INDEPENDENT REMEDIAL CLEANUP ACTION WORK PLAN

Sumner National Auto Parts, Inc.
16008 60th Street East
Sumner WA 98390

Ecology VCP Project Number: SW-1547
Ecology Cleanup Site ID: 3653
Ecology Facility/Site ID: 1304
Ecology VCP Reviewer: Mr. Tim Mullin, L. G.

Prepared for:

Mr. Robert A. Suss & Mr. Robert A. Suss Jr.
Sumner National Auto Parts, Inc.
16008 60th Street East
Sumner WA 98390

Prepared by:

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Signature of Preparer: _____

May 23, 2017

Job # E3JK-Sumner-Auto-Parts-3

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LIST OF ACRONYMS & ABBREVIATIONS

ABCA	analysis of Brownfield Cleanup Alternatives
ACT	abandoned commercial tank
ARARs	applicable or relevant and appropriate requirements
AST	above ground storage tank
BGS	below ground surface
BOC	bottom of casing
BTEX	benzene, toluene, ethylbenzene, and xylenes (total)
cPAH	carcinogenic polynuclear aromatic compounds
CLARC	cleanup levels and risk calculation table
COC	contaminants, constituents, or chemicals of concern
COC	chain of custody
CSM	conceptual site model
CUL	cleanup level
DRO	diesel range organics
DW	dangerous wastes
DWR	ecology dangerous waste regulations
ECOLOGY	Washington Department of Ecology
EDB	ethylene dibromide
EDC	ethylene dichloride
EHW	extremely hazardous waste
EnCo	EnCo Environmental Corporation
EPA	Environmental Protection Agency
ESA	environmental site assessment
GIS	geographic information system
GPR	ground penetrating radar
GRO	gasoline range organics
ID	identification number or inside diameter
LRI	Land Recovery, Inc.
MDL	method detection limit
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
MTBE	methyl tertiary butyl ether

MTCA	Model Toxics Control Act
MW	groundwater monitoring well
NA	not applicable
ND	not detected
NFA	no further action
NWTPH	northwest total petroleum hydrocarbon method
OD	outside diameter
ORO	oil range organics
OVM	organic vapor monitoring
PAH	polynuclear aromatic hydrocarbons
PCS	petroleum contaminated soil
PDF	portable document file
PID	photoionization detector instrument
PLP	potentially liable person
PPB	parts per billion
PPM	parts per million
PQL	practical quantitation level
QA/QC	quality assurance / quality control
REC	recognized environmental condition
RCW	Revised Code of Washington
RI/FS	remedial investigation / feasiblity study
RL	reporting level
SAP/QAP	sampling and analysis plan / quality assurance plan
SEPA	State Environmental Policy Act
TCLP	Toxicity Characteristic Leaching Procedure
TOC	top of casing
TPH	total petroleum hydrocarbons
TPH-Dx	total petroleum hydrocarbons – diesle range organics
TPH-Gx	total petroleum hydrocarbons – gasoline range organics
TPCHD	Tacoma Pierce County Health Departmen
ug/L	micrograms per liter
ug/m^3	micrograms per cubic meter
USCS	unified soil classification system
USGS	United State Geological Service

UST	underground storage tank
VCP	voluntary cleanup program
VI	vapor intrusion
VOC	volatile organic compounds
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish & Wildlife
WDNR	Washington State Department of Natural Resources

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1.0 INTRODUCTION

EnCo Environmental Corporation (EnCo**)** has been retained by Mr. Robert A. Suss of Sumner National Auto Parts, Inc. to prepare an **Independent Remedial Cleanup Action Work Plan** (Work Plan) for a forthcoming soil cleanup action on the above-referenced property, herein referenced as the project site.

This Work Plan is a decision and planning document that describes the State of Washington Model Toxics Control Act (MTCA) cleanup standards, the method of cleanup that will be used to achieve these cleanup standards, the rational for these decisions, and any other requirements the cleanup must comply with.

The cleanup alternative method chosen for remediating reasonably accessible contaminated soil will be to scarify, excavate, stockpile, and dispose of these soils at an off-site licensed disposal facility.

It is anticipated that complete removal of the contaminated soil will take place to meet MTCA Method “A” and Method “B” CULs for unrestricted property use for soil and groundwater rendering the project site to be protective of human health and environment.

2.0 BACKGROUND

2.1 Project Site History

In the 1980’s and early 1990’s Sumner National Auto Parts, Inc. rebuilt approximately 100 automobile engines per month in their machine shop. Services included an “out of vehicle” engine rebuild and metal machine shop. Part of the process included baking

the engines at 600 to 900 degrees and using a caustic spray / hot dip tank (130 gallons) to clean the engines and parts prior to assembly. This open-ended tank was stored on a concrete slab adjacent to the interior east wall of the machine shop. In 1987 it was reported that the TPCHD approved the discharge of rinse water from motors out of the hot tank as long as the rinse water consisted of only caustic solution and water; no oils or solvents were to be discharged. The contents in the dip tank were dumped periodically outside over the slab and onto the soil surface located east of the exterior door of the building.

In addition, leaks and spills of automobile parts washing solutions and vehicle fluids such as motor oil, cleaning solvents, antifreeze, and brake fluid flowed over the ground surface in this area. The spills and leaks of these fluids flowed outside onto a former concrete slab and over a soil-based area located adjacent to north, east, and south the slab. A shallow ditch was dug around the perimeter of the concrete slab to convey the rainwater to a shallow pool located southeast of the slab. The slab was removed in the 1990's.

Automobile engines and parts were also routinely spray cleaned outside to the east on top of a 16-foot long by 18.5-foot wide concrete slab that was formerly located adjacent to the exterior door. A portion of the slab was covered with a metal canopy. Rinsate from the spray cleaning process flowed over the slab and onto a soil-based surface located north, east, and south of the slab. Several color photographs were taken of this area by Washington Department of Ecology (ECOLOGY) on February 7, 1991 and September 9, 1991 (**ECOLOGY – 1991)**. The photographs depict the rainwater runoff ditches, 55-gallon drums of liquids stored on the concrete slab, pools of oily water, and black-stained soil.

Two anonymous complaint telephone calls of alleged dumping of cleaning solvents, oil, and antifreeze adjacent to the concrete slab were reported to ECOLOGY on November 8, 1990 and November 21, 1990. The documents reported that 10 gallons to 15 gallons of cleaning solvents, oil, and antifreeze were dumped at least twice into rain water runoff ditches which drained into a field located east the former concrete slab. According to other ECOLOGY documents (**ECOLOGY - 1990, 1991, & 1992**) drums of waste oil, solvents, and caustic solutions were stored on and near the concrete slab.

As a follow up to the above listed complaint telephone calls, Mr. Rusty Post of ECOLOGY performed a site inspection on February 7, 1991. A complaint investigation report was completed on April 3, 1991. The report stated that poor management of waste oil, solvents, caustic bath rinsate, and metal sludge has led to contamination of nearby soils.

A Site Hazard Assessment (WAC 173-340-320) was performed by ECOLOGY in 1991. A copy of the SHA is presented in **APPENDIX C – SUPPORT DOCUMENTS**. The project site was classified as a "Site Rank 1" which is the highest assessed risk for a contaminated site. It is the opinion of Ecology that re-ranking the project site is not a

good use of resources at this time. It will take less time and cost just to proceed with cleanup and de-list site upon No Further Action, regardless of site rank.

2.2 Remedial Investigations

In 2002 and again in 2015 limited remedial investigations (RI) were conducted to define the lateral and vertical extent and magnitude of contamination at the project site. The purpose of the RI was to collect, develop, and evaluate sufficient information regarding the site to select a cleanup action under WAC 173-340-360 through 173-340-390.

Sample analysis results confirmed contamination of several contaminants of concern (COCs) as presented in **TABLE 4A – SURFACE WATER TEST RESULTS & TABLE 4B – SOIL TEST RESULTS – 1991 ECOLOGY ASSESSMENT (APPENDIX B)**.

A summary of the highest concentrations for each COC in the 4 soil samples collected in 1991 compared to the highest concentrations in the 31 soil samples collected in 2002 and the 25 soil samples collected in 2015 are listed in the **TABLE** presented below. COCs that are highlighted in **BOLD** text exceed MTCA Method "A" CULs. Method "B" CULs were not used during this assessment.

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HIGHEST REPORTED CONTAMINANT CONCENTRATIONS – SOIL					
Year Collected ➤	**MTCA "A"**	**MTCA "B"**	**1991**	**2002**	**2015**
Petroleum Hydrocarbons	mg/kg		Surface	0.17' bgs	Variable Depth
Diesel Range Organics	**2,000**		Not Tested	Not Detected	350 @ 0.7' (10A)
Oil Range Organics	**2,000**		**65,360** (77474)	1,700 (7A)	1,500 @ 1' (18A)
Gasoline Range Organics	**30**		Not Tested	Not Tested	Not Detected @ 0.7' – 5.0' (1A-1C)
Heavy Metals (total)	mg/kg		mg/kg	mg/kg	mg/kg
Arsenic	**20**		**363** (77475)	Not Detected	4.3 @ 0.5' (4A)
Barium	-	**1,650**	**8,700** (77475)	230 (14A)	31 @ 0.75' (1A)
Cadmium	**2**		**186** (77475)	1.9 (7A & 13A)	**10.8** @ 0.5' (9A)
Chromium III	**2,000**		**2,340** (77475)	Not Detected	27.5 @ 0.5' (4A)
Chromium VI	**19**		Not Tested	Not Tested	Not Tested
Lead	**250**		**4,040** (77476)	**910** (7A)	**5,140**@ 0.5' (9A)
Mercury	**2**		0.034 (77475)	Not Detected	Not Detected
Silver	-	**13.6**	**84.6** (77475)	Not Detected	Not Detected
TCLP	mg/l		mg/l	mg/l	mg/l
Cadmium	**1.0**		Not Tested	Not Tested	ND (Composite)
Lead	**5.0**		Not Tested	Not Tested	1.2 (Composite)
VOCs	mg/kg		mg/kg	mg/kg	mg/kg
Benzene	**0.03**		0.0026 (77474)	Not Detected	Not Tested
Ethylbenzene	**6**		0.0052 (77474)	Not Detected	Not Tested
Toluene	**7**		0.013 (77474)	Not Detected	Not Tested
Tetrachloroethene (PCE)	**0.05**		0.0049 (97474)	Not Detected	Not Tested
1,1,1 Trichloroethane	**2**		Not Detected	Not Detected	Not Tested
Trichloroethylene (TCE)	**0.03**		Not Detected	Not Detected	Not Tested
Xylenes – total	**9**		0.025 (77474)	Not Detected	Not Tested
PAHs	mg/kg		mg/kg	mg/kg	mg/kg
Benzo(a)pyrene	**0.1**		Not Tested	Not Tested	0.015 @ 0.75' (1A)
Naphthalene	**5**		Not Detected	Not Detected	Not Detected
PCBs	**1**		Not Tested	Not Tested	Not Detected

The ECOLOGY report stated that visual contamination of oil, metal grindings and pieces, sorbent grit, and gaskets were observed in the soil adjacent to the slab. Soil adjacent to all three edges of the slab was contaminated with heavy oil, especially to the south. A rainwater runoff trench with visual contamination along the north edge of the concrete slab transported contaminated automobile engine rinsate into a "sludgy pool" of water. The pool was located approximately 15 feet southeast of the southeast corner of the former concrete slab and was reported to be approximately 20 feet wide by 40 feet long. According to Mr. Suss the contaminated soil has been left in place since it was discovered in 1991. The concrete slab and canopy was removed in the mid 1990's.

Three assessments have been completed on the project site since 1991, two of which have been documented in the reports listed below. The reader of this Work Plan is advised to read the below-listed documents in their entirety in order to become familiar with the completed work and their findings.

1. Washington State Department of Ecology, Southwest Regional Office, Complaint Investigation Report, Sumner National Auto Parts, Sumner WA, Prepared by Russell Post, April 3, 1991. (Surface Soil and Pooled Surface Water Assessment).

2. Washington State Department of Ecology, Summary Score Sheets for Site Hazard Assessment, Sumner National Auto Parts, Sumner WA, Prepared by Russel Post, May 31, 1991. (Surface Soil and Pooled Surface Water Assessment). A summary of the laboratory test data is presented in **TABLES 4A & 4B – APPENDIX B**.

3. EnCo Environmental Corporation, Limited Phase II Site Assessment, Sumner National Auto Parts, 16008 60th Street East, Sumner WA, 98390, January 17, 2003. (Near Surface Soil Assessment). A summary of the laboratory test data for samples collected in 2002 is presented in **TABLE 5 – SOIL TEST RESULTS 2002 EnCo ASSESSMENT (APPENDIX B)**. Copies of the text report, laboratory test reports and Chain-of-Custody forms for samples collected by EnCo in 2002 are presented in **APPENDIX C – SUPPORT DOCUMENTS**.

4. The third limited assessment consisted of collecting 25 near surface soils and 1 groundwater sample from an installed 1-inch diameter groundwater monitoring well (**MW-1**). This well was placed in the source area of contamination. This assessment extended north, east, and south of the 2002 near surface soil assessment. The third assessment was performed by EnCo in October and December 2015. The groundwater well details and probe hole log for the 2015 assessment are presented in **APPENDIX C**. A summary of the laboratory test data for samples collected in 2015 is presented in **TABLE 6A – SOIL TEST RESULTS – 2015 ENCO ASSESSMENT** and **TABLE 6B – GROUNDWATER TEST RESULTS – 2015 ENCO ASSESSMENT (APPENDIX B)**. Copies of the laboratory test reports and Chain-of-Custody forms for samples collected by EnCo in 2015 are presented in **APPENDIX D – LABORATORY TEST REPORTS – EnCo 2015**.

5. EnCo submitted a Draft Work Plan, dated August 11, 2016, to ECOLOGY for review and comment. The clarifications and issues raised in the review process have been included in this Work Plan.

6. On January 9, 2017 Mr. Tim Mullin, Licensed Geologist of ECOLOGY performed a site visit for the purpose of becoming familiar with project envelope and to discuss the contents of the August 11, 2016 Draft Work Plan. Based on this meeting and on the follow up summary notes prepared by Mr. Mullin, it was agreed to make the amendments, changes, and clarifications needed. These items have been included in this Work Plan. The meeting was held on the project site with Mr. Tim Mullin of ECOLOGY, Mr. Jonathan Kemp of EnCo, and Mr. J. R. Suss of Sumner National Auto Parts, Inc.

Soil and groundwater monitoring well locations (to date) are depicted as **FIGURE 4 – SOIL & GROUNDWATER MONITORING WELL SAMPLE LOCATIONS – BEFORE CLEANUP**. Soil and groundwater monitoring well test results (to date) are depicted as **FIGURE 5 – SOIL & GROUNDWATER SAMPLE TEST RESULTS – BEFORE CLEANUP**.

3.0 PURPOSE, OBJECTIVE & GOAL

The purpose for preparing this document is to identify and present the proposed cleanup action for the project site. This Work Plan specifies the Quality Assurance and Quality Control (QA/QC) procedures that will be generally followed to ensure that assessment methods, cleanup techniques, sample collection, field screening methods, laboratory analysis, and after cleanup monitoring will result in data of sufficient quality to evaluate the cleanup action and exposure pathways at the identified areas of concern on the project site.

The objective would be to determine whether implementation of this Work Plan will be sufficient to meet the substantive requirements of the Washington Model Toxic Control Act (MTCA) and its implementing regulations for COCs in soil and groundwater as codified in Chapter 173-340 of the Washington Administrative Code (WAC).

The goal of the forthcoming cleanup action will be to render the project site to be protective of human health and the environment in order to obtain a No Further Action opinion letter from ECOLOGY without site restrictive covenants.

4.0 SCOPE OF WORK

*The **SCOPE OF WORK** will include performing the following subtasks:*

1. Submit this Work Plan to ECOLOGY for review and to obtain approval from ECOLOGY.

2. Provide the required 30 day public notice comment period to be published in the local newspaper and inform residents residing with 500 feet of the pending cleanup action.

3. Determine if critical areas and threatened or endangered species are on the project site, are expected to be affected by the proposed cleanup action, and are located within a distance of about 500 feet from the project site.

4. Obtain a Waste Disposal Authorization permit from the Tacoma Pierce County Health Department (TPCHD) to transport and dispose of the contaminated soil to a local, licensed solid waste disposal facility (completed).

5. Obtain a City of Sumner Commercial & Industrial permit for fill & grade, erosion control, road and storm detail, and storm report. This permit is stamped by a Professional Engineer and approved by the City of Sumner (completed).

6. Perform the work using a qualified environmental professional and a licensed hydrogeologist or geologist to oversee the cleanup action including soil sampling, determining the investigated geologic lithology, and hydrologic conditions across the project site to include groundwater quality, flow direction, gradient, and vertical and horizontal extent or contaminants.

7. Contact the "1-800 DIG SAFE" utility identification hotline and a private utility locate service company to identify and mark on-site, subsurface utilities in and adjacent to the areas to be cleaned up prior to disturbing any soil, asphalt, concrete, or landscaping (completed).

8. Install a 4 foot tall, metal, lock and key access, chain-linked security fence with a swing open, 30 foot wide gate to prevent public access (completed).

9. Perform a limited feasibility study to develop and evaluate cleanup action alternatives that will enable a successful cleanup action to be selected for the project site.

10. Scarify and excavate approximately 12,000 square feet of space with an approximate 500 cubic yard of cut east of the existing building.

11. Load, transport, dispose, and manifest an estimated 117 to 215 cubic yards (**171 Tons to 314 Tons)** of petroleum hydrocarbon and heavy metal contaminated soil from the areas of concern depicted on **FIGURE 5 – SOIL & GROUNDWATER SAMPLE TEST RESULTS – BEFORE CLEANUP**. The estimated volume of contaminated soil may increase or decrease depending on compliance and confirmatory laboratory test results collected during the cleanup action. The contaminated soil will be placed in nine (9) temporary stockpiles. Soils that exceed MTCA Method "A" and "B" Cleanup Levels (CULs) will be disposed of at a licensed, off-site, disposal facility (Pierce County Land Recovery Inc. Landfill – LRI in Graham).

12. Collect about 67 randomly and judgmentally selected discrete soil samples from nine (9) excavation footprints and temporary soil stockpiles as depicted on **FIGURE 6 – EXCAVATION FOOTPRINTS & TEMPORARY SOIL STOCKPILES – PROPOSED DURING CLEANUP**. Samples will be collected in areas previously determined to exceed MTCA CULs. Additional soil samples may be collected during the cleanup based on the observed conditions and on the laboratory test results. Soil samples will be collected at depths below ground surface (bgs) ranging from 0.0 foot up to 2.0 feet below ground surface (bgs). It is estimated that most of the contaminated soil resides in the upper 1 foot of soil on the project site. Samples may need to be collected deeper than 2.0 feet bgs

depending on field screening tests, observation, olfactory evidence, and laboratory test results. Soil classifications will be estimated using the ASTM Unified Soil Classification System.

13. Collect 1 background soil sample during the cleanup action. The background soil sample will be collected near the northeast corner of the project site for the purpose of establishing an on-site background soil quality control check.

14. Field screen (protection and performance monitoring) soil samples, excavation footprints, temporary soil stockpiles, the ambient air at the project site, and at the breathing zone of EnCo workers for the presence of volatile organic compounds using a calibrated photoionization detection instrument.

15. Install 6 new, 1-inch diameter, PVC, permanent groundwater monitoring wells (**MW-1** to **MW-6**) in hydraulically advanced probe holes up to 10 feet below ground surface. These new wells will be installed after the cleanup action is completed. The uppermost shallow groundwater table has been determined to be about 5 feet below ground surface. The maximum well depth for the monitoring wells has been determined using this reported depth to the near surface groundwater table. Monitoring well details will be depicted on a Log of Boreholes and Monitoring Wells for each groundwater exploration location.

16. Collect up to a total of 10 discrete subsurface soil samples at the 6 probed locations. At least 2 vertically-aligned soil samples will be collected at each probed location. If more than 2 vertically-aligned soil samples are collected they will be preserved and held at the laboratory for possible future analysis. One of the vertically-aligned soil samples at each probe hole will be collected at or near the spring / early summer seasonal surficial groundwater table as measured in October 2015. One of the probe locations will be used to establish an on-site background soil and groundwater quality control check. Discrete soil samples will be collected from clean acetate-lined split-barrel spoons using industry standard procedures. A probe hole geologic log will be depicted on a Log of Probeholes for each soil exploration location. Soil classifications will be estimated using the ASTM Unified Soil Classification System.

17. Obtain the static water table elevation at the 6 new monitoring wells. Measurements will be taken from the top of the ground-level monument to the top of the casing at the north rim, from the top of the casing to the static water level, and from the top of the well casing to the bottom of each well. Measurements will be made using a battery operated Solinist Model Number 101 water level meter with an accuracy of one hundredth of a foot.

18. Collect groundwater samples from **MW-1** to **MW-7** after the cleanup action if sufficient groundwater remains in the wells after purging. Discrete groundwater samples will be collected using industry standard procedures.

19. Submit the soil and groundwater samples to a Washington State accredited testing laboratory under Chain-of-Custody procedures for analysis of selected COCs as presented in **SECTION 13.0**.

20. Compare the soil and groundwater test results to the Revised 2013 MTCA Method "A" and "B" Cleanup Levels (CULs) for unrestricted land use.

21. Determine the standard Points of Compliance required to protect human health and the environment for contaminated soil and groundwater throughout the project site after the cleanup action.

22. Perform a Terrestrial Ecological Evaluation (TEE) following WAC 173-340-7490. (Table 749-1). It is expected that TEE exclusion will suffice for this cleanup action. This will be determined upon completion of the simple TEE form.

23. Prepare an Independent Cleanup Action report with supportive appendices. The report will include a table of the soil and groundwater laboratory test results compared to MTCA Method "A" and "B" CULs, field screening readings, safety measures, field procedures, to-scale figures depicting site plan, sample locations, test results, monitoring wells, and excavation footprints, laboratory reports, Chain-of-Custody forms, and conclusions. The report will include sections on background history, purpose, subsurface soil cross-sections, methodology, site security, schedule, key personnel, land use, permits, contaminants of concern, decontamination and waste disposal, health and safety, sampling and analysis protocols, laboratory test methods, probing and well installation methods, soil logs, and groundwater monitoring well logs. In addition the following new figures will be created.

FIGURE 7	Soil & Groundwater Sample Locations – After Cleanup
FIGURE 8	Soil & Groundwater Test Results – After Cleanup
FIGURE 9	Surficial Groundwater Table Elevations, Gradient & Flow Direction

24. Reports and data generated will be submitted to ECOLOGY in written format (2 hard copies) and on a compact disc as a .pdf file. Laboratory data will be submitted to Ecology in the required electronic format using the Electronic Information Management (EIM) system.

25. Request ECOLOGY to prepare a No Further Action decision letter after the required 30 day public comment period expires.

5.0 METHODOLOGY

The proposed cleanup will be a voluntary effort undertaken by the landowner and will be performed without order or decree by ECOLOGY. The work has entered into the ECOLOGY'S Voluntary Cleanup Program (VCP) and will be completed without direct field oversight by ECOLOGY. The site has been assigned a VCP Site ID Number SW-1547. The VCP project manager is listed as Mr. Tim Mullin, L. G. Copies of the

appropriately signed VCP forms, listed below, are attached in **APPENDIX C – SUPPORT DOCUMENTS**.

1. ECOLOGY Voluntary Cleanup Program, Signed Agreement Form
2. ECOLOGY Voluntary Cleanup Program, Signed Application Form

The primary Applicable or Relevant and Appropriate Requirements (ARARs) applicable to the cleanup action include:

- MTCA Cleanup Regulations (WAC 173-340-450)
- Water Quality Standards for Groundwater (WAC 173-200)
- Hazardous Waste Management Act (RCW 70.105)

These primary ARARs are anticipated to be the most applicable to the cleanup action since they include the framework for the cleanup action, including cleanup standards, waste disposal criteria, references for additional ARARs, and standards for documentation of the findings.

Additional applicable ARARs for the cleanup of the project site include:

- Washington State Solid Waste Management Laws and Regulations (RCW 70.95, WAC 173-351, and WAC 173-304)
- Accreditation of Environmental Laboratories (WAC 174-50)
- Groundwater monitoring well installation per WAC 173-160
- Local permits and substantiated requirements required by the City of Sumner
- Required elements of a Work Plan as specified in WAC 173-340-380.
- Sampling and analysis procedures according to MTCA Chapter 173-340-820 WAC, Sampling and Analysis Plans.
- Soil and groundwater sample collection in accordance with WAC 173-340-410 – Compliance Monitoring Requirements.
- Worker safety and health in general accordance with the general provisions presented in WAC 173-340-810 and 173-340-820– Worker Safety and Health which will include meeting the requirements of WAC 296-62, 49.17 RCW, and OSHA 29 CFR 1910.120.

6.0 SAFETY & HEALTH

6.1 Personal Protection and Safety

The landowner provided information pertaining to known or suspected hazardous and toxic substances on the property. Knowledge of site contamination was also obtained by reviewing previous site assessments and investigations.

The required elements for protection monitoring for EnCo personnel is presented in the abbreviated Safety and Health Plan in **APPENDIX C**. EnCo will make available the Health and Safety Plan to subcontractors directly involved with the project. EnCo will not, however, be responsible for providing personal protection safety equipment to subcontractors and will not provide oversight to any heavy equipment operator's safety and health during the project

EnCo field sampling personnel currently meet current health and safety training, including 40-hour HAZWOPER training with annual 8-hour refresher courses, site supervisor training, first-aid, and cardiopulmonary resuscitation. EnCo workers are trained and experienced in project management, site characterization, cleanup actions, field sampling techniques, hazardous materials management, personal safety measures, protective equipment selection, and health monitoring.

EnCo personnel will be fitted with personal protection safety equipment meeting the minimum requirements for Safely Level D when in the hot zone. Safety Level D equipment will include protective overalls or zippered impermeable suits, rubber-lined, steel-shanked boots, hard hat, splash protection, safety glasses, Nitrile, Latex, and PVC gloves, and hearing protection.

6.2 Utility Safety

Public and private subsurface and above surface utility location firms will deem safe the areas on the project site to be excavated and cleaned up. This task has been completed on October 14, 2015 by Dig Safe (Ticket Number 15308205) and by an on-site visit by Mountain View Locating, Inc on October 29, 2015.

7.0 SEDIMENT & EROSION CONTROL

7.1 Best Management Practices

Best Management Practices (BMPs), as listed below, will be implemented on the project site before, during, and after the cleanup action. These BMPs will follow the City of Sumner temporary erosion and sediment control (TESC) permit and the fill and grade permit requirements.

1. Install 2 storm catch basin fabric inserts on the project site near the north entrance and 1 storm catch basin fabric insert within the 60th Street East Right of Way near the site entrance.
2. Install temporary silt fabric fence around the zones to be scarified and excavated to include around temporary soil stockpiles.
3. Construct a temporary sediment trap in the northern most excavation for the cleanup action. The trap overflow will direct water through to the existing grassy area located northeast of the excavation area.
4. Cover all temporary soil stockpiles daily with temporary plastic sheeting.
5. Backfill excavation areas with clean imported fill to existing grade.
6. Lay down permanent seeding over the disturbed area.
7. Remove erosion control facilities after site is stabilized with seeded vegetation.
8. Place auger cuttings into 55-gallon drums with lids.
9. Place contaminated wastewater and rinsewater in 55-gallon drums with lids.
10. Pour uncontaminated rinsewater over a grassy surface away from monitoring wells, ditches, and storm drains and catch basins.

Discussion

Temporary sediment control measures will be put into place to limit sediment transport and contamination. No permanent stormwater controls are proposed as part of this project other than the eventual permanent stabilization of the area with an appropriate seed mix after the cleanup. These temporary measures will remain in place until fill is imported to the site and the area is stabilized with seeded vegetation. Source controls will be utilized on the project site to prevent stormwater from coming in contact with pollutants. This project proposes to contain stormwater runoff in the construction area using the temporary erosion control measures. Details for these control measures are specified in the engineered Drainage & Erosion Control Report prepared by Beyler Consulting (**APPENDIX C – SUPPORT DOCUMENTS**).

Specifically, the north most soil cleanup excavation on the project site will be incorporated into a temporary sediment trap until fill is imported into the excavation area and the area is stabilized. The trap overflow will direct water through to the existing grassy area located northeast of the excavation area. The minimum trap size is listed below and specific construction details are depicted on Sheet C2.0 and Sheet C3.0 of the Grading, Drainage, and TESC Plan prepared by the project engineer to meet the City of Sumner storm and drainage permit requirements.

Temporary Sediment Trap Criteria

Minimum sediment trap surface area: 202 SF
Depth of trap: 3.5 to 5.0 feet below ground surface

8.0 SITE SECURITY

A 4 foot tall, metal, chain-linked security fence with a swing open, 30 foot wide gate will be installed on the project site to prevent public access. The gate will be affixed with a secure padlock that will be locked at the end of each work day. Access to the contaminated area will be given only to official site workers or to jurisdictional regulatory agencies. The public at large will not be allowed access to the contaminated area.

9.0 SCHEDULE

It is anticipated that this project will be initiated during the month of June to August 2017, weather permitting and provided that all required permits are secured, and that this Work Plan, or an amended version, has been reviewed and approved by ECOLOGY. The landowner will be contacted at least 10 days prior to any field work.

The initial phase of the proposed cleanup action should take about five to seven 8-hour work days to complete. Laboratory test reports take about ten working days to complete from the date of sample submittal. If additional sampling and testing is warranted after the initial cleanup effort an additional 15 to 20 days will be needed to complete this task. The site should be stabilized in about 60 days after starting the cleanup action. A cleanup action report will be completed within about 60 working days following receipt of the last set of laboratory test results. The forthcoming cleanup report will be submitted to ECOLOGY for comment and review. The review process at ECOLOGY will more than likely be at least 90 days.

10.0 KEY PERSONNEL

10.1 Project Manager

Mr. Jonathan Kemp, Principal at EnCo will be the project manager. Mr. Kemp has over thirty years of experience in laboratory management, environmental sampling, site assessment, investigation, and cleanup action. A brief resume of Mr. Kemp is presented in **APPENDIX C –SUPPORT DOCUMENTS**.

10.2 Licensing & Certification

Documents submitted under the VCP program that contain geologic, hydrogeologic, or engineering calculations and interpretation must be reviewed under the seal of an appropriately licensed professional, as required by Washington Title 18, Chapters 18.43 (Engineers & Land Surveyors) and 18.220 (Geologists) RCW.

The proposed soil cleanup action at the project site will require geologic, hydrogeologic, or engineering design or interpretation; therefore the cleanup action report will be reviewed and stamped by a State Certified Geologist, Licensed Professional Engineer, or a Licensed Hydrogeologist.

11.0 LOCATION, LAND USE & DESCRIPTION

11.1 Location

The project site is located within the jurisdictional boundary of the City of Sumner as depicted on **FIGURE 1, VICINITY (APPENDIX A)**. The project site is located in the southwest quarter of the southeast quarter of Section 19, Township 20N, Range 05E at the southeast corner of the intersection of 60th Street East and 160th Avenue East. A current site plan is depicted as **FIGURE 3 – SITE PLAN – BEFORE CLEANUP**.

The commercially developed parcel is currently defined as real property with given address at 16008 60th Street East in Sumner Washington. The property is currently zoned as General Commercial and is within the jurisdictional limits of the City of Sumner. The 1.58-acre section of land is known as Pierce County tax parcel number 0520198006. The subject parcel is rectangular in shape and is 238 feet wide and approximately 303 feet deep.

11.2 Land Use

11.2.1 Current Land Use

The project site is currently occupied by one commercial store/warehouse/office building that is currently occupied by a retail automobile parts supply company (Sumner National Auto Parts, Inc.) as depicted on **FIGURE 2 – PARCEL & AERIAL**. Other services include “out of vehicle” press and lathe work in a small metal machine shop. No bulk chemicals and cleansers are used in the shop. The 7,500 square foot, metal framed and metal roofed building was reportedly built in 1979 and has always been occupied by Sumner National Auto Parts, Inc. The machine shop (south part) occupies 4,500 square feet and the retail section (north part) of the building occupies 3,000 square feet. Property to the north and west of the building is covered with bituminous asphalt. About half of the parcel, located east of the building, is vacant land that has been scarified, filled, and graded over the years. This area is covered with mowed grass, crushed rock, and unsorted sandy gravels. A crushed rock / sandy gravel covered area, located south of the building, is used as a storage lot for a small tractor, camper, and light equipment.

11.2.2 Future Land Use

The project site future land use is not currently planned to change from its existing land use.

11.2.3 Contiguous Property Land Use

A brief description of contiguous property land use is presented in **TABLE 1 – CONTIGUOUS PROPERTY – CURRENT LAND USE**.

TABLE 1		
Direction	**Contiguous Property – Current Land Use**	**Topographic Slope**
North	60th Street East; nursery – Windmill Gardens (N), Dwellings (NE)	☐ up ☒ down ☒ level
East	Veterinary Clinic (Sumner Veterinary Hospital)	☐ up ☒ down ☒ level
South	Commercial (Kersey Mobility)	☐ up ☒ down ☒ level
West	160th Avenue East; Dwellings (NW) and Commercial (Northwest Construction Control & Allied Enterprises)	☒ up ☐ down ☒ level

11.3 Project Site Utilities

A summary of observed and reported utilities with readily available service to project site are presented below.

- Telephone / Cable
- Electricity
- Natural Gas
- Refuse
- Recycle
- Sanitary Sewer – Public
- Stormwater – Private & Public
- Water – Public

11.4 Critical Areas

The project site is not located on, or directly adjacent to, an area where management or land use plans will be required to protect, maintain, or restore native or semi-native vegetation (i.e. green-belts, wetlands, streams, forestlands, locally designated environmentally sensitive area, open space area managed for wildlife, and parks. There are no steep slopes or geologic hazards on the project site.

11.5 Threatened & Endangered Species

The project site and land located within 300 feet of the project site is not used or inhabited by threatened, endangered, or sensitive species.

11.6 Topography, Elevation, Floodplain, & Drainage

A United States Geological Survey (USGS) map was reviewed to assess local drainage patterns and land use. The overall topography east of the building is level with a variable and gentle slope less than 1 percent that trends in a northwesterly direction. According to the contour lines on the USGS map the project site elevation is at approximately 72 feet above mean sea level. Generally, the highest elevation occurs at the southeast corner of the project site and the lowest elevation occurs at the northwest corner of the property. A very shallow depression exists about 35 feet east of the building.

The project site is mapped on a Flood Boundary and Floodway Map as being in Zone C. Zone C is in an area of minimal flooding and is not within the 100-year floodplain.

There was no visual evidence of natural streams, wetlands, ponded water, seepage, or springs across or on the project site. Generally, surface water meanders as sheet flow over a pervious and impervious crushed rock / sandy gravel / soil-based surface east of the building towards a slight depressional area located approximately 35 feet southeast of the exterior door of the building. A shallow drainage ditch exists on the east side of 160th Avenue East.

The property is situated within the drainage basin of Salmon Creek. Salmon Creek is located approximately 2,200 feet north of the site. Salmon Creek discharges into the White River, which is located about 1½ miles northwest of the site.

11.7 Regional & Local Geologic Setting

Soil characteristics play an important role in the relationship between site activities and the quality of surface and subsurface soil, surface water, and groundwater. Soils generally serve as the initial contact medium for spills and leaks of potential pollutants on its route to reaching groundwater or surface water. Soil textures and soil vegetation cover directly influence the rate at which groundwater recharge takes place, the rate of surface water runoff, and whether or not an area is environmentally sensitive to contamination. In general, contamination plumes in groundwater move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

Native Soil

The native soil types at the existing ground surface has changed on the project site due to past land use activities such as farming, building, scarifying, excavating, grading, filling, ditching, compacting, and landscaping.

Soil Survey

Based on interpretation from the Natural Resource Conservation District's Web site (County Soil Survey), the original, undisturbed, primary mapped soil series identified at the surface down to about 60 inches bgs on the site have been mapped as indicated below. The mapped soil type was not reviewed by a professional Soil Scientist.

Briscot Loam – Pierce County (6A)

The soil type identified on 100 percent of the property is classified as Briscot Loam. The Briscot series consists of nearly level soil that is somewhat poorly drained. Slope ranges from 0 percent to 2 percent and the surface is slightly wavy. These soils formed in alluvium along the Puyallup and White Rivers. The taxonomic class for Briscot soil is coarse-loamy, mixed, nonacid, mesic Typic Fluvaquents. The Briscot series is listed on the county hydric list.

Elevation ranges from near sea level to 100 feet above sea level. The annual precipitation is 35 inches to 50 inches and the mean annual air temperature is about 53 degrees F. The average frost free season is about 190 days. Areas range in size from 5 acres to more than 300 acres, but average about 75 acres.

In a typical profile the surface layer is dark brown loam about 11 inches thick. The underlying material, to a depth of 29 inches is mottled, dark grayish brown fine sandy loam and silt loam. Between depths of 29 inches and more than 60 inches the soil is mottled, very dark grayish brown sand and gray silty clay loam.

Permeability is moderately slow. The available water capacity is high. Reaction is neutral to medium acid. In un-drained areas the effective rooting depth is about 30 inches. Surface runoff is slow and there is a slight erosion hazard. This soil is subject to flooding from urban runoff.

The main limitation is that onsite sewage disposal systems function improperly or fail during the rainy season because of the high water table. The natural ability of this soil to support large loads is limited. Fill soil material is required for most types of construction. Adequate drainage facilities to dispose of runoff from rooftops and pavement are necessary.

Most of this soil is protected from periodic flooding by dikes; however, as a result of changing land use in the adjacent upland areas, this soil is subject to additional flooding from urban runoff. The native vegetation consists of hardwoods and conifers.

Included Soil Series

Included with this soil in mapping are about 10 percent moderately well drained soil and 4 percent of a well-drained Puyallup soil. Included Puyallup soils are not listed on the County hydric sols list.

Hydraulically Probed Soil Log & Monitoring Well Details – MW-1

Based on the limited near surface site assessments performed by EnCo in October 2002 and in October 2015 the soil classes encountered during the shallow trenching and during the installation of **MW-1** consists of inorganic silt loam fill with a mixture of irregular cobbles (Soil Texture: ML) from the ground surface down to about 1 foot bgs underlain with poorly graded (rounded and irregular) sandy gravel fill (Soil Texture: GP) from about 1 foot bgs down to about 4 feet bgs. From about 4 feet bgs down to about 10 feet bgs (bottom of probe hole) the soil consists of grey, well sorted, medium sand (Soil texture: SW). Soil classifications were estimated using the ASTM Unified Soil Classification System.

11.8 Local Groundwater Setting

11.8.1 General Information

Groundwater data is important to consider because contamination from on-site or off-site sources could migrate beyond or beneath the project site via groundwater. Knowledge of groundwater conditions along with the local geology and soil texture can help assess potential risk from known or suspect contamination from on-site or off-site sources.

According to the Pierce County 2013 Aquafer Recharge map (on-line) the project site does lie within an Aquifer Recharge Area.

Based on inference from topographic gradient and local drainage patterns, it appears that shallow-seated groundwater in the vicinity of the project site may flow in a northerly to westerly direction (not confirmed). According to Mr. Clerget, from the City of Sumner, the shallow seated groundwater level beneath the site ranges from approximately 5 feet to 7 feet bgs.

11.8.2 Groundwater Monitoring Wells

Well installation was performed per WAC 173-160. One groundwater monitoring well (**MW-1**) was installed on the project site on October 30, 2015. This well is officially known in the ECOLOGY well database as well number **BJX-768**. This well is classified as a “high-yield” well because when the well was purged after installation about 7 gallons of water was pumped out of the well without causing it to go dry. This well is known as the source control well because it was placed in the shallow depressional area just southeast of the former concrete slab that was positioned along the east wall of the building. The depressional area is where most of the spills of oils and caustic solutions were conveyed to during heavy rain events. This area was reported to contain the highest concentration of the identified COCs during the initial assessment undertaken by ECOLOGY in April 1991 after a complaint was filed in November 1990. The probehole for **MW-1** was hydraulically advanced with a rubber-tire, vehicle-mounted, hydraulic advancing probe rig. The equipment used was a compact AMS Power Probe 9500D that was affixed to a Bob Cat, Model No. 463. The probe device consisted of a macro pore system with steel rods that were affixed at the bottom with a 4 foot long, 2 inch, outside diameter, hollow steel rod that was used to contain the 1¾ inch diameter, new, clear, acetate liners used for continuous soil sampling.

The groundwater monitoring well materials consists of new 1-inch, nominal outside diameter, Schedule 40, flush-threaded, PVC pipe. No solvent glues were used during installation. A manufacturer-slotted 0.01-inch pre-pack, 5 foot long, well screen was installed at the bottom of the probehole. The well was affixed with an end cap that acts like a sediment sump. Attached to the top of the pre-pack well screen and extending into the flush-mounted well monument at the ground surface is a 1-inch, nominal-

diameter, solid stem, riser PVC pipe. A **Log of Soil Samples and Monitoring Well Details** for **MW-1** is presented in **APPENDIX C – SUPPORT DOCUMENTS**.

Immediately after installation the monitoring well was developed using a combination of surging and pumping with a peristaltic pump in an attempt to restore the natural permeability of the formation adjacent to the probehole and to remove formation damage that may have resulted during advancement of the probe during well installation.

The volume of standing water in the well was calculated by using the measured static water level and the measured depth of groundwater in the well down to the bottom of the well. This volume of water will be used to determine how much water needs to be purged out of the well for development.

At least 4 volumes of standing water were purged out of the well using a Geotech GeoSub peristaltic pump. The pump was powered using a 12-Volt, marine, deep cycle, lead acid battery affixed to a DC flow rate controller. Purge water from the well was collected in an open-ended 55-gallon drum and the volume purged water was recorded on a field data form. The collected purge water in the drum was disposed of over the area proposed for cleanup, away from the well monument, because there was no observed sheen or hydrocarbon odor.

After the groundwater in the well was stabilized the static water level and bottom of casing measurements were taken using a Solinist Model # 101 water level meter. The meter cable is graduated into 1/100 foot intervals. The depth of groundwater in the well was measured at about 5 feet bgs in October 2015.

11.8.3 Public Water Wells

According to information obtained from the City of Sumner and the landowner public drinking water wells are not located on the project site. The homes and businesses in the area obtain drinking water from a public water well that obtains its water from natural springs located at the foot of the ridge located west of Lake Tapps and from a public water well that is located in the Puyallup River valley approximately 1 mile south of the site. According to readily available information no known public drinking water wells are located within about 500 feet of the project site.

11.8.4 Other Waters

The Puyallup River is located about 5,100 feet southwest of the project site.

12.0 PERMITS & AGREEMENTS

The below-listed permits and agreements are required for this project. Copies of applicable permits are presented in **APPENDIX C – SUPPORT DOCUMENTS**. Copies

of the City of Sumner required agreement and assignment of funds in lieu are maintained in the EnCo files.

- Tacoma Pierce County Health Department Waste Disposal Authorization Permit to allow the excavated and removed contaminated soil to be disposed of at the Land Recovery, Inc. landfill in Graham.
- City of Sumner Fill & Grade Permit and Erosion & Sediment Control (TESC) permit.
- City of Sumner SEPA Application and Environmental Checklist with Determination of Non–Significance.
- City of Sumner Agreement (Signed by the Landowner) to Maintain Stormwater Facilities and to Implement the City approved Pollution Source Control Plan.
- City of Sumner Assignment of Funds ($15,000) in Lieu for proper implementation of the City approved Sediment & Erosion Control Plan (Signed by the Landowner).
- Probehole Monitoring Well Start Card (ECOLOGY). A Start Card was not required for **MW-1** because it was installed at a depth of less than 10 feet bgs. The proposed 6 additional groundwater monitoring wells are also planned to extend to a maximum depth of 10 feet bgs. However, if it is determined in the field that groundwater extends beyond the screen the well depth may exceed 10 feet in which case Start Cards would be attained.
- Ecology groundwater monitoring well ID Numbers will be attained for each groundwater monitoring well for this project.

Work on this project will not proceed until the above-listed permits have been applied for, approved, secured, and validated. It is not anticipated that other government agency permits will be required at this time.

13.0 CONTAMINANTS OF CONCERN

13.1 Contaminants of Concern

The contaminants listed below are collectively referred herein as the contaminants of concern (COCs). One or more of these COCs will be tested on the collected soil and groundwater samples. The selection of COCs to be analyzed on each sample will depend on the concentrations obtained on samples collected throughout the course of the cleanup action.

Contaminants of Concern

- Gasoline range organics (GRO) as total petroleum hydrocarbons (soil & groundwater)
- Diesel range organics (DRO) as total petroleum hydrocarbons (soil & groundwater)
- Oil range organics (ORO) as total petroleum hydrocarbons (soil & groundwater)

- Volatile organic compounds (VOC) to include benzene, ethylbenzene, naphthalenes, methylene chloride, tetrachloroethene, toluene, EDB, EDC, MTBE, total xylenes, n-hexane, and other non-halogenated and halogenated hydrocarbons detected by the test method (soil & groundwater)
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) – (soil & groundwater)
- Polychlorinated biphenyls (PCBs) mixtures (total) (soil & groundwater)
- pH (soil and groundwater)
- Total arsenic, barium, cadmium, chromium (with speciation in soil), lead, silver (soil & groundwater)
- Total aluminum, copper, iron, manganese, magnesium, mercury, nickel, selenium, and zinc (soil in Area 9 with highest concentrations of cadmium, lead, and total petroleum hydrocarbons)
- Total suspended solids (groundwater)
- Dissolved (filtered in field) arsenic, barium, cadmium, chromium, lead, and silver (groundwater)

COCs were selected based on:

- Results from the ECOLOGY – 1991 surface soil and pooled surface water quality assessment.
- Results from the EnCo – 2002 near surface soil quality assessment.
- Results from the EnCo – 2015 near surface soil and groundwater water quality assessment.
- Contaminants commonly found on sites impacted from spills and leaks of automobile fluids, waste oil, and caustic cleaning solutions while performing “out of vehicle” engine re-builds and repairs.
- Contamination, olfactory evidence, stained soil, and/or petroleum hydrocarbon sheen observed during previous investigations and assessments.
- Contaminants required by the licensed disposal facility.
- Contaminants required by ECOLOGY MTCA regulations to protect human health and the environment.

Soil

At a minimum, the full suite of the above-listed COCs will be analyzed on at least two (2) soil samples that report the highest concentrations of cadmium, lead, and total petroleum hydrocarbons (project site indicators) in order to establish a Point of Compliance for soil on the project site.

Groundwater

The full suite of the above-listed COCs for groundwater will be analyzed at the source well (**MW-1**) and in the background well (**MW-6**). In addition the full suite of COCs will sampled and tested at the downgradient well in order to establish a Point of Compliance for groundwater across the project site. Sampling of the downgradient monitoring well

will be performed after a determination of which is the project site downgradient monitoring well.

Based on the laboratory test result collected from groundwater at **MW-1** and from site soils, COCs will be determined for testing groundwater from the other monitoring wells (**MW-2 – MW-7**). COCs analyzed in soil may be eliminated from the groundwater COC list if concentrations in soil are less than the applicable MTCA CULs. COCs which exceed their respective CUL in soil during excavation will also be sampled for in groundwater. The final monitoring well locations will be dependent upon excavation results as well as resolution of infrastructural and utility conflicts.

13.2 Dangerous Waste Designation

In October and December 2015 twenty five (25) near surface soil samples were collected in the areas of concern on the project site. Five of the 25 soil samples reported concentrations of total cadmium and total lead very close to and over the MTCA CULs for unrestricted land use as presented in **TABLE 6A (APPENDIX B)**.

Soil samples with high laboratory test results for total cadmium and total lead were composited, tested, and compared to the hazardous waste characteristic of toxicity as defined in WAC 173-303-090 – Dangerous Waste Characteristics. The purpose of these regulations is to set forth characteristics with which a solid waste might exhibit and which would cause that waste to be a dangerous waste for toxicity due to cadmium and lead.

On December 11, 2015 the following 5 soil samples (the entire volume of sample in the jars) that were collected by EnCo on October 30, 2015 and on December 1, 2015 were composited together and analyzed by an accredited testing laboratory (Freidman & Bruya) for TCLP cadmium (D006) and TCLP lead (D008). The TCLP test results of the total cadmium and total lead on the five discrete soil samples is presented below.

EnCo ID Number	Total Cadmium (mg/kg)	Total Lead (mg/kg)
SNA – 3A	<1	225
SNA – 4A	3.5	1,870
SNA – 9A	10.8	5,140
SNA – 12A	<1	228
SNA – 13A	<1	290

The laboratory test results (Report Dated December 22, 2015) for the TCLP Cd and TCLP Pb composite sample from the 5 discrete grab samples listed above are presented below, listed in **TABLE 6B**, and are documented in the laboratory test report presented in **APPENDIX D**.

Parameter	Lab Result	Dangerous Waste Threshold
TCLP Cd	<1 mg/l	1.0 mg/l
TCLP Pb	1.20 mg/l	5.0 mg/l

14.0 SITE SPECIFIC CLEANUP LEVELS

14.1 MTCA Cleanup Levels

MTCA has established the basic authorities and requirements to clean up contaminated sites in a manner that will protect human health and the environment. CULs and risk assessment techniques have been established for COC in order to protect groundwater, surface water, soil, sediment, and air.

Once a cleanup level has been selected the site will be remediated to these CULs. If the chosen CULs cannot be economically or feasibly attained the site will need to use one or a combination of the cleanup and/or containment technologies outlined in WAC 173-340-360(4).

In Washington State there are three methods used to determine CULs at a contaminated site:

1. Method “A”
2. Method “B”
3. Method “C”

Method “A” is appropriate for routine sites or for sites that involve relatively few hazardous or dangerous substances. This method defines CULs for 25 of the most common hazardous substances found at sites. Numerical levels must be available for all indicator hazardous substances if using this method. Many small sites that do not warrant the costs of conducting risk assessments and detailed site studies use this approach. This method is used for sites classified for unrestrictive land use.

Method “B” cleanup levels are established by performing a site risk assessment for any site, which focuses on site-specific characteristics. This is the most common method used for setting CULs when sites are contaminated with contaminants of concern not listed in the Method “A” cleanup tables. Method “B” is divided into two tiers – standard and modified. Standard Method “B” provides for the use of chemical-specific or site-specific information to change selected default assumptions.

Method “C” is the method used where Methods “A” or “B” may be technically impossible to achieve, when contaminants are reported lower than background concentrations, or when cleanup using other methods may cause greater environmental harm. This method may also be applied to qualified industrial properties.

14.2 Project Site MTCA Cleanup Levels

MTCA Method "A"

The reported concentrations of contaminated media identified on the project site will be compared to applicable MTCA Method "A" CULs found in Table 740-1 (Soil Cleanup Levels for Unrestricted Land Uses) and Table 720-1 (Cleanup Levels for Groundwater) of WAC 173-340-900.

MTCA Method "B"

Standard Method "B" CULs will be used for COCs that do not have a Method "A" CUL in the MTCA tables. The reported concentrations of contaminated media identified on the project site will be compared to applicable MTCA Method "B" CULs listed in the Cleanup Levels and Risk Calculations (CLARC – July 2015) tables, Soil – Method "B" and Groundwater Protection (unrestricted land use) table and Groundwater – Method "B", Method "A", and ARARs table of WAC 173-340-705.

14.2.1 Soil Cleanup Levels

MTCA Method "A" and Method "B" CULs specific to **soils** are presented in the **TABLE** listed below.

MTCA Cleanup Levels – Soil		
Contaminant of Concern	**MTCA "A"**	**MTCA "B"**
Petroleum Hydrocarbons	mg/kg	mg/kg
GRO with benzene	30	
DRO	2,000	
ORO	2,000	
Volatile Organic Compounds	mg/kg	mg/kg
Benzene	0.03	
Ethylbenzene	6	
Ethylene dibromide (EDB)	0.005	
1,2 Dichloroethane (EDC)	-	232
n-Hexane	-	96.2
Methylene chloride	0.02	
Methyl tertiary-butyl ether (MTBE)	0.1	
Naphthalenes	5	
Tetrachloroethylene	0.05	
Toluene	7	
1,1,1 Trichloroethane	2	
Trichloroethylene	0.03	
Xylenes (total)	9	
Carcinogenic PAHs	mg/kg	mg/kg
Benzo(a) pyrene as sum of 6 C-PAHs	0.1	

MTCA Cleanup Levels – Soil		
Contaminant of Concern	**MTCA "A"**	**MTCA "B"**
Polychlorinated biphenyls (PCBs)	mg/kg	mg/kg
Sum of mixture of PCBs	1	
Metals – Total	mg/kg	mg/kg
Aluminum		80,000
Arsenic	20	
Barium		1,650
Cadmium	2	
Chromium $^{+3}$	2,000	
Chromium $^{+6}$	19	
Copper		284
Iron		56,000
Lead (Unrestricted Land Use)	250	
Magnesium		Not Established
Manganese		11,200
Mercury	2	
Nickel		Not Established
Selenium		5.2
Silver		13.6
Zinc		5,970
Note 1: COCs to be tested on soil samples will be established during the cleanup action **Note 2**: MTCA Method "B" levels for soil based on the most stringent CUL for direct contact or protection of groundwater in the vadose zone, whichever is lower.		

14.2.2 Groundwater Cleanup Levels

MTCA Method "A" and Method "B" CULs specific to **groundwater** are presented in the **TABLE** listed below.

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MTCA Cleanup Levels – Groundwater		
Contaminant of Concern	**MTCA "A"**	**MTCA "B"**
Petroleum Hydrocarbons	ug/l	ug/l
GRO with benzene	800	
DRO	500	
ORO	500	
Volatile Organic Compounds	ug/l	ug/l
Benzene	5	
Ethylbenzene	700	
Ethylene dibromide (EDB)	0.01	
1,2 Dichloroethane (EDC)	5	
n-Hexane	-	480
Methylene chloride	5	
Methyl tertiary-butyl ether (MTBE)	20	
Naphthalenes	160	
Tetrachloroethylene	5	
Toluene	1,000	
1,1,1 Trichloroethane	200	
Trichloroethylene	5	
Xylenes (total)	1,000	
Carcinogenic PAHs	ug/l	ug/l
Benzo(a) pyrene as sum of 6 C-PAHs	0.1	
Polychlorinated biphenyls (PCBs)	ug/l	ug/l
Sum of mixture of PCBs	0.1	
Metals – Total	ug/l	ug/l
Aluminum		16,000
Arsenic	5	
Barium		3,200
Cadmium	5	
Chromium	50	
Chromium w/o Cr^{+6} in soil	100	
Copper		640
Iron		11,200
Lead (Unrestricted Land Use)	15	
Magnesium		None
Manganese		2,240
Mercury	2	
Nickel		None
Selenium		80.0
Silver		80.0
Zinc		4,800

Note 1: COCs to be tested on groundwater samples will be established after the cleanup action is completed
Note 2: MTCA Method "B" levels for groundwater based on the CUL for non-cancer level

15.0 EXPOSURE PATHWAYS OF CONCERN

15.1 Soil

Soil is a pathway by direct contact exposure of COCs that could affect human health and the environment. The previous investigations and the proposed cleanup action will adequately characterize the areal and vertical distribution and concentrations of COCs in the soil.

Discrete grab soil samples will be collected and analyzed to vertically and horizontally assess the extent and magnitude of selected COCs after excavation at the previously identified areas on concern on the project site. Composite soil samples will be collected from the temporary soil stockpiles to determine which soils will be loaded and transported for off-site disposal. A composite soil sample will be collected beneath all temporary soil stockpiles placed over bare soil. A background soil grab sample will be collected for QA/QC purposes near the northeast corner of the project site.

15.2 Sediment

Sediment is not a pathway for exposure of COCs to affect human health and the environment. Sediment samples will not be collected because drainage patterns and areas of sediment deposition caused by erosion and/or surface water movement or scouring are not located on the project site. Sediment does not deposit in the contaminated zone and does not migrate towards and within natural waterways, swales, ditches, storm drains, subsurface utilities, vaults, pits, infiltration galleries, or oil / water separators.

15.3 Groundwater

Groundwater is a pathway for exposure of COCs to that could affect human health and the environment. Groundwater could be potentially impacted by the identified soil contaminants at the near surface by leaching downward to the upper groundwater table.

Discrete groundwater samples will be collected and analyzed for selected COCs to assess groundwater quality from the monitoring wells to horizontally assess groundwater quality from the near surface groundwater table. A background groundwater sample will be collected for QA/QC purposes near the northeast corner of the project site.

15.4 Surface Water

Surface water is not a pathway for exposure of COCs to affect human health and the environment. Surface water samples will not be collected unless surface water flows off the project site during the cleanup effort. This scenario is very unlikely because the ground surface in the impacted area is very flat, the area is covered with pervious crushed rock and a grassy surface, BMPs will be installed, and there are no surface

water drainage corridors within or in the near vicinity of the impacted area. Surface water runoff from the parking lot flows into a subsurface stormwater collection system that is operated by the City of Sumner. Surface water does not flow across or through the contaminated area via natural waterways, streams, wetlands, swales, or ditches.

Temporary sediment control measures will be put into place to limit sediment transport and contamination from exiting the property. These temporary measures will remain in place until fill is imported to the site and the area is stabilized. Source controls will be utilized on the project site to prevent stormwater from coming in contact with pollutants. This project proposes to contain runoff in the construction area using the erosion control measures. Details for these control measures are specified in the engineered Stormwater and Drainage Report (**APPENDIX C**).

15.5 Indoor Air (Soil Gas / Vapor)

Indoor air (vapor) is not a pathway for exposure of COCs to affect human health and the environment. An evaluation of site contaminants indicates that air samples will not be collected during the cleanup action because the concentrations of volatile organic compounds tested at the source and across the impacted area did not exceed MTCA Method "A" CULs in 1991 (ECOLOGY), in 2002 (EnCo), and again in 2015 (EnCo).

As a precautionary measure however, a limited air assessment will include performing Tier I vapor assessment. Based on the outcome of the Tier I approach it will be decided if additional vapor monitoring will be required at the site. Vapor guidance will refer to ECOLOGY publication no. 09-09-047.

15.6 Subsurface Utility Corridors

Subsurface utility corridors are not a preferential pathway for exposure of COCs to affect human health and the environment. A private sanitary sewer line extends from the center – east portion of the existing building and extends south to the southern extent of the building at which point the sewer line connects to the City of Sumner's sanitary sewer on 160th Avenue East. The sanitary sewer line is located a few feet east of the east exterior wall of the building and is reported to be about 5 feet below ground surface.

16.0 POINTS OF COMPLIANCE

Points of Compliance (MTCA site boundary) are defined in WAC 173-340-200 as the locations where CULs established in accordance with WAC 173-340-720 through WAC 173-340-760 will be attained to meet the full closure requirements of MTCA. The Point of Compliance defines the point or points on a project site where CULs must be met or if the chosen the CULs cannot be economically or feasibly attained with remediation by removal what the site must do to meet one or a combination of the cleanup and/or containment technologies allowed under MTCA. Once the CULs have been attained at the defined Points of Compliance or once the approved containment technologies have

been implemented, the project site is no longer considered a threat to human health and the environment.

There are two types of Points of Compliance:

1. Standard
2. Conditional

For this cleanup action it is assumed that all of the contamination will be excavated and removed, therefore the standard Point of Compliance has been presented in this Work Plan.

16.1 Standard Point of Compliance for Soil

The Standard Point of Compliance for soil is defined as all soil within the project site boundary where previous analytical test results for in-situ soil samples have detected concentrations of one or more of the COCs above the MTCA Method "A" and "B" CULs. The estimated limit of contaminated soil is defined as soil the covers approximately 12,000 square feet of space with an approximate 500 cubic yard of cut as depicted on **FIGURE 6**. The Standard Point of Compliance for soil will be everywhere within this area that extends laterally and vertically where concentrations of COCs are above the established MTCA Method "A" and "B" CULs.

16.2 Standard Point of Compliance for Groundwater

The Standard Point of Compliance for groundwater is defined as groundwater throughout the project site that extends vertically and horizontally from the source of contamination out to the full extent of the boundary of the plume (if any). The groundwater Standard Point of Compliance extends from the uppermost level of the saturated zone of the upper groundwater table and extends vertically downward to the lowest depth that is affected by the COCs.

Groundwater monitoring wells (**MW-1 to MW-7**) will be used as reference locations for determining the Standard Points of Compliance for groundwater at the project site. These monitoring wells will be used to monitor the effects of source removal on the project site over time. Additional monitoring wells may be needed if the laboratory test results indicate that the COCs have migrated beyond the proposed monitoring well network.

Groundwater monitoring will be conducted according to scheduled term monitoring. This data will be used to assess whether Points of Compliance is sufficient to attain the established CULs across the project site. Typical term groundwater monitoring to show compliance is defined below:

1. Two consecutive quarters (spanning seasonal fluctuations – winter/summer): If all COCs tested in all groundwater monitoring wells report concentrations less than the practical quantitation limit (no detect).

2. Four consecutive quarters (spanning seasonal fluctuations): If all COCs tested in all groundwater monitoring wells report concentrations less than the respective MTCA Method "A" and "B" CULs.

3. Long term monitoring: If all COCs tested in any of the groundwater monitoring wells report concentrations that exceed the respective MTCA Method "A" and "B" CULs.

17.0 FIELD PROCEDURES

The purpose for documenting field procedures is to specify the Quality Assurance procedures that will be used to ensure that sample collection, handling, transport, documentation, and analysis will result in data of sufficient quality to evaluate soil and groundwater conditions.

Field procedures are also prepared to meet the requirements of the TPCHD for obtaining a Waste Disposal Authorization Permit to dispose of the contaminated soil at the LRI landfill in Graham.

Field procedures will follow acceptable industry practices as explained in this SECTION. Actual field procedures used during the investigation will be presented in the forthcoming report of the findings.

17.1 Data Organization

17.1.1 Soil Sample Documentation

Soil sample documentation will occur prior to and immediately after collection. Sample locations will be staked or flagged immediately after sampling. Characteristics of each sample will be hand-written onto a pre-printed **Soil Sample Field Data Form (APPENDIX C – SUPPORT DOCUMENTS**). The sample collection form contains information such as a unique sample identification number, sample collector name, project name and location, method of collection, depth and/or interval, time, date, appearance, sheen, odor, COC, observed texture or other characteristics, preservative requirement, and the total number and size of bottles. Additional information obtained in the field will be hand written in a spiral-bound, Rite-In-The-Rain log book.

17.1.2 Groundwater Sample Documentation

Groundwater sample documentation will occur prior to and immediately after collection. Characteristics of the collected groundwater sample from the monitoring wells will be hand-written onto a **Groundwater Well / Piezometer Sample Field Data Form (APPENDIX C)**. This form contains specialized information pertaining to Ecology well

ID number, well security, equipment calibration, static water level, sample appearance, immiscible layers, pumping or purging, sampling methods, well materials, and field test results. Additional information obtained in the field will be hand written in a spiral-bound, Rite-In-The-Rain log book.

17.2 Sample Identification Number

Samples will be designated with a unique number as shown below.

SNA – 1A – 1 – SO – 1' where:

SNA = Sumner National Auto Parts, Inc.
1A = Sample location number
SO = Type of sample {Soil (SO), Sediment (SD), Groundwater (GW), Monitoring Well (MW), Surface Water (SW), or Soil Gas (SG)}
1' = Depth bgs measured in feet

Note: Sample numbers for the cleanup action will start at **SNA-23A-SO**.

17.3 Sample Locations

17.3.1 Soil Sample Locations

Randomly and judgmentally selected soil samples will be collected. No statistical sampling approach is proposed at this time. The placement and number of soil samples to be collected after the cleanup action will be determined by a combination of many factors as listed below.

- Results from previous soil assessments. Soil samples will be collected at the areas of concern as depicted on **FIGURE 5 – SOIL & GROUNDWATER SAMPLE TEST RESULTS – BEFORE CLEANUP**. After the cleanup action confirmatory soil samples will be collected where previous soil samples exceeded or nearly exceeded MTCA Method "A" and "B" CULs for the COCs as depicted on **FIGURE 5**. A summary of the contaminated soils identified from previous assessments are listed below.

    1. Results from the ECOLOGY – 1991 surface soil and pooled surface water quality assessment. After the cleanup action soil samples will be collected in close proximity to sample numbers **77474, 77475, 77476, & 77477** (Figure Symbol)

    2. Results from the EnCo – 2002 near surface soil quality assessment. After the cleanup action soil samples will be collected in close proximity to sample numbers **7, 8, 9, 10, 11, 12, 13, 14, 16, 17, & 19** (Figure Symbol)

    3. Results from the EnCo – 2015 near surface soil and limited groundwater water quality assessment. After the cleanup action soil samples will be

collected in close proximity to sample numbers **2, 3, 4, 9, 12, & 13** (Figure Symbol )

- Knowledge of current and past land use activities, such as where caustic solutions, motor oils, chemicals, and degreasing solvents were used, stored, or spilled.

- The size and configuration of the project site, buildings, structures, and location of utilities.

- Soil texture, strata, and characteristics.

- Knowledge of the upper groundwater table.

- Topography of the project site.

- Size and number of temporary soil stockpiles.

- To determine the background, near surface, soil quality. The background location will have the same basic characteristics as the medium of concern at the site, will not be reportedly influenced by releases from the site, and will not be knowingly influenced by releases from other localized human activities.

17.3.2 Groundwater Sample Locations

Monitoring wells are proposed to be installed outside the excavation perimeter after the excavation is complete. The proposed monitoring well network, as depicted on **FIGURE 6**, assumes that all soil contamination will be removed by excavation and is based on that groundwater quality at all monitoring wells will not exceed the established CULs. Exceedance of a CUL in groundwater at any monitoring well during future groundwater sampling may require delineation via installation of additional monitoring wells. The monitoring well network also presumes that near surface groundwater flow direction will be to the north or west, following the local topography towards the nearest surface water (Puyallup River).

Based on the results of compliant groundwater monitoring thus far at **MW-1**, well construction will be similar to this well. However, if field conditions indicate that a given well location should be deeper than **MW-1**, a pre-wrapped 10 foot screen will installed instead of a five foot screen. Groundwater samples will be collected after the cleanup action at **MW-1** - **MW-7**.

17.3.3 Modification to Sample Locations

Actual sample locations may be modified based on unknown site conditions such as those (but not limited to) listed below.

1. Beneath or adjacent to subsurface utilities or above ground electrical poles or lights

2. Beneath or adjacent to foundations or other structures

3. Beneath buildings, public sidewalks, and public roadways

4. Olfactory evidence

5. Observed stains, hydrocarbons, and discolorations

6. Observed readings from a PID volatile organic vapor monitoring instrument used for field screening soil samples

7. Extent of actual soil excavation footprints

17.4 Number of Samples at Each Location

The number of soil samples to be collected at each location will be determined by a combination of many factors as listed below.

- To assess the vertical and horizontal extent of COC concentrations within the identified areas of concern.
- Duplicate samples. At this time it is not anticipated that any regulatory agency or third party will be on the project site to collect duplicate samples.
- The approximate size / volume of the temporary soil stockpiles. The number of soil samples in stockpiles will follow the revised (April 2003) ECOLOGY Guidance for Site Checks and Site Assessments for USTs for soils surrounding USTs and stockpiles. The minimum number of soil samples to be collected from temporary stockpiles will follow the guidelines as listed below:

Cubic Yards of Excavated Soil	Minimum Number of Soil Samples
0 – 25	**2**
26 – 100	**3**
101 – 500	**5**
501 – 1000	**7**
1001 – 2000	**10**
Greater than 2000	**10 + 1 for each additional 500 cubic yards of excavated soil over 2000**

17.5 Ambient Air Monitoring & Weather Data

An evaluation of air quality for volatile organic vapor migration will include ambient air monitoring at the project site boundaries by using a calibrated PID organic vapor monitoring instrument. A field data form will also record the daily rainfall totals, temperature, wind speed and direction, and barometric pressure.

17.6 Photographs

Photographs will be taken at the sampling locations and at other areas of interest on the site or sampling area. The photographs will serve to verify information entered in the field logbook. For each photograph taken, the following information will be written in the logbook or recorded in a separate field photography log:

- Time, date, location, and weather conditions
- Description of the subject photographed
- Name of person taking the photograph

18.0 COMPLIANCE MONITORING

18.1 Soil Sampling

18.1.1 Grab & Composite Samples

Discrete grab soil samples will be collected during and after the cleanup action. Composite samples will be collected from within temporary soil stockpiles and from beneath temporary soil stockpiles placed over bare soil.

After the cleanup is completed lateral (horizontal) confirmation soil grab samples will be collected from the bottom of excavations and on the side walls. Soil samples collected from the bottom and side walls of excavations that are less than four feet deep will be obtained by carefully entering into the excavations. If excavation depths exceed four feet deep soil samples will be collected from undisturbed soil within the backhoe bucket affixed to a track hoe.

Each sample will be obtained in accordance with appropriate sampling protocol including container type, packaging, preservation, transport, holding time, and Chain-of-Custody procedures. Samples will be collected using stainless steel spoons, plastic syringes, and/or triers. Each container will be properly labeled with a project name, sample location, sample number, COCs, date, time, preservation, sampler initials, and type of sample. Media samples will be delivered in person or by common carrier to the accredited testing laboratory within the required holding time for each parameter.

Samples will be carefully placed into clean plastic containers as listed in **TABLE 2 - Analytical Methods, MDLs, Containers, Preservatives, & Holding Times – Soil**. (**APPENDIX B**). Sample containers will be filled to the top, taking care to prevent soil from remaining in the lid threads prior to being closed to prevent potential contaminant migration to or from the sample. The outside surface of each sample bottle will be wiped clean with a paper towel, placed in a clean zip-lock bag, and placed into insulated plastic coolers filled with bagged cubed ice. Each cooler will be sealed with a signed “custody seal” until delivered to the testing

18.1.2 Volatile Organic Compounds

Soils being tested for volatile organic compounds such as benzene will be collected following ECOLOGY sampling method #5035A. This will be accomplished using laboratory supplied plastic syringes and weighed sample vials as described below:

- Position the syringe plunger to the desired soil sample volume (5 grams or 10 grams). To do this, slide the plunger portion of the syringe down to the desired volume by observing the scored markings on the syringe.
- Push the hollow end of the syringe into the soil until the plunger portion of the syringe makes contact with the soil, observing the desired volume.
- Transfer the soil from the syringe into a pre-weighed 40 ml septum vial by pushing the plunger down until the soil is ejected into the vial. The vials will be pre-weighed (tared) at the testing laboratory.
- Cap the vial and store the sample at 4 degrees C until time of analysis.
- If the samples will not be received by the laboratory within 48 hours then the samples were frozen the same day as collection.
- Labels will not be added to the exterior walls of the pre-weighed vials.

18.1.3 Non-Volatile Compounds

Soil samples collected for non-volatile organic compounds such as heavy metals, cPAHs, PCBs, DRO, and ORO will be collected by using clean stainless steel spoons or metal triers. Sample jars will be filled to the top and covered with a clean Teflon lined lid. Samples will be collected in 4 ounce or 8 ounce clean glass jars.

18.2 Groundwater Sampling

Groundwater measurements from each monitoring well will be taken from the top of ground-level monument to the top of the well casing at the north rim, from the top of the well casing down to the static water level, and from the top of the well casing down to the bottom of the well casing. The measurements will be made using a battery operated Solinist Model #101 water level meter. The flat, plastic, Solinist measuring tape is graduated into $1/100^{th}$ foot intervals. This data will be used to determine the static water level and the volume of water to be purged before sampling.

Withdrawal of groundwater in the well for purging and sampling will be accomplished by the use of an adjustable flow peristaltic pump at a flow rate that can range from about 0.5 gallons per minute to about 0.1 gallon per minute. A pre-cut length of clean, flexible, plastic Teflon tubing will be inserted into the well just below the static water level. A new section of tubing will be used for each well to prevent cross contamination.

The groundwater sample will be obtained in accordance with appropriate sampling protocol including identifying the project site, sample location, unique sample identification number, COCs, date, time, preservation requirement, sampler initials, type

of sample container, packaging, and Chain-of-Custody procedures. Filtering for dissolved parameters will be performed in the field using laboratory supplied 0.45 micrometer disposable filters.

Groundwater samples will be carefully placed into clean containers as listed in **TABLE 3**. The outside surface of each sample bottle will be wiped clean with a paper towel, placed into a clean zip-lock bag, and placed into insulated plastic coolers filled with bagged cubed ice to keep the temperature of the samples at approximately 4 to 6 degrees Celsius. Samples will be delivered in person or by common carrier to the accredited testing laboratory within the required holding time for each parameter.

Field tests on groundwater will be performed using calibrated equipment according to the manufactures' directions. A multi-port, portable, test instrument with collection chamber may be used for testing the groundwater for pH, temperature, specific conductance, and ionization potential. Other screening tests will include observing water samples for hydrocarbon sheen, odor, turbidity, and color.

18.3 Field Screening

Ambient air, breathing zone, void in the well casings, and soil samples will be monitored for volatile organic vapors using a Mini Rae Model 3000 photo-ionization detector (PID) instrument.

The PID instrument does not provide specific concentrations for hydrocarbon species, rather the instrument provides a sum of all detectable volatile hydrocarbons which are ionized by the 10.6 electro-voltage (e^V) lamp. A PID will detect the volatile heavier paraffin vapors found in gasoline or other volatile fuels and solvents, but will not detect lighter alkane paraffins such as ethane & methane. The PID instrument will detect aromatic constituents released from light fractionated petroleum hydrocarbons such as benzene and toluene.

The detection limit of the PID instrument is about 1 part per million. The highest observed PID reading in parts per million was recorded directly from the LED screen onto a field data sheet. The instrument will be calibrated within 24 hours of use according to the manufacturer's instruction manual using pressurized isobutylene at a known concentration of 100 parts per million.

For soil samples approximately 250 grams of soil will be placed into clean, 1-quart size, zip-lock polyethylene bags. The air headspace within the bags of soil will be monitored with the PID instrument when the temperature of soil in each bag ranges between 15 degrees and 25 degrees Celsius. If needed, soils in the zip lock bags will be warmed by placing the bags next to the heat vent in the equipment vehicle or in direct contact with the sun. Soil temperatures will be taken by wrapping the soil within each bag around a metal dip-type thermometer. When the soil temperature is in acceptable range the metal probe of the PID instrument will be carefully pierced into the air headspace of each plastic bag. The highest observed PID readings in the bag void will be recorded

directly from the LED screen onto the field form or into the spiral-bound log book. Volatile organic vapor readings will be presented in the forthcoming report.

Monitoring volatile organic vapors in soils at the bottom of excavations will be used as a tool to guide the track hoe operator when excavating contaminated soil and will be used to approximate the vertical and horizontal extent of contaminated soil from detectable and volatile petroleum hydrocarbons.

Monitoring volatile organic vapors in soils from the monitoring wells will be used to approximate the vertical and horizontal extent of contaminated soil in each well from detectable and volatile petroleum hydrocarbons.

Monitoring volatile organic vapors in ambient air will be performed as part of the safety protocol for field workers. Ambient air will be monitored in the breathing zone of EnCo workers. The excavation and drilling contractors will be responsible for monitoring the ambient air in the breathing zone for their employees. The highest observed PID readings on the LED screen in the ambient air in and around the excavations and monitoring wells, at the breathing zone of EnCo workers, and at the site boundaries will be recorded.

Background concentrations of volatile organic vapors in ambient air will be monitored on a daily basis up wind of the activities. Volatile organic vapor readings observed at background locations will be subtracted from the observed organic vapor readings taken at downwind locations.

Field screening during the cleanup will also include notating olfactory evidence and visual indicators of petroleum residue staining or other indicators of suspect contamination. Olfactory indications of potentially contaminated soil will include odors of petroleum hydrocarbons or musty, “metal-like’ odors. Field screening will include documenting evidence of un-natural grey/blue soil staining, discoloration, petroleum residue, automobile parts, or sheen.

Sheen testing will be used on soil samples with visual evidence of discoloration by placing the soil in glass sample jars containing clean water and watching for a petroleum sheen to appear on the water’s surface. This screening method will provide reliable evidence of the presence of contamination in soil saturated with petroleum hydrocarbons.

19.0 MEASURING & SURVEYING

Sample locations will be labeled with a unique sample number and will be immediately staked or flagged. Sample locations will be measured using a hand held Leica laser distance meter that has a 0.1 foot accuracy level to create a “to-scale” sample location diagram. Measurements will be taken using local benchmarks.

A professional land surveyor will be used to measure the location and elevation of all seven (7) monitoring wells. Survey measurements will be shot at the north rims of the riser pipes and on each ground-level monument. Wellhead elevations will be surveyed or normalized to a common datum. The datum to be used for this project will be referenced to the North American Vertical Datum of 1988 (NAVD88). The professional survey of the monitoring wells will be used to determine groundwater flow direction and gradient (foot per foot) across the project site.

Measured and surveyed data to be depicted on all forthcoming figures should be considered accurate only to the degree permitted by the data sources and implied by these measuring methods.

20.0 LABORATORY & TEST METHODS

20.1 Accredited Laboratory

Laboratory testing will be performed by a Washington state accredited laboratory. References to the accredited laboratory test methods, method detection limits, reporting limits, quantitation limits, testing equipment, equipment calibration procedures, data validation, internal and external quality control checks (duplicates, spikes, blanks), performance standards, system audits, preventative maintenance, and precision and accuracy statistics are maintained as standard operating protocols at the accredited testing laboratory. Most of this information will be provided on the laboratory test reports. Laboratory quality control and quality assurance information specific to this project will be supplied in the laboratory test reports that will be included as an Appendix in the forthcoming report.

The reporting limits for the chosen analytical methods will be sensitive enough to quantify each COC at or below its CUL, threshold, or guidance level. The forthcoming report will include a table presenting the following laboratory information for each media tested: Test Method, Method Detection Limit (MDL), Reporting Level (RL), Practical Quantitation Level (PQL), Container Type, Preservative, and Holding Time.

20.2 Laboratory Test Methods

Analytical methods, method detection limits, container types and sizes, preservatives, and holding times for the COCs are presented below as **TABLE 2 – SOIL** and **TABLE 3 – GROUNDWATER**.

TABLE 2
Analytical Methods, MDLs, Containers, Preservatives, & Holding Times – Soil

Contaminant of Concern	Lab Method Reference	MDL (undiluted) Unit: mg/Kg	Bottle Size & Type	Preservative	Holding Time
Petroleum Hydrocarbons					
Gasoline Range Organics - TPH ($C_6 – C_{12}$)	NWTPH – Gx 8015 5035A	2	4 x 40mL vials w/ Teflon septum (Pre-Weighed)	Ice <4°C	14 Days
Diesel Range Organics -TPH ($C_{10} – C_{25}$)	NWTPH – Dx 8015	50	4 to 8 oz. glass jar, wide mouth, Teflon-lined lid	Ice <4°C	14 Days
Oil Range Organics - TPH ($C_{25} – C_{36}$)	NWTPH – Dx-Ext 8015	250	4 to 8 oz. glass jar, wide mouth, Teflon-lined lid	Ice <4°C	14 Days
Volatile Organic Compounds					
Volatile Organic Compounds (Extended List including BTEX)	SW 846-8010, 8240, 8260B (SIM), 8260C (SIM), 8011 or 5035A	0.01 to 0.5	40 mL glass Teflon septum-lid vials, pre-weighed, with spin bar	Ice <4°C for 48 Hours, Freeze < -7°C	14 Days
Polycyclic Aromatic Hydrocarbons					
Carcinogenic	SW 846-8310, 8270D (SIM) 8270C (SIM)	0.01	4 to 8 oz. glass wide mouth w/ Teflon lined lid	Ice <4°C	7 Days
Polychlorinated Biphenyls					
Total Mixtures	SW 846-8082A	0.02	4 to 8 oz. glass wide mouth w/ Teflon lined lid	Ice <4°C	7 Days
Metals (Total)					
Al, As, Ag, Ba, Cd, Cr , Cu, Fe, Hg, Mn, Mg, Ni, Pb, Se, Zn	EPA 7420 6010 / 6020	0.1 to 5.0	4 to 8 oz. glass wide mouth w/ Teflon lined lid	Ice <4°C	6 months
Cr^{+6}	EPA 7196A	2.0	4 to 8 oz. glass wide mouth w/ Teflon lined lid	Ice <4°C	6 months
TCLP					
Cd, Pb	EPA 200.8 40 CFR Part 261	1	4 oz. glass jar, wide mouth	Ice <4°C	7 Days Extract
Conventional Tests					
pH	SW 846-9040, 9045D	0.1 unit	250 ml poly	None	15 min
Moisture	ASTM D2216-98	1 to 0.1%	4 to 8 oz. glass wide mouth	Ice <4°C	

TABLE 3 Analytical Methods, MDLs, Containers, Preservatives, and Holding Times – Groundwater					
Contaminant of Concern	**Method Reference**	**MDL (undiluted) Unit: ug/l**	**Bottle Size & Type**	**Preservative**	**Holding Time**
Petroleum Hydrocarbons					
Gasoline Range Organics - TPH ($C_6 – C_{12}$)	NW-TPH-Gx 8021B	100	4-40 ml glass vials - Teflon septum, no headspace	HCl, pH <2 Cool <4°C	14 Days
Diesel Range Organics -TPH ($C_{10} – C_{25}$)	NW-TPH-Dx	50	1 L brown glass, narrow mouth, Teflon lined lid	Cool <4°C	14 Days
Oil Range Organics - TPH ($C_{25} – C_{36}$)	NW-TPH-Dx/ Dx Extended	250	1 L brown glass, narrow mouth, Teflon lined lid	Cool <4°C	14 Days
Volatile Organic Compounds					
Volatile Organic Compounds (Extended List including BTEX)	SW 846 -8240, 8260B (SIM), 8270C (SIM) EPA 8021B	0.2 - 10	4-40 ml glass vials - Teflon septum, no headspace	HCl, pH <2 Cool <4°C	14 Days
Polycyclic Aromatic Hydrocarbons					
Carcinogenic	SW846-8270 SIM	0.1	2 lL amber glass, narrow mouth jars	Cool <4°C	7 Days Extract
Polychlorinated Biphenyls					
Total - Mixtures	8270D (SIM) SW846-8082	0.001	2 lL amber glass, narrow mouth jars	Cool <4°C	7 Days Extract
Metals (Total)					
Ag, As, Ba, Cd, Cr, Pb	EPA 200.8	<1	1 L Plastic, narrow mouth, Teflon lined lid	HNO_3, pH <2.0 Cool <4°C	28 days
Cr^{+6} (If reported in soil)	SM 3500 EPA 7196A	5	1 L Plastic, narrow mouth, Teflon lined lid	Cool <4°C	24 hours
Metals (Dissolved) *0.45 u/m Filtered in Field*					
Ag, As, Ba, Cd, Cr, Pb	EPA 200.8	<1.0	1 L Plastic, narrow mouth, Teflon lined lid	HNO_3, pH <2.0Cool <4°C	28 days
Conventional Tests					
pH	SW 846-9040, 9045D, APHA 4500-H+B	0.1 unit	250 ml poly	None	15 min
Total Suspended Solids	2540D	10 mg/l	500 ml poly	Cool <4°C	25 days

20.3 Electronic Data Submittal

In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), reports and data generated will be submitted to Ecology and the TPCHD in written format and laboratory data will be submitted to Ecology in the required electronic format using the Electronic Information Management (EIM) system.

21.0 DECONTAMINATION & WASTE DISPOSAL

21.1 Equipment Decontamination

Cleaning procedures will be performed to reduce or eliminate the potential for cross contamination between sample locations. Probing and down hole sampling equipment to be used for installing the monitoring wells will be cleaned prior to, during, and at the completion of the field exploration with high-pressure water, laboratory grade detergent (Alconox), and clean water rinses. Split-spoon and hollow rod samplers and acetate liner cutting tools will be hand washed with laboratory grade detergent and a clean tap water rinse between samples.

A clean surface will be provided at each location where sampling and monitoring equipment will be used. A secure equipment decontamination station will be set up at a clean area to clean sampling equipment. The decontamination equipment will include a clean tarp, bucket tray, 5-gallon plastic buckets, clean towels, brushes, gloves, laboratory grade detergent (Alconox), spray water bottles, distilled water, and a clean tap water source. A public water source will be made available by the landowner or EnCo will bring clean tap water in 5-gallon portable containers.

The working end of manual sampling tools will be cleaned by scraping adhering soil from the tools and washing with a laboratory grade detergent solution (Alconox). Washed equipment will be followed with a tap water rinse followed with a triple distilled water rinse before use at each sample location. Municipal tap water will be used for cleaning procedures and bottled distilled water will be purchased at a local department store. Cleaning fluids will be visually inspected after decontaminating sampling tools to determine disposal options. After cleaning, the sampling equipment will be allowed to air-dry. Clean sampling equipment will be placed into clean zip-lock bags or will be wrapped in plastic wrap to keep them clean while in storage.

21.2 Equipment Waste

The cleaning and decontamination fluids, down hole extracted soils, and probing wastes (investigation derived wastes) such as excess soils from probing, drilling, and sampling, gloves, paper, bags, plastic pipe, tubing, etc. will be temporarily stored in a clean 20-gallon to 55-gallon, open-topped, bolted ring, metal DOT 17h drum. The start and fill dates will be recorded on a non-hazardous waste label that will be affixed to the waste drum. The drum will be stored in a secure place on the premises until the investigation is completed at which time the drummed waste will be properly manifested and disposed at an off-site treatment and disposal facility. If the waste in the drum is determined not be contaminated the solids will be placed in a dumpster and the liquids will be poured over a grassy surface away from monitoring well heads and in an area that will not affect surface water runoff.

Wastewater and washwater generated from field sampling equipment, decontaminating liquids, and purged water from the monitoring well will be checked for observed sheen and hydrocarbon odor. If the wastewater in the drum does not contain a hydrocarbon

sheen or petroleum odor it will be disposed of on the project site over a grassy surface away from the well heads and in an area that will not affect surface water runoff. Liquid wastes will not be disposed of into catch basins or other drains. If the wastewater in the drum contains an observed hydrocarbon sheen or petroleum odor it will be properly analyzed for COCs, manifested, and disposed of at an off-site licensed disposal facility.

The scope of work for disposal of contaminated materials, supplies, soil, and/or groundwater assumes that the contaminated media will designate as a routine, non-hazardous waste (not a federal or state-listed dangerous waste).

22.0 FEASIBILITY STUDY

22.1 Purpose

The purpose of the limited feasibility study is to develop and evaluate cleanup action alternatives that will enable a successful cleanup action to be selected for the project site. The proposed cleanup action will remove the contamination from the site, will restore the site to MTCA Method "A" and Method "B" CULs, or if CULs cannot be feasibly attained the remedy will contain or isolate the contamination in such a way that will minimize future exposure to humans and ecological receptors (plants and animals).

22.2 Model Remedies

In 2013, the Washington Legislature made significant changes to MTCA. One of the provisions gave additional direction to ECOLOGY regarding the establishment of model remedies. MTCA regulations (WAC 173-340-390) specify that ECOLOGY must identify the circumstances under which application of a model remedy meets the requirements for selection of cleanup actions established under WAC 173-340-360. If a site meets the requirements for use of a model remedy, it is not necessary to conduct a Feasibility Study (WAC 173-340-350 (8)) or a Disproportionate Cost Analysis (WAC 173-340-360(3)).

The purpose of model remedies is to streamline and accelerate the selection of cleanup actions that protect human health and the environment, with a preference for permanent solutions to the maximum extent practicable.

The model remedies completed to date only applies to sites with soil contamination impacted with petroleum hydrocarbons consisting of gasoline, middle distillates/oils, or heavy fuels/oils and their constituents. If any contaminants other than those typically found in petroleum products are discovered above the practical quantitation limits during the site characterization, the site is not eligible to use any of the model remedies at this time. Sufficient data must be collected to confirm that the project site has not impacted groundwater, surface water, sediments, and indoor air.

Based on these criteria, the project site **is not qualified** to use existing ECOLOGY model remedies because several identified contaminants on the project site do not solely consist of petroleum hydrocarbons and their constituents.

22.3 Alternative Analysis

The purpose of an alternative analysis is to define cleanup objectives and evaluate cleanup alternatives that are appropriate for eliminating, reducing, or otherwise controlling contaminant risk to levels that are protective of human health and the environment, including as appropriate, aquatic and terrestrial ecological receptors.

Clean up action alternatives that achieve CULs at the Standard Points of Compliance and comply with applicable state and federal laws are presumed to be protective of human health and the environment and will require no further action. The chosen cleanup action will be conducted in conformance with the requirements for selection of a remedy under WAC 173-340-360.

22.3.1 No Cleanup Action

This alternative would leave all of the identified soil contamination in place with protective measures to prevent public access and to protect the environment. Institutional or attendant engineering controls would be instituted to protect human health and the environment. A restrictive covenant would be legally placed on the Title of the property. Groundwater monitoring for selected COCs would continue on a quarterly or semi-annual basis to monitor groundwater quality over time.

22.3.2 Source Removal with On-Site Isolation or Containment

This alternative is for situations where complete removal of the contaminated soil will take place to meet MTCA Method “A” and Method “B” CULs for unrestricted property use for soil and groundwater. Following excavation, confirmation testing will be performed on soil and groundwater to document the applicable Method “A” CULs found in Table 740-1 (Soil Cleanup Levels for Unrestricted Land Uses) and Table 720-1 (Cleanup Levels for Groundwater) of WAC 173-340-900 or Method “B” CLARC database table CULs have been met at the standard Point of Compliance, such that no environmental covenants are necessary. The excavated area would then be backfilled with clean imported soil to existing grade.

Contaminated soils that were excavated will remain on the project site in an engineered, lined, and monitored facility. The on-site containment of the hazardous substances will be required to have attendant engineering controls, institutional controls, and long term monitoring.

22.3.3 Complete Source Removal using Excavation – Method A

This alternative is for situations where complete removal of the contaminated soil will take place to meet MTCA Method “A” CULs for unrestricted property use for soil and

groundwater. Following excavation, confirmation testing will be performed on soil and groundwater to document the applicable Method "A" CULs found in Table 740-1 (Soil Cleanup Levels for Unrestricted Land Uses) and Table 720-1 (Cleanup Levels for Groundwater) of WAC 173-340-900 have been met at the standard Point of Compliance, such that no environmental covenants are necessary. Contaminated soils will be loaded, manifested, and disposed of at a licensed off-site treatment and disposal facility. The excavated area would then be backfilled with clean imported soil to existing grade.

22.3.4 Limited Source Removal with Excavation – Method A

This alternative is for situations where the soil removal action for sites with unrestricted land use is not sufficient to fully comply with the specified Method "A" CUL concentrations at all locations on the source property or within right-of-way of a public road, due to the presence of one or more structural impediments (i.e. buildings, utility lines, or roadways). Information will be provided that:

1. The soil removal action was implemented to the greatest degree practicable.
2. The site characterization confirms that no other pathway has or can reasonably be expected to be impacted.
3. An environmental covenant will be filed (or an institutional control will be utilized for certain public right-of-ways) to ensure the remedy remains protective.

22.3.5 Complete Source Removal with Excavation – Method B

This alternative is for situations where complete removal of the contaminated soil will take place to meet calculated (or the most stringent) MTCA Method "B" CULs for unrestricted property use for soil and groundwater. Method "B" CULs can either be calculated under MTCA on a site-specific basis, or standard assumptions can be made and the Method "B" cleanup levels from the CLARC database tables can be used directly. In this case the most stringent Method "B" value from the CLARC database table (direct contact or protection of groundwater in vadose zone) would be used instead of calculating a site-specific value.

This method is commonly used when a COC does not have a Method "A" CUL listed in the Method "A" tables for soil and/or groundwater. The Method "B" CULs are listed in the Cleanup Levels and Risk Calculations (CLARC – July 2015) tables, Soil – Method B and Groundwater Protection (unrestricted land use) table and Groundwater – Method "B", Method "A", and ARARs table.

The Method "B" soil cleanup levels will be determined using the provisions contained in WAC 173-340-740(3). After contaminated soil is excavated, confirmation testing will be performed on soil and groundwater to document that the Method "B" CULs have been met at the standard Point of Compliance, such that no environmental covenants would be necessary. The excavated area would then be backfilled with clean imported soil to existing grade.

22.3.6 Limited Source Removal with Excavation – Method B

This alternative is for situations where the soil removal action for sites with unrestricted land use is not sufficient to fully comply with the calculated (or most stringent) Method "B" CUL concentrations at all locations on the source property or within right-of-way of a public road, due to the presence of one or more structural impediments (i.e. buildings, utility lines, or roadways). Documentation will be provided that the soil removal action was implemented to the greatest degree practicable and an environmental covenant will be filed (or an institutional control will be used for certain public right-of-ways) to ensure the remedy remains protective.

22.3.7 Rational for Preferred Alternative

Alternative 22.2.3 (Method "A" CULs) and **22.2.5** (Method "B" CULs) are the preferred options because it is anticipated that complete source removal will be attainable and the COCs that have been identified on in the project site soils do not (at this point in time) appear to be affecting groundwater quality at the source based on analysis of a groundwater sample collected from **MW-1** in October 2015. Also, based on previous assessments, the contaminated soil appears to be limited to the upper 1 foot to 2 foot depth across the impacted area, making excavation and source removal the viable and cost-effective option.

Alternative 22.2.3 and **22.2.5** will be protective of human health and environment, will comply with the MTCA Method "A" and "B" cleanup standards, will be in compliance with ARARs, will provide necessary compliance monitoring, will use permanent solutions to the maximum extent practicable, will provide a reasonable restoration timeframe to complete, and will meet the notice requirements for public concerns.

23.0 CLEANUP ACTION

23.1 Technical and Methodical Approach

Best Management Practices (BMPs) will be implemented on the project site for the cleanup action as presented in **SECTION 7.1 – Best Management Practices**.

The selected alternative cleanup action proposes to scarify and excavate approximately 12,000 square feet of soil with an approximate 500 cubic yard of cut. The cleanup action will be initiated during the seasonal minimum for groundwater depth; estimated at about 5 feet bgs. The goal of the cleanup action will be to obtain no MTCA exceedances for the COCs across the project site, both horizontally and vertically from the source. **MW-1** (the source monitoring well) will be left in place during the cleanup action.

The portion of the site to be worked during the cleanup action will be accessed off of 60th Street East. The identified soil contamination that exceeds MTCA Method "A" and "B" CULs for unrestricted land use would be scarified and excavated by a heavy

equipment operator, stored in temporary soil stockpiles, assessed by field screening techniques, characterized by protection of human health, performance monitoring, and confirmational sampling and testing protocols, and then loaded, transported, disposed, and manifested to a licensed, off-site, disposal facility (LRI in Graham).

The heavy equipment operator will scarify and excavate the top 4-inch to 6-inch layer of imported crushed rock and place the material into a temporary soil stockpile for analysis of selected COCs. After this is completed the underlain exposed soil will be scarified and excavated in 4-inch to 12-inch lifts based on observed, field screened, and confirmed areas impacted with the COCs. If olfactory evidence, water sheen, petroleum staining, unusual color, automobile parts, and organic vapor monitoring readings appear to indicate contamination from the areas excavated an additional 4-inch to 6-inch thick layer of soil will be excavated out and placed onto the temporary soil stockpiles.

Contaminated soil which exceeds MTCA Method "A" and "B" CULs for the COCs (after confirmatory sampling) will be disposed of at the LRI facility under a waste disposal authorization permit from the TPCHD. Based on the historical sampling data, it is anticipated that stockpiles for areas/cells 6, 7, 8, and 9, will require off-site transport and disposal. Soil from temporary stockpiles that do not exceed MTCA Method "A" and "B" CULs will be left on the premises and will be used as backfill.

The proposed areas that will be scarified and excavated are depicted on **FIGURE 6 – EXCAVATION FOOTPRINTS & TEMPORARY SOIL STOCKPILES – PROPOSED DURING CLEANUP**. It is estimated that nine (9) temporary soil stockpiles will be positioned on the project site as listed below.

Area	**Cubic Feet**	**Cubic Yards** (based on 1' deep excavation)
Area 1	1,800	66.7
Area 2	720	26.7
Area 3	1,520	56.3
Area 4	256	9.5
Area 5	1,250	46.3
Area 6	1,500	55.6
Area 7	1,200	44.4
Area 8	1,600	59.3
Area 9	1,500	55.6
TOTAL		**~420**

If there is enough room to maneuver heavy equipment each soil stockpile will remain within the footprints of each excavation. If there is not enough room in each excavation footprint the temporary soil stockpiles will be placed over Visqueen sheets adjacent to each excavation footprint or other suitable space on the project site. Visqueen sheets will be placed over the tops and sides of each temporary soil stockpile at the end of each work day.

Performance composite samples will be collected from each temporary soil stockpile to determine the concentrations of selected COCs. The test results will determine which stockpile(s) will be loaded and transported to LRI for off-site disposal and which stockpile(s) will remain on site to be used as backfill. Confirmation composite soil samples will be collected from beneath temporary soil stockpiles that were placed over bare soil after they have been removed. Confirmation composite soil samples from beneath temporary stockpiles will not be collected if Visqueen was placed under the temporary stockpiles.

Based on previous laboratory test results Areas 6, 7, 8, & 9 contain soils that have exceeded (or have nearly exceeded) MTCA Method "A" CULs for several COCs. Areas 1 through 5 contain soils that border the areas that exceeded MTCA Method "A" CULs. Method "B" CULs were not used in these previous assessments.

Performance and confirmation soil samples will be collected at the bottom and side walls of excavations for analysis of selected COCs. In addition soil samples will be randomly collected along the building foundation, along the east exterior wall. The test results from the performance and confirmation soil samples will be used to guide the cleanup action and to determine which soils need to be stockpiled, loaded, and transported for off-site disposal. Additional information pertaining to soil sampling is presented in **SECTION 17.0 – FIELD PROCEDURES** and **SECTION 18.1 –Soil Sampling**.

If laboratory test results from samples collected in the areas initially remediated confirm the presence of COCs above the MTCA Method "A" and "B" CULs an additional 4-inch to 6-inch thick layer of soil will be excavated out and placed into the temporary soil stockpiles. Additional confirmation soil samples will then be collected from the bottom and side walls of excavations.

Excavation will continue until laboratory test results confirm that the concentrations of COCs are below MTCA Method "A" and "B" CULs. The cleanup action will be discontinued if a potential exists for severe safety concern, such as sidewall cave-in of excavations, presence of utilities, pipelines, near and beneath footings/foundations of existing buildings, proximity to public right-of-ways such as sidewalks and streets, and/or lack of off-site access agreements.

Any residual contamination remaining on the project site after the cleanup action will be protected with restrictions on future land uses and activities to ensure continued protection of human health and the environment.

Weight Tickets or Bills of Lading slips will be obtained for each load of soil transported to the off-site licensed disposal facility. Excavations will be backfilled and compacted by the landowner with clean soil obtained from the project site or from clean soil obtained from a known clean source. Landscaping that is removed or damaged during the cleanup will not be replanted or replaced.

Site figures will reflect the areas that were excavated during the cleanup action (MTCA Site Boundary) along with test results of performance and confirmatory sample test results compared to Method "A" and "B" CULs.

Six additional groundwater monitoring wells (**MW-2** to **MW-7**) will be installed beyond the footprints of the excavations after the cleanup action. Groundwater samples will be collected from these wells after the cleanup action. Additional information pertaining to groundwater sampling is presented in **SECTION 17.0 – FIELD PROCEDURES** and **SECTION 18.2 – Groundwater Sampling**.

23.2 Construction Phasing

The construction sequence will be as follows:

1. Install construction entrance fence with secure 4 foot high gate
2. Stake and flag the clearing and construction limits
3. Install 2 storm catch basin fabric inserts on the project site near the north entrance and 1 storm catch basin fabric insert within the 60th Street East Right of Way near the site entrance
4. Install temporary silt fabric fence around the zones to be scarified and excavated to include around temporary soil stockpiles. Temporary soil stockpiles will be removed within 30 days after obtaining the final laboratory test reports. The silt fence may be installed along the outer fence of the project site property boundary to allow room for the cleanup action.
5. Construct the temporary sediment trap in the northern most excavation for the cleanup action
6. Call City of Sumner for an Erosion Control inspection prior to any cleanup action
7. Scarify the top layer of crushed rock and place in separate temporary stockpile
8. Scarify and grade the identified project site soil contamination starting at the north most excavation zone. Collect confirmatory soil samples. Scarify additional soils if warranted by the laboratory test results.
9. Cover all temporary soil stockpiles daily with temporary plastic sheeting
10. Install 6 new groundwater monitoring wells after the soil cleanup is completed
11. Sample groundwater for "to-be-determined" COCs according to the specified monitoring schedule after the cleanup action is completed
12. Backfill excavation areas with clean imported fill to existing grade
13. Lay down permanent seeding over the disturbed area
14. Remove erosion control facilities after site is stabilized with seeded vegetation
15. Request final site construction inspection from the City of Sumner after the cleanup action is completed and the site is stabilized

23.3 Contingencies

If laboratory test results from soil samples collected in the areas initially remediated confirm the presence of COCs above the MTCA Method "A" and "B" CULs an additional

4-inch to 6-inch thick layer of soil will be excavated out and placed into the temporary soil stockpiles. Additional confirmation soil samples will then be collected from the bottom and side walls of excavations and along the foundation of the building. This action will occur until the MTCA Method "A" and "B" CULs are attained for each COC.

If the cleanup action cannot remove all of the COCs to the MTCA Method "A" and "B" CULs due to safety concerns, utilities, roadways, or building integrity then the project site will be secured with a restrictive covenant according to ECOLOGY regulations.

24.0 CONCLUSION

The forthcoming cleanup action will be used to determine if the project site is protective of human health and the environment and is protective to local environmental receptors from the COCs in soil and groundwater at the indicated locations.
ECOLOGY staff will review the Work Plan and submit a letter of approval prior to implementation. Modifications to this Work Plan may be needed based on the review process and from information gathered during the cleanup action.

This Work Plan has been submitted to ECOLOGY at the address listed below.

Tim Mullin, LG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503

Closing Statement

The information presented in this Work Plan may not absolutely define the lateral and vertical extent of soil and groundwater contamination on the project site. Additional investigation may be needed to make such determinations which could include additional soil and groundwater sampling and testing. However the Work Plan, as presented, should yield sufficient information to provide a reasonable estimate of the horizontal and vertical extent of contamination for the identified COCs at the indicated sample locations and will provide the data to determine if further investigation, site characterization, or cleanup action is needed.

25.0 REFERENCES

Beyler Consulting, Lakewood WA, Drainage & Erosion Control Report, Sumner National Auto Parts, Inc., 16008 60th Street East, Sumner WA, 98390, March 30, 2017.

Beyler Consulting, Lakewood WA, Construction Stormwater Pollution Prevention Plan, Sumner National Auto Parts, Inc., 16008 60th Street East, Sumner WA, 98390, March 30, 2017.

EnCo Environmental Corporation, Puyallup WA, Limited Phase II Site Assessment, Sumner National Auto Parts, Inc. 16008 60th Street East, Sumner WA, 98390, January 17, 2003. (Near Surface Soil Assessment with Ecology 1990 – 1992 Site Hazard Assessment Documents as Appendices).

Pierce County Assessor – Treasurer, Parcel Map, Parcel Summary, Building Characteristics, Land Characteristics, About My Property, Color Aerial Photograph, Topographic Map, Building Footprint Map, Quarter Section Map, Download from the Pierce County Web Site, December 2015.

U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Las Vegas NV, Characterization of Hazardous Waste Sites – A Methods Manual, Volume I1 – Available Sampling Methods, Second Edition, EPA/600/4-84/076, December 1984.

Washington State Department of Ecology, Environmental Report, Sumner National Auto Parts, Sumner WA, Prepared by Verna Cleveland (Recorder), November 8, 1990.

Washington State Department of Ecology, Southwest Regional Office, Complaint Investigation Report, Sumner National Auto Parts, Sumner WA, Prepared by Russell Post, April 3, 1991. (Surface Soil and Pooled Surface Water Assessment).

Washington State Department of Ecology, Summary Score Sheets for Site Hazard Assessment, Sumner National Auto Parts, Sumner WA, Prepared by Russel Post, May 31, 1991. (Surface Soil and Pooled Surface Water Assessment).

Washington State Department of Ecology, Known & Suspected Sites List Letter, Sumner National Auto Parts, Sumner WA, Prepared by Edward Canapary, June 12, 1991.

Washington State Department of Ecology, Site Hazard Ranking Letter, Sumner National Auto Parts, Sumner WA, Prepared by Megan White, February 11, 1992.

Washington State Department of Ecology, Olympia WA, Model Toxics Control Act, Statute and Regulation, Chapter 70.105D RCW, MTCA Cleanup Regulation, Chapter 173-340 WAC, Uniform Environmental Covenants Act , Chapter 64.70 RCW, Publication No. 94-06, Revised 2013.

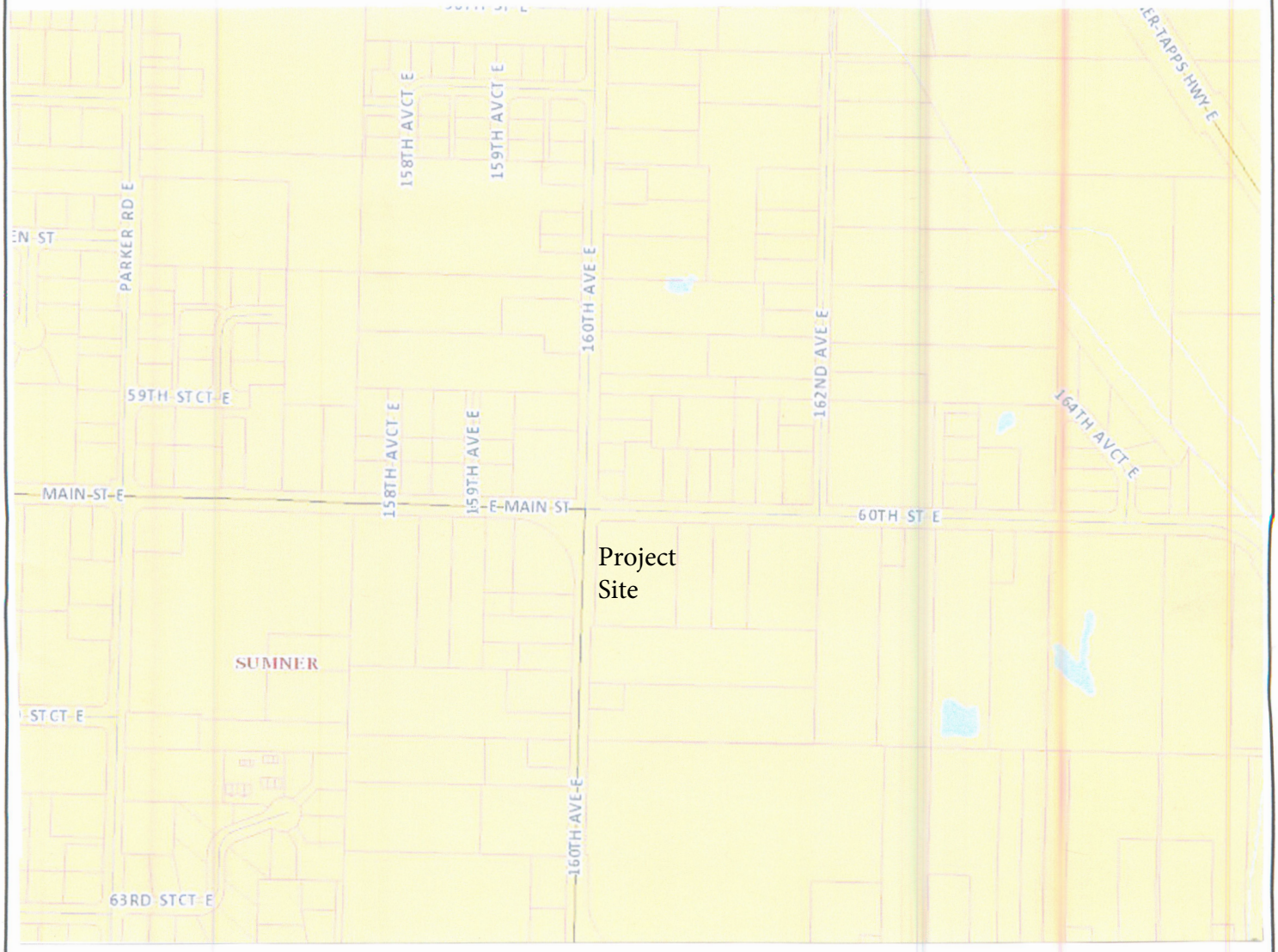
Washington State Department of Ecology, Olympia WA, Toxics Cleanup Program, Guidance on Sampling and Data Analysis Methods: Publication No. 94-49, January 1995.

Washington State Department of Ecology, Olympia WA, Toxics Cleanup Program, Guidance for Remediation of Petroleum Contaminated Sites, Publication No. 10-09-057, Revised June 2016.

Washington State Department of Ecology, Olympia WA, Dangerous Waste Regulations, Chapter 173-303 WAC, Publication 92-91, Amended December 2014, Effective January 18, 2015.

APPENDIX A

FIGURES



Independent Remedial Action Work Plan
Map Source: Pierce County GIS
1" = ~ 493' for a 8.5'" x 11.0" Sheet

N

VICINITY **FIGURE 1**

Sumner National Auto Parts, Inc.
16008 60th Street East, Sumner, Pierce County WA 98390

EnCo Environmental Corporation

POB 1212
Puyallup WA 98371
Tele: 253.841.9710
www.encoec.com

Independent Remedial Action Work Plan
Parcel Number: 0520198006
Acres: 1.58
Map Source: Pierce County GIS
Scale: 1" = ~121' for a 8.5'" x 11.0" Sheet

N

PARCEL & AERIAL **FIGURE 2**

Sumner National Auto Parts, Inc.
16008 60th Street East, Sumner, Pierce County WA 98390

EnCo Environmental Corporation

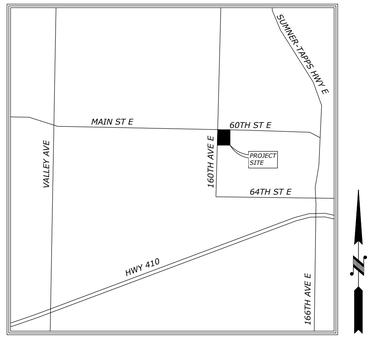
POB 1212
Puyallup WA 98371
Tele: 253.841.9710
www.encoec.com

A PORTION OF SWQ OF SEQ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

SUMNER NATIONAL AUTO PARTS STORE

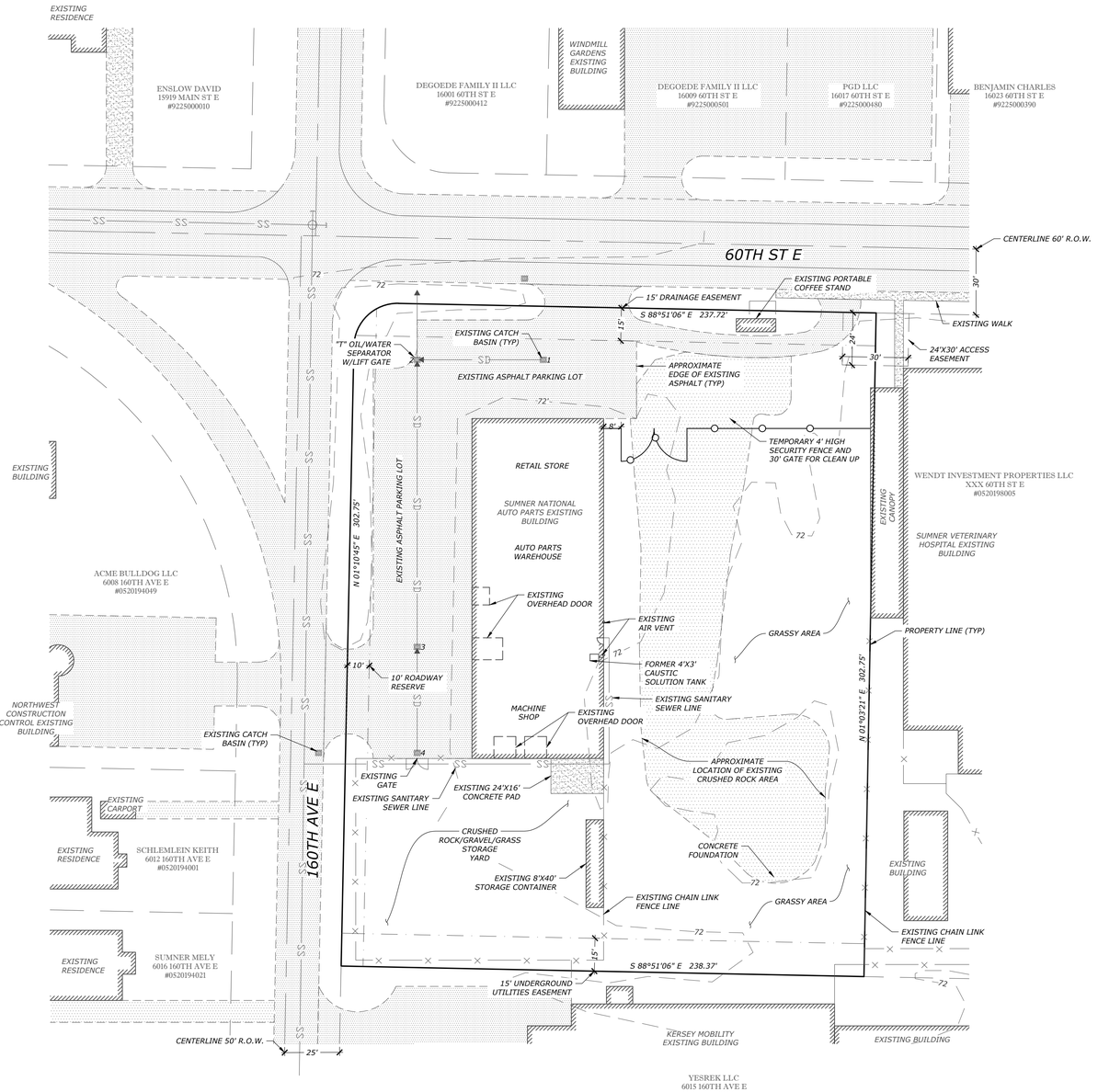
16008 60TH ST E

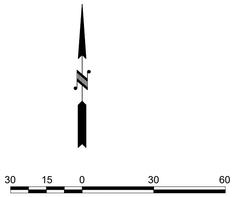
SITE PLAN - BEFORE CLEAN UP



VICINITY MAP

N.T.S





UTILITY NOTE

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT HAPPEN DUE TO THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. BEYLER CONSULTING ASSUMES NO LIABILITY FOR THE LOCATION OF UNDERGROUND UTILITIES.

SITE DATA

PARCEL NUMBER:	*0520198006*
SITE ADDRESS:	*16008 60TH ST E*
SITE AREA:	*69,041 SF (1.58 AC)*
ZONING:	*GC (GENERAL COMMERCIAL)*
SETBACKS:	
FRONT:	*5' MIN/25' MAX*
BACK:	*20'*
INTERIOR:	*5'*

TOPOGRAPHIC NOTE

THIS IS NOT A SURVEY. THE EXISTING CULTURAL AND TOPOGRAPHICAL DATA, SITE FEATURES, ELEVATIONS, AND PROPERTY BOUNDARIES SHOWN ON THESE DRAWINGS HAVE BEEN PREPARED BASED UPON INFORMATION FURNISHED BY THE OWNER, PIERCE COUNTY RECORDS, ENCO ENVIRONMENTAL, AND OTHER PUBLIC GIS INFORMATION. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, BEYLER CONSULTING CANNOT ENSURE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT. IT IS RECOMMENDED THAT A LICENSED SURVEYOR ALWAYS BE USED TO SET CORNERS, ESTABLISH LOT LINES AND DETERMINE ELEVATIONS. IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR HIRED CONTRACTORS TO VERIFY ALL INFORMATION PRIOR TO PLACEMENT OF STRUCTURES ON THE PROPERTY.

TAX DESCRIPTION

Section 19 Township 20 Range 05 Quarter 43 : LOT 4 OF SH PLAT 79-121 FORMERLY AKA SH PLAT 79-75 EXC POR DEEDED TO P CO ETN 569258 EASE OF RECORD PER ETN 701497 OUT OF 4-026 SEG M-0139 SP EMS (DCWJES11-5-82) (DC077SRJ8-26-88)

PROJECT INFO

CLIENT:
ENCO ENVIRONMENTAL
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-841-9710

ENGINEER:
BEYLER CONSULTING
7602 BRIDGEPORT WAY W, STE 3D
LAKEWOOD, WA 98499
TEL: 253-301-4157

OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390

EnCo Environmental Corporation
P.O. BOX 1212 PUYALLUP, WA 98371 TEL: 253-541-9710

NO.	DESCRIPTION	INIT	DATE

BEYLER CONSULTING
Plan. Design. Manage
CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
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fax: 253-336-3950

ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
fax: 425-392-0100

beylerconsulting.com

SITE PLAN - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 3

CITY OF SUMNER, WASHINGTON

DRAWN BY: KN | CHECKED BY: BML | SCALE: HORZ: 1"=30' VERT: N/A | DATE: 08/09/2016

JOB NUMBER 16-243

SHEET OF FIG.3

CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg PLOT DATE/TIME: 1/12/2017 - 9:32am

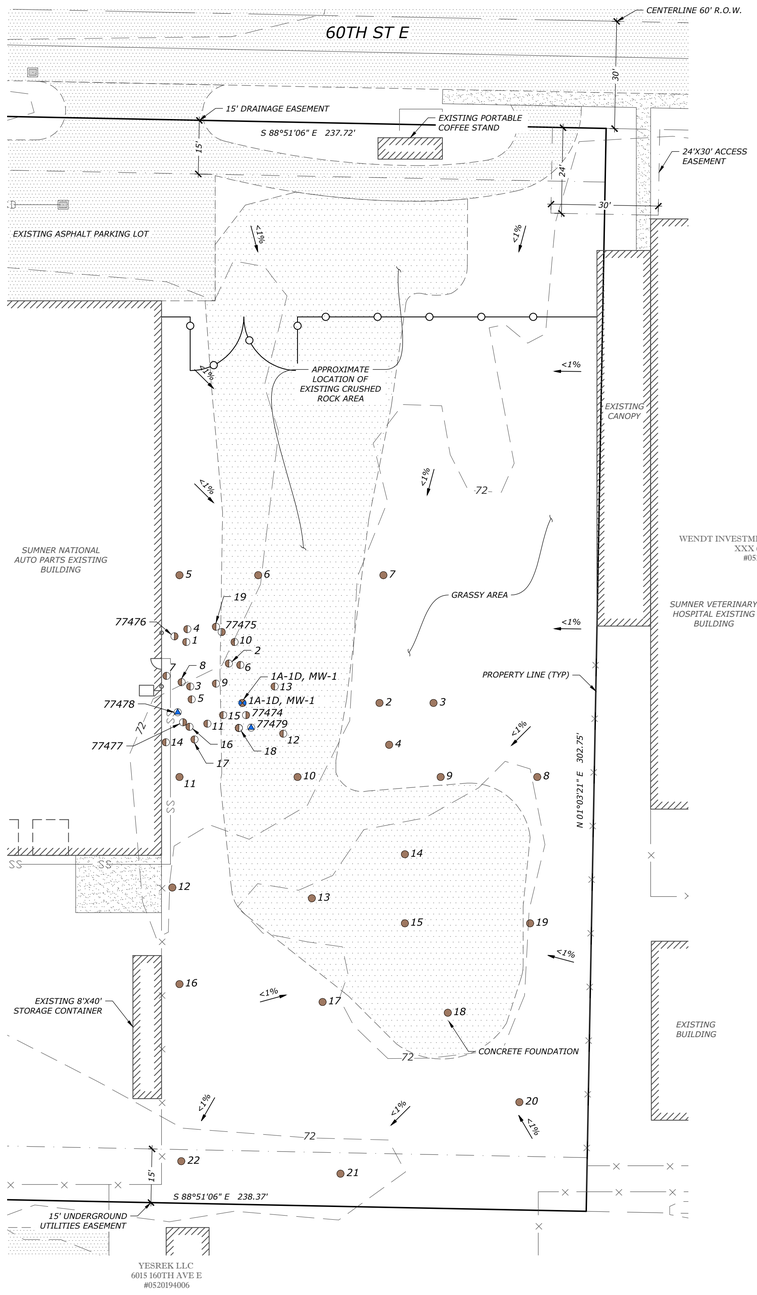
A PORTION OF SWQ OF SEQ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

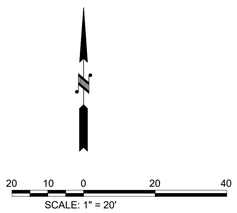
SUMNER NATIONAL AUTO PARTS STORE

16008 60TH ST E

SOIL AND GROUNDWATER MONITORING WELL SAMPLE LOCATIONS - BEFORE CLEAN UP

VICINITY MAP
N.T.S





SOIL SAMPLE KEY

- *1991 SURFACE WATER SAMPLE - ECOLOGY*
- *1991 SOIL SAMPLE - ECOLOGY*
- *2002 SOIL SAMPLE - ENCO*
- *2015 SOIL SAMPLE - ENCO*
- *2015 SOIL & GROUND WATER SAMPLE - ENCO*

NOTE: FOR SAMPLE COLLECTION DATA, REFER TO THE DATA TABLES IN THE REPORT

SITE DATA

PARCEL NUMBER:	*0520198006*
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TEL: 253-301-4157

OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390

EnCo Environmental Corporation
P.O. BOX 1212 PUYALLUP, WA 98371 TEL: 253-541-9710

NO.	DESCRIPTION	INIT	DATE

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
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fax: 253-336-3950

ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
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CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

SAMPLE LOCATIONS - BEFORE CLEAN UP

16008 60TH ST E

FIGURE 4

CITY OF SUMNER, WASHINGTON

DRAWN BY: *KN*	CHECKED BY: *BML*
SCALE: HORZ: *1"=20'*	VERT: *N/A*
DATE:	*08/09/2016*

JOB NUMBER
16-243

SHEET OF
FIG.4

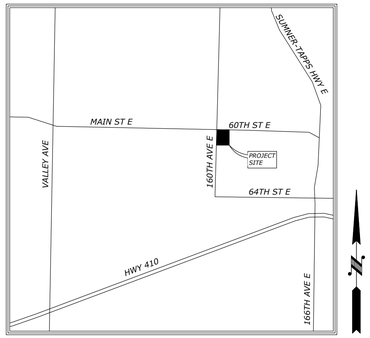
CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg PLOT DATE/TIME: 1/12/2017 - 9:32am

A PORTION OF SWQ OF SEQ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

SUMNER NATIONAL AUTO PARTS STORE

16008 60TH ST E

SOIL AND GROUNDWATER TEST RESULTS - BEFORE CLEAN UP



VICINITY MAP
N.T.S

1991 & 2002 SAMPLE DATA

TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
77474	(SURFACE)	**H0-65360**
77475	(SURFACE)	**AS-363, CD-186, CR-2340, PB-323**
77476	(SURFACE)	**H0-5420, AS-57, CD-12.5, PB-4040**
77477	(SURFACE)	**H0-19290**
77478		pH-10.97, BE-ND, T0-ND, XY-4.9
77479		BE-ND, T0-1.6, XY-ND
1	1A (.83') 1B (1.25')	H0-ND, PB-ND H0-ND
2	2A (.5') 2B (.83') 2C (1.33') 2D (2') 2E (2.67')	H0-ND, PB-120 H0-ND, PB-12 H0-ND, PB-125 H0-ND H0-ND
3	3A (1') 3B (1.5')	H0-ND H0-ND
4	4A (1')	H0-ND
5	5A (1')	H0-ND
6	6A (1.5')	H0-ND
7	7A (.17')	H0-1700, CD-1.9, **PB-910**
8	8A (.17')	H0-ND, CD-1.2, **PB-520**
9	9A (.17')	H0-ND, PB-220
10	10A (.17')	H0-1700, CD-1.3, **PB-540**
11	11A (.17')	H0-ND, PB-220
12	12A (.17') 12B (1.5')	H0-ND, **PB-460** H0-ND
13	13A (.17')	H0-ND, CD-1.9, **PB-700**
14	14A (.17')	H0-ND, CD-1.5, **PB-320**
15	15A (.25') 15B (.75')	H0-ND, PB-110 H0-ND, PB-160
16	16A (.25') 16B (.75')	H0-290, PB-130 H0-ND, **PB-330**
17	17A (.25') 17B (.75')	H0-ND, PB-220 H0-ND, PB-8
18	18A (.25') 18B (1')	H0-ND, PB-45 H0-ND, PB-47
19	19A (.33') 19B (1')	H0-ND, **PB-370** H0-ND, **PB-760**

2015 SAMPLE DATA

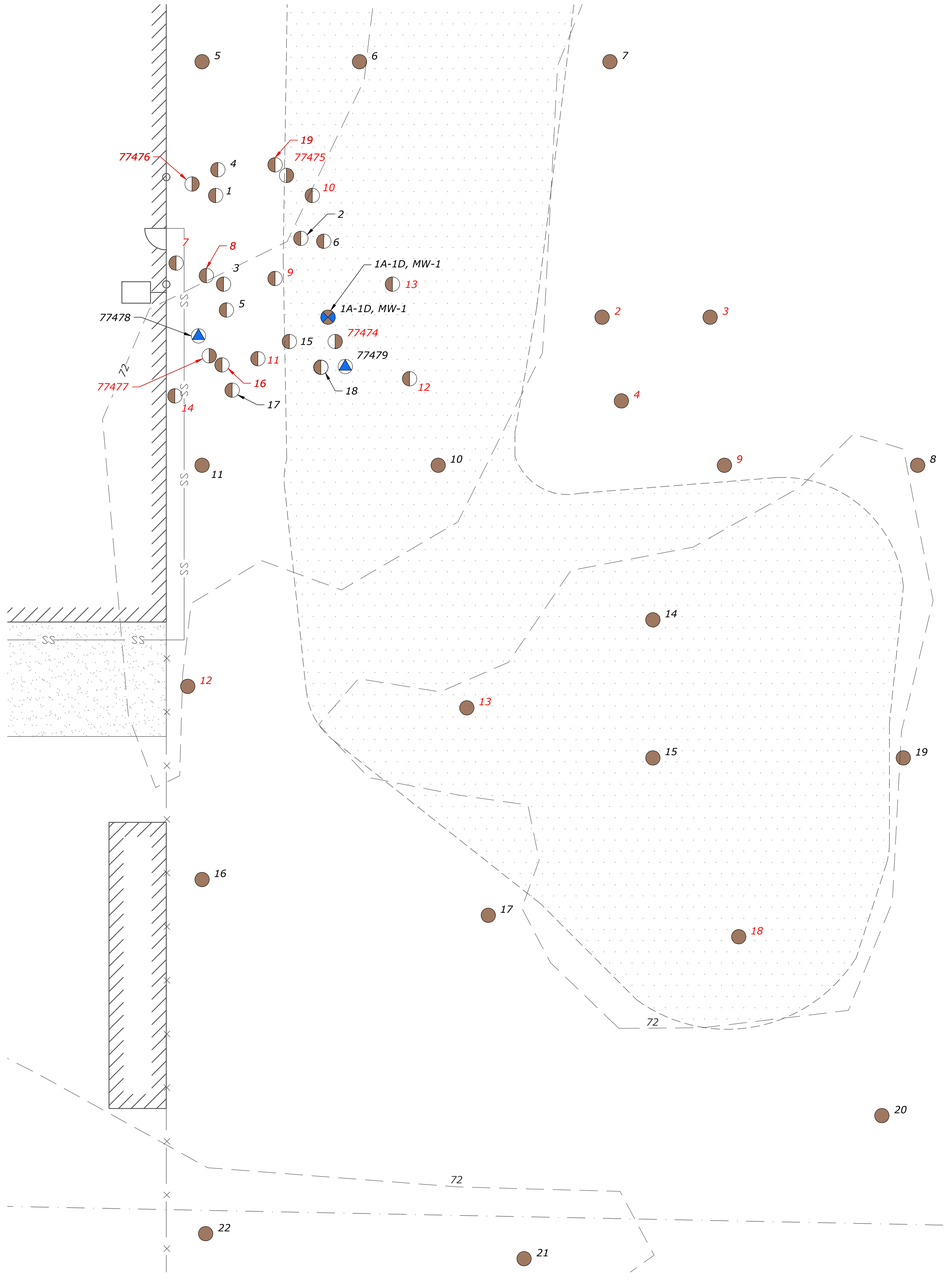
TEST NO.	SAMPLE NO. (DEPTH BGS)	SAMPLE DATA
1	1A (.75') 1B (2') 1C (5') 1D (10')	H0-ND, CD-ND, PB-105 H0-ND, CD-ND, PB-1.2 H0-ND, CD-ND, PB-1.13 CD-ND, PB-ND
2	2A (.5')	CD-ND, PB-172
3	3A (.5')	CD-ND, PB-225
4	4A (.5')	**CD-3.5, PB-1870**
5	5A (.5')	H0-ND, CD-ND, PB-113
6	6A (.5')	CD-ND, PB-33.6
7	7A (.5')	CD-ND, PB-27.4
8	8A (.9')	CD-ND, PB-6.65
9	9A (.5')	**CD-10.8, PB-5140**
10	10A (.7')	H0-950, CD-ND, PB-107
11	11A (.7')	H0-ND, CD-ND, PB-69.3
12	12A (.8')	CD-ND, PB-228
13	13A (.8')	CD-ND, **PB-290**
14	14A (.5')	CD-ND, PB-110
15	15A (1.0')	CD-ND, PB-25.8
16	16A (1.0')	H0-ND, CD-ND, PB-27.1
17	17A (1.0')	H0-ND, CD-ND, PB-117
18	18A (1.0')	H0-1500, CD-ND, PB-68.3
19	19A (.8')	CD-ND, PB-103
20	20A (.5')	CD-ND, PB-5.68
21	21A (.5')	CD-ND, PB-5.29
22	22A (.5')	CD-ND, PB-10.9

NOTES:
SURFACE WATER AND GROUND WATER SAMPLES DID NOT EXCEED MTCA CULS FOR THE TESTED COCS.

TEST RESULTS PLOTTED IN RED TEXT IN THE SAMPLE DATA COLUMN EXCEEDED MTCA METHOD A CULS.

REFER TO TABLES 4A, 4B, 5, 6A, & 6B FOR THE MTCA CULS FOR EACH PARAMETER.

NOT ALL PARAMETERS ARE LISTED IN THE DATA TABLE ON FIGURE 5; REFER TO TABLES 4A, 4B, 5, 6A, & 6B, THE LABORATORY REPORTS, AND THE CHAIN-OF-CUSTODY FORMS FOR A COMPLETE LISTING OF TESTED PARAMETERS.



SOIL SAMPLE KEY

- *1991 SURFACE WATER SAMPLE - ECOLOGY*
- *1991 SOIL SAMPLE - ECOLOGY*
- *2002 SOIL SAMPLE - ENCO*
- *2015 SOIL SAMPLE - ENCO*
- *2015 SOIL & GROUND WATER SAMPLE - ENCO*

NOTE: FOR SAMPLE COLLECTION DATA, REFER TO THE DATA TABLES IN THE REPORT

LEGEND

AS - ARSENIC (TOTAL)
BE - BENZENE
BGS - BELOW GROUND SURFACE
CD - CADMIUM (TOTAL)
CR - CHROMIUM (TOTAL)
HO - HEAVY OIL
mg/kg - MILLIGRAM PER KILOGRAM
ND - NOT DETECTED
PB - LEAD (TOTAL)
TO - TOLUENE
XY - XYLENES (TOTAL)

SITE DATA

PARCEL NUMBER:	*0520198006*
SITE ADDRESS:	*16008 60TH ST E*
SITE AREA:	*69,041 SF (1.58 AC)*
ZONING:	*GC (GENERAL COMMERCIAL)*
SETBACKS:	
FRONT:	*5' MIN/25' MAX*
BACK:	*20'*
INTERIOR:	*5'*

PROJECT INFO

CLIENT:
ENCO ENVIRONMENTAL
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-841-9710

ENGINEER:
BEYLER CONSULTING
7602 BRIDGEPORT WAY W, STE 3D
LAKEWOOD, WA 98499
TEL: 253-301-4157

OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390

EnCo Environmental Corporation

NO.	DESCRIPTION	INIT	DATE

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
Lakewood, WA 98499
phone: 253-301-4157
fax: 253-336-3950

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PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

SAMPLE DATA - BEFORE CLEAN UP

16008 60TH ST E
FIGURE 5

CITY OF SUMNER, WASHINGTON

DATE: 08/09/2016
SCALE: HORZ: 1"=10' **VERT:** N/A
CHECKED BY: BML
DRAWN BY: KN

JOB NUMBER
16-243

SHEET OF
FIG.5

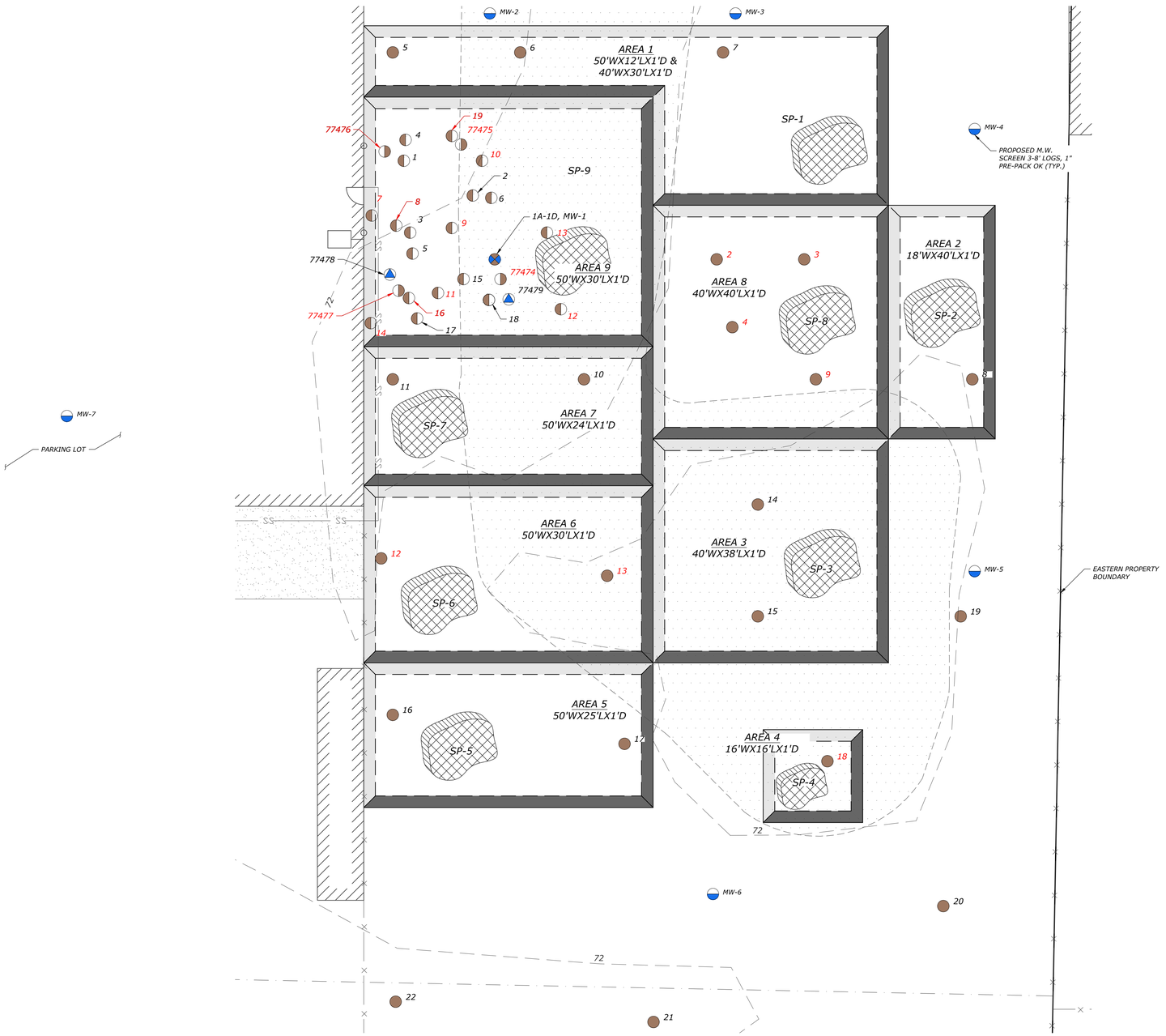
A PORTION OF SWQ OF SEQ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

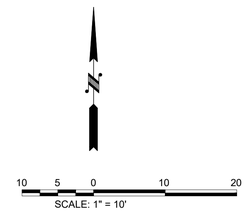
SUMNER NATIONAL AUTO PARTS STORE

16008 60TH ST E

EXCAVATION FOOTPRINTS & TEMPORARY SOIL STOCKPILE - PROPOSED DURING CLEAN UP

VICINITY MAP
N.T.S





EXCAVATION & STOCKPILE KEY

= FOOTPRINT OF EXCAVATION

= TEMPORARY SOIL STOCKPILE

NOTE:
VISQUEEN WILL BE PLACED UNDER TEMPORARY SOIL STOCKPILES.

STOCKPILES WILL BE COVERED DAILY WITH VISQUEEN PLASTIC UNTIL REMOVED FROM THE SITE.

TEST RESULTS HIGHLIGHTED IN RED EXCEED OR ARE CLOSE TO MTOA CULS FOR THE COCS.

SOIL SAMPLE KEY

- 1991 SURFACE WATER SAMPLE - ECOLOGY
- 1991 SOIL SAMPLE - ECOLOGY
- 2002 SOIL SAMPLE - ENCO
- 2015 SOIL SAMPLE - ENCO
- 2015 SOIL & GROUND WATER SAMPLE - ENCO (MW-1)
- PROPOSED MONITORING WELL LOCATION

NOTE: FOR SAMPLE COLLECTION DATA, REFER TO THE DATA TABLES IN THE REPORT

SITE DATA

PARCEL NUMBER:	0520198006
SITE ADDRESS:	16008 60TH ST E
SITE AREA:	69,041 SF (1.58 AC)
ZONING:	GC (GENERAL COMMERCIAL)
SETBACKS:	
FRONT:	5' MIN/25' MAX
BACK:	20'
INTERIOR:	5'

PROJECT INFO

CLIENT:
ENCO ENVIRONMENTAL
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-841-9710

OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390

ENGINEER:
BEYLER CONSULTING
7602 BRIDGEPORT WAY W, STE 3D
LAKEWOOD, WA 98499
TEL: 253-301-4157

EnCo Environmental Corporation
P.O. BOX 1212 PUYALLUP, WA 98371 TEL: 253-541-9710

NO.	DESCRIPTION	INIT	DATE

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PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

EXCAVATION & STOCKPILES - DURING CLEAN UP

16008 60TH ST E
FIGURE 6
CITY OF SUMNER, WASHINGTON

DRAWN BY: KN | CHECKED BY: BML | SCALE: HORZ: 1"=10' VERT: N/A | DATE: 01/26/2017

JOB NUMBER 16-243

SHEET OF FIG.6

PLOT DATE/TIME: 1/26/2017 - 4:17pm
CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon Kemp\4Civil Engineering\Engineering Drawings\16243 Site Plan 2016.07.21.dwg

APPENDIX B

TABLES

TABLE 4A
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SURFACE WATER TEST RESULTS – ECOLOGY – 1991						
Sample Number: ➢	77478	77479				**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Groundwater**
Petroleum Hydrocarbons						(µg/L)
Diesel						**500**
Heavy Oil (TPH)						**500**
Gasoline						**1,000**
Metals (total)						
Arsenic						**5**
Barium						
Cadmium						**2**
Chromium						**50**
Lead						**15**
Mercury						**2**
Selenium						
Silver						
Corrosivity						
pH - Units	10.97					**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs	Several unidentified compounds were reported					
Benzene	ND	ND				**5**
Ethylbenzene	ND	ND				**700**
Toluene	ND	1.6				**1,000**
Tetrachloroethene	ND	ND				**5**
Xylenes - total	4.9	ND				**1,000**
SVOCs						

1. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples in this table were collected by Russell Post of the WADOE on February 7, 1991.
3. ug/L = micrograms per liter which is approximately equal to parts per billion.
4. TPH = Total petroleum hydrocarbons.
5. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (Chapter 173-303) thresholds.

TABLE 4B
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS – ECOLOGY 1991						
Sample Number: ➢	77474 Surface	77475 Surface	77476 Surface	77477 Surface		**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel						**2,000**
Heavy Oil (TPH)	**65,360**		**5,420**	**19,290**		**2,000**
Gasoline						**100**
Metals (total)						**-**
Arsenic		**363**	**57**			**20**
Barium		8,700	174			
Cadmium		**186**	**12.5**			**2**
Chromium		**2,340**	902			**2,000**
Lead		**323**	**4,040**			**250**
Mercury		.034	.028			**2**
Selenium						
Silver		84.6	5.06			
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene	.0026					**.03**
Ethylbenzene	.0052					**6**
Toluene	.013					**7**
Tetrachloroethene	.004					**.05**
Xylenes - total	.025					**9**
SVOCs						

1. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples in this table were collected by Russell Post of the WADOE on February 7, 1991.
3. The results in this table initiated the Phase II assessment performed by **EnCo** in the fall of 2002.
4. mg/Kg = milligrams per Kilogram which is approximately equal to parts per million.
5. TPH = Total petroleum hydrocarbons.
6. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (Chapter 173-303) thresholds.

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS – EnCo 2002						
Sample Number: ➢SN-	1A .83’	1B 1.25’	2A .5’	2B .83’	2C 1.33’	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND				ND	**20**
Barium	ND				ND	
Cadmium	ND		ND	ND	ND	**2**
Chromium	ND				ND	**2,000**
Copper	ND				110	
Lead	ND		120	12	125	**250**
Mercury	ND				ND	**2**
Nickel	ND				ND	
Selenium	ND				ND	
Silver	ND				ND	
Zinc	59				170	
Corrosivity						
pH - Units	7.36				6.80	**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic					ND	
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs	ND				ND	
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs					ND	

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	2D 2'	2E 2.67'	3A 1'	3B 1.5'	4A 1'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic						**20**
Barium						
Cadmium						**2**
Chromium						**2,000**
Copper						
Lead						**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs						

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	5A 1'	6A 1.5'	7A .17'	8A .17'	9A .17'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	1,700	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic						**20**
Barium						
Cadmium			1.9	1.2	ND	**2**
Chromium						**2,000**
Copper						
Lead			**910**	**520**	220	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units			7.25			**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs						

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	10A .17'	11A .17'	12A .17'	12B 1.5'	13A .17'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND			ND	**20**
Barium	ND	ND			ND	
Cadmium	1.3	ND	ND		1.9	**2**
Chromium						**2,000**
Copper						
Lead	**540**	220	**460**		**700**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs		ND			ND	
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	14A .17'	15A .25'	15B .75'	16A .25'	16B .75'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	290	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND	ND	ND	ND	**20**
Barium – Total Barium –TCLP	230 ND	ND	ND	ND	ND	**-** **100** (mg/L)
Cadmium	1.5	ND	ND	ND	ND	**2**
Chromium						**2,000**
Copper						
Lead	**320**	110	160	130	**330**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs		ND	ND	ND	ND	
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS – 2002						
Sample Number: ➢SN-	17A .25'	17B .75'	18A .25'	18B 1.0'	19A .33'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND	ND	ND	ND	**20**
Barium	ND	ND	ND	ND	ND	
Cadmium	ND	ND	ND	ND	ND	**2**
Chromium						**2,000**
Copper						
Lead	220	8	45	47	**370**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

TABLE 5
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	19B 1.0'					**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND					**2,000**
Heavy Oil	180					**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND					**20**
Barium	ND					
Cadmium	ND					**2**
Chromium						**2,000**
Copper						
Lead	**760**					**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

TABLE 5

Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Notes:

1. The table lists only those parameters that were detected over their respective method detection limit established by the laboratory. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples collected by Jonathan Kemp of **EnCo** on 10/3/02, 10/16/02, and 11/15/02.
3. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (DWR), Chapter 173-303 thresholds.
4. mg/Kg = milligrams per kilogram which is approximately equal to parts per million.
5. PAHs = polynuclear aromatic compounds.
6. SVOCs = semi-volatile organic compounds.
7. VOCs = volatile organic compounds.

TABLE 6A - SOIL TEST RESULTS													
Sumner Auto ID = SNA-SO		1A	1B	1C	1D	2A	3A	4A	5A	6A	7A	8A	9A
Sample Location		MW-1	MW-1	MW-1	MW-1	East	East	Southeast					
Sample Collection Date		10.30.15	10.30.15	10.30.15	10.30.15	10.30.15	10.30.15	10.30.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15
Media		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Hydrogeologic Zone		Vadose	Vadose	Smear	Saturated	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose
Depth (bgs in feet)		0.75'	2'	5'	10'	0.5'	0.5'	0.5'	0.5'	0.5'	0.5'	0.9'	0.5'
Sample Purpose		Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment
Olfactory (Odor)		Earthy	None	None	None	Earthy	Earthy	Earthy	Earthy	Musty	Earthy	Earthy	Earthy
Description / Texture		Silt Loam	Sandy Gvl	Med Sand	Med Sand	Sandy Loam	Grvly Loam	Sandy Loam	Sandy Gvl	Sandy Gvl	Silty Sand	Sandy Gvl	Sandy Gvl
Soil Classification		ML	GP	SW	SW	ML	GP	ML	GP	GP	SM	GP	GP
Moisture - Field		Moist	Moist	Wet	Wet	Moist	Moist	Moist	Moist	Moist	Sl Moist	Moist	Sl Moist
PID Vapor Level (ppm)		0.2	0.1	0.1	0.1	0.1	ND	0.1	0.3	ND	ND	ND	ND
Contaminant of Concern (Unrestricted Property)	MTCA A CUL												
Petrloeum Hydrocarbons	mg/kg												
Gas Range Organics w BZ	30	<2	<2	<2									
Diesel Range Organics	2,000	<50	<50	<50					<50				
Oil Range Organics	2,000	<250	<250	<250					<250				
Metals - Total	mg/kg												
Lead (Pb) - Unrestricted	250	105	1.2	1.13	<1	172	225	1,870	113	33.6	27.4	6.65	5,140
Arsenic (As)	20	2.27	<1	<1	<1	1.21	2.38	4.33					
Cadmium (Cd)	2	<1	<1	<1	<1	<1	<1	3.5	<1	<1	<1	<1	10.8
Chromium (Cr)	2,000	9.01	8.93	5.59	6.14	11.9	13	27.5					
Mercury (Hg)	2	<1											
Other Metals - Total	MTCA B												
	mg/kg												
Selenium (Se)	5.2	<1											
Silver (Ag)	13.6	<1											
Barium (Ba)	1,650	31											
Zinc (Zn)	5,970	21.9											
Nickel (Ni)	None	5.59											
Copper (Cu)	284	15.4											
TCLP - DWR	mg/l												
TCLP - Cd	1.0												
TCLP - Pb	5.0												
Volatile Organic Compounds	mg/kg												
VOCs Not Tested													
Polyaromtic Hyrdocarbons	mg/kg												
Carcinogenic PAHs	0.1	0.015											
Polychlorinated Biphenyls	mg/kg												
PCBs	1	<0.02											
Conventional Tests													
pH		5.7	5.8	6.2	6.6				5.18				
Percent Moisture	Percent	11	17	14	19	19	15	18	9	10	12	8	12

TABLE 6A - SOIL TEST RESULTS													
Sumner Auto ID = SNA-SO		10A	11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
Sample Location													
Sample Collection Date		12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15	12.01.15
Media		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Hydrogeologic Zone		Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose	Vadose
Depth (bgs in feet)		0.7'	0.7'	0.8'	0.8'	0.5'	1.0'	1.0'	1.0'	1.0'	0.8'	0.5'	0.5'
Sample Purpose		Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment
Olfactory (Odor)		Earthy	Musty	Earthy	Earthy	Earthy	Earthy	Earthy	Eathy	Earthy	Earthy	Earthy	Earthy
Description / Texture		Sandy Gvl	Sandy Gvl	Gravely Sand	Sandy Gvl	Sandy Gvl	Sandy Gvl	Sandy Gvl	Sandy Gvl	Gravely Sand	Crush Rock	Crush Rock	Gravely Sand
Soil Classification		GP	GP	GM	GP	GP	GP	GP	GP	GM	GW	GW	GM
Moisture - Field		Sl Moist	Moist	Sl Moist	Sl Moist	Sl Moist	Sl Moist	Sl Moist	Sl Moist	Sl Moist	Sl Moist	Moist	Moist
PID Vapor Level (ppm)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Contaminant of Concern (Unrestricted Property)	MTCA A CUL												
Petrloeum Hydrocarbons	mg/kg												
Gas Range Organics w BZ	30												
Diesel Range Organics	2,000	350x	<50					<50	<50	96x			
Oil Range Organics	2,000	950	<250					<250	<250	1,500			
Metals - Total	mg/kg												
Lead (Pb) - Unrestricted	250	107	69.3	228	290	110	25.8	*27.1*	117	68.3	103	5.68	5.29
Arsenic (As)	20												
Cadmium (Cd)	2	<1	<1	<1	<1	<1	<1	*<1*	<1	<1	<1	<1	<1
Chromium (Cr)	2,000												
Mercury (Hg)	2												
Other Metals - Total	MTCA B												
	mg/kg												
Selenium (Se)	5.2												
Silver (Ag)	13.6												
Barium (Ba)	1,650												
Zinc (Zn)	5,970												
Nickel (Ni)	None												
Copper (Cu)	284												
TCLP - DWR	mg/l												
TCLP - Cd	1.0												
TCLP - Pb	5.0												
Volatile Organic Compounds	mg/kg												
VOCs Not Tested													
Polyaromtic Hyrdocarbons	mg/kg												
Carcinogenic PAHs	0.1												
Polychlorinated Biphenyls	mg/kg												
PCBs	1												
Conventional Tests													
pH		6.46	6.99	6.65	6.44			6.03					
Percent Moisture	Percent	14	10	14	16	10	10	26	15	16	16	19	10

TABLE 6A - SOIL TEST RESULTS			
Sumner Auto ID = SNA-SO		**22A**	**Composite (3A, 4A, 9A, 12A, 13A)**
Sample Location			
Sample Collection Date		12.01.15	
Media		Soil	
Hydrogeologic Zone		Vadose	
Depth (bgs in feet)		0.5'	
Sample Purpose		Assessment	
Olfactory (Odor)		Earthy	
Description / Texture		Gravely Sand	
Soil Classification		GM	
Moisture - Field		Very Moist	
PID Vapor Level (ppm)		ND	
Contaminant of Concern (Unrestricted Property)	**MTCA A CUL**		
Petrloeum Hydrocarbons	**mg/kg**		
Gas Range Organics w BZ	**30**		
Diesel Range Organics	**2,000**		
Oil Range Organics	**2,000**		
Metals - Total	**mg/kg**		
Lead (Pb) - Unrestricted	**250**	10.9	
Arsenic (As)	**20**		
Cadmium (Cd)	**2**	<1	
Chromium (Cr)	**2,000**		
Mercury (Hg)	**2**		
Other Metals - Total	**MTCA B**		
	mg/kg		
Selenium (Se)	**5.2**		
Silver (Ag)	**13.6**		
Barium (Ba)	**1,650**		
Zinc (Zn)	**5,970**		
Nickel (Ni)	**None**		
Copper (Cu)	**284**		
TCLP - DWR	**mg/l**		
TCLP - Cd	**1.0**		<1
TCLP - Pb	**5.0**		1.2
Volatile Organic Compounds	**mg/kg**		
VOCs Not Tested			
Polyaromtic Hyrdocarbons	**mg/kg**		
Carcinogenic PAHs	**0.1**		
Polychlorinated Biphenyls	**mg/kg**		
PCBs	**1**		
Conventional Tests			
pH			
Percent Moisture	**Percent**	9	

TABLE NOTES FOR SOIL TEST RESULTS – October 2015
Sumner National Auto Parts

1. Sample Number SNA-SO refers to Sumner National Auto Parts (SNA) – SO = SOIL
2. Samples were collected by Jonathan Kemp of EnCo on the date specified in the **TABLE** and Chain-of-Custody form(s)
3. Empty cells in a TABLE indicate that the COC was not analyzed at this time
4. Sample locations with test results are depicted on **FIGURES 4 & 5**
5. ID = Identification Number
6. N/A = Not applicable
7. ND – Not detected by the test laboratory
8. mg/kg = milligrams per kilogram which is approximately equal to parts per million.
9. ppm = parts per million, which is approximately equal to milligrams/kilogram (mg/kg).
10. < = less than, > = greater than
11. All samples were collected as discrete grabs except as indicated in the table
12. bgs = below ground surface in feet
13. Gas Range Organics w BZ = Gasoline Range Organics with Benzene (w BZ)
14. MTCA A = Model Toxics Control Act, RCW 70.105D, Cleanup Regulation Chapter 173-340 WAC, Publication No. 94-06, Revised 2013. Method "A" Cleanup Level (CULs) for unrestricted land use – Soil, Table 740-1. Empty cells in the CUL column indicate that the listed COCs do not have an established MTCA Method "A" CUL at this time. Concentrations highlighted in **RED** (color copies) or **BOLD** (black & white copies) text (if any) exceed, or are equal to, a MTCA Method "A" CUL.
15. MTCA B = Model Toxics Control Act, RCW 70.105D, Cleanup Regulation Chapter 173-340 WAC, Publication No. 94-06, Revised 2013. Method "B" Cleanup Level (CULs) Cleanup Levels and Risk Calculations (CLARC – July 2015) tables, Soil – Method "B" and Groundwater Protection (unrestricted land use) table and Groundwater – Method "B", Method "A", and ARARs table of WAC 173-340-705. The CUL is the most stringent level for direct contact or for protection of groundwater in the vadose zone, whichever is lower.
16. Empty cells in the CUL column indicate that the listed COCs do not have an established MTCA Method "A" or Method "B" CUL at this time.
17. Concentrations highlighted in **RED** (color copies) or **BOLD** (black & white copies) text (if any) exceed, or are equal to, a MTCA Method "A" or Method "B" CUL.
18. CUL = Cleanup level under MTCA
19. PID = photoionization detection instrument.
20. DWR = Dangerous Waste Regulations, Chapter 173-303 Washington Administrative Code, Amended December 2014, effective on January 18, 2015.
21. TCLP = Toxicity Characteristic Leaching Procedure under the DWR regulations
22. Soil Description / Texture: Estimated soil description based on cursory field assessment methods.
23. Soil Classification: Using the ASTM Unified Soil Classification System
24. Total metal test results are reported on a "dry weight" basis.
25. VOCs = volatile organic compounds **with** MTCA Method "A" Cleanup Levels for soil as listed in Table 740-1 (Unrestricted Land Uses).
26. MW-1 = Monitoring Well Number 1
27. Conventional Tests: A conventional pollutant is a term used to describe a pollutant that is amenable to treatment by a municipal sewage treatment plant. A basic list of conventional pollutants is defined in the U.S. Clean Water Act and has been amended in regulations issued

by the EPA. These pollutants include biochemical oxygen demand, fecal coliform bacteria, oil and grease, pH, and total suspended solids.

28. PCBs = Polychlorinated biphenyl compounds. This result lists the test results for individual PCB compounds and the sum of the eight listed PCB compounds in the MTCA regulations.
29. cPAHs = Carcinogenic polycyclic aromatic hydrocarbons. There are 7 MTCA listed carcinogenic PAHs as shown on TABLE 708-2 on page 233. There are 9 “other” PAHs listed in the referenced laboratory test method for a total of 16 PAHs compounds. cPAHs include the sum of benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,30cd)pyrene concentrations.
30. In some instances retests or duplicates were performed on the same sample number. The results presented on the TABLE reflect the highest concentration of the detected parameter.

TABLE 6B - GROUNDWATER RESULTS							
Sumner Auto Sample ID = SNA-WA:		**MW-1**					
Sample Location		East					
Sample Collection Date		10.30.15					
Media Type		Groundwater					
Static Water Level in Feet (bgs)		5.0'					
Static Water Level from TOC		4.8'					
Sample Purpose		Assessment					
Appearance (Visual)		Light Tan					
Field Screening (Odor)		None					
PID Vapor Level (ppm) (Probehole Annulus)		N/A					
Chemicals of Concern (Industrial Property)	**MTCA A CUL**						
Petroleum Hydrocarbons	ug/liter						
Gas Range Organics w Benzene	**800**	<100					
Diesel Range Organics	**500**	<50					
Oil Range Organics	**500**	<250					
Metals - Total							
Total Lead (Pb)	**15**	<1					
Total Arsenic (As)	**5**	<1					
Total Cadmium (Cd)	**5**	<1					
Total Chromium (Cr)	**50**	1.33					
Metals - Filtered in Field							
Filtered Lead (Pb)	**15**	<1					
Filtered Arsenic (As)	**5**	1.08					
Filtered Cadmium (Cd)	**5**	<1					
Filtered Chromium (Cr)	**50**	<1					
Volatile Organic Compounds	ug/liter						
Benzene	**5**	<0.35					
Ethylbenzene	**700**	<1					
Toluene	**1,000**	<1					
Xylenes	**1,000**	<2					
All Other VOCs		ND					

TABLE NOTES FOR GROUNDWATER TEST RESULTS – October 2015
Sumner National Auto Parts

1. Sample Number SNA-WA refers to Sumner National Auto Parts (SNA) – WA = WATER
2. Samples collected by Jonathan Kemp of EnCo on the date(s) specified on the TABLE and Chain-of-Custody forms
3. Sample locations and test results are shown on **FIGURES 4 & 5**
4. Empty cells in the TABLE indicate that the COC was not analyzed at this time
5. N/A = Not applicable
6. ND – Not detected
7. ug/l = milligrams per liter which is approximately equal to parts per billion.
8. ppm = parts per million
9. < = less than, > = greater than
10. All samples were collected as discrete grabs
11. bgs = below ground surface measured in feet.
12. MTCA = Model Toxics Control Act, RCW 70.105D, Cleanup Regulation Chapter 173-340 WAC, Publication No. 94-06, Revised 2013, Method "A" Cleanup Level (CUL) – Groundwater, Table 720-1. Empty cells in the CUL column indicate that the listed COC does not have an established MTCA Method "A" CUL at this time.
13. CUL = Cleanup level under MTCA
14. Concentrations highlighted in **RED** (color copies) or **BOLD** (black & white copies) text (if any) exceed or are equal the MTCA Method "A" CUL.
15. PID = photoionization detection instrument.
16. VOCs = volatile organic compounds **with** MTCA Method "A" Cleanup Levels for groundwater as listed in Table 720-1 in the MTCA cleanup regulation.
17. TOC = Top of monitoring well casing taken at the north rim
18. Conventional Tests: A conventional pollutant is a term used to describe a pollutant that is amenable to treatment by a municipal sewage treatment plant. A basic list of conventional pollutants is defined in the U.S. Clean Water Act and has been amended in regulations issued by the EPA. These pollutants include biochemical oxygen demand, fecal coliform bacteria, oil and grease, pH, and total suspended solids.

APPENDIX C

SUPPORT DOCUMENTS

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

APPLICATION FORM

Under the Voluntary Cleanup Program (VCP), the Department of Ecology (Ecology) may provide informal site-specific technical consultations to persons conducting independent remedial actions at a hazardous waste site. Ecology may provide such consultations under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC.

To enter the VCP, complete and submit to Ecology a VCP Application. The Application consists of the following two documents:

1. Application Form (including required attachments). ← **THIS DOCUMENT**
2. Agreement.

For guidance on how to complete your Application, please refer to the Application Instructions, which are available separately on the VCP web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

Part 1 - ADMINISTRATION

A. Customer Information. The Customer is the person or organization requesting services from Ecology under the VCP, and is responsible for paying the costs incurred by Ecology. The authority and duty of the Customer are explained in the Agreement.

Name of Customer: Robert A. Suss

What type of entity is the Customer?

☒ Person

*If the Customer is a **"person,"** then the Customer shall serve as both the Project Manager and the Project Billing Contact. Please identify this person and their contact information in both Parts 1B and 1C.*

☐ Organization

*If the Customer is an **"organization,"** then please identify the Project Manager in Part 1B and the Project Billing Contact in Part 1C. **Both persons must be employed by the Customer organization.***

What is the Customer's involvement at the Site? Please check all that apply.

- ☒ Property owner
- ☐ Past property owner
- ☐ Future property owner
- ☐ Property lessee
- ☐ Other – please specify:
- ☐ Business owner (operator)
- ☐ Mortgage holder
- ☐ Consultant
- ☐ Attorney

If not the current property owner, is the Customer acting as the agent for the property owner? n/a

☐ Yes ☐ No

If not the current property owner, is the Customer authorized to grant access to the property? n/a

☐ Yes ☐ No

Part 1 – ADMINISTRATION continued

B. Project Manager Information. Ecology will send this person all official correspondence. This person must either be the Customer or be employed by the Customer. This person may not be an independent contractor hired by the Customer. Please enter the required information below.

Name: Robert A. Suss		Title: Owner
Mailing address: 3117 S.W. 342nd Street		
City: Federal Way	State: WA	Zip: 98023
Phone: 253.275.7106	Fax: n/a	E-mail: bobsuss@msn.com

C. Project Billing Contact Information. Ecology will send this person monthly invoices. This person must either be the Customer or be employed by the Customer. This person may not be an independent contractor hired by the Customer. Please enter the required information below.

Name: Robert A. Suss		Title: Owner
Mailing address: 3117 S.W. 342nd Street		
City: Federal Way	State: WA	Zip: 98023
Phone: 253.275.7106	Fax: n/a	E-mail: bobsuss@msn.com

D. Project Consultant Information.

Is the Customer a consultant?

☐ Yes *If you answered **"YES,"** then skip to the next question.*

☒ No *If you answered **"NO"** and the Customer hired a consultant to conduct the independent remedial action, then enter the required information below.*

Name: Jonathan M. Kemp		Title: President
Organization: EnCo Environmental Corporation		
Mailing address: P.O. Box 1212		
City: Puyallup	State: WA	Zip: 98371
Phone: 253.841.9710	Fax: n/a	E-mail: jkemp@encoec.com

Do you want Ecology to contact the Project Consultant?

☒ Yes ☐ No

E. Property Owner Information.

Is the Customer the owner of the property where independent remedial action is being conducted?

☒ Yes *If you answered **"YES,"** then enter the type of entity and skip to the next question.*

☐ No *If you answered **"NO,"** then please enter all of the required information below.*

Name: Robert A. Suss		Title: Property Owner
Organization: Sumner National Auto Parts, Inc.		
Mailing address: 3117 S.W. 342nd Street		
City: Federal Way	State: WA	Zip: 98023
Phone: 253.275.7106	Fax: n/a	E-mail: bobsuss@msn.com

Part 1 – ADMINISTRATION continued

What type of entity is the property owner? Please check only one.

☒ Private	☐ County
☐ Tribal	☐ Municipal
☐ Federal	☐ Mixed
☐ State	☐ Public School
☐ Other – please specify: _____	

F. Request for Written Opinion.

Are you requesting a written opinion at this time?

☒ Yes ☐ No

If you answered **"YES,"** on what planned or completed remedial action do you want a written opinion?

EnCo Environmental Corporation, Independent Remedial Action Work Plan, Sumner National Auto Parts, 16008 60th Street East, Sumner WA, 98390, August 11, 2016 (To be sent to Ecology electronically as a .pdf under separate cover).

Please attach to this Application any additional remedial action plans or reports you want Ecology to review. Ecology will base its opinion on the information contained in the Site file, including any information attached to this Application.

If you answered **"NO,"** please explain why you are enrolling in the VCP at this time and when you expect to request a written opinion from Ecology.

Attach additional pages if necessary.

G. Reporting Requirements.

Please comply with the following reporting requirements when requesting written opinions on planned or completed remedial actions:

- ❑ **Licensing.** Documents submitted containing geologic, hydrologic, or engineering work must be under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.
- ❑ **Data Submittal.** Environmental sampling data must be submitted in both a printed form and an electronic form capable of being transferred into Ecology's data management systems. For instructions on how to submit the data, please refer to the following Ecology web site: www.ecy.wa.gov/programs/tcp/data_submittal/Data_Requirements.htm.

Failure to comply with these requirements may result in unnecessary delays. **Ecology will not issue a No Further Action (NFA) opinion unless these requirements are satisfied.**

Part 2 - DESCRIPTION OF THE SITE

A. Name of the Site. If Ecology has already identified the Site, enter the name provided by Ecology. Otherwise, enter a suggested name for the Site. You may also include an alternate name.

Name: Sumner National Auto Parts, Inc.

Alternate Name: n/a

B. Location of Property where the Releases Occurred (Source Property).

The "source property" is the property where hazardous substances were released into the environment. For example, if petroleum was released from a leaking UST, the source property is the property where the UST was located.

Do you know on which property the releases occurred?

☒ Yes — *If you answered **"YES,"** then please refer to the source property when answering the following questions.*

☐ No — *If you answered **"NO,"** then please refer to the property addressed by your remedial action (cleanup) when answering the following questions.*

Physical Address. Please enter the physical address of the property below.

Street Address: 16008 60th Street East (Formerly Known as Daniels Road)

City: Sumner	State: WA	Zip: 98390

Geographic Position. Please enter the geographical position of the property below. For additional guidance on how to complete this part, please refer to instructions on the VCP web site.

COORDINATES	**LATITUDE:**	Degrees: 47	Minutes: 12	Seconds: 7.32
	LONGITUDE :	Degrees: 122	Minutes: 12	Seconds: 55.34
LOCATION ON PROPERTY: [e.g., point of release or center of parcel]		Point of Release		
COLLECTION METHOD: [e.g., GPS or address matching]		Address Matching		
COLLECTION SOURCE: [i.e., map scale]		Google Earth		
HORIZONTAL DATUM: [i.e., base reference for coordinate system]		2016 Google Earth Web Site		
ACCURACY LEVEL: [i.e., +/- feet or meters]		n/a		

Legal Descriptions.

TRS DATA:	Township: 20N	Range: 5E	Section: 19	Quarter-Quarter: SW of SE
TAX PARCEL #(S):	0520198006			

Part 2 - DESCRIPTION OF THE SITE continued

C. Identification of Properties affected by the Releases (Affected Properties).

An "affected property" is a property affected by the release of hazardous substances on the source property. For example, petroleum released from a leaking UST on one property (source property) may migrate through the soil or ground water onto an adjacent property (affected property).

Do any of the releases affect any properties adjacent to the source property?

☐ Yes — *If you answered **"YES,"** then please identify below each property that you know has been affected by the releases on the source property. If you need to identify additional properties, please attach additional pages.*

☒ No — *If you answered **"NO,"** then skip to the next question.*

☐ Unknown — *If you answered **"UNKNOWN,"** then skip to the next question.*

1.	Address: n/a
	Tax Parcel(s):
2.	Address:
	Tax Parcel(s):
3.	Address:
	Tax Parcel(s):
4.	Address:
	Tax Parcel(s):

D. Identification of Public Right-of-Ways affected by the Releases.

Do any of the releases affect any public right-of-ways (e.g., streets)?

☐ Yes ☒ No ☐ Unknown

If you answered **"YES"** above, please specify below. Otherwise, skip to the next question.

n/a

Attach additional pages if necessary.

E. Extent of the Site.

What is the approximate areal extent of the Site? Please check only one.

☐ < 5,000 square feet
☒ > 5,000 square feet, but < 1 acre (~9,800 SF)
☐ > 1 acre, but < 10 acres
☐ > 10 acres
☐ Unknown

Part 2 - DESCRIPTION OF THE SITE continued

F. Description of Release(s) at the Site.

Source of Release(s).

What are the source(s) of the release(s) at the Site? Please check all that apply.

- ☐ Point source (e.g., leaking tank)
- ☐ Non-point source (e.g., contaminated soil used as fill)
- ☐ Area-wide lead and arsenic soil contamination (see questions below)
- ☒ Other – please specify: Spills and spray cleaning of engines & parts
- ☐ Unknown

To the extent known, please describe the source(s) of the release(s):

1. A spill to the outside from a caustic solution dip tank that was stored inside near the east wall.
2. Spray cleaning engines and parts outside on a concrete slab east of the building.
3. Drums of waste oil and other liquids stored outside on a concrete slab east of the building.

Attach additional pages if necessary.

Circumstances of Release(s). To the extent known, please describe below the circumstances of the release(s).

In the 1980's and early 1990's Sumner National Auto Parts rebuilt approximately 100 automobile engines per month in the machine shop. Part of the process included caustic spray cleaning the engines and parts prior to assembly. A caustic solution tank, which was stored adjacent to the interior east wall of the machine shop, overflowed in 1987 causing a spill of the solution to occur outside to the east of the exterior door of the building. The spill flowed onto a former concrete slab and soil-based surface adjacent to the slab during a heavy rainstorm. A shallow ditch was dug around the perimeter of the concrete slab to transport rainwater runoff east of the slab.

During this time period automobile engines and parts were routinely spray cleaned outside on top of a 16-foot long by 18.5-foot wide concrete slab that was formerly located adjacent to the east of an exterior door. A portion of the slab was covered with a metal roofed lean to. Rinsate from the spray cleaning process flowed onto the soil-based surface to the north, east, and south of the slab. Drums of oily liquids were also stored outside on the concrete slab.

A complaint was reported to ECOLOGY in November 1990 that 10 to 15 gallons of cleaning solvents, waste oils, metal sludge, caustic solutions, and antifreeze were dumped on the ground surface in the vicinity of the concrete slab east of the building.

Attach additional pages if necessary.

Circumstances of Release Discovery. To the extent known, please describe below the circumstances of the discovery of the release(s).

1991 – ECOLOGY collected 4 soil and 2 surface water (pooled) samples for analysis. MTCA exceedances were reported for Total Petroleum Hydrocarbons, arsenic, cadmium, chromium, and lead.

2002 – EnCo collected 31 soil samples for analysis. MTCA exceedances were reported for lead.

2015 – EnCo collected 25 soil samples for analysis. MTCA exceedances were reported for cadmium and lead. One groundwater monitoring well was installed. No MTCA exceedances were reported for the chemicals of concern.

Attach additional pages if necessary.

Part 2 - DESCRIPTION OF THE SITE continued

Area-Wide Soil Contamination. For information about the area-wide soil contamination project, please refer to the following web site: www.ecy.wa.gov/programs/tcp/area_wide/area_wide_hp.html. For information about the Tacoma Smelter Plume (TSP) and the associated Management Plan, please refer to the following web site: www.ecy.wa.gov/programs/tcp/sites/tacoma_smelter/ts_hp.htm.

Is the Site located within an area affected by smelter emissions, such as the TSP area?

☐ Yes ☒ No ☐ Unknown

To determine whether your Site is located within the TSP area, please refer to the map on the TSP web site identified above.

Is the Site located on a former apple or pear orchard in operation prior to 1947?

☐ Yes ☒ No ☐ Unknown

Is the Site impacted by area-wide arsenic and/or lead soil contamination?

☐ Yes ☒ No ☐ Unknown

G. Nature and Extent of Hazardous Substances Released at the Site. The following questions refer to conditions after the release, but prior to any cleanup, of the hazardous substances at the Site.

Hazardous Substances and Affected Media. To the extent known, please identify in the following table the hazardous substances released at the Site and the media (e.g., soil) impacted by those substances. Use the codes at the bottom of the table.

Hazardous Substance	Affected Media				
	Soil	Ground Water	Surface Water	Sediment	Air
EXAMPLE: Benzene	C	S	N/A	N/A	B
Total Petroleum Hydrocarbons (Oil Range)	C	O	U	N/A	N/A
Total Arsenic	C	B	U	N/A	N/A
Total Cadmium	C	O	U	N/A	N/A
Total Chromium	C	B	U	N/A	N/A
Total Lead	C	O	U	N/A	N/A
Benzene	B	O	O	N/A	N/A
Ethylbenzene	B	O	O	N/A	N/A
Toluene	B	O	B	N/A	N/A
Xylenes (Total)	B	O	O	N/A	N/A
Tetrachloroethene	B	O	O	N/A	N/A

When identifying the affected media in the table above, please use one of the following codes:

- C = confirmed, above cleanup level
- B = confirmed, below cleanup level
- O = confirmed, not present
- S = suspected
- N/A = not suspected
- U = unknown

Part 2 - DESCRIPTION OF THE SITE continued

Drinking Water.

Does any of the contamination at the Site pose a threat or potential threat to an existing drinking water source (ground water or surface water)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, what type of drinking water system is threatened by the contamination? Please check all that apply.

☐ Single Family
☐ Public Drinking Water Supply

If you checked "Public Drinking Water Supply" above, is the contamination located within or upstream of a 10-year wellhead protection area?

☐ Yes ☐ No ☐ Unknown

To help answer the above question or if you answered "Yes" to that question, then go to https://fortress.wa.gov/doh/eh/dw/swap/maps/ or call (800) 521-0323.

Indoor Air.

Are contaminant odors present in any buildings, manholes, or other confined spaces?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify:

Attach additional pages if necessary.

H. Maps of the Site.

Please attach to this application map(s) that identify, to the extent known, the following:

- ❑ The location of the site.
- ❑ The properties, and any public right-of ways, affected by the site.
- ❑ The source(s) of the release(s) at the site.
- ❑ The nature and extent of contamination at the site.
- ❑ Any human or ecological receptors impacted by the site (e.g., drinking water wells).
- ❑ The physical characteristics of the site (e.g., property lines, building and road outlines, surface water bodies, water supply wells, ground water flow direction, and utility right-of-ways).
- ❑ The properties adjacent to the site and the uses of those properties (e.g., gas station, dry cleaner, residential).

Part 3 – OPERATIONAL HISTORY OF THE SITE

A. Current Use of Source Property. *Note that the following questions refer only to the Source Property, not other properties affected by the Site. Answer these questions to the best of your ability.*

Current Property Owners. To the extent known, please identify below the current owner of the source property.

Name: Robert A. Suss	Title: Property Owner	
Organization: Sumner National Auto Parts, Inc.		
Mailing address: 3117 S.W. 342nd Street		
City: Federal Way	State: WA	Zip code: 98023
Phone: 253.275.7106		

Current Business Owner (Operator). To the extent known, please identify below the current owner of the business located on the source property.

Name: Sumner National Auto Parts, Inc.	Title: Business Owner	
Organization: Sumner National Auto Parts		
Mailing address: 16008 60th Street East		
City: Sumner	State: WA	Zip code: 98390-3055
Phone: 253.863.5178		

Current Business Operations. To the extent known, please identify below the current operations of the business located on the source property.

What is the current land use of the source property? Please check all that apply.

- ☐ Residential
- ☒ Commercial
- ☐ Industrial
- ☐ Agricultural
- ☐ School
- ☐ Childcare facility
- ☐ Park
- ☐ Other – please specify: _____

Is there a currently operational commercial or industrial business located on the source property?

☒ Yes ☐ No ☐ Unknown

If you answered "YES" above, please identify in the following table the current business operations using the North American Industry Classification System (NAICS) codes and specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores
441310	Automobile Parts & Supply Stores

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Is there a solid waste handling facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Is there a dangerous waste treatment, storage, or disposal facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Regulation of Current Business Operations.

Does the business operate under any federal, state, or local permits related to the release of hazardous substances into the environment (e.g., NPDES permit)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify the regulated operation, the name of the permit, and the date it was issued in the table below.

REGULATED OPERATION	PERMIT	DATE ISSUED
EX: Wastewater discharge	NPDES permit	02/02/02

Has a state or federal notice of enforcement action (e.g., notice of violation) ever been issued related to the release of hazardous substances at the business?

☒ Yes ☐ No ☐ Unknown

If you answered "yes" above, please specify (notice and year issued): ECOLOGY Environmental Violation Report, November 8, 1990.

Have business operations resulted in any other spills or other unpermitted releases on the source property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify in the table below.

RELEASE	DATE OF RELEASE	STATUS OF RELEASE

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Storage Tank Information. In table below, please identify all above ground storage tanks (AST) and underground storage tanks (UST) that have been used for storing hazardous substances on the source property, irrespective of whether the tanks are still in use or in place. *If you are unable to provide answers to specific questions regarding a tank, please enter "U" for unknown.*

IDENTIFICATION				STATUS AND CLOSURE				RELEASES	
Hazardous Substance	Type (AST/UST)	Size (Gallons)	TANK ID	DATE INSTALL	IN USE (Y/N)	DATE CLOSED	CLOSURE METHOD (*)	PAST (Y/N)	CURRENT (Y/N)
EX: Diesel	UST	10,000	4	02/87	N	05/98	Removed	Y	N
No USTs									
Waste Oil	AST	500	1	01/99	N	12/15	Removed	N	N
Caustic Dip	AST	130	2	09/80	N	12/15	Removed	Y	N

(*) Options = Removed or Closed in Place

B. Past Use of Source Property. *Note that the following questions refer only to the Source Property, not other properties affected by the Site. Please answer these questions to the best of your ability.*

Past Property Owners. To the extent known, please identify below the owner of the source property at the time the release occurred.

Name: Unknown	Title:	
Organization:		
Mailing address:		
City:	State:	Zip code:
Phone:	Fax:	E-mail:

Past Business Owners (Operators). To the extent known, please identify below the owner of the business (operator) at the time the release occurred.

Name: Past use was residential	Title:	
Organization:		
Mailing address:		
City:	State:	Zip code:
Phone:	Fax:	E-mail:

Identification of Past Business Operations. Please identify in the following table the past operations of businesses located on the source property using the North American Industry Classification System (NAICS) codes and/or specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores
n/a	

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

C. Future Use of Source and Affected Properties. The following questions refer to both source and affected properties. Please answer these questions to the best of your ability.

Will any ownership interest in the source or affected properties be conveyed prior to, or upon completion of, the cleanup?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify:

Attach additional pages if necessary.

Will any of the source or affected properties, or portions of those properties, be redeveloped as part of the cleanup?

☐ Yes ☐ No ☒ Unknown

If you answered "YES" above, please specify the proposed land use below. Please check all that apply.

☐ Residential
☐ Commercial
☐ Industrial
☐ Agricultural
☐ School
☐ Childcare facility
☐ Park
☐ Other – please specify:

Please also specify the activities proposed for that land use:

Unknown

Attach additional pages if necessary.

Part 4 – ADMINISTRATIVE HISTORY OF THE SITE

Have you previously reported the release(s) of hazardous substances at the Site to Ecology?

☐ Yes – If so, when? _____ ☐ No ☒ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under the VCP?

☐ Yes – If so, please specify the VCP Project Number: _____
☒ No
☐ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under a federal or state order or decree?

☐ Yes – If so, please specify the type and docket number: _____
☒ No
☐ Unknown

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE

A. Scope of Remedial Actions.

Do you plan to characterize and address all of the contamination at the Site, including any contamination located on affected adjacent properties, as part of the VCP project?

☒ Yes ☐ No ☐ Unknown

If you answered "NO" above, please describe below the scope of the VCP project, including the contamination (properties, portions of a property, media and/or hazardous substances) that you DO NOT plan on characterizing and/or addressing as part of the VCP project. Please include additional pages if necessary.

Attach additional pages if necessary.

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE continued

B. Status of Remedial Actions.

What is the current status of remedial actions at the site? Please check all that apply in the table below.

REMEDIAL ACTION	PLANNED	ONGOING	COMPLETED	NOT APPLICABLE
INITIAL RESPONSE (UST ONLY)				X
INTERIM ACTION				X
REMEDIAL INVESTIGATION			X	
FEASIBILITY STUDY				X
CLEANUP ACTION	X			

C. Documentation of Remedial Actions.

Please list in the table below all known remedial action plans or reports produced for the site, including:

- The title of the plan or report,
- The author (e.g. consulting firm) of the plan or report,
- The date the plan or report was produced,
- Whether the plan or report has been submitted to Ecology,
- The date the plan or report was submitted to Ecology.

	TITLE	AUTHOR	DATE	SUBMITTED TO ECOLOGY	
				Y/N?	DATE
EX:	John Doe's Site: Remedial Investigation Work Plan	Mom's Consulting Firm	02/20/05	NO	N/A
1.	Environmental Violation Report	Ecology, Verna Cleveland	11/08/90	Y	n/a
2.	Complaint Investigation Report	Ecology, Rusty Post	04/03/91	Y	n/a
3.	Summary Score Sheet for a Site Hazard Assessment	Ecology, Rusty Post	05/31/91	Y	n/a
4.	Known & Suspected Sites List Letter	Ecology, Ed Canapary	06/12/91	Y	n/a
5.	Site Hazard Ranking Letter	Ecology, Megan White	02/11/92	Y	n/a
6.	Limited Phase II Site Assessment (This report is included in the Work Plan as an Attachment)	EnCo Environmental	01.17.03	Yes	08.12.16
7.	Independent Remedial Action Work Plan	EnCo Environmental	08.11.12	Yes	08.12.16
8.					
9.					
10.					

Part 6 – STATEMENT AND SIGNATURE

A. Statement and Signature. The undersigned affirms that the information contained in this application is true and accurate to the best of his or her knowledge. Please note that someone other than the Customer may sign this Application Form.

Name: Jonathan M. Kemp	Title: President	
Signature: Jonathan M. Kemp		Date: August 11, 2016
Organization: EnCo Environmental Corporation		
Mailing address: P.O. Box 1212		
City: Puyallup	State: WA	Zip code: 98371
Phone: 253.841.9710	Fax: n/a	E-mail: jkemp@encoec.com

B. Affiliation.

What is the signatory's involvement at the Site? Please check all that apply.

- ☐ Customer
- ☐ Property Owner
- ☒ Consultant
- ☐ Attorney
- ☐ Other – please specify: _____

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.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

September 9, 2016

Mr. Robert Suss
Sumner National Auto Parts, Inc.
3117 SW 342nd St Street
Federal Way, WA 98023

Re: Acceptance of VCP Application for the following Contaminated Site:

- **Site Name:** Sumner National Auto Parts Inc.
- **Site Address:** 16008 60th Street East, Sumner, WA 98390 Pierce Co.
- **Cleanup Site ID:** 3653
- **Facility/Site ID:** 1304
- **VCP Project ID:** SW1547
-

Dear Mr. Robert Suss

The Department of Ecology (Ecology) has accepted your Voluntary Cleanup Program (VCP) application for the. Sumner National Auto Parts Inc.16008 60th Street East, Sumner, WA 98390 facility (Site). We applaud your initiative and welcome your interest in the VCP. This letter confirms your entry into the VCP and provides important information on how we will manage the VCP Cleanup Project (Project) and the Site.

Agreement

Ecology has completed and signed the VCP Agreement governing the Project on September 8, 2016. This is the effective date of the Agreement. **Enclosure A** includes a copy of the Agreement. Please review it carefully.

Identification

Ecology has assigned a unique name and number to the **Site**. We have also assigned a unique number to your **Project** at the Site. You can find this information in the box at the bottom of the first page of the Agreement. When contacting us, please use this information to identify your Project.

Designated Managers Please direct communications between Ecology and Sumner National Auto Parts Inc. through the designated managers to the maximum extent possible.

- **Ecology**

  We have designated the following site manager to respond to your requests:

  Nicholas Acklam
  Department of Ecology
  Toxic Cleanup Program, SWRO
  PO Box 47775
  Olympia, WA 98504-7775
  Phone: 360-407-6347
  E-mail: nicholas.acklam@ecy.wa.gov

- **South Puget Sound Salmon Enhancement Group**

  The application designated you, Robert Suss, as the project manager for Sumner National Auto Parts, Inc. 16008 60th Street East, Sumner, WA 98390. We will therefore respond only to your requests. If someone replaces you as the project manager or your contact information changes, please submit a Change of Contact Form. You can download the Form from our VCP web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

Requests for Written Opinions

In your application, you requested a written opinion on the sufficiency of your cleanup action plan. Ecology will review the documents you submitted and provide you a written response within about 90 days.

Reporting Requirements

When requesting written opinions on planned or completed remedial actions, please comply with the following reporting requirements:

- **Licensing.** You must submit documents containing geologic, hydrologic, or engineering work under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.
- **Data Submittal.** You must submit environmental sampling data in both a printed form and an electronic form capable of being transferred into our Environmental Information Management (EIM) system. For an overview of data submittal requirements, please refer to **Enclosure B**, which includes a copy of Toxics Cleanup Program Policy 840. For instructions on how to submit data, please refer to the following web site: www.ecy.wa.gov/programs/tcp/data_submittal/data_requirements.htm.

Failure to comply with these requirements may result in unnecessary delays.

Payment

Ecology will send monthly invoices to the billing contact designated in the Application Form. If someone replaces the billing contact or their contact information changes, please submit a Change of Contact Form. You can find the Form on the VCP web site.

The invoice will include a summary of the costs incurred, payments received, identity of staff involved, and the amount of time spent on the Project during the previous month. Payment is due within thirty days of the invoice date. For more information on the billing system, please refer to the VCP web site.

Contact Information

We are committed to working with you to accomplish the prompt and effective cleanup of the Site. Again, if you have any questions about the VCP or your Project, please contact me at 360-407-6347.

Sincerely,

Nicholas Acklam
VCP Unit Manager
Toxics Cleanup Program, SWRO

NA: hd

Enclosures (2): A – Copy of VCP Agreement
B – Toxics Cleanup Program Policy 840: Data Submittal Requirements

By certified mail: [91710821333939704274 38]

cc: Jonathan M. Kemp, EnCo Environmental Corporation
Matt Alexander, Ecology

Enclosure A

Copy of VCP Agreement

VCP AGREEMENT

DEPARTMENT OF ECOLOGY
State of Washington

INSTRUCTIONS: Submit this Agreement (original) to Ecology as part of your Application. Before submitting, enter the Customer's name and the Site's address on the first page and sign the Agreement on the second page. If your Application is accepted, then Ecology will do the following: 1) identify the Site and VCP project in the box below; 2) sign the Agreement; and 3) send you a copy of the completed Agreement.

This document constitutes an Agreement between the State of Washington Department of Ecology (Ecology) and Robert A. Suss. (Customer) to provide informal site-specific technical consultations under the Voluntary Cleanup Program (VCP) for the Site identified below and associated with the following address: Sumner National Auto Parts, Inc., 16008 60th Street East, Sumner WA 98390.

The purpose of this Agreement is to facilitate independent remedial action at the Site. Ecology is entering into this Agreement under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC. If a term in this Agreement is defined in MTCA or Chapter 173-340 WAC, then that definition shall govern.

Services Provided by Ecology

Upon request, Ecology agrees to provide the Customer informal site-specific technical consultations on the independent remedial actions proposed for or performed at the Site consistent with WAC 173-340-515(5). Those consultations may include assistance in identifying applicable regulatory requirements and opinions on whether the remedial actions proposed for or conducted at the Site meet those requirements.

Ecology may use any appropriate resource to provide the Customer with the requested consultative services. Those resources may include, but shall not be limited to, those of Ecology and the Office of the Attorney General. However, Ecology shall not use independent contractors unless the Customer provides Ecology with prior written authorization.

In accordance with RCW 70.105D.030(1)(i), any opinions provided by Ecology under this Agreement are advisory only and not binding on Ecology. Ecology, the state, and officers and employees of the state are immune from all liability. Furthermore, no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance under the VCP.

Payment for Services by Customer

The Customer agrees to pay all costs incurred by Ecology in providing the informal site-specific technical consultations requested by the Customer consistent with WAC 173-340-515(6) and 173-340-550(6). Those costs may include the costs incurred by attorneys or independent contractors used by Ecology to provide the requested consultative services. Ecology's hourly costs shall be determined based on the method in WAC 173-340-550(2).

Ecology shall mail the Customer a monthly itemized statement of costs (invoice) by the tenth day of each month (invoice date) that there is a balance on the account. The invoice shall include a summary of the costs incurred, payments received, identity of staff involved, and amount of time staff spent on the project.

The Customer shall pay the required amount by the due date, which shall be thirty (30) calendar days after the invoice date. If payment has not been received by the due date, then Ecology shall withhold

FOR COMPLETION BY ECOLOGY ONLY	
	Facility / Site Name: Sumner National Auto parts Inc. 16008 60th St E. Sumner WA 98390
	Facility / Site No.: 1307
	VCP Project No.: SW1547

RECEIVED
AUG 16 2016
WA State Department of Ecology (SWRO)

any requested opinions and notify the Customer by certified mail that the debt is past due. If payment has not been received within sixty (60) calendar days of the invoice date, then Ecology shall stop all work under the Agreement and may, as appropriate, assign the debt to a collection agency under Chapter 19.16 RCW. The Customer agrees to pay the collection agency fee incurred by Ecology in the course of debt collection.

Reservation of Rights / No Settlement

This Agreement does not constitute a settlement of liability to the state under MTCA. This Agreement also does not protect a liable person from contribution claims by third parties for matters addressed by the Agreement. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). Ecology's signature on this Agreement in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority.

Ecology reserves all rights under MTCA, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

Effective Date, Modifications, and Severability

The effective date of this Agreement shall be the date on which this Agreement is signed by the Toxics Cleanup Program's Section Manager or delegated representative. This Agreement may be amended by mutual agreement of Ecology and the Customer. Amendments shall be in writing and shall be effective when signed by the Toxics Cleanup Program's Section Manager or delegated representative. If any provision of this Agreement proves to be void, it shall in no way invalidate any other provision of this Agreement.

Termination of Agreement

Either party may terminate this Agreement without cause by sending written notice by U.S. mail to the other party. The effective date of termination shall be the date Ecology sends notice to the Customer or the date Ecology receives notice from the Customer, whichever occurs first. Unless otherwise directed, issuance of a No Further Action opinion, either for the Site as a whole or for a portion of the real property located within the Site, shall constitute notice of termination by Ecology.

Under this Agreement, the Customer is only responsible for costs incurred by Ecology before the effective date of termination. However, termination of this Agreement shall not affect any right Ecology may have to recover its costs under MTCA or any other provision of law.

Representations and Signatures

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to enter into this Agreement and to execute and legally bind the Customer to comply with the Agreement.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Marian L. Abbett for Rebecca Lawson
Signature

Marian L. Abbett
Printed Name

Section Manager, SWRO
Toxics Cleanup Program *Section*

Date: 9/8/16

Robert A. Suss
Name of Customer

Signature

Robert A. Suss
Printed Name of Signatory

Propety Owner
Title of Signatory

Date: 7-13-2016

If you need this document in an alternative 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.

Enclosure B

Toxics Cleanup Program Policy 840
Data Submittal Requirements

DEPARTMENT OF ECOLOGY
State of Washington

Toxics Cleanup Program

Policy 840: Data Submittal Requirements

Established: August 1, 2005

Revised: April 12, 2016

Contact: Policy & Technical Support Unit, Headquarters

Purpose: This Policy provides guidance on the submission of environmental monitoring data generated or collected during the investigation or cleanup of contaminated sites under the Model Toxics Control Act.

References: WAC 173-340-840 (5)
Chapter 173-204 WAC
Environmental Information Management System Database
Sediment Cleanup Users Manual II

Attachments: A - Model Grant and Permit Condition

Disclaimer: This Policy is intended solely for the guidance of Ecology staff. It is not intended, and cannot be relied on, to create rights, substantive or procedural, enforceable by any party in litigation with the state of Washington. Ecology may act at variance with this Policy depending on site-specific circumstances, or modify or withdraw this Policy at any time.

Approved by:

James J. Pendowski, Program Manager
Toxics Cleanup Program

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

The investigation and cleanup of contaminated sites generate a large volume of environmental monitoring data that need to be properly managed to facilitate regulatory decisions. The data also need to be accessible by Ecology staff, site owners, consultants, and the general public.

This Policy describes the requirements for submitting environmental monitoring data generated or collected during the investigation and cleanup of contaminated sites under Chapter 70.105D RCW, Model Toxics Control Act (MTCA).

This Policy applies to Ecology staff and any person who investigates or cleans up contaminated sites and submits related environmental sampling data to Ecology, including potentially liable persons, Voluntary Cleanup Program (VCP) customers, prospective purchasers, government agencies, and Ecology contractors.

1. Unless otherwise specified by Ecology, all environmental monitoring data generated during contaminated site investigations and cleanups are required to be submitted to Ecology in both written format and electronically through EIM.

Environmental monitoring data include biological, chemical, physical, and radiological data generated during site investigations and cleanups under the Model Toxics Control Act Cleanup Regulation (Chapter 173-340 WAC) and the Sediment Management Standards (Chapter 173-204 WAC).

The Environmental Information Management System (EIM) is a searchable database that contains data collected by Ecology (or by environmental contractors on behalf of Ecology), and by Ecology grant recipients, local governments, the regulated community, and volunteers.

Under this Policy, data are considered to be "environmental monitoring data" if generated or collected during:

a. Site investigations and cleanups conducted under an order, agreed order or consent decree, permit, grant, loan, contract, interagency agreement, memorandum of understanding; or
b. An independent remedial action.

Under this Policy, data are not considered to be environmental monitoring data if generated or collected for the following studies. This means that entering data into EIM, while encouraged, is optional for:

a. Non site-specific studies;
b. Site hazard assessments that result in no further action; and
c. All initial site investigations.

2. Orders, agreed orders, consent decrees, or permits must include a condition that site-specific environmental sampling data be submitted in compliance with this Policy.

For those reports prepared and submitted for review under an order, agreed order, consent decree, or permit, the environmental sampling data must be entered into EIM at the time of report submittal. If reports for such work do not include documentation that data was submitted in compliance with this Policy, the reports shall be deemed incomplete and a notice will be provided to the submitter.

Generally, Ecology should not review such reports until that documentation is provided. The assistant attorney general assigned to the site should be consulted for an appropriate response when Ecology's review is delayed due to failure of data entry into EIM.

3. Site-specific environmental sampling data must be entered into EIM before Ecology will review independent remedial action reports under the Voluntary Cleanup Program.

For independent remedial action reports prepared and submitted under Ecology's Voluntary Cleanup Program (VCP), environmental sampling data must be entered into EIM at the time any report is submitted requesting an opinion on the sufficiency of the action under the VCP.

However, Ecology may establish an alternate deadline for entering data into EIM if this Policy creates undue hardship on the VCP customer and Ecology does not need the data in EIM to begin the review.[1] But in no case will Ecology issue a No Further Action (NFA) opinion letter under the VCP—either for the whole site or a property located within the site—until the data has been entered into EIM.

If sampling data has not been entered into EIM, Ecology may still review the report for the limited purpose of determining whether it contains sufficient information to provide an opinion. If the report is incomplete, Ecology may also respond to the VCP customer's request for an opinion by issuing an administrative letter rejecting the report and requesting additional information.

[1] For example, when a site has multiple groundwater sampling events over time, it may be more efficient to enter the data into EIM at one time after monitoring is completed, rather than for each monitoring event. Another example would be where a VCP consultant is using EIM for the first time and needs additional time to learn how to use the system.

4. Grants, contracts, interagency agreements or memoranda of understanding issued after the effective date of this Policy must include a condition that site-specific data be submitted in compliance with this Policy.

Reports on such work will not be accepted as complete until the data have been submitted in compliance with this Policy. If a payment or transfer of funds is involved in the transaction, the relevant payment or transfer shall be withheld until this requirement has been met. Attachment A contains example language to include in these documents.

5. Data generated during upland investigations and cleanups must be submitted electronically using Ecology's EIM.

The Environmental Information Management System is Ecology's main database for environmental monitoring data. Proper submission of data through this system meets the requirement of submitting such data in an electronic format.

Additional information about EIM, including instructions for data submittal, can be found on Ecology's EIM website at http://www.ecy.wa.gov/eim/. The Toxic Cleanup Program's (TCP) EIM Coordinator can also provide technical assistance to site managers and consultants who use EIM.

6. Data generated during sediment investigations and cleanups must be submitted electronically using Ecology's EIM.

Effective March 1, 2008, EIM is Ecology's data management system for sediment-related data. Proper submission of data through EIM meets the requirement of submitting such data in an electronic format. Electronic data must be submitted to Ecology simultaneously with the accompanying report.

For additional information on sediment sampling and analysis plan requirements, see Ecology's *Sediment Cleanup Users Manual (SCUM II)* Publication No. 12-09-057, available at: https://fortress.wa.gov/ecy/publications/summarypages/1209057.html

The Sediment Data Coordinator in TCP's Aquatic Land Cleanup Unit (ALCU) can also provide technical assistance with EIM.

7. Data submitted electronically using EIM must be checked by the Toxics Cleanup Program's EIM Coordinator before the data will be officially loaded into EIM.

Normally, TCP's EIM Coordinator will receive a notice that data have been submitted through EIM. Upon receipt of the notice, the EIM Coordinator should notify the Cleanup Project Manager. The EIM Coordinator then reviews the submittal for quality control and officially loads the data into the system.

Attachment A

Model Grant and Permit Condition

Publication Number: 16-09-050 *Revised: April 12, 2016*

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Model Grant and Permit Condition

The following condition is to be inserted in grants, loans, contracts, interagency agreements, and memoranda of understandings where site-specific environmental monitoring data is expected to be generated:

> All sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840: Data Submittal Requirements. Electronic submittal of data is not required for site hazard assessments that result in no further action and initial site investigations. (FOR GRANTS, AND LOANS ADD: Failure to properly submit sampling data will result in Ecology withholding payment and could jeopardize future funding.)

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CITY OF SUMNER WASHINGTON

1104 MAPLE STREET, SUMNER WA 98390
COMMUNITY DEVELOPMENT DEPARTMENT
253-299-5520

SEPA DETERMNATION OF NON-SIGNIFICANCE

Proposal Description:
Excavate and temporarily stockpile on site approximately 500 cubic yards of soil that has been contaminated with heavy metals and petroleum; test stockpiled soil to meet Dept. of Ecology cleanup regulations; transport approximately 200 cubic yards of contaminated soil to a to a licensed treatment/disposal facility. Project will follow a Cleanup Action Work Plan to be approved by Dept. of Ecology. Documents related to this proposal are available on the City of Sumner website at www.ci.sumner.wa.us.

Location/Parcel(s):	**National Auto Parts, Sumner** 16008 60th Street East, Sumner Parcel #0520198006
Project Number:	PLN-2017-0013
Applicant:	Jonathan Kemp, Enco Environmental Corporation, Puyallup, WA
Property Owner:	Robert Suss, Federal Way, WA
Date of Complete Application:	March 6, 2017
Lead Agency:	City of Sumner

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

___ There is no comment period for this DNS.
___ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.
_X_ This DNS is issued under 197-11-340 (2); the lead agency will not act on this proposal for 14 days from the publish date below.

Responsible Official: Ryan Windish
Position/Title: Director of Community Development
Phone: (253) 299-5524
Address: 1104 Maple Street Suite 250, Sumner, WA 98390

Date: March 10, 2017

Signature: 

Ryan Windish, Community Development Director

Published: March 20, 2017

PO Box 1212
Puyallup WA 98371
Telephone: 253.841.9710
Fax: 253.841.0264
www.encoec.com

Ms. Allison Judge, Permit Specialist
City of Sumner
Community Development Center
1104 Maple Street, STE 250
Sumner WA 98390

January 16, 2017

RE: Fill & Grade – TESC Permit & SEPA Application with Environmental Checklist
Independent Remedial Cleanup Action
Sumner National Auto Parts, 16008 60th Street East, Sumner WA 98390
Tax Parcel: 0520198006
City of Sumner Permit File Number: SIT-2016-0146

Dear Allison:

Based on your letter dated November 4, 2016 EnCo Environmental Corporation (EnCo) hereby submits the requested updates and clarifications for the City of Sumner permits and SEPA documents required for the above-referenced project. All comments have been addressed in this cover letter as itemized below. I understand that all comments from various City departments need to be addressed before final approval.

1.0 Public Works Department

1. This submittal does not comply with the application checklist: 24" by 36" size plans are needed for this review. **Response**: Three (3) sets of 24" by 36" size plans are included with this submittal. The modified Fill & Grade – TESC site plans are also included as a .pdf file on a disc.

2. Storm report must be bound. **Response**: Three (3) complete bound sets of the modified Fill & Grade – TESC (Drainage & Erosion Control Report and Construction Stormwater Pollution Prevention Plan (CSWPPP) is included with this submittal. The modified reports are also included as a .pdf file on a disc.

3. Provide a sediment trap or another more intensive BMP to satisfy element 5 of Section 8 of the CSWPPP. **Response**: A sediment trap was sized per Volume II, BMP C240 of the 2005 ECOLOGY Stormwater Manual as requested by the City Engineer. This trap has been engineered as presented in **Section 12 – Engineering Calculations** in the CSWPPP. The design, layout, and specifications of the sediment trap are depicted on **Figures C2.0** and **C3.0**.

4. The storm report was incomplete and did not adequately provide documentation for the design. **Response**: **Section 1 – Project Description in the Drainage and Erosion Control Report** (page 4) has been updated to include description

of the temporary sediment control measures that will be put into place to limit sediment contamination. These temporary measures will remain in place until fill is imported to the site and the area is stabilized. This trap has been engineered as presented in **Section 12 – Engineering Calculations** in the CSWPPP. The design, layout, and specifications of the sediment trap are depicted on **Figures C2.0** and **C3.0**.

2.0 Planning Department

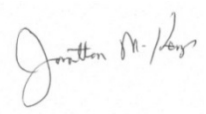
1. Project will first require SEPA environmental review. Please complete a SEPA application form and a SEPA checklist. **Response**: One (1) copy of the completed and signed SEPA application form and four (4) copies of the completed and signed SEPA Environmental Checklist are included with this submittal.

   The submittal also includes four (4) 11" by 17" and two (2) 24" by 36" site plan drawings (**Sheet Number C1.0**). This cover letter, SEPA application form, and SEPA Environmental Checklists are also included as a .pdf file on a disc.

   The zoning for the project site is General Commercial. A mailing list of all property owners within 500 feet of the project site is included with this submittal. The mailing list includes an Excel table and a site map depicting the address locations. This information has been submitted as a .pdf file on a disc. The mailing list has also been submitted electronically to the City of Sumner Planning Department as an Excel file.

   The required City of Sumner review and processing fee of $400.00 for a "minor" SEPA project is included with this submittal.

Jonathan M. Kemp



President
EnCo Environmental Corporation

City of Sumner
SEPA
Application

(Please fill out ALL fields unless otherwise noted)

File Number: SIT-2016-0146

Community Development
1104 Maple Street, Suite 250
Sumner, WA 98390
Tel. (253)299-5530 Fax: (253)299-5539
www.ci.sumner.wa.us

Site/Project Address (if available): Sumner National Auto Parts, Inc. / 16008 60th Street East		Parcel #: 0520198006		
Owner: Mr. Robert A. Suss	Phone: (253) 275-7106	Email: bobsuss@msn.com		
Owner Address: 3117 SW 342nd Street		City: Federal Way	State: WA	Zip: 98023
Surveyor/Engineer/Contractor: Consultant: EnCo Environmental Corporation		Phone: (253) 841-9710	Contractor License Number: Tax ID: UBI 601683866	
Address: P.O. Box 1212	Email: jkemp@encoec.com	City: Puyallup	State: WA	Zip: 98371
Contact Person: Jonathan M. Kemp	Phone: (253) 841-9710	Fax:		
Contact Address: P.O. Box 1212	Email: jkemp@encoec.com	City: Puyallup	State: WA	Zip: 98371

Description of Project:

Excavate and temporarily stockpile soil that has been contaminated with heavy metals and oil range petroleum east of the existing building (a vacant lot) from historic leaks and spills of automobile parts washing and engine operations and vehicle fluids such as motor oil, cleaning solvents, antifreeze, and brake fluid. The work will follow a Cleanup Action Work Plan that has been reviewed and will be approved by ECOLOGY prior to implementation. After soil excavation, the bottoms and sidewalls of the open excavations and stockpiled soil will be sampled and tested to meet ECOLOGY MTCA cleanup regulations. The contaminated soil will be loaded and transported (via a TPCHD Waste Disposal Authorization permit) to a licensed treatment/disposal facility (LRI in Graham). The volume of soil to scarify, excavated, and stockpile is about 500 cubic yards and the volume of contaminated soil to be transported off site for disposal is about 215 cubic yards.

Supporting Materials Required:

Office Applicant - (please check off all "applicant" boxes)

- ☑ **SEPA** Application Form and Checklist
  4 copies of the completed SEPA Checklist
  Required fee (Please consult the Permit Specialist)

- ☑ **Site Plan Drawing (To scale including ALL items below)** — **4 - 11" x 17"**
  (Prepared, stamped, and dated by a licensed surveyor) — **2 - Full Sheet (24"x 36")**
  - o Legal Descriptions of existing and proposed lots
  - o Vicinity map and site zoning
  - o Property line dimensions and square footage of new lots
  - o Existing public and private roads, driveway access and all easements
  - o Existing and proposed fire hydrant locations or distance to the nearest hydrants
  - o All major man-made features; drainage ditches, railroad tracks, etc.
  - o Existing building locations and setbacks from property lines (if any)
  - o Proposed access width
  - o Building envelopes and lot number assigned to each lot
  - o Location of nearest existing utilities including sanitary sewer, storm drainage, and water services
  - o Environmental constraints identified and delineated (if any) such as wetlands, rivers, streams, slopes

  Other information as applicable from Pre-Application review comments (Wetland reports, etc)

- ☑ Mailing list of all property owners within 500 ft, 1000 if project is in M1 zone – electronically (Excel)

- ☑ **PDF Copy of all submitted documents**

I, THE UNDERSIGNED, SWEAR UNDER THE PENALTY OF PERJURY THAT THE ABOVE RESPONSES ARE MADE TRUTHFULLY AND TO THE BEST OF MY KNOWLEDGE. I ALSO UNDERSTAND THAT, SHOULD THERE BE ANY WILLFUL MISREPRESENTATION OR WILLFUL LACK OF FULL DISCLOSURE ON MY PART, THE AGENCY MAY WITHDRAW ANY DETERMINATION OF NON-SIGNIFICANCE THAT IT MIGHT ISSUE IN RELIANCE UPON THIS CHECKLIST.

****BY LEAVING THE CONTRACTOR INFORMATION SECTION BLANK, I HEREBY CERTIFY FURTHER THAT CONTRACTORS (GENERAL OR SUBCONTRACTORS) WILL NOT BE HIRED TO PERFORM ANY WORK IN ASSOCIATION WITH THIS PERMIT. (building permits only)**

Jonathan M. Kemp
SIGNATURE OF OWNER / AUTHORIZED AGENT

Jonathan M. Kemp
PRINTED NAME

DATE: 01 / 18 / 17

City of Sumner

ENVIRONMENTAL CHECKLIST

A. Background

1. Name of proposed project:

   Independent Remedial Cleanup Action, **Sumner National Auto Parts, Inc**., 16008 60th Street East, Sumner WA 98390

2. Name of applicant:

   Mr. Robert A. Suss, Landowner (Applicant) AND Jonathan M. Kemp (Consultant)

3. Address and phone number of applicant and contact persons:

   Mr. Robert A. Suss (Applicant), 3117 SW 342nd Street, Federal Way, WA 98023, 253.275.7106 **AND** Jonathan M. Kemp (Consultant), EnCo Environmental Corporation, PO Box 1212, Puyallup WA 98371, 253.841.9710.

4. Date checklist prepared:

   January 16, 2017

5. Agency requesting checklist:

   City of Sumner Planning

6. Proposed timing or schedule (including phasing, if applicable):

   It is anticipated that this project will be initiated during the month of June to August 2017.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   No, does not apply

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

   The cleanup will follow a Cleanup Action Work Plan that will be reviewed and approved by ECOLOGY prior to implementation.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

   City of Sumner Fill and Grade – TESC Permit is under review.

10. List any government approvals or permits that will be needed for your proposal, if known.

    City of Sumner Fill and Grade – TESC Permit is under review.

    Awaiting ECOLOGY approval of Independent Remedial Cleanup Action Work Plan.

Tacoma Pierce County Health Department Waste Disposal Authorization Permit (approved) to allow the excavated and removed contaminated soil to be disposed of at the Land Recovery, Inc. landfill in Graham.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

    Excavate and temporarily stockpile soil that has been contaminated with heavy metals and oil range petroleum east of the existing building (a vacant lot) from historic leaks and spills of automobile parts washing operations and vehicle fluids such as motor oil, cleaning solvents, antifreeze, and brake fluid. The work will follow a Cleanup Action Work Plan that has been reviewed and will be approved by ECOLOGY prior to implementation. After soil excavation, the bottoms and sidewalls of the open excavations and stockpiled soil will be sampled and tested to meet ECOLOGY MTCA cleanup regulations. The contaminated soil will be loaded and transported (via a TPCHD Waste Disposal Authorization permit) to a licensed treatment/disposal facility (LRI in Graham). The volume of soil to scarify, excavated, and stockpile is about 500 cubic yards and the volume of contaminated soil to be transported off site for disposal is about 215 cubic yards. The initial phase of the proposed cleanup action should take about five to seven 8-hour work days to complete. The site should be stabilized in about 45 days after starting the cleanup action.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

    Location: Sumner National Auto Parts, Inc., 16008 60th Street East, Sumner WA 98390

    The project site is located in the southwest quarter of the southeast quarter of Section 19, Township 20N, Range 05E at the southeast corner of the intersection of 60th Street East and 160th Avenue East.

    Legal description, site plan, vicinity map, and topographic map are presented on the attached Site Plan as Sheet C1.0.

TO BE COMPLETED BY APPLICANT

B. ENVIRONMENTAL ELEMENTS

EVALUATION FOR AGENCY USE ONLY

1. **Earth**

~~a.~~ General description of the site (circle one):

Flat, ~~rolling, hilly, steep slopes, mountainous, other~~

b. What is the steepest slope on the site (approximate percent slope)?

1 percent

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Briscot Loam. In a typical profile the surface layer is dark brown loam about 11 inches thick. The underlying material, to a depth of 29 inches is mottled, dark grayish brown fine sandy loam and silt loam. Between depths of 29 inches and more than 60 inches the soil is mottled, very dark grayish brown medium, well sorted sand.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

The estimated limit of contaminated soil is defined as soil the covers approximately 12,000 square feet of space with an approximate 500 cubic yard of cut.

The excavated area will be backfilled with clean imported soil to existing grade obtained from a local gravel yard or other clean source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No, however as a precautionary measure a silt fence and a crushed rock construction entrance will be installed to provide adequate erosion control protection of adjacent properties and streets.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

None, after the cleanup the excavations will be backfilled with clean earthen fill material to grade.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

This information is presented in the City of Sumer Fill & Grade – TESC permit that is under review. In summary, temporary sediment control measures will be put into place to limit sediment transport and contamination. No permanent stormwater controls are

proposed as part of this project other than the eventual permanent stabilization of the area after the cleanup. These temporary measures will remain in place until fill is imported to the site and the area is stabilized. Source controls will be utilized on the project site to prevent stormwater from coming in contact with pollutants. This project proposes to contain runoff in the construction area using the erosion control measures.

Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Insignificant amounts of dust and heavy equipment exhaust will be generated during soil excavation and loading activities.

b. Are there any off–site sources of emissions or odor that may affect your proposal? If so, generally describe.

No, does not apply

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None, does not apply

3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year–round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No, does not apply

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No, does not apply

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Does not apply

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No, does not apply

5) Does the proposal lie within a 100–year floodplain? If so, note location on the site plan.

No, does not apply

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No, does not apply

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No, does not apply

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals… ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Source of stormwater runoff will be from direct precipitation over the area to be excavated. The north most excavation on the project site will be incorporated into a temporary sediment trap until fill is imported into the excavation area and the area is stabilized. The trap overflow will direct water through the existing grassy area located northeast of the excavation area. The calculations, design, layout, and specifications of the sediment trap are depicted on Figures C2.0 and C3.0 on the City of Sumner Fill & Grade – TESC permit that is under review.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Historic leaks and spills of automobile parts washing and engine cleaning operations and vehicle fluids such as motor oil, cleaning solvents, antifreeze, and brake fluid (heavy metals and oil range petroleum) spilled and leaked over the ground surface in an area east of the existing building (a vacant lot).

A groundwater sample collected from MW-1 on October 30, 2015 reported no detectable concentrations of gasoline, diesel, and oil range organics and no detectable concentrations of volatile organic compounds, lead, and cadmium. Very low levels of total arsenic and chromium were reported; these levels were significantly below cleanup levels.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Source of stormwater runoff will be from direct precipitation over the area to be excavated. The north most excavation on the project site will be incorporated into a temporary sediment trap until fill is imported into the excavation area and the area is stabilized. The trap overflow will direct water through the existing grassy area located northeast

of the excavation area. The calculations, design, layout, and specifications of the sediment trap are depicted on Figures C2.0 and C3.0 on the City of Sumner Fill & Grade – TESC permit that is under review.

4. **Plants**

a. Check or circle types of vegetation found on the site:

Deciduous tree: ~~alder, maple, aspen, other,~~ does not apply
Evergreen tree: ~~fir, cedar, pine, other,~~ does not apply
Shrubs: Few deciduous shrubs in the southwest corner
Grass: mowed grass and weeds
Pasture: does not apply
Crop or grain: does not apply
Wet soil plants: ~~cattail, buttercup, bullrush, skunk cabbage, other,~~ does not apply
Water plants: ~~water lily, eelgrass, milfoil, other,~~ does not apply
Other types of vegetation: does not apply

b. What kind and amount of vegetation will be removed or altered?

Weeds and grasses

c. List threatened or endangered species known to be on or near the site.

Does not apply

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Does not apply

5. **Animals**

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: ~~hawk, heron, eagle,~~ songbirds (chickadee), other: American crow, robin
Mammals: ~~deer, bear, elk, beaver, other: skunk, opossum, squirrel,~~ does not apply
Fish: bass, salmon, trout, herring, shellfish, other, does not apply

b. List any threatened or endangered species known to be on or near the site.

Does not apply

c. Is the site part of a migration route? If so, explain.

Does not apply. The Puyallup River is located about 5,100 feet southwest of the project site.

d. Proposed measures to preserve or enhance wildlife, if any:

Does not apply

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

All pollutants, including waste materials and contaminated soils will be handled and disposed of in a manner that does not cause contamination to the environment. Worker safety and health will follow the general provisions presented in WAC 173-340-810 – Worker Safety and Health which will include meeting the requirements of WAC 296-62, 49.17 RCW, and OSHA 29 U.S.C. Sec. 651.

1) Describe special emergency services that might be required.

The required elements for protection monitoring for EnCo personnel will be presented in an abbreviated Health and Safety Plan. This plan will provide the shortest route to the nearest health care center and hospital.

2) Proposed measures to reduce or control environmental health hazards, if any:

The required elements for protection monitoring for EnCo personnel will be presented in an abbreviated Health and Safety Plan. This plan will provide the shortest route to the nearest health care center and hospital.

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Heavy equipment such as dump truck, bull dozer, loader, and a rubber tire back hoe will be used during the cleanup action.

2) What types and levels of noise would be created by or associated with the project on a short–term or a long–term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

   Noise levels will consist of normal levels encountered when using heavy equipment on common construction and land development sites. Hours of operation will be limited from 8:00 A.M. to 5:00 P.M. , Monday through Friday.

3) Proposed measures to reduce or control noise impacts, if any:

   Operators and workers in the cleanup zone will wear hearing protection.

8. **Land and Shoreline use**

a. What is the current use of the site and adjacent properties?

   The project site is currently occupied by one commercial store/warehouse/office building that is currently occupied by a retail automobile parts supply company (Sumner National Auto Parts, Inc.).

   North: 60th Street East; nursery – Windmill Gardens (N), Dwellings (NE

   East: Veterinary Clinic (Sumner Veterinary Hospital)

   South: Commercial and Warehouse (Kersey Mobility)

   West: 160th Avenue East; Dwellings (NW) and Commercial (Northwest Construction Control & Allied Enterprises)

b. Has the site been used for agriculture? If so, describe.

   Does not apply

c. Describe any structures on the site.

   The 7,500 square foot, metal framed and metal roofed building was reportedly built in 1979 and has always been occupied by Sumner National Auto Parts, Inc. The 1.58-acre section of land is known as Pierce County tax parcel number 0520198006. The subject parcel is rectangular in shape and is 238 feet wide and approximately 303 feet deep.

d. Will any structures be demolished? If so, what?

   Does not apply

e. What is the current zoning classification of the site?

   The property is currently zoned as General Commercial

f. What is the current comprehensive plan designation of the site?

   The site is located within Sumner City Limits – Urban

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Does not apply

i. Approximately how many people would reside or work in the completed project?

Up to 4 workers

j. Approximately how many people would the completed project displace?

Does not apply

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The cleanup action will obtain a No Further Action opinion letter from ECOLOGY upon completion so that the property can be classified with an unrestricted land use. The cleanup action will be protective of human health and the environment.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low–income housing.

Does not apply

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low–income housing.

Does not apply

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Does not apply

b. What views in the immediate vicinity would be altered or obstructed?

Does not apply

c. Proposed measures to reduce or control aesthetic impacts, if any:

Does not apply

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Does not apply

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply

c. What existing off–site sources of light or glare may affect your proposal?

Does not apply

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Does not apply

b. Would the proposed project displace any existing recreational uses? If so, describe.

Does not apply

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Does not apply

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Does not apply

c. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Does not apply

b. Proposed measures to reduce or control impacts, if any:

Does not apply

14. **Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The project site is served by 60th Street East to the north and 160th Avenue East to the west. The portion of the site to be worked during the cleanup action will be accessed off of 60th Street East. See Sheet C1.0.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Does not apply

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Does not apply

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Does not apply

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Does not apply

g. Proposed measures to reduce or control transportation impacts, if any:

Does not apply

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Does not apply

b. Proposed measures to reduce or control direct impacts on public services, if any.

Does not apply

16. **Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Electricity, natural gas, water, refuse service, recycle service, telephone / cable, sanitary sewer, storm sewer

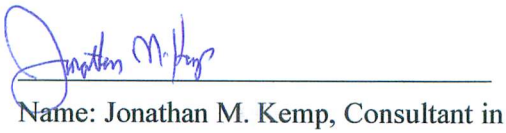
b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply

C. SIGNATURE

I, the undersigned, swear under the penalty of perjury that the above responses are made truthfully and to the best of my knowledge. I also understand that, should there be any willful misrepresentation or willful lack of full disclosure on my part, the agency may withdraw any determination of non-significance that it might issue in reliance upon this checklist.

Signature:



Name: Jonathan M. Kemp, Consultant in Behalf of the Landowner

Date Submitted: January 16, 2017

[Statutory Authority: RCW 43.21C.110. 84–05–020 (Order DE 83–39), § 197–11–960, filed 2/10/84, effective 4/4/84.]

CITY OF SUMNER
1104 Maple St, Ste 250
Sumner, WA 98390
Tel: (253) 299-5530
Fax: (253) 299-5539
www.ci.sumner.wa.us

Permit ID: **29250**
Permit No.: **SIT-2016-0146**
Inspection Request Line: (253) 299-5530

Permit Type: **TESC / FILL & GRADE**

Description: EXCAVATING AND TEMPORARY STOCKPILING OF CONTAMINATED SOIL - EXCAVATED SOIL WILL BE SAMPLED AND TESTED THEN TRANSPORTED TO A TREATMENT FACILITY. ESTIMATED VOLUME OF SOIL IS ABOUT 600 CUBIC YARDS EAST OF THE BUILDING - EXCAVATING NO DEEPER THAN 2 FEET BELOW GRADE FOR THE SOIL CLEAN UP

APPLICATION DATE: 9/22/2016 | ISSUE DATE: 5/22/2017 | EXPIRATION DATE: 3/22/2017

Project Name:
Site Address: 16008 60TH ST E
SUMNER WA 98390-3055

Project Valuation: $ 0.00
Square Footage: 0

Parcel No: 0520198006

Owner's Name: ROBERT A SUSS
Owner's Address: 16008 60TH ST E
SUMNER WA 98390-3055

Phone: (253) 275-7106

Contractor's Name:
Contractor's Address:

Phone:
Email:

Contact Person:

Phone:

PERMIT DETAILS	

FEES			
PW Plan Review:	$990.00	Recorded Documents:	$82.00
PW SDC Storm:	$1,393.92	PW Storm Permit:	$1,825.00

FEE TOTAL: $ 4,290.92

Conditions: NOTE: Approval does not relieve the contractor/owner from complying with all applicable codes and requirements, nor does it abrogate the requirements of other authorities having jurisdiction.

EROSION CONTROL INSPECTION REPORT: The applicant shall submit a monthly erosion and sediment control inspection report to the City for all Civil permits.

BEFORE YOU DIG: Prior to commencing work the applicant/contractor must consult with the pipeline company when excavating within 100 feet of a gas transmission pipeline easement or right-of-way

STREET LIGHTS in the right of way shall have approved plans prior to installation.

RIGHT-OF-WAY WORK: Prior to commencing work in the public right-of-way a Street Obstruction Notification form shall be submitted and a bond and insurance are required.

" CERTIFICATE OF INSURANCE: All permittees or their contractors: Submit a copy of the CG 20 12 endorsement naming the City of Sumner, its officers and employees as an additional insured. Site address and/or project # shall be in the description. Maintain a Commercial General Liability insurance policy for the duration of the permit written with limits no less than $1,000,000 each occurrence, $2,000,000 general aggregate and a $2,000,000 products- completed operations aggregate limit. Applicant shall not reduce or cancel the policy without thirty (30) days written notice to the City.

" STREET OBSTRUCTION NOTIFICATION must be submitted to the City of Sumner Public Works Department a MINIMUM of 2 working days prior to any work being done in the City Right-Of-Way. (The submittal date does not count as a working day.).

" TRAFFIC CONTROL PLAN must be submitted for city review and approval before any construction work can begin in public right-of-way. Traffic control will be maintained by the contractor, construction signs, cones, barricades and flag person, etc., as required by the City Engineer.

" UTILITY LOCATE: Owner and/or contractor are required to call the "One Call" number system for utility locates prior to excavation in City right-of-ways. 1-800-424-5555.

" RESTORE right-of-way to original or better condition as per City Standards.

" PAVEMENT CUTS shall be saw cut a minimum of twelve inches from any side of the trench prior to the permanent street repair.

" DAMAGE: Any sunken, fallen, cracked or chipped sidewalk or curb and gutter due to construction will be replaced by contractor/owner per City Standards and Specifications.

CONSTRUCTION HOURS are from 7:00 a.m. to 6:00 p.m. weekdays and 10:00 a.m. to 6:00 p.m. Saturdays, Sunday and holidays. Any overtime inspection fees to be paid by the contractor. Prior approval from the City is required.

DEVIATION FROM APPROVED PLANS require a re-submittal to the City for review and approval.

PRE-CONSTRUCTION MEETING: A pre-construction meeting shall be scheduled as a condition of the permit prior to initiating any work on the site. 253.299.5530

EROSION CONTROL IMPLEMENTATION: Prior to disturbing any ground surface on the project site call the permit line 253.299.5530 for inspection of the erosion control implementation. Contractor/applicant shall provide and install erosion control devices.

INSPECTION CARD: Shall be posted on the jobsite in a conspicuous location until FINAL approval has been granted by the Public Works Department and the Building Official.

AS-BUILT of off-site and/or on-site utilities: Call the permit line 253.299.5530 to schedule the as-built drawing of water, sewer, and/or storm lines to be filed with the City prior to final and/or occupancy.

WATER RUNOFF: No storm water runoff may enter onto adjacent private property.

BACKFLOW ASSEMBLY TEST REPORT + INSPECTION: Call the permit line 253.299.5530 for inspection for any backflow assembly required on fire, irrigation and/or domestic water line. The test report shall be submitted prior to the final and/or certificate of occupancy and annually thereafter.

CAPPING WATER, SEWER & STORM SERVICE LINE - FUTURE USE: Call the permit line 253.299.5530 with permit number to schedule a water, sewer, and/or storm cap. Capping of the utility service for future use shall be done by the contractor and an as-built shall be done by the inspector prior to final approval. Utility billing will continue for future credit on system development charges.

SEPTIC TO SEWER CONNECTION: Applicant shall submit a Tacoma Pierce County Health Department (TPCHD)

septic abandonment certification form prior to permit issuance with the top portion filled out only. Call 253.798.7661 for TPCHD.

SEWER LINE TAP: Prior to tap call the permit line 253.299.5530 to schedule with the inspector. Tap shall be done by the contractor.

SEWER LINE INSPECTION: Call the permit line 253.299.5530 to schedule with the inspector for as-built.

ILLEGAL CONNECTION to tightline the storm line into the sewer line.

STORM LINE TAP: Call the permit line 253.299.5530 to schedule with the inspector. Tap shall be done by the contractor

STORM INSPECTION: Call the permit line 253.299.5530 to schedule with the inspector for as-built. Stormwater shall be tight-lined to City system or infiltration trench installed.

WATER LINE TAP: Call the permit line 253.299.5530 with permit number to schedule a water service tap.
" Contractor shall provide a safe trench for all individual water service connections to an existing water main.
" City of Sumner will tap and supply all necessary parts for new water service 1.2 inches.
" Contractor shall backfill and compact trench and patch any pavement surface disturbed.
" Contractor shall provide and install the water line from the meter box to the structure. All work shall be in conformance with current City Standards.

WATER LINE INSPECTION: Per Standard Details, 200psi poly is required. Call the inspection line 253.299.5530 to schedule with the inspector for as-built.

WATER METER INSTALLATION: Call the Permit line 253.299.5530 to request the water meter installation.

WATER METER SERVICE ABANDONMENT:
" Call the permit line 253.299.5530 with permit number to schedule a water meter removal.
o The water meter is removed by the City Shop
" Contractor shall then disconnect water service line behind the City right-of-way.
" After disconnection, City Shops shall abandon service line at the water main.

FIRE SYSTEM BACKFLOW:
Circumstances requiring installation of a double check detector assembly (DCDA):
" Wet systems with an in-line booster pump or buildings over 30 feet high.
" Systems with a pumper connection within 1,700 feet of an approved auxiliary water supply source, as designated by the Fire Marshal and the City Engineer or designee.
" Looped systems or any system with private yard hydrants.
Double check detector assemblies shall be located on private property in a location approved by the City Engineer or designee in a reinforced concrete vault of adequate size and structural design for the specific site application. With prior approval of the City Engineer or designee, the DCDA may be located within the building when circumstances preclude locating the DCDA outside.
Where an existing fire line and/or yard hydrant system is extended to service a new building or a building addition, the existing fire line and/or yard hydrant and its backflow prevention device shall be upgraded to comply with current City codes and standards, and the latest edition of the AWWA Pacific Northwest Section Cross Connection Control Manual.
Proposed backflow protection assemblies shall be taken from the Washington State Department of Health's current approved list. All backflow assemblies are to be tested annually by a Washington State certified backflow assembly tester. Copies of annual inspection reports shall be submitted to the City. For new structures, a copy of the initial passing inspection report shall be required before use of the Sumner water system.
The most stringent requirements shall apply in the event of conflict between these Development Specifications and Standard Details, the WAC, and the RCW regarding backflow prevention.

SEGREGATION of the L.I.D. ASSESSMENT (2000) 001.237.600
Each L.I.D requires a completed application (blank form supplied by the City) + copy of the new recorded map + application fee per L.I.D application to the City of Sumner Permit Center.
Please direct any questions to Public Finance Inc. at (425) 885-1604 and/or publicfinanceinc@aol.com as they provide the local improvement district administration services and will need the parcel numbers for reference.

GREASE TRAP: Number GTI 00XXX in the City FOG Program.
" DESIGN: Submit design & calculations stamped by a professional engineer; Minimum size is 25GPM and 50 LB. The trap must be installed to accept all grey water from the establishment except the hand sink water from the

restroom facilities. Black water may not be routed through the grease trap.

" DESIGN APPROVAL: The proposed grease trap is acceptable. Installation of a grease trap to receive all grey water from the establishment except the hand sink water from the restroom facilities; Black water may not be routed through the grease trap.

" GREASE TRAP: annual inspection by the City; City Grease Trap Program number is GT 00000##.

" INSPECTION: Call the permit line 253.299.5530 to schedule installation assessment.

" MAINTENANCE AGREEMENT: Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times. The City FOG Program calls for an annual report, on the past year's maintenance of these facilities, be submitted on/or before March 15th of each year and an annual inspection by the City. (Ord. 2077 § 1 (part), 2004) SMC 13.16.390

TRUCK WASH:

" OIL WATER SEPARATOR: A permit is required to install an oil water separator between shop floor drain and sewer discharge or show an adequate oil water separator exists. Submit design & calculations stamped by a professional engineer; SMC section 13.16

" TRUCK WASH: Commercial washing operations of vehicles are not permitted without significant site upgrades. All wash water must be collected and recycled or discharged to the sanitary sewer system, yet no stormwater may enter the sanitary sewer system which effectively means that the washing operation must take place indoors or under cover within a collection basin. Prior to discharge to the sewer system, the waste water must have the oil separated from it, collected, and disposed of properly. Pressure washer hookup requires that the water service be equipped with an RPBA. SMC Section 13.45.510 (C), SMC section 13.16.370

" STORM (leaking oil): "Illicit discharge" is prohibited. "illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire-fighting activities. Illicit discharges include, but are not limited to, sanitary sewer connections, industrial process water, interior floor drains, fuel islands, car washing, and grey water systems. Illicit discharges are further described in SMC section 13.48.820, SMC section 13.48.200 (34)

Date: May 23, 2017

Authorized Agent

CITY OF SUMNER
1104 Maple St, Ste 250
Sumner, WA 98390
Tel: (253) 299-5530
Fax: (253) 299-5539
www.ci.sumner.wa.us

JOB SITE INSPECTION CARD

Permit Number: SIT-2016-0146
Permit Type: TESC / FILL & GRADE
Issue Date: 05/22/2017
Date Printed: 05/23/2017

FOR INSPECTION REQUEST PLEASE CALL 253-299-5530

INSPECTION REQUESTS REQUIRE 24 TO 48 HOURS ADVANCED NOTICE

All approved plans and permits shall be maintained on site in visible locations and protected from the weather.

Upon approval of **all department **FINAL** inspections please call the Permit Center at **253-299-5530** to request a Certificate of Occupancy.

OCCUPANCY PRIOR TO OBTAINING CERTIFICATE OF OCCUPANCY IS PROHIBITED!

VIOLATIONS ARE SUBJECT TO PENALTY

CODE	INSPECTIONS	DATE	INSPECTOR
4022	PRE CONSTRUCTION MEETIN(		
4014	STORM/EROSION CONTROL		
4024	STORMWATER CONSTRUCTIO		
4025	STORMWATER ANNUAL INSPE		
4003	CURB/ACCESS/SIDEWALK		
4029	SIDEWALK FORM		
4030	DRIVEWAY FORM		
9019	FINAL PUBLIC WORKS INSPEC		

CODE	INSPECTIONS	DATE	INSPECTOR

BEYLER
CONSULTING

16008 60TH STREET E, SUMNER

Drainage & Erosion Control Report

Prepared for: **Sumner National Auto Parts**
16008 69th St E
Sumner, WA 98390

September 7, 2016
Revised: January 11, 2017

Prepared by: **Michael Marshall**

Reviewed by: **Brandon Loucks, P.E.**

Beyler Consulting
7602 Bridgeport Way W., Ste 3D
Lakewood, WA 98499
253-301-4157

CONTACT
phone: 253-301-4157
fax: 253-336-3950
beylerconsulting.com

OFFICE
7602 Bridgeport Way W, Ste 3D
Lakewood, WA 98499

Plan. Design. Manage.

CIVIL ENGINEERING | LAND SURVEYING | LAND PLANNING
PROJECT MANAGEMENT | PERMIT EXPEDITING | FEASIBILITY

TABLE OF CONTENTS

I. Project Engineers Certificate

I hereby certify that this **Drainage Report** for the **Sumner National Auto Parts** project has been prepared by me or under my direct supervision and meets minimum standards of care and expertise which is usual and customary in this community for professional engineers. I understand that the **City of Sumner** does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.

Signature

01/17/2016

Date

Seal

II. Drainage Report

Section 1 – Project Description

This project proposes to excavate contaminated soils from a portion of the site. The proposed project includes excavating and stockpiling of contaminated soils, to be removed at a later date. The subject property's address is 16008 60TH STREET E, Sumner, in Pierce County, WA, parcel number 0520198006 and is located within the Urban Growth Area. The portion of the site being worked will be accessed off 60th Street E.

The proposed project will be done using traditional development standards in accordance with the WSDOE 2005 Stormwater Management Manual. This report accompanies the grading and erosion control plan submittal for the project.

The subject parcel is rectangular in shape approximately 1.6 acres in size, 238 feet wide and approximately 303 feet deep, and is zoned General Commercial. The parcel is currently developed, with an existing building, parking and associated utilities. The site is generally flat and is surrounded by developed commercial properties.

As a result of land disturbing activity of over 7,000 square feet, a Drainage Control Plan has been prepared implementing applicable Minimum Requirements #1-5 per Figure 2.1 of the 2005 Manual. A copy of Figure 2.1 can be found in Appendix C of the Drainage Report. The project proposes to remove existing impervious (gravel and soil) and replace it with pervious surface.

Table 1 Minimum Requirements per Fig 2.1 and 2.2 of 2005 Manual

Threshold Discharge Area (Basin)	Site Area (sf)	Existing site Impervious	NEW Impervious Surface*(sf)	NEW Converted Area Landscape/Lawn *(ac)	Minimum Requirements
1	71,983 sf	5,888 sf	0 sf	0.135 ac	#1-5
Threshold		>35%	>5,000 sf	>0.75 ac	-
Exceeds Threshold?		No	No	No	-

Minimum Requirements (per 2005 Manual)

Minimum Requirement #1: Preparation of a Stormwater Site Plan.
Requirement met with this drainage report and plan

Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)
A CSWPPP has been included in Appendix E, addressing Construction SWPPP Elements #1 through #9 as detailed in Volume II, Section 2.2.2 of the WSDOE 2005 Stormwater Management Manual. Temporary sediment control measures will be put into place to limit sediment contamination. This temporary measures will remain in place until fill is imported to the site and the area stabilized.

Minimum Requirement #3: Source Control of Pollution
Source controls will be utilized on site to prevent stormwater from coming in contact with pollutants. Polluted stockpiles to be removed after laboratory test results are confirmed. Offsite disposal will be to the LRI Landfill to Graham.

Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls
The project proposes to contain runoff in the construction area using the erosion control measures. All generated runoff will remain onsite.

Minimum Requirement #5: On-Site Stormwater Management
Projects shall employ On-Stormwater Management BMPs to infiltrate, disperse, and retain stormwater runoff onsite to the maximum extent feasible without causing flooding or erosion impacts. The project is limited to approximately 12,000 sf of excavation, or around 500 cubic yards of cut. Temporary sediment control measures will be put into place to limit sediment contamination. This temporary measures will remain in place until fill is imported to the site and the area stabilized. No permanent stormwater control is proposed as a part of this proposal other than the eventual permanent stabilization of the area at a later date.

Minimum Requirement #6: Runoff Treatment
Not Applicable.

Minimum Requirement #7: Flow Control
Not Applicable.

Minimum Requirement #8: Wetland Protection
Not applicable.

Minimum Requirement #9: Basin/Watershed Plan
Not Applicable.

Minimum Requirement #10: Operation and Maintenance
Not Applicable.

Minimum Requirement #11: Financial Liability
Not applicable at this time.

Section 2 – Existing Conditions

The existing site is located at the southeast corner of the intersection of 60th Street East and 160th Avenue East, in Sumner Washington. The parcel is rectangular, 1.6 acres in size, approximately 238 feet wide and 303 feet deep, and is zoned General Commercial. The parcel is currently developed, with an existing auto parts store, parking and associated utilities. The site is generally flat and is surrounded by developed commercial properties.

Section 3 – Soils Investigation/Reports

A Soils Report was generated from the NRCS website and can be found in Appendix D of this report. In Summary, the report indicates the site soils are designated as Briscot Loam, somewhat poorly drained, and a depth to water table of 12 to 24 inches. Per site observation, the top 12" is crushed rock and unsorted sandy gravels.

Section 4 – Wells and Septic Systems

Records at Tacoma-Pierce County Health Department and the Department of Ecology were searched to locate wells and septic systems that may be located on this site and/or within the setback distances from any stormwater facilities. One groundwater monitoring well is located onsite. Recorded water was at five feet below ground surface at 10/30/2015.

Section 5 – Fuel tanks

Records at Tacoma-Pierce County Health Department and the Department of Ecology were searched to locate the presence of above and below ground fuel storage tanks that may be located within the setback distances from any stormwater facilities. No fuel tanks were found or identified on the property.

Section 6 – Sub-basin Description

There does not appear to be any significant offsite run-on tributary to the site. The grades of the adjacent properties and frontage roads are flat and the stormwater is contained.

In the areas of development, the stormwater management dispersion techniques will be installed as to maintain the existing drainage course of the property. Stormwater will follow existing onsite paths.

Section 7 – Analysis of 100-year Flood

The Federal Emergency Management Agency prepares maps for all areas within Pierce County, including the incorporated cities therein. These maps can be found on the Pierce County GIS site. Panel #530138 0354 C depicts the areas, if any, subject to flooding near this project. By inspection of this map much of the project and areas to be developed are in Zone C, which is an area of minimal flooding. See Appendix B for the FEMA flood map.

Section 8 – Aesthetic Considerations for Facilities

The stormwater facility for this project will provide little impact on the surrounding aesthetics of the project. This will allow for minimal impact to the existing vegetation.

Section 9 – Facility Sizing

There will be no facility sizing for this project. The project proposes to remove existing impervious surface (crushed gravel and soil) and replace it with pervious surface. The project proposes to contain runoff in the construction area using temporary and permanent erosion control measures. All generated runoff will remain onsite. See the Construction Stormwater Pollution Prevention Plan for analysis of the sediment control measures.

Section 10 – Utilities

The parcel is currently developed, with an existing building, parking, and associated utilities, storm facilities, sewer and water service.

Section 11 – Covenants, Dedications, and Easements

All stormwater facilities located on private property shall be owned, operated, and maintained by the property owners, their heirs, successors, and assigns.

Section 12 – Property Owner's Association Articles of Incorporation

No property owner's association is required for this project.

Section 13 – Other Permits or Conditions Placed on the Project

None.

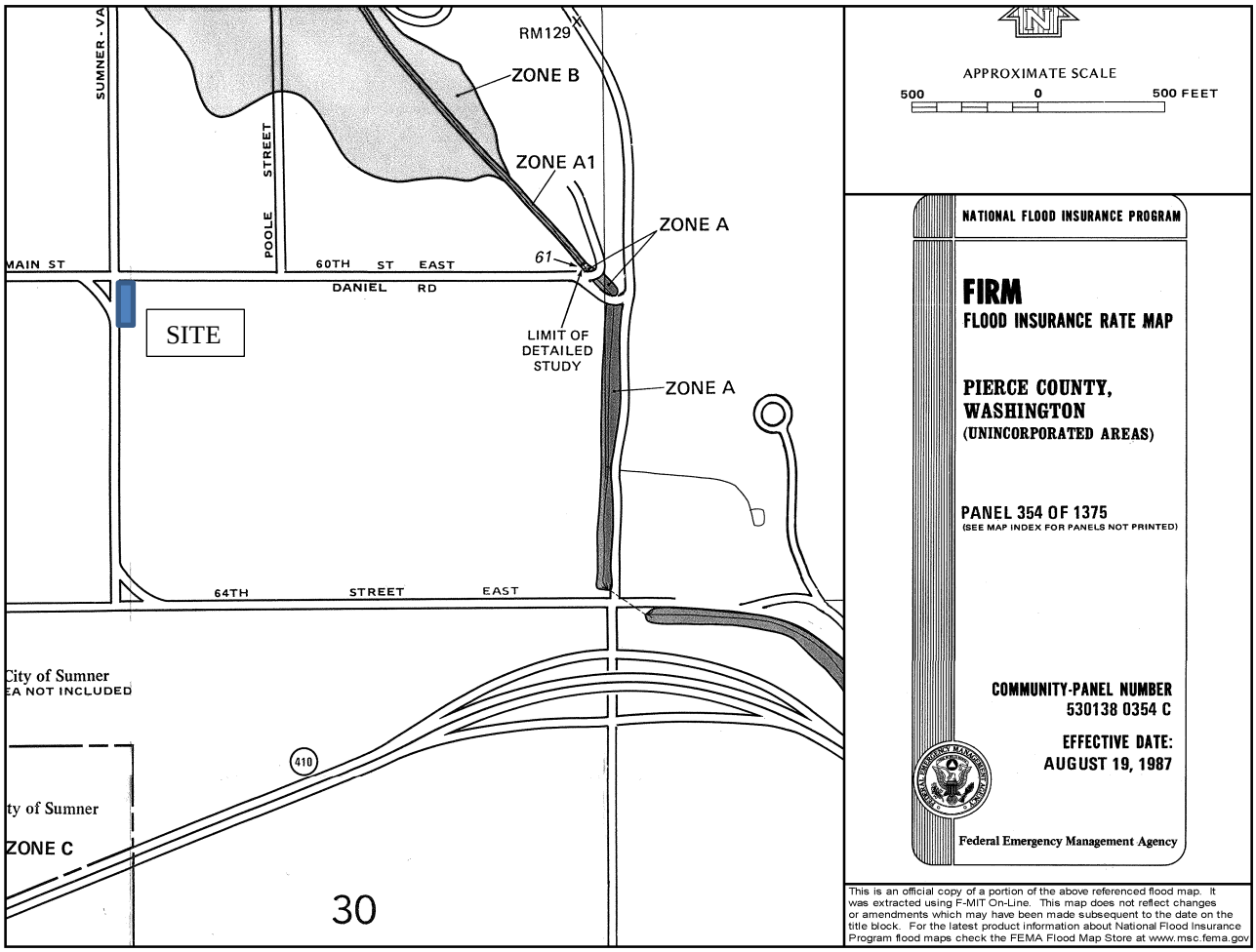
III. Appendices

Appendix A – Vicinity Map

VICINITY MAP

N.T.S

Appendix B – FEMA Map



Appendix C – Other Charts

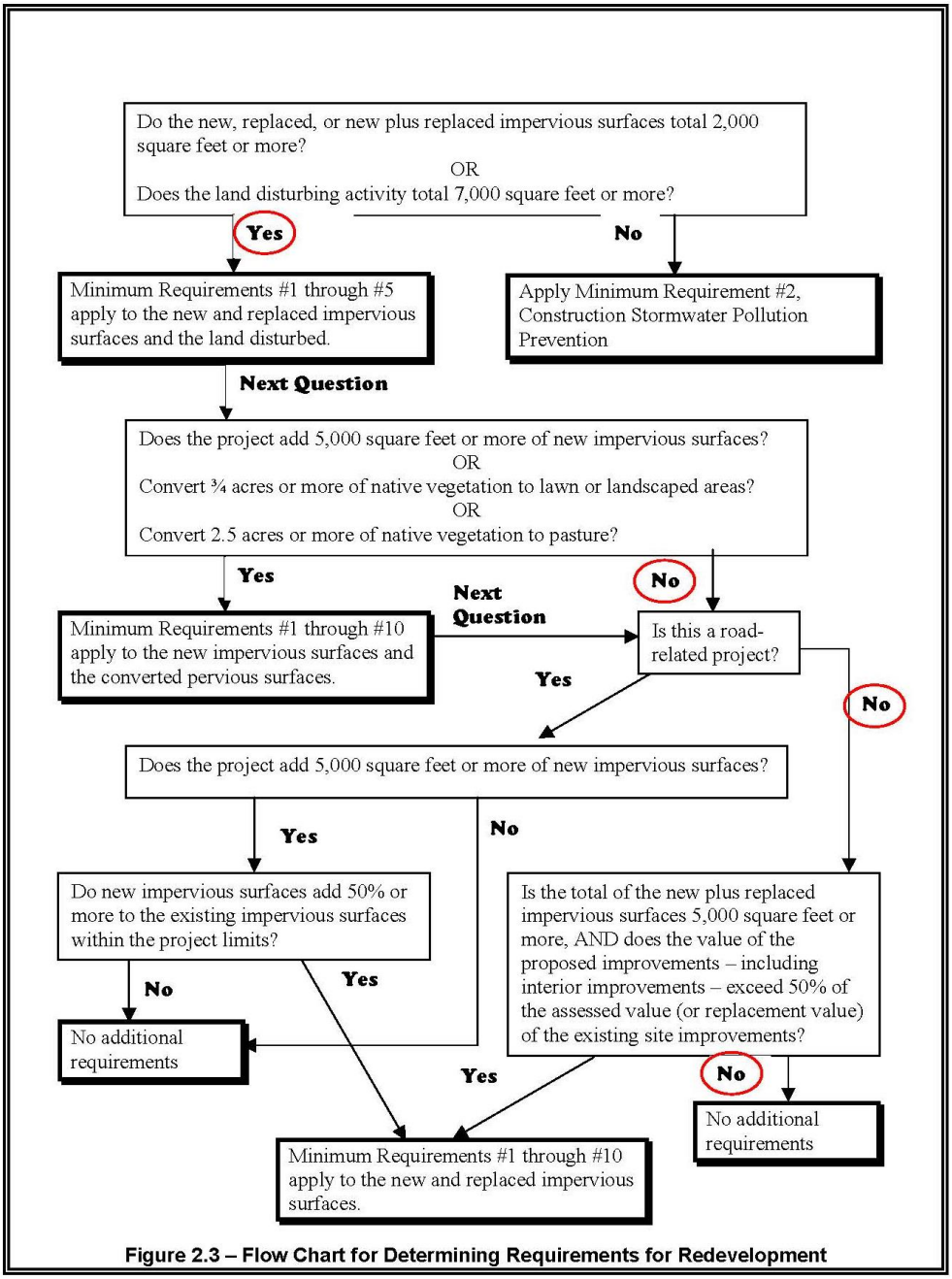


Figure 2.3 – Flow Chart for Determining Requirements for Redevelopment

Appendix D – Geotechnical Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Pierce County Area, Washington

Sumner National Auto Parts

August 25, 2016

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

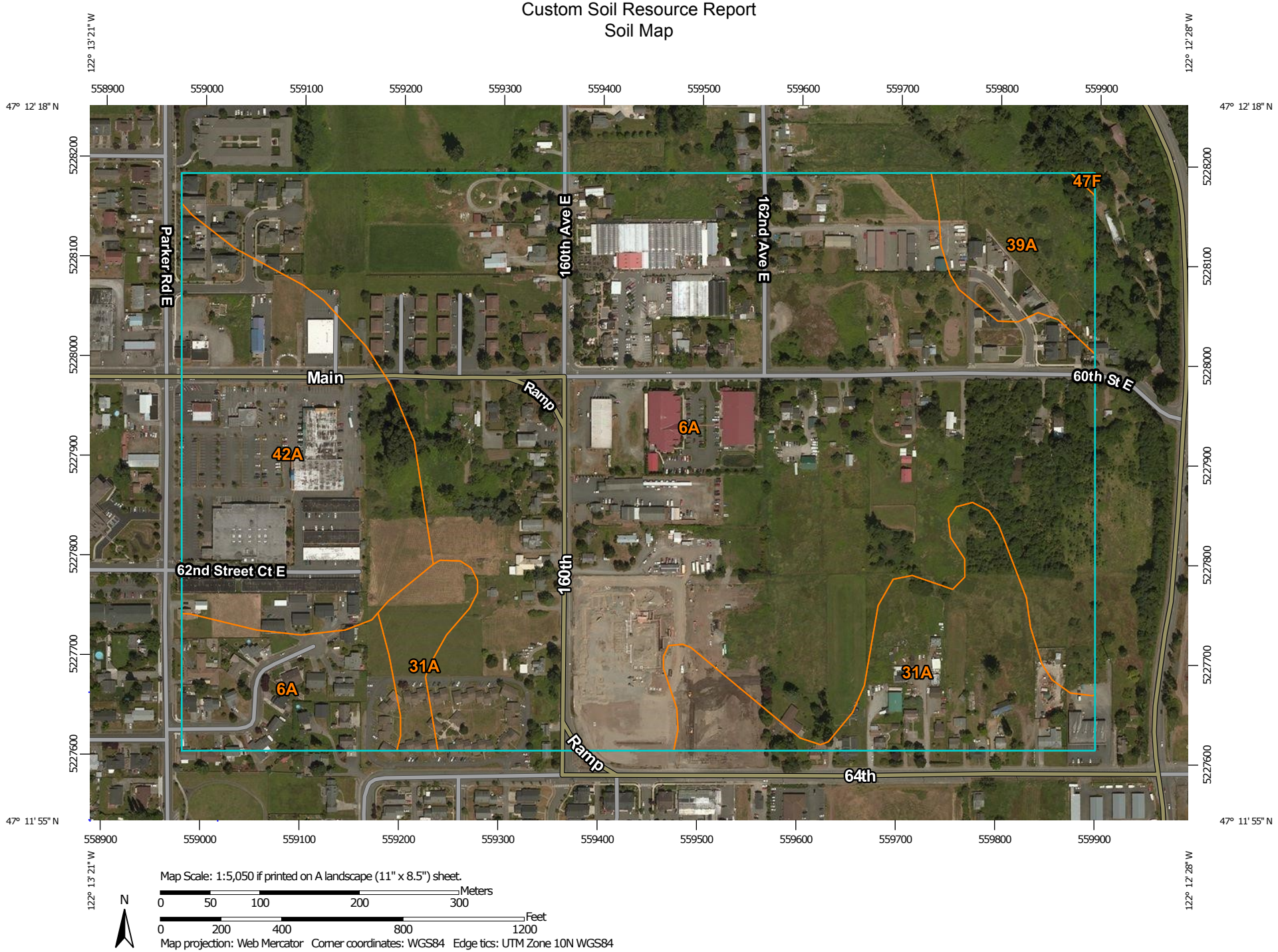
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pierce County Area, Washington
Survey Area Data: Version 10, Sep 15, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2014—Jul 15, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Pierce County Area, Washington (WA653)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
6A	Briscot loam	93.7	70.9%
31A	Puyallup fine sandy loam	13.6	10.3%
39A	Snohomish silty clay loam	5.4	4.1%
42A	Sultan silt loam	19.3	14.6%
47F	Xerochrepts, 45 to 70 percent slopes	0.1	0.1%
Totals for Area of Interest		**132.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that

have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Pierce County Area, Washington

6A—Briscot loam

Map Unit Setting

National map unit symbol: 2hrc
Elevation: 20 to 250 feet
Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 160 to 210 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Briscot and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Briscot

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: loam
H2 - 11 to 38 inches: stratified fine sand to silt loam
H3 - 38 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: Yes

31A—Puyallup fine sandy loam

Map Unit Setting

National map unit symbol: 2hq9
Mean annual precipitation: 35 to 60 inches

Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Puyallup and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Puyallup

Setting
Landform: Terraces, flood plains
Parent material: Alluvium

Typical profile
H1 - 0 to 13 inches: ashy fine sandy loam
H2 - 13 to 29 inches: loamy fine sand
H3 - 29 to 60 inches: fine sand

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Other vegetative classification: Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Briscot
Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

39A—Snohomish silty clay loam

Map Unit Setting
National map unit symbol: 2hqp
Elevation: 10 to 300 feet
Mean annual precipitation: 22 to 50 inches
Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 160 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Snohomish and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Snohomish

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 17 inches: silty clay loam
H3 - 17 to 29 inches: mucky peat
H4 - 29 to 52 inches: silty clay
H5 - 52 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 5w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Other vegetative classification: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Minor Components

Sultan

Percent of map unit: 5 percent
Landform: Backswamps
Hydric soil rating: Yes

Puget

Percent of map unit: 5 percent
Landform: Backswamps
Hydric soil rating: Yes

42A—Sultan silt loam

Map Unit Setting

National map unit symbol: 2hqx
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sultan and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sultan

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 14 inches: ashy silt loam
H2 - 14 to 23 inches: silt loam
H3 - 23 to 60 inches: stratified sand to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

Minor Components

Briscot

Percent of map unit: 6 percent
Landform: Depressions
Hydric soil rating: Yes

Puget

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

47F—Xerochrepts, 45 to 70 percent slopes

Map Unit Setting

National map unit symbol: 2hr5
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 45 to 46 degrees F
Farmland classification: Not prime farmland

Map Unit Composition

Xerochrepts and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Xerochrepts

Setting

Landform: Valley sides
Parent material: Sandy and gravelly outwash and/or glacial till

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam
H2 - 6 to 40 inches: gravelly sandy loam
H3 - 40 to 60 inches: very gravelly sandy loam

Properties and qualities

Slope: 45 to 70 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Coastal beaches

Percent of map unit:
Landform: Alluvial cones
Hydric soil rating: No

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Appendix E – Construction Stormwater Pollution Prevention Plan

16008 60TH STREET E, SUMNER

Construction Stormwater Pollution Prevention Plan

Prepared for: **Sumner National Auto Parts**
16008 60TH St E
Sumner, Wa 98390

September 7, 2016
Revised: January 11, 2017

Prepared by: **Michael Marshall**

Reviewed by: **Brandon Loucks, P.E.**
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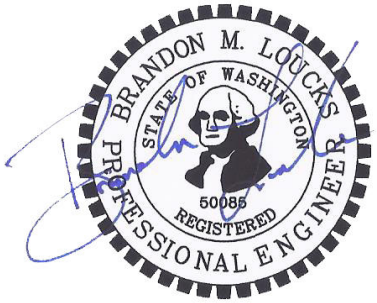
I. Project Engineers Certificate

I hereby certify that this **CSWPPP** for the **Sumner National Auto Parts** project has been prepared by me or under my direct supervision and meets minimum standards of care and expertise which is usual and customary in this community for professional engineers. I understand that **City of Sumner** does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.

Signature

12/20/2016

Date



Seal

II. Construction Pollution Prevention Plan

Section 1 – Project Overview

This project proposes to excavate contaminated soils from a portion of the site. The proposed project includes excavating and stockpiling of contaminated soils, to be removed at a later date. The subject property's address is 16008 60TH STREET E, Sumner, in Pierce County, WA, parcel number 0520198006 and is located within the Urban Growth Area. The portion of the site being worked will be accessed off of 60th Street E.

The proposed project will be done using traditional development standards in accordance with the WSDOE 2005 Stormwater Management Manual. This report accompanies the grading and erosion control plan submittal for the project.

The subject parcel is rectangular in shape approximately 1.6 acres in size, 238 feet wide and approximately 303 feet deep, and is zoned General Commercial. The parcel is currently developed, with an existing building, parking and associated utilities. The site is generally flat and is surrounded by developed commercial properties.

Section 2 – Erosion Control Specialist

An erosion control specialist is not required for the size and scope of this project. It will be responsibility of the owner and/or the contractor to regularly inspect and maintain the proposed erosion control BMPs, and will take additional measures, as necessary, to respond to changing site conditions. Should it become necessary, the engineer will be made available in providing recommendations for additional erosion measures to the site.

Section 3 – Existing Site Conditions

The existing site is located at the southwest corner of the intersection of 60th Street East and 160th Avenue East, in Sumner Washington. The parcel is rectangular in shape, 1.6 acres in size, approximately 238 feet wide and 303 feet deep, and is zoned General Commercial. The parcel is currently developed, with an existing auto parts store, parking and associated utilities. The site is generally flat.

Section 4 – Adjacent Areas

The site is bordered on the north and west by frontage streets 60th Street East and 160th Avenue East and is bordered on the east and south by developed commercial properties.

Section 5 – Critical Areas

There are no critical areas onsite.

Section 6 – Soils

A Soils Report was generated from the NRCS website and can be found in Appendix D of this report. In Summary, the report indicates the site soils are designated as Briscot Loam, somewhat poorly drained, and a depth to water table of 12 to 24 inches. Per site observation, the top 12” is crushed rock and unsorted sandy gravels.

Section 7 – Potential Erosion Problems

Due to existing slopes and that the site is currently developed and stabilized, a silt fence and construction entrance are anticipated to provide adequate erosion control protection of the adjacent properties.

Section 8 – Construction Stormwater Pollution Prevention Elements

The required elements per the Pierce County stormwater manual are listed below. Refer to the latest stormwater manual for further BMP detail as listed below.

Element 1: Mark Clearing Limits

The clearing limits shall be marked per the approved plans. Prior to beginning land disturbing activities, including clearing and grading, all clearing limits will be clearly marked. Silt fence will be placed on downstream property boundaries as indicated on the project plans.

The duff layer, native top soil, and natural vegetation should be retained in an undisturbed state to the maximum extent practicable. If it is not practicable to retain the duff layer in place, it should be stockpiled on site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities.

Limit the site clearing and grading activities to the relatively dry months.

BMP C102: Buffer Zones
BMP C103: high Visibility Plastic or Metal Fence.

Element 2: Establish Construction Access

It is anticipated that one construction entrance will be established on this project site. With the use of this construction entrance vehicle access to and from the site is expected to track only minor amounts of dirt and other sediment onto the street.

All sediment that is tracked onto the roadway due to construction activities should be cleaned at the end of each working day. Should sediment tracked onto the street become excessive, operations will cease until the tracked material has been removed by street sweeping or shoveling.

Wheel wash or tire baths should be located on site, if the stabilized construction entrance is not effective in preventing sediment from being tracked onto roads/accesses.

BMP C 105: Stabilized Construction Entrance

Element 3: Control Flow Rates

Due to the size of the site and the area of disturbance, existing and/or proposed check dams and interceptor ditches are not anticipated to control flow rates.

Element 4: Install Sediment Controls

Prior to surface water leaving the construction site, the stormwater runoff from disturbed areas shall pass through a sediment removal BMP.

The SWPPP plan for this project specifies the use of various erosion/sediment control measures: construction entrance and siltation fence. These facilities should be inspected weekly at the end of the work week and subsequent to each storm event. Sediment

accumulation in excess of design limits will be removed from the facilities upon identification of the condition and prior to a forecasted storm event. The construction superintendent, or owner, will be responsible for these actions and will be responsible for maintenance of the erosion and sediment control facilities. Site demolition and/or grading shall not occur on the site until after the silt fences have been installed.

BMP C233: Silt Fence along the downhill side of the construction area that will be disturbed. The silt fence should be in place before clearing and grading is initiated.
BMP C240: Incorporate portion of exaction area to perform as a temporary sediment trap until fill is imported to the excavation area and the area stabilized. Locate trap at the north end of the excavation. Trap overflow should direct water through the existing grassy area north of the excavation area. See section 12 of this report for trap sizing calculations.

Element 5: Stabilize Soils

The following constraints will apply. From October 1 through April 30, no soils will remain exposed and unworked for more than 2 days. From May 1 to September 30, no soils will remain exposed and unworked for more than 7 days. This condition will apply to all soils on site, whether at final grade or not. The areas outside of the roadway will be stabilized with mulch, grass planting or other approved erosion control treatment during the construction phase.

BMP C120: Temporary and Permanent Seeding
BMP C121: Mulching
BMP C122: Nets and Blankets
BMP C123: Plastic Covering
BMP C140: Dust Control

Element 6: Protect Slopes

There are no steep slopes on the site. Clearing limits are to be established and silt fence provided to protect the neighboring property from sediment runoff during construction.

Element 7: Protect Drain Inlets

All storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

All approach roads shall be kept clean. Sediment and street wash wastewater shall be controlled as specified above in Element #2.

Inlets should be inspected weekly at a minimum and daily during storm events. Inlet protection devices should be cleaned or removed and replaced when sediment had filled on-third of the available storage.

BMP C220: Storm Drain Inlet Protection

Element 8: Stabilize Channels and Outlets

There are no channels either existing or proposed nor are there any existing or proposed outlets to channels.

Element 9: Control Pollutants

Control of pollutants are the responsibility of the construction superintendent. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities that may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contaminated surfaces will be cleaned immediately following any discharge or spill incident. The superintendent will be expected to use his best judgment in addressing any and all conditions that are potentially damaging to the environment. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle.

All pollutants, including waste materials and demolition debris that occur on-site during construction will be handled and disposed of in a manner that does not cause contamination of stormwater. Cover, containment, and protection from vandalism will be provided for all chemicals, liquid products, petroleum products, and non-inert wastes present on the site.

The contractor will provide a centralized area for the storage, maintenance, and refueling of construction equipment and for washing of concrete truck drums. All runoff from the area shall be intercepted by a trench around the downslope side of the area and detained until it can be removed by a 'Vactor' truck and properly disposed of in an approved facility.

BMP C151: Concrete Handling
BMP C152: Saw cutting and Surfacing Pollution Prevention

Element 10: Control De-Watering

No requirement for de-watering is anticipated. However, if encountered, de-watering shall be discharged into a closed conveyance system for discharge from the site. Highly turbid or otherwise contaminated dewatering water, such as from construction equipment operation will be handled separately from stormwater.

Element 11: Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair will be conducted in accordance with standard procedures for the BMPs.

Sediment control BMPs will be inspected weekly or after a runoff-producing storm event during the dry season and daily during the wet season.

All temporary erosion and sediment control BMPs should be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil areas resulting from removal of BMPs or vegetation will be permanently stabilized with mulch, grass planting or other approved erosion control treatment.

Element 12: Manage the Project

Site construction will be performed after the erosion and sediment control measures have been constructed.

From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if the transport of sediment from the construction site to receiving waters

will be prevented through a combination of favorable site and weather conditions, limitations on extent of activity, and proposed erosion and sediment control measures. The Contractor and/or owner should stop the permitted activity if sediment leaves the construction site causing a violation of the surface water quality standard or if erosion and sediment control measures are not adequately maintained.

Trenches should be opened only immediately prior to construction and the trenches should be backfilled immediately after any required testing or inspections of the installed improvements. Trenching spoils should be treated as other disturbed earthwork and measures will be taken to cover or otherwise stabilize the material, as required.

All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. The construction SWPPP shall be retained on site or within reasonable access to the site.

The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to water of the state.

Section 9 – Construction Phasing

The recommended construction sequence will include these steps in this order, but some portions of the steps may be performed out of sequence as conditions require.

The Construction Sequence is as follows:

1. Stake and flag clearing and construction limits
2. Install Construction Entrance(s)
3. Install silt fabric fence where indicated
4. Install any other erosion control facilities that may be necessary
5. Call City of Sumner for Erosion Control Inspection
6. Clear and grade site
7. Remove erosion control facilities only after site is stabilized
8. Cover stockpiles with temporary plastic sheeting
9. Install temporary silt fence around stockpiles
10. Storm Catch Basin inlet protection in the two catch basins near the north entrance and the catch basin within the 60th street E ROW near the entrance to remain
11. Request Final site development inspection

Section 10 – Construction Schedule

The project is intended to begin construction in the Spring/Summer 2017. Special consideration is required for source control during the wet season period, which may include phased construction, materials available for immediate stabilization of denuded areas and diligent review of site for noted erosion concerns.

Section 11 – Financial/Ownership Responsibilities

The property owner will be responsible for bonds and other required securities for this project.

Section 12 – Engineering Calculations

Sediment Trap Calculations

The Sediment Trap was sized per Volume II, BMP C240 of the 2005 WSDOE Stormwater manual.

Trap geometry was calculated by first determining the required surface area. The tributary area of the trap was assumed to be the excavated area of project, approximately 12,000 square feet, 0.27 acres. The excavated area is assumed to be compact because of the construction activity, thus the excavated area has been modeled as an impervious surface.

The surface area is calculated to be $FS(Q_2/V_s)$. Where FS is a factor of Safety of 2, Q_2 is the 2-year design flow rate, and V_s is the settling velocity of the soil particles. For a medium silt particle, the settling velocity is taken as 0.00096 ft/sec (2005 Manual, BMP C240).

To determine the design flow rate, WWHMv2012 was utilized with the basin characteristics noted above.

Q2 = 0.0968 cf/sec
FS = 2
Vs = 0.00096 ft/sec

SA = 2(0.0968/0.00096) = 201.67 sf = **202 sf**

See Sheet 2 of the plat set for sediment trap location and details

WWHM2012
PROJECT REPORT

Project Name: default[24]
Site Name:
Site Address:
City :
Report Date: 12/23/2016
Gage :
Data Start : 10/01/1901
Data End : 09/30/2059
Precip Scale: 1.00
Version Date: 2016/02/25
Version : 4.2.12

Element Flows To:
Surface **Interflow** **Groundwater**

MITIGATED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

Pervious Land Use	acre
Pervious Total	0

Impervious Land Use	acre
DRIVEWAYS FLAT	0.27

Impervious Total	0.27
Basin Total	0.27

Element Flows To:

Surface	Interflow	Groundwater

ANALYSIS RESULTS

Stream Protection Duration

Mitigated Landuse Totals for POC #1
Total Pervious Area:0
Total Impervious Area:0.27

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	0.0968
5 year	0.1299
10 year	0.1539
25 year	0.1868
50 year	0.2131
100 year	0.2412

Section 13 – Conclusion

Erosion control procedures as described in this report and illustrated on the design plans, if properly implemented, should mitigate effects from the development of this project.

The success of erosion control measures is usually related to the Contractor's attention to maintenance of such measures. However, in some instances, even with proper attention being paid to erosion control, measures such as those shown on the plans are unable to prevent the discharge of turbid water to the city storm system. In this event, secondary measures may be required. These additional BMPs are provided in Volume II of the Surface Water Management Manual.

A PORTION OF SWQ OF SEQ OF SECTION 19, TOWNSHIP 20 N., RANGE 05 E., W.M.

SUMNER NATIONAL AUTO PARTS STORE

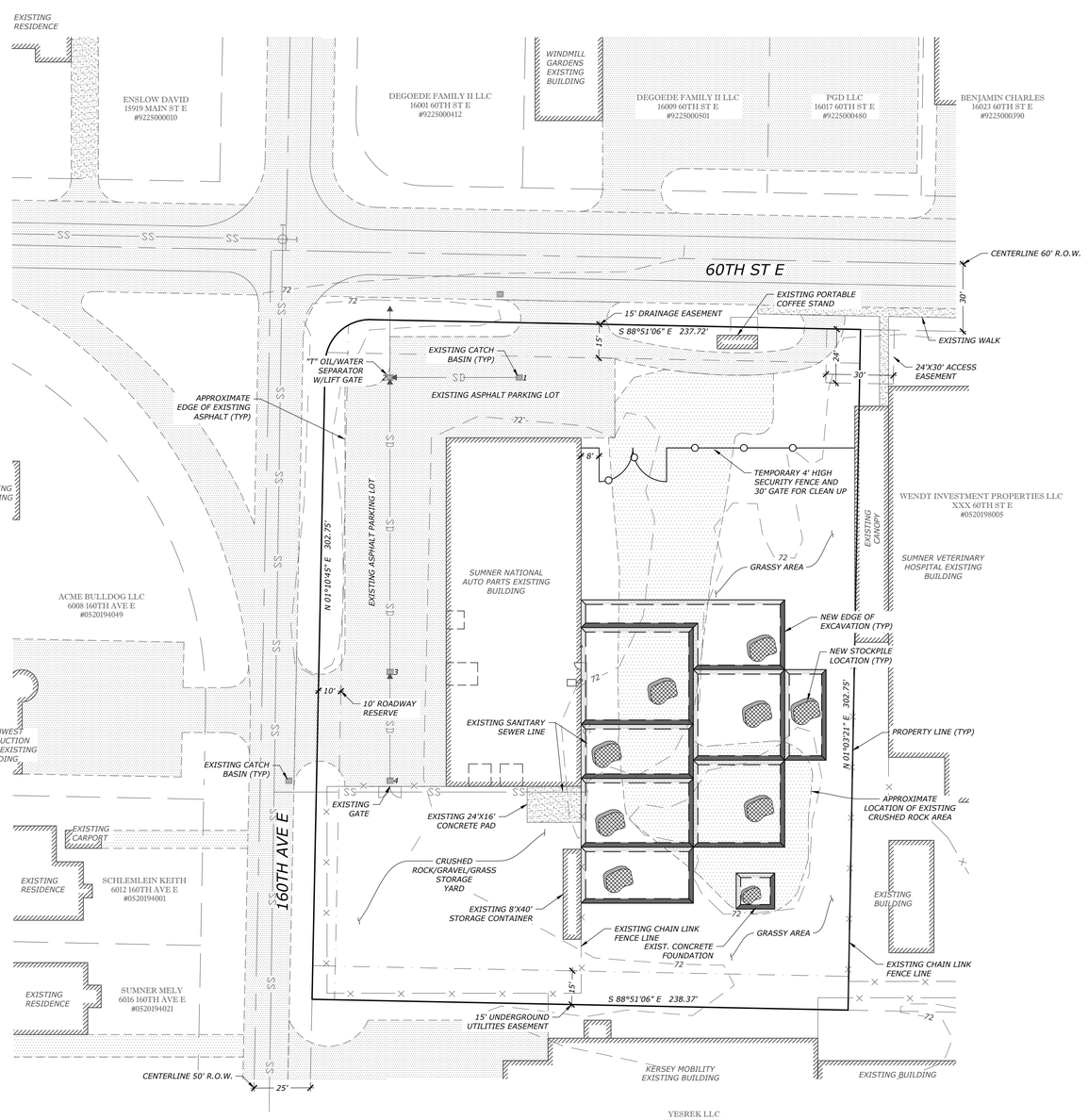
16008 60TH ST E

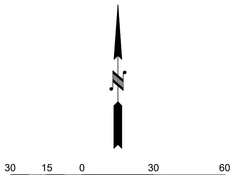
VICINITY MAP

N.T.S

CITY OF SUMNER GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AND THE CITY OF SUMNER DEVELOPMENT SPECIFICATIONS. IN CASE OF CONFLICT, THE CITY DEVELOPMENT SPECIFICATIONS AND STANDARD DETAILS TAKE PRECEDENCE.
2. PRIOR TO ANY WORK COMMENCING, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION MEETING TO BE ATTENDED BY ALL MAJOR CONTRACTORS, REPRESENTATIVES OF INVOLVED UTILITIES, AND THE CITY OF SUMNER. CALL (253) 299-5700 TO SCHEDULE A MEETING AT LEAST TWO (2) WORKING DAYS IN ADVANCE.
3. SITE OWNER IS TO OBTAIN ALL PERMITS REQUIRED FROM THE STATE TO INCLUDE BUT NOT TO BE LIMITED TO THE NPDES STORMWATER GENERAL PERMIT.
4. THE CONTRACTOR SHALL NOTIFY THE COUNTY AND/OR STATE, AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS IF CONSTRUCTION IS TO TAKE PLACE IN COUNTY AND/OR STATE RIGHT-OF-WAY.
5. ALL WORK WITHIN THE CITY RIGHT-OF-WAY SHALL BE CONDUCTED BY A LICENSED, BONDED, AND INSURED CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A STREET OBSTRUCTION NOTIFICATION FORM, INCLUDING A TRAFFIC CONTROL PLAN IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND WSDOT SPECIFICATION SECTION 1-10, TO THE PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL A MINIMUM OF TWO (2) FULL WORKING DAYS PRIOR TO STREET OBSTRUCTION. NOTE THAT THE DAY THE STREET OBSTRUCTION NOTIFICATION FORM IS SUBMITTED TO THE CITY SHALL NOT COUNT AS ONE OF THE TWO DAYS. A NEW FORM WILL BE REQUIRED IF THE TIME, DATE, OR LOCATION OF THE PROPOSED OBSTRUCTION CHANGES FROM THAT REPORTED ON THE ORIGINAL FORM. CERTIFIED COPIES OF THE CONTRACTOR'S BUSINESS LICENSE AND INSURANCE POLICY SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT BEFORE PERMIT ISSUANCE.
6. ANY STRUCTURE AND/OR OBSTRUCTION THAT NEED TO BE REMOVED OR RELOCATED AS A RESULT OF THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
7. ANY DISTURBANCE OR DAMAGE TO CRITICAL AREAS AND ASSOCIATED BUFFERS SHALL BE MITIGATED IN ACCORDANCE WITH A MITIGATION PLAN APPROVED BY THE SUMNER COMMUNITY DEVELOPMENT DEPARTMENT. THE PREPARATION AND IMPLEMENTATION OF THE MITIGATION PLAN SHALL BE AT THE DEVELOPER'S EXPENSE.
8. ALL MANHOLES AND CATCH BASINS SHALL BE COVERED WITH TEMPORARY COVERS TO PREVENT ENTRANCE OF DIRT AND DEBRIS DURING CONSTRUCTION.
9. BURIED UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO ANY CONSTRUCTION. CALL 1-800-424-5555 FOR "ONE CALL LOCATES."
10. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD AND THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO IMPLEMENTATION IN THE FIELD.
11. TRAFFIC CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR. CONSTRUCTION SIGNS, CONES, BARRICADES, AND FLAGGERS SHALL BE EMPLOYED AS SPECIFIED ON THE APPROVED TRAFFIC CONTROL PLANS OR AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT.
12. AN APPROVED COPY OF THESE PLANS WITH REVISIONS MUST BE ON SITE WHENEVER CONSTRUCTION WORK IS IN PROGRESS.
13. THE PUBLIC WORKS DEPARTMENT REQUIRES THE CONTRACTOR TO PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CONTROL AT ALL TIMES ON SITE FOR PERIODIC SPOT CHECKS BY CITY PERSONNEL. THIS CONTROL WILL CONSIST OF FRONT-PROPERTY CORNER OFFSETS (20 FEET) STAKED PERPENDICULAR TO THE ROAD CENTERLINE. ALL CURVE RADIUS POINTS WILL BE STAKED.
14. PRIVATE UTILITY EASEMENTS ARE REQUIRED ON THE FRONT 10 FEET OF EACH LOT.
15. IF WORKERS ENTER ANY TRENCH OR OTHER EXCAVATION, FOUR (4) FEET OR MORE IN DEPTH, THAT DOES NOT MEET THE OPEN PIT REQUIREMENTS OF WSDOT SECTION 2-09.3, THE TRENCH/EXCAVATION SHALL BE SHORED AND CRIBBED. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR WORKER SAFETY. ALL TRENCH SAFETY SYSTEMS SHALL MEET THE REQUIREMENTS OF THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT, CHAPTER 49 17 RCW.
16. EAST PIERCE FIRE AND RESCUE SHALL BE NOTIFIED IMMEDIATELY OF ALL GAS LINE BREAKS.
17. CONSTRUCTION HOURS ARE MONDAY THROUGH FRIDAY, 7:00 A.M. TO 6:00 P.M., AND SATURDAY, SUNDAY, AND HOLIDAYS, 10:00 A.M. TO 6:00 P.M.. WORK CONDUCTED OUTSIDE THESE HOURS SHALL BE APPROVED BY THE COMMUNITY DEVELOPMENT DEPARTMENT A MINIMUM OF TWO (2) WORKING DAYS IN ADVANCE. THE DAY OF SUBMITTAL SHALL NOT BE COUNTED AS ONE OF THE TWO REQUIRED DAYS. ALL CITY PERSONNEL OVERTIME INSPECTION FEES SHALL BE PAID BY THE CONTRACTOR.
18. BEFORE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE PUBLIC WORKS DEPARTMENT DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK LISTED SHALL BE SATISFACTORILY COMPLETED PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
19. RECORD DRAWINGS (MYLAR) WILL BE SUBMITTED TO THE CITY BEFORE FINAL ACCEPTANCE.
20. NO CONSTRUCTION WORK SHALL BEGIN UNTIL THE OWNER/DEVELOPER HAS ACQUIRED ALL REQUIRED RIGHT-OF-WAY AND/OR EASEMENTS, AND HAS PROVIDED THE PUBLIC WORKS DEPARTMENT WITH COPIES OF THE RECORDED DOCUMENTS.





UTILITY NOTE

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT HAPPEN DUE TO THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. BEYLER CONSULTING ASSUMES NO LIABILITY FOR THE LOCATION OF UNDERGROUND UTILITIES.

SITE DATA

PARCEL NUMBER:	0520198006
SITE ADDRESS:	16008 60TH ST E SUMNER, WA 98390
SITE AREA:	69,041 SF (1.58 AC)
ZONING:	GC (GENERAL COMMERCIAL)
SETBACKS:	
FRONT:	5' MIN/25' MAX
BACK:	20'
INTERIOR:	5'

TOPOGRAPHIC NOTE

THIS IS NOT A SURVEY. THE EXISTING CULTURAL AND TOPOGRAPHICAL DATA, SITE FEATURES, ELEVATIONS, AND PROPERTY BOUNDARIES SHOWN ON THESE DRAWINGS HAVE BEEN PREPARED BASED UPON INFORMATION FURNISHED BY THE OWNER, PIERCE COUNTY RECORDS, ENCO ENVIRONMENTAL, AND OTHER PUBLIC GIS INFORMATION. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, BEYLER CONSULTING CANNOT ENSURE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT. IT IS RECOMMENDED THAT A LICENSED SURVEYOR ALWAYS BE USED TO SET CORNERS, ESTABLISH LOT LINES AND DETERMINE ELEVATIONS. IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR HIRED CONTRACTORS TO VERIFY ALL INFORMATION PRIOR TO PLACEMENT OF STRUCTURES ON THE PROPERTY.

TAX DESCRIPTION

Section 19 Township 20 Range 05 Quarter 43 : LOT 4 OF SH PLAT 79-121 FORMERLY AKA SH PLAT 79-75 EXC POR DEEDED TO P CO ETN 569258 EASE OF RECORD PER ETN 701497 OUT OF 4-026 SEG M-0139 SP EMS (DCWJES11-5-82) (DC0775RJ8-26-88)

PROJECT INFO

CLIENT:
ENCO ENVIRONMENTAL
P.O. BOX 1212
PUYALLUP, WA 98371
TEL: 253-841-9710

ENGINEER:
BEYLER CONSULTING
7602 BRIDGEPORT WAY W, STE 3D
LAKEWOOD, WA 98499
TEL: 253-301-4157

OWNER:
SUMNER NATIONAL AUTO PARTS
ROBERT S. SUSS
16008 60TH ST E
SUMNER, WA 98390

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
Lakewood, WA 98499
phone: 253-301-4157
fax: 253-336-3950

ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
fax: 425-392-0100

beylerconsulting.com

BEYLER CONSULTING
Plan. Design. Manage
CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

COVER SHEET - SITE PLAN

SUMNER NAT'L AUTO PARTS

16008 60TH ST E

CITY OF SUMNER, WASHINGTON

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
KN/MEM	BML	HORZ: 1"=30' VERT: N/A	08/23/2016

JOB NUMBER

16-243

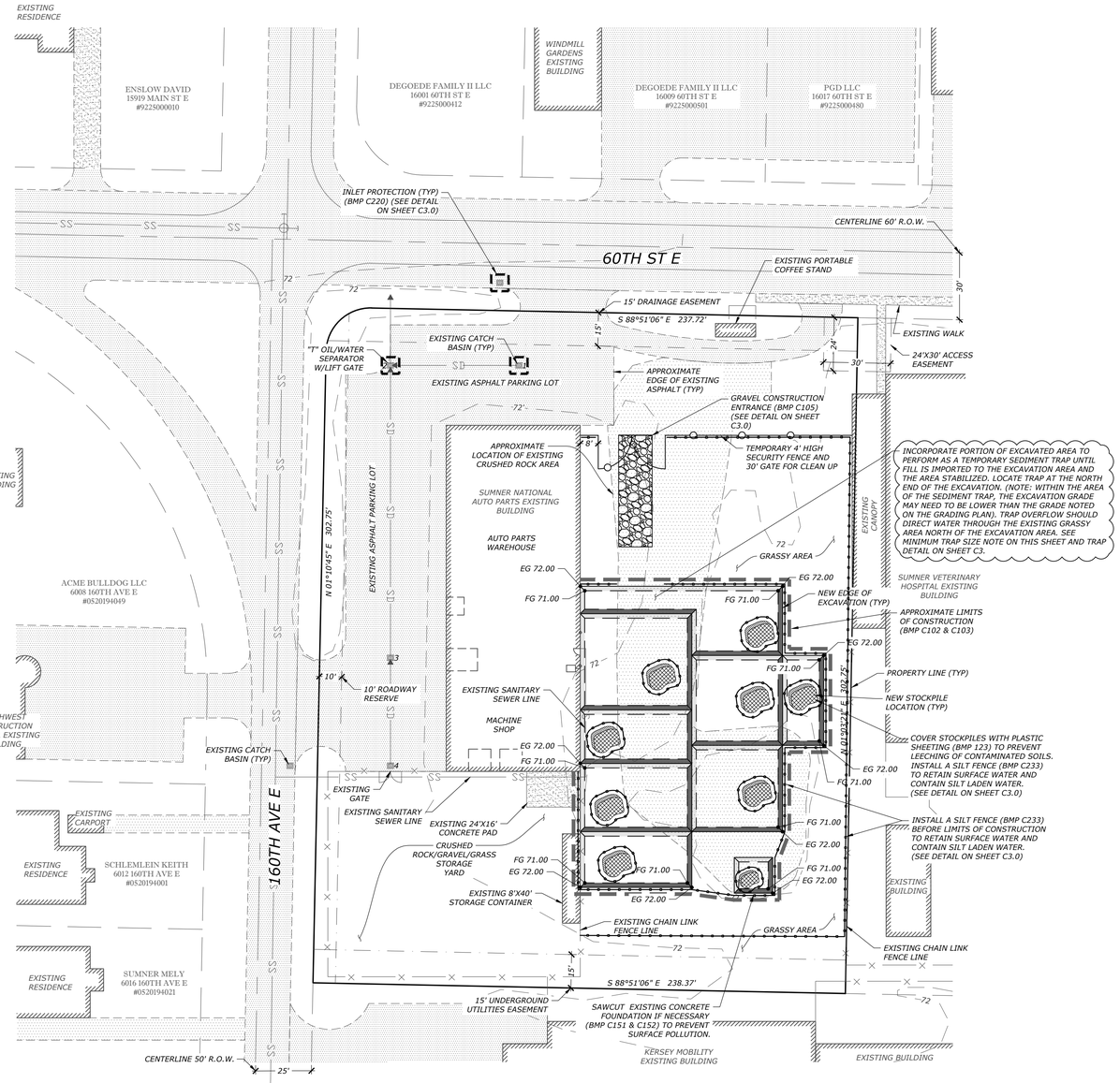
SHEET 1 OF 3

C1.0

CITY OF SUMNER PROJECT/PERMIT NUMBER SIT-2016-0146

PLOT DATE/TIME: 1/12/2017 – 9:33am

CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathon Kemp\4Civil Engineering\Engineering Drawings\16243 Grading & Erosion Plan 2016.08.23.dwg



PERMANENT SEEDING

1. SEEDING MAY BE USED THROUGHOUT THE PROJECT ON DISTURBED AREAS THAT HAVE REACHED FINAL GRADE OR THAT WILL REMAIN UNWORKED. SEED AND MULCH ALL DISTURBED AREAS NOT OTHERWISE VEGETATED OR STABILIZED.
2. SEED DURING SEASONS MOST CONDUCTED TO PLANT GROWTH. FOR WASHINGTON THIS IS BETWEEN APRIL 1ST THROUGH JUNE 30 AND SEPTEMBER 1 THROUGH OCTOBER 1. SEEDING THAT OCCURS BETWEEN JULY 1 AND AUGUST 30 WILL REQUIRE IRRIGATION UNTIL 5 PERCENT GRASS COVER IS ESTABLISHED. SEEDING THAT OCCURS BETWEEN OCTOBER 1 AND MARCH 30 WILL REQUIRE A MULCH OR PLASTIC COVER UNTIL 75 PERCENT GRASS COVER IS ESTABLISHED.
3. REFER TO BMP C120 IN THE 2015 PIERCE COUNTY STORMWATER MANUAL FOR FURTHER DETAILS.

FILL SPECIFICATION

FILL MATERIAL SHALL NOT CONTAIN PETROLEUM PRODUCTS, OR SUBSTANCES WHICH ARE HAZARDOUS, DANGEROUS, TOXIC, OR WHICH OTHERWISE VIOLATE ANY STATE, FEDERAL. OR LOCAL LAW, ORDINANCE, CODE, REGULATION, RULE, ORDER, OR STANDARD.

TRAP SIZING

MINIMUM TRAP SURFACE AREA= 202 SF
MINIMUM DEPTH 3.5 FEET BELOW SURROUNDING EXCAVATION TOP ELEV= 73.0±
OVERFLOW= 72.0 ±
BOTTOM=68.5 ±
(SEE STANDARD DETAIL ON SHEET C3)

CITY OF SUMNER STORMWATER NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN CONFORMANCE WITH THE CITY OF SUMNER DEVELOPMENT SPECIFICATIONS AND STANDARD DETAILS, THE MOST CURRENT COPY OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, THE ECOLOGY MANUAL, AND THE 2009 KING COUNTY SURFACE WATER DESIGN MANUAL.
2. ALL MANHOLES AND CATCH BASINS SHALL BE COVERED WITH TEMPORARY COVERS TO PREVENT DIRT AND DEBRIS FROM BEING PUSHED INTO THEM DURING CONSTRUCTION.
3. PROVISIONS SHALL BE MADE TO AVOID THE TRACKING OF SEDIMENT BY CONSTRUCTION VEHICLES ONTO PAVED PUBLIC ROADS. IF SEDIMENT IS DEPOSITED, IT IS TO BE CLEANED EVERY DAY BY SWEEPING.
4. CITY INSPECTION SHALL BE REQUIRED AT THE FOLLOWING STAGES OF CONSTRUCTION:
   COMPLETION OF FLOW ATTENUATION OR WATER QUALITY STRUCTURES.
   UPON COMPLETION OF EXCAVATION OF THE DETENTION FACILITIES SUBFOUNDATION AND INSTALLATION OF STRUCTURAL SUPPORTS OR REINFORCEMENT, AS REQUIRED BY THE APPROVED PLANS.
   DURING PLACEMENT OF STRUCTURAL FILL OR CONCRETE.
   DURING PIPING AND CATCH BASIN INSTALLATION.
   DURING BACKFILL OF FOUNDATIONS OR TRENCHES.
   DURING CONSTRUCTION OF EMBANKMENTS.
   UPON COMPLETION OF FINAL GRADING AND PERMANENT STABILIZATION.
5. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF SUMNER SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. STORMWATER PIPE BEDDING AND BACKFILL MATERIALS AND PRACTICES SHALL BE IN ACCORDANCE WITH THE CITY OF SUMNER DEVELOPMENT SPECIFICATIONS AND STANDARD DETAILS.
7. ALL STORMWATER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS. ANY DEVIATION FROM THESE PLANS SHALL REQUIRE APPROVAL FROM THE OWNER, ENGINEER OF RECORD, AND THE CITY.
8. NATIVE MATERIAL SHALL NOT BE ALLOWED FOR BACKFILL UNLESS IT CONFORMS TO THE CITY OF SUMNER BACKFILL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LABORATORY ANALYSIS AND ASSOCIATED COSTS REQUIRED TO VERIFY CONFORMANCE.

CITY OF SUMNER TESC NOTES

1. APPROVAL OF THIS STORMWATER SITE PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN.
2. THE IMPLEMENTATION OF THESE TESC BMPS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. THE TESC BMPS SHOWN MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE PERMITTEE SHALL NOTIFY THE CITY ENGINEER OR DESIGNEE TO SCHEDULE INSPECTIONS AT THE COMPLETION OF THE FOLLOWING PHASES OF WORK:
   - PRECONSTRUCTION INSPECTION. PRIOR TO THE COMMENCEMENT OF ANY OTHER WORK, THE INSPECTION OF EROSION AND SEDIMENT CONTROL DEVICES SHALL TAKE PLACE WHEN INSTALLATION OF ALL THE EROSION AND SEDIMENT CONTROL DEVICES HAS BEEN COMPLETED ACCORDING TO APPROVED PLANS. ONLY THE MINIMUM AREA NECESSARY FOR INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CLEARED AND/OR GRADED PRIOR TO THIS INSPECTION.
   - ROUGH GRADING INSPECTION. WHEN ALL ROUGH GRADING IS COMPLETE, INSPECTION OF THE SITE SHALL TAKE PLACE TO DETERMINE THE SATISFACTORY FUNCTIONING OF ALL EROSION AND SEDIMENT CONTROL DEVICES.
   - FINAL INSPECTION. UPON COMPLETION OF ALL CONSTRUCTION, INSPECTION OF THE SITE SHALL TAKE PLACE TO DETERMINE THAT ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN REMOVED AND THAT THE SITE HAS BEEN PERMANENTLY STABILIZED.
6. THE TESC BMPS SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS AND AS THE CITY REQUIRES.
7. FROM OCTOBER 1 THROUGH APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM MAY 1 THROUGH SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. THIS CONDITION APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. SEE THE DEPARTMENT OF ECOLOGY 2005 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME II, FOR ADDITIONAL SOIL STABILIZATION REQUIREMENTS.
8. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN 15 DAYS.
9. AT NO TIME SHALL MORE THAN 1 FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. PROVISIONS SHALL BE MADE TO AVOID THE TRACKING OF SEDIMENT BY CONSTRUCTION VEHICLES ONTO PAVED PUBLIC ROADS. IF SEDIMENT IS DEPOSITED, THE ROADS ARE TO BE CLEANED EVERY DAY BY SWEEPING.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION-CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY AND SHALL BE CLEANED OUT ENTIRELY FOLLOWING PROJECT COMPLETION.
13. AS CONSTRUCTION PROGRESSES AND UNEXPECTED SEASONAL CONDITIONS DICTATE, AND AS THE CITY REQUIRES, THE PERMITTEE SHOULD ANTICIPATE THAT MORE TESC MEASURES WILL BE NECESSARY TO PROTECT ADJACENT PROPERTIES AND ENSURE ADEQUATE WATER QUALITY FOR SITE RUNOFF. IT SHALL BE THE RESPONSIBILITY OF THE ESC SUPERVISOR TO ADDRESS DEFICIENT TESC CONDITIONS AND PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE MINIMUM REQUIREMENTS OUTLINED ON THE APPROVED PLANS.
14. THE ESC SUPERVISOR SHALL INSPECT ALL TESC MEASURES MONTHLY DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30), WEEKLY DURING THE WET SEASON (OCTOBER 1 TO APRIL 30), AND IMMEDIATELY FOLLOWING SIGNIFICANT STORMS (0.4 INCHES OF PRECIPITATION IN 24 HOURS). WRITTEN RECORD OF THESE INSPECTIONS SHALL BE RETAINED ON SITE, WITH A COPY OF THE INSPECTION REPORT BEING FORWARDED TO THE CITY ENGINEER OR DESIGNEE WITHIN 48 HOURS OF EACH INSPECTION. ESC SUPERVISOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TESC BMPS AS NECESSARY TO ENSURE CONTINUED SATISFACTORY FUNCTION AND OPERATION.
15. RETURN SILTATION CONTROL AREAS TO ORIGINAL OR BETTER GROUND CONDITIONS AT PROJECT COMPLETION.

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
Lakewood, WA 98499
phone: 253-301-4157
fax: 253-336-3950

ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
fax: 425-392-0100

beylerconsulting.com

BEYLER CONSULTING
Plan. Design. Manage
CIVIL & STRUCTURAL ENGINEERING | LAND SURVEYING | PLANNING
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

CITY OF SUMNER PROJECT/PERMIT NUMBER SIT-2016-0146

GRADING, DRAINAGE, AND T.E.S.C. PLAN

SUMNER NAT'L AUTO PARTS

16008 60TH ST E

CITY OF SUMNER, WASHINGTON

DRAWN BY: KN/MEM
CHECKED BY: BML
SCALE: HORZ: 1"=30' VERT: N/A
DATE: 08/23/2016

BRANDON M. LOUDON
STATE OF WASHINGTON
50958
REGISTERED
PROFESSIONAL ENGINEER
11/20/16

JOB NUMBER
16-243

SHEET 2 OF 3
C2.0

CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathan Kemp\4Civil Engineering\Engineering Drawings\16243 Grading & Erosion Plan 2016.08.23.dwg PLOT DATE/TIME: 1/12/2017 – 9:34am

TEMPORARY CONSTRUCTION ENTRANCE CRITERIA FOR TESC, GRADE & FILL, SITE WORK & BUILDING CONSTRUCTION					CATEGORY
DESCRIPTION	TYPE 1	TYPE 2	TYPE 3	TYPE 4	
SITE SIZE IN ACRES	<1.0	1.0 to 3.0	3.0 to 6.0	>6.0	SITE SIZE CRITERIA
VOLUME OF CUT & FILL	<2,500	<20,000	<100,000	>100,000	
MINIMUM WIDTH IN FEET	15	24	24	30	GEOMETRY & DIMENSIONS OF ENTRANCE
MIN. DEPTH OF SPALLS (INCHES)	8	12	12	18	
MIN. LENGTH OF SPALL ENTRANCE	50	75	100	150	
MIN. RETURN RAD. OFF ST. (FT.)	0	30	35	40	
DEPTH OF HMA APPROACH IN ROW	3	4	6	6	
TYPE OF HMA FOR APPROACHES	CLASS 1/2"	CLASS 1/2"	CLASS 1/2"	CLASS 1/2"	MATERIAL SPECIFICATIONS FOR ENTRANCE IN RIGHT-OF-WAY
CONCRETE APPROACH THICKNESS	6	6	7	7	
TYPE OF CONCRETE CEMENT	6 SACK-1 1/2	6 SACK-1 1/2	6 SACK-1 1/2	6 SACK-1 1/2	
28 DAY OF STRENGHT OF CONC.	4,000 lb.	4,000 lb.	4,000 lb.	4,000 lb.	
CONC. CEMENT REINFORCEMENT	FIBER MESH	#4@12"E.W.	#5@12"E.W.	#5@12"E.W.	
GEOTEXTILE REQUIRED	YES	YES	YES	YES	
SIZE OF QUARRY SPALLS	2" - 4"	4" - 6"	4" - 6"	4" - 6"	

PURPOSE: THE PURPOSE OF CONSTRUCTION ENTRANCES IS TO REDUCE THE AMOUNT OF SEDIMENT TRANSPORTED OFF–SITE BY CONSTRUCTION VEHICLES, PROTECTION OF THE CITY'S STORM DRAINAGE SYSTEM FROM UN–DUE AMOUNTS OF SEDIMENT AND PROTECTION OF THE CITY'S STREETS AND ROADS. A HARD SURFACE APPROACH WITHIN THE LIMITS OF THE RIGHT–OF–WAY PROTECTS THE CITY STREET AND REDUCES THE POTENTIAL OF ROCKS GETTING ONTO THE STREETS.

NOTES:

1. ACP WILL BE USED WITHIN RIGHT–OF–WAY'S WHERE THE STREET IS A ROAD SECTION WITHOUT CURB & GUTTER.
2. FOR ACCESS OFF IMPROVED STREETS, PROVIDE CONCRETE DRIVEWAY IN R.O.W. AS SPECIFIED IN THE TABLE.
3. CURB CUTS SHALL MEET THE SAME MATERIAL REQUIREMENTS AS CONCRETE DRIVEWAY APPROACHES.
4. FOR ACP APPROACHES, EDGE OF ROAD SHALL BE SAW CUT, EDGE TACKED AND JOINT SEALED WITH AR4000.

DESIGN AND INSTALLATION SPECIFICATIONS:

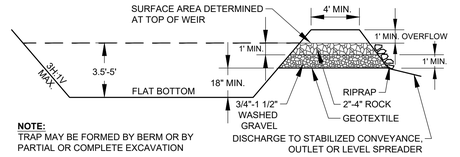
1. SEE SUMNER STANDARD DETAIL M–8.1 FOR LAYOUT OF ENTRANCE.
2. A SEPERATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENTS FROM PUMPING UP INTO THE ROCK PAD. THE FABRIC SHALL CONFORM TO WSDOT STANDARD SPECIFICATION 9–33, TABLE 3 FOR SOIL STABILIZATION FABRIC.
3. FENCING SHALL BE INSTALLED AS NECESSARY TO RESTRICT TRAFFIC TO THE CONSTRUCTION ENTRANCE.
4. LOCATION OF CONSTRUCTION ENTRANCE TO BE APPROVED BY THE CITY ENGINEER. TYPE 1 AND 2 SITES WILL GENERALLY BE ALLOWED ONLY ONE ENTRANCE.
5. TRUCK ROUTES FOR TYPE 2, 3 AND 4 SITES SHALL BE SUBMITTED WITH THE PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE CITY ENGINEER.
6. PERMITEE SHALL POST STREET RESTORATION BOND FOR TYPE 2, 3 AND 4 SITES.

MAINTENCE STANDARDS:

1. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES SHALL BE REQUIRED WHICH MAY INCLUDE STREET SWEEPING, INCREASING DIMENSIONS OF THE ENTRANCE OR THE INSTALLATION OF A WHEEL WASH.
3. ANY SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP IN THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
4. DIRT TRACKED ONTO THE STREETS SHALL BE REMOVED BY SWEEPERS.
5. ADDITIONAL MAINTENANCE AS REQUIRED BY CITY REPRESENTATIVE.

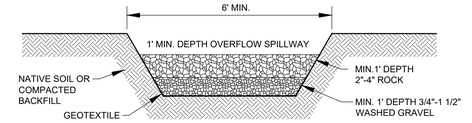
P:\Standard Details\CAD\MISC\M-8.2.DWG

The City of Sumner Public Works Department	
TEMPORARY CONSTRUCTION ACCESS – NOTES	
DATE: 9/3/2007 N.T.S.	STANDARD DETAIL MISC.
LAST REVISION: 7/2/10	
SHEET 1 of 1	FILE NO. M–8.2



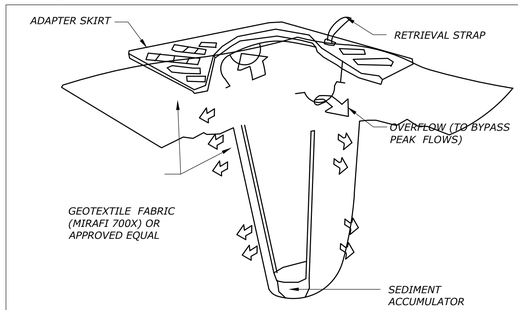
NOTE:
TRAP MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION

CROSS SECTION



TRAP OUTLET

1 C3 SEDIMENT TRAP DETAIL

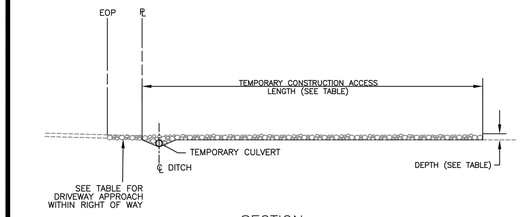


SCHEMATIC DETAIL

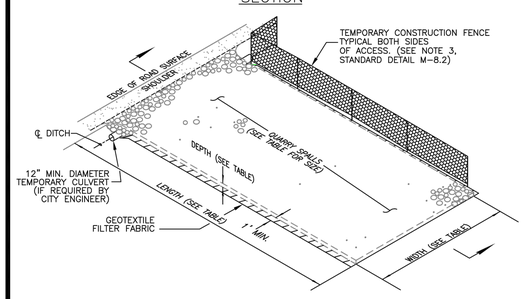
PROVIDE CB INSERT "STREAMGUARD FOR SEDIMENT" OR APPROVED EQUAL
MANUFACTURER'S NAME: FOSS ENVIRONMENTAL, OR APPROVED EQUAL

2 C3 INLET SEDIMENT PROTECTION

SCALE: N.T.S.



SECTION



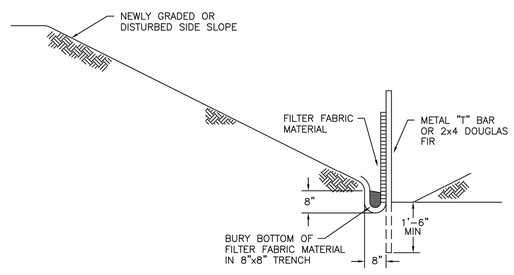
NOTE:

THE 'TEMPORARY CONSTRUCTION ACCESS' WILL BE THE ONLY ALLOWED POINT OF ACCESS IN AND OUT OF THE CONSTRUCTION AREA.

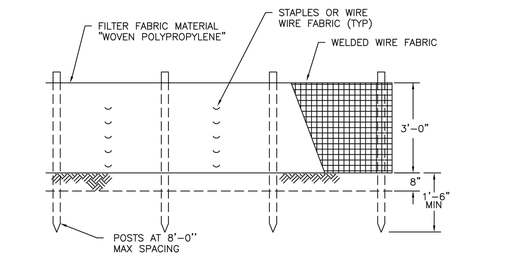
(SEE STANDARD DETAIL M–8.2 FOR ADDITIONAL NOTES AND "TABLE")

P:\Standard Details\CAD\MISC\M-8.1.DWG

The City of Sumner Public Works Department	
TEMPORARY CONSTRUCTION ACCESS	
DATE: 9/3/2007 N.T.S.	STANDARD DETAIL MISC.
LAST REVISION: 6/30/10	
SHEET 1 of 1	FILE NO. M–8.1



TYPICAL CROSS SECTION



ELEVATION

P:\Standard Details\Storm\SD5-9.DWG

The City of Sumner Public Works Department	
SILTATION FENCE DETAIL	
DATE: 7/24/07 N.T.S.	STANDARD DETAIL STORM
LAST REVISION: 7/2/10	
SHEET 1 of 1	FILE NO. SD5–9

NO.	DESCRIPTION	INIT	DATE
1	REVISED PER CITY COMMENTS, NOV 4, 2016	BML	12/20/16

LAKEWOOD OFFICE
7602 Bridgeport Way W #3D
Lakewood, WA 98499
phone: 253-301-4157
fax: 253-336-3950

ISSAQUAH OFFICE
455 Rainier Blvd N
Issaquah, WA 98027
phone: 425-392-8055
fax: 425-392-0100

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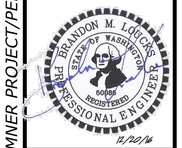
PROJECT MANAGEMENT | FEASIBILITY | PERMIT EXPEDITING

CITY OF SUMNER PROJECT/PERMIT NUMBER SIT-2016-0146

TEMPORARY EROSION SEDIMENTATION CONTROL DETAILS

SUMNER NAT'L AUTO PARTS
16008 60TH ST E
CITY OF SUMNER, WASHINGTON

DRAWN BY: KN/MEM | CHECKED BY: BML | SCALE: HORZ: 1"=30' VERT: N/A | DATE: 08/23/2016



JOB NUMBER 16-243

SHEET 3 OF 3

C3.0

CAD FILE: X:\Projects\16-000\16-243 Sumner National Auto Parts, Jonathan Kemp\4Civil Engineering\Engineering Drawings\16243 Grading & Erosion Plan 2016.08.23.dwg

PLOT DATE/TIME: 12/23/2016 - 10:24am

Tacoma - Pierce County
Health Department
Healthy People in Healthy Communities
www.tpchd.org

No. 2035

WASTE DISPOSAL AUTHORIZATION

Tacoma Pierce County
Health Department

7/29/2016 2:07:19 PM
Clerk 58-T1
Waste Disposal Auth Initial
$156.00
Receipt #423836
ck6680 ENCE Enviro corp 16008 60th st e

(**XX**) Non-Asbestos
( ) Asbestos (PSCAA Case # _____)

(XX) New
( ) Amendment

A. Generator Name: Sumner National Auto Parts, Inc.

B. Generator Address: 16008 60th Street East, Sumner WA 98390

C. Transporter Name: Terra Metric Inc.

D. Technical Contact: Jonathan M. Kemp EnCo Environmental Corporation 253.841.9710, jkemp@encoec.com

E. Waste Description: Petroleum and Metal contaminated soils
( ) Sludge (**X**) Solid () PCS (**X**) Other

F. Approved Quantity: **Project Total of 200 Tons**

G. **Actual Quantity (Filled in upon disposal):** _____

H. Multiple Loads: (**X**) Yes ( ) No

I. Dates of Disposal: **July 28, 2016 through December 31, 2016**

J. Testing: Petroleum Hydrocarbons, Metals, VOCs, pH, and TCLP Lead and Arsenic

K. Reviewed by Department of Ecology: ( ) Yes (**XX**) No

L. Disposal/Transportation Requirements: **A copy of this WDA must be transported with EACH load of waste and presented to the LRI Landfill Scalehouse Operator.** Soils demonstrating excessive odors are not suitable for use as daily cover and shall be directly buried (disposed of) in the landfill. If odors are not excessive and the soils physical characteristics are suitable for utilization as a daily cover then the soils may be used as alternative daily cover. Loads shall be covered during transport to the landfill to prevent fugitive emissions of contaminated soils. Load sizes shall comply with conditional-use and solid waste permit criteria.

M. Facility: **(X X) LRI Landfill (304th Street LF), 30919 Meridian Street, Eatonville, WA**

CERTIFICATION

I hereby certify that I have personally examined and am familiar with the information submitted in this document and any supporting material. Based on my inquiry of those individuals immediately responsible for obtaining the information, the information submitted is true, accurate and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed. I agree that the generator and/or transporter will abide by all conditions specified in line (L) or any attachments thereto.

07.29.2016 President, EnCo Env. Jonathan M. Kemp

Date Title Signature

AUTHORIZED BY:

7/28/16

Joseph Gallagher, TPCHD (253)798-6566

APPROVED

JUL 28 2016

TACOMA-PIERCE COUNTY HEALTH DEPT.
ENVIRONMENTAL HEALTH DIV.
For Official Use Only

Cc: LRI LF Scalehouse via Fax – 253 875 7205

EnCo Environmental Corporation

MEDIA: ☒ **Soil** (SO) ☐ **Sediment** (SD) ☐ **Residue** (RS) ☐ **Sludge** (SL ☐ **Other** _____
Project Name: Sumner National Auto Parts **EnCo Project** #: E3-Sumner Parts **Location Reference** _____
Sample #: SNA-_____ (SNA-SO - 1A - 14' (bgs) **Time**: _____ **Date**: _____
Borehole / Well / Piezometer # _____ ☐ Riser/Flush ☐ Screen _____ ☐ Recovery in Spoon/Liner _____
Sample ☐ Trench ☐ Pile ☐ Drum ☐ Liner ☐ Cuttings ☐ Basin/Drain ☐ Sump/Separator ☐ Other ____
Sample ☐ Surface ☐ Bottom ☐ Wall (N E S W) ☐ Under Slab ☐ Under Asphalt ☐ Other: _____
Sample Type ☐Grab ☐Composite _____ **Oil** ☐ Soil Sheen: _____ ☐ Water Sheen: _____
Moisture: Saturated - Very Wet -Very Moist - Moist - Slight Moist - Dry
Zone: ☐ Saturated ☐ Smear/Capillary ☒ Vadose ☐ Aquitard (Over/Under) ☐ Water Depth: _____
Compliance: ☐ Profile ☐ Performance ☐ Confirm ☐ Background ☐ Stockpile ☐ Assessment
☐ QC ☐ Protection ☐ Removed ☐ Future Removal ☐ Left-In-Place _____
Odor: Gas/Diesel/Fuel Oil/Motor Oil/Solvent/Musty/Septic/Sap/Earthy/None **Strength**: Strong/Moderate/Trace
Organic Vapor: Ground Surface:_____ Empty Bag: _____ Headspace in Bag w Soil: _____ **Soil Temp**: _____
Organic Vapor: Breathing Zone: ___ Cutting/Auger Flight/Liner ____ Well / Borehole Void:_____
PID Lamp: 9.8/10.6/11.7 **Cal Date**: _**Equipment** ☐Auger Drill/Hand ☐Shovel ☐Hydraulic Probe ☐Back Hoe
Sampling Tools: ☒Spoon ☐Trier ☐Syringe
Problems: _____ ☒ **Decon Station**
COC: ☒ See Custody ☐ VOC ☐ BTEX
☐ Gas ☐ Diesel/Oil ☐ cPAH ☐ PCB ☒ Metals
☐ Other: _____
Waste Disposal: ☐ N/A ☐ Off-Site ☒ On-Site _____
Sampler: ☒JK ☐ ___ **Bottles**: _____

Layers	Color/Texture/Moistness/Loose/Dense/Soft/Stiff/Hard/ FILL

EnCo Environmental Corporation

MEDIA: ☒ **Soil** (SO) ☐ **Sediment** (SD) ☐ **Residue** (RS) ☐ **Sludge** (SL ☐ **Other** _____
Project Name: Sumner National Auto Parts **EnCo Project** #: E3-Sumner Parts **Location Reference** _____
Sample #: SNA-_____ (SNA-SO - 1A - 14' (bgs) **Time**: _____ **Date**: _____
Borehole / Well / Piezometer # _____ ☐ Riser/Flush ☐ Screen _____ ☐ Recovery in Spoon/Liner _____
Sample ☐ Trench ☐ Pile ☐ Drum ☐ Liner ☐ Cuttings ☐ Basin/Drain ☐ Sump/Separator ☐ Other ____
Sample ☐ Surface ☐ Bottom ☐ Wall (N E S W) ☐ Under Slab ☐ Under Asphalt ☐ Other: _____
Sample Type ☐Grab ☐Composite _____ **Oil** ☐ Soil Sheen: _____ ☐ Water Sheen: _____
Moisture: Saturated - Very Wet -Very Moist - Moist - Slight Moist - Dry
Zone: ☐ Saturated ☐ Smear/Capillary ☒ Vadose ☐ Aquitard (Over/Under) ☐ Water Depth: _____
Compliance: ☐ Profile ☐ Performance ☐ Confirm ☐ Background ☐ Stockpile ☐ Assessment
☐ QC ☐ Protection ☐ Removed ☐ Future Removal ☐ Left-In-Place _____
Odor: Gas/Diesel/Fuel Oil/Motor Oil/Solvent/Musty/Septic/Sap/Earthy/None **Strength**: Strong/Moderate/Trace
Organic Vapor: Ground Surface:_____ Empty Bag: _____ Headspace in Bag w Soil: _____ **Soil Temp**: _____
Organic Vapor: Breathing Zone: ___ Cutting/Auger Flight/Liner ____ Well / Borehole Void:_____
PID Lamp: 9.8/10.6/11.7 **Cal Date**: _**Equipment** ☐Auger Drill/Hand ☐Shovel ☐Hydraulic Probe ☐Back Hoe
Sampling Tools: ☒Spoon ☐Trier ☐Syringe
Problems: _____ ☒ **Decon Station**
COC: ☒ See Custody ☐ VOC ☐ BTEX
☐ Gas ☐ Diesel/Oil ☐ cPAH ☐ PCB ☒ Metals
☐ Other: _____
Waste Disposal: ☐ N/A ☐ Off-Site ☒ On-Site _____
Sampler: ☒JK ☐ ___ **Bottles**: _____

Layers	Color/Texture/Moistness/Loose/Dense/Soft/Stiff/Hard/ FILL

Groundwater Well / Piezometer Sample Form

☐ Final QC

❑ Well #, Ecology # & Job Number	Well #: MW-1	Well #: BJX-768	Job #: E2JK-Sumner_Auto_Parts-2
❑ Underground Utility Check	Company: Mt. View Locate & Dig Safe		Locate or Logger ID #: 15308205
❑ Well / Probe Install Date & Sample Date	Well / Probe Install Date: 10.30.15		Sample Date: 10:30:15
❑ Project Site Name & Telephone	Site Name: Sumner National Auto Parts		Telephone: 253.863.5178
❑ Project Site Location & Address	Address: 16008 60th Street East, Sumner WA		
❑ Sampler(s) & Company	Company: EnCo Environmental Corp.		Sampler: Jonathan M. Kemp
❑ Testing Laboratory	Lab Name: Friedman & Bruya, Inc.		Telephone: 206.285.8282
❑ Drill / Probe Company & Operator:	Company: Holocene Drilling		Telephone: 253.848.6500
❑ Precipitation, Clouds, Wind, Barometer (Rise / Fall)	Cloudy, breezy, showers, 65 degrees		
❑ Security of Well	☐ Bolt	☒ Cap (Push/Screw)	☐ Key Lock
❑ Well Casing Material & Diameter	☒ PVC 40 / 80 ☐ Stainless		O.D. = ¾" 1" 2" 4" 6"
❑ Type of Well / Date Removed	☒ Permanent ☐ Temporary		Remove Date =
❑ Filtering (0.45um) # of filters used: 1	☒ Yes ☐ No ☐ N/A		☐ Sent to Lab for Filtering
❑ Photos Taken	☒ Yes ☐ No		Filter Pore Diameter:
❑ Ice or Freeze Packs In Cooler	☒ Yes ☐ No		
❑ Chain of Custody Seal on Sample Cooler	☒ Yes ☐ No		
❑ Length and OD Diameter of Sample Tubing	Length: 10' Diameter: ¼"		Type: ☒ Teflon ☐
❑ Chemicals of Concern ☒ (See C-O-C Form)			
❑ Organic Vapor Reading (Well Casing / Borehole Annulus)	Not part of scope		
❑ Water Depth from TOC (ft) @ North Rim (Cap Remove)	5'		☒ Water in Well
❑ Ground Surface to TOC (ft) @ North Rim (+ or -)			
❑ Depth to Water from Ground Surface			☐ Stick Up / ☐ Flush Mount
❑ Well Screen Interval BGS Screen Type: Pre Pack	3.5' to 8.5' Screen: 0.01" 0.02"		☒ Sampled in Screen Interval
❑ Bottom of Casing from TOC @ North Rim + 0.28'	12' deep well		
❑ Sediment in Bottom of Well	☒ Yes Texture: Light tan silt		☐ No ☐ Unknown
❑ Was TOC Professionally Surveyed to a Benchmark	☐ Yes ☒ No ☐ Unknown		
❑ Elevation at Ground Surface at Monument	Not required at this time		
❑ Elevation at TOC @ North Rim			
❑ Elevation at SWL from TOC @ North Rim	☐ Assumed ☐ MSL		
❑ Benchmark and Elevation	☐ Vertical Datum NAVD88		
❑ Immiscible Layers (observed or interphase meter)	Top: None		Bottom: None
❑ Tidal Influence	High Tide: n/a		Low Tide: n/a
❑ Purge & Sampling Equipment ☒ Battery ☐ Electric	**PURGE**: Geo Guard		**SAMPLING**: Geo Guard
❑ Purge & Sampling Date and Time	Date: 10.30.15 Purge Time: 10 to 11:15		Date: 10.30.15 Sample Time: 11:15
❑ Purge/Sample Rate	Purge Rate: 0.5 gpm		Sample Rate: 0.1 gpm
❑ Static Water Depth in Well, & 4 Volumes	Static Water Depth: 7'		4 Volumes in Well = 1.14 gal
❑ Static & Purge Water Volume (gallons) & Disposal	Purged Water: 7 gallons		Disposal: 55 gallon drum
❑ Borehole / Probehole Annulus Diameter	Hole Diameter: 2"		
❑ Auger / Probe Cuttings / Purge Water Disposal	Drummed: Yes		Drums Labeled: No
❑ Well Yield	☒ High	☐ Medium	☐ Low ☐ None
❑ Purge Water Appearance	**INITIAL**: Very Silty Tan		**END**: Clear
❑ pH, Conductivity, DO, ORP Meter Calibrations	Calibration Date:	Buffer Expiration Date:	Field Test Instrument:
❑ Stability Temperature Degrees C (field) 1, 2, 3	Not part of scope		
❑ Stability Conductivity µS/cm^3 (field) – 3+ readings			
❑ Stability pH units (field) – 3+ readings			
❑ Stability DO mg/L (field) – 3+ readings			
❑ Stability ORP mV (field) – 3+ readings			
❑ **Start** Sample Appearance, Odor, and Sheens	Clear		
❑ **Finish** Sample Appearance, Odor, and Sheens	Clear		
❑ Sample Temperature (Degrees C):	**Start: Not part of scope**		**Finish:**
❑ Sample Conductivity µS/cm^3 (field):	**Start:**		**Finish:**
❑ Sample pH (field):	**Start:**		**Finish:**
❑ Sample Dissolved Oxygen (mg/L)			
❑ Sample Oxidation Reduction Potential			
❑ Sample Ferrous Iron Field Kit Test Result (mg/L)			
❑ **Notes:**			
❑ Gasket and Monument Condition	Excellent		
❑ Maintenance Requirements	None		

Updated on 10.30.15

HOLOCENE DRILLING
Licensed To Drill

11412 62nd Avenue East, Puyallup, WA 98373
Tel: (253) 848-6500 Fax: (253) 848-6515
info@holocenedrillinginc.com

HOLOCENE DRILLING, INC. DAILY DIRECT PUSH DRILLING LOG

JOB INFORMATION:

CLIENT INFORMATION:		DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:
Client:		Probe Rig/Full Day:		Probe LAR/Full Day:	
Field Person:		Probe Rig/1/2 Day:		Probe LAR/1/2 Day:	
Project:		Concrete Cores/Each:		Electric Jackhammer/Day:	
Location:	11008 60th St E	Overtime/Hour:		Overtime/Hour:	
Rig:	Summer	Other:		Other:	
Level:		Other:		Other:	
Date:	10/30/15	Other:		Other:	

MILEAGE:

Job Start Mileage:		Job End Mileage:		Total Mileage:	

TIME RECORD – FIELD ACTIVITY:

FROM:	TO:	DESCRIPTION:	FROM:	TO:	DESCRIPTION
8:30	9 cc	Mob			
9:00	9:30				
9:30	11 00	Probe			
11:00		De Mob			

WELL INFORMATION:

TB#:	FROM:	TO:	WELL DEPTH:	TAG#	DESCRIPTION:
Well	0	12	12	BJX 768	Cobbles 0-3 3-5 Dry Sand 5-12 Wet Sand

MATERIALS:

DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	DESCRIPTION:	QTY.:	NOTES:
Hole Plug/Bag:	½	1" x 5' PVC Riser:	1	1" Threaded End Cap:		Dec. Start Card:		
Concrete/Bag:	3	1.5" x 5' PVC Riser:		1.5" Threaded End Cap:		Res. Prot. Start Card:		
Sand/Bag:	1	2" x 5' PVC Riser:		2" Threaded End Cap:		Env. Inv. Start Card:		
Top Soil/Bag:		3/4" Slip Cap:		3/4" x 5' Pre-Pack Screen		5" x 12" Flush Monument:		
1.5"x4' Liners:	3	1" Slip Cap:	2	1" x 5' Pre-Pack Screen:	1	8" x 12" Flush Monument:	1	
1.5" x 3' Liners		1.5" Slip Cap:		1.5" x 5' Pre-Pack Screen:		20 gallon Drum:		
GeoProbe® 5' Liners		2" Slip Cap:		2" x 5' Pre Pack Screen:		55 gallon Drum:	1	
3/4" x 5' PVC Screen		3/4" J Plug:		1.5" Expend. Drive Point:		Additional Mileage:		
1" x 5' PVC Screen:		1" J Plug:		3/4" Expend. drive point:		Per Diem/Man:		
1.5" x 5' PVC Screen:		1.5" J Plug		3.5" Expend. Drive Points:	1	5" x 12" Flush Monument:		
2" x 5' PVC Screen:		2" J Plug:		2 3/8" Expend. Drive Tip		8" x 12" Flush Monument:		
3/4" 5' PVC Riser:		3/4" Threaded End Cap:		Other:		Other:		

CLIENT APPROVAL:

(Ensures Client's figures agree with Holocene Drilling, Inc. figures)

Overtime Approval:	Lead Driller:
Client Signature: Justin M/L	Driller's Assistant:
Lead Driller Signature:	*Thank you for choosing Holocene Drilling, Inc.* *We appreciate your business today!* www.holocenedrillinginc.com

Direct Push **Hollow Stem Auger** **Mud Rotary** **Air/ODEX** **Rock Coring** **Hydraulic Jetting**

PROBED SOIL LOG & MONITORING WELL DETAILS: MW-1

PROJECT SITE: Sumner National Auto Parts, Inc. | **PROJECT ID**: E3JK-Sumner-National-2

ADDRESS: 16008 60th St. East, Sumner WA 98390 | **PROJECT NAME**: Independent Remedial Cleanup Work Plan

Sample Number	Org. Vapor (ppm)	Sample Type	Blow Counts	Recovery ("): 48" Max	ASTM Classification	Color	Moisture	Sample Depth (bgs)	Soil Layer (feet)	0 Feet	Lithographic Description
											Soil at surface, grey inorganic silt loam with cobbles & crush rock, medium dense, moist, no odor, Fill
1A	0.2	Grab		30"	ML		Moist	0.75'		1	
1B	0.1	Grab		30"	GP		Moist	1'-2'			Grey brown, poorly graded, sandy gravel, 1.5" - 0.25", irregular and round, medium dense, moist, no odor, Fill
										2	
										3	
										4	
1C	0.1	Grab		40"	SW		Smear	4'-5'			Grey, well sorted, medium sand, loose, very moist to wet, no odor
										5	
										6	
										7	
										8	
										9	
1D	0.1	Grab		40"	SW		Wet	9'-10'			
										10	Bottom of Probe Hole
										11	
										12	
										13	
										14	
										15	
										16	

Monitoring Well Details

Flush Mounted Monument Secured with Hydrated Sacrete (0' - 1')
Expansion Cap 1"D With Key Lock
PVC Riser - 1"D (0' - 3.5')
2" Diameter Annulus
3/4" Bentonite Chip - Hydrated (1' - 3.0')
Silica Sand - 10 to 20 Mesh (3' to 10')
PVC 1"D 0.02" Slotted Pre-Pack Well Screen (3.5' - 8.5')
Static Water Level at 5.0' bgs ▼
Bottom of Monitoring Well at 8.5'
PVC 1" End Cap On Bottom of Well
Bottom of Probe Hole at 10'

Elevation: Referenced at: Not Surveyed Yet
Assumed at: Not Surveyed Yet
Benchmark: n/a
Samples Collected from 48" Acetate Liners
Bottom of Probe Hole: 10'

EnCo Environmental Corporation
PO Box 1212
Puyallup WA 98371
253.841.9710

Page 1 of 1

Drill /Probe Date: 10.30.2015
Sample Collection Date: 10.30.2015
Downhole Equipment: AMS Power Probe
Operator: R. J. Ortega at Holocene Drilling
Logged By: JK Checked By: GK

UNIFIED SOIL CLASSIFICATION SYSTEM (From ASTM D-2488 & 2487-90)				
MAJOR DIVISIONS			GROUP SYMBOL	TYPICAL DESCRIPTION
Coarse-Grained Soils (more than 50% retained on No. 200 sieve) [Use Dual Symbols for 5 – 12% Fines (i.e. GP – GM)]	Gravels (more than 50% of coarse fraction retained on No. 4 sieve)	Clean Gravels (less than 5% fines)	GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP	Poorly-Graded Gravels, Gravel-Sand Mixtures
		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 passes the No. 4 sieve)	Clean Sands (less than 5% fines)	SW	Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP	Poorly-Graded Sand, 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 passes the No. 200 sieve)	Silts and Clays (liquid limit less than 50)	Inorganic	ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or 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
		Organic	OL	Organic Silts and Organic Silty Clays of Low Plasticity
	Silts and Clays (liquid limit 50 or more)	Inorganic	CH	Inorganic Clays of Medium to High Plasticity, Sandy Fat Clay, Gravelly Fat Clay
			MH	Inorganic Silts, Micaceous or Diatomaceous Fine Sands or Silty Soils, Elastic Silt
		Organic	OH	Organic Clays of Medium to High Plasticity, Organic Silts
Highly Organic Soils	Primarily organic matter, dark in color, and organic odor		PT	Peat, Humus, Swamp Soils with High Organic Content (See D 4427-02)

PROJECT SITE SAFETY PLAN

PROJECT SITE: Sumner National Auto Parts, Inc.
SITE ADDRESS: 16008 60th Street East, Sumner WA 98390

This Site Safety Plan establishes policy and procedures to protect EnCo Environmental Corporation (EnCo) workers from the potential hazards posed by a suspect hazardous waste site or site impacted with contaminants of concern.

This Site Safety Plan will be distributed to all EnCo employees working on a suspect hazardous waste site or site impacted with contaminants of concern. A Site Safety Plan provides measures to minimize accidents and injuries that may occur during normal daily activities or during adverse conditions, such as hot or cold weather. This Site Safety Plan is to be used only on sites that require Safety Level C or Level D. This Site Safety Plan is not intended to be used for confined space entry and is not intended to be used for Safety Level A or Level B situations. The Site Safety Plan is established for informational purposes and general project coordination and describes the planning process for health and safety during normal site operation, e.g., for non-emergency situations.

An essential part of this Site Safety Plan is to identify the hazards and risks which may be presented by toxic chemicals associated with the work site prior to undertaking any on-site investigations or cleanup actions. To provide workers with dependable information about specific toxic chemicals, EnCo uses professionally prepared Material Safety Data Sheets (MSDS). These MSDS documents provide useful information on occupational exposure limits for each hazardous ingredient, physical data, health hazard data, fire and explosion hazards and other important information to assist in the selection of proper personnel protection for each worker. Applicable MSDS documents are kept in the EnCo office and can be reviewed by each worker prior to any site activities. The Site Safety Plan will be modified, as needed, whenever new information about site hazards is obtained.

Project Proposed Date: June to August 2017
Proposed Arrival Time: 8:00 A.M.
Proposed Leave Time: 5:00 P.M.
Proposed Hours on Site per Day: 9 Hours

EMERGENCY NUMBERS

Emergency: 911
Hospital: 253.697.4000
Urgent Care Center: 253.697.8610
Police: 253.299.5680 (Non-Emergency)
Washington Poison Control Center: 1.800.222.1222

Nearest Hospital: Multi-Care Good Samaritan Hospital, 401 15th Avenue SE, Puyallup WA 98372

Direction to Hospital: See attached directions map

Nearest Urgent Care Center: Multi-Care Puyallup Urgent Care, 220 15th Avenue SE, Puyallup WA 98372

Direction to Urgent Care Center: See attached directions map

Police: Sumner Police Department, 1104 Maple St, STE 140, Sumner WA,

PROJECT SITE DESCRIPTION

Description of Work: Soil Cleanup Action (See EnCo INDEPENDENT REMEDIAL CLEANUP ACTION WORK PLAN, January 16, 2017)

Scope & Objective of Work: Soil cleanup action for oil range organics, cadmium, and lead in soil

Prevailing Wind Direction: Southwest

TRAINING REQUIREMENTS

Training Requirements: OSHA 1910.120 Hazardous Site Investigations, 40 hour training with annual 8 hour refresher course for EnCo employees.

Before Work: A health and safety measures debriefing will be held for EnCo employees.

Buddy System: Only 1 EnCo employee will be on the project site therefore a buddy system is not warranted. Independent contractors on the job site are responsible for their own site safety requirements.

Independent Contractors: Holocene Drilling, Terra Metric, Inc., Mountain View Locating Services, LLC. Note: Independent contractors on the job site are responsible for their own site safety requirements.

Washington Department of Ecology Inspector / Reviewer: Mr. Tim Mullins, L. G.

First Aid Equipment: Standard first aid kit will be in the vehicle operated by EnCo employee.

Personal Protection Requirements: Level D – Modified: Bright orange safety vest, coverall, steel-toed rubber boots, latex/nitrile gloves, ear plugs, safety hat.

Media to Sampled: ☐ Air ☒ Ground Water ☐ Residues ☐ Sediment ☒ Soil ☐ Surface Water

Medical Monitoring Requirement: Not required

Chemicals of Concern: Cadmium, Lead, Oil Range Organics

Routes of Chemical Exposure: ☒ Inhalation ☒ Dermal ☒ Ingestion ☒ Eye

CONTAMINANT OF CONCERN HAZARDS						
COC	**PEL/TWA**	**Action Level TWA**	**Route of Exposure**	**Acute Symptoms**	**Odor Threshold**	**Odor**
Cadmium	5 ug/m^3	None	Inhalation or ingestion of dust, sediment or dirt. Dermal or eye contact.	Irritation of eyes, nose, and throat Nausea, vomiting Chest tightness, cough, headache, and weakness	None	Odorless
Lead	50 ug/m^3	30 ug/m^3	Inhalation or ingestion of dust, sediment or dirt. Dermal or eye contact.	Anemic Coma Seizure	None	Metallic Sweet
Motor Oil Vapor/Mist	5 mg/m^3	None	Inhalation or ingestion oil residues in soil. Dermal or eye contact.	Irritation of nose, throat, eyes (stinging, tearing, or redness) Redness, burning, or drying of skin	None	Motor oil

Footnotes for Table 1:

COC = contaminant of concern
PEL = permissible exposure level
TWA = time weighted average
ppm = part per million
ug/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter

Overall Risk of Chemical Exposure:

☒ Low ☐ Moderate
☐ High ☐ Very High

Physical Hazards:

☐ Explosion	None
☐ Confined Space	None: Excavations to be less than 4 feet deep
☒ Noise	Probing and heavy equipment operation
☐ Heat/cold stress	Drinking water to be supplied
☐ Other (specify)	N/A

Overall Risk from Physical Hazards:

☒ Low ☐ Moderate ☐ High ☐ Unknown

Overall Risk from Electrical Hazards:

☒ Low ☐ Moderate ☐ High ☐ Unknown

Is a Confined/Enclosed Space Entry Permit Required: No

Breathing Zone Air Monitoring: ☒ Yes ☐ No **Threshold**: <10 PPM in Breathing Zone

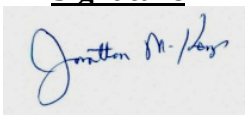
Air Monitoring Equipment: Mini Rae Model 3000 PID meter

Radiation Monitoring Requirement: N/A

Other Equipment: AMS Power Probe 9500D affixed to a Bob Cat, Model No. 463, dump truck, backhoe, loader, bull dozer.

SIGNATURE STATEMENT

EnCo personnel have read and understand the information presented in this PROJECT SITE SAFETY PLAN.

Title	Name (print)	Signature	Date
Site Safety Officer			
Project Team Leader			
Technician #1			
Technician #2			
Other:			

YOUR TRIP TO:

Multicare Good Samaritan Hosp

12 MIN | 6.7 MI

Est. fuel cost: $0.76

Trip time based on traffic conditions as of 3:50 PM on January 18, 2017. Current Traffic: Heavy

Sumner National to Hospital

1. Start out going **east** on 60th St E toward 162nd Ave E.

   Then 0.36 miles — 0.36 total miles

2. Turn **right** onto Sumner Tapps Hwy E.

   Then 0.26 miles — 0.63 total miles

3. Merge onto State Route 410 E/WA-410 W toward **Tacoma**.

   If you are on 166th Ave E and reach John Deere Dr you've gone a little too far.

   Then 2.42 miles — 3.05 total miles

4. Merge onto WA-167 S toward **WA-161 N/Tacoma/WA-512 W/Puyallup**.

   Then 0.86 miles — 3.92 total miles

5. Merge onto WA-512 W toward **WA-161 S/Puyallup/Olympia**.

   Then 2.21 miles — 6.13 total miles

6. Take the **Meridian St S** exit.

   Then 0.23 miles — 6.36 total miles

7. Turn **left** onto WA-161/S Meridian.

   If you reach WA-512 W you've gone about 0.3 miles too far.

   Then 0.22 miles — 6.58 total miles

8. Turn **left** onto 15th Ave SE. Pass through 1 roundabout.

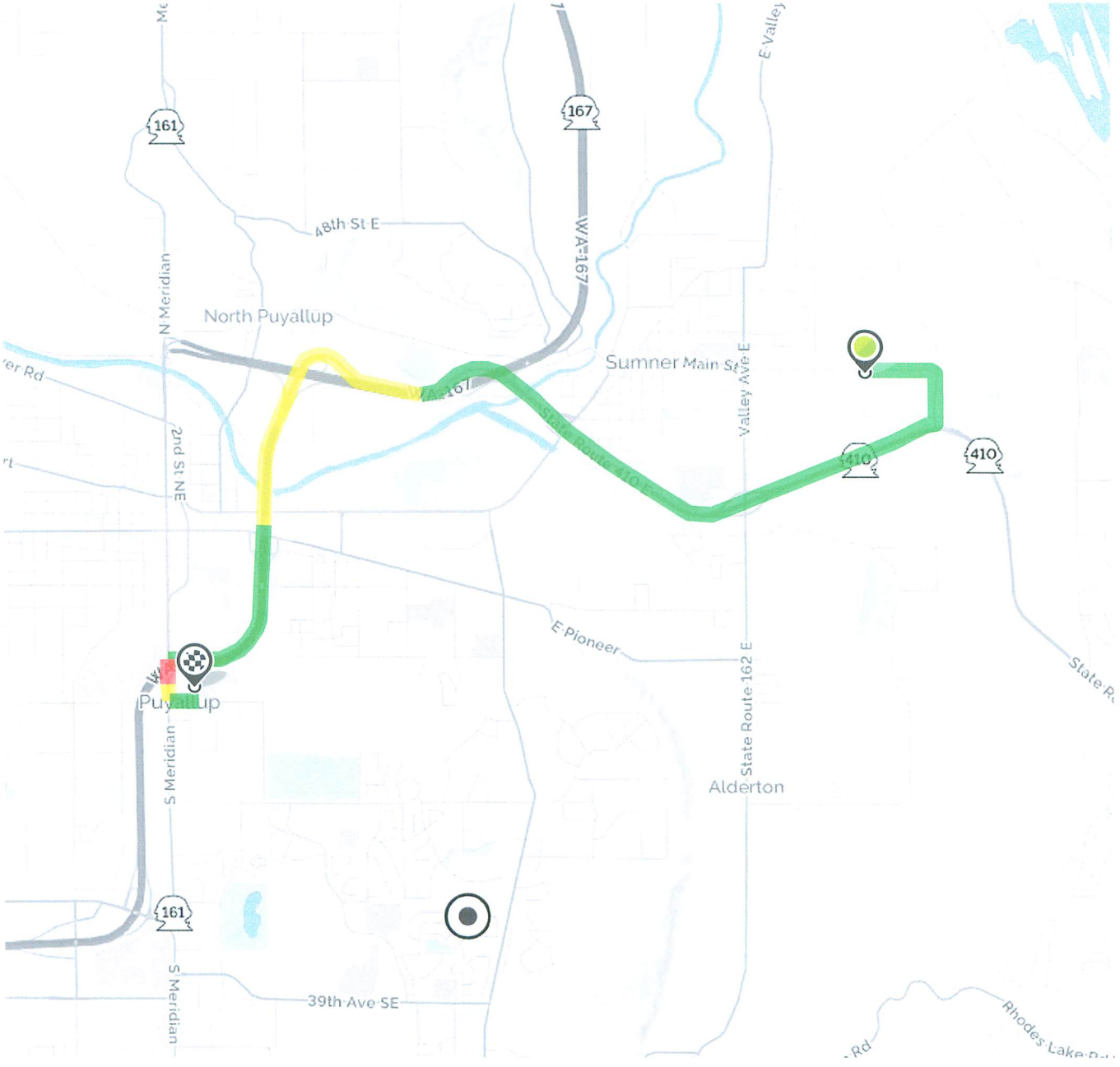
   15th Ave SE is just past 14th Ave SW.

   If you reach 17th Ave SE you've gone a little too far.

   Then 0.17 miles — 6.74 total miles

9. Multicare Good Samaritan Hosp, 401 15th Ave SE, Puyallup, WA, 401 15TH AVE SE is on the **left**.

   If you reach 4th St SE you've gone a little too far.



YOUR TRIP TO:

MultiCare Puyallup Urgent Care

11 MIN | 6.7 MI

Est. fuel cost: $0.75

Trip time based on traffic conditions as of 3:57 PM on January 18, 2017. Current Traffic: Heavy

Sumner National to Urgent Care

1. Start out going **east** on 60th St E toward 162nd Ave E.

Then 0.36 miles — 0.36 total miles

2. Turn **right** onto Sumner Tapps Hwy E.

Then 0.26 miles — 0.63 total miles

3. Merge onto State Route 410 E/WA-410 W toward **Tacoma**.

If you are on 166th Ave E and reach John Deere Dr you've gone a little too far.

Then 2.42 miles — 3.05 total miles

4. Merge onto WA-167 S toward **WA-161 N/Tacoma/WA-512 W/Puyallup**.

Then 0.86 miles — 3.92 total miles

5. Merge onto WA-512 W toward **WA-161 S/Puyallup/Olympia**.

Then 2.21 miles — 6.13 total miles

6. Take the **Meridian St S** exit.

Then 0.23 miles — 6.36 total miles

7. Turn **left** onto WA-161/S Meridian.

If you reach WA-512 W you've gone about 0.3 miles too far.

Then 0.22 miles — 6.58 total miles

8. Turn **left** onto 15th Ave SE.

15th Ave SE is just past 14th Ave SW.

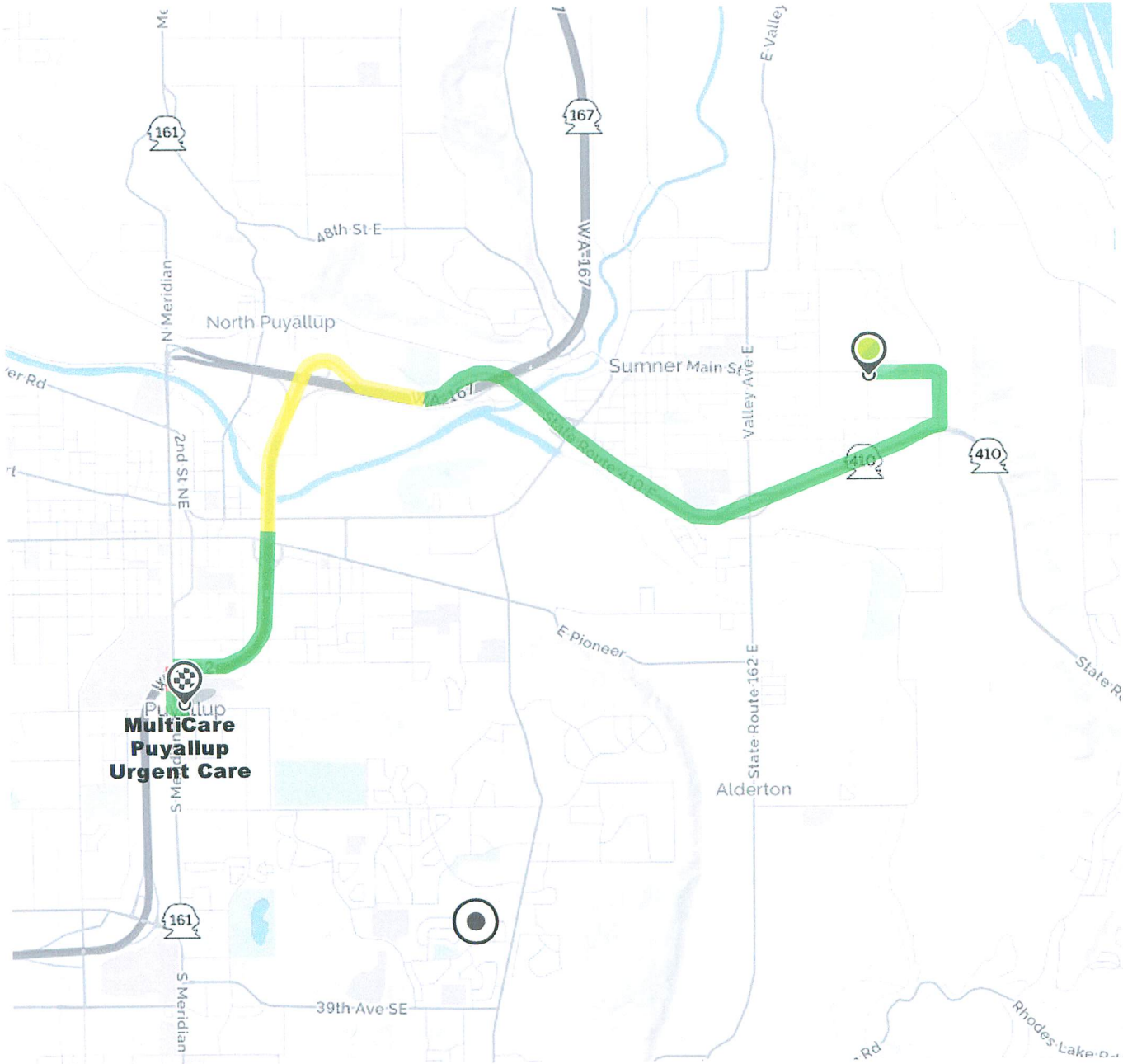
If you reach 17th Ave SE you've gone a little too far.

Then 0.08 miles — 6.65 total miles

9. MultiCare Puyallup Urgent Care, 220 15TH AVE SE is on the **right**.

Your destination is just past 2nd St SE.

If you are on 3rd St SE and reach 17th Ave SE you've gone about 0.1 miles too far.



EnCo
Environmental
Corporation

LIMITED PHASE II SITE ASSESSMENT

Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Prepared for:

Mr. Robert Suss
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Prepared by:

EnCo Environmental Corporation
P. O. Box 731747
Puyallup, WA 98373

EnCo Job #E2JK-SumnerNational-1

January 17, 2003

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EnCo Environmental Corporation

LIMITED PHASE II SITE ASSESSMENT

Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

1.0 EXECUTIVE SUMMARY

1.1 GENERAL INFORMATION

Mr. Robert A. Suss of Sumner National Auto Parts retained EnCo Environmental Corporation (**EnCo**) to perform a limited Phase II Environmental Site Assessment (ESA) for the purpose of determining soil quality from an approximate 950 square foot area in the vicinity of the former concrete slab and rainwater pool that existed east of the exterior door of the building at the above-referenced property.

The work was commenced after Mr. Robert Suss signed **EnCo's** September 26, 2002 proposal on September 27, 2002. A change order (October 8, 2002) with a client signed agreement (October 15, 2002) was approved in order to perform work beyond the original scope of work. The purpose for performing the additional work was to collect and analyze additional soil samples and to review and document information and data presented in the February 1991 Washington Department of Ecology (WADOE) Site Hazard Assessment report.

This report contains background information, methodology, field procedures, site geologic and hydrologic conditions, safety level, observations, results, conclusions, recommendations, and references.

Site figures (**Appendix A**), Photographic Log (**Appendix B**), Tables (**Appendix C**), Field Procedures (**Appendix D**), Terms and Conditions (**Appendix E**), Regulatory Documents (**Appendix F**), and Laboratory Reports and Chain-of-Custody forms (**Appendix G**) are presented as appendices to this report.

1.2 SUMMARY OF FINDINGS

Based on the 2002 data, nine (9) of the 22 soil samples that were tested for total lead reported concentrations over the MTCA Method A cleanup action level of 250 mg/Kg for unrestricted land use. Total lead concentrations that exceeded the MTCA action level ranged from 320 mg/Kg at location 14A to 910 mg/Kg at location 7A. The highest concentrations of total lead are located less than 6 feet east of the building and greater than 15 feet east of the building.

Seven of the nine soil samples that exceeded the MTCA method A cleanup action level for total lead exists within four inches of the ground surface (7A, 8A, 10A, 12A, 13A,

14A, and 19A). The remaining two soil samples (16B and 19B) were identified at .75-foot bgs and 1-foot bgs, respectively. Sample numbers 16B and 19B are located in the vicinity of the former shallow ditch that was dug around the perimeter of the concrete slab that transported rainwater runoff east of the slab. The lead may have been deposited in the bottom of the former ditch that has since been covered over with fill.

The remaining parameters reported concentrations below applicable MTCA action levels. All three pH measurements in soil collected in 2002 did not exceed applicable Dangerous Waste regulations for corrosivity. Concentrations of the selected parameters are presented in **Table 3**. Groundwater was not encountered at the base of the 3-foot deep excavated trenches.

2.0 PURPOSE AND OBJECTIVE

The purpose for performing the work was to determine the soil quality from an approximate 950 square foot area in the vicinity of the former concrete slab and pooled rainwater area that existed east of the exterior door of the Sumner National Auto Parts building.

The primary objective for performing the limited Phase II ESA was to obtain updated data that will be used for the preparation of a work plan that will be implemented to remediate the identified lead contaminated soil to meet the current Model Toxics Control Act (MTCA) standards. Upon completion of remediation, Mr. Suss would like to obtain a No Further Action status letter and would like to have the Sumner National Auto Parts site removed from the WADOE Hazardous Sites List.

3.0 BACKGROUND

Sumner National Auto Parts is a retail automobile parts store with an "out of vehicle" engine rebuild and metal machine shop. The 7,500 square foot building was reportedly built in 1979 and has always been occupied by Sumner National Auto Parts. The machine shop occupies 4,500 square feet and the retail section of the building occupies 3,000 square feet.

Mr. Suss reported that he placed one to three feet of imported gravely fill material east of the building approximately 25 years ago. The fill material was reportedly imported from pit run that was obtained from a local source and from the Sumner High School property when they renovated their football field.

According to Mr. Suss, in the 1980's and early 1990's Sumner National Auto Parts rebuilt approximately 100 automobile engines per month in the machine shop. Part of the process included caustic spray cleaning the engines and parts prior to assembly. Mr. Suss stated that the caustic solution tank, which was stored adjacent to the interior east wall of the machine shop, overflowed in 1987 causing a spill of the solution to occur outside to the east of the exterior door of the building. The spill flowed onto a

former concrete slab and soil-based surface adjacent to the slab during a heavy rainstorm. A shallow ditch was dug around the perimeter of the concrete slab to transport rainwater runoff east of the slab.

It was also reported that automobile engines and parts were routinely spray cleaned outside on top of a 16-foot long by 18.5-foot wide concrete slab that was formerly located adjacent to the exterior door. A portion of the slab was covered with a metal roofed lean to. Rinsate from the spray cleaning process flowed onto the soil-based surface north, east, and south of the slab. Several color photographs were taken by the WADOE on February 7, 1991 and September 9, 1991 (**Appendix F**). The photographs depict the rainwater runoff ditches, 55-gallon drums of liquids stored on the concrete slab, pools of oily water, and black-stained soil.

Two anonymous complaint telephone calls of alleged dumping of cleaning solvents, oil, and antifreeze adjacent to the concrete slab were reported to the WADOE on November 8, 1990 and November 21, 1990. The documents reported that 10 to 15 gallons of cleaning solvents, oil, and antifreeze were dumped at least twice into rain water runoff ditches which drain into a field located east the former concrete slab. According to other dated documents (1990, 1991, & 1992) in the WADOE Toxic Cleanup files, drums of waste oil, solvents, and caustic solutions were stored on and near the concrete slab.

As a follow up to the above listed telephone calls, Mr. Rusty Post of the WADOE performed a site inspection on February 7, 1991. A complaint investigation report was completed on April 3, 1991 (**Appendix F**). The report stated that poor management of waste oil, solvents, caustic bath rinsate, and metal sludge has lead to contamination of nearby soils. A Site Hazard Assessment (WAC 173-340-320) was performed in 1991. Sample analysis results confirmed suspected contamination.

The WADOE report stated that visual contamination of oil, metal grindings and pieces, sorbent grit, and gaskets were observed in the soil adjacent to the slab. Soil adjacent to all three edges of the slab was contaminated with heavy oil, especially to the south. A rainwater runoff trench with visual contamination along the north edge of the concrete slab transported contaminated automobile engine rinsate into a "sludgy pool" of water. The pool was located approximately 15 feet southeast of the southeast corner of the former concrete slab and was reported to be approximately 20 feet wide by 40 feet long. According to Mr. Suss the contaminated soil has been left in place since it was discovered in 1991. The concrete slab and lean to roof was removed in the mid 1990's.

Soil and Surface Water Quality

Four soil and two surface water samples were collected for analysis by the WADOE in February of 1991 (**Tables 1 & 2**). Groundwater samples were not collected. The approximate locations of the six samples are depicted on **Figure 2**.

Surface soil samples collected adjacent to the north (#77476) and south (#77477) of the concrete slab reported concentrations of total petroleum hydrocarbons of 5,420 milligrams per Kilogram (mg/Kg) and 19,290 mg/Kg, respectively (**Table 1**). These concentrations exceed the current 2,000 mg/Kg MTCA cleanup standard for heavy petroleum hydrocarbons.

A surface soil sample collected near the west edge of the rainwater pool (#77474) located southeast of the slab reported a concentration of total petroleum hydrocarbons of 65,360 mg/Kg. Eighteen (18) volatile organic compounds (VOC) were also identified in this area. Many of the VOCs were not identified. The highest concentration of the identified VOCs was reported to be 120 parts per billion (ppb) of 5,5-Dimethyl-(z)-2 hexene. It was reported that the identified VOCs were below cleanup standards.

Two surface soil samples (#77475 and #77476) reported concentrations of total arsenic (363 mg/Kg & 57 mg/Kg), cadmium (186 mg/Kg & 12.5 mg/Kg), chromium (2,340 mg/Kg), and lead (323 mg/Kg & 4,040 mg/Kg) above applicable heavy metal MTCA Method A cleanup action levels (**Table 1**).

Thirteen (13) VOCs were identified in a surface water sample (#77478) collected from an approximate 10-foot diameter pool of burgundy colored water located adjacent to the south of the former slab. Several unknown VOCs reported concentrations over 500 ppb.

Fourteen (14) VOCs were identified in a surface water sample (#77479) collected from the "sludgy pool" of rainwater runoff located southeast of the former slab. Toluene was reported at a concentration of 1.6 ppb and two unknown VOCs reported a concentration at 42 ppb each.

Among the known VOCs that were identified in soil and surface water samples from the 1991 Site Hazard Assessment are listed below. Many of the listed compounds do not have established MTCA cleanup action levels.

- Acetone
- Benzene
- 2-Butanone
- Carbon disulfide
- Ethylbenzene
- Methylene chloride
- 4-Methyl-2-pentanone
- Tetrachloroethene
- Toluene
- Xylenes (total)

It was reported on the WADOE Summary Score Sheet that the total area impacted with petroleum hydrocarbons was approximately 500 square feet in the vicinity of the

concrete slab and approximately 150 square feet in and near the pools of water for a total impacted surface area of 650 square feet (based on visual observation in 1991). The estimated quantity of contaminated soil was calculated at 1,950 cubic feet (~110 tons). The volume of contaminated soil was reportedly calculated from a 650 square foot impacted area that was estimated to extend down to an average depth of 3 feet below ground surface (bgs).

WADOE Hazardous Sites List

WADOE maintains a database of known or suspected contaminated sites. In a letter dated February 11, 1992 the WADOE reported that a hazard rank of 1 was scored for Sumner National Auto Parts (Site ID #6036). Sites are ranked, based on an estimate of potential threat to human health and the environment, relative to other sites. The rankings are based on guidelines provided in the Washington Ranking Method and are assigned on a scale of 1 to 5 (1 = the highest risk). The substances used for ranking the site included arsenic, chromium, lead, cadmium, tetrachloroethene, and xylene. These substances were confirmed in shallow soil samples collected in an area with no containment of the spill. The potential routes of contamination were assessed for surface water, air, and groundwater.

4.0 SCOPE OF WORK

The scope of work included the following subtasks:

- Assessed an approximate 950 square foot area by collecting and analyzing 31 soil samples using a small backhoe and manually-operated sampling tools. Samples were collected adjacent to the former concrete slab and former rainwater pool.

- Submitted the samples to a Washington certified testing laboratory under Chain-of-Custody procedures for analysis of selected parameters identified on **Table 3** and on the attached laboratory reports (**Appendix G**).

- Compared the test results to applicable MTCA method A cleanup action levels.

- Measured sample locations from a convenient benchmark using a manually operated Rolatape and a plastic measuring tape. The measured locations were plotted onto a computer-drafted site diagram.

- Prepared this report.

5.0 METHODOLOGY

This report was prepared in general conformance within the scope and limitations of the 2001 WADOE MTCA Cleanup Regulation, Washington Administrative Code (WAC)

Chapter 173-340 – Toxics Cleanup Program, RCW 70.105D, the state's Hazardous Waste regulations, RCW 70.105, and according to the scope of work identified in **Section 4.0** of this report. This assessment was performed without oversight by the WADOE or the Tacoma Pierce County Health Department (TPCHD).

MTCA Cleanup Action Levels

The MTCA regulation was passed by voters in the State of Washington in November 1988 and originally became effective March 1, 1989. The law was amended in February 2001 and became effective as of August 15, 2001. The law establishes the basic authorities and requirements for cleaning up contaminated sites in a manner that will protect human health and the environment. There are three methods used for determining cleanup action levels, methods A, B, and C. Cleanup action levels are established for certain parameters for groundwater, surface water, soil, industrial soil, and air.

Each method determines the cleanup action levels for the contaminated media. Once a cleanup method has been selected, media (water, soil, etc.) above the applicable cleanup action levels must be addressed using one or a combination of the cleanup technologies outlined in WAC 173-340-360(4).

Method A is appropriate for routine sites or for sites that involve relatively few hazardous or dangerous substances. This method defines cleanup action levels for twenty-five of the most common hazardous substances found at sites. Numerical levels must be available for all indicator hazardous substances if using this method. Many small sites that do not warrant the costs of conducting risk assessments and detailed site studies use this approach. This method is used for sites classified for unrestrictive land use.

Method B levels are established by performing a site risk assessment, which focuses on site-specific characteristics. This is the most common method used for setting cleanup action levels when sites are contaminated with substances not listed under method A.

Method C is the method used where methods A or B may be technically impossible to achieve, when contaminants are reported lower than background concentrations, or when cleanup using other methods may cause greater environmental harm. This method may also be applied to qualified industrial properties.

Method A was chosen for the subject property. The soil data from this site was evaluated by consulting the MTCA Method A cleanup action levels for unrestricted land use. Method A is intended to provide cleanup standards for sites undergoing "routine" cleanup actions, such as sites with relatively few hazardous substances (such as this site).

Dangerous Waste Regulations

Test results for pH were compared to the hazardous waste characteristic of corrosivity as defined in WAC 173-303-090 – Dangerous Waste Characteristics. The purpose of these regulations is to set forth characteristics with which a solid waste might exhibit and which would cause that waste to be a dangerous waste for corrosivity.

6.0 SITE TOPOGRAPHY AND DRAINAGE

The overall topography of the area assessed is fairly level that gently slopes less than 1 percent in an east to southeasterly direction. A United States Geological Survey (USGS) map was reviewed to assess local drainage patterns and land use. The altitude of the ground surface at the subject property is approximately 60 feet above mean sea level. Generally, the highest elevation occurs at the northwestern portion of the site and the lowest elevation occurs at the southeastern portion of the property.

The subject property is mapped on a Flood Boundary and Floodway Map as being in Zone C. Zone C is in an area of minimal flooding and is not within the 100-year floodplain.

There was no visual evidence of streams, ponding water, seepage, or springs across or into the subject property. Generally, surface water meanders as sheet flow over the pervious soil-based surface towards a slight depressional area located approximately 35 feet southeast of the exterior door of the building. There are no drainage corridors within a few hundred feet of the area assessed. According to Mr. Pat Clerget from the City of Sumner, the subject property is situated within the drainage basin of Salmon Creek. Salmon Creek is located approximately 2,200 feet north of the subject property. Salmon Creek discharges into the White River, which is located approximately 1½ miles northwest of the site.

7.0 REGIONAL AND SITE GEOLOGIC SETTING

Soil characteristics play an important role in the relationship between site activities and the quality of subsurface soil and groundwater. Soils generally serve as the initial contact medium for a potential pollutant on its route to reaching groundwater. Soil textures directly influence the rate at which groundwater recharge takes place and whether or not an area is environmentally sensitive to contamination.

The original soil types have changed on the subject property due to past land use activities such as farming, excavating, grading, filling, ditching, compacting, and building. According to information obtained from the Pierce County Soil Survey the original soil types at the subject property has been mapped as indicated below.

Briscot Loam

This very deep, somewhat poorly drained soil occurs on a nearly level, wavy surface ranging in elevation from sea level to 100 feet and was formed from materials deposited by streams. The slope of these soils is usually between 0 to 5 percent. Typically, the surface layer consists of dark brown loam about 11 inches thick. The subsoil is mottled, dark grayish brown fine sandy loam and silty loam about 29 inches thick; between depths of 29 and more than 60 inches, it is mottled, very dark grayish brown sand and gray silty clay loam. Reaction is neutral to medium acid. Permeability is moderately slow. Depth to bedrock is greater than 60 inches. This soil is subject to long, frequent periods of flooding from January to May. Available water capacity is high, surface water runoff is slow, and there is a slight erosion hazard.

Most of this soil is protected from periodic flooding by dikes, however, as a result of changing land use in the adjacent upland area this soil is subject to additional flooding from urban runoff.

This soil was historically used for the production of pasture, hay, and field crops. The primary limitation of production is a seasonal high water table, and the hazard of flooding. There is a risk of corrosion to uncoated steel and concrete when placed in this soil. Excavations in this soil that exceed four feet in depth will require shoring or sloping of sidewalls.

8.0 REGIONAL AND SITE HYDROLOGIC SETTING

Groundwater data is important to consider because contamination from on-site or off-site sources could migrate beyond or beneath the subject property via groundwater. Knowledge of groundwater conditions and the local geology can help assess potential risk to the area assessed from potentially contaminated on-site or off-site sources.

According to information obtained from the City of Sumner there are no drinking water wells located on the subject property. The homes and businesses in the area obtain their drinking water from natural springs located at the foot of the ridge west of Lake Tapps and from one well that is located in the Puyallup River valley approximately 1 mile south of the subject property.

According to personnel from the TPCHD the subject property does not lie within an Aquifer Recharge Area as defined and regulated by Chapter 18E, Aquifer Recharge Areas, Pierce County Development Regulations – Critical Areas.

Based on inference from topographic gradient and local drainage patterns, it appears that shallow-seated groundwater in the vicinity of the subject property may flow in a northeasterly direction (not confirmed). According to Mr. Clerget, the shallow seated groundwater level beneath the subject property is approximately 5 to 7 feet bgs.

Perched groundwater conditions often develop within fill and weathered till soils situated above dense unweathered till, particularly during the wet season. Variability in subsurface lithology due to meandering of subsurface utilities, hills and dales, ravines, French drains, ditches, fill, and/or buried structures can all impact the local groundwater flow direction. Likewise, sudden rises or falls in the water table following heavy rains, or groundwater extraction can cause temporary and local changes and reversals in flow direction due to uneven infiltration rates or groundwater extraction rates. The groundwater level is expected to fluctuate seasonally following the wet winter and spring seasons.

9.0 FIELD PROCEDURES, SAMPLE COLLECTION, AND ANALYSIS

Sampling activities was limited to collecting samples with hand tools such as shovels, stainless steel spoons, and a 1-inch diameter soil probe. Mr. Robert Suss of Sumner National Auto Parts provided a tractor with a backhoe bucket for excavating several trenches and pits for the purpose of exposing subsurface soils prior to collection. The field procedures undertaken followed acceptable industry practices. Field procedures are presented in **Appendix D**.

9.1 RATIONALE FOR COLLECTION AND ANALYSIS

9.1.1 Sample Media

The type of sample medium collected was:

- Soil

9.1.2 Number of Samples Collected

A total of 31 discrete samples were collected. The number of samples collected for the project was determined by a combination of many factors. These factors include:

- Observed areas of stressed vegetation and staining adjacent to the former concrete slab and in the vicinity of the former rainwater pool.
- Knowledge of reported soil contamination in 1991 from petroleum hydrocarbon spills and spray cleaning automobile engines outside with a caustic solution.
- The size and configuration of the area potentially impacted.
- Budgetary restraints.

9.1.3 Laboratory Parameters

Laboratory parameters selected for this assessment included diesel, heavy oil, VOCs, semivolatile VOCs, polynuclear aromatic hydrocarbons (PAH), pH, and certain heavy metals. Laboratory parameters were selected based on:

- Reported concentrations of heavy metals and petroleum hydrocarbons identified in the 1991 WADOE Site Hazard Assessment.
- Known or reported past land use practices based on interviews and review of researched documents.
- Storage and use of petroleum hydrocarbons, automobile fluids, and cleaning solvents commonly used in automobile engine repair and rebuild shops and metal shops.
- Soil sampling requirements identified in the scope of work in the 1991 WADOE Site Hazard Assessment.

9.1.4 Sample Locations

Samples were collected at approximate locations as depicted on **Figures 2 & 3**. Soil samples were collected from an approximate 950 square foot area in the vicinity of the former concrete slab and rainwater pool that existed east of the exterior door of the Sumner National Auto Parts building. Subsurface samples were collected from a range of .17 feet (eight samples) to 2.67 feet (#2E) bgs. Sample locations were determined after obtaining knowledge from Mr. Suss, from information presented in documents obtained from the WADOE, and from reported past land use practices. A background soil sample was not collected during this assessment.

Soil samples were collected in 2002 within three feet of the estimated locations of the four soil samples that were collected in 1991. However, it should be noted that the exact locations of the four soil samples collected in 1991 could not be determined because the sample location sketch was not drawn to scale. The plotted WADOE sample locations depicted on **Figures 2 & 3** may not be in the exact sampling position.

10.0 SAFETY LEVEL

EnCo personnel used safety Level D-Modified when performing the work. Protective equipment included hard hats, nitrile and PVC gloves, safety glasses, ear protection, coveralls, and rubber-lined, steel-shanked boots.

11.0 SCHEDULE

Field work was conducted on October 3rd, October 16th, and November 15, 2002. Weather conditions during sampling activities ranged from partly cloudy to overcast skies with light to moderate showers. The ambient air temperature ranged from 50° to 60° Fahrenheit.

12.0 OBSERVATIONS

Surface soils encountered during the assessment consisted of 3 to 5 inches of dark brown to black silty sandy loam topsoil with fine to medium gravel. This surface layer of

soil was laden with grass and weed roots and decayed organic matter. Soil from 5 to 16 inches bgs consists of a mixture of dark to medium brown to gray poorly graded, non-homogeneous, sandy gravel (imported fill) with varying amounts of silt and organic matter and 1/2 to 6-inch diameter pebbles. The upper 1-foot layer of soil was moist to very moist from recent rainstorms.

A bluish-gray to gray layer of compact sandy gravel with silt is interspersed within the fill material in the vicinity of the perimeter of the former concrete slab. This layer extends from approximately 9 to 15 inches bgs. Olfactory evidence of soil collected from location numbers 2, 7, and 19 resembled heavily weathered motor oil.

The approximate 16-inch layer of fill material was underlain by a 4-inch thick layer of dark black to gray medium to fine sand at 16 to 20 inches bgs. This layer was underlain by reddish brown fine to medium sand from approximately 20 inches bgs to the bottom of the excavated trenches at 36 inches bgs.

The estimated soil descriptions are based on observations made in the field by the environmental scientist and were documented using field description procedures. The information represents the approximate boundaries between soil types; in-situ transition may be gradual.

13.0 RESULTS

Based on the 2002 data, nine (9) of the 22 soil samples that were tested for total lead reported concentrations over the MTCA Method A cleanup action level of 250 mg/Kg for unrestricted land use. Total lead concentrations that exceeded the MTCA action level of 250 mg/Kg ranged from 320 mg/Kg at location 14A to 910 mg/Kg at location 7A. The highest concentrations of total lead are located less than 6 feet east of the building and greater than 15 feet east of the building.

Seven of the nine soil samples that exceeded the MTCA method A cleanup action level for total lead exists within four inches of the ground surface (7A, 8A, 10A, 12A, 13A, 14A, and 19A). The remaining two soil samples (16B and 19B) were identified at .75-foot bgs and 1-foot bgs, respectively. Sample numbers 16B and 19B are located in the vicinity of the former shallow ditch that was dug around the perimeter of the concrete slab that transported rainwater runoff east of the slab. The lead may have been deposited in the bottom of the former ditch that has since been covered over with fill.

The remaining parameters reported concentrations below applicable MTCA action levels. All three pH measurements in soil collected in 2002 did not exceed applicable Dangerous Waste regulations for corrosivity.

14.0 CONCLUSIONS

Based on the 2002 data, nine (9) of the 22 soil samples that were tested for total lead reported concentrations over the MTCA Method A cleanup action level of 250 mg/Kg for unrestricted land use. The total lead concentration was significantly higher (4,040 mg/Kg) within 6 feet east of the building in 1991 as compared to lead concentrations within 6 feet east of the building in 2002 (910 mg/Kg, 320 mg/Kg, and 520 mg/Kg). However, many of the lead concentrations are higher at a distance greater than 15 feet east of the building in 2002 (760 mg/Kg, 540 mg/Kg, 700 mg/Kg, and 460 mg/Kg as compared to the 323 mg/Kg lead concentration reported in 1991. The highest total lead concentration in 2002 was reported from the sample collected closest to the building (7A at 910 mg/Kg).

It has been reported in literature that the 90th percentile value for total lead in soils collected from the Puget Sound region at the surface to a maximum depth of 3 feet bgs is 24 mg/Kg. Three of the 22 soil samples tested for total lead (1A, 2B, and 17B) reported concentrations below the Puget Sound background level of 24 mg/Kg.

The highest concentrations for each detected contaminant in the 4 soil samples collected in 1991 compared to the highest concentrations in the 31 soil samples collected in 2002 are listed below.

HIGHEST REPORTED CONTAMINANT CONCENTRATIONS		
Year Collected ➤	**1991**	**2002**
Petroleum Hydrocarbons	Collected at the Surface	Collected at .17 foot
Heavy Oil	**65,360** (77474)	1,700 (7A)
Metals (total)		
Arsenic	**363** (77475)	Not Detected
Barium	**8,700** (77475)	230 (14A)
Cadmium	**186** (77475)	1.9 (7A & 13A)
Chromium	**2,340** (77475)	Not Detected
Lead	**4,040** (77476)	**910** (7A)
Mercury	**.034** (77475)	Not Detected
Silver	**84.6** (77475)	Not Detected
VOCs		
Benzene	**.0026** (77474)	Not Detected
Ethylbenzene	**.0052** (77474)	Not Detected
Toluene	**.013** (77474)	Not Detected
Tetrachloroethene	**.0049** (97474)	Not Detected
Xylenes - total	**.025** (77474)	Not Detected

The substances studied in the 1991 site hazard ranking were arsenic, chromium, lead, cadmium, tetrachloroethylene, and xylene. Of these six substances, five have been naturally remediated to concentrations below applicable MTCA method A cleanup action levels. Total lead is the only studied substance that still exists in soil above the current MTCA method A cleanup action level of 250 mg/Kg.

Based upon reported information and laboratory test results, it is my opinion that the identified contaminants reported on the site in 1991 have been significantly remediated by natural means to levels less that applicable MTCA method A cleanup action levels with the exception of total lead.

15.0 RECOMMENDATIONS

The following tasks are recommended:

1. Submit two copies of this report to the southwestern regional office of the WADOE Toxic Cleanup Section in Lacey. The address is

   Mr. Charles S. Cline, Hydrogeologist
   Washington Department of Ecology
   Southwest Regional Office
   P.O. Box 47775
   Olympia, WA 98504-7775

2. Make a request to have the WADOE inform Mr. Suss as to what needs to be accomplished to 1) obtain a No Further Action status letter and 2) to remove Sumner National Auto Parts from the WADOE Hazardous Sites List. After a decision has been made regarding treatment options prepare a work plan that will be implemented to remediate the identified lead contaminated soil to meet the current Model Toxics Control Act (MTCA) standards.

16.0 REFERENCES

American Society for Testing and Materials (ASTM), West Conshocken, PA, ASTM Standards Related to the Phase II Environmental Site Assessment Process, 1998.

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Washington Department of Ecology, Olympia WA, Site Hazard Assessment Guidance and Procedures for Washington Ranking Method, Publication No. 91-73, 1992.

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Washington Department of Ecology, Olympia WA, Complaint Investigation Report with color photographs, Sumner National Auto Parts, 16008 Daniels Road, Sumner WA, February 1991.

Washington Department of Ecology, Olympia WA, Site Hazard Assessment Scope of Work, Sumner National Auto Parts, 16008 Daniels Road, Sumner WA, March 1991.

Washington Department of Ecology, Olympia WA, Summary Score Sheet for the Site Hazard Assessment with color photographs and laboratory reports, Sumner National Auto Parts, 16008 Daniels Road, Sumner WA May 1991.

Washington Department of Ecology, Olympia WA, The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC, Publication No. 94-06, Amended January 1996.

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Washington Department of Ecology, Olympia WA, Toxics Cleanup Program, Guidance on Preparing Independent Remedial Action Reports Under MTCA, Working Draft, Chapter 70.105D RCW, Publication No. 94-18, March 9, 1994.

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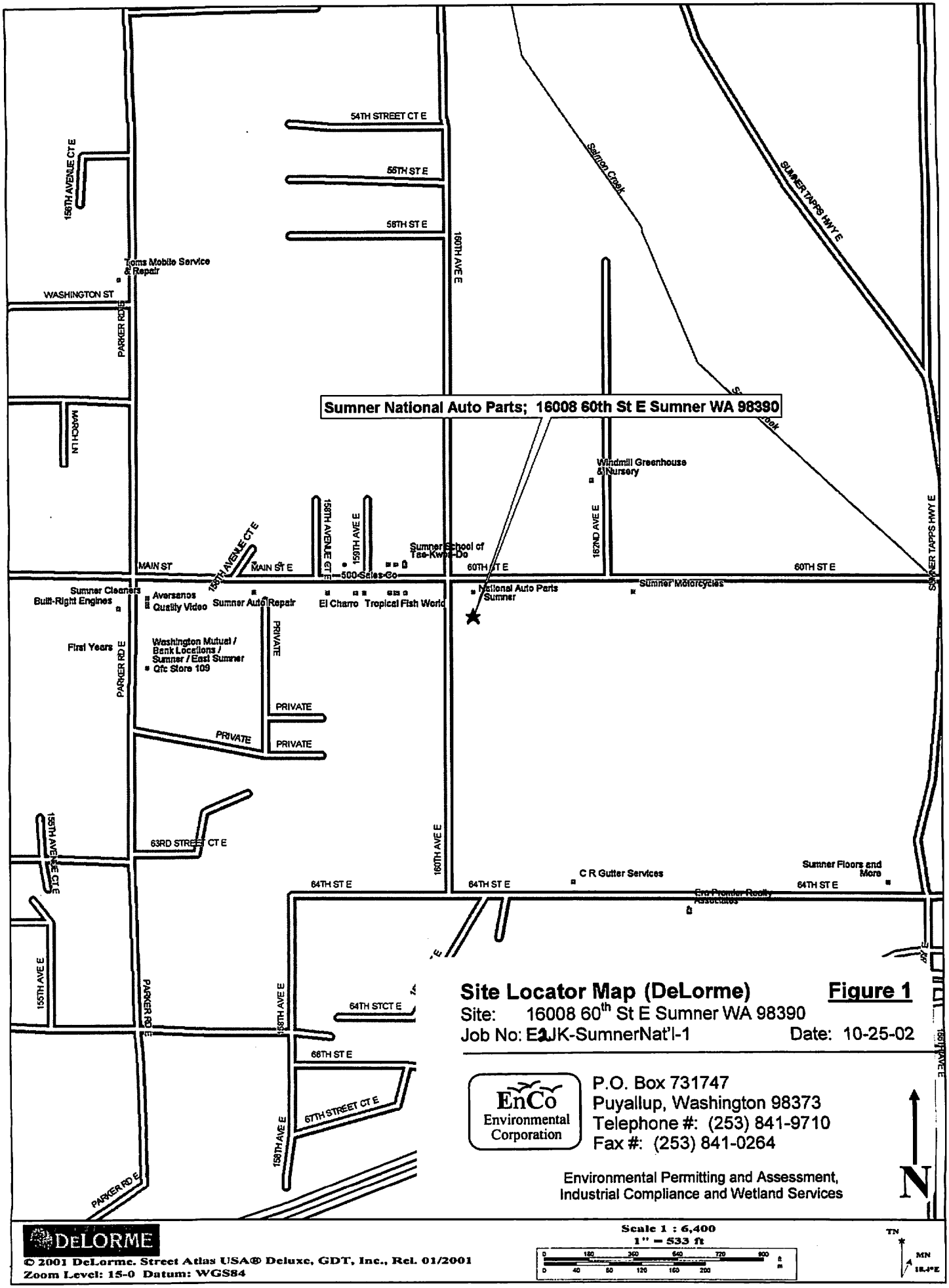
APPENDIX A

Figures

Figure 3 in File cabinet!
2-21-14



Site Locator Map (DeLorme) — Figure 1

Site: 16008 60th St E Sumner WA 98390

Job No: E1JK-SumnerNat'l-1 Date: 10-25-02

EnCo Environmental Corporation

P.O. Box 731747
Puyallup, Washington 98373
Telephone #: (253) 841-9710
Fax #: (253) 841-0264

Environmental Permitting and Assessment, Industrial Compliance and Wetland Services

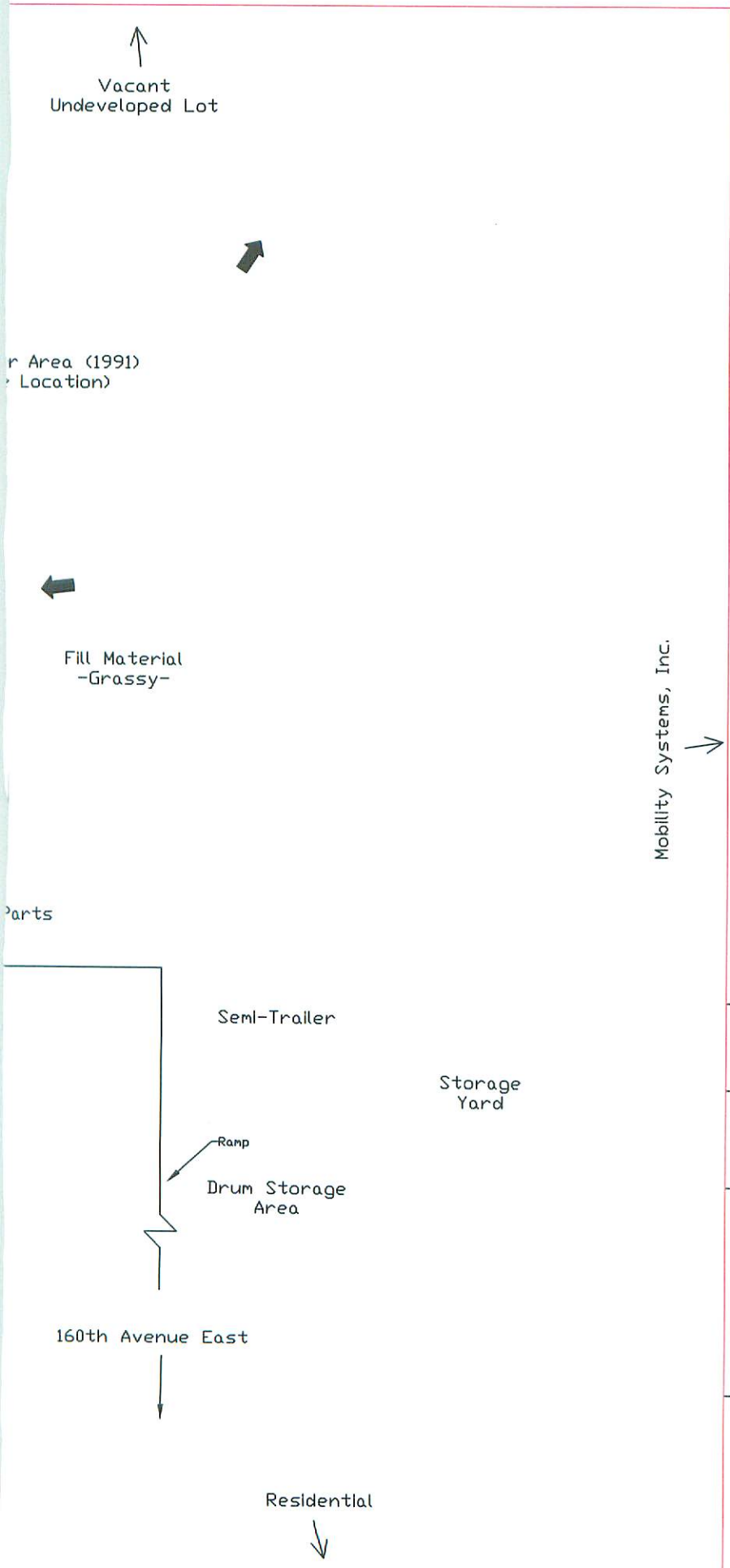
N

DeLORME

Scale 1 : 6,400
1" = 533 ft

Zoom Level: 15-0 Datum: WGS84

TN MN 18.4°E



LEGEND

● = Soil Sample Location
i.e. 1A (.83'), B (1.25') = Sample #1A at .83' Below Ground Surface (BGS) + 1B AT 1.25' BGS.

○ = Surface Water

---------- Former Boundary of Slab and Pooled Areas

➡ Stormwater Flow Direction (<1% Grade)

Notes:

Map drawn to approximate scale. Dimensions herein are deemed reliable. Map obtained by measuring distances with a measuring tape from convenient benchmarks by EnCo Environmental Corporation. The location of structures and buildings are considered approximate and subject to variation.

Trenches were dug out in October and November 2002 with a small backhoe bucket. All trenches are 30" wide.

General topographic slope is to the southeast.

Surface water samples and soil sample numbers 774__ collected at the surface in 1991 by WADOE. Sample locations are approximate based on review of not-to-scale 1991 WADOE site sketch.

Map does not depict subsurface utilities.

SCALE: 1" = 10'

10 5 0 10

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FAX #: 253.841.0264
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FIGURE 2
Site Plan and Sample Location Diagram

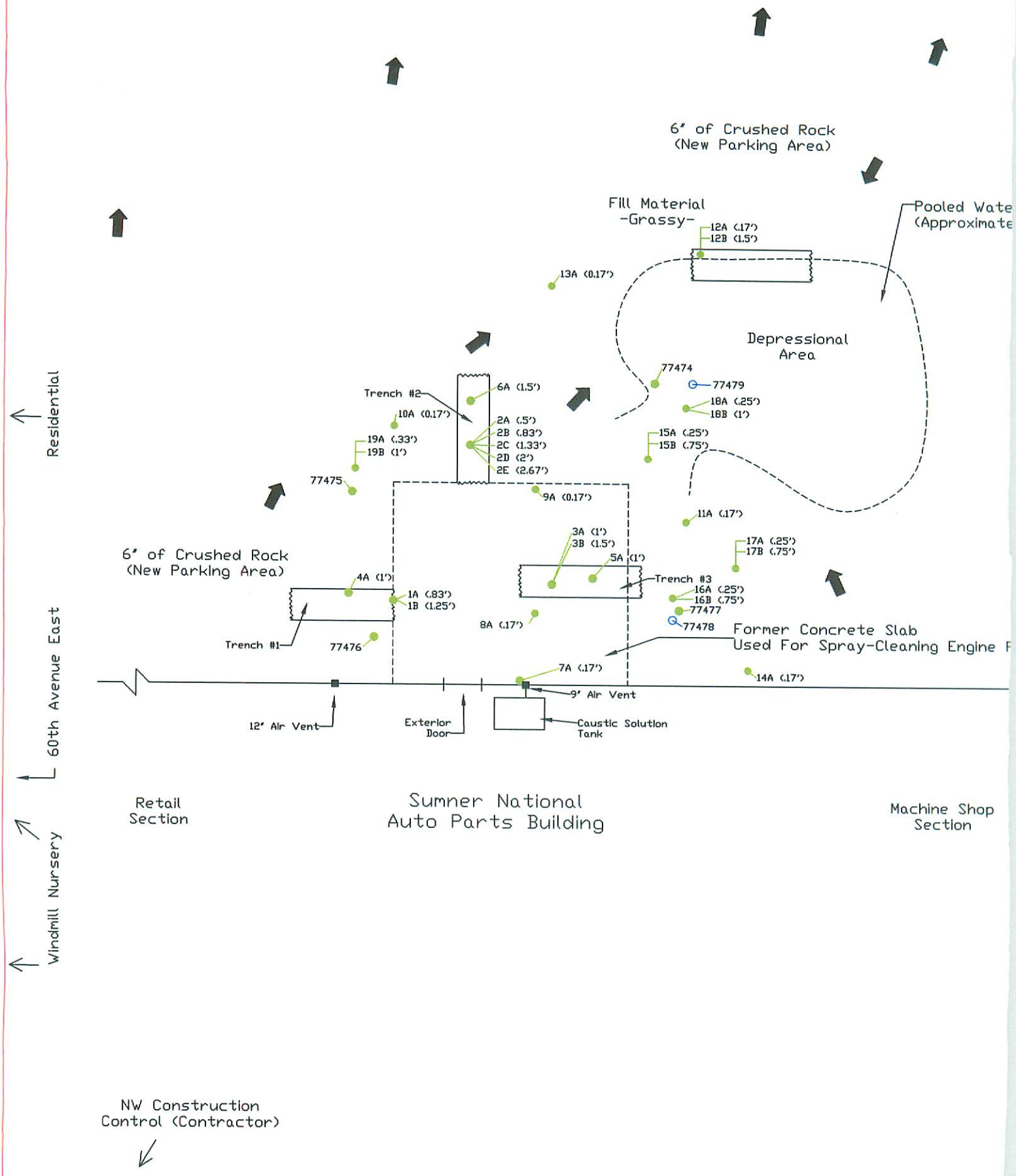
PROJECT NAME AND ADDRESS

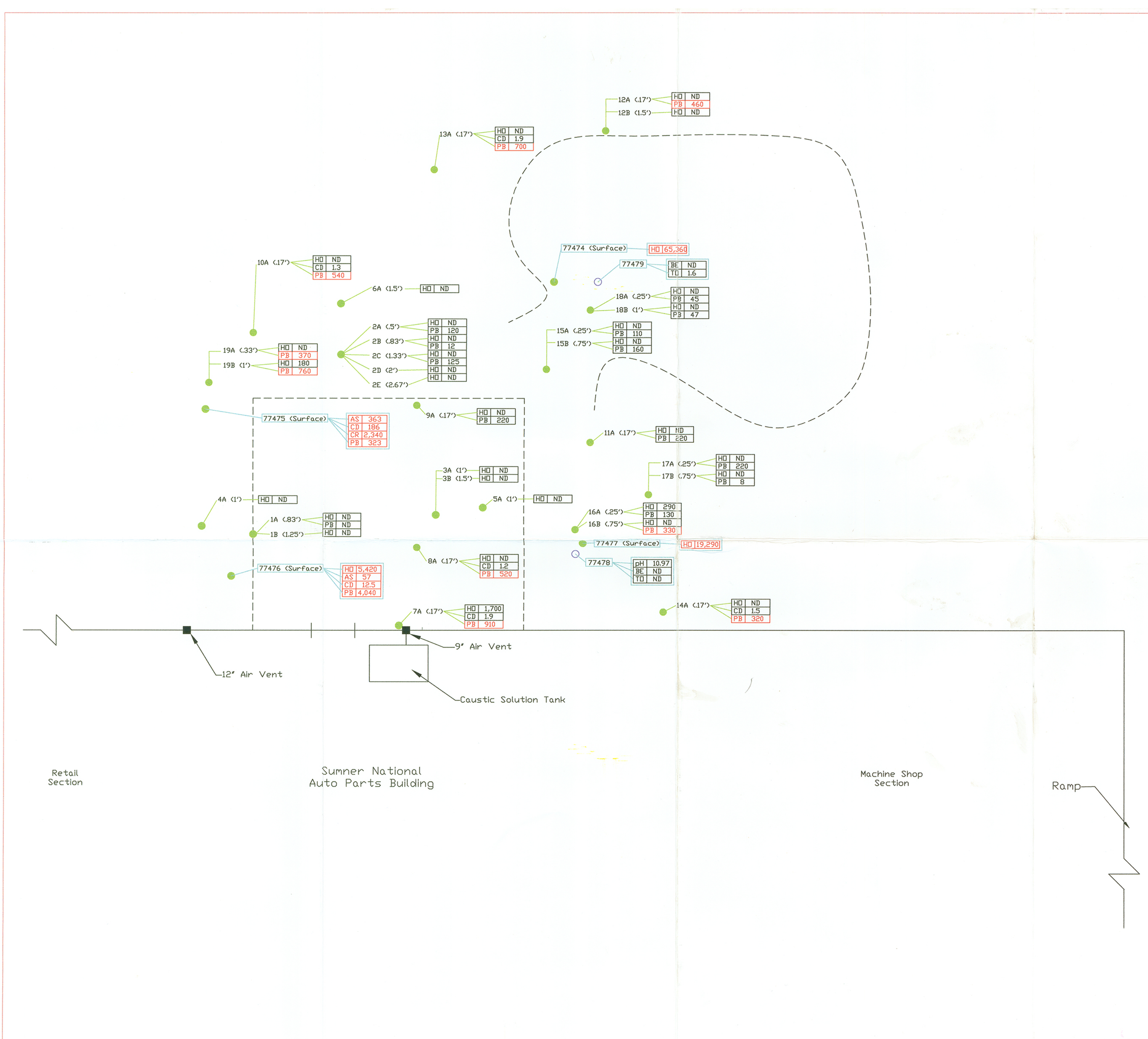
Sumner National Auto Parts
16008 60th Street East
Sumner, WA 98390

DRAWN BY	DATE
ANGELA JOHNSON Revision #7	01/03/2003
CHECKED BY	JOB NO.
JONATHAN M. KEMP	E2JK-SumnerNatl-1

N

SHEET 1 of 2


6" of Crushed Rock
(New Parking Area)
Fill Material
-Grassy-
Pooled Wate
(Approximate
12A (.17')
12B (1.5')
13A (0.17')
Depressional
Area
77474
77479
18A (.25')
18B (1')
15A (.25')
15B (.75')
Trench #2
6A (1.5')
10A (0.17')
2A (.5')
2B (.83')
2C (1.33')
2D (2')
2E (2.67')
19A (.33')
19B (1')
77475
9A (0.17')
11A (.17')
3A (1')
3B (1.5')
5A (1')
17A (.25')
17B (.75')
6" of Crushed Rock
(New Parking Area)
4A (1')
1A (.83')
1B (1.25')
Trench #3
16A (.25')
16B (.75')
77477
77478
8A (.17')
Trench #1
77476
Former Concrete Slab
Used For Spray-Cleaning Engine F
7A (.17')
14A (.17')
9' Air Vent
12' Air Vent
Exterior
Door
Caustic Solution
Tank
Residential
60th Avenue East
Windmill Nursery
Retail
Section
Sumner National
Auto Parts Building
Machine Shop
Section
NW Construction
Control (Contractor)



LEGEND

● = Soil Sample Location

i.e. 1A (.83'), B (1.25') = Sample #1A at .83' Below Ground Surface (BGS) + 1B AT 1.25' BGS.

○ = Surface Water (Collected in 1991)

– – – – – – Former Boundary of Slab and Pooled Areas

AS = Arsenic (total)

BE = Benzene

CD = Cadmium (total)

CR = Chromium (total)

HO = Heavy Motor Oil

ND = Not Detected

PB = Lead (total)

TO = Toluene

Parameters — Test Results (mg/Kg)

PB | 910

Test results plotted in the red boxes and red text exceeded MTCA method A cleanup action levels. Confirmatory soil sample test results collected after remediation (less than MTCA levels) are plotted in black boxes below MTCA exceedance boxes. All other sample locations reported concentrations less than MTCA levels and are not plotted in boxes.

mg/Kg = milligrams per Kilogram - soil samples
µg/L = micrograms per Liter - water samples

Sample numbers highlighted in turquoise boxes were collected by WADOE in 1991.

Notes:

Map drawn to approximate scale. Dimensions herein are deemed reliable. Map obtained by measuring distances with a measuring tape from convenient benchmarks by EnCo Environmental Corporation. The location of structures and buildings are considered approximate and subject to variation.

Trenches were dug out in October and November 2002 with a small backhoe bucket. All trenches are 30" wide.

General topographic slope is to the southeast.

Surface water samples and soil sample numbers 774__ collected at the surface in 1991 by WADOE. Sample locations are approximate based on review of not-to-scale 1991 WADOE site sketch.

Map does not depict subsurface utilities.

SCALE: 1" = 4'

4 2 0 4 8

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FAX #: 253.841.0264
ENVIRONMENTAL PERMITTING AND ASSESSMENT, INDUSTRIAL COMPLIANCE, AND WETLAND SERVICES

FIGURE 3

Sample Location with Test Results Diagram

PROJECT NAME AND ADDRESS

Sumner National Auto Parts
16008 60th Street East
Sumner, WA 98390

DRAWN BY	DATE
ANGELA JOHNSON Revision #7	01/03/2003
CHECKED BY	JOB NO.
JONATHAN M. KEMP	E2JK-SumnerNatl-1

N

SHEET 2 of 2

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APPENDIX B

Photographic Log

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Photo #1: View of the area assessed adjacent to the east of the exterior door of Sumner National Auto Parts, (facing west). The pink flags show where soil samples were collected. Photo taken on 10/03/02.

Photo #2: View depicting three (3) excavated trenches and soil sample location flags, facing north toward 60th Street East. Photo taken on 10/03/02.

E2JK-SumnerNationalAuto-1 10/07/02

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Photo #3: View of blue-grey layer of petroleum hydrocarbon contamination in Trench #1, facing southwest. Photo taken on 10/03/02.

Photo #4: View of blue-gray and black-grey contaminated soil layers in Trench #2 (foreground), facing west. Trench #1 is on the right side of the photograph and Trench #3 is on the left. Photo taken on 10/03/02.

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Photo #5: Photograph taken during the second day of the subsurface soil assessment, facing south. The trackhoe is positioned in the area formerly (2-1991) inundated with surface water runoff and impacted with petroleum hydrocarbons (Figure 2). EnCo collected near surface soil samples in this area. Photo taken on 10-16-02.

Photo #6: Photograph depicting the assessed area that was formerly impacted with petroleum hydrocarbons, heavy metals, and VOCs from a caustic solution spill and engine spraying activities, facing southeast. Photo taken on 1016/02.

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Photo #7: View of the area assessed for reported contaminants, facing south. The ditches were dug for the purpose of collecting subsurface soil samples for analysis. Photo taken on 10/16/02.

Photo #8: View of the trackhoe excavating the trenches for the purpose of inspecting subsurface soil conditions, facing west towards the Sumner National Auto Parts building. Photo taken on 10/16/02.

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Photo #9: Excavating soil test trenches, facing north. Recently graded crushed rock was placed over portions of the area assessed. Photo taken on 11/15/02.

Photo #10: Close up view of excavated soil test trenches, facing northwest. The building was recently painted yellow. Photo taken on 11/15/02.

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Photo #11: Photograph depicting the depressional area in the lower left corner, facing west. Excavated trenches indicate where soil samples were collected. Photo taken on 11/15/02.

Photo #12: View of the assessed area after the landowner filled and graded in the soil test trenches, facing west. Four to six inches of crushed rock has been placed and graded over some of the assessed area. Photo taken on 12/9/02.

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APPENDIX C

Tables

Table 1
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

PRELIMINARY ASSESSMENT SOIL TEST RESULTS - 1991						
Sample Number: ➢	77474 Surface	77475 Surface	77476 Surface	77477 Surface		**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel						**2,000**
Heavy Oil (TPH)	**65,360**		**5,420**	**19,290**		**2,000**
Gasoline						**100**
Metals (total)						-
Arsenic		**363**	**57**			**20**
Barium		8,700	174			
Cadmium		**186**	**12.5**			**2**
Chromium		**2,340**	902			**2,000**
Lead		**323**	**4,040**			**250**
Mercury		.034	.028			**2**
Selenium						
Silver		84.6	5.06			
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene	.0026					**.03**
Ethylbenzene	.0052					**6**
Toluene	.013					**7**
Tetrachloroethene	.004					**.05**
Xylenes - total	.025					**9**
SVOCs						

1. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples in this table were collected by Russell Post of the WADOE on February 7, 1991.
3. The results in this table initiated the Phase II assessment performed by **EnCo** in the fall of 2002.
4. mg/Kg = milligrams per Kilogram which is approximately equal to parts per million.
5. TPH = Total petroleum hydrocarbons.
6. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (Chapter 173-303) thresholds.

Table 2

Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

PRELIMINARY ASSESSMENT SURFACE WATER TEST RESULTS - 1991						
Sample Number: ➢	77478	77479				**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Groundwater**
Petroleum Hydrocarbons						(ug/L)
Diesel						**500**
Heavy Oil (TPH)						**500**
Gasoline						**1,000**
Metals (total)						
Arsenic						**5**
Barium						
Cadmium						**2**
Chromium						**50**
Lead						**15**
Mercury						**2**
Selenium						
Silver						
Corrosivity						
pH - Units	10.97					**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs	Several unidentified compounds were reported					
Benzene	ND	ND				**5**
Ethylbenzene	ND	ND				**700**
Toluene	ND	1.6				**1,000**
Tetrachloroethene	ND	ND				**5**
Xylenes - total	4.9	ND				**1,000**
SVOCs						

1. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples in this table were collected by Russell Post of the WADOE on February 7, 1991.
3. ug/L = micrograms per liter which is approximately equal to parts per billion.
4. TPH = Total petroleum hydrocarbons.
5. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (Chapter 173-303) thresholds.

Table 3
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	1A .83'	1B 1.25'	2A .5'	2B .83'	2C 1.33'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND				ND	**20**
Barium	ND				ND	
Cadmium	ND		ND	ND	ND	**2**
Chromium	ND				ND	**2,000**
Copper	ND				110	
Lead	ND		120	12	125	**250**
Mercury	ND				ND	**2**
Nickel	ND				ND	
Selenium	ND				ND	
Silver	ND				ND	
Zinc	59				170	
Corrosivity						
pH - Units	7.36				6.80	**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic					ND	
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs	ND				ND	
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs					ND	

Table 3
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SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	2D 2'	2E 2.67'	3A 1'	3B 1.5'	4A 1'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic						**20**
Barium						
Cadmium						**2**
Chromium						**2,000**
Copper						
Lead						**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs						

Table 3
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SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	5A 1'	6A 1.5'	7A .17'	8A .17'	9A .17'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	1,700	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic						**20**
Barium						
Cadmium			1.9	1.2	ND	**2**
Chromium						**2,000**
Copper						
Lead			**910**	**520**	220	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units			7.25			**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Toluene						**7**
Tetrachloroethene						**.05**
Xylenes - total						**9**
SVOCs						

Table 3
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SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	10A .17'	11A .17'	12A .17'	12B 1.5'	13A .17'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND			ND	**20**
Barium	ND	ND			ND	
Cadmium	1.3	ND	ND		1.9	**2**
Chromium						**2,000**
Copper						
Lead	**540**	220	**460**		**700**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs		ND			ND	
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

Table 3
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SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	14A .17'	15A .25'	15B .75'	16A .25'	16B .75'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	290	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND	ND	ND	ND	**20**
Barium – Total Barium –TCLP	230 ND	ND	ND	ND	ND	- **100** (mg/L)
Cadmium	1.5	ND	ND	ND	ND	**2**
Chromium						**2,000**
Copper						
Lead	**320**	110	160	130	**330**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs		ND	ND	ND	ND	
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

Table 3
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SOIL TEST RESULTS – 2002						
Sample Number: ➢SN-	17A .25'	17B .75'	18A .25'	18B 1.0'	19A .33'	**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND	ND	ND	ND	ND	**2,000**
Heavy Oil	ND	ND	ND	ND	ND	**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND	ND	ND	ND	ND	**20**
Barium	ND	ND	ND	ND	ND	
Cadmium	ND	ND	ND	ND	ND	**2**
Chromium						**2,000**
Copper						
Lead	220	8	45	47	**370**	**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

Table 3
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SOIL TEST RESULTS - 2002						
Sample Number: ➢SN-	19B 1.0'					**MTCA Method A Cleanup Action Level For Unrestricted Land Use - Soil**
Petroleum Hydrocarbons						(mg/Kg)
Diesel	ND					**2,000**
Heavy Oil	180					**2,000**
Gasoline						**100**
Metals (total)						
Arsenic	ND					**20**
Barium	ND					
Cadmium	ND					**2**
Chromium						**2,000**
Copper						
Lead	**760**					**250**
Mercury						**2**
Nickel						
Selenium						
Silver						
Zinc						
Corrosivity						
pH - Units						**DWR: ≤ 2 or ≥12.5**
PAHs-Carcinogenic						
Benzo(a)pyrene						**.1**
Sum of Carcinogenic PAHs						**.1**
VOCs						
Benzene						**.03**
Ethylbenzene						**6**
Tetrachloroethene						**.05**
Toluene						**7**
Xylenes - total						**9**
SVOCs						

Table 3

Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

Notes:

1. The table lists only those parameters that were detected over their respective method detection limit established by the laboratory. Empty cells in the table indicate that the listed parameters were either not analyzed or were not detected over their respective method detection limit.
2. Samples collected by Jonathan Kemp of **EnCo** on 10/3/02, 10/16/02, and 11/15/02.
3. Concentrations highlighted in **BOLD** text exceed or are equal to applicable 2001 MTCA method A cleanup action levels or applicable Dangerous Waste Regulations (DWR), Chapter 173-303 thresholds.
4. mg/Kg = milligrams per kilogram which is approximately equal to parts per million.
5. PAHs = polynuclear aromatic compounds.
6. SVOCs = semi-volatile organic compounds.
7. VOCs = volatile organic compounds.

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APPENDIX D

Field Procedures

FIELD PROCEDURES
Sumner National Auto Parts
16008 60th Street East
Sumner WA 98390

1.0 PURPOSE

The purpose for documenting field procedures is to specify the Quality Assurance procedures that were used to ensure that sample collection, handling, documentation, and analysis resulted in data of sufficient quality to evaluate subsurface conditions at the site.

References to the test methods calibration procedures, data validation, internal quality control checks, performance standards, system audits, preventative maintenance, precision, and accuracy are part of the standard protocols of the certified testing laboratory. The Washington Department of Ecology (WADOE) has accredited the certified testing laboratory used during this project. The laboratory contracted for this project was Environmental Services Network (ESN) of Lacey, Washington.

2.0 PERSONNEL

An environmental scientist with **EnCo** performed the field sampling. The environmental scientist is a Washington State Certified Site Assessor with over twenty-three years of experience in environmental sampling and site cleanup work. **EnCo** personnel has a minimum of 48 hours (with annual 8-hour refresher course) of hazardous materials, safety and health training that meets the requirements of WAC 296-62 and OSHA 1910.120.

3.0 CLEANING PROCEDURES

A clean surface was used for washing the equipment in the field. Sampling equipment was cleaned prior to and at the completion of the work with an Alconox soap solution wash followed by tap water and distilled water rinses. These procedures were performed to reduce the potential for cross contamination between sample locations. The working end of the hand tools were cleaned by scraping adhering soil from the tools and washing with an Alconox soap solution. A tap water rinse followed with a distilled water rinse was performed before use at each sample location. Municipal tap water was used for cleaning procedures and bottled distilled water was purchased at a local department store. Cleaning fluids were visually inspected after decontamination of sampling tools. The cleaning fluids did not appear to be grossly contaminated and were disposed of on site.

4.0 SAMPLING AND ANALYSIS

4.1 GENERAL INFORMATION

Sample locations were selected based on known pervious land use practices. Each sample location was entered into a field logbook and onto a Sampling Information Sheet

immediately after collection. The notes contain information such as an identification number, interval, location, time, date, appearance, observed characteristics, and parameters to be tested. Sample locations were labeled, flagged, and identified on a site sketch on the same day of sampling. Each sample location was manually measured to a local and convenient benchmark. The benchmark used for this project was the southeast corner of the building.

4.2 SAMPLE NUMBER

Samples were designated with a unique number using the following format:

SN - 1A – SO - .83'

SN = Sumner National Auto Parts
1A = Sample Number 1A
SO = Type of Sample Collected (i.e. Soil)
.83' = Depth Below Ground Surface

4.3 SAMPLING TECHNIQUE

Excavated soil was temporarily stored adjacent to each trench. Upon completion of sampling from the sidewalls or bottom of the trenches the stockpiled soil was placed back into the trenches for safety reasons. Soil samples were collected using a clean 1-inch diameter soil probe. When possible samples were taken from undisturbed areas within the sampling device.

Grab soil samples were collected for this assessment. Generally, soil samples were collected at the bottom and sidewalls of trenches. Vertical profiles of impacted areas were visually assessed and sampled in an attempt to delineate the depth below ground surface of the contamination. Lateral profiles were also collected in the vicinity of impacted areas throughout the site in order to assess the horizontal extent of contamination. In some cases two or more vertical profile soil samples were collected in order to determine the extent of contamination.

Samples were carefully placed into clean, borosilicate glass jars with Teflon-lined screw-top lids. Each jar was properly labeled with a project name, sample location, test parameters, date, time, preservation requirement, and the sampler's initials. The outside surface of sample bottles were wiped with a clean paper towel and placed into insulated coolers with bags of crushed ice. Each sample was obtained in accordance with appropriate sampling protocol including packaging, preservation and Chain-of-Custody procedures.

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APPENDIX E

Terms and Conditions

TERMS AND CONDITIONS

This report is intended for the sole use of Mr. Robert Suss of Sumner National Auto Parts and his assigns. Any other parties that wish to read or use this report shall notify **EnCo** by executing a Right to Rely form. **EnCo** will supply this form upon request. On the basis of the intended use of the report, **EnCo** may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements will release **EnCo** from any liability resulting from the use of this report by any unauthorized party.

The report has been prepared in accordance with generally accepted professional consulting practices for the nature and conditions of the work completed at the time of the performed work. The assessment is based on conditions that existed at the time of the work. It must be recognized that the scope of work performed was not designed to provide information on all types of soil (surface and/or subsurface), sediment, surface water, and/or groundwater contamination risks that may exist on the area assessed and other areas that were not assessed at the subject site. Guarantees cannot be made that the site is free of contamination which would be considered as having an adverse environmental impact, particularly where contamination is localized, in areas not assessed, under or in close proximity to the existing building, structures, or utilities, hidden from view, or at concentrations below standard analytical detection limits.

Site conditions, both surface and subsurface, may be affected as a result of natural processes or human influence. The information presented in this report applies only to the areas of the property identified by the releases identified in this report. Contaminants may be present in areas that were not sampled, tested, or surveyed or may migrate to areas that showed no signs of contamination at the time they were studied.

The analysis and opinions expressed in this report are based upon data obtained by **EnCo** from samples collected at the indicated locations, observations, and from information provided to **EnCo** by the client or interviewed personnel and should not be relied upon to represent conditions at later dates. The concentrations of parameters presented in this report are based on the attached laboratory reports. This report does not reflect any variations in subsurface stratigraphy, geohydrology, or contaminant distribution, which may occur between sample locations or across the site. Actual surface and/or subsurface conditions may vary and may not become evident without further assessment.

In the event that changes in the nature, usage, or configuration of the property or nearby properties are made, the conclusions and/or recommendations contained in this report may not be valid. Conclusions drawn by others from the results of this assessment should recognize the limitations of the methods used. If variations appear evident, it will be necessary for our firm to re-evaluate the conclusions of this report. This report is not meant to represent a legal opinion. No warranty or guarantee, expressed or implied, is made or offered.

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APPENDIX F

Regulatory Documents

S.W.R.O.

DEPARTMENT OF ECOLOGY ENVIRONMENTAL REPORT

RECORDER: VERNA CLEVELAND WEATHER: TIDE: ID#: S1802

DATE: 11/08/90 TIME: 16:37:11 COUNTY: PIERCE WATERWAY:

REPORTED BY: [redacted]
BUS NAME:
ADDRESS:
CITY: STATE:
ZIP: HOME PHONE: [redacted]
BUS PHONE:
ANONYMOUS: A BEST TIME TO CALL:

LOC DESC: FIELD NEXT TO SUMNER NATIONAL AUTO PARTS

CITY: SUMNER

ALLEGED VIOLATOR: SUMNER NATIONAL AUTO PARTS
ADDRESS:
CITY: SUMNER STATE: WA EXT:
ZIP: PHONE:
CONTACT: PHONE:

MEDIUM: SOIL MAT TYPE: OIL, ALKLI SOLUTION

MATERIAL: CHEMICALS SOURCE: RELEASE/ILLEGAL DISPOSING

QUANTITY: ACTUAL QUANTITY:

PROGRAM: HWICP SECTION HD ~~WILSON~~ Steeley INSPECTOR: Post

DATE INVEST: SM 2/7/91 DATE CLOSED: 2/7/91 IMPACT:
NONPOINT: POINT: LUST:
ACTION TAKEN: Site Visit CAUSE:

REFERRAL TO OUTSIDE ENTITY:
ENTITY NAME:_____ CONTACT: _____
DATE REFERRED / / PHONE ( ) -

NARRATIVE: CALLER REPORTED ABOVE COMPANY DUMPING CLEANING SOLVENTS, OIL, ANTIFREEZE, ETC. INTO RAIN WATER RUNOFF DITCHES WHICH DRAIN INTO FIELD NEXT DOOR (OWNER OF BUSINESS ALSO OWNS FIELD). HE'S SEEN 10-15 GAL @ A TIME DUMPED (TWICE). 'HOT TANK' IS LEAKING ALKLI SOLUTION - ALSO RUNS INTO FIELD. SAID GROUND IS TURNING BLACK.

SAMPLES YES OR NO REPORT REQUESTED YES OR NO PICTURES YES OR NO

S W R O

DEPARTMENT OF ECOLOGY ENVIRONMENTAL REPORT

RECORDER: VERNA CLEVELAND WEATHER: TIDE: ID#: S1884

DATE: 11/21/90 TIME: 14:30:00 COUNTY: PIERCE WATERWAY:

REPORTED BY: KARL
BUS NAME:
ADDRESS:
CITY: SUMNER STATE: WA
ZIP: HOME PHONE: (206)-863-3837
BUS PHONE:
ANONYMOUS: BEST TIME TO CALL:

LOC DESC: PROPERTY NEXT TO SUMNER NAT'L AUTO PARTS

CITY: SUMNER

ALLEGED VIOLATOR: SUMNER NATIONAL AUTO PARTS
ADDRESS: 16008 Daniels Rd.
CITY: SUMNER STATE: WA EXT:
ZIP: 98390 PHONE: 863 5178
CONTACT: Robert Suss PHONE:

copy in site file

MEDIUM: SOIL MAT TYPE: SOLVENTS, oil, Caustic

MATERIAL: CHEMICALS SOURCE: Rinseate, Drums

QUANTITY: 20 gal/day ACTUAL QUANTITY:

PROGRAM: ~~WT~~ ~~GPM~~ TCP SECTION HD ~~BACKOUS~~ WILSON INSPECTOR: POST

DATE INVEST: 2/7/91 DATE CLOSED: 4/3/91 IMPACT: Soil
NONPOINT: POINT: LUST:
ACTION TAKEN: SMS, SHA CAUSE:

REFERRAL TO OUTSIDE ENTITY:
ENTITY NAME: _____ CONTACT: _____
DATE REFERRED / / PHONE ( ) -

NARRATIVE: CALLER REPORTED SUMNER NATIONAL AUTO PARTS DUMPING SOLVENTS, ETC. ONTO CONCRETE PAD NEAR SHOP. THEN THEY RINSE IT OFF PAD AND WASTE WATER DUMPS INTO PROPERTY NEXT DOOR. PROPERTY NEXT DOOR IS OWNED BY OWNER OF AUTO PARTS SHOP.

SAMPLES (YES) OR NO REPORT REQUESTED YES OR NO PICTURES (YES) OR NO

DEPARTMENT OF ECOLOGY - SOUTHWEST REGIONAL OFFICE
COMPLAINT INVESTIGATION REPORT
PREPARED BY RUSSELL POST

Russell Post

COUNTY: Pierce
DATE OF INVESTIGATION: 2/7/91
TIME ON SITE: 13:20
WEATHER CONDITIONS: 50F, Cloudy
INSPECTOR(S): R. Post

CASE NO.: 1884
DATE OF REPORT: 4/3/91
OFF SITE: 14:40

SITE NAME: Sumner National Auto Parts
SITE LOCATION: Sumner National Auto Parts
16008 Daniels Rd.
Sumner, WA 98390
SE 1/4, Sec 19, R5E, T20N

DIRECTIONS TO SITE: I-5 to 512 E to 167 N(E) to 410 E to Valley Ave. exit. Take left (N) on Valley Ave. to Main St., go right (E) to just past 160 th Ave. Site on right.

SITE REPRESENTATIVE: Robert Suss, Owner
TELEPHONE NO.: 863-5178
ENTITY (AV/PLP): Sumner National Auto Parts
CONTACT PERSON: Robert Suss
TELEPHONE NO.:
ADDRESS: Same

PHOTOS TAKEN?: Yes
SAMPLES TAKEN?: Yes
PERMIT OR NOTIFIER?: No

ISSUE: Improper disposal of solvents, rinseate, metals and oil.

SUMMARY: Poor management of waste oil, solvents, caustic bath rinseate and metal sludge has lead to contamination of nearby soils. Sample analysis results confirm suspected contamination. Recommend SMIS listing and Site Hazard Assessment.

INVESTIGATION:
PERSON(S) PRESENT: R. Post, WDOE; Robert Sluss, owner SNAP; SNAP employees.

OBSERVATIONS: I explained to Mr. Suss the purpose of my visit and asked him to show me around his facility, to which he agreed. His shop does a lot of engine rebuilding and uses a new process to clean the engines; a high temperature (600-900F) oven that bakes off residue. Sludge from the caustic bath is also cooked in the oven. This oven is purported to have very clean emissions due to the high temperatures. Mr. Suss explained that Tacoma-Pierce County Health Department (TPCHD) had

investigated due to concerns of metals in the ash left over from the bake-oven. Mr. Suss made copies for me of two memoranda (from TPCHD) that demonstrate that the ash from the bake-oven is suitable for landfill disposal. The memoranda also indicate a concern for the storage of waste oil and discharge of rinse water from engines coming out of the hot bath. This issue is also of particular concern to Ecology.

Mr. Suss showed me the caustic bath, the hot bath, the metal grinding machinery and the waste oil storage and rinsing area. The waste oil storage and rinsing area is on a sloped cement pad on the eastern side of the shop, partially under cover. Rinseate from this area drains to the north, east and south. Likely constituents of this rinseate include caustic solution, caustic bath sludge, solvents, petroleum products and metals.

Other contaminants likely to escape are the waste oil and other materials in the eleven drums partially under cover of the roof. Seven smaller containers were also in this area and subject to weather and rainwater intrusion. Many of the drums had oil, water and/or other material covering the top of the drum and were leaking onto the cement pad and escaping to surrounding soils. No containment for leakage or spills was evident, and leaking material was escaping to surrounding soils during the investigation. No control measures to stop or stem the flow of these materials was instituted.

Soils on all sides of the cement pad appeared contaminated. To the south was the largest visible evidence. A trench along the north side carried visibly contaminated rinseate into a sludgy pool approximately 40' by 20' with a brown scum on the surface and black stained soil around the edges. An oil sheen was visible on the water flowing into the pool. A second pooling area to the east, mostly wet and soggy, showed visible signs of stressed vegetation and contaminated soils. A surface soil sample and a water sample were taken at the western edge of the first pool (sample #1).

A second sample was taken from the trench along the north side of the cement slab, and it appeared visibly contaminated with metals.

The third sample was also on the north side of the cement slab, but was only a few feet from the shop. The soil in this location appeared heavily contaminated with oil and metal grindings. I dug through several layers of dirt, sorbent grit and other material, all of which was water and oil-soaked. At the six to eight inch depth, water began to slowly seep into the hole. The water had a sheen on it. Many small pieces of metal and gaskets and other items were discovered during the digging. In addition, it is very probable that caustic bath rinseate and its constituents is also to be found in this area, since even as I was sampling there, some of the spray from their rinsing operation landed next to me.

South of the cement pad were two obvious types of contamination: petroleum contaminated soils and a pool of burgundy tinted water. Sample number four was taken from this location. The colored water

covered an area at least ten feet in diameter and had a strange odor I could not identify with complete accuracy. When I asked Mr. Suss what it was, he said it must be caustic bath. It appeared to be concentrated product and not rinseate, which Mr. Suss explained must have been one of his employees emptying out the machine. I asked if that was a standard practice and he said it was not.

At the conclusion of the sampling, I explained to Mr. Suss that he should take several steps to improve management of waste oil and other materials in the drums: (1) label the drums as to their contents; (2) keep the tops of the drums clear of oil and other material; (3) keep rain from reaching the drums (i.e. put sides on the covered area where drums are stored); (4) keep the drums stored on pallets; (5) discontinue the use of open buckets for the storage of waste materials; (6) put a berm around the drum storage area to control runoff and spillage; (7) use sorbent material to soak up spilled material.

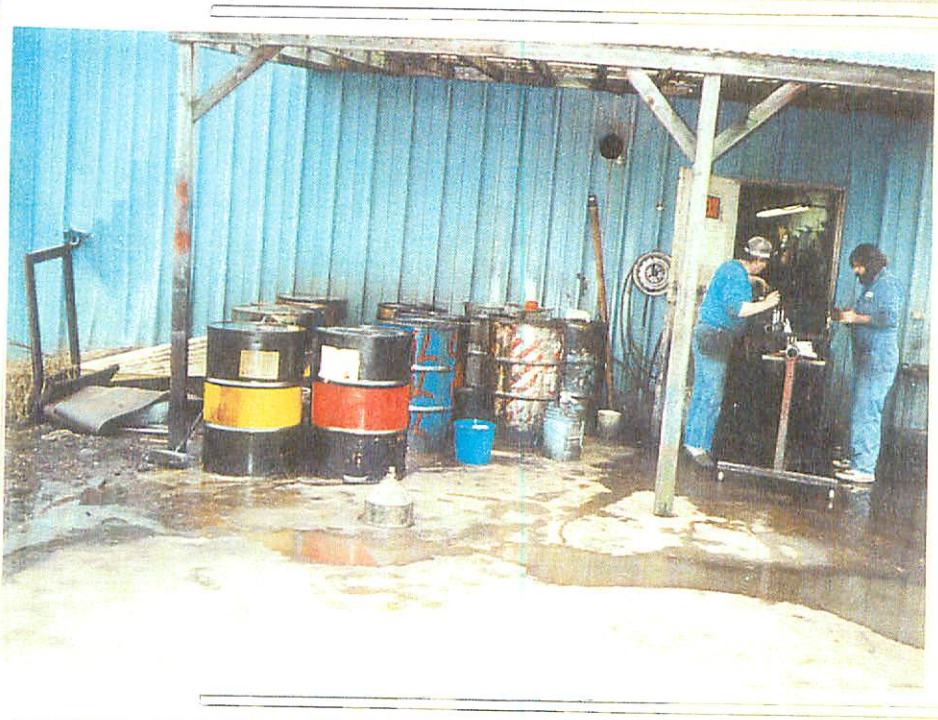
I also recommended to Mr. Suss that he find an alternative method for rinsing engines or controlling rinseate runoff, and that he determine an appropriate method for disposal of metal grinding sludge.

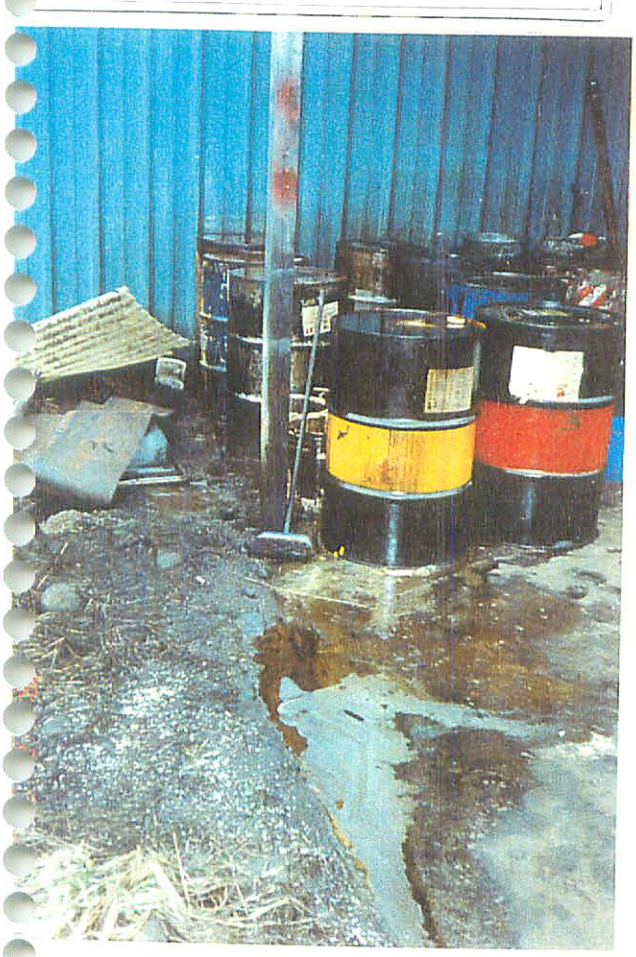
I told Mr. Suss that I would get back to him with the results of the sample analyses.

ATTACHMENTS: Site map, Sampling Information Sheet, Sample Data & Analysis Required form, Sample Analysis Results, Photos, TPCHD Memoranda to SNAP.

RECOMMENDATION: Listing on SMIS, Site Hazard Assessment.

FOLLOW UP: Letter to Mr. Suss regarding recommendations for improving waste management and results of sample analysis.





SUMNER NATIONAL AUTO PARTS
PIERCE COUNTY
COMPLAINT # 1884
FEBRUARY 7, 1991
PHOTO BY R. POST

SUMNER NATIONAL AUTO PARTS
PIERCE COUNTY
COMPLAINT # 1884
FEBRUARY 7, 1991
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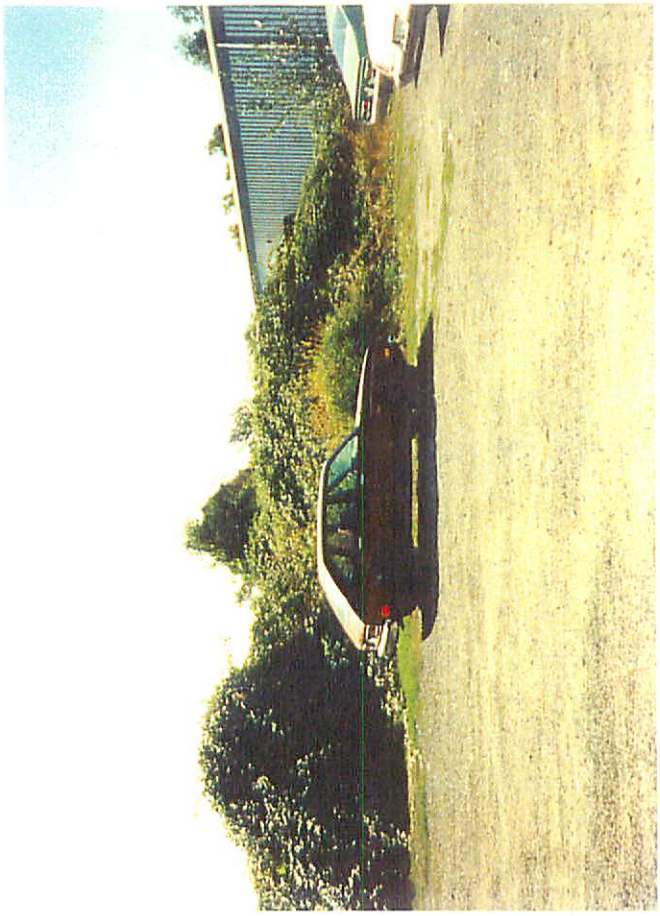
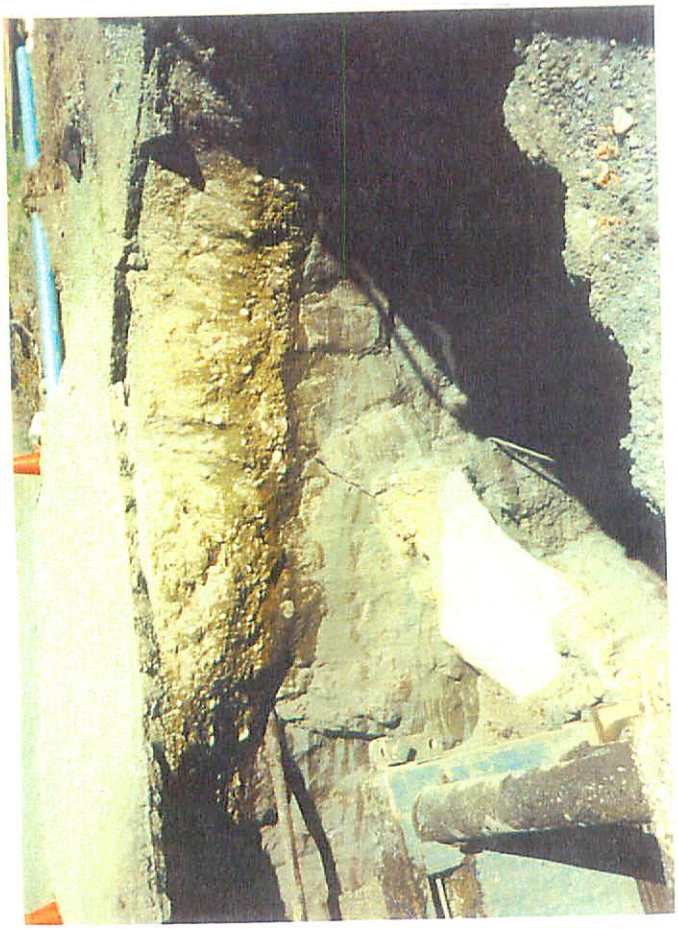
SUMNER NATIONAL AUTO PARTS
PIERCE COUNTY
COMPLAINT # 1884
FEBRUARY 7, 1991
PHOTO BY R. POST


NATIONAL
AUTO PARTS
DRIVER WANTED





WORKSHEET 1

SUMMARY SCORE SHEET

Site Name/Location (City, County, Section/Township/Range):

Sumner National Auto Parts
16008 Daniels Road
Sumner, Washington 98390
Pierce County

Section 19, Township 20 N, Range 5E, WM.

Site Description (Include management areas, compounds of concern, and quantities):

Tacoma-Pierce County Health Department (TCPHD) wrote a letter to Sumner National Auto Parts (SNAP) on 8/10/87 regarding their waste management practices. Apparently SNAP baked sludges generated at their in-house machine shop and was trying to determine where to dispose of resulting ash. The letter mentioned that preliminary Ph and aquatic bioassays indicated the ash to be suitable for landfill disposal but, due to concerns over heavy metal content, an EP Toxicity test was also required. TPCHD also noted an "oily area" behind the shop which they recommended be covered with clean fill. TPCHD also approved the discharge of rinse water from motors out of the hot tank as long as the rinse water consisted of only caustic solution and water. TPCHD stated "no oils or solvents" were to be discharged.

An EP Toxicity test was conducted 9/17/87 on the ash for SNAP by Northwest Environmental Services Inc. A letter dated 11/16/87 indicated TPCHD had reviewed the test and found the ash suitable for landfill disposal. TPCHD also recommended that drums stored behind the shop should be kept to a minimum number and also be covered.

On 11/20/90 the Washington State Department of Ecology (Ecology) received a report that indicated solvents (etc. ?) had been dumped onto a concrete pad near the shop at SNAP. The solvent was reported to then be rinsed off the pad with the waste water flowing onto the property adjacent to the auto parts shop. Both properties are owned by Bob Suss.

On 2/7/91 Rusty Post of Ecology conducted an Initial Investigation at SNAP. He toured the site with the owner. Among other typical automotive machine shop activities, SNAP rebuilds engines. They use a new block cleaning process with a 600-900 degree F oven to bake off old residue prior to rebuilding. The owner claims the emissions are very clean due to the high temperatures, and that the process was approved by the Puget Sound Air Pollution Control Authority (PSAPCA).

The shop also has a caustic bath, a hot bath, and metal grinding machinery. Waste oil drum storage and a rinsing area are located on a sloped cement pad on the eastern side of the shop. Run-off from this area drains to the north, east and south of the pad. Eleven drums (size ?) were partly covered by the roof. Seven smaller containers located in this area were subject to weather and rainwater intrusion. No containment for spills was observed.

Soil on all sides of the pad appeared contaminated with oil especially to the south. A trench (with visual contamination) along the north side was observed to carry contaminated rinsate into a seasonal pool of water, about 20' by 40' in size.

Sample #1 (lab # 077474) was collected from the surface soil at the west edge of the pool and was analyzed for pH, VOAs and TPH. The results indicated 18 hits of volatiles with 5,5-Dimethyl-(Z)-2-Hexene giving the highest reading 120 ppb. TPH = 65,360 mg/kg. All pH tests for this investigation were not analyzed due to interference. A water sample, #1a (lab # 077479), was collected from the pool and analyzed for VOAs. The results indicated the presence of 14 volatiles, with two unknown hydrocarbons giving the highest readings at 42 ppb each.

Sample #2 (lab # 077475), a surface soil sample, was collected from the trench along the north side of the cement slab and was analyzed for total metals and TCLP metals (Al, Fe, Mg, Mn).

A second soggy/pool area to the east of sample area 1 had visually oil stained soils (no samples taken here) .

Sample #3 (lab # 077476) was collected from the north side of the cement slab, a few feet from the shop, and analyzed for TPH, total metals and EP Tox metals (Al, Fe, Mg, Mn). While digging into the soil for this sample, visual contamination was observed including, oil, metal grindings and pieces, sorbent grit and gaskets. In addition this is a likely location for caustic rinsate contamination, although Ph was not analyzed here. TPH = 5,420 mg/kg.

South of the pad, petroleum contaminated soils and a pool, about 10 feet in diameter, of burgundy colored water were observed. One surface soil sample (sample #4, lab # 077477) was collected from this location and analyzed for TPH only resulting in a TPH reading of 19,290 mg/kg. This pool had a strange odor that the owner believed to be that of caustic bath. It appeared to be more concentrated than rinsate. The owner said it must have been from an employee emptying out the bath machine. A sample of the liquid was collected (sample #4a, lab # 077478) and analyzed for VOAs and pH. The results indicated hits of 13 volatiles with the highest readings for several unknown volatiles over 500 ppb. Again Ph was not analyzed due to interference.

The results of the total metals analysis from the soil adjacent to the cement slab confirm the presence of several heavy metals over MTCA cleanup standards. The soil also contains toxic volatile hydrocarbons below cleanup standards. Both types of chemicals are potentially available to the groundwater and air pathways and confirmed in the surface water pathway. No cover or containment is present.

The area is apparently served by a public water supply system therefore there are no nearby wells to sample (R. Post).

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

TPH soil samples were over MTCA cleanup standards, however this information cannot be accommodated by the WARM scoring since individual toxic compounds are not identified by this test.

EP Tox analysis of two soil/sediment samples indicate the presence of barium, cadmium, and chromium at levels that designate as Dangerous Waste (DW). Also the same two sample locations have arsenic and lead at levels above the Extremely Hazardous Waste (EHW).

ROUTE SCORES:

Surface Water/Human Health:	33.4	Surface Water/Environ.:	26.6
Air/Human Health:	39.4	Air/Environmental:	30.3
Ground Water/Human Health:	62.9		

OVERALL RANK: 1

Rev. 5/31/91

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List substances to be considered for scoring: Source: 1

Arsenic, chromium, lead, cadmium, PCE, and xylene.

Explain basis for choice of substance(s) to be used in scoring.

Confirmed in shallow soil samples.

List management units to be considered in scoring: Source: 1

Surface soil near cement slab near east end of shop.

Explain basis for choice of unit used in scoring. Source: 1

Contaminants found in shallow surface soil.
No containment

2. AIR ROUTE

List substances to be considered for scoring: Source: 1

Arsenic, chromium, lead, cadmium, PCE, and xylene.

Explain basis for choice of substance(s) to be used in scoring.

Confirmed in shallow soil samples.

List management units to be considered in scoring: Source: 1

Surface soil near cement slab near east end of shop.

Explain basis for choice of unit used in scoring.

Contaminants found in shallow surface soil.
No containment

WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List substances to be considered for scoring: Source: 1

Arsenic, chromium, lead, cadmium, PCE, and xylene.

Explain basis for choice of substance(s) to be used in scoring.

Confirmed in shallow soil samples.

List management units to be considered in scoring: Source: 1

Surface soil near cement slab near east end of shop.

Explain basis for choice of unit used in scoring.

Contaminants found in shallow surface soil.
No containment

WORKSHEET 4.
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcino-genicity WOE	PF*	Val.
1. Arsenic	6		5		5				7
2. Chromium	6		1		x				2
3. Cadmium	8		5		5				x
4. Lead	8		x		x				x
5. PCE	8		3		5				4
6. Xylene	2		1		10				x

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value 12

1.2 Environmental Toxicity

Substance	Acute Criteria (ug/l)	Non-human Mammalian Acute Toxicity (mg/kg)	Value
1. Arsenic			4
2. Chromium			2
3. Cadmium			8
4. Lead			6
5. PCE			2
6. Xylene			x

Source: 2 Value: 8

1.3 Substance Quantity

Source: 1 Value: 5

Explain basis: Approx. 10 x 50 foot and 5 x 30' estimated uncovered contaminated area. equals 650 sq. feet

WORKSHEET 4 (CONTINUED)
SURFACE WATER ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment = none — Source: 1 Value: 10
Explain basis: exposed contaminated dirt near cement pad, east of shop

2.2 Surface Soil Permeability: sand — Source: 1 Value: 1

2.3 Total Annual Precipitation: 40.3 inches — Source: 3 Value: 3

2.4 Max. 2-Yr/24-hour Precipitation: 2 inches — Source: 4 Value: 2

2.5 Flood Plain: no — Source: 5 Value: 0

2.6 Terrain Slope: < 2 % — Source: 6 Value: 1

3.0 TARGETS

3.1 Distance to Surface Water: approx. 5,100 feet — Source: 6 Value: 2

3.2 Population Served within 2 miles: √pop.= 0 — Source: 7 Value: 0

3.3 Area Irrigated within 2 miles: 0.75√no. acres= 30 — Source: 7 Value: 30

3.4 Distance to Nearest Fishery Resource: 5,100 feet — Source: 6,8 Value: 3

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) 5,100 feet, Puyallup River, Migratory Pathway way for salmon including the following: Chinook, Pink, Chum, Coho — Source: 6,8 Value: 3

4.0 RELEASE

Explain basis for scoring a release to surface water: Lab analysis and visual observation — Source: 1 Value: 5

WORKSHEET 5
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual) - Please review before scoring

1.2 Human Toxicity

Substance	Air Standard (ug/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcinogenicity WOE	PF*	Val.
1. Arsenic		10		x		x			9
2. Chromium		9		10		x			x
3. Cadmium		10		x		10			6
4. Lead		10		x		x			x
5. PCE		9		x		x			x
6. Xylene		1		1		3			x

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility
Vapor Pressure(s): 1=x 2=x 3=x 4=x 5=4 6=3 Source: 2 Value: 4

1.3.2 Particulate Mobility
Soil type: sand Source: 1,9
Erodibility: 73 (coarse sand) Value: 1
Climatic Factor: 1 -10

1.4 Final Human Health Toxicity/Mobility Matrix Value: 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Acute Toxicity	Value	Mobility	Value
1. Arsenic		x		1
2. Chromium		x		1
3. Cadmium		10		1
4. Lead		x		1
5. PCE		x		4
6. Xylene		3		3

Environmental Toxicity/Mobility Matrix Source: 1,2,9 Value: 5

WORKSHEET 5 (CONTINUED)
AIR ROUTE

1.6 Substance Quantity: 650 sq. feet Source: 1,9 Value: 4
Explain basis: estimated surface area based on visual observation.

2.0 **MIGRATION POTENTIAL**

2.1 Containment: none, uncovered contaminated soil Source: 1 Value: 10

3.0 **TARGETS**

3.1 Nearest Population: approx. 300 feet to north Source: 1 Value: 10

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Puyallup River 5,100 feet Source: 6,8 Value: 7

3.3 Population within 0.5 miles: √population= 29 Source: 6 Value: 29

4.0 **RELEASE**

Explain basis for scoring a release to air: none confirmed Source: 1 Value: 0

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Carcino-genicity WOE	PF*	Val.
1. Arsenic	6		5		5				7
2. Chromium	6		1		x				2
3. Cadmium	8		5		5				x
4. Lead	8		x		x				x
5. PCE	8		3		5				4
6. Xylene	2		1		10				x

*Potency Factor

Source: 2
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value 12

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions _____ Source: 2 Value: 3

OR
Solubility(mg/l) 1 = 3, 2 = 1, 3 = 2, 4 = 2
5 = 2, 6 = 2

1.3 Substance Quantity Source: 1 Value: 2
Explain basis: assume 650 sq. ft. area
and approx 3 feet deep = 1,950 cu ft = 72 cu yds.

2.0 MIGRATION POTENTIAL

2.1 Containment none Source: 1 Value: 10
Explain basis: uncontained contaminated soil

2.2 Net Precipitation: 23.1 inches Source: 3 Value: 3

2.3 Subsurface Hydraulic Conductivity: >10-3 Source: 1 Value: 4

2.4 Vertical Depth to Ground Water: estimate 100 feet Source: 10 Value: 4

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 **TARGETS**

3.1 Ground Water Usage: public supply no other source Source: 10,11 Value: 9

3.2 Distance to Nearest Drinking Water Well: ~2,000 ft Source: 10 Value: 3

3.3 Population Served within 2 Miles: √population=100 Source: 10,11 Value: 100

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75√no.acres= 15 Source: 7 Value: 15

4.0 **RELEASE**

Explain basis for scoring a release to ground water: none confirmed
no ground water sampling

Source: 1 Value: 0

SOURCES USED IN SCORING

1. Ecology SHA Reconnaissance, September 9, 1991, Heggen and February 7, 1991 Initial Investigation, Post.
2. SAIC Toxic Database
3. NOAA, Washington Climate, October 1964.
4. NOAA, Atlas 2, Vol. Lx, 2-yr. 24 hr. precipitation.
5. FIRM, Pierce Panel # 530138 - 0354 C.
6. USGS 7.5 min quad, Sumner Quadrangle.
7. Ecology, Water Resources, WRIS.
8. Wash. Dept. of Fisheries, Catalog of Washington Streams Vol. 1
9. Ecology WARM Manual.
10. DOH public water supply listings
11. Ecology well logs

CHRISTINE O. GREGOIRE
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

June 12, 1991

Mr. Robert Suss
Sumner National Auto Parts
16008 Daniels Road
Sumner, WA 98390

Re: Sumner National Auto Parts Site, 16008 Daniels Road, Sumner

Dear Mr. Suss:

I am writing to send you information the Washington Department of Ecology has gathered regarding the above-referenced property. Under the Model Toxics Control Act (Chapter 70.105D RCW), Ecology maintains a database of known or suspected contaminated sites. Based on available information and an inspection performed on February 7, 1991, I have added this property to our database.

Enclosed is a computer printout summarizing information which we believe reflects the current status of this site. I want to ensure that Ecology has accurate information, so I encourage you to carefully review this report. If you have any corrections, please send them and any supporting material to me at the above address. A legend has also been enclosed to help you interpret this report.

Please note that inclusion in the database does not mean that Ecology has determined you are a potentially liable person under the Model Toxics Control Act or that action is needed at this time. Ecology may conduct a more detailed inspection of this property, including testing for possible contamination, in the future. After that, we will be able to assess whether action will be needed and establish a priority for this work.

It is Ecology's policy to work cooperatively with persons to accomplish prompt and effective cleanups. However, due to limited resources and requirements in state law, we are not always able to provide requested assistance. Furthermore, your cooperation with Ecology in planning or conducting a remedial action is not admission of guilt or liability. If you decide to proceed with work on your own, please be aware that there are requirements in state law which must be adhered to.

Enclosed are a copy of Chapter 70.105D RCW and the implementing regulations, and Chapter 173-340 WAC, which detail these requirements. If you have any questions, please call me at (206) 753-2982. Thank you for your cooperation.

Sincerely,

Edward Canapary

Edward Canapary, SMIS Coordinator
Southwest Regional Office

EC:ls
Enclosures

CHRISTINE O. GREGOIRE
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

February 11, 1992

Bob Suss
Sumner National Auto Parts
16008 Daniels Road
Sumner, WA 98390

Dear Mr. Suss:

The Department of Ecology (Ecology) has now assessed a hazard ranking for the Sumner National Auto Parts site as required by the Model Toxics Control Act. This is an estimation of the potential threat of this site to human health and the environment, relative to other Washington State sites scored at this time. A ranking of 1 (with 1 being the highest relative risk and 5 being the lowest) has been calculated for this site.

For your information, Ecology will be publishing the ranking of this and other sites in the February 25, 1992 Site Register. The rankings will be used in conjunction with other considerations in determining Ecology's priority for future actions at sites. It is not anticipated this ranking will affect the current activities at the Sumner National Auto Parts site.

A fact sheet on the ranking method together with copies of the sample analysis for your property and a brief Site Hazard Assessment summary are enclosed for your information.

For further information, please contact Dick Heggen at (206) 586-8618.

Sincerely,

Megan White
Southwest Region Supervisor
Toxics Cleanup Program

MW:DH:le
Enclosure

EnCo
Environmental
Corporation

APPENDIX G

Laboratory Reports & Chain-of-Custody Forms

ESN NORTHWEST | Environmental Services Network

October 21, 2002

Jonathan Kemp
Enco Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373

Dear Mr. Kemp:

Please find enclosed the analytical data report for the Sumner National Auto Parts Project in Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, pH, RCRA 8 + 3 Metals by Method 7000 series, VOC's by Method 8260, and Semi-VOC's by Method 8270 on October 8 – 15, 2002.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Enco Environmental Corporation for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Vice President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corp.
Client Project #E2JK-Sumner Nat'l Auto-1

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	10/9/02	74	nd	nd	nd
SN-1A-SO-10	10/9/02	118	nd	nd	nd
SN-1B-SO-15	10/9/02	92	nd	nd	nd
SN-2A-SO-6	10/9/02	82	nd	nd	nd
SN-2B-SO-10	10/9/02	112	nd	nd	nd
SN-2C-SO-16	10/9/02	110	nd	nd	nd
SN-2D-SO-24	10/9/02	115	nd	nd	nd
SN-2E-SO-32	10/9/02	83	nd	nd	nd
SN-3A-SO-12	10/9/02	112	nd	nd	nd
SN-3B-SO-18	10/9/02	110	nd	nd	nd
SN-4A-SO-12	10/9/02	84	nd	nd	nd
SN-5A-SO-12	10/9/02	87	nd	nd	nd
SN-6A-SO-18	10/9/02	105	nd	nd	nd
SN-7A-SO-2	10/9/02	70	nd	1700	nd
Method Detection Limits			20	40	40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

SN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corp.
Client Project #E2JK-Sumner Nat'l Auto-1 Redo

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	10/15/02	111	nd	nd	nd
SN-3A-SO-12"	10/15/02	89	nd	nd	nd
Method Detection Limits			20	40	40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corp.
Client Project #E2JK-Sumner Nat'l Auto-1

Analyses of pH (EPA Method 9045C) in Soil

Sample Number	Date Analyzed	pH
Method Blank	10/15/02	6.46
SN-1A-SO-10"	10/15/02	7.36
SN-2C-SO-16"	10/15/02	6.80
SN-7A-SO-2"	10/15/02	7.25

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corporation
Client Project #E2JK-Sumner Nat'l Auto-1

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb) EPA 7420 (mg/kg)	Cadmium (Cd) EPA 7130 (mg/kg)	Chromium (Cr) EPA 7190 (mg/kg)	Arsenic (As) EPA 7061 (mg/kg)	Silver (Ag) EPA 7760 (mg/kg)	Barium (Ba) EPA 7080 (mg/kg)
Method Blank	10/8/02	nd	nd	nd	nd	nd	nd
SN-1A-SO-10"	10/8/02	nd	nd	nd	nd	nd	nd
SN-2C-50-16"	10/8/02	125	nd	nd	nd	nd	nd
Method Detection Limits		5	1	20	5	20	20

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corporation
Client Project #E2JK-Sumner Nat'l Auto-1

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Selenium (Se) EPA 7741 (mg/kg)	Mercury (Hg) EPA 7471 (mg/kg)	Nickel (Ni) EPA 7520 (mg/kg)	Zinc (Zn) EPA 7950 (mg/kg)	Copper (Cu) EPA 7210 (mg/kg)
Method Blank	10/8/02	nd	nd	nd	nd	nd
SN-1A-SO-10"	10/8/02	nd	nd	nd	59	nd
SN-2C-50-16"	10/8/02	nd	nd	nd	170	110
Method Detection Limits		50	0.5	20	20	20

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
ENCO Environmental Corporation
Client Project #E2JK-Sumner Nat'l Auto-1

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: 11403-SS1

	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	125	124	99	125	136	109	9.23
Cadmium	12.5	13.3	106	12.5	13.1	105	1.52
Chromium	125	123	98	125	127	102	3.20
Arsenic	125	107	86	125	107	86	0.00

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	125	125	100
Cadmium	12.5	13.4	107
Chromium	125	118	94
Arsenic	125	102	82

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Dean Phillips

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S21009-4
Client: ENCO ENVIRONMENTAL
Client Job Name: SUMNER NATIONAL AUTO PARTS
Client Job Number: E2JK-SUMNER

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-1A-50-10"	SN-2C-50-16"
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	10/09/02	10/09/02	10/09/02	10/09/02
Date analyzed	Limits	10/09/02	10/09/02	10/09/02	10/09/02
Dichlorodifluoromethane	50	nd		nd	nd
Chloromethane	50	nd		nd	nd
Vinyl chloride	50	nd		nd	nd
Bromomethane	50	nd		nd	nd
Chloroethane	50	nd		nd	nd
Trichlorofluoromethane	50	nd		nd	nd
1,1-Dichloroethene	50	nd		nd	nd
Methylene chloride	20	nd		nd	nd
trans-1,2-Dichloroethene	50	nd		nd	nd
1,1-Dichloroethane	50	nd		nd	nd
cis-1,2-Dichloroethene	50	nd		nd	nd
2,2-Dichloropropane	50	nd		nd	nd
Chloroform	50	nd		nd	nd
Bromochloromethane	50	nd		nd	nd
1,1,1-Trichloroethane	50	nd		nd	nd
1,2-Dichloroethane	50	nd		nd	nd
1,1-Dichloropropene	50	nd		nd	nd
Carbon tetrachloride	50	nd		nd	nd
Benzene	20	nd	105%	nd	nd
Trichloroethene	20	nd	106%	nd	nd
1,2-Dichloropropane	50	nd		nd	nd
Dibromomethane	50	nd		nd	nd
Bromodichloromethane	50	nd		nd	nd
cis-1,3-Dichloropropene	50	nd		nd	nd
Toluene	50	nd	83%	nd	nd
trans-1,3-Dichloropropene	50	nd		nd	nd
1,1,2-Trichloroethane	50	nd		nd	nd
1,3-Dichloropropane	50	nd		nd	nd
Dibromochloromethane	50	nd		nd	nd
Tetrachloroethene	20	nd		nd	nd
1,2-Dibromoethane (EDB)(*)	5	nd		nd	nd
Chlorobenzene	50	nd	84%	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd	nd
Ethylbenzene	50	nd		nd	nd
Xylenes	50	nd		nd	nd
Styrene	50	nd		nd	nd
Bromoform	50	nd		nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd	nd
Isopropylbenzene	50	nd		nd	nd
1,2,3-Trichloropropane	50	nd		nd	nd
Bromobenzene	50	nd		nd	nd
n-Propylbenzene	50	nd		nd	nd
2-Chlorotoluene	50	nd		nd	nd
4-Chlorotoluene	50	nd		nd	nd
1,3,5-Trimethylbenzene	50	nd		nd	nd
tert-Butylbenzene	50	nd		nd	nd
1,2,4-Trimethylbenzene	50	nd		nd	nd
sec-Butylbenzene	50	nd		nd	nd
1,3-Dichlorobenzene	50	nd		nd	nd
1,4-Dichlorobenzene	50	nd		nd	nd
Isopropyltoluene	50	nd		nd	nd
1,2-Dichlorobenzene	50	nd		nd	nd
n-Butylbenzene	50	nd		nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd	nd
1,2,4-Trichlorobenzene	50	nd		nd	nd
Naphthalene	50	nd		nd	nd
Hexachloro-1,3-butadiene	50	nd		nd	nd
1,2,3-Trichlorobenzene	50	nd		nd	nd

*-instrument detection limits

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21009-4
Client:	ENCO ENVIRONMENTAL
Client Job Name:	SUMNER NATIONAL AUTO PARTS
Client Job Number:	E2JK-SUMNER

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-1A-50-10"	SN-2C-50-16"
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	10/09/02	10/09/02	10/09/02	10/09/02
Date analyzed	Limits	10/09/02	10/09/02	10/09/02	10/09/02
Surrogate recoveries					
Dibromofluoromethane		122%	118%	102%	101%
Toluene-d8		84%	83%	100%	99%
4-Bromofluorobenzene		100%	100%	101%	100%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S21009-4
Client: ENCO ENVIRONMENTAL
Client Job Name: SUMNER NATIONAL AUTO PARTS
Client Job Number: E2JK-SUMNER

Analytical Results

8270, mg/kg		MTH BLK	LCS	SN-2C-50-16"
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	Soil	Soil	10/09/02
Date analyzed	Limits	10/09/02	10/09/02	10/09/02
Penatchloroethane	0.10	nd		nd
Phenol	0.10	nd		nd
2-Chlorophenol	0.10	nd		nd
Bis (2-chloroethyl) ether	0.10	nd		nd
1,3-Dichlorobenzene	0.10	nd		nd
1,4-Dichlorobenzene	0.10	nd	114%	nd
1,2-Dichlorobenzene	0.10	nd		nd
2-Methylphenol (o-cresol)	0.10	nd		nd
Bis (2-chloroisopropyl) ether	0.10	nd		nd
3,4-Methylphenol (m,p-cresol)	0.10	nd		nd
2-Nitrophenol	0.50	nd		nd
2,4-Dimethylphenol	0.50	nd		nd
Bis (2-chloroethoxy) methane	0.10	nd		nd
2,4-Dichlorophenol	0.50	nd		nd
1,2,4-Trichlorobenzene	0.10	nd	124%	nd
Naphthalene	0.10	nd		nd
2,6-Dichlorophenol	0.50	nd		nd
Hexachloropropylene	0.50	nd		nd
Hexachlorobutadiene	0.50	nd		nd
4-Chloro-3-methylphenol	0.50	nd		nd
1,2,4,5-Tetrachlorobenzene	0.10	nd		nd
Hexachlorocyclopentadiene	0.10	nd		nd
2,4,6-Trichlorophenol	0.50	nd		nd
2,4,5-Trichlorophenol	0.50	nd		nd
2-Chloronaphthalene	0.10	nd		nd
Dimethylphthalate	0.10	nd		nd
Acenaphthylene	0.10	nd		nd
Acenaphthene	0.10	nd	106%	nd
2,4-Dinitrophenol	0.50	nd		nd
4-Nitrophenol	0.50	nd		nd
Pentachlorobenzene	0.10	nd		nd
2,3,4,6-Tetrachlorophenol	0.10	nd		nd
Fluorene	0.10	nd		nd
Diethylphthalate	0.50	nd		nd
4-Chlorophenylphenylether	0.10	nd		nd
N-Nitrosodiphenylamine	0.10	nd		nd
4-Bromophenylphenylether	0.10	nd		nd
Hexachlorobenzene	0.10	nd		nd
Pentachlorophenol	0.50	nd		nd
Phenanthrene	0.10	nd		nd
Anthracene	0.10	nd		nd
2-sec-Butyl-4,6-dinitrophenol (Di	0.50	nd		nd
Di-n-butylphthalate	0.10	nd		nd
Fluoranthene	0.10	nd		nd
Pyrene	0.10	nd	108%	nd
Butylbenzylphthalate	0.50	nd		nd
Benzo(a)anthracene	0.10	nd		nd
Chrysene	0.10	nd		nd
Bis (2-ethylhexyl) ether	0.10	nd		nd
Di-n-octylphthalate	0.50	nd		nd
Benzo(b)fluoranthene	0.10	nd		nd
Benzo(k)fluoranthene	0.10	nd		nd
Benzo(a)pyrene	0.10	nd		nd
Dibenzo(a,h)anthracene	0.10	nd		nd
Benzo(ghi)perylene	0.10	nd		nd
Indeno(1,2,3-cd)pyrene	0.10	nd		nd

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21009-4
Client:	ENCO ENVIRONMENTAL
Client Job Name:	SUMNER NATIONAL AUTO PARTS
Client Job Number:	E2JK-SUMNER

Analytical Results

8270, mg/kg		MTH BLK	LCS	SN-2C-50-16"
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	Soil	Soil	10/09/02
Date analyzed	Limits	10/09/02	10/09/02	10/09/02
Surrogate recoveries				
Nitrobenzene-d5		104%	100%	92%
2-Fluorobiphenyl		107%	101%	91%
2,4,6-Tribromophenol		89%	65%	78%
4-Terphenyl-d14		104%	77%	87%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21009-4
Client:	ENCO ENVIRONMENTAL
Client Job Name:	SUMNER NATIONAL AUTO PARTS
Client Job Number:	E2JK-SUMNER

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	SN-2C-50-16"
Matrix	Soil	Soil	Soil
Date extracted	Reporting	10/15/02	10/15/02
Date analyzed	Limits	10/15/02	10/15/02
Kerosene/Jet fuel	20	nd	nd
Diesel/Fuel oil	20	nd	nd
Heavy oil	50	nd	nd
Surrogate recoveries:			
Fluorobiphenyl		101%	86%
o-Terphenyl		97%	84%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
na - not analyzed
C - coelution with sample peaks
M - matrix interference
J - estimated value
Results reported on dry-weight basis
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST
Environmental
Services Network

November 12, 2002

Jonathan Kemp
Enco Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373

Dear Mr. Kemp:

Please find enclosed the analytical data report for the Sumner National Auto Parts Project in Sumner, Washington. Soil samples were analyzed for Pb by Method 7420 and TCLP Ba by Method 1311 on November 6, 2002.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Enco Environmental Corporation for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

TCLP Metals in Soil by EPA-Method 1311

Sample Number	Date Analyzed	Barium (Ba) EPA 7080 (mg/l)
Method Blank	11/6/02	nd
SN-14A-SO-2"	11/6/02	nd
SN-14A-SO-2" dup.	11/6/02	nd
Method Detection Limits		0.80

ANALYSES PERFORMED BY: Tim McCall

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

QA/QC Data - TCLP EPA-Method 1311 Analyses

Sample Number	Date Analyzed	Barium (Ba) EPA 7080 (mg/l)
Matrix Spike Level		5.00
LCS	11/6/02	3.80
Percent Recovery (%)		76
Method Detection Limits		0.80

"nd" Indicates not detected at listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Tim McCall

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

Sample Preparation Information for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

Sample Number:	Blank
% Solids:	100
No. of Extractions:	1
Type of Extraction:	Rotary
Extraction Fluid:	#1
Date Extracted:	11/5/02

Sample Preparation Information for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

Sample Number:	SN-14A-SO-2"
% Solids:	100
No. of Extractions:	1
Type of Extraction:	Rotary
Extraction Fluid:	#1
Date Extracted:	11/5/02

Sample Preparation Information for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

Sample Number:	SN-14A-SO-2" dup.
% Solids:	100
No. of Extractions:	1
Type of Extraction:	Rotary
Extraction Fluid:	#1
Date Extracted:	11/5/02

Sample Preparation Information for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

Sample Number:	LCS
% Solids:	100
No. of Extractions:	1
Type of Extraction:	Rotary
Extraction Fluid:	#1
Date Extracted:	11/5/02

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb) EPA 7420 (mg/kg)
Method Blank	11/5/02	nd
SN-2A-SO-0.5'	11/5/02	120
SN-2B-SO-6" 10" 9k	11/5/02	10
SN-2B-SO-6" Dup 10"	11/5/02	12
Method Detection Limits		5

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

QA/QC Data - Total Metals EPA-7000 Series Analyses

	Sample Number: E1-S2						
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	125	159	127	125	136	109	15.59

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	125	146	117

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST
Environmental
Services Network

November 14, 2002

Jonathan Kemp
Enco Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373

Dear Mr. Kemp:

Please find enclosed the analytical data report for the Sumner National Auto Parts Project in Sumner, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, VOC's by Method 8260, and Pb, Cd, As, & Ba by Method 7000 series on October 18, 2002.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Enco Environmental Corporation for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-SumnerNatl-1

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	10/18/02	107	nd	nd	nd
SN-8A-SO-2"	10/18/02	103	nd	nd	nd
SN-9A-SO-2"	10/18/02	94	nd	nd	nd
SN-10A-SO-2"	10/18/02	98	nd	nd	nd
SN-11A-SO-2"	10/18/02	95	nd	nd	nd
SN-12A-SO-2"	10/18/02	87	nd	nd	nd
SN-12B-SO-18"	10/18/02	90	nd	nd	nd
SN-13A-SO-2"	10/18/02	113	nd	nd	nd
SN-13A-SO-2" Dup.	10/18/02	67	nd	nd	nd
SN-14A-SO-2"	10/18/02	92	nd	nd	nd
Method Detection Limits			20	40	40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer & Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-SumnerNatl-1

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb) EPA 7420 (mg/kg)	Cadmium (Cd) EPA 7130 (mg/kg)	Barium(Ba) EPA 7080 (mg/kg)	Arsenic (As) EPA 7061 (mg/kg)
Method Blank	10/18/02	nd	nd	nd	nd
SN-10A-SO-2"	10/18/02	540	1.3	nd	nd
SN-11A-SO-2"	10/18/02	220	nd	nd	nd
SN-13A-SO-2"	10/18/02	700	1.9	nd	nd
SN-14A-SO-2"	10/18/02	320	1.2	230	nd
SN-14A-SO-2" Dup	10/18/02	310	1.5	230	nd
Method Detection Limits		5	1	20	20

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-SumnerNatl-1

QA/QC Data - Total Metals EPA-7000 Series Analyses

	Sample Number: SN-14A-SO-2"						
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	125	120	96	125	109	87	9.61
Cadmium	12.5	12.6	101	12.5	12.5	100	0.80

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	125	133	106
Cadmium	12.5	13.4	107

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Dean Phillips

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S21018-1
Client: ENCO
Client Job Name: SUMNER NATIONAL AUTO PARTS
Client Job Number: E2JK-SUMNER

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-11A-SO-2"	SN-13A-SO-2"
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	10/18/02	10/18/02	10/18/02	10/18/02
Date analyzed	Limits	10/18/02	10/18/02	10/18/02	10/18/02
Dichlorodifluoromethane	50	nd		nd	nd
Chloromethane	50	nd		nd	nd
Vinyl chloride	50	nd		nd	nd
Bromomethane	50	nd		nd	nd
Chloroethane	50	nd		nd	nd
Trichlorofluoromethane	50	nd		nd	nd
1,1-Dichloroethene	50	nd		nd	nd
Methylene chloride	20	nd		nd	nd
trans-1,2-Dichloroethene	50	nd		nd	nd
1,1-Dichloroethane	50	nd		nd	nd
cis-1,2-Dichloroethene	50	nd		nd	nd
2,2-Dichloropropane	50	nd		nd	nd
Chloroform	50	nd		nd	nd
Bromochloromethane	50	nd		nd	nd
1,1,1-Trichloroethane	50	nd		nd	nd
1,2-Dichloroethane	50	nd		nd	nd
1,1-Dichloropropene	50	nd		nd	nd
Carbon tetrachloride	50	nd		nd	nd
Benzene	20	nd	80%	nd	nd
Trichloroethene	20	nd	79%	nd	nd
1,2-Dichloropropane	50	nd		nd	nd
Dibromomethane	50	nd		nd	nd
Bromodichloromethane	50	nd		nd	nd
cis-1,3-Dichloropropene	50	nd		nd	nd
Toluene	50	nd	79%	nd	nd
trans-1,3-Dichloropropene	50	nd		nd	nd
1,1,2-Trichloroethane	50	nd		nd	nd
1,3-Dichloropropane	50	nd		nd	nd
Dibromochloromethane	50	nd		nd	nd
Tetrachloroethene	20	nd		nd	nd
1,2-Dibromoethane (EDB)(*)	5	nd		nd	nd
Chlorobenzene	50	nd	78%	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd	nd
Ethylbenzene	50	nd		nd	nd
Xylenes	50	nd		nd	nd
Styrene	50	nd		nd	nd
Bromoform	50	nd		nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd	nd
Isopropylbenzene	50	nd		nd	nd
1,2,3-Trichloropropane	50	nd		nd	nd
Bromobenzene	50	nd		nd	nd
n-Propylbenzene	50	nd		nd	nd
2-Chlorotoluene	50	nd		nd	nd
4-Chlorotoluene	50	nd		nd	nd
1,3,5-Trimethylbenzene	50	nd		nd	nd
tert-Butylbenzene	50	nd		nd	nd
1,2,4-Trimethylbenzene	50	nd		nd	nd
sec-Butylbenzene	50	nd		nd	nd
1,3-Dichlorobenzene	50	nd		nd	nd
1,4-Dichlorobenzene	50	nd		nd	nd
Isopropyltoluene	50	nd		nd	nd
1,2-Dichlorobenzene	50	nd		nd	nd
n-Butylbenzene	50	nd		nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd	nd
1,2,4-Trichlorobenzene	50	nd		nd	nd
Naphthalene	50	nd		nd	nd
Hexachloro-1,3-butadiene	50	nd		nd	nd
1,2,3-Trichlorobenzene	50	nd		nd	nd

*-Instrument detection limits

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S21018-1
Client: ENCO
Client Job Name: SUMNER NATIONAL AUTO PARTS
Client Job Number: E2JK-SUMNER

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-11A-SO-2"	SN-13A-SO-2"
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	10/18/02	10/18/02	10/18/02	10/18/02
Date analyzed	Limits	10/18/02	10/18/02	10/18/02	10/18/02
Surrogate recoveries					
Dibromofluoromethane		106%	105%	103%	104%
Toluene-d8		96%	98%	96%	96%
4-Bromofluorobenzene		100%	101%	100%	99%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST
Environmental
Services Network

December 5, 2002

Jonathan Kemp
Enco Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373

Dear Mr. Kemp:

Please find enclosed the analytical data report for the Sumner National Auto Project in Sumner, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, VOC's by Method 8260, and Pb, Cd, As, & Ba by Method 7000 series on November 19, 2002.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Enco Environmental Corporation for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	11/19/02	105	nd	nd	nd
SN-15A-SO-0.25'	11/19/02	106	nd	nd	nd
SN-15B-SO-0.75'	11/19/02	104	nd	nd	nd
SN-16A-SO-0.25'	11/19/02	113	nd	290	nd
SN-16B-SO-0.75'	11/19/02	100	nd	nd	nd
SN-17A-SO-0.25'	11/19/02	106	nd	nd	nd
SN-17B-SO-0.75'	11/19/02	94	nd	nd	nd
SN-18A-SO-0.25'	11/19/02	101	nd	nd	nd
SN-18B-SO-1'	11/19/02	91	nd	nd	nd
SN-19A-SO-0.33'	11/19/02	92	nd	nd	nd
SN-19B-SO-1.0'	11/19/02	90	nd	160	nd
SN-19B-SO-1.0' Dup	11/19/02	97	nd	180	nd
Method Detection Limits			20	40	40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Dean Phillips

ENVIRONMENTAL SERVICES NETWORK NORTHWEST, INC.

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb) EPA 7420 (mg/kg)	Cadmium (Cd) EPA 7130 (mg/kg)	Arsenic (As) EPA 7061 (mg/kg)	Barium (Ba) EPA 7080 (mg/kg)
Method Blank	11/19/02	nd	nd	nd	nd
SN-15A-SO-0.25'	11/19/02	110	nd	nd	nd
SN-15B-SO-0.75'	11/19/02	160	nd	nd	nd
SN-16A-SO-0.25'	11/19/02	130	nd	nd	nd
SN-16B-SO-0.75'	11/19/02	330	nd	nd	nd
SN-17A-SO-0.25'	11/19/02	220	nd	nd	nd
SN-17B-SO-0.75'	11/19/02	8	nd	nd	nd
SN-18A-SO-0.25'	11/19/02	45	nd	nd	nd
SN-18B-SO-1'	11/19/02	47	nd	nd	nd
SN-19A-SO-0.33'	11/19/02	370	nd	nd	nd
SN-19B-SO-1.0'	11/19/02	760	nd	nd	nd
SN-19B-SO-1.0' Dup	11/19/02	740	nd	nd	nd
Method Detection Limits		5	1	5	20

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ENVIRONMENTAL SERVICES NETWORK NORTHWEST, INC.

SUMNER NATIONAL AUTO PARTS PROJECT
Sumner, Washington
Enco Environmental Corporation
Client Project #E2JK-Sumner Natl-1

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: B-3 S-1

	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	125	128	102	125	130	104	1.55
Cadmium	12.5	12.2	98	12.5	12.0	96	1.65
Arsenic	125	98	78	125	98	78	0.00

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	125	130	104
Cadmium	12.5	13.0	104
Arsenic	125	108	86

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Dean Phillips

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S21119-3
Client: ENCO
Client Job Name: SUMNER
Client Job Number: E2JK

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-15A-50-0.25	SN-15B-50-0.75	SN-16A-50-0.25	SN-16B-50-0.75
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02
Date analyzed	Limits	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02
Dichlorodifluoromethane	50	nd		nd	nd	nd	nd
Chloromethane	50	nd		nd	nd	nd	nd
Vinyl chloride	50	nd		nd	nd	nd	nd
Bromomethane	50	nd		nd	nd	nd	nd
Chloroethane	50	nd		nd	nd	nd	nd
Trichlorofluoromethane	50	nd		nd	nd	nd	nd
1,1-Dichloroethene	50	nd		nd	nd	nd	nd
Methylene chloride	20	nd		nd	nd	nd	nd
trans-1,2-Dichloroethene	50	nd		nd	nd	nd	nd
1,1-Dichloroethane	50	nd		nd	nd	nd	nd
cis-1,2-Dichloroethene	50	nd		nd	nd	nd	nd
2,2-Dichloropropane	50	nd		nd	nd	nd	nd
Chloroform	50	nd		nd	nd	nd	nd
Bromochloromethane	50	nd		nd	nd	nd	nd
1,1,1-Trichloroethane	50	nd		nd	nd	nd	nd
1,2-Dichloroethane	50	nd		nd	nd	nd	nd
1,1-Dichloropropene	50	nd		nd	nd	nd	nd
Carbon tetrachloride	50	nd		nd	nd	nd	nd
Benzene	20	nd	89%	nd	nd	nd	nd
Trichloroethene	20	nd	88%	nd	nd	nd	nd
1,2-Dichloropropane	50	nd		nd	nd	nd	nd
Dibromomethane	50	nd		nd	nd	nd	nd
Bromodichloromethane	50	nd		nd	nd	nd	nd
cis-1,3-Dichloropropene	50	nd		nd	nd	nd	nd
Toluene	50	nd	86%	nd	nd	nd	nd
trans-1,3-Dichloropropene	50	nd		nd	nd	nd	nd
1,1,2-Trichloroethane	50	nd		nd	nd	nd	nd
1,3-Dichloropropane	50	nd		nd	nd	nd	nd
Dibromochloromethane	50	nd		nd	nd	nd	nd
Tetrachloroethene	20	nd		nd	nd	nd	nd
1,2-Dibromoethane (EDB)(*)	5	nd		nd	nd	nd	nd
Chlorobenzene	50	nd	85%	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd	nd
Xylenes	50	nd		nd	nd	nd	nd
Styrene	50	nd		nd	nd	nd	nd
Bromoform	50	nd		nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd	nd	nd	nd
Isopropylbenzene	50	nd		nd	nd	nd	nd
1,2,3-Trichloropropane	50	nd		nd	nd	nd	nd
Bromobenzene	50	nd		nd	nd	nd	nd
n-Propylbenzene	50	nd		nd	nd	nd	nd
2-Chlorotoluene	50	nd		nd	nd	nd	nd
4-Chlorotoluene	50	nd		nd	nd	nd	nd
1,3,5-Trimethylbenzene	50	nd		nd	nd	nd	nd
tert-Butylbenzene	50	nd		nd	nd	nd	nd
1,2,4-Trimethylbenzene	50	nd		nd	nd	nd	nd
sec-Butylbenzene	50	nd		nd	nd	nd	nd
1,3-Dichlorobenzene	50	nd		nd	nd	nd	nd
1,4-Dichlorobenzene	50	nd		nd	nd	nd	nd
Isopropyltoluene	50	nd		nd	nd	nd	nd
1,2-Dichlorobenzene	50	nd		nd	nd	nd	nd
n-Butylbenzene	50	nd		nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd	nd	nd	nd
1,2,4-Trichlorobenzene	50	nd		nd	nd	nd	nd
Naphthalene	50	nd		nd	nd	nd	nd
Hexachloro-1,3-butadiene	50	nd		nd	nd	nd	nd
1,2,3-Trichlorobenzene	50	nd		nd	nd	nd	nd

*-instrument detection limits

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21119-3
Client:	ENCO
Client Job Name:	SUMNER
Client Job Number:	E2JK

Analytical Results

8260, µg/kg		MTH BLK	LCS	SN-15A-50-0.25	SN-15B-50-0.75	SN-16A-50-0.25	SN-16B-50-0.75
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02
Date analyzed	Limits	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02	11/19/02
Surrogate recoveries							
Dibromofluoromethane		108%	103%	107%	101%	103%	105%
Toluene-d8		96%	96%	94%	95%	95%	95%
4-Bromofluorobenzene		98%	97%	99%	98%	99%	104%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST
Environmental
Services Network

November 26, 2002

Jonathan Kemp
Enco Environmental Corporation
P.O. Box 731747
Puyallup, WA 98373

Dear Mr. Kemp:

Please find enclosed the analytical data report for the Sumner National Auto Project in Sumner, Washington. Soil samples were analyzed for Pb & Cd by Method 7000 series on November 22, 2002.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Enco Environmental Corporation for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Vice President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com* E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PROJECT
Sumner, Washington
Enco Environmental Corporation

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb) EPA 7420 (mg/kg)	Cadmium (Cd) EPA 7130 (mg/kg)
Method Blank	11/22/02	nd	nd
SN-2A-SO-6"	11/22/02	---	nd
SN-2B-SO-10"	11/22/02	---	nd
SN-7A-SO-2"	11/22/02	910	1.9
SN-8A-SO-0-2"	11/22/02	520	1.2
SN-9A-SO-0-2"	11/22/02	220	nd
SN-9A-SO-0-2" Dup	11/22/02	210	nd
SN-12A-SO-0-2"	11/22/02	460	nd
Method Detection Limits		5	1

"---" Indicates not tested for component.
"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

SUMNER NATIONAL AUTO PROJECT
Sumner, Washington
Enco Environmental Corporation

QA/QC Data - Total Metals EPA-7000 Series Analyses

	Sample Number: SN-9A-SO-0-2"						
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	125	123	98	125	136	109	10.04
Cadmium	12.5	12.7	102	12.5	12.5	100	1.59

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	125	125	100
Cadmium	12.5	12.4	99

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Dean Phillips

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: EnCo Environmental Corp.
ADDRESS: PO Box 731747
PHONE: 253-841-9710 FAX: 253-841-0264
CLIENT PROJECT #: E2SK-Sumner Natl Auto-1 PROJECT MANAGER: JMK

DATE: 10-3-02 PAGE 1 OF 1
PROJECT NAME: Sumner National Auto Parts
LOCATION: Sumner, WA
COLLECTOR: J Kemp DATE OF COLLECTION 10-3-02

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD, Cd, Cr	pH	RCRA 8 + Zn, Ni, Cu	NOTES	Total Number of Containers	Laboratory Note Number
1. SN-1A-SO-10"	10"	12:50	Grab	Glass 4oz			✓			✓						X	✓	✓		1	
2. SN-1B-SO-15"	15"	1:55	Grab							✓						✓				1	
3. SN-2A-SO-6"	6"	1:[illegible]	Grab							✓									2C	1	
4. SN-2B-SO-10"	10"	1:35	Grab							✓										1	
5. SN-2C-SO-16"	16"	1:40	Grab			✓	✓			✓	✓					✓	✓	✓	Solvent Oily ODOR	1	
6. SN-2D-SO-24"	24"	1:45	Grab							✓										1	
7. SN-2E-SO-32"	32"	4:15	Grab							✓										1	
8. SN-3A-SO-12"	12"	2:05	Grab							✓										1	
9. SN-3B-SO-18"	18"	2:15	Grab							✓										1	
10. SN-4A-SO-12"	12"	2:35	Grab							✓										1	
11. SN-5A-SO-12"	12"	2:25	Grab							✓										1	
12. SN-6A-SO-18"	18"	2:30	Grab							✓										1	
13. SN-7A-SO-2"	2"	4:30	Grab							✓							✓			1	
14.																					
15.																					
16.																					
17.																					
18.																					

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
J Kemp	10-4-02	[signature]	10/4/02
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	13
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:
10% Discount Applied
Charges as per J Kemp
10-8-02

Turn Around Time: (5 Day)

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: EnCo Env. Corp

ADDRESS: PO Box 731747 Puyallup Wa 98373

PHONE: 253-841-9710 FAX: 253 841 -0264

CLIENT PROJECT #: E23K-Sumner Mill-1 PROJECT MANAGER: Jon Kemp

DATE: 10-16-02 PAGE 1 OF 1

PROJECT NAME: Sumner National Ave Parks

LOCATION: Sumner WA

COLLECTOR: Jon Kemp DATE OF COLLECTION 10-16-02

Sample Number	Depth	Time	Soils Sample Type	Container Type	ANALYSES: VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD, AS Ba	pH	NOTES	Total Number of Containers	Laboratory Note Number
1. SN-6A-SO-2"	2"	11:15	Grab	4oz Glass						X									1	
2. SN-9A-SO-2"	2"	11:30	Grab	"						X									1	
3. SN-10A-SO-2"	2"	11:40	"	"						X					X				1	
4. SN-11A-SO-2"	2"	11:45	"	"		X				X					X				1	
5. SN-12A-SO-2"	2"	11:50	"	"						X									1	
6. SN-12B-SO-18"	18"	11:55	"	"						X									1	
7. SN-13A-SO-2"	2"	12:15	"	"		X				X					X				1	
8. SN-14A-SO-2"	2"	12:30	"	"						X					X				1	
9.																				
10.																				
11.																				
12.																				
13.																				
14.				"			2													
15.																				
16.																				
17.																				
18.																				

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Jon Kemp	10-17 02		10-17-02
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	8
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

ICP/ Digest Analyze

Turn Around Time: 5 Day - Normal

ESN NORTHWEST | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: EnG Environmental Corporation

ADDRESS: PO Box 731747 Puyallup WA 98373

PHONE: 253-841-9710 FAX: 253-841-0264

CLIENT PROJECT #: E2SK-SumnerNat-1 PROJECT MANAGER: Jon Kemp

DATE: 11-15-02 PAGE 1 OF 1

PROJECT NAME: Sumner National Auto Parts

LOCATION: Sumner WA

COLLECTOR: Jon Kemp DATE OF COLLECTION: 11-15-02

Sample Number	Depth	Time	Sample Type (All Soils)	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb, As, Ba, Cd (total)	Hex Chrome				NOTES	Total Number of Containers	Laboratory Note Number
1. SN-15A-S0-0.25	.25'	1:50	Grab	4 oz glass			✓					✓								✓						1	
2. SN-15B-S0-0.75'	.75'	1:55	↓	↓			✓					✓								✓						1	
3. SN-16A-S0-0.25'	.25'	2:05	↓	↓			✓					✓								✓						1	
4. SN-16B-S0-0.75'	.75'	2:15	↓	↓			✓					✓								✓						1	
5. SN-17A-S0-0.25'	.25'	2:30	↓	↓								✓								✓						1	
6. SN-17B-S0-0.75	.75'	2:40	↓	↓								✓								✓						1	
7. SN-18A-S0-0.25'	.25'	2:50	↓	↓								✓								✓						1	
8. SN-18B-S0-1'	1.0'	3:00	↓	↓								✓								✓						1	
9. SN-19A-S0-0.33'	0.33'	3:10	↓	↓								✓								✓						1	
10. SN-19B-S0-1.0'	1.0'	3:30	↓	↓								✓								✓						1	
11.																											
12.																											
13.																											
14.																											
15.																											
16.																											
17.																											
18.																											

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	11-18-02 9:00 A.M.	[signature]	11-18-02
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	10
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES: 10% Discount Applies

Turn Around Time: 5 Day

Assessor-Treasurer electronic Property Information Profile

Parcel Map for 0520198006

12/16/2015 08:49 AM

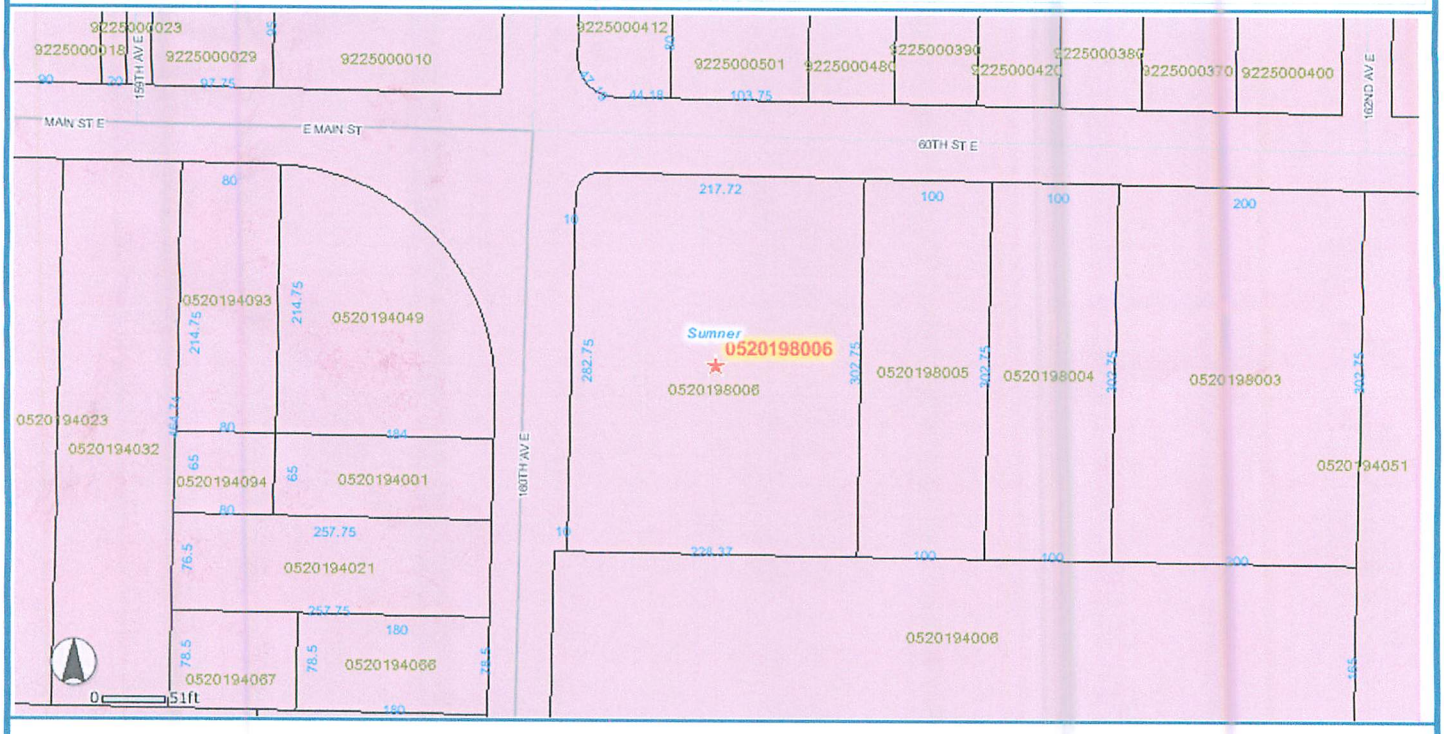
Have a question?

Property Details

Parcel Number:	0520198006
Site Address:	16008 60TH ST E
Account Type:	Real Property
Category:	Land and Improvements
Use Code:	6410-AUTO REPAIR SERVICES

Taxpayer Details

Taxpayer Name:	SUSS ROBERT A & GRACE M
Mailing Address:	16008 60TH ST E SUMNER WA 98390-3055



For additional mapping options, visit Public GIS

RTSQ Maps: Normal (200 Scale) | Detailed (100 Scale)

Pierce County Assessor-Treasurer
Mike Lonergan
2401 South 35th St Room 142
Tacoma, Washington 98409
(253)798-6111 or Fax (253)798-3142
www.piercecountywa.org/atr

WEBSITE INFORMATION

Privacy Policy
Copyright Notices

Assessor-Treasurer electronic Property Information Profile

Parcel Summary for 0520198006

12/16/2015 08:49 AM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	0520198006	**Taxpayer Name:**	SUSS ROBERT A & GRACE M
Site Address:	16008 60TH ST E	**Mailing Address:**	16008 60TH ST E SUMNER WA 98390-3055
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6410-AUTO REPAIR SERVICES		

Appraisal Details		Assessment Details	
Value Area:	PI5	**2015 Values for 2016 Tax**	
Appr Acct Type:	Commercial	**Taxable Value:**	891,700
Business Name:	NATIONAL AUTO AND SHOP	**Assessed Value:**	891,700
Last Inspection:	04/02/2008 - Physical Inspection		

Related Parcels

Group Account Number: n/a

Mobile/MFG Home and Personal Property parcel(s) located on this parcel: 2006198700 2620030815

Real parcel on which this parcel is located: n/a

Tax Description

Section 19 Township 20 Range 05 Quarter 43 : LOT 4 OF SH PLAT 79-121 FORMERLY AKA SH PLAT 79-75 EXC POR DEEDED TO P CO ETN 569258 EASE OF RECORD PER ETN 701497 OUT OF 4-026 SEG M-0139 SP EMS (DCWJES11-5-82) (DC0775RJ8-26-88)

Pierce County Assessor-Treasurer
Mike Lonergan
2401 South 35th St Room 142
Tacoma, Washington 98409
(253)798-6111 or Fax (253)798-3142
www.piercecountywa.org/atr

Assessor-Treasurer electronic Property Information Profile

Building Characteristics for 0520198006

12/16/2015 08:49 AM

Property Details

Parcel Number:	0520198006
Site Address:	16008 60TH ST E
Account Type:	Real Property
Category:	Land and Improvements
Use Code:	6410-AUTO REPAIR SERVICES

Taxpayer Details

Taxpayer Name:	SUSS ROBERT A & GRACE M
Mailing Address:	16008 60TH ST E SUMNER WA 98390-3055

Building ID: 1 2

2 building(s) on this parcel

General Characteristics

Property Type:	Commercial	**SF:**	9,300	**Fin. Attic SF:**	0
Condition:	Fair	**Net SF:**	9,300	**Total Bsmnt. SF:**	0
Quality:	Low	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	505 / 770	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Retail Stand Alone	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Storage Warehouse	1980	1980	9,300	1	n/a	n/a	n/a	Wood Frame	n/a	Space Heater	0	0

Improvement Details

Detail Type	Detail Description	Units
Add On	Asphalt (AV)	19,000
Add On	Chain Link 6 ft with top rail	320
Add On	Concrete	300
Mezzanine	Unfinished	1,575

Warning: Appraisal data provided is for informational purposes only and is incomplete for determination of value.

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Assessor-Treasurer electronic Property Information Profile

Land Characteristics for 0520198006

12/16/2015 08:49 AM

Property Details		Taxpayer Details	
Parcel Number:	0520198006	**Taxpayer Name:**	SUSS ROBERT A & GRACE M
Site Address:	16008 60TH ST E	**Mailing Address:**	16008 60TH ST E SUMNER WA 98390-3055
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6410-AUTO REPAIR SERVICES		
Location:		**Size**	
LEA:	2055	**SF:**	69,041
RTSQQ:	05-20-19-43	**Acres:**	1.58
		Front Ft:	238
Amenities		**Utilities**	
WF Type:	n/a	**Electric:**	Power Installed
View Quality:	n/a	**Sewer:**	Sewer/Septic Installed
Street Type:	Paved	**Water:**	Water Installed

Warning: Appraisal data provided is for informational purposes only and is incomplete for determination of value.

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Tacoma, Washington 98409
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www.piercecountywa.org/atr

Pierce County Planning And Land Services

About My Property

Parcel Information - 0520198006 - 16008 60TH ST E

Print Search

Very Important Notes

This information combines several sources of information and should not be used for land development decisions without first consulting with your professional design team and/or the Planning and Land Services Development Center.

For Interactive mapping, please visit Public GIS

DISCLAIMER

All map features are approximate, this is not a survey. All data is expressly provided 'AS IS' and 'WITH ALL FAULTS', the County makes no warranty of fitness for a particular purpose.

About the Property

Assessor's Data	Pierce County	Tell Me More
Community Plan Area	City of Sumner	Tell Me More
Current Zoning	City of Sumner	Tell Me More
Development Moratorium	City of Sumner	Tell Me More
Documents	City of Sumner	Tell Me

Documents, Applications/Permits	City of Sumner	Tell Me More
Documents, Other	City of Sumner	Tell Me More
Documents, Recorded	Pierce County	Tell Me More
Fire District	City of Sumner	Tell Me More
Jurisdiction	City of Sumner	Tell Me More
Lot Size in Acres	City of Sumner	Tell Me More
Parcel Alerts	City of Sumner	Tell Me More
Parcel Compliance Inquiries	City of Sumner	Tell Me More
Range, Township, Section	City of Sumner	Tell Me More
School District	City of Sumner	Tell Me More
Sewer Service Area	City of Sumner	Tell Me More
Site Address	16008 60TH ST E	Tell Me More
Traffic Impact Areas	City of Sumner	Tell Me More
Transfer Development Rights	City of Sumner	Tell Me More
Urban Growth Area	City of Sumner	Tell Me More

About the Property's Natural Environment

Frost Depth	City of Sumner	Tell Me More
Open Space Corridors	City of Sumner	Tell Me More
Shoreline Environment	City of Sumner	Tell Me

		More
Shoreline Marine Habitat	City of Sumner	Tell Me More
Snow Load	City of Sumner	Tell Me More

Possible Site Constraints

Aquifer Recharge Area	City of Sumner	Tell Me More
Erosion Hazard	City of Sumner	Tell Me More
Fish and Wildlife Habitat	City of Sumner	Tell Me More
Flood	City of Sumner	Tell Me More
Floodway, Possible	City of Sumner	Tell Me More
Landslide	City of Sumner	Tell Me More
Mine Hazard	City of Sumner	Tell Me More
Resource Land	City of Sumner	Tell Me More
Right-Of-Way Needs Area	City of Sumner	Tell Me More
Volcanic Hazard	City of Sumner	Tell Me More
Wetlands	City of Sumner	Tell Me More

If you have questions about this information, please contact:

Pierce County Planning & Land Services Department
Email: Ask the Development Center
Phone: (253) 798-3739
Development Center Hours: Monday - Friday 9 a.m. to 2 p.m. (Excluding Holidays)

Upcoming PALS Workshops

The Development Center periodically hosts workshops to help permit applicants learn more about the land development process. For more information, please see the current workshop agenda.

Helpful Links

View the Online Permit Information website for permit & application history, reported violations, and inspection requests.

View the Planning and Land Services website for zoning and land use regulations and development standards.

View the Auditor Document Search site to access official public records or land records.

Visit the Pierce County Public GIS website to create a customized map of Pierce County. Users can also turn on data layers and query the map for detailed information.

View the Sheriff's Neighborhood Crime website for crime data around the property.

View all the County's Interactive Services for online access to the County's information systems.

0520198006

Pierce County
WASHINGTON

0520198006

Pierce County

Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. **ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'**. The County makes no warranty of fitness for a particular purpose. 2015/12/16

0520198006

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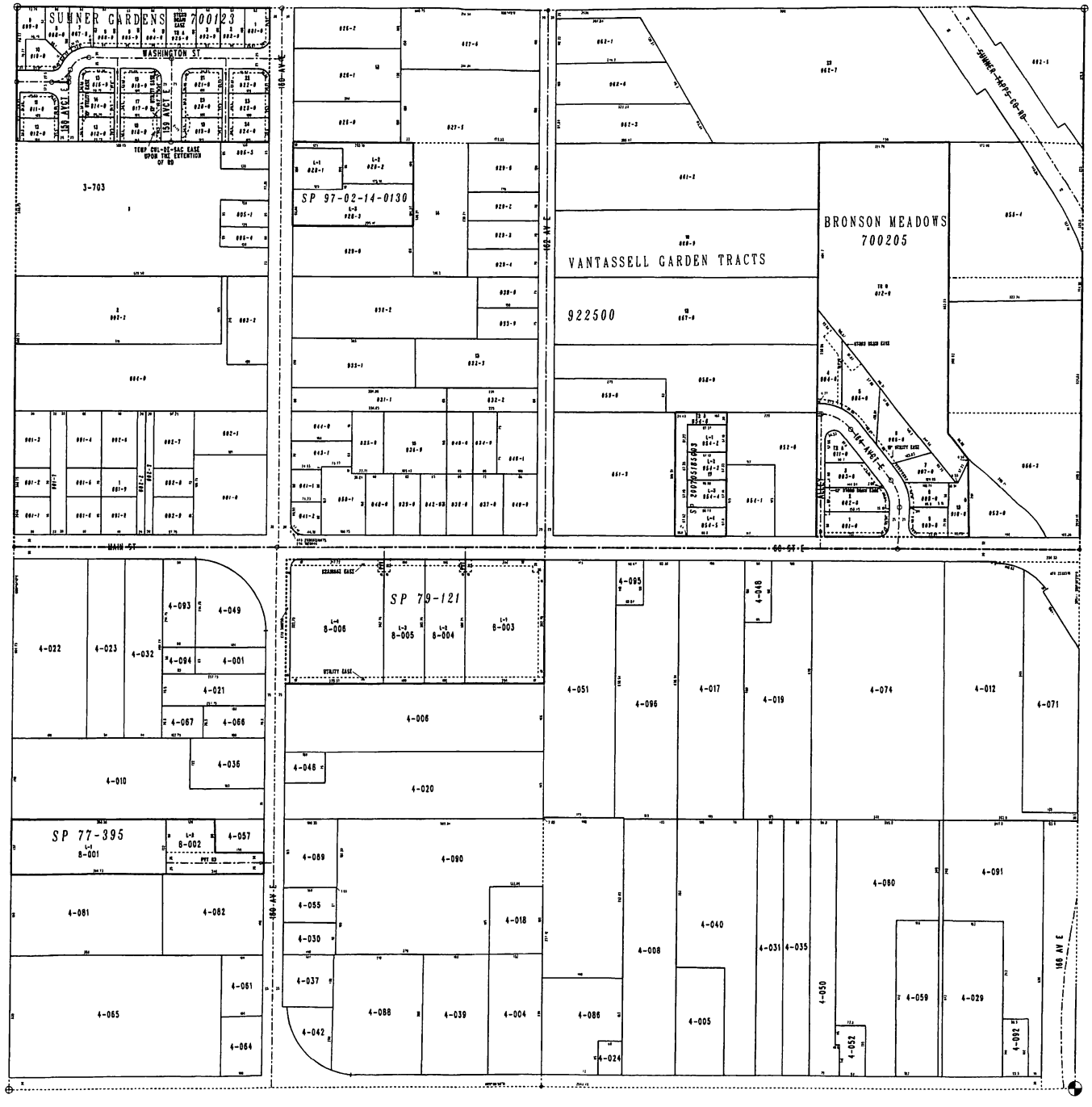
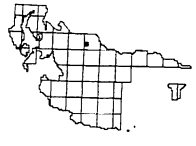


SE19-T20N-R05E

Scale 1" = 100'

NORTH



DATE OF MAP PRODUCTION: 09/10/10

05-20-19-4

Public Services Building
2401 S. 35th Street, Room 142
Tacoma, Washington 98409

Washington State Plane Feet, South Zone, Datum: NAD83-91

Pierce County
Assessor-Treasurer

THIS IS NOT A SURVEY

DO NOT USE DATA FOUND ON THIS MAP
WE ASSUME NO LIABILITY FOR VARIATIONS
ASCERTAINED BY ACTUAL SURVEY
FOR ASSESSOR'S USE ONLY

RESUME

Jonathan M. Kemp
Principal & Professional Wetland Scientist

WORK EXPERIENCE

EnCo, Puyallup WA, Wildlife & Fisheries Biologist **February 1996 to Present**

- Performed over 200 Environmental Site Assessments (ESA), many at large industrial sites according to ASTM standards. Remediated 12 contaminated sites to a No Further Action status. Interpreted laboratory test results, validated data, and coordinated disposal of contaminated materials with certified contractors.

- Performed over 30 Underground Storage Tank (UST) site assessments and collected soil, sediment, residue, and water samples on over 25 sites in Washington. Obtained diverse environmental and SEPA permits for public and private clients.

- Delineated, characterized, mitigated, and restored over 150 wetland sites. Designed and constructed wetlands that have met or exceeded agency performance standards. Prepared several SEPA, EIS, and Biological Assessments for property linked to shorelines, streams, wetlands, and priority habitat.

Timson & Peters, Farmingdale ME, Associate **September 1992 to October 1995**

- Completed 6 property cleanups, 75 Phase I ESAs, & 25 Phase IIs at heavy industrial sites including shoe and plastics factories.

- Performed 15 underground storage tank closures at service stations and heavy industrial sites.

- Obtained stormwater permits, recommended best management practices, prepared stormwater pollution prevention plans, collected stormwater samples, and completed discharge monitoring reports at industrial facilities.

Terracon Environmental, Omaha NE, Project Manager **December 1988 to July 1992**

- Performed over 50 hydrogeological studies and remediation services to UST owners, utility companies, manufacturers, governmental agencies, transportation firms, and other business entities. Experienced with Geo-Probe field investigation techniques.

- Performed stormwater permit related activities at several heavy industrial plants in the Midwest.

EDUCATION

South Dakota State University, Bachelor of Science Degree – Three Majors: Wildlife/Fisheries Science, Biology, and Environmental Management, December 1976

CONTINUING EDUCATION, TRAINING, LICENSES, & AFFILIATIONS

- Professional Wetland Scientist, Society of Wetland Scientists, Certification #2110, Expires 2016
- The Wildlife Society, Board Member #1 – 2011 – 2013
- Amphibian Identification & Design Workshops (WDFW) – February 2008 & April 2009
- Wetland Delineation and Practicum – 48 hours of training in Washington
- Wetland Specialist for King, Pierce, Thurston, Lewis, Mason, Snohomish, and Kitsap Counties
- Society of Wetland Scientists, Hydric Soil Indicators – 2009
- Certified pocket gopher surveyor (WDFW) – 2010
- Washington Wetland Rating System Training, Coastal Training Program – 2005 & 2008 & 2014
- Certified Washington UST Site Assessor #32-US-32004237
- Personal Protection and Safety for Hazardous Waste Sites Course - OSHA 29 CFR Part 1910.10
- 40 hours plus annual 8-hour refresher courses
- Lead Awareness and Drug Lab Supervisor and Decontamination Worker

APPENDIX D

LABORATORY REPORTS
EnCo 2015 Assessment

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

November 6, 2015

Jon Kemp, Project Manager
Enco Environmental Corporation
PO Box 1212
Puyallup, WA 98371

Dear Mr. Kemp:

Included are the results from the testing of material submitted on October 30, 2015 from the E2JK-Summner Auto Parts, F&BI 510475 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ENC1106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 30, 2015 by Friedman & Bruya, Inc. from the Enco Environmental Corporation E2JK-Summner Auto Parts, F&BI 510475 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Enco Environmental Corporation
510475 -01	SNA-1A-SO-0.75'
510475 -02	SNA-1B-SO-2'
510475 -03	SNA-1C-SO-4'-5'
510475 -04	SNA-1D-SO-9'-10'
510475 -05	SNA-2A-SO-.50'-.75'
510475 -06	SNA-3A-SO-.50'-.75'
510475 -07	SNA-4A-SO-.50'-.75'

All quality control requirements were acceptable.

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475
Date Extracted: 11/02/15
Date Analyzed: 11/02/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR pH USING EPA METHOD 9045D

Sample ID Laboratory ID	pH
SNA-1A-SO-0.75' 510475-01	5.7
SNA-1B-SO-2' 510475-02	5.8
SNA-1C-SO-4'-5' 510475-03	6.2
SNA-1D-SO-9'-10' 510475-04	6.6

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475
Date Extracted: NA
Date Analyzed: 11/03/15

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR PERCENT MOISTURE USING ASTM D2216-98

Sample ID Laboratory ID	% Moisture
SNA-1A-SO-0.75' 510475-01	11
SNA-1B-SO-2' 510475-02	17
SNA-1C-SO-4'-5' 510475-03	14
SNA-1D-SO-9'-10' 510475-04	19
SNA-2A-SO-.50'-.75' 510475-05	19
SNA-3A-SO-.50'-.75' 510475-06	15
SNA-4A-SO-.50'-.75' 510475-07	19

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475
Date Extracted: 11/02/15
Date Analyzed: 11/02/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
SNA-1A-SO-0.75' 510475-01	<2	91
SNA-1B-SO-2' 510475-02	<2	92
SNA-1C-SO-4'-5' 510475-03	<2	93
Method Blank 05-2217 MB	<2	90

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475
Date Extracted: 11/02/15
Date Analyzed: 11/02/15

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
SNA-1A-SO-0.75' 510475-01	<50	<250	87
SNA-1B-SO-2' 510475-02	<50	<250	89
SNA-1C-SO-4'-5' 510475-03	<50	<250	87
Method Blank 05-2233 MB	<50	<250	83

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-1A-SO-0.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/04/15	Lab ID:	510475-01
Date Analyzed:	11/04/15	Data File:	510475-01.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	121	60	125
Indium	90	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.27
Barium	31.0
Cadmium	<1
Chromium	9.01
Copper	15.4
Lead	103 ve
Mercury	<1
Nickel	5.59
Selenium	<1
Silver	<1
Zinc	21.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-1A-SO-0.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/04/15	Lab ID:	510475-01 x10
Date Analyzed:	11/04/15	Data File:	510475-01 x10.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	106	60	125
Indium	99	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<10
Barium	30.0
Cadmium	<10
Chromium	<50
Copper	<50
Lead	105
Mercury	<10
Nickel	<10
Selenium	<10
Silver	<10
Zinc	<50

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-1B-SO-2'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-02
Date Analyzed:	11/02/15	Data File:	510475-02.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	121	60	125
Indium	98	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	8.93
Lead	1.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-1C-SO-4'-5'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-03
Date Analyzed:	11/02/15	Data File:	510475-03.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	114	60	125
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	5.59
Lead	1.13

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-1D-SO-9'-10'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-04
Date Analyzed:	11/02/15	Data File:	510475-04.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	116	60	125
Indium	98	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	6.14
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-2A-SO-.50'-.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-05
Date Analyzed:	11/02/15	Data File:	510475-05.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	115	60	125
Indium	93	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Cadmium	<1
Chromium	11.9
Lead	172

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-3A-SO-.50'-.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-06
Date Analyzed:	11/02/15	Data File:	510475-06.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	116	60	125
Indium	94	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.38
Cadmium	<1
Chromium	13.0
Lead	225

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-4A-SO-.50'-.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/14	Lab ID:	510475-07
Date Analyzed:	11/02/15	Data File:	510475-07.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	124	60	125
Indium	93	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.33
Cadmium	3.50
Chromium	27.5
Lead	1,870

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	NA	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/15	Lab ID:	I5-619 mb
Date Analyzed:	11/04/15	Data File:	I5-619 mb.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<5
Copper	<5
Lead	<1
Mercury	<1
Nickel	<1
Selenium	<1
Silver	<1
Zinc	<5

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SNA-1A-SO-0.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/15	Lab ID:	510475-01 1/5
Date Analyzed:	11/02/15	Data File:	110209.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	84	31	163
Benzo(a)anthracene-d12	104	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	0.013
Pyrene	0.015
Benz(a)anthracene	<0.01
Chrysene	0.012
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	0.015
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.013

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	Not Applicable	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/15	Lab ID:	05-2230 mb 1/5
Date Analyzed:	11/02/15	Data File:	110208.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	77	31	163
Benzo(a)anthracene-d12	94	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	SNA-1A-SO-0.75'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/15	Lab ID:	510475-01 1/5
Date Analyzed:	11/03/15	Data File:	25.D\ ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	69	29	154

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	Not Applicable	Project:	E2JK-Summner Auto Parts, F&BI 510475
Date Extracted:	11/02/15	Lab ID:	05-2227 mb 1/5
Date Analyzed:	11/03/15	Data File:	06.D\ ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	80	29	154

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR pH BY METHOD 9045D

Laboratory Code: 510387-02 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
pH	6.8	6.8	0	0-20

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 510475-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475

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

Laboratory Code: 510473-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	118	123	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	125	74-139

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 510475-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	83	84	44-129	1
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	87	89	52-121	2
Acenaphthene	mg/kg (ppm)	0.17	<0.01	87	89	51-123	2
Fluorene	mg/kg (ppm)	0.17	<0.01	85	87	37-137	2
Phenanthrene	mg/kg (ppm)	0.17	<0.01	88	89	34-141	1
Anthracene	mg/kg (ppm)	0.17	<0.01	83	86	32-124	4
Fluoranthene	mg/kg (ppm)	0.17	0.012	86	86	16-160	0
Pyrene	mg/kg (ppm)	0.17	0.014	88	88	10-180	0
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	92	93	23-144	1
Chrysene	mg/kg (ppm)	0.17	0.011	87	89	32-149	2
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.013	78	79	23-176	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	79	76	42-139	4
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	74	78	21-163	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	71	74	23-170	4
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	73	75	31-146	3
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	0.012	67	69	37-133	3

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	89	58-121
Acenaphthylene	mg/kg (ppm)	0.17	87	54-121
Acenaphthene	mg/kg (ppm)	0.17	92	54-123
Fluorene	mg/kg (ppm)	0.17	89	56-127
Phenanthrene	mg/kg (ppm)	0.17	91	55-122
Anthracene	mg/kg (ppm)	0.17	82	50-120
Fluoranthene	mg/kg (ppm)	0.17	89	54-129
Pyrene	mg/kg (ppm)	0.17	91	53-127
Benz(a)anthracene	mg/kg (ppm)	0.17	95	51-115
Chrysene	mg/kg (ppm)	0.17	98	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	80	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	85	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	71	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	90	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	89	50-141
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	87	52-131

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK-Summner Auto Parts, F&BI 510475

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 510447-05 1/5 (Matrix Spike) 1/5

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Control Limits
Aroclor 1016	mg/kg (ppm)	0.8	<0.02	60	50-150
Aroclor 1260	mg/kg (ppm)	0.8	<0.02	71	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	78	89	55-130	13
Aroclor 1260	mg/kg (ppm)	0.8	81	97	58-133	18

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

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

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

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

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

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

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

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

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

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

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

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

510475

SAMPLE CHAIN OF COUSTODY

ME 10/30/15 [redacted] BI2/VS/

Page # 1 of 1 Soil

Send Report To Jonathan M. Kemp
Company Enla Environmental Corporation
Address P.O. Box 1212
City, State, ZIP Puyallup WA 98371
Phone # 253 841.9716 Fax # jkemp@encoeo.com

SAMPLERS (*signature*) Jonathan M Kemp

PROJECT NAME/NO. ~~E25K Sumner Auto Parts - 2~~ Sumner National Auto Parts

PO#

REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel DRO+ORO	TPH-Gasoline GRO	BTEX by 8021B	VOCs by8260	SVOCs by 8270	T. As Cd, Cr, Pb	8RCRA Metals Total	Zn, Cu, Ni - Total	PAHs	PCBs - Total	pH	Dissolved (Filtered) 8RCRA+Zn,Cu,Ni	% Moisture	Notes
SNA-1A-SO-0.75'	01 A-E	10.30.15	10:00	Soil	6	✓	✓					✓	✓	✓	✓	✓		X	
SNA-1B-SO-2'	02		10:20	Soil	6	✓	✓				✓					✓		X	
SNA-1C-SO-4'-5'	03		10:45	Soil	6	✓	✓				✓					✓		X	
SNA-1D-SO-9'-10'	04		12:10	Soil	~~8oz~~ 1						✓					✓		X	
SNA-2A-SO-.5'-.75'	05		12:25	Soil	1						✓							X	
SNA-3A-SO-.5'-.75'	06		12:40	Soil	1						✓							X	
SNA-4A-SO-.50'-.75'	07		12:50	Soil	1						✓							X	
					22 Total														

Samples received at 4

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Jonathan M Kemp	EnE Environ. Corp	10.30.15	3:30 pm
Received by:	S Smith	S Smith	FedEx SDC	10/30/15	3:26 pm
Relinquished by:	S Smith	S. Smith	FedEx SDC	10/30/15	5:03 pm
Received by:	[signature]	[signature]	F&B	10/30	5:28 pm

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 6, 2015

Jon Kemp, Project Manager
Enco Environmental Corporation
PO Box 1212
Puyallup, WA 98371

Dear Mr. Kemp:

Included are the results from the testing of material submitted on October 30, 2015 from the E2JK Sumner Auto Parts-2, F&BI 510476 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ENC1106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 30, 2015 by Friedman & Bruya, Inc. from the Enco Environmental Corporation E2JK Sumner Auto Parts-2, F&BI 510476 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Enco Environmental Corporation
510476 -01	SNA-MW-1-WA-5'

All quality control requirements were acceptable.

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted: 11/03/15
Date Analyzed: 11/03/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
SNA-MW-1-WA-5' 510476-01	<100	88
Method Blank 05-2218 MB	<100	95

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted: 11/02/15
Date Analyzed: 11/02/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
SNA-MW-1-WA-5' 510476-01	<50	<250	94
Method Blank 05-2234 MB	<50	<250	92

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-MW-1-WA-5'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/05/15	Lab ID:	510476-01
Date Analyzed:	11/06/15	Data File:	510476-01.126
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Cadmium	<1
Chromium	1.33
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	NA	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/05/15	Lab ID:	I5-628 mb
Date Analyzed:	11/05/15	Data File:	I5-628 mb.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	98	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Cadmium	<1
Chromium	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	SNA-MW-1-WA-5'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/02/15	Lab ID:	510476-01
Date Analyzed:	11/04/15	Data File:	510476-01.067
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	96	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.08
Cadmium	<1
Chromium	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	NA	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/02/15	Lab ID:	I5-621 mb
Date Analyzed:	11/04/15	Data File:	I5-621 mb.060
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	116	60	125
Indium	107	60	125
Holmium	107	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Cadmium	<1
Chromium	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SNA-MW-1-WA-5'	Client:	Enco Environmental Corporation
Date Received:	10/30/15	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/02/15	Lab ID:	510476-01
Date Analyzed:	11/02/15	Data File:	110208.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	101	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	Not Applicable	Project:	E2JK Sumner Auto Parts-2, F&BI 510476
Date Extracted:	11/02/15	Lab ID:	05-2238 mb
Date Analyzed:	11/02/15	Data File:	110207.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 511006-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	69-134

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	114	119	58-134	4

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 510445-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	98	99	70-130	1
Cadmium	ug/L (ppb)	5	<1	106	106	70-130	0
Chromium	ug/L (ppb)	20	<1	101	104	70-130	3
Lead	ug/L (ppb)	10	<1	85	87	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	96	85-115
Cadmium	ug/L (ppb)	5	107	85-115
Chromium	ug/L (ppb)	20	100	85-115
Lead	ug/L (ppb)	10	93	85-115

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 510476-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	1.08	101	123	70-130	20
Cadmium	ug/L (ppb)	5	<1	102	118	70-130	15
Chromium	ug/L (ppb)	20	<1	95	110	70-130	15
Lead	ug/L (ppb)	10	<1	89	103	70-130	15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	101	98	85-115	3
Cadmium	ug/L (ppb)	5	105	99	85-115	6
Chromium	ug/L (ppb)	20	101	99	85-115	2
Lead	ug/L (ppb)	10	99	96	85-115	3

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 510482-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	124	55-137
Chloromethane	ug/L (ppb)	50	<10	106	61-120
Vinyl chloride	ug/L (ppb)	50	<0.2	104	61-139
Bromomethane	ug/L (ppb)	50	<1	125	20-265
Chloroethane	ug/L (ppb)	50	<1	105	55-149
Trichlorofluoromethane	ug/L (ppb)	50	<1	98	71-128
Acetone	ug/L (ppb)	250	<10	106	48-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	100	71-123
Hexane	ug/L (ppb)	50	<1	98	61-127
Methylene chloride	ug/L (ppb)	50	<5	103	61-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	104	68-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	79-113
2,2-Dichloropropane	ug/L (ppb)	50	<1	113	58-132
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	63-126
Chloroform	ug/L (ppb)	50	<1	99	79-113
2-Butanone (MEK)	ug/L (ppb)	250	<10	110	69-123
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	94	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	106	75-121
1,1-Dichloropropene	ug/L (ppb)	50	<1	96	67-121
Carbon tetrachloride	ug/L (ppb)	50	<1	104	70-132
Benzene	ug/L (ppb)	50	<0.35	96	78-108
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
1,2-Dichloropropane	ug/L (ppb)	50	<1	100	80-111
Bromodichloromethane	ug/L (ppb)	50	<1	102	78-117
Dibromomethane	ug/L (ppb)	50	<1	103	73-125
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	79-123
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	76-120
Toluene	ug/L (ppb)	50	<1	92	73-117
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	75-122
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	81-116
2-Hexanone	ug/L (ppb)	250	<10	102	74-127
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	80-113
Tetrachloroethene	ug/L (ppb)	50	<1	97	72-113
Dibromochloromethane	ug/L (ppb)	50	<1	105	69-129
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	79-120
Chlorobenzene	ug/L (ppb)	50	<1	91	75-115
Ethylbenzene	ug/L (ppb)	50	<1	96	71-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	108	76-130
m,p-Xylene	ug/L (ppb)	100	<2	95	63-128
o-Xylene	ug/L (ppb)	50	<1	98	64-129
Styrene	ug/L (ppb)	50	<1	100	56-142
Isopropylbenzene	ug/L (ppb)	50	<1	99	77-122
Bromoform	ug/L (ppb)	50	<1	103	49-138
n-Propylbenzene	ug/L (ppb)	50	<1	98	74-117
Bromobenzene	ug/L (ppb)	50	<1	94	70-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	100	60-138
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	79-120
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	99	62-125
2-Chlorotoluene	ug/L (ppb)	50	<1	93	70-123
4-Chlorotoluene	ug/L (ppb)	50	<1	94	79-113
tert-Butylbenzene	ug/L (ppb)	50	<1	100	78-124
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	99	74-118
sec-Butylbenzene	ug/L (ppb)	50	<1	96	77-118
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	64-132
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	92	79-109
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	93	78-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	115	69-129
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	97	66-123
Hexachlorobutadiene	ug/L (ppb)	50	<1	92	67-120
Naphthalene	ug/L (ppb)	50	<1	106	62-140
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	97	59-130

Date of Report: 11/06/15
Date Received: 10/30/15
Project: E2JK Sumner Auto Parts-2, F&BI 510476

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	125	124	54-149	1
Chloromethane	ug/L (ppb)	50	108	104	67-133	4
Vinyl chloride	ug/L (ppb)	50	102	101	70-119	1
Bromomethane	ug/L (ppb)	50	128	123	62-188	4
Chloroethane	ug/L (ppb)	50	103	100	66-149	3
Trichlorofluoromethane	ug/L (ppb)	50	99	99	70-132	0
Acetone	ug/L (ppb)	250	108	102	44-145	6
1,1-Dichloroethene	ug/L (ppb)	50	99	97	75-119	2
Hexane	ug/L (ppb)	50	101	98	51-153	3
Methylene chloride	ug/L (ppb)	50	100	101	63-132	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	107	105	70-122	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	96	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	100	98	80-116	2
2,2-Dichloropropane	ug/L (ppb)	50	126	128	62-141	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	98	80-112	2
Chloroform	ug/L (ppb)	50	99	97	81-109	2
2-Butanone (MEK)	ug/L (ppb)	250	118	109	53-140	8
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	92	79-109	3
1,1,1-Trichloroethane	ug/L (ppb)	50	113	110	80-116	3
1,1-Dichloropropene	ug/L (ppb)	50	96	94	78-112	2
Carbon tetrachloride	ug/L (ppb)	50	114	112	72-128	2
Benzene	ug/L (ppb)	50	96	94	81-108	2
Trichloroethene	ug/L (ppb)	50	97	95	77-108	2
1,2-Dichloropropane	ug/L (ppb)	50	104	101	82-109	3
Bromodichloromethane	ug/L (ppb)	50	108	104	76-120	4
Dibromomethane	ug/L (ppb)	50	104	102	80-110	2
4-Methyl-2-pentanone	ug/L (ppb)	250	122	111	59-142	9
cis-1,3-Dichloropropene	ug/L (ppb)	50	121	116	76-128	4
Toluene	ug/L (ppb)	50	92	91	83-108	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	123	119	76-128	3
1,1,2-Trichloroethane	ug/L (ppb)	50	104	99	82-110	5
2-Hexanone	ug/L (ppb)	250	114	104	53-145	9
1,3-Dichloropropane	ug/L (ppb)	50	103	99	83-110	4
Tetrachloroethene	ug/L (ppb)	50	96	95	78-109	1
Dibromochloromethane	ug/L (ppb)	50	114	111	63-140	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	112	109	82-118	3
Chlorobenzene	ug/L (ppb)	50	90	90	84-108	0
Ethylbenzene	ug/L (ppb)	50	96	94	83-111	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	111	112	76-125	1
m,p-Xylene	ug/L (ppb)	100	94	93	84-112	1
o-Xylene	ug/L (ppb)	50	97	96	81-117	1
Styrene	ug/L (ppb)	50	102	101	83-121	1
Isopropylbenzene	ug/L (ppb)	50	96	97	81-122	1
Bromoform	ug/L (ppb)	50	122	120	40-161	2
n-Propylbenzene	ug/L (ppb)	50	99	97	81-115	2
Bromobenzene	ug/L (ppb)	50	96	94	80-113	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	99	99	83-117	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	103	97	79-118	6
1,2,3-Trichloropropane	ug/L (ppb)	50	105	100	74-116	5
2-Chlorotoluene	ug/L (ppb)	50	93	92	79-112	1
4-Chlorotoluene	ug/L (ppb)	50	96	93	81-113	3
tert-Butylbenzene	ug/L (ppb)	50	98	98	81-119	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	98	97	81-121	1
sec-Butylbenzene	ug/L (ppb)	50	95	95	83-123	0
p-Isopropyltoluene	ug/L (ppb)	50	101	101	81-122	0
1,3-Dichlorobenzene	ug/L (ppb)	50	92	92	82-110	0
1,4-Dichlorobenzene	ug/L (ppb)	50	94	92	81-105	2
1,2-Dichlorobenzene	ug/L (ppb)	50	97	97	83-111	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	124	118	62-133	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	95	95	77-117	0
Hexachlorobutadiene	ug/L (ppb)	50	88	91	70-116	3
Naphthalene	ug/L (ppb)	50	103	103	72-131	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	93	94	80-114	1

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

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

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

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

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

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

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

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

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

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

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

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

510476

SAMPLE CHAIN OF CUSTODY

ME 10/30/15

Page # 1 of 1

Send Report To Jonathan McKay

Company Fox & Environmental Corp

Address PO Box 1212

City, State, ZIP Puyallup WA 98374

Phone # 253 841-9710 Fax # jkay@foxenv.com

SAMPLERS (signature) Jonathan McKay

PROJECT NAME/NO. E Sumner National Auto Parts

PO# E23 Sumner Auto Parts-2

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel (Extended)	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total As, Cd, Cr, Pb	Filtered (Dissolved) As, Cd, Cr, Pb					Notes
SNA-MW-1-WA-5'	01 A-I	10.30.15	11:15	Groundwater	10	X	X		X			X	X					
														Samples received at 4 °C				
				Total	10 Bottles													

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Jonathan McKay	Fox Environ Corp	10/30/15	3:32 PM
Received by:		J Smith	FedEx SDC	10/30/15	3:26 PM
Relinquished by:		J Smith	FedEx SDC	10/30/15	5:03 PM
Received by:			FOB	10/30/15	5:03 PM

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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December 9, 2015

Jon Kemp, Project Manager
Enco Environmental Corporation
PO Box 1212
Puyallup, WA 98371

Dear Mr. Kemp:

Included are the results from the testing of material submitted on December 2, 2015 from the E2JK-Sumner Auto-2, F&BI 512044 project. There are 26 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ENC1209R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 2, 2015 by Friedman & Bruya, Inc. from the Enco Environmental Corporation E2JK-Sumner Auto-2, F&BI 512044 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Enco Environmental Corporation	Percent Moisture
512044 -01	SNA-SO-5A-0.5'	9
512044 -02	SNA-SO-6A-0.5'	10
512044 -03	SNA-SO-7A-0.5'	12
512044 -04	SNA-SO-8A-0.9'	8
512044 -05	SNA-SO-9A-0.5'	12
512044 -06	SNA-SO-10A-0.7'	14
512044 -07	SNA-SO-11A-0.7'	10
512044 -08	SNA-SO-12A-0.8'	14
512044 -09	SNA-SO-13A-0.8'	16
512044 -10	SNA-SO-14A-0.50'	10
512044 -11	SNA-SO-15A-1.0'	10
512044 -12	SNA-SO-16A-1.0'	26
512044 -13	SNA-SO-17A-1.0'	15
512044 -14	SNA-SO-18A-1.0'	16
512044 -15	SNA-SO-19A-0.8'	16
512044 -16	SNA-SO-20A-0.50'	19
512044 -17	SNA-SO-21A-0.50'	10
512044 -18	SNA-SO-22A-0.50'	9

All quality control requirements were acceptable.

Date of Report: 12/09/15
Date Received: 12/02/15
Project: E2JK-Sumner Auto-2, F&BI 512044
Date Extracted: 12/03/15
Date Analyzed: 12/04/15

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SNA-SO-5A-0.5' 512044-01	<50	<250	77
SNA-SO-10A-0.7' 512044-06	350 x	950	77
SNA-SO-11A-0.7' 512044-07	<50	<250	79
SNA-SO-16A-1.0' 512044-12	<50	<250	77
SNA-SO-17A-1.0' 512044-13	<50	<250	81
SNA-SO-18A-1.0' 512044-14	96 x	1,500	77
Method Blank 05-2453 MB	<50	<250	85

Date of Report: 12/09/15
Date Received: 12/02/15
Project: E2JK-Sumner Auto-2, F&BI 512044
Date Extracted: 12/07/15
Date Analyzed: 12/07/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR pH USING EPA METHOD 9045D

Sample ID Laboratory ID	pH
SNA-SO-5A-0.5' 512044-01	5.18
SNA-SO-10A-0.7' 512044-06	6.46
SNA-SO-11A-0.7' 512044-07	6.99
SNA-SO-12A-0.8' 512044-08	6.65
SNA-SO-13A-0.8' 512044-09	6.44
SNA-SO-16A-1.0' 512044-12	6.03

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-5A-0.5'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-01
Date Analyzed:	12/13/15	Data File:	512044-01.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	113

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-6A-0.5'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-02
Date Analyzed:	12/13/15	Data File:	512044-02.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	33.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-7A-0.5'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-03
Date Analyzed:	12/13/15	Data File:	512044-03.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	103	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	27.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-8A-0.9'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-04
Date Analyzed:	12/13/15	Data File:	512044-04.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	6.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-9A-0.5'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-05
Date Analyzed:	12/13/15	Data File:	512044-05.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	10.8
Lead	5,140

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-10A-0.7'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-06
Date Analyzed:	12/13/15	Data File:	512044-06.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	103	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	107

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-11A-0.7'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-07
Date Analyzed:	12/13/15	Data File:	512044-07.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	69.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-12A-0.8'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-08
Date Analyzed:	12/13/15	Data File:	512044-08.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	228

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-13A-0.8'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-09
Date Analyzed:	12/13/15	Data File:	512044-09.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	290

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-14A-0.50'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-10
Date Analyzed:	12/13/15	Data File:	512044-10.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	110

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-15A-1.0'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-11
Date Analyzed:	12/13/15	Data File:	512044-11.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	25.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-16A-1.0'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-12
Date Analyzed:	12/13/15	Data File:	512044-12.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	109	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	27.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-17A-1.0'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-13
Date Analyzed:	12/13/15	Data File:	512044-13.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	117

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-18A-1.0'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-14
Date Analyzed:	12/13/15	Data File:	512044-14.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	68.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-19A-0.8'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-15
Date Analyzed:	12/13/15	Data File:	512044-15.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	103

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-20A-0.50'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-16
Date Analyzed:	12/13/15	Data File:	512044-16.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	5.68

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-21A-0.50'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-17
Date Analyzed:	12/13/15	Data File:	512044-17.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	103	60	125
Holmium	108	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	5.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	SNA-SO-22A-0.50'	Client:	Enco Environmental Corporation
Date Received:	12/02/15	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	512044-18
Date Analyzed:	12/14/15	Data File:	512044-18.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	10.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	NA	Project:	E2JK-Sumner Auto-2, F&BI 512044
Date Extracted:	12/13/15	Lab ID:	I5-689 mb
Date Analyzed:	12/13/15	Data File:	I5-689 mb.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	101	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	<1

Date of Report: 12/09/15
Date Received: 12/02/15
Project: E2JK-Sumner Auto-2, F&BI 512044

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

Laboratory Code: 512040-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	93	89	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	88	79-144

Date of Report: 12/09/15
Date Received: 12/02/15
Project: E2JK-Sumner Auto-2, F&BI 512044

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR pH BY METHOD 9045D

Laboratory Code: 512044-12 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
pH	6.03	6.07	1	0-20

Date of Report: 12/09/15
Date Received: 12/02/15
Project: E2JK-Sumner Auto-2, F&BI 512044

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 512044-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	mg/kg (ppm)	10	<1	102	96	70-130	6
Lead	mg/kg (ppm)	50	24.4	91	87	70-130	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	mg/kg (ppm)	10	110	85-115
Lead	mg/kg (ppm)	50	107	85-115

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

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

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

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

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

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

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

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

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

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

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

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

512044

SAMPLE CHAIN OF CUSTODY ME12-02-15

Page # 1 of 2 BI3

Send Report To: Enle Environmental Corp

Company: Jonathan M. Kemp

Address: Po Box 1212

City, State, ZIP: Puyallup WA 98371

Phone # 253.841.9710 ~~Fax~~ Email # jkemp@encvet.com

SAMPLERS (signature): Jonathan M. Kemp

PROJECT NAME/NO.: EZJK-Sumner Auto 2 →

PO#:

REMARKS:

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel+Oil	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Pb+Cd	pH					Notes
SNA-SO-5A-0.5'	01	12.1.15	12:40	Soil	1	X						X	X					Report all Soil
SNA-SO-6A-0.5'	02	↓	12:55	↓	1							+						w. % Moisture
SNA-SO-7A-0.5'	03		1:00		1	—						+						
SNA-SO-8A-0.9'	04		1:10		1							+						
SNA-SO-9A-0.5'	05		1:20		1							+						
SNA-SO-10A-0.7'	06		1:25		1	X						+	X					
SNA-SO-11A-0.7'	07		1:40		1	X						+	X					
SNA-SO-12A-0.8'	08		1:55		1							+	X					
SNA-SO-13A-0.8'	09	↓	2:05	↓	1							+	X					
SNA-SO-14A-0.50'	10	12.1.15	2:20	Soil	1							X						Samples received at 8 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Jonathan M. Kemp	Jonathan M. Kemp	Enle Env. Corp	12-2-15	11:08
Received by: [signature]	Rick Vasquez	Fedex	12-2-15	11:06
Relinquished by:				
Received by: Elizabeth Radford	Elizabeth Radford	F&B	12/2	13:30

FORMS\COC\COC.DOC

5120414

SAMPLE CHAIN OF CUSTODY

ME 12-0215

Page # 2 of 2

BI3

Send Report To Jonathan M Kemp

Company Erik Environmental Corp

Address Rebey 1212

City, State, ZIP Puyallup WA 98371

Phone # 253.841-9718 Fax # jkemp@eraec.com

SAMPLERS (signature) Jonathan M Kemp

PROJECT NAME/NO. E2Sor-Summer Action 2

PO#

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel 7D7	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Lab, Cd	PH					Notes
SNA-SO-15A-1.0'	11	12.1.15	2:30	Soil	1							X						Report All Soils w/ % Moisture
SNA-SO-16A-1.0'	12		2:40		1	X						X	X					
SNA-SO-17A-1.0'	13		2:55		1	X						X						
SNA-SO-18A-1.0'	14		3:05		1	X						X						
SNA-SO-19A-0.8'	15		3:15		1							X						
SNA-SO-20A-0.50'	16		3:50		1							X						
SNA-SO-21A-0.5'	17		4:00		1							X						
SNA-SO-22A-0.50'	18	12.1.15	4:10	Soil	1							X						
																		Samples received at 0 °C

ANALYSES REQUESTED

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Jonathan M Kemp	Jonathan M Kemp	Erik Env Corp	12-2-15	11:08
Received by:		Rick Vanzin	Rebey	12-2-15	11:28
Relinquished by:					
Received by:	Elizabeth Rafford	Elizabeth Rafford	FSB	12/2	13:30

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 22, 2015

Jon Kemp, Project Manager
Enco Environmental Corporation
PO Box 1212
Puyallup, WA 98371

Dear Mr. Kemp:

Included are the additional results from the testing of material submitted on October 30, 2015 and December 2, 2015 from the E2JK-Sumner Auto Parts, F&BI 510475 and 512044 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ENC1222R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 30, 2015 and December 2, 2015 by Friedman & Bruya, Inc. from the Enco Environmental Corporation E2JK-Sumner Auto Parts, F&BI 510475 and 512044 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Enco Environmental Corporation
510475 -01	SNA-1A-SO-0.75'
510475 -02	SNA-1B-SO-2'
510475 -03	SNA-1C-SO-4'-5'
510475 -04	SNA-1D-SO-9'-10'
510475 -05	SNA-2A-SO-.50'-.75'
510475 -06	SNA-3A-SO-.50'-.75'
510475 -07	SNA-4A-SO-.50'-.75'
512044 -01	SNA-SO-5A-0.5'
512044 -02	SNA-SO-6A-0.5'
512044 -03	SNA-SO-7A-0.5'
512044 -04	SNA-SO-8A-0.9'
512044 -05	SNA-SO-9A-0.5'
512044 -06	SNA-SO-10A-0.7'
512044 -07	SNA-SO-11A-0.7'
512044 -08	SNA-SO-12A-0.8'
512044 -09	SNA-SO-13A-0.8'
512044 -10	SNA-SO-14A-0.50'
512044 -11	SNA-SO-15A-1.0'
512044 -12	SNA-SO-16A-1.0'
512044 -13	SNA-SO-17A-1.0'
512044 -14	SNA-SO-18A-1.0'
512044 -15	SNA-SO-19A-0.8'
512044 -16	SNA-SO-20A-0.50'
512044 -17	SNA-SO-21A-0.50'
512044 -18	SNA-SO-22A-0.50'

All quality control requirements were acceptable.

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	E2JK-Sumner Auto Comp	Client:	Enco Environmental Corporation
Date Received:	10/30/15 and 12/02/15	Project:	E2JK-Sumner Auto Parts
Date Extracted:	12/17/15	Lab ID:	510475-06,07
Date Analyzed:	12/18/15	Data File:	510475-06,07.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	103	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Cadmium	<1	1.0
Lead	1.20	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Enco Environmental Corporation
Date Received:	Not Applicable	Project:	E2JK-Sumner Auto Parts
Date Extracted:	12/17/15	Lab ID:	I5-723 mb
Date Analyzed:	12/18/15	Data File:	I5-723 mb.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	100	60	125
Holmium	101	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Cadmium	<1	1.0
Lead	<1	5.0

Date of Report: 12/22/15
Date Received: 10/30/15 and 12/02/15
Project: E2JK-Sumner Auto Parts, F&BI 510475 and 512044

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 510475-06,07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	mg/L (ppm)	0.5	<1	105	105	50-150	0
Lead	mg/L (ppm)	1.0	1.20	103	105	50-150	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	mg/L (ppm)	0.5	105	70-130
Lead	mg/L (ppm)	1.0	104	70-130

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

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

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

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

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

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

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

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

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

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

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

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

510475

SAMPLE CHAIN OF CUSTODY

ME 10/30/15 [redacted] BI2/VS1

Page # 1 of 1 Soil

Send Report To Jonathan M. Kemp
Company Enla Environmental Corporation
Address P.O. Box 1212
City, State, ZIP Puyallup WA 98371
Phone # 253 841.9716 Fax # jkemp@encoco.com

SAMPLERS (signature) Jonathan M Kemp

PROJECT NAME/NO. E2SK Sumner Artifacts - 2 Sumner National Auto Parts

PO#

REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel (DRO+ORO)	TPH-Gasoline (GRO)	BTEX by 8021B	VOCs by8260	SVOCs by 8270	T. As, Cd, Cr, Pb	8RCRA Metals	Zn, Cu, Ni Total	PAHs	PCBs - Total	pH	Dissolved (Filtered) 8RCRA + Zn, Cu, Ni	% Moisture	TCLP Pb+Cd composite	Notes
SNA-1A-SU-0.75'	01 A-E	10.30.15	10:00	Soil	6	✓	✓					✓	✓	✓	✓	✓		X		* - per JK 12/12/15 mk.
SNA-1B-SU-2'	02		10:20	Soil	6	✓	✓				✓					✓		X		
SNA-1C-SU-4'-5'	03		10:45	Soil	6	✓	✓				✓					✓		X		
SNA-1D-SU-9'-10'	04		12:10	Soil	~~8~~ or 1						✓					✓		X		
SNA-2A-SU-.5'-.75'	05		12:25	Soil	~~8~~ or 1						✓							X		
SNA-3A-SU-.5'-.75'	06		12:45	Soil	1						✓							X	*	
SNA-4A-SU-.5'-.75'	07		12:50	Soil	1						✓							X	*	
					22 Total															

Samples received at 4 °

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Jonathan M Kemp	EnLa Environ. Corp	10.30.15	3:30 pm
Received by: [signature]	S Smith	FedEx SDC	10/30/15	3:36 pm
Relinquished by: [signature]	S. Smith	FedEx SDC	10/30/15	5:03 pm
Received by: [signature]	[signature]	FEB	10/30	5:28 pm

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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512044

SAMPLE CHAIN OF CUSTODY ME12-02-15

Page # 1 of 2 BI3

Send Report To Fale Environmental Corp
Company Jonathan M. Kemp
Address PO Box 1212
City, State, ZIP Puyallup WA 98371
Phone # 253.841.9710 ~~Fax #~~ Email jkemp@...com

SAMPLERS (signature) [signature]
PROJECT NAME/NO. E2SR-Summer Ave 2 → | PO#
REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel+Oil	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Pb+Cd	pH	TCLP Pb+Cd composite			Notes
SNA-SO-5A-0.5'	01	12.1.15	12:40	Soil	1	X						X	X				Report all Soil
SNA-SO-6A-0.5'	02	↓	12:55	↓	1							+					w. % Moisture
SNA-SO-7A-0.5'	03		1:00		1							+					
SNA-SO-8A-0.9'	04		1:10		1							+					
SNA-SO-9A-0.5'	05		1:20		1							+		*			
SNA-SO-10A-0.7'	06		1:25		1	X						+	X				
SNA-SO-11A-0.7'	07		1:40		1	X						+	X				
SNA-SO-12A-0.8'	08		1:55		1							+	X	*			
SNA-SO-13A-0.8'	09	↓	2:05	↓	1							+	X	*			
SNA-SO-14A-0.50'	10	12.1.15	2:20	Soil	1							X					Samples received at 8 °C

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Jonathan M. Kemp	Fale Env. Corp	12-2-15	11:08
Received by: [signature]	Rick Vargas	Fedex	12-2-15	11:06
Relinquished by:				
Received by: [signature]	Elizabeth Radford	F & B	12/2	13:30

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512044

SAMPLE CHAIN OF CUSTODY

ME 12-02-15

BI3

Page # 2 of 2

Send Report To: Jonathan M. Kemp
Company: Pacifica Environmental Corp
Address: PO Box 1212
City, State, ZIP: Puyallup WA 98371
Phone #: 253.841.9710
Email: jkemp@pacificaenv.com

SAMPLERS (signature): [illegible]
PROJECT NAME/NO.: E2 Site-Summer Action 2
PO#:
REMARKS:

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH____
- Rush charges authorized by ____

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel 7a?	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Pb, Cd	PH	composite TCLP Pb+Cd				Notes
SNA-SO-15A-1.0'	11	12.1.15	2:30	Soil	1							X						Report All Soils
SNA-SO-16A-1.0'	12	↓	2:40	↓	1	X						X	X					w % Moisture
SNA-SO-17A-1.0'	13	↓	2:55	↓	1	X						X						
SNA-SO-18A-1.0'	14	↓	3:05	↓	1	X						X						
SNA-SO-19A-0.8'	15	↓	3:15	↓	1							X						
SNA-SO-20A-0.50'	16	↓	3:50	↓	1							X						
SNA-SO-21A-0.50'	17	↓	4:00	↓	1							X						
SNA-SO-22A-0.50'	18	12.1.15	4:10	Soil	1							X						

Samples received at 0 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[illegible]	Jonathan M. Kemp	Pacifica Env Corp	12-2-15	11:08
Received by:	[illegible]	Rick Vorse	Pacifica	~~12-2-15~~	11:08
Relinquished by:					
Received by:	[illegible]	Elizabeth Rafford	F&B	12/2	13:30

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