ND	ND

SS-117	Tank Pit: E. Wall	4.0' bgs	10-04-11	14 mg/kg	ND	ND
SS-121	Tank Pit: S. Wall	8.5' bgs	10-05-11	0.029 mg/kg	ND	ND
SS-122	Tank Pit: N. Wall	8.0' bgs	10-05-11	ND	ND	ND
SS-123	Tank Pit: W. Wall	8.0' bgs	10-05-11	ND	ND	ND
SS-124	Sample	Not	Collected	X	X	X
SS-130	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND	ND
SS-132	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND	ND
MTCA Cleanup Level				100 mg/kg	2,000 mg/kg	2,000 mg/kg

**NORTH EXCAVATION TRENCH**

Sample Number:	Location:	Depth (feet):	Date Analyzed:	Gasoline Range Organics mg/kg*	Diesel Range Organics mg/kg*	Lube Oil Range Organics mg/kg*
SS-133	North Trench: E. End	8.0' bgs	10-05-11	ND	ND	ND
SS-134	North Trench: E. End	12.0' bgs	10-05-11	ND	ND	ND
SS-135	North Trench: E. End	14.0' bgs	10-05-11	ND	ND	ND
SS-136	North Trench: Center	8.0' bgs	10-05-11	ND	ND	ND

SS-137	North Trench: Center	12.0' bgs	10-05-11	ND	ND	ND
SS-138	North Trench: Center	14.0' bgs	10-05-11	ND	ND	ND
SS-139	North Trench: W. End	8.0' bgs	10-05-11	ND	ND	ND
SS-140	North Trench: W. End	12.0' bgs	10-05-11	ND	ND	ND
SS-141	North Trench: W. End	14.0' bgs	10-05-11	ND	ND	ND
MTCA Cleanup Level				100 mg/kg	2,000 mg/kg	2,000 mg/kg
<b>WEST EXCAVATION TRENCH</b>						
<b>Sample Number:</b>	<b>Location:</b>	<b>Depth (feet):</b>	<b>Date Analyzed:</b>	<b>Gasoline Range Organics mg/kg*</b>	<b>Diesel Range Organics mg/kg*</b>	<b>Lube Oil Range Organics mg/kg*</b>
SS-143	West Trench: S. End	8.0' bgs	10-05-11	ND	ND	ND
SS-144	West Trench: S. End	14' bgs	10-05-11	870 mg/kg	11,000 mg/kg	ND
SS-145	West Trench: Center	8.0' bgs	10-05-11	ND	ND	ND
MTCA Cleanup Level				100 mg/kg	2,000 mg/kg	2,000 mg/kg

### **North Exploratory Trench**

#### **Polynuclear Aromatic Hydrocarbons ("PAH") 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 Number:	Location:	Depth (feet):	Date Analyzed:	Polynuclear Aromatic Hydrocarbons
SS-135	North Trench: E. End	14.0' bgs	10-13-11	ND
SS-138	North Trench: Center	14.0' bgs	10-13-11	ND
SS-141	North Trench: W. End	14.0' bgs	10-13-11	ND

### **Tank Pit Excavation**

#### **Polynuclear Aromatic Hydrocarbons ("PAH") 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:	Location:	Date Analyzed:	Benzo(a)pyrene:	Naphthalene:
SS-107	Tank Pit 16.5'	11-11-11	ND	ND
SS-114	Tank Pit 18.5'	11-11-11	ND	ND
SS-125	Tank Pit 14.0'	11-11-11	ND	1.7 mg/kg
SS-144	West trench 8.0'	11-11-11	ND	ND
Cleanup Level:			0.1 mg/kg	5.0 mg/kg

**Benzene & Toluene ("BTEX")  
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 Number:	Location:	Depth (feet):	Date Analyzed:	Benzene mg/kg*	Toluene mg/kg*
SS-101	Fueling Island: S. Wall	4.0' bgs	10-04-11	ND	ND
SS-102	Fueling Island: N. Wall	4.0' bgs	10-04-11	ND	ND
SS-103	Fueling Island: E. Wall	4.0' bgs	10-04-11	ND	ND
SS-104	Fueling Island: W. Wall bottom	5.0' bgs	10-04-11	ND	ND
SS-105	Tank Pit: E. Wall, bottom	13.5' bgs	10-04-11	ND	ND
SS-105 (duplicate)	Tank Pit: E. Wall, bottom	13.5' bgs	10-04-11	ND	ND
SS-106	Tank Pit: E. Wall, bottom	13.0' bgs	10-04-11	ND	ND
SS-107	Tank Pit: W. Wall bottom	16.5' bgs	10-04-11	***	***
SS-108	Tank Pit: S. Wall	9.0' bgs	10-04-11	***	***
SS-109	Tank Pit: S. Wall	4.0' bgs	10-04-11	ND	ND

SS-110	Tank Pit: N. Wall bottom	17.0' bgs	10-04-11	***	***
SS-111	Tank Pit: N. Wall	13.0' bgs	10-04-11	***	***
SS-112	Tank Pit: W. Wall	13.5' bgs	10-04-11	ND	ND
SS-113	Tank Pit: E. Wall	8.0' bgs	10-04-11	***	***
SS-114	Tank Pit: bottom	18.5' bgs	10-04-11	***	***
SS-115	Tank Pit: E. Wall	13.5' bgs	10-04-11	***	***
SS-116	Tank Pit: E. Wall	8.0' bgs	10-04-11	***	***
SS-117	Tank Pit: E. Wall	4.0' bgs	10-04-11	ND	ND
SS-118	Tank Pit: W. Wall	4.0' bgs	10-05-11	***	***
SS-119	Tank Pit: S. Wall	5.0' bgs	10-05-11	ND	ND
SS-120	Tank Pit: N. Wall	4.0' bgs	10-05-11	ND	ND
SS-121	Tank Pit: S. Wall	8.5' bgs	10-05-11	ND	ND
SS-122	Tank Pit: N. Wall	8.0' bgs	10-05-11	ND	ND
SS-123	Tank Pit: W. Wall	8.0' bgs	10-05-11	ND	ND
SS-124	Sample	Not	Collected	X	X
SS-125	Tank Pit: Bottom	14.0' bgs	10-05-11	ND	ND
SS-126	Tank Pit: W. Wall	13.0' bgs	10-05-11	ND	ND
SS-127	Tank Pit: S. Wall	13.0' bgs	10-05-11	ND	ND

SS-128	Tank Pit: N. Wall	12.5' bgs	10-05-11	Sample	not tested
SS-129	Tank Pit: N wall center	13.0' bgs	10-05-11	ND	ND
SS-130	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND
SS-131	Tank Pit: N wall center	13.0' bgs	10-05-11	ND	ND
SS-132	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				0.03 mg/kg	7.0 mg/kg
<b>NORTH EXCAVATION TRENCH</b>					
<b>Sample Number:</b>	<b>Location:</b>	<b>Depth (feet):</b>	<b>Date Analyzed:</b>	<b>Benzene mg/kg*</b>	<b>Toluene mg/kg*</b>
SS-133	North Trench: E. End	8.0' bgs	10-05-11	ND	ND
SS-134	North Trench: E. End	12.0' bgs	10-05-11	ND	ND
SS-135	North Trench: E. End	14.0' bgs	10-05-11	ND	ND
SS-136	North Trench: Center	8.0' bgs	10-05-11	ND	ND
SS-137	North Trench: Center	12.0' bgs	10-05-11	ND	ND

SS-138	North Trench: Center	14.0' bgs	10-05-11	ND	ND
SS-139	North Trench: W. End	8.0' bgs	10-05-11	ND	ND
SS-140	North Trench: W. End	12.0' bgs	10-05-11	ND	ND
SS-141	North Trench: W. End	14.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				0.03 mg/kg	7.0 mg/kg
<b>WEST EXCAVATION TRENCH</b>					
<b>Sample Number:</b>	<b>Location:</b>	<b>Depth (feet):</b>	<b>Date Analyzed:</b>	<b>Benzene mg/kg*</b>	<b>Toluene mg/kg*</b>
SS-142	West Trench: S. End	12.0' bgs	10-05-11	ND	ND
SS-143	West Trench: S. End	8.0' bgs	10-05-11	ND	ND
SS-144	West Trench: S. End	14' bgs	10-05-11	ND	ND
SS-145	West Trench: Center	8.0' bgs	10-05-11	ND	ND
SS-146	West Trench: Center	12.0' bgs	10-05-11	ND	ND
SS-147	West Trench: Center	14.0' bgs	10-05-11	ND	ND

SS-148	West Trench: N. End	8.0' bgs	10-05-11	ND	ND
SS-149	West Trench: N. End	12.0' bgs	10-05-11	ND	ND
SS-150	West Trench: N. End	14.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				0.03 mg/kg	7.0 mg/kg

\* mg/kg is the same as parts per million ('ppm')

\*\*\*\* indicates that the sample was not analyzed due to the diesel analysis being above 2000 ppm

As the above chart shows all soils samples were below the most stringent State of Washington Model Toxics Control Act (MTCA) Method "A" Unrestricted Residential Soil Cleanup Levels for benzene and toluene.

**Ethyl benzene & Xylenes (BTEX)  
Constituents in Soil Concentrations:**

All samples were below the most stringent State of Washington Model Toxics Control Act

Sample Number:	Location:	Depth (feet):	Date Analyzed:	Ethyl benzene mg/kg*	Xylenes mg/kg*
SS-101	Fueling Island: S. Wall	4.0' bgs	10-04-11	ND	ND
SS-102	Fueling Island: N. Wall	4.0' bgs	10-04-11	ND	ND

SS-103	Fueling Island: E. Wall	4.0' bgs	10-04-11	ND	ND
SS-104	Fueling Island: W. Wall bottom	5.0' bgs	10-04-11	ND	ND
SS-105	Tank Pit: E. Wall, bottom	13.5' bgs	10-04-11	ND	ND
SS-106	Tank Pit: E. Wall, bottom	13.0' bgs	10-04-11	ND	ND
SS-107	Tank Pit: W. Wall bottom	16.5' bgs	10-04-11	***	***
SS-108	Tank Pit: S. Wall	9.0' bgs	10-04-11	***	***
SS-109	Tank Pit: S. Wall	4.0' bgs	10-04-11	ND	ND
SS-110	Tank Pit: N. Wall bottom	17.0' bgs	10-04-11	***	***
SS-111	Tank Pit: N. Wall	13.0' bgs	10-04-11	***	***
SS-112	Tank Pit: W. Wall	13.5' bgs	10-04-11	ND	ND
SS-113	Tank Pit: E. Wall	8.0' bgs	10-04-11	***	***
SS-114	Tank Pit: bottom	18.5' bgs	10-04-11	***	***
SS-115	Tank Pit: E. Wall	13.5' bgs	10-04-11	***	***
SS-116	Tank Pit: E. Wall	8.0' bgs	10-04-11	***	***
SS-117	Tank Pit: E. Wall	4.0' bgs	10-04-11	ND	ND

SS-118	Tank Pit: W. Wall	4.0' bgs	10-05-11	***	***
SS-119	Tank Pit: S. Wall	5.0' bgs	10-05-11	ND	ND
SS-120	Tank Pit: N. Wall	4.0' bgs	10-05-11	ND	ND
SS-121	Tank Pit: S. Wall	8.5' bgs	10-05-11	ND	ND
SS-122	Tank Pit: N. Wall	8.0' bgs	10-05-11	ND	ND
SS-123	Tank Pit: W. Wall	8.0' bgs	10-05-11	ND	ND
SS-124	Sample	Not	Collected	X	X
SS-125	Tank Pit: Bottom	14.0' bgs	10-05-11	ND	ND
SS-126	Tank Pit: W. Wall	13.0' bgs	10-05-11	ND	ND
SS-127	Tank Pit: S. Wall	13.0' bgs	10-05-11	ND	ND
SS-128	Tank Pit: N. Wall	12.5' bgs	10-05-11	Sample	not tested
SS-129	Tank Pit: N wall center	13.0' bgs	10-05-11	ND	ND
SS-130	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND
SS-131	Tank Pit: N wall center	13.0' bgs	10-05-11	ND	ND
SS-132	Tank Pit: N wall center	8.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				6.0 mg/kg	9.0 mg/kg

NORTH EXCAVATION TRENCH					
Sample Number:	Location:	Depth (feet):	Date Analyzed:	Ethyl benzene mg/kg*	Xylenes mg/kg*
SS-133	North Trench: E. End	8.0' bgs	10-05-11	ND	ND
SS-134	North Trench: E. End	12.0' bgs	10-05-11	ND	ND
SS-135	North Trench: E. End	14.0' bgs	10-05-11	ND	ND
SS-136	North Trench: Center	8.0' bgs	10-05-11	ND	ND
SS-137	North Trench: Center	12.0' bgs	10-05-11	ND	ND
SS-138	North Trench: Center	14.0' bgs	10-05-11	ND	ND
SS-139	North Trench: W. End	8.0' bgs	10-05-11	ND	ND
SS-140	North Trench: W. End	12.0' bgs	10-05-11	ND	ND
SS-141	North Trench: W. End	14.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				6.0 mg/kg	9.0 mg/kg
WEST EXCAVATION TRENCH					

Sample Number:	Location:	Depth (feet):	Date Analyzed:	Ethyl benzene mg/kg*	Xylenes mg/kg*
SS-142	West Trench: S. End	12.0' bgs	10-05-11	0.79 mg/kg	1.4 mg/kg
SS-143	West Trench: S. End	8.0' bgs	10-05-11	ND	ND
SS-144	West Trench: S. End	14' bgs	10-05-11	0.30 mg/kg	0.62 mg/kg
SS-145	West Trench: Center	8.0' bgs	10-05-11	ND	ND
SS-146	West Trench: Center	12.0' bgs	10-05-11	ND	ND
SS-147	West Trench: Center	14.0' bgs	10-05-11	ND	ND
SS-148	West Trench: N. End	8.0' bgs	10-05-11	ND	ND
SS-149	West Trench: N. End	12.0' bgs	10-05-11	0.28 mg/kg	0.20 mg/kg
SS-150	West Trench: N. End	14.0' bgs	10-05-11	ND	ND
MTCA Cleanup Level				6.0 mg/kg	9.0 mg/kg

\* mg/kg is the same as parts per million ('ppm')

\*\*\*\* indicates that the sample was not analyzed due to the diesel analysis being above 2000 ppm

As the above chart shows all soils samples were below the most stringent State of Washington Model Toxics Control Act (MTCA) Method "A" Unrestricted Residential Soil Cleanup Levels for Ethyl benzene and xylenes.

## **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

#### **Polynuclear Aromatic Hydrocarbons**

Northwest Polynuclear Aromatic Hydrocarbons (Method 8270)

### **Laboratory Analysis:**

Laboratory analysis was provided by:

ESN Northwest Chemistry Laboratory<sup>1</sup>  
1210 Eastside Street S.E., Suite No.200  
Olympia, Washington 98501  
(360) 459-4670

## SECTION IV. CONCLUSIONS AND RECOMMENDATIONS

### **Conclusions & Recommendations:**

Aerotech Environmental Consulting, Inc. observed the Site Remediation of the Lynnwood Bodyshop located at 19230 Highway 99 in the City of Lynwood, WA. The remediation took place from October 4 though October 6, 2011. Aerotech observed Langseth Environmental Services Inc. in the performance of the subsurface remediation activities at the Lynnwood Body Shop.

The purpose of the remediation activities was to remove soil that had been impacted with petroleum products. All the areas of soil contamination identified in our prior Phase II Subsurface Investigations were excavated. Soil samples down to approximately six to eight feet in the area of the tank pit and pump island was found to be below the most stringent State of Washington Model Toxics Control Act (MTCA) Method "A" Unrestricted Residential Soil Cleanup Levels for petroleum products. However, twenty-two samples collected at deeper depths (ten to twenty feet) were found to be impacted by petroleum products. Soil analysis showed petroleum hydrocarbon impacts extend to at least twenty feet below ground surface.

Approximately 339.07 tons of contaminated soil was removed from the tank pit and fueling island area. Excavation and soil samples analysis of the North Exploratory Trench to a depth of 14 feet did not reveal any impacts. The pattern of the soil contamination suggest underground storage tank leakage into the surrounding days prior to tank removal in the 1970s.

Soil excavation, removal, and backfilling with clean fill was completed at tank pit. Backfilling was accomplished with clean imported fill. Both the north and west excavation trenches were backfilled with the same native material that had been excavated. Previously paved areas were re-asphalted after excavation activities were completed.

The remediation objective was to remove all areas of petroleum impacted soil contamination previously identified in the Phase II Subsurface Investigations above the most MTCA Method "A" Unrestricted Residential Soil Cleanup Levels. However excavation operations revealed that in the tank pit soil contamination extended deeper than twenty feet in depth. Excavation at such a depth is impractical and soil removal was terminated at the eighteen foot level. In addition further petroleum impacted soil was encountered on the bottom of the west excavation trench.

### **■ Recommendation:**

Based upon the laboratory results reported by the on Site ESN Northwest, Inc., mobile analytical laboratory, the soil samples collected at the lower depths at the bottom of Tank Pit (approximately twenty feet below ground surface) indicated the soil to be impacted by petroleum hydrocarbons.

Since soil at these depth cannot not be readily excavated without the risk of damage to adjoining structures and utilities – soil removal was terminated at approximately eighteen feet below ground surface.

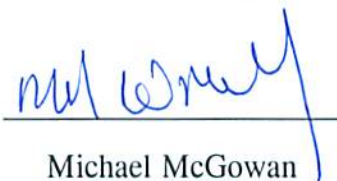
It is recommended that the subject Property enter into the State of Washington Department of Ecology's Voluntary Cleanup Program and obtain a no further action determination.

## STATEMENT OF THE LICENSED GEOLOGIST

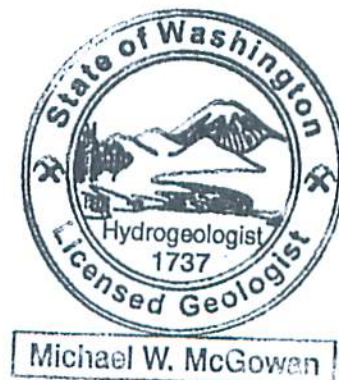
As stipulated in the Regulatory Code of the State of Washington Title 18, Chapter 18.220, the undersigned is a licensed Geologist in the State of Washington, and has met the statutory requirements of R.W. § 18.220.060 for such licensing including, but not limited to, educational requirements, work and 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 R.W. Title 18, Chapter 18.220, Paragraph 190.

Signature of Licensed  
Professional Geologist:



Michael McGowan  
State of Washington License No 1737



## DEFINITIONS SPECIFIC TO LIMITED & TARGETED PHASE II ASSESSMENT

**Background Concentration**..... the concentration of a target analyte in groundwater, surface water, air, soil gas, sediment, or soil at a referenced location near a release or potential release area under investigation, which is not attributable to the release under investigation. Background samples may contain the target analyte, due to either naturally occurring or manade sources, but not due to the release(s) in question. (See, E 1903-97, § 3.1.3).

**Phase II Environmental Site Assessment**.... This practice (ASTM E 1903-97, Reapproved 2002) defines a commercially practical process for sound Phase II investigation that includes sampling and chemical testing. Such Phase II investigation is performed, at a minimum, to confirm the actual presence of contamination in environmental media at a property where prior assessment had indicated that contaminants may occur due to releases or potential releases of substances to the environment at the property, or to demonstrate prior to property acquisition that contamination by targeted analytes is absent. (See, E 1903-97, § 1.1.1).

**Phase II Environmental Site Assessment Limitations**..... “This practice [ASTM E1903-97, Reapproved 2002] recognizes that the *Phase II ESA* process can be applied either to an overall assessment of a property with respect to all releases and potential releases at the property, or to an evaluation targeted to a specific release or potential release. If a property-wide assessment is not necessary to meet the particular *User* objective, then the Phase II investigation process described herein should be applied to generate sound information regarding the specific question of problem to be resolved. If a Phase II investigation does not address all releases and potential releases identified at a property, the report of the assessment must be denoted as a “*Targeted Phase II Environmental Site Assessment*.” [E 1903-97, § 1.1.3]”

**Phase II Targeted Environmental Site Assessment**.... 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]”

**Prior Knowledge**.... “This Standard Practice [ASTM E 1903-97, Reapproved 2002] assumes ... that all reasonably ascertainable information, including but not limited to prior Phase I Environmental Site Assessment Reports, will be considered in conducting a Phase II ESA and interpreting its results. [E 1903-97, § 1.1.2].”

**Targeted Analytes**.... substances that have been released or potentially have been released to environmental media at the site, and which are of interest in the context of the particular Phase II ESA and its objectives, the presence of which will be sought and concentrations of which will be quantified through field screening or chemical testing. (See, E 1903-97, § 3.1.63).

## REPORT ENDNOTES

1. The ESN Northwest Chemistry Laboratory is accredited by the State of Washington Department of Ecology for the chemicals analyzed for this Report.

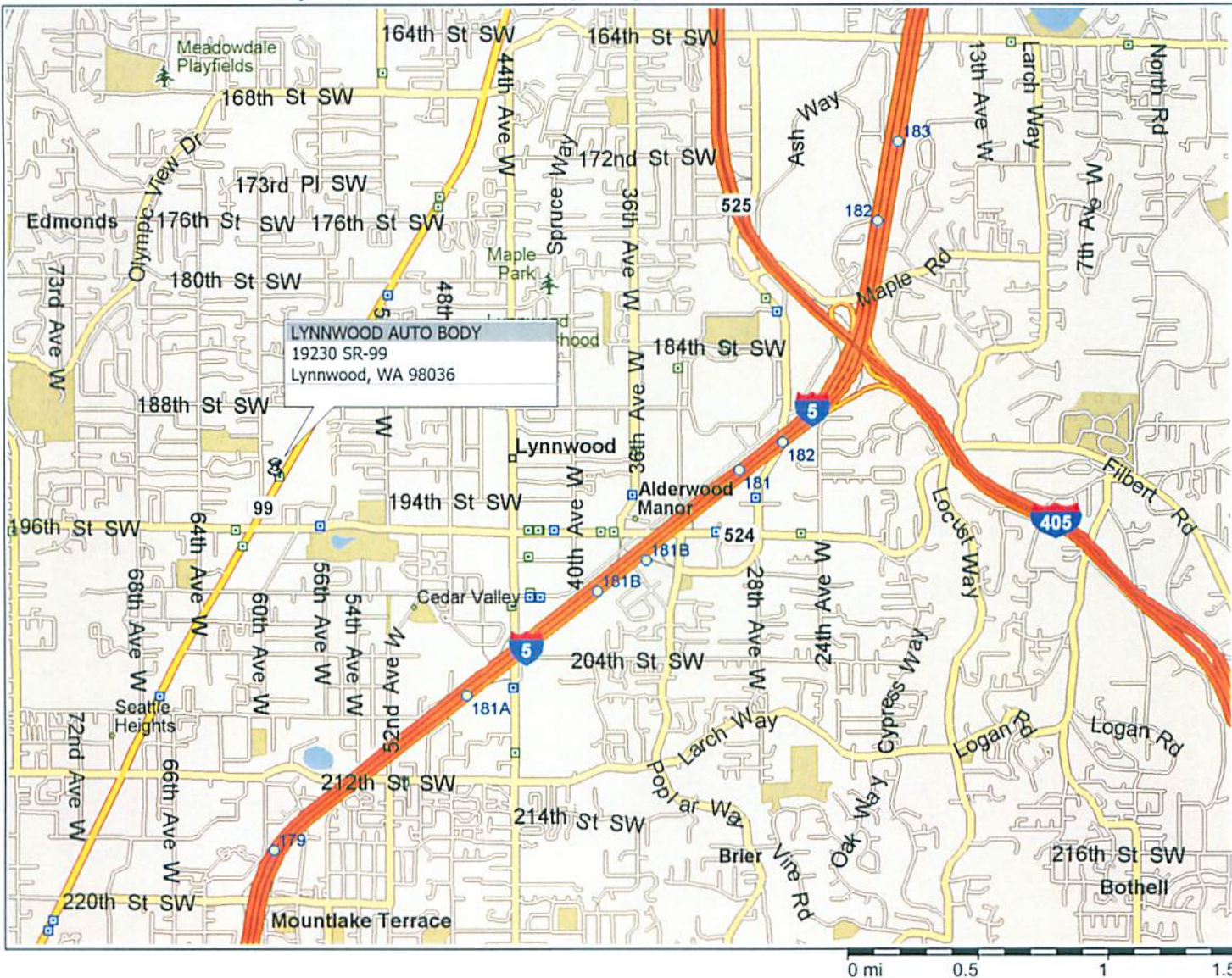


## APPENDIX

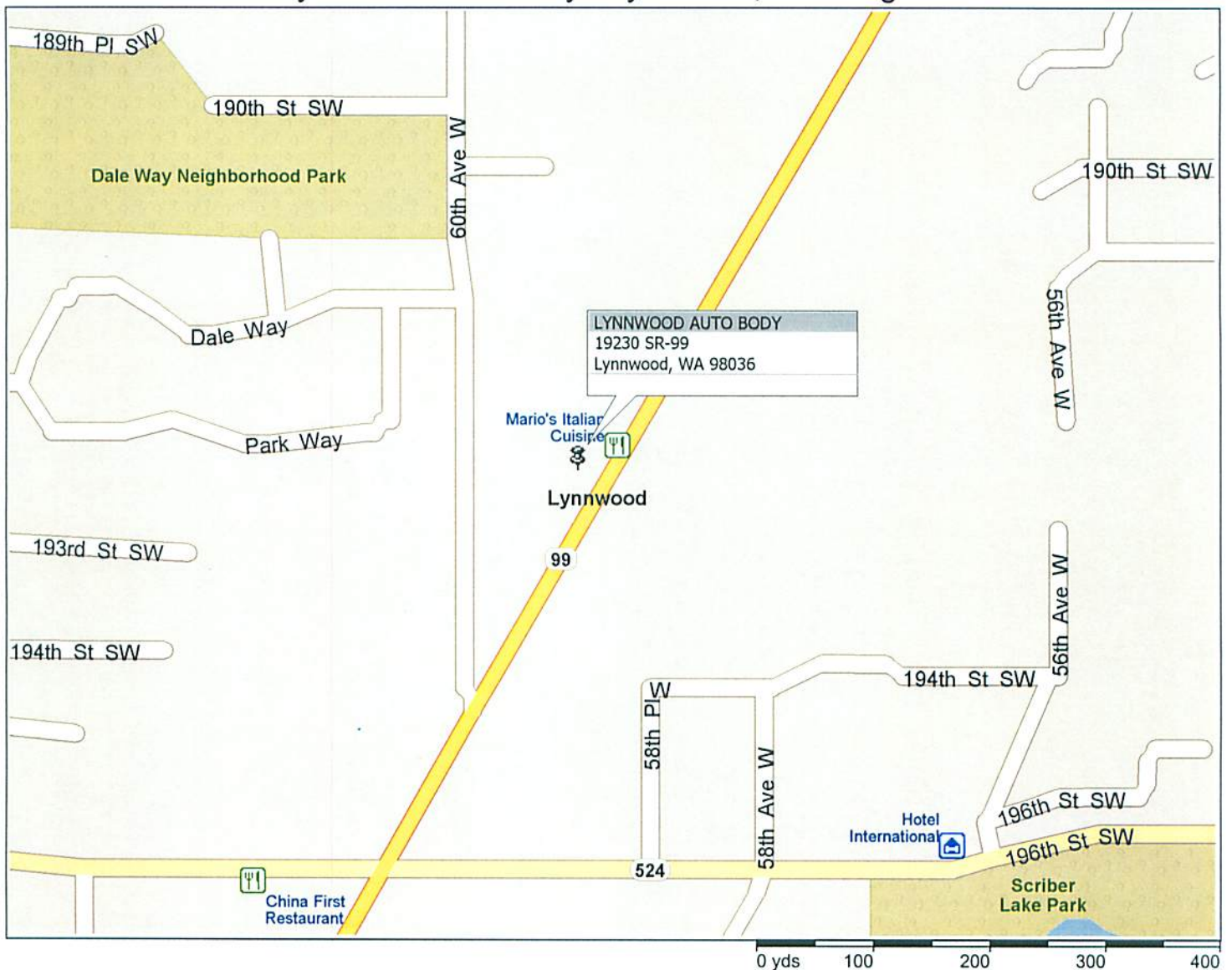
- Site Location and Photographs
- Project Contract Documents
- Project Correspondence / Boring Logs
- Analytical Results
- Chain of Custody

- **Site Location and Photographs**

## Lynnwood Auto Body - Lynnwood, Washington



## Lynnwood Auto Body - Lynnwood, Washington



Pushpins

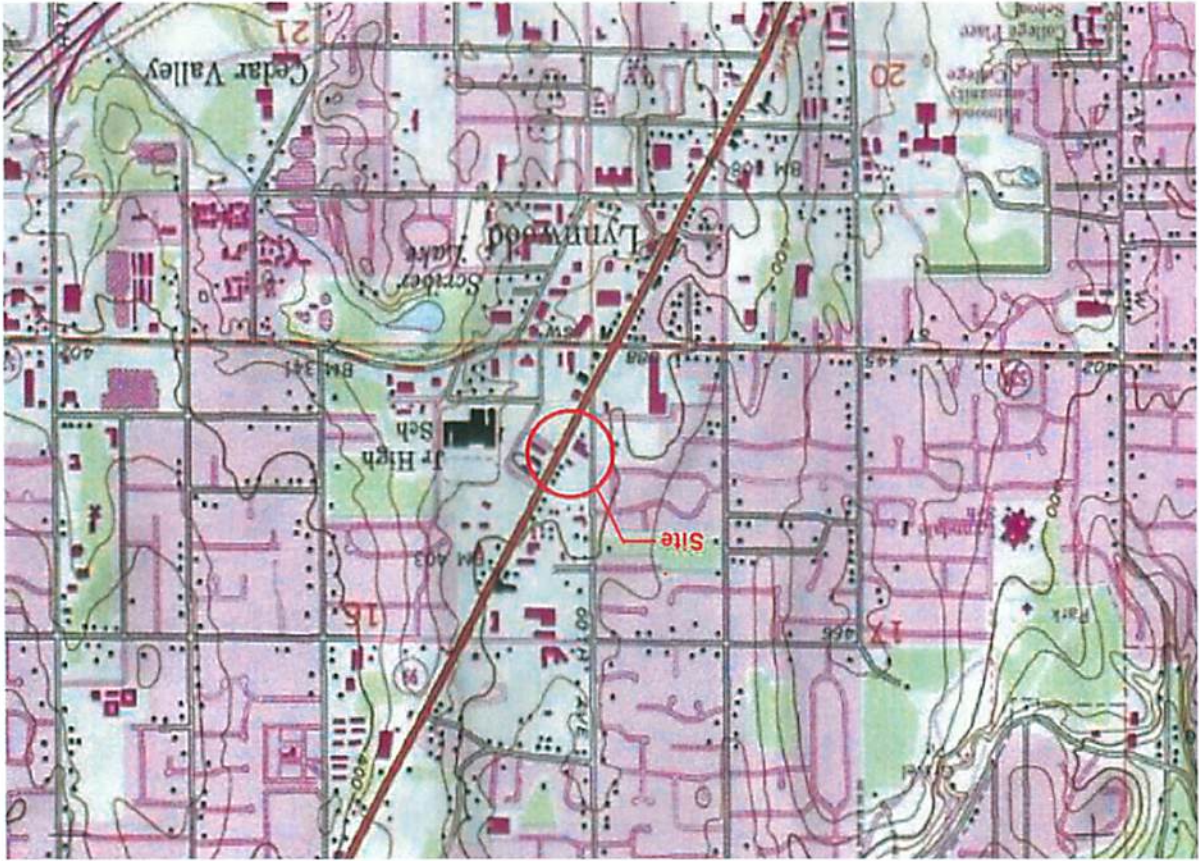
My Pushpins

Aerotech Environmental Consulting, Inc  
19600 International Blvd, Ste. 101  
Seattle, Washington  
Drawing by McDermott: 15 Nov 2011

USGS Topographic Map  
Lynnwood Body Shop  
19230 Highway 99  
Lynnwood, WA



NORTH





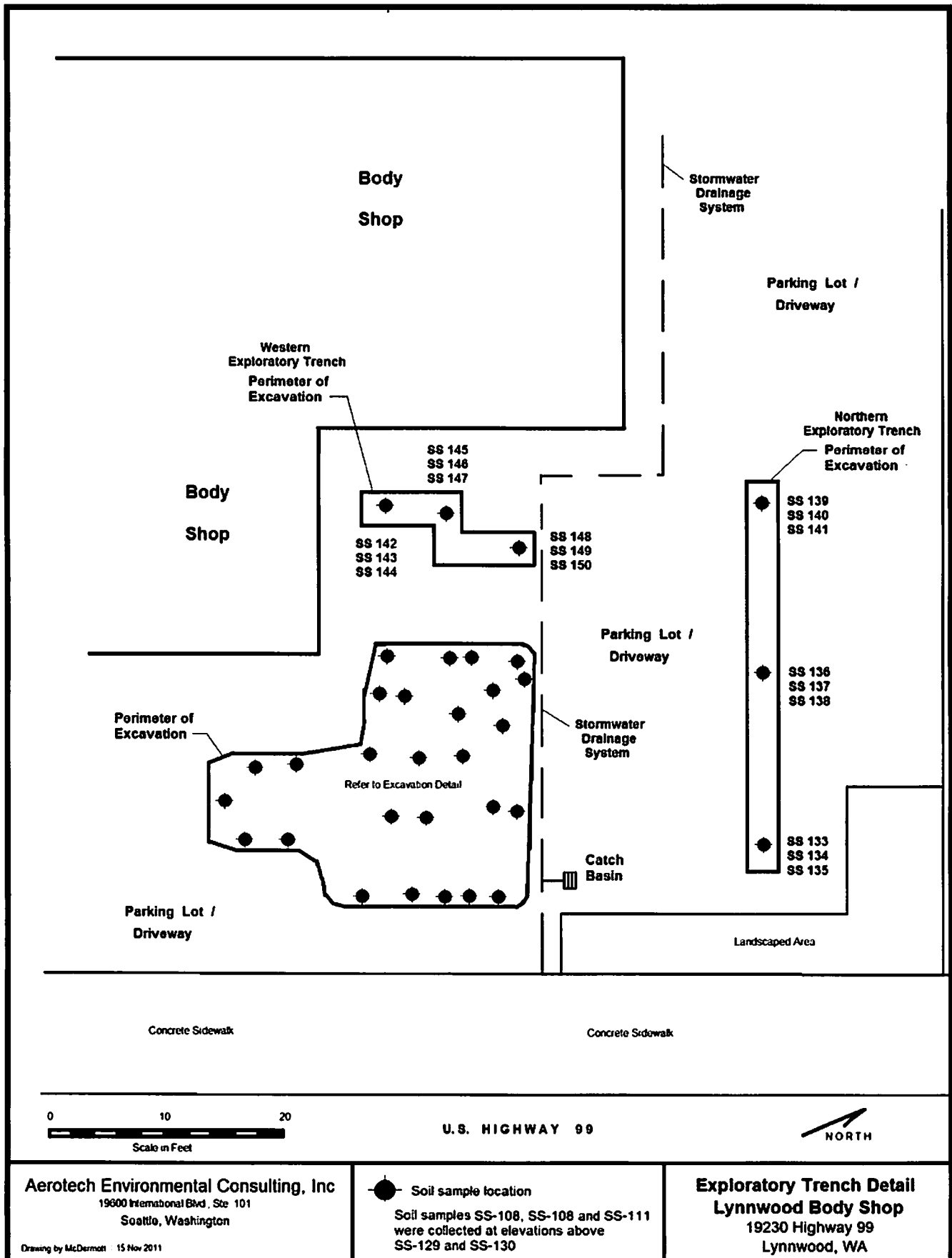
0 30 60  
Scale in Feet

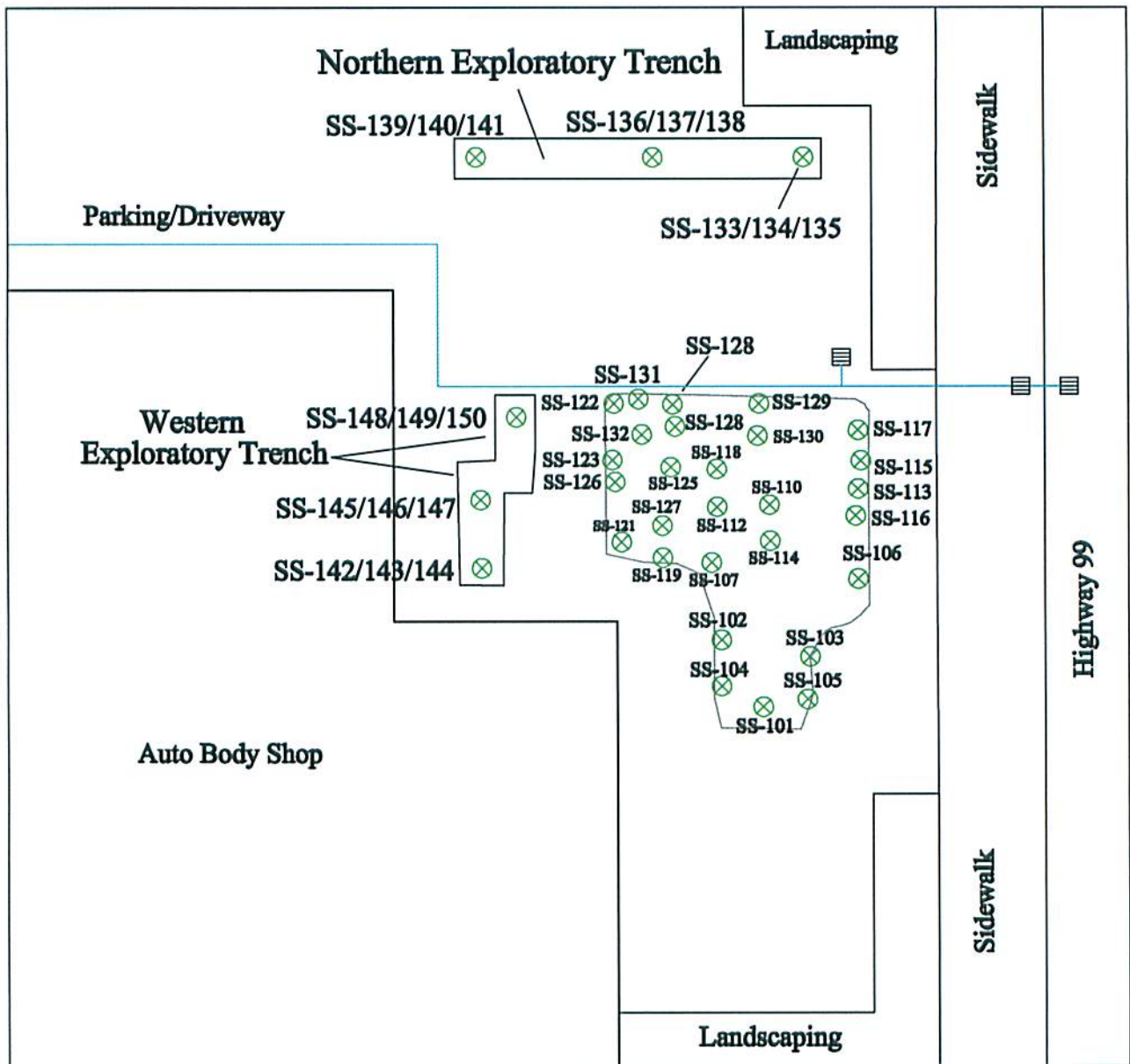
NORTH

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

Drawing by McDermott 15 Nov 2011

**Site Aerial Photo**  
**Lynnwood Body Shop**  
19230 Highway 99  
Lynnwood, WA





#### Notes

Soil Sample or SS-108, SS-108 and SS-111 were collected above SS-129 and SS-130.

#### Scale in Feet



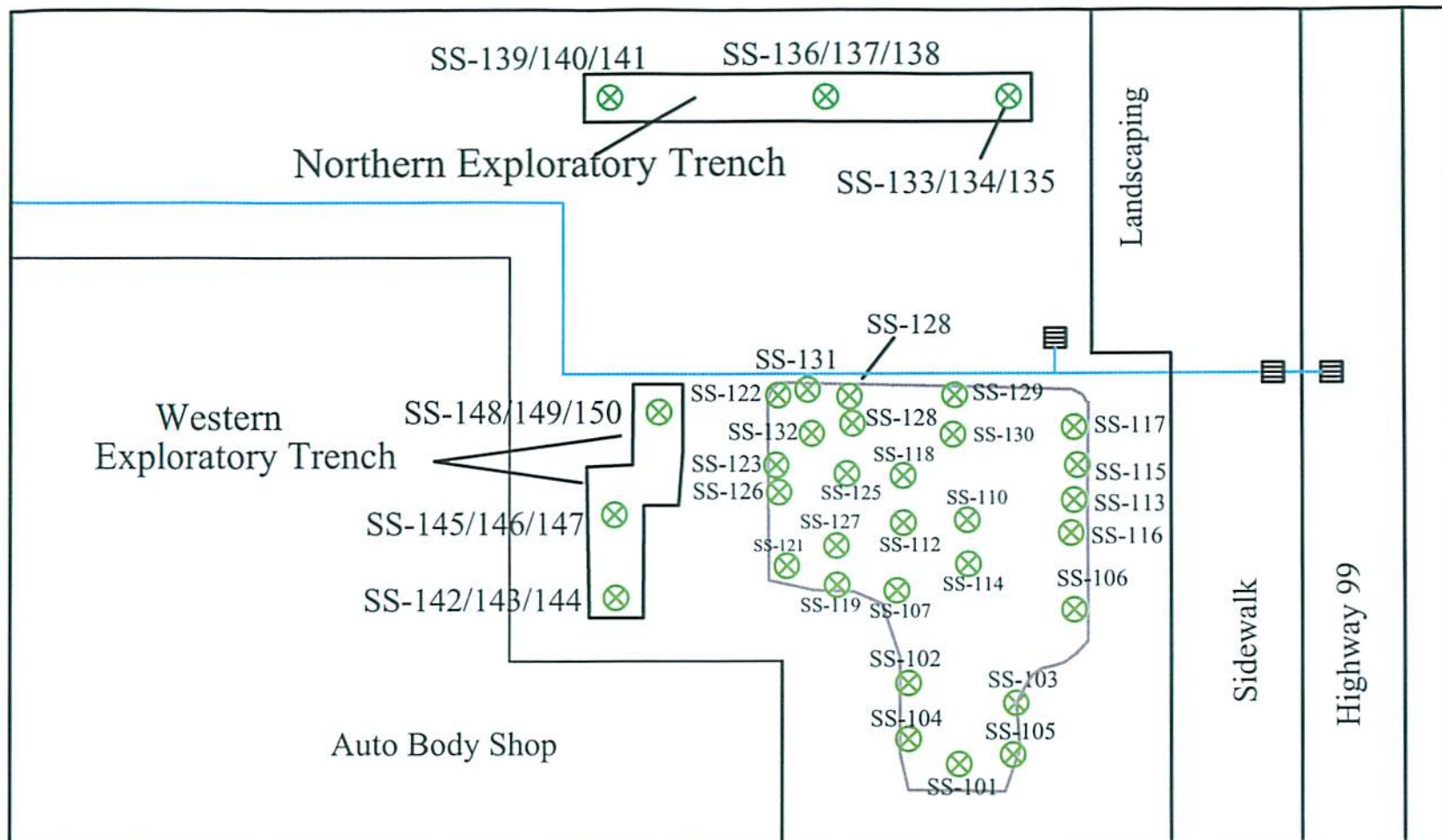
Key	
	Soil Sample
	~Excavation Area
	~Building Outline
	~Stormdrain System



**AEROTECH**  
19600 International Blvd. Ste 101  
Seatac, WA 98188

#### Site Map

**Lynnwood Body Shop**  
19230 Highway 99  
Lynnwood, WA 98036



Scale in Feet



Notes

Soil Sample or SS-108, SS-108 and SS-111 were collected above SS-129 and SS-130.

- Key**
- SS-111 Soil Sample
  - ~Excavation Area
  - ~Building Outline
  - ~Stormdrain System

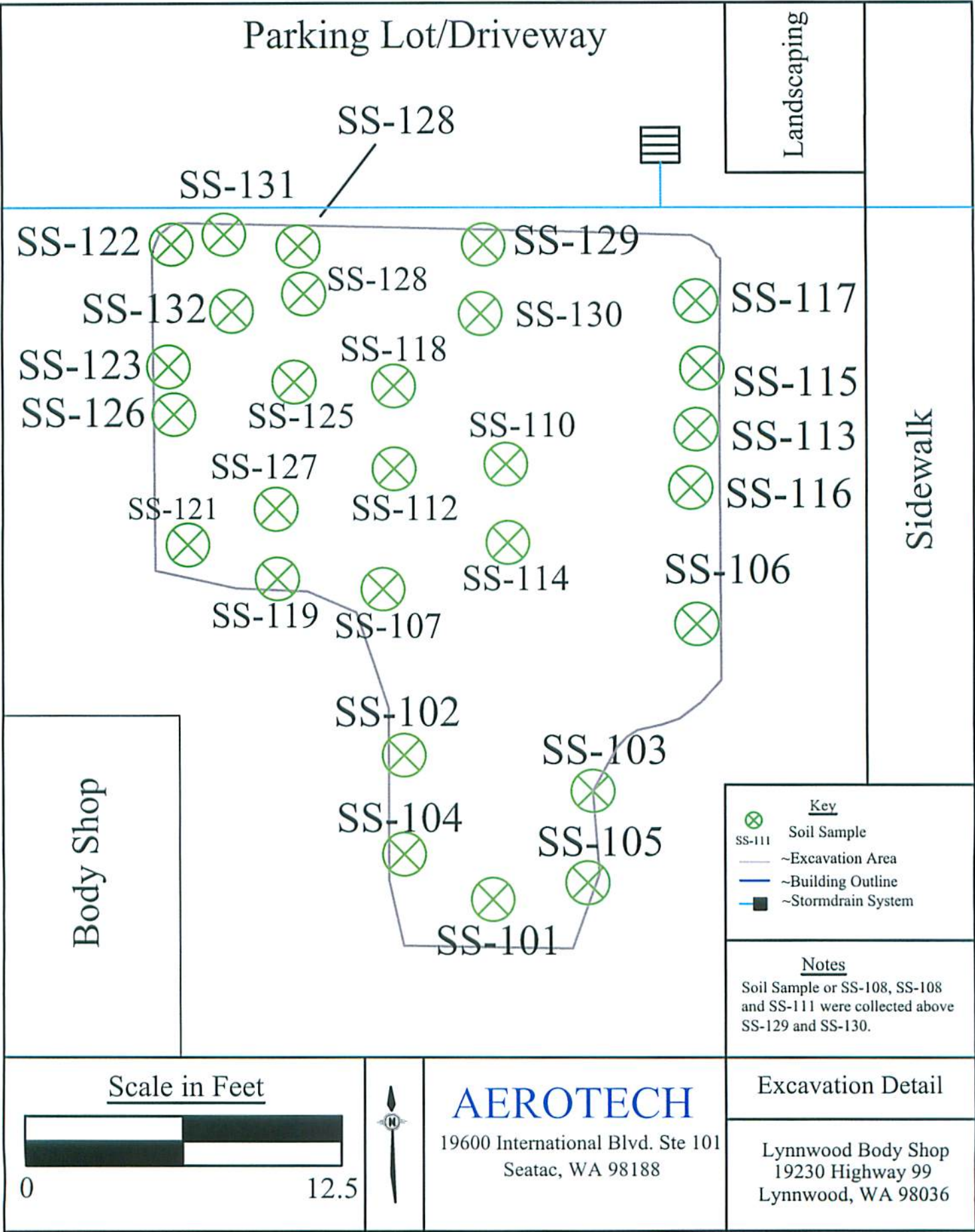


**AEROTECH**

19600 International Blvd. Ste 101  
Seatac, WA 98188

**Site Map**

Lynnwood Body Shop  
19230 Highway 99  
Lynnwood, WA 98036



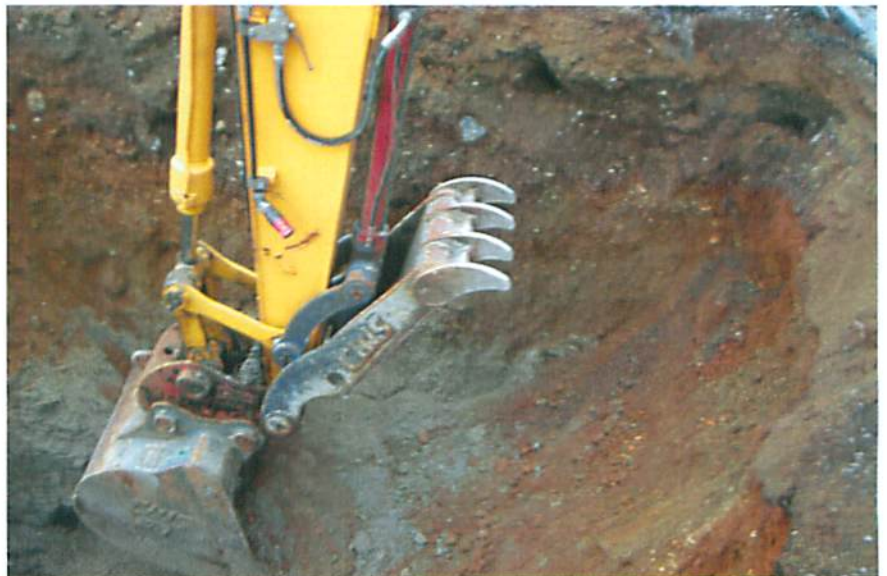
Aldercrest Remediation  
Page 1 of 4

Remediation area



Start of Remediation  
(Fuel dispenser island)

Excavation at fuel dispenser  
island



Completion of fuel dispenser  
island remediation

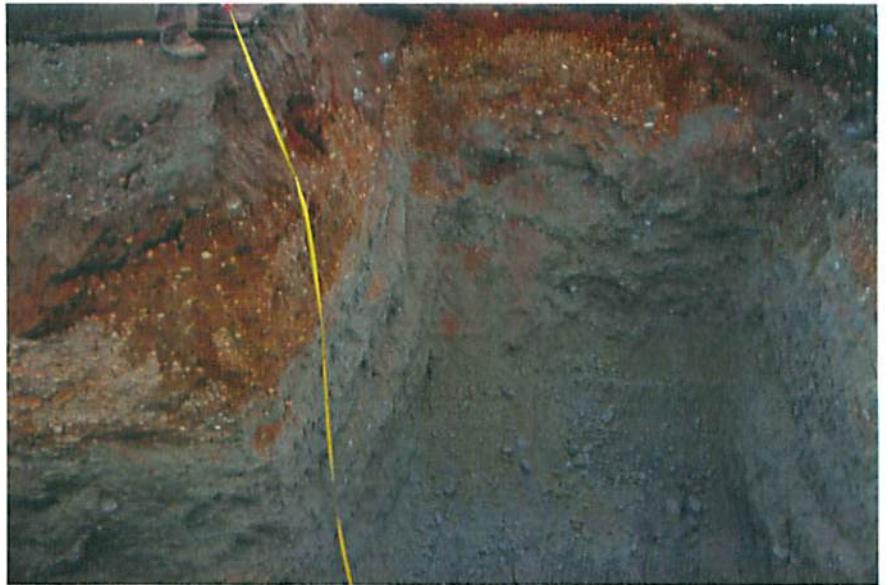


Excavation along eastern  
Property boundary

Depth of Excavation  
at 20 feet bgs



Former tank pit excavation



Bottom of tank pit excavation  
at 20 feet bgs

Northwest corner of tank pit  
excavation



Aldercrest Remediation  
Page 4 of 4

Tank pit excavation  
north side



Northern exploratory trench

Western exploratory trench



Groundwater Monitoring Report

Lynnwood Auto Body

Fourth Consecutive Quarter

September 2015

**Groundwater Sampling Report  
Fourth Quarter - September 2015**

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

VCP Site No. NW 2555

***AEROTECH***  
***Environmental Consulting Inc.***

September 15, 2015

Anchorage   Seattle   Portland

Cost-effective environmental solutions  
for the western United States and Alaska

[www.AerotechEnvironmental.com](http://www.AerotechEnvironmental.com)

## ***AEROTECH***

### ***Environmental Consulting Inc.***

13925 Interurban Avenue South, Suite No.210  
Seattle, Washington 98168  
(360)710-5899

2916 NW Bucklin Hill Road, Suite No.126  
Silverdale, Washington 98383  
(866) 800-4030

512 W. International Airport Road, Suite 201  
Anchorage, Alaska 99518  
(907) 575-6661

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

September 16, 2015

Ms. Julie Stack

### **Aldercrest Auto Rebuild, Inc.**

2415 - 196<sup>th</sup> Street Southwest  
Lynnwood, Washington 98036

**RE: GROUNDWATER MONITORING SAMPLING REPORT - Event: Sep. 15, 2015**  
**Lynnwood Auto Body Shop**  
19230 Highway 99  
Lynnwood, Washington  
VCP Site No. NW 2555

Dear Ms. Stack:

As you are aware, Aerotech Environmental Consulting, Inc. ("Aerotech") has been retained to collect quarterly groundwater samples from [number of wells sampled] groundwater monitoring wells previously installed at the Lynnwood Auto Body Shop in Lynnwood, Washington. Aerotech conducted the most recent round of groundwater monitoring and sampling activities on September 15, 2015. Enclosed, please find the associated laboratory analytical report, tabulated analytical results, field notes, and other related documentation.

Please feel free to contact the Aerotech Site Project Manager, Mr. James McDermott, at (425) 686-0032 (james@dirtydirt.us), or the Aerotech Environmental Scientist/Field Sampling Coordinator, Mr. Nicholas Gerkin (nick@dirtydirt.us) if you have questions regarding work completed at this Site.



Best Regards,

James G. McDermott

State of Washington

Licensed Geologist No. 3063

James G. McDermott

## ***AEROTECH***

### ***Environmental Consulting Inc.***

13925 Interurban Avenue South, Suite No.210  
Seattle, Washington 98168  
(360)710-5899

2916 NW Bucklin Hill Road, Suite No.126  
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512 W. International Airport Road, Suite 201  
Anchorage, Alaska 99518  
(907) 575-6661

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

September 16, 2015

Ms. Julie Stack  
**Aldercrest Auto Rebuild, Inc.**  
2415 - 196<sup>th</sup> Street Southwest  
Lynnwood, Washington 98036

**RE: GROUNDWATER MONITORING PROCEDURES / QUALITY CONTROL**  
**Lynnwood Auto Body Shop**  
19230 Highway 99  
Lynnwood, Washington  
VCP Site No. NW 2555

Dear Ms. Stack:

As you are aware, Aerotech Environmental Consulting, Inc. ("Aerotech") has been retained to collect quarterly groundwater samples at the groundwater monitoring well previously installed at the Site indicated above. The *Groundwater Sampling Program* was planned and conducted with oversight by an Aerotech State of Washington Licensed Hydrogeologist or Geologist.

The following protocol and sampling procedures represent the *Site Work Plan* selected for the Site indicated above. Protocol were designed to meet or exceed standards for groundwater monitoring well sampling, as specified by the State of Washington Department of Ecology "*Standard Operating Procedures for Purging and Sampling Monitoring Wells, Version 1.0,*" dated and approved on October 4, 2011. These procedures are strictly adhered to by Aerotech field staff:

### **Cross-Contamination Mitigation Protocol**

A fresh piece of plastic sheeting is placed on the ground or pavement adjacent to the well head in order to protect field equipment from contact with the ground, to prevent or minimize the possible introduction of foreign materials into the wells, and in general in order to mitigate the possibility of cross-contamination. Where previous laboratory data is available, or where visual or olfactory indicators provide initial evidence, well sampling order is arranged to proceed with the least contaminated well, often the upgradient groundwater monitoring wells, and sampling order proceeds by sampling wells associated with successively higher contamination levels. Thus, the wells exhibiting the highest contamination levels are sampled last, in order to minimize the possibility of cross contamination.

A fresh pair of disposable Nitrile gloves is worn at each well. Equipment neither disposable nor dedicated to wells, is washed in a dedicated container prepared with non-phosphate Alconox

detergent and triple rinsed in a second container prepared with distilled and/or deionized water. Surfaces that cannot be readily submerged for the purpose of decontamination, are sprayed with wash water followed by rinse water, and wiped with a fresh disposable paper towel. Dedicated tubing is recovered from wells after each use, and deployed to a designated dedicated clean plastic bag, bearing a label indicating well identification information.

### **Water Level Measurement**

Prior to the well purge process and the collection of groundwater samples, groundwater levels are measured at the north side of the Top of Casing ("TOC") with a piezometer/water level indicator, by slowly lowering the sensor into wells prior to purging, in order to minimize disturbances. The water levels are measured twice, with tape marked in 0.01 foot increments, in order to reduce possible reading error. Where appropriate, free product thickness is measured with gas level indicator paste. Upon arrival at the well and visual inspection, the condition of the well and well head, as well as weather conditions and unusual ambient air conditions, are documented on a "Monitoring Well Field Sampling Record" sheet, completed in paper form and / or in electronic form.

### **Groundwater Monitoring Well Purge and Sampling Methodologies**

Prior to groundwater sample collection, the wells are purged by means of low flow techniques, during which time groundwater is monitored for physical parameters, including temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential, by means of a YSI 556 multi-parameter device, until such time as values recorded have stabilized and equilibrium conditions are verified according to State guidelines. This protocol ensures that collected groundwater samples are representative of in-situ groundwater conditions. A minimum of one calculated well volume is purged prior to sampling. No more than three well volumes are generally purged.

A dedicated length of high density polyethylene tubing is lowered into each well to a level near the middle of the screened interval. Groundwater is then purged and samples are collected by means of a peristaltic pump, set at a steady low flow rate in order to limit drawdown and sample agitation. A dedicated length of clean silicone tubing is utilized within the pump mechanism. Periodic measurements of groundwater conditions are recorded (generally a minimum of five readings recorded at two- to three- minute intervals) until groundwater equilibrium conditions are confirmed; the well is then considered as having been adequately purged. Unusual occurrences such as slow well recharge are also described in field documentation. Contaminated purge water is drummed on Site.

Groundwater samples are collected in containers specified by the laboratory for the analyses established at the Site, and in accordance with EPA Method 5035A. Sample containers are labeled with site name, well identification, and date of collection information. Each sample is documented on a *Chain of Custody* ("COC") form, and immediately placed in an iced cooler (maintained at 4 degrees Celcius or less) for transport to a certified laboratory for analysis.

Please feel free to contact the Aerotech Site Project Manager, Mr. James McDermott, at (425) 686-0032 (james@dirtydirt.us), or the Aerotech Environmental Scientist/Field Sampling Coordinator, Mr. Nicholas Gerkin (nick@dirtydirt.us), if you have questions regarding work completed at this Site.

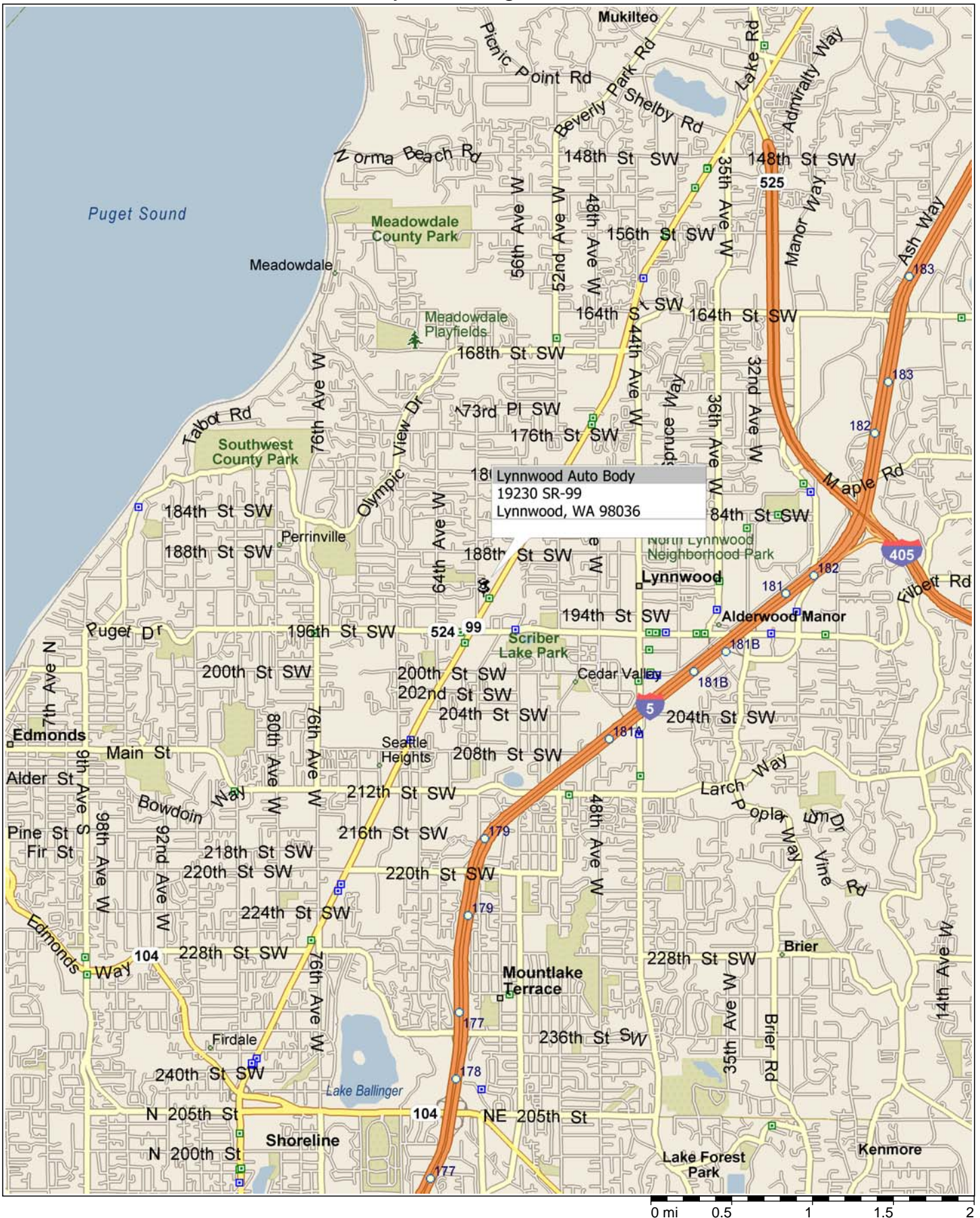


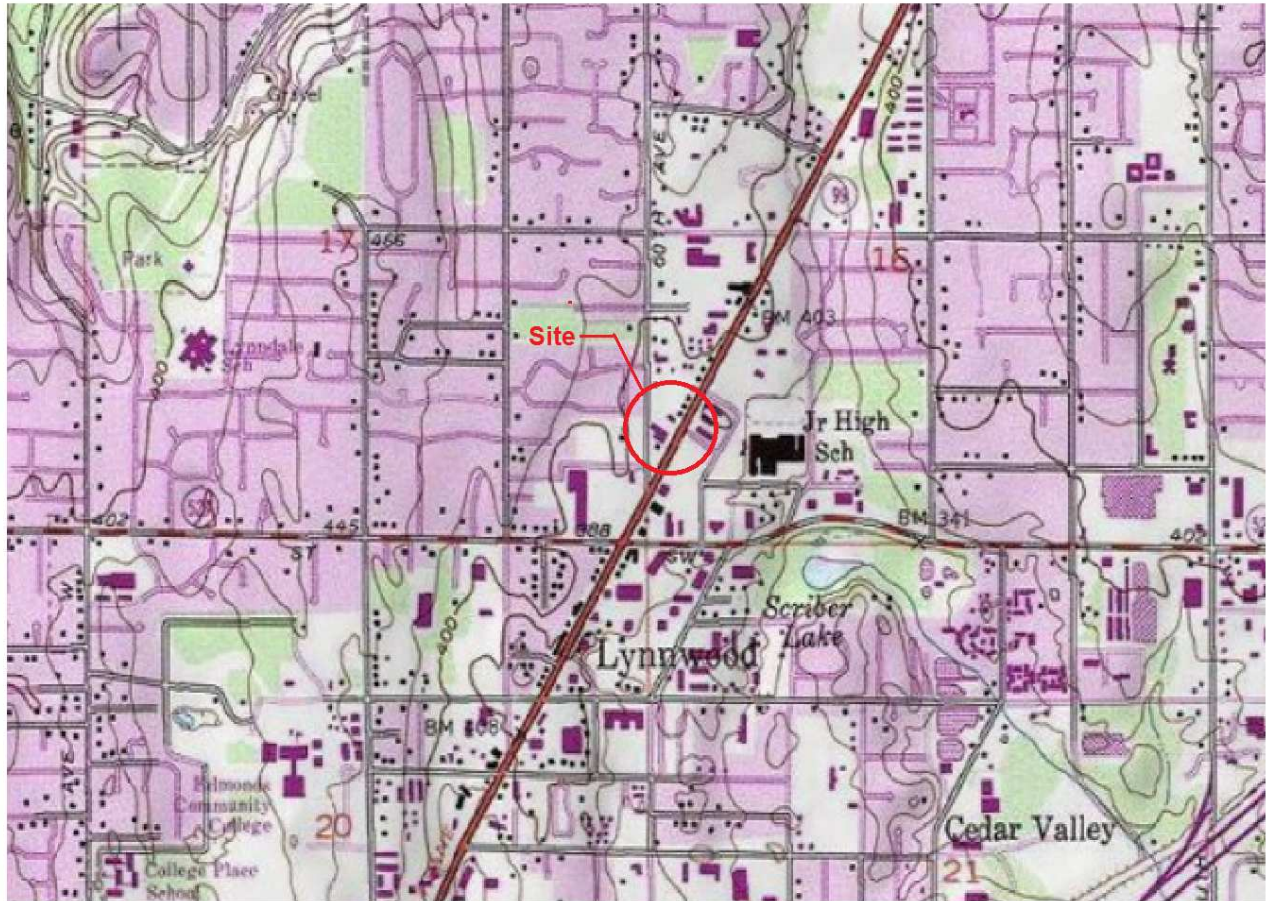
Best Regards,

James G. McDermott  
State of Washington  
Licensed Geologist No. 3063

James G. McDermott

# Cedar Valley, Washington, United States





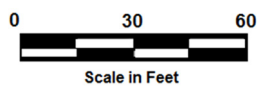
0.0 0.2 0.4  
Scale in Miles

NORTH

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

Drawing by McDermott : 15 Nov 2011

**USGS Topographic Map**  
**Lynnwood Body Shop**  
19230 Highway 99  
Lynnwood, WA



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

**Figure 1**

## GROUNDWATER MONITORING WELL LOCATION MAP

**Lynnwood Body Shop**  
19230 Highway 99  
Lynnwood, WA

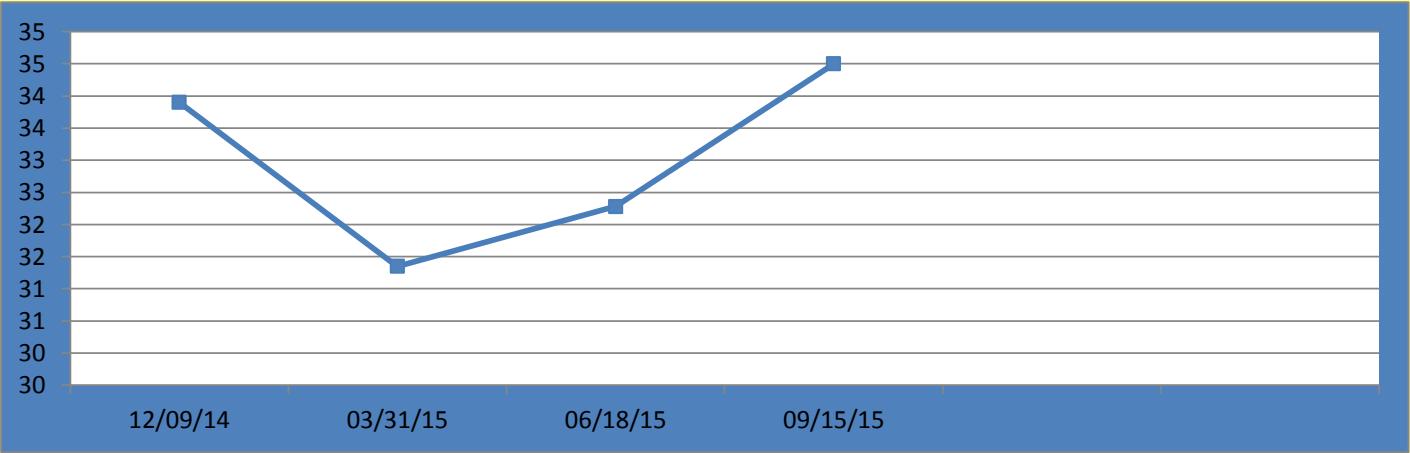
Drawing by McDermott : 15 Dec 2014

Groundwater Monitoring Well Analytical Results - VCP SW 1407

Precision Collision Lynnwood, 15405 Hwy 99, Lynnwood, Washington

Monitoring Well 1 (Paved lot, east of building, near east driveway)												
Well Depth	Sampling Date	Ground Water Level	GRO	DRO Kerosine/ Dieel	DRO Heavy Oil	Benzene	Toluene	Ethyl- benzene	Xylenes	Total Lead	PAH	ChlorinatedV OCs
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
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

September 16, 2015

*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 *Aldercrest Lynnwood, (B50915-1)* Project.

Samples were received on *September 15, 2015*. 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) 497-0110.

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

---

13256 NE 20<sup>th</sup> Street Suite 8■ Bellevue, WA 98005  
ph 425.747-7009  
E-mail: *aachemlab@yahoo.com*

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Any use, copying or disclosure other than by the intended recipient is unauthorized.*

Advanced Analytical Laboratory  
(425)497-0110, fax(425)497-8089

AAL Job Number:	B50915-1
Client:	Aerotech Environmental
Project Manager:	James McDermott
Client Project Name:	Aldercrest (Lynnwood Auto Body)
Client Project Number:	215-8181
Date received:	09/15/15

AAL Job Number: B50915-1  
Client: Aerotech Environmental  
Project Manager: James McDermott  
Client Project Name: Aldercrest (Lynnwood Auto Body)  
Client Project Number: 215-8181  
Date received: 09/15/15

Analytical Results

8260B, µg/L		MTH BLK	LCS	MW-1	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	09/16/15	09/16/15	09/16/15	09/16/15	09/16/15	09/16/15
MTBE	5.0	nd		nd			
Chloromethane	1.0	nd		nd			
Vinyl chloride(*)	0.2	nd		nd			
Bromomethane	1.0	nd		nd			
Chloroethane	1.0	nd		nd			
Trichlorofluoromethane	1.0	nd		nd			
1,1-Dichloroethene	1.0	nd		nd			
Methylene chloride	1.0	nd		nd			
trans-1,2-Dichloroethene	1.0	nd		nd			
1,1-Dichloroethane	1.0	nd		nd			
2,2-Dichloropropane	1.0	nd		nd			
cis-1,2-Dichloroethene	1.0	nd		nd			
Chloroform	1.0	nd		nd			
1,1,1-Trichloroethane	1.0	nd		nd			
Carbontetrachloride	1.0	nd		nd			
1,1-Dichloropropene	1.0	nd		nd			
1,2-Dichloroethane (EDC)	1.0	nd		nd			
Trichloroethene	1.0	nd	81%	nd	103%	100%	3%
1,2-Dichloropropane	1.0	nd		nd			
Dibromomethane	1.0	nd		nd			
Bromodichloromethane	1.0	nd		nd			
cis-1,3-Dichloropropene	1.0	nd		nd			
trans-1,3-Dichloropropene	1.0	nd		nd			
1,1,2-Trichloroethane	1.0	nd		nd			
Tetrachloroethene	1.0	nd		nd			
1,3-Dichloropropane	1.0	nd		nd			
Dibromochloromethane	1.0	nd		nd			
1,2-Dibromoethane (EDB)*	0.01	nd		nd			
Chlorobenzene	1.0	nd	89%	nd	104%	105%	1%
1,1,1,2-Tetrachloroethane	1.0	nd		nd			
Bromoform	1.0	nd		nd			
1,2,3-Trichloropropane	1.0	nd		nd			
Bromobenzene	1.0	nd		nd			
1,1,2,2-Tetrachloroethane	1.0	nd		nd			
2-Chlorotoluene	1.0	nd		nd			
4-Chlorotoluene	1.0	nd		nd			
1,3,5-Trimethylbenzene	1.0	nd		nd			
1,2,4-Trimethylbenzene	1.0	nd		nd			
1,3-Dichlorobenzene	1.0	nd		nd			
1,4-Dichlorobenzene	1.0	nd		nd			
1,2-Dichlorobenzene	1.0	nd		nd			
1,2-Dibromo-3-Chloropropane	1.0	nd		nd			
1,2,4-Trichlorobenzene	1.0	nd		nd			
1,2,3-Trichlorobenzene	1.0	nd		nd			

\*-instrument detection limits

AAL Job Number: B50915-1  
 Client: Aerotech Environmental  
 Project Manager: James McDermott  
 Client Project Name: Aldercrest (Lynnwood Auto Body)  
 Client Project Number: 215-8181  
 Date received: 09/15/15

Analytical Results

8260B, µg/L		MTH BLK	LCS	MW-1	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	09/16/15	09/16/15	09/16/15	09/16/15	09/16/15	09/16/15

Surrogate recoveries

Dibromofluoromethane	104%	103%	100%	100%	110%
1,2-Dichloroethane-d4	96%	103%	105%	106%	117%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

AAL Job Number: B50915-1  
Client: Aerotech Environmental  
Project Manager: James McDermott  
Client Project Name: Aldercrest (Lynnwood Auto Body)  
Client Project Number: 215-8181  
Date received: 09/15/15

Analytical Results

Dupl

NWTPH-Gx		MTH BLK	LCS	MW-1	MW-1	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	09/15/15	09/15/15	09/15/15	09/15/15	09/15/15	09/15/15	09/15/15

**NWTPH-Gx, ug/L**

Mineral spirits/Stoddard	100	nd		nd	nd			
Gasoline	100	nd		nd	nd			

**BTEX 8021B, ug/L**

Benzene	1.0	nd	93%	nd	nd	109%	107%	1%
Toluene	1.0	nd	110%	nd	nd	121%	120%	0%
Ethylbenzene	1.0	nd		nd	nd			
Xylenes	1.0	nd		nd	nd			

Surrogate recoveries:

Trifluorotoluene	103%	104%	91%	90%	114%	113%	
Bromofluorobenzene	102%	99%	96%	96%	86%	100%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
Acceptable Recovery limits: 70% TO 130%  
Acceptable RPD limit: 30%

AAL Job Number: B50915-1  
Client: Aerotech Environmental  
Project Manager: James McDermott  
Client Project Name: Aldercrest (Lynnwood Auto Body)  
Client Project Number: 215-8181  
Date received: 09/15/15

Analytical Results

NWTPH-Dx, mg/L		MTH BLK	MW-1
Matrix	Water	Water	Water
Date extracted	Reporting	09/16/15	09/16/15
Date analyzed	Limits	09/16/15	09/16/15
Kerosene/Jet fuel	0.20	nd	nd
Diesel/Fuel oil	0.20	nd	nd
Heavy oil	0.50	nd	nd

Surrogate recoveries:

Fluorobiphenyl	109%	97%
o-Terphenyl	99%	89%

Data Qualifiers and Analytical Comments

na - not analyzed

C - coelution with sample peaks

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

AAL Job Number: B50915-1  
Client: Aerotech Environmental  
Project Manager: James McDermott  
Client Project Name: Aldercrest (Lynnwood Auto Body)  
Client Project Number: 215-8181  
Date received: 09/15/15

Analytical Results

PAH(8270), ug/L		MTH BLK	LCS	MW-1	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	09/21/15	09/21/15	09/21/15	09/21/15	09/21/15	09/21/15
Date analyzed	Limits	09/21/15	09/21/15	09/21/15	09/21/15	09/21/15	09/21/15
Naphthalene	0.5	nd		nd			
Acenaphthylene	0.5	nd		nd			
Acenaphthene	0.5	nd	85%	nd	81%	83%	2%
Fluorene	0.5	nd		nd			
Phenanthrene	0.5	nd		nd			
Anthracene	0.5	nd		nd			
Fluoranthene	0.5	nd		nd			
Pyrene	0.5	nd	64%	nd	63%	64%	1%
Chrysene	0.5	nd		nd			
Benzo(k)fluoranthene	0.5	nd		nd			
Benzo(a)pyrene(*)	0.1	nd		nd			
Indeno(1,2,3-cd)pyrene	0.5	nd		nd			
Dibenzo(ah)anthracene	0.5	nd		nd			
Benzo(ghi)perylene	0.5	nd		nd			
*-instrument detection limits							
Surrogate recoveries:							
Fluorobiphenyl		98%	99%	96%	97%	96%	
o-Terphenyl		96%	96%	97%	97%	95%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
Acceptable Recovery limits: 50% TO 150%  
Acceptable RPD limit: 50%

AAL Job Number: B50915-1  
 Client: Aerotech Environmental  
 Project Manager: James McDermott  
 Client Project Name: Aldercrest (Lynnwood Auto Body)  
 Client Project Number: 215-8181  
 Date received: 09/15/15

Analytical Results

Metals Total (7010), mg/l		MTH BLK	LCS	MW-1	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	09/18/15	09/18/15	09/18/15	09/18/15	09/18/15	09/18/15
Date analyzed	Limits	09/18/15	09/18/15	09/18/15	09/18/15	09/18/15	09/18/15
Lead (Pb)	0.002	nd	106%	nd	99%	107%	7%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
 na - not analyzed  
 Acceptable Recovery limits: 70% TO 130%  
 Acceptable RPD limit: 30%

Laboratory Job #: B50915-1

2821 152 Avenue NE  
Redmond, WA 98052  
(425) 497-0110 fax: (425) 497-8089  
aachemlab@yahoo.com

Client: Aerotech

Project Manager: STEVE FLETCHER

Address: \_\_\_\_\_

Phone: 206-730-4702 Fax: \_\_\_\_\_

Project Name: Albercrest Lynnwood Auto Rebuild

Project Number: \_\_\_\_\_

Collector: Steve Fletcher

Date of collection: 9-15-15

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Notes, comments	# of containers
1	MW <sup>#1</sup>	12:35	H <sub>2</sub>		⊕		✓		✓		✓						✓	2 molar, 2.4mg plastic	5
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Relinquished by:	Date/Time	Received by:	Date/Time
<u>St. Hall</u>	<u>9-15 14:40</u>	<u>Steve Fletcher</u>	<u>9-15-15</u>
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp. °C)

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day ☐

24 hr ☐

48 hr ☐

Standard ☐